

icH&Hpsy 2018
**4th International Conference on Health and Health
Psychology**

**THE IMPORTANCE OF PSYCHOLOGICAL RESOURCES TO
INDIVIDUALS' ADJUSTMENT TO MOBILITY DISABILITY**

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Abstract

Although disability is widely acknowledged to involve physical, social and psychological consequences, few studies have studied the potential of psychological resources to improve adjustment to disability outcomes. The purpose of this study was to investigate the importance of psychological resources on adjustment to disability for mobility impaired individuals. Psychological resources were evaluated using General self-efficacy scale, MOS Social Support Survey and Brief-COPE questionnaire (measuring adaptive and maladaptive coping strategies). Adjustment of Disability scale – Revised was also used in the study. The study sample consisted 321 mobility impaired individuals (132 men and 189 women), aged between 18 and 80. Participants possessing greater psychological resources reported higher scores of adjustment to disability compared to participants with fewer resources. Regression analysis identified general self-efficacy, perceived social support and maladaptive coping strategies as main significant predictors of adjustment to disability. General self-efficacy, perceived social support and coping strategies were significantly related to individual's adjustment to disability and seem to be stronger predictors of adjustment than sociodemographic or disability-related variables. Empowering of psychological resources should be an important aspect of rehabilitation process for people with mobility disabilities.

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Keywords: Adjustment to disability, self-efficacy, social support, coping strategies.



1. Introduction

Previous studies have indicated that physical disability or severe mobility impairment involves physical, social and psychological consequences (Petter, Müller, Cieza, & Ghey, 2012). These consequences can be enormous and affect every aspect of a person's life. People who have mobility impairment, especially if it is severe, may be dependent on others for assistance with tasks of daily living such as bathing, toileting, dressing, eating, community access, and recreational activities (Glass, 1999). They also face the increased risk of major depression, anxiety disorder, substance abuse and suicide compared with the general population (Avey, Luthans, Smith & Palmer, 2010; Kennedy & Rogers, 2000). In addition, people with mobility disability report not only poorer physical but also mental health, lower quality of life compared to non-disabled people (Lidal, Veenstra, Hjeltnes & Biering-Sørensen, 2008; Salaffi et al. 2009). These indicators suggest that the person with mobility impairment or disability has an increased risk of adjustment difficulties and their coping strengths might be challenged, particularly in the early stages following disability.

Adjustment to disability can be described as “evolving, dynamic, general process through which the individual gradually approaches an optimal state of person-environment congruence” (Livneh & Antonak, 1997, p. 18). During this process, persons with mobility disabilities may grow positively over time as they develop adaptive beliefs and experience shifts in their values. Some of these positive aspects may take time to be realized or appreciated (Elliott, Kurylo & Rivera, 2002).

The extent of adjustment to disability can be explained by the degree that a person (a) recognizes values other than those which are in the direct conflict with his or her disability, (b) deemphasizes those aspects of physical appearance and ability that contradicts his or her disability, (c) does not extend his or her disability beyond actual physical impairment to other aspects of functioning self, (d) does not compare himself or herself to other in the areas of physical limitations but instead emphasizes his or her own assets and abilities (Dembo, Leviton & Wright, 1956; Li & Moore, 1998).

2. Problem Statement

Although disability is widely acknowledged to involve physical, social and psychological consequences, few studies have studied the potential of psychosocial resources to improve adjustment to disability process. Psychological resources can be described as inner health protecting and promoting the potential of a person, who means to deal with difficult and stressful situations. Psychological resources may include person's skills, abilities, knowledge, talents, experiences, strengths or behavioral patterns (Hobfoll, 2002; Rowe, 1996).

