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Factors associated with perceived social support of patients with multiple sclerosis

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Keywords
Multiple Sclerosis; Social Support; Family; Friends

Abstract

Background: Multiple sclerosis (MS) is an inflammatory chronic disease of the central nervous system (CNS) which is related with unpredictable course and increasing disability. Social support as an available interpersonal resource may help patients with MS. The purpose of the present study was to evaluate perceived social support in patients with MS as well as the associated factors.

Methods: The sample of this cross-sectional study included 200 patients with MS. Data collection was performed by the completion of the Multidimensional Scale of Perceived Social Support (MSPSS) and a questionnaire which included patients' characteristics.

Results: Patients reported to perceive high support from significant others and their family (median: 24.0 and 23.5, respectively) and less from their friends (median: 20). Moreover, a statistically significant association was found between social support from significant others and marital status ($P = 0.010$), modification of daily activities ($P = 0.018$), difficulties with social and family environment ($P \leq 0.001$ and $P \leq 0.001$, respectively), frequent urination ($P = 0.015$), and whether they easily forgot ($P = 0.049$), characterized themselves as anxious ($P = 0.049$), and believed in God ($P = 0.002$). Also, a statistically significant association was fond between social support from family and relation with health professionals ($P = 0.041$), difficulties with social and family environment ($P = 0.003$ and $P \leq 0.001$, respectively), and whether they considered themselves as anxious ($P = 0.050$), and they believed in God ($P \leq 0.001$). Furthermore, a statistically significant association was found between support from friends and modification of daily activities ($P = 0.010$), help in daily activities ($P = 0.016$), need for movement assistance ($P = 0.001$), difficulties with social and family environment ($P \leq 0.001$ and $P = 0.005$, respectively), and whether they considered themselves anxious ($P = 0.046$).

Conclusion: Factors associated with perceived social support should be evaluated when planning holistic care to patients with MS.

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Introduction

Multiple sclerosis (MS) is a chronic and progressive disease of the central nervous system (CNS) which affects approximately 2.5 million people, worldwide.[1] MS presents in the third or fourth decade of life, is three times more frequent in women,[1,2] and is the most common cause of neurological disability.[2] Recently, in United States of America (USA), MS prevalence was about 150 per 100000 individuals with peak prevalence in ages of 45-49 years for both male and female patients.[1]

The disease seems to vary considerably globally with Europe to be a region of high prevalence containing more than half of the global population of people diagnosed with MS. However, discrepancies noticed worldwide are mainly attributed to various applied methodologies and to genetic, clinical, and environmental factors.[3]

Though the therapeutic options of MS have been dramatically improved, this neurodegenerative disease implies a heavy burden on individuals, affecting quality of life (QOL), employment, social relationships, productivity, self-efficacy, and personal independence.[1,4,5] Notably, MS has a variable prognosis causing early severe disabilities in some patients but leaving others ambulatory and functional for many years.[4]

Perceived social support represents a new area of interest in MS therapeutic regimen. Social support in MS is associated with disease-specific factors, quantity and quality of social networks, and various socio-demographic factors.[6,7]

Interestingly, this resource enhances relationships, promotes individual's coping skills, has a protective role against the negative effects of stressful life events, and generally has a beneficial role for both physical and mental health,[7]since it may help patients to live every day to its full potential.[6,7]

The concept of social support varies from objective social life (group memberships, family, spouse) to subjective experience (emotional support, loneliness).[7] More in detail, social support refers to the level of help provided to a person by his/her surroundings. Support may derive as a tangible assistance provided by others or as perceived social support which evaluates individuals' confidence of the availability of adequate support when needed.[8]

Several gaps are noticed in literature regarding perceived social support in patients with MS, possibly because health care professionals focus on the biological aspect of the disease.

In attempt to address all these issues and explore whether individuals with MS perceive or not poor social support, this study aimed to explore factors associated with perceived social support in MS.

Materials and Methods

Study population: In the present study, 200 patients with the diagnosis of MS according to the McDonald criteria were enrolled.[9]

Criteria for inclusion of patients in the study were diagnosis of MS and good comprehension of Greek language. Patients with physical and mental disabilities prior to the onset of disease were excluded.

Data collection: Data were collected by the completion of a questionnaire which included patients' characteristics.

Regarding study area, it was conducted at the outpatient clinic of a public hospital where patients were consecutively evaluated during the period of January 2016-March 2016.

