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ORIGINAL ARTICLE

Investigation of the levels of low back pain, depression, and burnout of the personnel providing formal care for children with disability and elderly individuals

Engelli çocuklara ve yaşlı bireylere formal bakım veren personelin bel ağrısı, depresyon ve tükenmişlik düzeylerinin incelenmesi

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Summary

Objectives: The aim of the study was to investigate and compare the low-back pain, depression, and burnout levels among formal caregivers of elderly individuals and children with disability.

Methods: This descriptive and cross-sectional study included 29 caregivers of children with disabilities (Group 1) and 26 caregivers of elderly individuals (Group 2). The sociodemographic characteristics of the participants were questioned. The part of low back pain in the Standardized Nordic Musculoskeletal Questionnaire was used to estimate of low back pain. Beck Depression Inventory and Maslach Burnout Inventory were used to evaluate the levels of depression and burnout, respectively. In analysis, percentage values, mean, standard deviation, frequency, and t-test for comparative statistics and Chi-square and Fisher Exact test for categorical variables were used.

Results: There was a significant difference between the two groups only for the frequency of pain (p=0.039). There was a significant difference in depression levels between the groups (p=0.001) and no difference in the burnout level of the among groups (emotional exhaustion p=0.21; depersonalization p=0.95; and personal achievement p=0.066).

Conclusion: It was observed that the disabled and elderly care personnel included in this study similarly experienced moderate burnout, and they also had similar complaints in terms of low back pain, except for the frequency of pain. It was found that the depression levels of the disabled child caregivers were higher than the elderly caregivers. As a result, it has been seen that care work can cause both physical and psychosocial problems in both groups.

Keywords: Burnout; children with disability; depression; formal caregivers; pain.

Özet

Amaç: Çalışmanın amacı, engelli çocuklara ve yaşlı bireylere formal bakım veren personelin bel ağrısı, depresyon ve tükenmişlik düzeylerini incelemek ve karşılaştırmaktır.

Gereç ve Yöntem: Tanımlayıcı, kesitsel bir desende olan bu çalışmaya engelli çocuklara bakım veren 29 personel (grup 1) ve yaşlı bireylere bakım veren 26 personel (grup 2) dahil edildi. Katılımcıların sosyodemografik özellikleri sorgulandı. Bireylerin bel ağrısının değerlendirilmesinde standardize Nordik muskuloskeletal anketinin bel ağrısı ile ilgili kısmı kullanıldı. Bireylerin depresyon düzeylerini değerlendirmede Beck depresyon ölçeği, tükenmişlik düzeylerini ölçmek için Maslak tükenmişlik envanteri kullanıldı. Veri analizinde ortalama, standart sapma, frekans, yüzde değerleri ile karşılaştırmalı istatistiklerden t testi ve kategorik değişkenlerde ki-kare ve Fisher-Exact test kullanıldı.

Bulgular: Bel ağrısı parametresinde sadece ağrı sıklığı durumu için iki grup arasında fark olduğu görüldü (p=0,039). Gruplar karşılaştırıldığında depresyon düzeylerinde anlamlı fark olduğu (p=0,001), tükenmişlik düzeyleri karşılaştırıldığında ise fark olmadığı görüldü (duygusal tükenme p=0,21; duyarsızlaşma p=0,952; kişisel başarı p=0,066).

Sonuç: Bu çalışmaya dahil edilen engelli çocuklara ve yaşlı bireylere bakım veren personelin benzer şekilde orta düzeyde tükenmişlik yaşadığı, bunun yanında ağrı sıklığı haricinde bel ağrısı bakımından benzer yakınmalara sahip olduğu görüldü. Engelli çocuklara bakım veren personelin depresyon düzeyinin yaşlı bireylere bakım veren personele göre daha yüksek olduğu bulundu. Sonuç olarak, bakım işinin her iki grupta da hem fiziksel hem de psikososyal sorunlara yol açabileceği görüldü.