Strengthening psychological resources is one of the most important aims in rehabilitation to support successful adjustment to mobility disability. In terms of the impact of the individual's adjustment, psychological resources, such as self-efficacy, perceived social support and coping strategies were found to be very important factors related with health, psychological well-being and quality of life in mobility impaired people (Benyon, Hill, Zadurian & Mallen, 2010; Motl, McAuley, Snook & Gliottoni, 2009; Hampton, 2004; Alčiauskaitė & Šinkariova, 2013).

General self-efficacy is probably one of the most analyzed psychological resources among people with mobility disabilities. Self-efficacy measures the strength of a person's expectation about performing a task successfully in the future and has been shown to be a mediator of health outcomes (Bandura, 2004). It is believed to guard against the negative impact of pain, fatigue and depression (Cameron, Kool, Estévez-López, López-Chicheri & Geenen, 2018; Craig, Tran & Siddall, 2013). Higher self-efficacy is consistently related to higher life satisfaction, greater psychological well-being, better mental health and higher life satisfaction in mobility impaired individuals (Cijssouw et al., 2017; Van Leeuwen, Kraaijeveld, Lindeman & Post, 2012).

Perceived social support has also been identified as a significant psychological resource that can buffer the negative effects of health conditions on psychological functioning. Previous research demonstrates consistent negative associations between measures of social support and depression, as well as positive associations between measures of social support and psychological health in people with spinal cord injury or arthritis (Müller, Peter, Cieza & Geyh, 2012; Jensen, Smith, Bombardier, Yorkston, Miró & Molton, 2014). Lack of social support is related to increased loneliness, physical pain and fatigue, lower physical health outcomes (Kool & Geenen, 2012; Buenaver, Edwards & Haythornthwaite, 2007), so it is very important that persons with disabilities get enough support from their family and friends.

Meanwhile, coping has assumed a dominant role in the extant literature on psychosocial adaptation to physical disability or life-threatening diseases. The role of coping has been typically viewed either as a stable, trait-like or trans-situational personality attribute to reduce anxiety or stress, or a situationally determined process, state or strategy invoked to alleviate context-triggered stress (Livneh & Wilson, 2003). This resource may significantly amplify or diminish the effects of stressful events as different types of coping strategies can have protective or harmful effects on individuals' health and well-being. Previous research has found that adaptive coping strategies are associated with better emotional well-being and quality of life (Englbrecht, Kruckow, Araujo, Rech & Schett, 2013), decreased pain and depressive symptoms (Ramírez-Maestre & Esteve, 2014) and better psychosocial adjustment to disability (Livneh & Martz, 2014).

However, the existing studies on adjustment to disabilities are limited in several ways. First, previous research has focused on only a few variables related to adjustment to disability. Some psychological resources have been frequently analyzed but not together with disability related variables. Even among people with the same disability, their condition and functional limitation can vary dramatically. Disability related characteristics, such as severity of disability, nature of disability (congenital or acquired) and visibility of disability, and their associations with person's adjustment have rarely been explored (Harrison, Falvo, Weiss & Holland, 2017; Malcarne, Hansdottir, McKinney, Upchurch & Greenbergs, 2007). Also, mostly the negative aspects of disability (e. g. depression, anxiety, perceived distress, etc.) have been analyzed in previous studies, instead of focusing on person's inner strengths and positive outcomes of mobility disability (Alčiauskaitė & Šinkariova, 2018; Weitzner et al., 2011).

There remain a number of important unanswered questions with respect to self-efficacy, perceived social support and coping strategies. As we have mentioned above, most of the resources are very complex and it still remains unclear, which aspects are related to a person's adjustment to disability. For

example, there are many coping strategies that might be effective in dealing with psychological distress, but are they all useful while a person is trying to adapt to his or her disability? Moreover, previous research provides controversial findings and limited research has yet to directly compare the relative importance of different types of social support to the psychological functioning of persons with mobility disabilities.

3. Research Questions

- 3.1. Which psychological resources are significant predictors of adjustment to disability among individuals with mobility disabilities?
- 3.2. Are psychological resources stronger predictors of adjustment to disability than sociodemographic and disability related variables?