In terms of study design, the researchers interviewed participants in the waiting room before their routine follow-up.

Ethical considerations: All subjects had been informed of their rights to refuse or discontinue participation in the study according to the ethical standards of the Declaration of Helsinki (1989) of the World Medical Association (WMA). Ethical permission for the study was obtained from the scientific committee of the hospital. Patients participated after they had given their written consent for participation.

Data variables: The data collected for each patient included: socio-demographic and clinical characteristics, as well as patients' views about MS.

Perceived social support: The Multidimensional Scale of Perceived Social Support (MSPSS) questionnaire was used to assess social support. This scale assesses three dimensions of social support: support from significant others, family, and friends. Significant others are defined as the persons perceived as important and do not belong to family or friends. MSPSS scale is a short tool (12 items in total) and is ideal for research that requires assessment of multiple variables and populations who cannot tolerate a long questionnaire.[10]

This scale was tested in Greek standards by Theofilou,[10] with satisfactory internal consistency. More in detail, it had an overall Cronbach's alpha at 0.80, ranging between 0.74 (sub-scale of friends) and 0.78 (is for both sub-scales, family and significant others). The test-retest reliability intraclass correlation coefficient (ICC) was 0.894.[10]

The questions of each dimension expressing "support" are rated at a 7-point Likert scale ranging from 1 (very strongly disagree) to 7 (very strongly agree). In order to calculate the final score of each dimension of social support, we added the scores of questions corresponding to each dimension. These scores reflect the degree of support that patients with MS felt. Higher scores indicate higher support.[10]

Categorical variables were presented by absolute and relative frequencies (percentages), whereas continuous variables were presented by median and interquartile range (IQR). Normality of continuous variables was tested with Kolmogorov-Smirnov test and was rejected. Association between patients' characteristics and score of social support was performed by Kruskal-Wallis test or Mann-Whitney test. Multiple linear regression was performed in order to identify factors associated with social support that patients felt; multiple linear regression was performed using the enter method. As independent factors were considered, the ones that were statistically significant were associated with social support univariately. Results were presented with β coefficients and 95% confidence intervals (CIs). The level of statistical significance was set to alpha 5%. The analysis was performed with the Stata software (version 13, Stata Corporation, College Station, TX, USA).

Results

Characteristics of patients: From table 1, it is observed that 36% of the patients were men and 45% were below the age of 40 years, while 49% of the sample studied were married.

Regarding clinical characteristics, 34.5% of participants suffered from the disease less than five years, 35% modified their daily activities (very much or enough), 60% had help for their daily activities, and 34% stated that they needed movement assistance.

Furthermore, 48.5% and 64.5% of participants reported vision problems and frequent urination, respectively, while 38.5% reported easy forgetting.

Lastly, 26% reported having very good relations with medical stuff, 59.5% characterized themselves as anxious, 58% believed in God (very or enough), while 13% and 12% faced difficulties with society and family environment, respectively.

Perceived social support: As far as social support is concerned, table 2 presents the descriptive measures.

Table 1. Sample description (n = 200)

Variables	n (%)
Gender (male)	72 (36.0)
Age (year)	
< 30	27 (13.5)
30-40	63 (31.5)
41-50	68 (34.0)
51-60	31 (15.5)
> 61-70	11 (5.5)
Marital status	
Married	98 (49.0)
Single	80 (40.0)
Divorced/widowed	22 (11.0)
Years of onset	
≤ 1	19 (9.5)
2-5	50 (25.0)
6-10	66 (33.0)
11-15	28 (14.0)
> 15	37 (18.5)
Modifying daily activities because of MS	
Very/enough	70 (35.0)
Little	86 (43.0)
Not at all	44 (22.0)
Getting help from someone for daily activities (yes)	120 (60.0)
Need for movement assistance (yes)	68 (34.0)
Vision problems (yes)	97 (48.5)
Frequent urination (yes)	129 (64.5)
Forgetting easily (yes)	77 (38.5)
Relation with health professionals	
Very good	52 (26.0)
Good	119 (59.5)
Below moderate	29 (14.5)
Difficulties with social environment	
Very/enough	26 (13.0)
Little	70 (35.0)
Not at all	104 (52.0)
Difficulties with family environment	
Very/enough	24 (12.0)
Little	61 (30.5)
Not at all	115 (57.5)
Considering yourself anxious (yes)	119 (59.5)
Believing in God	
Very/enough	116 (58.0)
Little/not at all	84 (42.0)

MS: Multiple sclerosis

Patients reported feeling highly supported from their significant others and their family (median: 24.0 and 23.5, respectively) and less from their friends (median: 20, neutral support levels). In total, participants felt highly supported (median: 65, IQR: 58-74).