Anahtar sözcükler: Tükenmişlik; ağrı; engelli çocuklar; depresyon; formal bakım veren.

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Introduction

Caregiving is the act of maintaining the functions of an individual who cannot meet his basic needs adequately and who is in need of help in terms of ensuring the survival of his life and meeting his physical and psychological needs by someone else.[1] Care services are provided in two ways in our country. Formal care is the type of care provided by service personnel in official institutions and organizations. Informal care is the type of care in which the needs of the individual are met by his family or relatives.[2] The number of elderly people and individuals with disabilities in need of care is increasing in Turkey day by day. Various neurological diseases (stroke, Parkinson, dementia, Alzheimer, etc.), cancer, muscular diseases, respiratory system diseases, orthopedic diseases, and the disability that may be experienced from congenital or subsequent traumas (visual impairment, hearing impairment, mental disability, or the disability that stem from orthopedic/chronic diseases like Cerebral Palsy or Spina Bifida) can make individuals in need of permanent or partial care.[3] Although not every individual is in need of care with aging, chronic diseases and physical inadequacies accompanied by psychological and social problems can make the individual dependent on someone else's help.[4] The family institution is not sufficient in terms of meeting the care needs of these individuals, and the official care personnel increasingly assumes the role of care for the family.[5] In acquiring and performing their daily life activities and self-care skills (toilet need, bath and body cleaning, hand, face, and foot cleaning, nail care, hair care, oral care, beard shaving, nutritional needs, dressing, and undressing, etc.) in line with the needs of individuals in formal care, the acts of constantly helping them, protecting them against dangers, and accompanying them are mostly characterized by the care personnel as a demanding task with plenty of demands that must be fulfilled.[6]

It is widely accepted that both formal and informal caregivers experience various emotional problems. Taking care of victims and people in need makes them more vulnerable to troubles and dangers.[4] Stress, and burnout that stress brings together with are the most crucial of these problems.[7–9] While studies that have drawn attention to the increased prevalence of burnout and depression in families with disabled children can be found in the literature, no studies have been found in the literature evaluating burnout in formal caregivers of children with disabilities.[10,11] Stress and burnout of caregivers working both in geriatric care services and nursing homes have been emphasized in terms of geriatric care.[12] Besides, formal caregivers are at higher risk of experiencing depression compared to those who do not give care and the general population.[13] The physical strength and effort required by the working conditions of caregivers can cause musculoskeletal diseases like low back pain mostly, which occur due to work-related activities, and this situation can negatively affect work efficiency.[14,15] Improper body movements and postural habits cause musculoskeletal system disorders over time.[16] Lifting heavy things, pushing and pulling heavy objects, lifting without bending the knees, lifting with rotation in lumbar flexion, lifting asymmetrically, repeating the movement continuously, and standing for a long time progressively increase the stress on the lumbar region, cause degenerative disorders in the musculoskeletal system, and also lead to pain that causes limitations in the lumbar and sacral region.[14] The reason why these common movements, which are seen as normal daily life activities, gain harmful qualities is continuous repetition, speed, and inadequate recovery intervals between two movements.[17]

It has been reported in the literature that physical and psychosocial risk factors may be effective in the emergence of musculoskeletal disorders for both formal and informal caregivers.[18–20] During such activities as especially transferring individuals from one place to another, their personal care, and proving their nutrition, etc., caregivers are faced with risk factors that may cause physical disorders. In conclusion, it can be said that the characteristics such as body weight of individuals taking care, their disability/illness status and severity, and their need for help, as well as the education of caregivers during transfer activities, may all affect the health of caregivers in different ways.