4. Purpose of the Study

The purpose of the study was to investigate the importance of psychological resources on adjustment to disability among individuals with mobility disabilities.

5. Research Methods

5.1. Participants

In total 516 persons having mobility disability were invited to participate in this study. Potential participants were reached while collaborating with various Lithuanian associations and organizations for people with disability. The data of the study came from self-administered questionnaires. Respondents were personally asked to fill in the questionnaires, after they were informed about the purpose and procedure of the study.

To be included in the study, a participant had to match three criteria: (1) being older than 18; (2) having a mobility disability (impairment); (3) willing to participate in the study. The final study sample comprised 321 participants with mobility disabilities.

Sociodemographic variables associated with this sample included the following sociodemographic characteristics: (a) age range: 18 to 80 years ($M = 39.64$, $SD = 15.11$ years), (b) gender: women (59.1%), men (40.9%), (c) marital status: single (43%), married or living with a partner (37.8%), divorced (13.9%) or widowed (5.3%) (d) education: secondary education (32.5%), university education (26.3%), non-university education (18.9%), vocational training (16.7%), basic education (5.6%), (e) employment status: not employed (51.7%), employed (31.3%), students (12.7%) or employed students (4.3%).

The mobility disabilities ranged from mild walking impairment to using crutches, a walker, a wheelchair or other assistive devices. The severity of disability was reported as: (a) moderately severe (34.4%), (b) severe (33.7%), (c) non-severe (15.8%), (d) very severe (13.0%). These categories were formulated according to the law of Disability and working capacity assessment in Lithuania (Disability and working capacity assessment office under the Ministry of Social Security and Labour of the Republic of Lithuania, 2018).

The sample was divided between participants having acquired (62.8%) and congenital disability (37.2%). Age at the time of acquired disability ranged from 1 to 66 years ($M = 14.82$, $SD = 11.11$ years). Most participants had a visible (48.9%) or partly-visible (31.9%) disability. The majority of respondents (73.4%) reported feeling chronic pain due their mobility disability and its frequency was reported as: (a) never (16.3%), (b) rarely (15.0%), (c) sometimes (32.3%), (d) often (28.8%), (e) most of the time (12.5%). Intensity of perceived chronic pain ranged from 0 to 10 ($M = 5.02$, $SD = 2.57$).

5.2. Research Instruments

Study participants were asked to complete the survey containing four questionnaires and sociodemographic questions. All surveys were completed individually, contacting by each respondent in person. Every participant of the study was informed about the main goal of the study, study procedure, data protection and their right to cancel their participation at any time of the study.

The survey contained four questionnaires measuring individual's psychological resources (self-efficacy, perceived social support and coping strategies) and adjustment to disability.

Self-efficacy. Participants completed the 10-item General Self-Efficacy scale by Schwarzer and Jerusalem (1995). All items were scored on a five-point Likert scale ranging from 1 (strongly disagree) to 5 (strongly agree). The Cronbach's alpha for this scale in the present study was .955.

Perceived social support. MOS Social Support Survey by Sherbourne & Stewart (1991) is an 18-item self-reported measure for assessing the availability of social support. All items were scored on a five-point Likert scale ranging from 1 (none of the time) to 5 (all of the time). Originally, this scale consists of four subscales measuring four different types of social support, but in this study, because of high number of analyzed variables, we only used the overall scores. The Cronbach's alpha for this scale in the present study was .967.

Coping strategies. The strategies for coping with stress were assessed using the 28-item Brief COPE, comprising 14 two-item subscales. The Cronbach's alpha for the Lithuanian subscales ranged from 0.509 (venting) to 0.890 (substance use). The individual item score ranged from 1 (not doing it at all) to 4 (doing it a lot). The subscales were divided into three groups of strategies: 1) emotion-focused coping (use of emotional support, positive reframing, acceptance, religion, humor), 2) problem-focused coping (active coping, planning, use of instrumental support) and 3) maladaptive coping strategies (venting, denial, substance use, behavioral disengagement, self-distraction, self-blame).