Association between social support and patients' characteristics: Tables 3 and 4 show results between association of social support and patients' characteristics. Regarding demographic characteristics (Table 3), a statistically significant association of social support from significant others was observed with marital status (P = 0.010). More specifically, patients who were divorced or widowed perceived less social support from significant others (median: 21) than patients who were married (median: 24) and patients who were single (median: 24). No other significant association between patients' characteristics and social support was shown.

Table 2. Descriptive statistics for perceived social support

Support from	Range	Median (25º-75º)
Significant others	4-28	24.0 (21.0-27.5)
Family	4-28	23.5 (20.0-26.0)
Friends	4-28	20.0 (16.0-23.0)
Total support	12-84	65.0 (58.0-74.0)

Regarding clinical and other characteristics (Table 4), a statistically significant association of social support from significant others was observed with modification of daily activities (P = 0.018), frequent urination (P = 0.015), whether they easily forgot (P = 0.049), whether they faced difficulties with social and family environment (P ≤ 0.001 and P ≤ 0.001, respectively), whether they considered themselves anxious (P = 0.049), and whether they believed in God (P = 0.002). More specifically, patients who had modified very or enough their daily activities because of their problem, those who had frequent urination and forgot easily, those who faced a lot of difficulties with social and family environment, those who considered themselves anxious, and those who believed little or not at all in God perceived less support from their significant others.

Similarly, a statistically significant association of social support from family was observed with relation with health professionals (P = 0.041), whether they faced difficulties with social and family environment (P = 0.003 and P ≤ 0.001, respectively), whether they considered themselves anxious (P = 0.050), and whether they believed in God (P ≤ 0.001). As before, patients who had below moderate relations with health professionals, those who faced a lot of difficulties with social and family environment, those who considered themselves anxious, and those who believed little or not at all in God perceived less support from their family.

Furthermore, a statistically significant association with support from friends was observed with the modification of daily activities (P = 0.010), whether they had help for their daily activities (P = 0.016), whether they needed movement assistance (P = 0.001), whether they faced difficulties with social and family environment (P ≤ 0.001 and P = 0.005, respectively), and whether they considered themselves anxious (P = 0.046). More specifically, patients who had modified very or enough their daily activities because of MS, those who had help for their daily activities and needed movement assistance, those who faced a lot of difficulties with social and family environment, and those who considered themselves anxious perceived less support from their friends.

Estimation of perceived social support: Multiple linear regression was applied in order to estimate the social support that patients felt. Factors that were statistically and significantly associated with social support in the univariate analysis (Tables 3 and 4) were considered as independent factors. Table 5 presents these results.

Table 3. Association between social support and patients' demographic characteristics (n = 200)

Variables	Support from:					
	Significant others	P	Family	P	Friends	P
	Median (25º-75º)		Median (25º-75º)		Median (25º-75º)	
Gender		0.177		0.890		0.423
Male	24.0 (20.0-25.0)		23.0 (20.0-26.5)		20.0 (16.0-23.0)	
Female	24.0 (22.0-28.0)		24.0 (19.5-26.0)		20.0 (16.0-23.5)	
Age (year)		0.643		0.759		0.229
< 40	24.0 (21.0-28.0)		24.0 (20.0-26.0)		20.0 (16.0-24.0)	
41-50	24.0 (20.5-27.0)		23.0 (18.5-28.0)		20.0 (16.0-23.0)	
> 50	24.0 (21.0-26.0)		22.5 (20.0-24.0)		17.0 (16.0-20.0)	
Marital status		0.010		0.133		0.574
Married	24.0 (22.0-28.0)		24.0 (20.0-26.0)		19.5 (16.0-22.0)	
Single	24.0 (21.0-27.5)		24.0 (19.5-26.0)		20.0 (16.0-24.0)	
Divorced/widowed	21.0 (20.0-24.0)*		20.0 (18.0-24.0)		20.0 (16.0-24.0)	

*Statistically significant different score from two first categories, after Bonferroni correction

Table 4. Association between social support and patients' clinical and other characteristics (n = 200)