It has been observed in the literature that studies on low back pain and neck pain generally focus on doctors, nurses, or families of individuals with disabilities and elderly people.[19–22] As far as we could examine the literature, just a few studies have been conducted on the physical and mental well-being of care personnel working in the centers for individuals with disabilities and elderly people. Besides, it may have different effects on the health of caregivers of

children with disabilities and elderly people. It has also been mentioned that the stress and burnout levels of care personnel working in acute geriatric care services and nursing homes might be different in elderly care.[12] Therefore, we think that the care needs of children with disabilities who receive care from the caregivers included in this study and those of elderly people who receive care in nursing homes may have different physical and psychosocial needs, so these factors may affect the health of caregivers in different ways. No studies could be found comparing these groups in the literature. Thus, this study, which we think will contribute to the development of strategies for maintaining and improving caregiver health, aimed to compare low back pain, depression, and burnout levels of formal caregivers of children with disabilities and elderly people.

Material and Methods

Study group

In this study, the participants of which were accessed by convenience sampling method with a descriptive and cross-sectional design, 29 individuals (Group 1) working in spastic children care and rehabilitation center in Bolu province and 26 individuals working in two separate nursing home, elderly care and rehabilitation centers (Group 2) were included, all of whom volunteered to participate and met the inclusion criteria. The data of the study were collected from a total of 55 caregivers by face-to-face interview technique between July 2018 and December 2018.

Children who received care in the group of the personnel giving care for children with disabilities were in the age group of 0–18 years and had a disability that may be experienced from congenital or subsequent traumas like visual impairment, hearing impairment, mental disability, or the disability that stem from orthopedic/chronic diseases like Cerebral Palsy or Spina Bifida.

The majority of the elderly who received care in the group of the personnel giving care for elderly people involved the individuals over 65 who were constantly or partially in need of care, with chronic diseases like various neurological diseases (stroke, Parkinson, dementia, Alzheimer, etc.), cancer, muscular diseases, respiratory system diseases, and orthopedic diseases, or without a disease but having physical inadequacies accompanied by psychological and social problems.

Data collection tools

In addition to a questionnaire form questioning sociodemographic information of the individuals included in the study, The Standardized Nordic Musculoskeletal Questionnaire (SNMQ) was used to evaluate musculoskeletal system pain, Maslach Burnout Inventory (MBI) was used to determine burnout level, and Beck Depression Inventory (BDI) was used to evaluate depression status.

Survey form

The participants' sociodemographic information such as gender, age, height (cm), weight (kg), marital status, and educational status were obtained.

Maslach burnout inventory (MBI)

The Maslach Burnout Inventory (MBI) was used to determine the burnout levels of the individuals who participated in this study. MBI was developed by Maslach et al.[23] in 1981 and was adapted to Turkish by Ergin. However, while it was being adapted, its 7-point answer option was reduced to 5-point type, and the index was adapted to Turkish culture. It is composed of a total of 22 items and 3 subscales as Emotional Exhaustion (8 items), Depersonalization (6 items), and Personal Achievement (8 items). The high score obtained from the subscales of Emotional Exhaustion and Depersonalization and the low score obtained from the subscale of Personal Achievement indicate a high level of burnout. In the Emotional Exhaustion sub-dimension, 0–16 points indicate low burnout, whereas 17–26 points indicate moderate, and 27 points and above indicate high burnout; In the Depersonalization sub-dimension, 0–6 points indicate low burnout, while 7–12 points indicate moderate, and 13 points and above indicate high burnout; and in the Personal Achievement sub-dimension, 39 points and above indicate low burnout, whereas 32–38 points indicate moderate, and 0–31 points indicate high burnout. The Cronbach's Alpha coefficients for the three sub-dimensions of MBI are as follows: Emotional Exhaustion 0.83, Depersonalization 0.65, and Personal Achievement 0.72.[23,24]

Beck depression inventory (BDI)

In order to determine the depression levels of the participants, a 4-point Likert type and 21-item Beck Depression Inventory (BDI), Turkish validity and reliability study of which was conducted by Hisli in 1988,

was utilized. The score that can be obtained from the inventory is between 0–63, and an increase in the scores indicates an increase in depressive symptoms. The Cronbach's Alpha coefficient of the inventory was found 0.80, and its reliability was found 0.74.[25]