Adjustment to disability. The Adjustment to Disability Scale-Revised (ADS-R) is a 32-item self-reporting measure of adjustment to disability among people with disabilities. Each statement is rated on a 4-point Likert-type scale ranging from 1 (strongly disagree) to 4 (strongly agree). Possible scores on the ADS-R range from 32 to 128. A low score reflects a low level of acceptance of the disability. The ADS-R was adapted and modified from the original 50-item Acceptance of Disability (AD) (Groomes & Linkowski, 2007). The Cronbach's alpha for the ADS-R in the present study was 0.957.

We also included sociodemographic variables, such as respondent gender, age, marital status, education and occupation. We categorized disability variables in terms of disability severity, disability onset (acquired or congenital), duration of disability, visibility of disability, presence of chronic pain, intensity and frequency of perceived chronic pain. Intensity of chronic pain was measured using a 10-

point Likert-type ordinal scale from 0 (no pain at all) to 10 (worst possible pain). Pain frequency was also measured using 5-point Likert-type ordinal scale from 1 (never) to 5 (most of the time).

5.3 Data Analysis

Data were analysed using SPSS software, version 23.0 for Win. Data were presented using descriptive statistics including means, standard deviations, and proportions. A t-test was used for between-groups comparison and Pearson correlation coefficient for correlation analysis. The Mann–Whitney test was used for parameters with non-normal distributions. Three regression analyses (linear and stepwise) to determine which variables were associated with adjustment to disability were used in the study. We verified that the basic assumptions for all three regressions were met for all of our analyses, especially for the normality of residuals. For each dependent variable, we specified the beta regression coefficient, its standard deviation and the associated t- and p-values. Statistical significance was considered when the p-value ≤ 0.05 .

6. Findings

Of the 321 individuals who agreed to participate in this study, 274 (114 males and 160 females) who fully completed the research questionnaires, were included in the current analyses.

6.1. Correlations and comparisons

Before testing of differences in adjustment to disability between subgroups based on demographic or disability-related characteristics, some variables were transformed into dichotomous or variables with less categories based on the mean or frequency of the particular variable (e. g. individuals were divided into two age groups based on the mean of the age) (see Table 01).

Table 01. Distributions of adjustment to disability scores in relevant subgroups

Variable	N	M	SD	t/F	p-value
<i>Gender</i>					
Male	114	92.12	19.99	-.619	.536
Female	160	93.57	17.66		
<i>Age</i>					
Younger (18-39)	141	98.90	18.87	5.754	.001
Older (40-80)	133	86.68	16.48		
<i>Marital status</i>					
Married or living with a partner	110	95.90	16.44	2.226	.027
Single, divorced or widowed	164	91.00	19.79		
<i>Education</i>					
higher education	128	96.98	17.68	2.425	.003
vocational training	47	88.89	16.39		
secondary or lower education	99	89.71	19.92		
<i>Occupation</i>					

Employed	103	101.50	15.39	41.638	.001
Student	33	103.70	18.73		
Unemployed	138	84.04	16.47		
<i>Severity of disability</i>					
More severe	119	91.69	20.36	-1.361	.175
Less severe	145	94.83	17.13		
<i>Nature of disability</i>					
Congenital	95	98.93	18.00	3.957	.001
Acquired	179	89.90			
<i>Visibility of disability</i>					
Visible or partly-visible	219	92.44	19.36	-1.072	.286
Non-visible	55	95.07	15.43		
<i>Presence of chronic pain</i>					
Feels chronic pain	211	91.61	18.44	-2.219	.027
No chronic pain	63	97.51	18.74		
<i>Intensity of chronic pain</i>					
Stronger pain	114	84.25	16.68	7.039	.001
Weaker pain	137	99.40	17.23		
<i>Frequency of chronic pain</i>					
Seldom or sometimes	132	97.45	18.99	5.191	.001
Often or most of the time		85.70	15.85		

Testing of differences in adjustment to disability scores between subgroups based on demographic or disability-related characteristics revealed some statistically significant differences with respect to age, marital status, education, occupation, nature of disability, presence of chronic pain, intensity of chronic pain and frequency of chronic pain (Table 01).