Variables	**Significant others**		**Family**		**Friends**	
	Median (25^{o}-75^{o})	**P**	**Median (25^{o}-75^{o})**	**P**	**Median (25^{o}-75^{o})**	**P**
Modifying daily activities because of MS		0.018		0.788		0.010
Very/enough	22.5 (20.0-26.0)*		23.0 (19.0-27.0)		18.0 (15.0-20.0)*	
Little	24.0 (21.0-27.0)		23.0 (20.0-26.0)		20.0 (16.0-24.0)	
Not at all	25.0 (23.5-28.0)*		24.0 (19.5-27.0)		20.0 (16.0-24.0)	
Getting help from someone for daily activities		0.230		0.100		0.016
No	24.0 (21.0-26.5)		22.0 (19.0-26.0)		20.0 (17.0-24.0)	
Yes	24.0 (21.5-28.0)		24.0 (20.0-27.0)		18.0 (16.0-22.0)	
Need for movement assistance		0.746		0.360		0.001
No	24.0 (21.0-28.0)		23.0 (19.0-26.0)		20.0 (16.5-24.0)	
Yes	24.0 (21.0-26.5)		24.0 (20.0-27.0)		17.0 (12.5-21.0)	
Frequent urination		0.015		0.065		0.109
No	24.0 (22.0-28.0)		24.0 (20.0-28.0)		20.0 (16.0-24.0)	
Yes	23.0 (21.0-26.0)		23.0 (19.0-26.0)		20.0 (16.0-22.0)	
Forgetting easily		0.049		0.347		0.726
No	24.0 (21.0-28.0)		24.0 (20.0-27.0)		20.0 (16.0-23.0)	
Yes	23.0 (20.0-26.0)		23.0 (19.0-26.0)		20.0 (16.0-23.0)	
Relation with health professionals		0.362		0.041		
Very good	24.0 (21.0-28.0)		23.5 (20.5-27.0)		20.0 (16.5-24.0)	
Good	24.0 (21.0-27.0)		24.0 (20.0-26.0)		20.0 (16.0-24.0)	
Below moderate	24.0 (18.0-26.0)		21.0 (14.0-24.0)*		19.0 (16.0-23.0)	
Difficulties with social environment		< 0.001		0.003		< 0.001
Very/enough	20.5 (16.0-25.0)*		18.0 (14.0-24.0)*		15.0 (6.0-18.0)*	
Little	23.0 (20.0-25.0)		23.0 (20.0-26.0)		20.0 (16.0-22.0)	
Not at all	25.0 (22.5-28.0)*		24.0 (20.0-27.0)*		20.0 (16.0-24.0)	
Difficulties with family environment		< 0.001		< 0.001		0.005
Very/enough	18.5 (15.5-23.0)*		16.0 (12.0-20.5)*		16.0 (9.0-20.0)*	
Little	23.0 (20.0-24.0)		21.0 (18.0-26.0)		20.0 (16.0-21.0)	
Not at all	25.0 (23.0-28.0)*		24.0 (22.0-27.0)*		20.0 (16.0-24.0)	
Considering yourself anxious		0.049		0.050		0.046
No	24.0 (22.0-28.0)		24.0 (20.0-27.0)		20.0 (17.0-23.0)	
Yes	24.0 (20.0-26.0)		23.0 (19.0-26.0)		18.0 (16.0-23.0)	
Believing in God		0.002		< 0.001		0.325
Very/enough	24.0 (22.0-28.0)		24.0 (20.5-28.0)		20.0 (16.0-24.0)	
Little/not at all	23.0 (20.0-25.5)		21.0 (18.0-24.0)		20.0 (16.0-23.0)	

*Statistically significant different score from all other categories, after Bonferroni correction

MS: Multiple sclerosis

We concluded that single patients perceived 1.92 (95% CI: -3.03, -0.76) points less support from their significant others than married patients and similarly divorced/widowed patients perceived 1.85 (95% CI: -3.67, -0.03) points less support from their significant others than married patients.

Moreover, patients who did not face any difficulties with social and family environment perceived 2.09 (95% CI: 0.01, 4.16) and 4.29 (95% CI: 2.20, 6.38) points, respectively, more support from their significant others than patients who faced a lot of difficulties with social and family environment.

Lastly, patients who believed little or not at all in God perceived 1.32 (95% CI: -2.41, -0.22) points less support from significant others than patients who believed a lot in God.