Standardized nordic musculoskeletal questionnaire (SNMQ)

The related section of SNMQ on low back pain was used to evaluate low back pain. In this questionnaire, nine symptom areas of the body were mapped and marked. These areas were determined as feet-ankles, knees, thighs-hips, wrists-hands, low back, elbows, back, shoulders, and neck. For each area, whether there was pain within the last year, within the last month, and on that day, the age when it started first, whether they faced hospitalization due to pain in this area, the status of work hindrance and work change, seeing the doctor, using medication and getting a medical report, as well as the frequency and severity of the pain, were all questioned. Besides, whether the pain decreases or not when the participant is at work and on holiday, the frequency and severity of the symptoms in terms of the symptoms and duration of the disease were also analyzed in a more detailed manner.[26]

Data collection process

This study was approved by the Clinical Research Ethics Committee of Abant İzzet Baysal University on 19/07/2018 (Decision Nr. 2018/127) after the necessary permissions were obtained from the Provincial Directorate of Family, Labor and Social Services, to which the institutions that the participants were working in were affiliated.

The care personnel working in the institutions included in the study were interviewed between July 2018 and December 2018. The purpose of the study, its end point, the evaluation methods to be used, and the evaluation period were verbally explained to all the personnel. The participants were made to sign the "Informed Consent Form" prepared by the Clinical Research Ethics Committee of Abant İzzet Baysal University, and thus their written approval was obtained. The forms were applied to the individuals who participated in the study by the researcher physiotherapist.

The inclusion criteria for the study were the fact that the participant could read and write, had good cognitive functions, and volunteered to participate in the study. On the other hand, exclusion criteria were the fact that the participant had undergone any surgery affecting the musculoskeletal system, was pregnant, was working for less than 3 years, and had a neurological, systemic, or inflammatory disease.

Data analysis

For the descriptive values of the measurements obtained, mean, median, standard deviation, number, and percentage frequencies were calculated. Whether the numerical data showed normal distribution in each group was examined by using the Kolmogorov-Smirnov test. When the parametric test assumptions were met, t-test was used to compare the two independent groups in the study. Besides, Chi-square test and Fisher-Exact tests were used for the differences between categorical variables. In the calculations, PASW (Version 18) was utilized, and the statistical significance level was accepted as $p \leq 0.05$.

Results

This study included 29 care personnel giving care for children with disabilities with a mean age of 38.96±8.46 years (25.00–52.00 min-max), and 26 care personnel giving care for elderly people with a mean age of 42.34±4.89 years (33.00–51.00 min-max). In the study, the body mass index of the caregivers of children with disabilities was found 27.0±4.76 (19.10–35.43 min-max) kg/m^2, whereas the body mass index of the caregivers of elderly people was found 27.0±3.83 (20.90–35.64 min.-max.) kg/m^2 (Table 1).

While 28 (96.6%) of the caregivers of children with disabilities were female and only 1 (3.4%) of them was a male participant, 14 (53.8%) of the caregivers of elderly people were female and 12 (% 46.2) were male participants. The sociodemographic information of the participants is presented in Table 2.

When the depression levels of the caregivers of children with disabilities and those of elderly people were compared according to groups, a significant difference was found between the groups (p=0.001, t=3.602). It was found that the depression levels of the caregivers of children with disabilities were higher than those of the caregivers of elderly people. When the burnout level of the groups was examined, it was found that there were no differences between the two groups in terms of Emotional Ex-

Table 1. Physical characteristics of the groups

	Groups	n	Mean (min-max)	Standard deviation
Age (year)	Caregivers of children with disabilities	29	38.96 (25.00–52.00)	8.46
	Caregivers of elderly people	26	42.34 (33.00–51.00)	4.69
Height (cm)	Caregivers of children with disabilities	29	161.27 (150.00–175.00)	5.67
	Caregivers of elderly people	26	166.53 (150.00–183.00)	7.56
Weight (kg)	Caregivers of children with disabilities	29	70.17 (48.00–100.00)	12.38
	Caregivers of elderly people	26	74.96 (57.00–103.00)	11.24
BMI (kg/m^2)	Caregivers of children with disabilities	29	27.0 (19.10–35.43)	4.76
	Caregivers of elderly people	26	27.0 (20.90–35.64)	3.83

BMI: Body mass index.