Correlation analysis (Table 02) shows that adjustment to disability was positively correlated with general self-efficacy, perceived social support, emotion-focused coping and problem-focused coping, and negatively correlated with maladaptive coping. General self-efficacy positively correlated with social support, emotion-focused coping and problem-focused coping, and was negatively related to maladaptive coping. Both emotion-focused coping and problem-focused coping had significantly positive relations to perceived social support.

Table 02. Correlations between adjustment to disability and psychological resources

Variable	1	2	3	4	5
1. Adjustment to disability					
2. General self-efficacy	.762**				
3. Perceived social support support	.500**	.503**			
4. Problem-focused coping	.368**	.385**	.380**		
5. Emotion-focused coping	.286**	.277**	.396**	.659**	
6. Maladaptive coping	-.453**	-.426**	-.253**	-.119*	-.209**

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

6.2. Regression analyses

To obtain a more parsimonious and meaningful understanding of the pattern of significant correlations, we conducted several linear regression analyses.

In the first regression analysis, we entered sociodemographic and disability-related variables as potential predictors of adjustment to disability. Before the regression analysis, nominal and ordinal variables (gender, marital status, education, occupation, nature of disability, severity of disability, visibility of disability, presence of chronic pain, frequency of chronic pain) were transformed into pseudo-variables (see Table 03).

From the group of sociodemographic and disability related variables, respondent's age, marital status, occupation (being employed or being a student), emerged as significant predictors of incremental variance in adjustment to disability. This model explained 45% of the variance of adjustment scores.

Table 03. Linear regression analysis of sociodemographic and disability-related variables as potential determinants of adjustments to disability scores

Sociodemographic and disability-related variables	B	SE B	β	p-value
Gender (male)	-.220	2.217	-.006	.921
Age	-.355	.088	-.297	.001
Marital status (being married or living with a partner)	8.442	2.279	.237	.001
Education (higher education)	3.079	2.663	.086	.249
Education (vocational training)	.161	3.193	.004	.960
Occupation (employed)	10.083	2.580	.277	.001
Occupation (student)	7.979	4.979	.107	.111
Nature of disability (congenital)	.412	4.656	.006	.930
Severity of disability (more severe)	-2.097	2.526	-.057	.408
Visibility of disability (visible)	-4.450	2.819	-.108	.116
Duration of disability	.311	.105	.195	.003
Presence of chronic pain (no pain)	13.147	3.691	.254	.001
Frequency of pain (less frequent)	3.817	2.710	.107	.161
Intensity of pain	-1.762	.614	-.232	.007
R ²	.450			
Adjusted R ²	.404			

In the second regression analysis, we entered general self-efficacy, perceived social support, emotion-focused coping, problem-focused coping and maladaptive coping to predict adjustment to disability (see Table 04).

Table 04. Linear regression analysis of psychological resources as potential determinants of adjustments to disability scores

Psychological resource	B	SE B	β	p-value
General self-efficacy	1.476	.126	.585	.001
Perceived social support	.105	.050	.094	.038
Problem-focused coping	.400	.283	.073	.159
Emotion-focused coping	.332	.191	.088	.084
Maladaptive coping	-.669	.157	-.194	.001
R ²	.641			
Adjusted R ²	.635			

From the group of psychological resources, general self-efficacy, perceived social support and maladaptive coping emerged as significant predictors of incremental variance in adjustment to disability. The model explained 64.1% of the variance of adjustment to disability scores.