Table 5. Estimation of perceived social support

	Significant others β coefficient (95% CI)	**P**	**Family β coefficient (95% CI)**	**P**	**Friends β coefficient (95% CI)**	**P**
Marital status						
Married	Ref. Cat		-		-	
Single	-1.92 (-3.03, -0.76)	0.001	-		-	
Divorced/widowed	-1.85 (-3.67, -0.03)	0.046	-		-	
Modifying daily activities because of MS						
Very/enough	Ref. Cat		-		Ref. Cat	
Little	-0.43 (-1.6, -0.81)	0.493	-		0.51 (-1.44, -2.46)	0.608
Not at all	0.81 (-0.76, -2.39)	0.312	-		0.01 (-2.51-2.53)	0.993
Getting help from someone for daily activities						
No	-		-		Ref. Cat	
Yes	-		-		-1.15 (-2.81-0.51)	0.172
Need for movement assistance						
No	-		-		Ref. Cat	
Yes	-		-		-1.75 (-3.71-0.21)	0.079
Frequent urination						
No	Ref. Cat		-		-	
Yes	-0.57 (-1.74-0.59)	0.626	-		-	
Forgetting easily						
No	Ref. Cat		-		-	
Yes	-0.57 (-1.74-0.59)	0.333	-		-	
Relation with health professionals						
Very good	-		Ref. Cat		-	
Good	-		0.85 (-0.68-2.40)	0.276	-	
Below moderate	-		-1.69 (-3.85-0.46)	0.122	-	
Difficulties with social environment						
Very/enough	Ref. Cat		Ref. Cat		Ref. Cat	
Little	1.31 (-0.61-3.23)	0.180	1.78 (-0.50-4.07)	0.125	4.98 (2.29-7.69)	< 0.001
Not at all	2.09 (0.01-4.16)	0.049	1.03 (-1.34-3.40)	0.392	4.89 (1.99-7.79)	0.001
Difficulties with family environment						
Very/enough	Ref. Cat		Ref. Cat		Ref. Cat	
Little	2.87 (0.86-4.88)	0.005	3.76 (1.35-6.16)	0.002	-0.06 (-2.85-2.74)	0.969
Not at all	4.29 (2.20-6.38)	< 0.001	6.18 (3.67-8.70)	< 0.001	0.75 (-2.08-3.59)	0.601
Considering yourself anxious						
No	Ref. Cat		Ref. Cat		Ref. Cat	
Yes	-0.11 (-1.21-0.99)	0.844	-0.24 (-1.56-1.08)	0.721	-0.74 (-2.29-0.81)	0.345
Believing in God						
Very/enough	Ref. Cat		Ref. Cat		-	
Little/not at all	-1.32 (-2.41, -0.22)	0.018	-1.42 (-2.73, -0.11)	0.034	-	

CI: Confidence interval; MS: Multiple sclerosis

Furthermore, patients who did not face any difficulties with family environment perceived 6.18 (95% CI: 3.67, 8.70) points more support from their family than patients who faced a lot of difficulties. On the other hand, patients who believed little or not at all in God perceived 1.42 (95% CI: -2.73, -0.11) points less support from significant others than patients who believed a lot in God.

Lastly, patients who did not face any difficulties with social environment perceived 4.89 (95%

CI: 1.99, 7.79) points more support from their friends than patients who faced a lot of difficulties.

Discussion

According to the results, patients with MS perceived high support from significant others and family and less from friends. Family consists of a frame within which individuals share common life experiences, options, and mutual aid. Family and significant others often provide support to the loved person as a normal part of their common life.[11-14] At the same time, the long disease trajectory allows time for family members to adjust to their roles as a carer, which differ from those in cancer and other disabling neurological conditions such as stroke.[13]

Enhancement of social support is crucial, since it is associated with good QOL. As measured by **36**-Item Short Form Health Survey (SF-36), perceived social support from significant others was positively associated with general health, while support from family and friends was positively associated with perceived mental health, among 207 patients with MS (38.4 ± 10.6 years, 66.2% women).[11]

Participants who faced difficulties with social and family environment and those who reported themselves as anxious perceived less support in the three subscales (significant other, family, friends). MS is inducing several adversities not only on patients' lives but also on family which in turn exert a negative impact on their QoL or their psychological state.[15] Sometimes, the burden of family members mainly on spouse is so heavy that care for themselves becomes severely restricted.[14] Notwithstanding the foregoing, individuals with MS must be offered the opportunity to define what they perceive as difficulties and express their priorities along with their preferences regarding social support.[12]

Furthermore, participants who recognized themselves as anxious experienced less support from family and friends. Possibly, individuals who experience anxiety may feel unable to exert control over the disease-related issues, thus limiting themselves.