Table 2. Sociodemographic characteristics of the individuals

	Caregivers of children with disabilities		Caregivers of elderly people		Total	
	n	%	n	%	n	%
Educational level						
Primary school	12	41.4	7	26.9	19	34.5
Secondary school	2	6.9	2	7.7	4	7.3
High school	14	48.3	13	50.0	27	49.1
University	1	3.4	4	15.4	5	9.1
Gender						
Female	28	96.6	14	53.8	42	76.4
Male	1	3.4	12	46.2	13	23.6
Marital status						
Married	26	89.7	23	88.5	49	89.1
Single	3	10.3	3	11.5	6	10.9

Table 3. The comparisons of burnout and depression levels of the groups

	Groups	n	Mean (min-max)	SD	p
Maslach EE score	Caregivers of children with disabilities	29	17.00 (9.00–34.00)	6.98	0.21 (t=1.24)
	Caregivers of elderly people	26	19.07 (11.00–33.00)	5.09	
Maslach D score	Caregivers of children with disabilities	29	7.86 (5.0–17.0)	3.25	0.952 (t=0.06)
	Caregivers of elderly people	26	7.80 (5.0–16.0)	3.39	
Maslach PA score	Caregivers of children with disabilities	29	29.68 (15.00–40.00)	5.64	0.066 (t=1.83)
	Caregivers of elderly people	26	32.03 (26.00–40.00)	3.46	
BDI	Caregivers of children with disabilities	29	11.00 (0.00–23.00)	6.51	0.001* (t=3.602)
	Caregivers of elderly people	26	5.38 (0.00–16.00)	4.80	

* p<0.01 statistically significant difference, t: t test value. Maslach EE score: Maslach emotional exhaustion sub-dimension score; Maslach D score: Maslach depersonalization sub-dimension score; Maslach PA score: Maslach personal achievement sub-dimension score; BDI: Beck depression inventory score; SD: Standard deviation.

haustion sub-dimension scores, Depersonalization sub-dimension scores, and Personal Achievement sub-dimension scores (p=0.21, t=1.24; p=0.952, t=0.06; p=0.066, t=1.83) (Table 3).

When the data regarding the low back pain section of the SNMQ were analyzed, it was revealed that 62.07% of the caregivers of children with disabilities and 59.46% of the caregivers of elderly people that they had low back pain complaints. In the same questionnaire, it was found that there was a significant difference between the two groups only for pain frequency status (p=0.039, χ^2=0.75). It was observed that the three different pain frequency category distributions of the caregivers of children with disabilities questioned as "constantly (almost every day), often (several days a week), and rarely" were similar according to SNMQ; whereas almost three-quarters of the caregivers of elderly people reported pain several days a week (Table 4).

Discussion

In this study, which was carried out in order to compare low back pain, depression, and burnout levels of formal caregivers of children with disabilities and elderly people, it was determined that the depression levels of the caregivers of children with disabilities were higher than the caregivers of elderly people, while the burnout levels of the caregivers of children with disabilities and those of the caregivers of elderly people were similar. It was observed that in terms of low back pain, both caregiver groups had similar complaints, except for pain frequency status.