In the final stepwise linear regression analysis, we entered demographic and disability-related variables and psychological resources which were significant in previous regression analyses as potential predictors of adjustment to disability (see Table 05).

Table 05. Stepwise linear regression analysis of demographic and disability-related as potential determinants of adjustments to disability scores

Model	B	SE B	β	p-value
<i>Step 1</i>				
General self-efficacy	1.960	.112	.793	.001
R ²	.629			
Adjusted R ²	.627			
<i>Step 2</i>				
General self-efficacy	1.869	.110	.757	.001
Age	-.222	.054	-.184	.001
R ²	.662			
Adjusted R ²	.658			
<i>Step 3</i>				
General self-efficacy	1.683	.126	.681	.001
Age	-.249	.053	-.207	.001
Perceived social support	.150	.053	.141	.005
R ²	.676			
Adjusted R ²	.671			
<i>Step 4</i>				
General self-efficacy	1.592	.131	.644	.001
Age	-.231	.053	-.191	.001
Perceived social support	.142	.053	.134	.008
Occupation (employed)	4.013	1.709	.109	.020

R ²					.686
Adjusted R ²					.679
<i>Step 5</i>					
General self-efficacy	1.489	.139	.603		.001
Age	-.236	.053	-.195		.001
Perceived social support	.137	.052	.129		.010
Occupation (employed)	3.843	1.697	.104		.025
Maladaptive coping	-.328	.164	-.095		.047
R ²					.693
Adjusted R ²					.684

As represented in Table 05, in the stepwise regression analysis, the variables were entered one by one to the analysis at the each step. In the first step, general self-efficacy could potentially predict 62.9% of variance, with standardized beta coefficient of 0.793, $p = .001$. Both general self-efficacy and participants' age explained 66.2% of adjustment to disability scores with beta coefficients of 0.757, $p = .001$ and $-.184$, $p = .001$, respectively in the second step. In the third step, perceived social support emerged as the third significant predictor ($\beta = .141$, $p = .005$) together with self-efficacy ($\beta = .681$, $p = .001$) and age ($\beta = -.207$, $p = .001$). In the next step, occupation status was added as the fourth significant variable ($\beta = .109$, $p = .020$) and with self-efficacy ($\beta = .664$, $p = .001$), age ($\beta = -.191$, $p = .001$) and social support ($\beta = .134$, $p = .008$) predicted of 68.6% variance. The results from the final fifth step of the model showed that self-efficacy ($\beta = .603$, $p = .001$), age ($\beta = -.195$, $p = .001$), social support ($\beta = .129$, $p = .010$), occupation ($\beta = .104$, $p = .025$) and maladaptive coping ($\beta = -.095$, $p = .047$) potentially predict individuals' adjustment to disability. Including all five variables, the Adjusted R Square was 0.693 (69.3% variance explained).

7. Conclusion

The main focus of this study was to investigate the importance of psychological resources to adjustment of disability for mobility impaired individuals. General self-efficacy, perceived social support and coping strategies were chosen as possible predictors of adjustment to mobility disability, and we wanted to find out if these predict a stronger adjustment than sociodemographic and disability related variables.

Our findings concur with those from previous studies in which psychological resources played important roles in adjustment. Higher general self-efficacy, higher perceived social support and less used maladaptive coping were significant predicting successful adjustment to mobility disability.

Just like other minority groups, people with disabilities are often segregated or excluded from the society. Social integration process requires effort not only from governmental institutions and policy makers but self-empowerment from disabled person as well in order to gain mastery of the problems caused by external discrimination (Lee & Moore, 1998). Previous studies have confirmed that self-efficacy and perceived social support act as positive contributors decreasing impairment and improving quality of life and general health (Börsbo, Gerdle & Peolsson, 2010), which leads to a better adjustment

to disability. A high adjustment to disability does not necessarily mean the person is happy about the disability they now experience, although it does allow for the relinquishment of any false hopes, as well as the successful adaptation of new roles based upon realistic potentials and limitations. The person might benefit from interactions with others, and becomes comfortable with who they are (Livneh & Antonak, 2005). Strong psychological resources may help a person with disability to live a high-quality life regardless of his or her physical limitation.