Interestingly, the way patients perceive and feel about themselves is an important determinant of their subjective well-being.[16] Up to some extent, anxiety may be beneficial, since it stimulates individuals to take the necessary steps to confront with the disease or to seek for medical help.[17] Recognition of the association between anxiety and support is gradually coming to the forefront of MS clinical practice.[18,19] More in detail, perceived social support reduces anxiety which meanwhile is a strong predictor of depression.[19] Likewise, participation in MS supporting groups seems to decrease anxiety and increase satisfaction with life.[18]

Support in two subscales, significant others and friends, was associated with modification of daily activities. This finding may reflect disability, functional restrictions, or other constraints due to disease.[8] Fatigue which is reported by 75%-90% of individuals with MS is a possible contributor for this modification.[20,21] It is crucial to enhance social support in MS, since it is associated with higher physical activities and lower fatigue perception.[14,22]

In addition, believing in God was found to be associated with two subscales, significant others and friends. The unforeseeable MS course involving exacerbations or remissions along with failure of "cure" may either prompt or discourage individuals to turn to God for empowerment and support. Individuals have the tendency to seek for support in God in the acute phase of a chronic illness and quit when they experience failure of their expectations. Additionally, this relapsing-remitting disease imposes uncertainty which is negatively correlated with religious wellbeing. Remarkably, people make sense of illness, healing, and death through various contexts (cultural, social, philosophical) and the intimate relationships which are addressed by spiritual practice.[23-26]

A patient can successfully adapt to life with MS through active, problem-focused coping, distraction and self-construction, religiousness, and search for a meaning in life.[27] Psychological challenges, such as uncertainty, may be ameliorated through increased appreciation for life and spirituality.[28]

Support from significant others was less perceived by divorced or widowed participants and those who had frequent urination and forgot easily. Patients with MS due to psychological and physical changes prefer to be far from others due to illness symptoms such as vision or hearing deficits, weakness, fatigue, poor balance, and several others. Disability and cognitive impairment in patients with MS are predictors of loss of employment, decline in the standards of living, and withdrawal from social and leisure activities.[29-32] Single patients experienced more unmet needs related to MS in a sample of 632 community dwellers.[29]

Participants who had help in daily activities and needed movement assistance experienced less support from friends. Possibly, these participants experience some degree of physical impairment. Interestingly, as the disease is progressing, patients may encounter with difficulties in walking or have feeling of fatigue, pain, and several other symptoms related to the disease.[33]

Another factor that could potentially discourage them to ask for support is a sense of powerlessness and a lack of control over daily life. This vulnerable group of patients needs individualized support, focused on helping them to regain their place in the world and leading to rewarding and fulfilling lives.[33]

During last decades, significant progress has been observed within the field of MS treatment. Though the unpredictable MS course creates difficulties for planning appropriate support,[33] it is crucial for specialists involved in care to evaluate social support as an important resource in daily-living issues.[18]

Educational programs for patients' families or friends are essential at the effort to provide holistic care.[34,35] It is essential for patients with MS to build supportive relationships, since social isolation is a predictor for depression.[28] Psychosocial support such as good relationships with physicians and MS healthcare team is identified as the most important need for patients with MS and caregivers.[12]

The study has limitations. First, the sample studied was not representative of all patients with MS in Greece but a convenience sample. This method of sampling limits the generalizability of results. Other limitations are related to the study design which was cross-sectional and not longitudinal, thus not permitting investigation for causal relation between social support and patients' characteristics. Furthermore, there was no other measurement in time that would allow evaluation of possible changes in perceived social support at baseline and at a later follow-up visit. It would be interesting to monitor social support 12 or 24 months after baseline measurement.

Conclusion

The current paper sheds light on factors affecting perceived social support to individuals with MS. More in detail, factors associated with perceived social support were: marital status, difficulties with social and family environment, modification of daily activities, help in daily activities, frequent urination, movement assistance, forgetfulness, belief in God, relations with health professionals, and report of themselves as anxious.

Conflict of Interests

The authors declare no conflict of interest in this study.

Acknowledgments

The findings of the present study enable healthcare professionals to form their interventions or caring models to promote social support .

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