In a study conducted with caregivers who lifted heavy loads, it was found that 8 out of 11 caregivers had low back pain.[27] In the literature, it has been stated that carrying in the wrong position and repeating the movement are risk factors for creating and increasing low back pain, and it has been reported that the weight limit that will set the ground for low back pain is 12.5 kg.[28] Considering the fact that the mean body weight of both children with disabilities and elderly people for whom the caregivers participating in this study provided care is above this limit, it is likely that the caregivers having no training with regard to body mechanics will experience low back pain. In a study conducted by Czupryna et al.,[20] the prevalence and underlying causes of low back pain in the mothers of children with cerebral palsy were examined, and it was found that most of the mothers who participated in the study had low back pain. Bearing in mind that the caregivers participating in our study care and accompany children with disabilities and elderly people just like their family members throughout the day, we think that it is inevitable for them to suffer from low back pain. Thus, in our study, it was found that more than half of the participants in both groups had low back pain. On the other hand, in terms of the frequency of pain, experiencing pain often (a few days a week) was present in more than half of the caregivers of elderly people. When both groups were examined together, it was observed that a significant amount of the caregivers experienced low back pain often (several days a week). With this study, it can be said that experiencing low back pain often (several days a week) in both the caregivers of children with disabilities and those of elderly people is faced by most caregivers.

When the literature is reviewed, the prevalence of caregiver burnout in elderly care can reach up to 50%.[12] In some studies, high levels of psychological stress, burnout, stress, anxiety, depression, and hopelessness were found in the caregivers of dementia patients.[29,30] In another study, it was reported that the risk of emotional exhaustion increased with high workload, repetition and continuity of caregiving, and decreased energy and resilience due to various institutional and personal factors in primary caregivers of children with disabilities.[31] Caregivers are often exposed to mental and physical health risks such as depression, anxiety, and high blood pressure, all of which negatively affect their quality of life.[32,33]

When the burnout scores of the individuals participating in the study were examined, it was observed that there was not a significant difference between the caregivers of children with disabilities and those of elderly people, whereas moderate burnout was experienced in the sub-dimensions of emotional exhaustion and depersonalization in both groups. When the lack of personal achievement sub-dimension was examined, despite the fact that there was not a significant difference in the caregivers of children with disabilities and those of elderly people, it was determined when the mean scores were interpreted that the caregivers of children with disabilities had a high level of burnout, while and the caregivers

Table 4. SNMQ-Low back are pain-related situations and the distribution between the groups

Nordic-Low back area	Groups						p
	Caregivers of children with disabilities		Caregivers of elderly people		Total		
	n	%	n	%	n	%	
Low back pain							
Yes	18	62.07	22	59.46	40	60.61	0.83 (χ^2=0.046)
No	11	37.93	15	40.54	26	39.39	
Pain in the last year							
Yes	18	100.0	22	100.0	40	100.0	–
Pain in the last month							
Yes	17	94.44	18	81.82	35	87.5	0.355$^{\delta}$
No	1	5.56	4	18.18	5	12.5	
Pain today							
Yes	13	72.22	14	63.64	27	67.5	0.564 (χ^2=0.333)
No	5	27.78	8	36.36	13	32.5	
Hospitalization							
Yes	1	5.56	1	4.55	2	5.0	1.000$^{\delta}$
No	17	94.44	21	95.45	38	95.0	
Work change							
Yes	1	5.56	0	0.0	1	2.5	0.450 δ
No	17	94.44	22	100.0	39	97.5	
Work hindrance in the last year							
Yes	8	44.44	10	45.45	18	45.0	0.949 (χ^2=0.004)
No	10	55.56	12	54.55	22	55.0	
Seeing the doctor in the last year							
Yes	4	22.22	5	22.73	9	22.5	1.000$^{\delta}$
No	14	77.78	17	77.27	31	77.5	
Using medication in the last year							
Yes	5	27.78	9	40.91	14	35.0	0.386 (χ^2=0.75)
No	13	72.22	13	59.09	26	65.0	
Getting a medical report in the last year							
Yes	2	11.11	4	18.18	6	15.0	0.673$^{\delta}$
No	16	88.89	18	81.82	34	85.0	
Frequency of the pain							
Constantly (almost every day)	5	27.78	3	13.64	8	20.0	0.039* (χ^2=6.467)
Often (several days a week)	6	33.33	16	72.73	22	55.0	
Rarely	7	38.89	3	13.64	10	25.0	
Decrease in the pain during holiday							
Decreasing	16	88.89	16	72.73	32	80.0	0.258$^{\delta}$
Does not matter	2	11.11	6	27.27	8	20.0	