Even though the correlational analysis revealed significant relationships between problem-focused, emotion-focused and maladaptive coping, only the latter was significant in explaining the variance of adjustment to disability. Contrary to earlier findings (Englbrecht et al., 2012; Alok, Das, Agarwal, Tiwari, Salwahan & Srivastava, 2014) where both problem and emotion-focused coping strategies were associated with better mental health and higher quality of life, we did not find problem-focused and emotion-focused coping strategies to be significant predictors of adjustment. Meanwhile, frequent use of maladaptive coping strategies contributed to high levels of depression and this can negatively impact adjustment to disability (Ziarko, Mojs, Piasecki, & Samborski, 2014).

Adjustment to disability can be affected not only by psychological resources but by external factors as well, so sociodemographic variables were also taken into account in this study. Anyway, the findings of our study suggest that that sociodemographic and disability related characteristics are poorer predictors of psychological adjustment to disability than psychological resources, and this supports previous findings of the scientific literature (Kennedy, Evans & Sandhu, 2009). The comparisons between groups based on individuals' sociodemographic characteristics revealed some statistically significant differences with respect to age, marital status, level of education and occupation. With respect to age, younger individuals reported higher scores of adjustment compared to older ones. Similarly, individuals who were married or having a domestic relationship reported being better adjusted to their mobility impairment than those who had no partner (were single, divorced or widowed). In addition, respondents having a higher education and/or being employed also reported higher scores of adjustment compared to respondents who have lower education and/or are unemployed.

In the final stepwise regression, only age and being employed emerged as significant sociodemographic predictors of adjustment to disability. These findings confirm evidence of previous studies stating that life quality and adjustment to disability is higher for younger mobility impaired individuals than older ones (Rukauskienė & Skučas, 2009). There are several possible explanations for this result. Young people with disabilities face many issues related to their independence and future career goals (House, Russell, Kelly, Gerson & Vogel, 2009), but they, just like other young individuals, are more open to new experiences, more active in employment activities and social participation and more optimistic about their future (Palgi, Shrira, Ben-Ezra, Cohen-Fridel & Bodner, 2011; Levasseur, Richard, Gauvin & Raymond, 2010). In contrast, quality of life and psychological well-being tend to decrease while aging, despite the fact that the person may or may not have a mobility impairment (Hennessy & Walker, 2004).

The finding regarding the importance of individuals' educational level and occupation was not a surprising finding either. Education and employment are the key components of social identity for every adult individual (Asaba & Jackson, 2011). Unfortunately, unemployment is a serious and prevalent

problem among persons with mobility disabilities. Nowadays, people with disabilities face social and physical barriers in the labor market and are excluded from social participation. Low employment rates after rehabilitation are a cause for concern, since return to gainful employment may be the most recognized primary marker of successful rehabilitation outcome after disability (Ottomanelli et al., 2012). Increasing the employment of persons with disabilities is associated with both extrinsic economic rewards and intrinsic rewards, such as greater quality of life and greater physical and psychological well-being (Chapin & Holbert, 2010). The findings of our previous research confirmed that mobility impaired individuals with higher educational level reported less internalized anger and externalized hostility compared to individuals with lower educational level. In addition, employed individuals expressed less depression and internalized anger and greater adjustment than unemployed individuals (Alčiauskaitė & Šinkariova, 2018).