*: P<0.05 statistically significant difference; χ^2: Chi-square test value; $^{\delta}$: Fisher-Exact test. SNMQ: Standardized Nordic Musculoskeletal Questionnaire.

of elderly people experienced a moderate level of burnout. A decrease in the sense of personal accomplishment indicates that employees tend to ascribe themselves as unsuccessful and incompetent.

When the gender factor is examined, it has been reported in some studies that women experience emotional exhaustion sub-dimension more frequently, whereas men experience depersonalization and lack of personal accomplishment sub-dimension more frequently.[34,35] While some studies have reported higher levels of burnout in women, others have stated that there is no gender difference in terms of burnout level.[35,36] In our study, though the number of female employees in the caregivers of children with disabilities was higher than the number of employees in the caregivers of elderly people, the fact that there was not a significant difference between their burnout levels was thought to prove that the incidence of burnout was not different between the genders.

When our study was examined in terms of depression, which is one of the psychological effects of burnout, it was found that the caregivers of children with disabilities had a higher depression level compared to the caregivers of elderly people. The fact that caregivers of children with disabilities served children with various chronic diseases and that these caregivers were mostly women may cause excessive emotional and psychological burdens due to the fact that they act with affection and protection instinct more.[19,37]

It is very important to be aware of such problems as pain and burnout, the physiological problems they bring together, as well as the psychological problems like depression, and to take personal and institutional protective measures. Informing caregivers about the musculoskeletal system, the accurate use of body mechanics, and the definition, symptoms, prevention, and coping strategies of burnout can be a preventative measure against experiencing pain, depression, and burnout. In the light of all these, it is recommended to establish preventive psychotherapeutic strategies and interventions in the national sector.

We think that this study is enlightening in terms of drawing attention to the prevalence of burnout and physical and psychosocial problems experienced by care personnel working in care and rehabilitation centers for the disabled and elderly. Studies conducted with these groups should not only focus on individual, physical or psychological problems. Indeed, considering that a problem in one affects the other too, focusing them together is thought to provide more accurate results.

Limitations

The small sample size is our most important limitation in terms of the generalization of the results since the study is limited to the institutions located in the province where it was conducted. Besides, the lack of available adequate information regarding the characteristics of children with disabilities and elderly people in the institutions where the study was conducted created a hindrance to the interpretation of the results. Considering that many risk factors may play a role in the subject being examined, the fact that all risk factors have not been evaluated in order to attribute our results to the caregiving process is thought to be another limitation of our study.

Conclusion

It was concluded that the caregivers of children with disabilities and elderly people included in this study had moderate and similar burnout levels, had similar complaints in terms of low back pain, except for pain frequency, and that the depression levels of the caregivers of children with disabilities were higher than those of the caregivers of elderly people.

The protection of the musculoskeletal systems of caregivers depends on their correct posture and movements during work. Despite the fact that both care groups face similar risks, considering the differences, the importance of maintaining proper posture and movements during work, as well as body mechanics, in accordance with their needs should be taught to caregivers by physiotherapists through in-service training seminars, their pain complaints and related assessments should be made accurately, coping methods should be taught, and necessary solution offers should be presented.

Detecting and solving the physical and psychosocial problems on time that affect employees and that influence the quality and productivity of the work significantly are deemed important for the health of not only employers but also caretakers and employ-

ees. It is thought that by improving the physical and mental health of caregivers, personal and professional satisfaction will be increased, and as a result, higher quality patient care will be provided.

Ethical Approval: The study was approved by The Bolu Abant İzzet Baysal University Clinical Research Ethics Committee (Date: 19/07/2018, No: 2018/127).

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