In this study we also examined several relationships between adjustment to disability and some disability related factors, including the nature, severity, duration and visibility of disability, presence of chronic pain, strength and intensity of perceived pain. Of all of these factors, only the duration of disability, presence and intensity of chronic pain emerged as significant predictors of person's adjustment to disability. Longer duration of disability was related to better adjustment and it is consistent with other studies (Simpson, Eng, Hsieh, Wolfe and the SCIRE Research Team, 2012; Pentland, McColl & Rosenthal, 1995; Krause, 1992). According to previous findings, the duration of acquired disability has a direct effect on health and economic stability, and after some time, adjustment will, at worst, be stable, and, at best, improve significantly with time. It was quite unexpected that in this study, there were no significant differences between persons with congenital and acquired disability. As stated in other studies, people with congenital disabilities are generally assumed to be better adapted than people with acquired disabilities (Bogart, 2014). Nonetheless, there is only a small body of literature examining the impact of disability related factors, such as nature or duration of disability, on adjustment in the mobility impaired population.

Meanwhile, the presence of chronic pain and stronger perceived pain predicted poorer adjustment to disability. Previous studies have confirmed that persons who reported perceiving more intense pain, felt more disabled by their pain problem, more depressed, experienced more psychological distress and had lower health related quality of life (Abbott, Tyni-Lenné & Hedlund, 2010; Mok & Lee, 2008). These effects might be responsible for poorer adjustment to disability but, it was quite unexpected that frequency of pain did not appear as a significant predictor of adjustment to disability and this finding has not confirmed previous research on importance of pain frequency on daily life for people with mobility disabilities (Kalia & O'Connor, 2005).

We are aware that our research may have several limitations. First, both the non-randomness of the recruited sample and the restrictiveness of the geographic area limit the generalizability of the findings to other groups of people with mobility disabilities. Second, was our non-homogeneous sample regarding the cause of disability. The main inclusion criteria for study participants was having a mobility impairment or disability and other disability related factors, but the medical diagnosis was not important in our study. Future studies could concentrate on comparison of internal resources and adjustment to disability between persons with different diagnosis (e. g. persons with spinal cord injury vs persons with

arthritis) which could perhaps generate some promising results. Another limitation is that our study lacks longitudinal data and reciprocal analysis so we could not fully explore the process of how identified factors influence adjustment to disability.

Our findings propose some clinical implications as well. Adjustment to disability, as a process, plays the key role in psychosocial and vocational rehabilitation. Rehabilitation not only provides physical recovery and socialization, but also develops new roles and new self-definitions, so higher adjustment is associated with better success of rehabilitation (Lee & Moore, 1998). Rehabilitation professionals should take into consideration that improved self-efficacy, reliable social support and adaptive coping could positively impact the process of adjustment and rehabilitation. Self-efficacy is an important promoting factor and is possible to influence using various self-efficacy enhancing programmes (Turner, Holtzman & Mancl, 2007). Efforts to increase patients' self-efficacy for dealing with disability related problems (e. g., managing pain) might have unique additional benefits for his or her adjustment to disability and general health. In addition, higher self-efficacy may encourage adaptive coping while dealing with daily disease-specific distress (Lowe et al., 2008). Perceived social support can also be increased by applying psychosocial interventions for patient's family and friends, who are the main sources of social support for people with disabilities (Elliott & Berry, 2009). In addition, social participation of individuals with mobility disabilities should also be encouraged so their chances to be supported by others could be increased. Finally, some stress management programmes might also be beneficial for teaching more adaptive ways to cope with distress in mobility impaired persons, thus, increasing their psychological well-being and adjustment to disability (de Brouwer et al., 2013). Some disability related characteristics could be moderated as well. Previous evidence-based studies have proved that psychological pain management training can reduce pain catastrophizing, physical pain and disability and increase self-efficacy and medical outcomes for persons with mobility impairment (Somers et al., 2012; Riddle, Keefe, Nay, McKee, Attarian & Jensen, 2011). We hope that our research will be helpful to improve the psychosocial rehabilitation programmes and for better understanding of the process of adjustment to disability.

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