

Relationship between Pain Self Efficacy and Depression among Individuals with Osteoarthritis

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Current study intended to explore the association between pain self-efficacy and depression and to find gender based differences among individuals Osteoarthritis. In the present study two instruments; depression and pain self-efficacy scale were administered on 100 individuals with osteoarthritis. Results of the study revealed that pain self-efficacy has significant negative relationship with depression. Furthermore, there is no significant difference has been found in depression based gender; men have more pain self-efficacy as compare women. Current study has important implications for health and clinical psychologists.

Keywords: Pain self-efficacy, depression, Individuals with Osteoarthritis

In general population Osteoarthritis (OA) is known as the most commonly diagnosed musculoskeletal disease (Johnson & Hunter, 2014). It is regarded as dissolution of the articular cartilage and lop-sided joint space reduction (Lories & Luyten, 2011) which leads to extreme pain (Hunter, et al., 2014; Litwic, et al., 2013). The divergence in symptoms and its effects among individuals with Osteoarthritis cannot be explicated by a number of factors are being investigated of which depressive symptoms have appeared as strong factor (Axford et al., 2010; Van Baar, et al., 1998). Depression is defined as the presence of unhappy, blank, or short-tempered mood. Depression is commonly complemented by physical and psychological changes that can suggestively have emotional impact on over all functioning (American Psychiatric Association, 2013). Number of studies have stated that depression have significant impacts on overall physical conditions such as heart functioning digestive system etc. (Maurer, et al., 2008; Mikocka-Walus et al., 2007). Individuals with prolonged bodily pains commonly report the experience of depressive symptoms (He et al., 2008). This may increase the vulnerability of patients to experience pain more often (Hansen, & Streltzer, 2005).

Several studies have evaluated the concordance between chronic pain and depression. In this regard pain self-efficacy signifies one's self-reliance about one's capability to work efficiently with experiencing pain (Nicholas, 2007). Pain related self-efficacy has been associated with significant pain-related consequences in individuals with Osteoarthritis (Kalapurakkel, et al., 2015).

Acceptance of pain reflects an individual's disposition to accept pain as reality of life without efforts to avoid or control it (McCracken, et al., 2007). Preliminary studies show the relationship of pain self-efficacy with better activity among patients sustained pain related symptoms (McCracken, et al., 2010; Wallace, et al., 2011). Positive mood improves perceived pain self-efficacy (Bandura, et al., 1999). Similarly, individuals with low pain self-efficacy may believe that things are nerve-racking than they really are, this belief promotes depression, anxiety, and stress (Pajares, 2002).

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Moreover levels pain self-efficacy and depression varies in both genders. Robinson et al. (2005) indicated that women have less emotive response for experienced pain. Furthermore Dahlhamer et al. (2018) reported higher occurrence rate of both depression among female with chronic pain. Prior studies have pointed out significant differences in the levels of depression and experiences of chronic pains between both genders (Keogh et al., 2006; Munce & Stewart, 2007; Tsang et al., 2008).

Although substantial work has been conducted to explore the relationship between pain related self-efficacy and depression but limited work is available for the individuals with Osteoarthritis, this study pursues to provide a comprehensive understanding regarding the impact of pain related self-efficacy chronic pain and depressive symptomology. It also aims to identify the gender differences on depressive and symptoms pain self-efficacy, among patients with Osteoarthritis. The present study is significant from the point of view of psychological diagnosis, assessment precaution in clinical settings. In the light of above mentioned discussion, it is being hypothesized that there is a negative relationship between pain self-efficacy and depression among individuals with Osteoarthritis. Moreover female with Osteoarthritis have higher level of depression and male have higher level pain self-efficacy.

Method

Participants

In the present study, 100 individuals diagnosed Osteoarthritis (male =50, female =50) were approached through purposive convenient sampling technique from OPDs of different hospitals Mansehra and Abbottabad, Pakistan. It was made sure that only those individual were included in the study who were diagnosed orthopedic and reported symptoms of muscular pain in outdoor health facilities. Moreover individuals diagnosed any other muscular pain or mental health issues were excluded from the study.

Measures

In the present study following measures were used.

Depression Anxiety Stress Scales (DASS)

The original version of the DASS (DASS-42; Lovibond & Lovibond, 1995) with three sub-scales i.e., depression, anxiety and stress was applied. For the present study only a depression section of DASS-42 is used. It is comprised of 14 items. With response categories ranging from 0 to 3 (0 = not at all; 1 = to some degree, or some of the time; 2 = a considerable degree, or a good part of time; and 3 = very much, or most of the time). Responses to each scale item were summed to produce a total score for that scale. The reported alpha reliability for the depression scale is .93.

Pain Self-Efficacy Questionnaire (PSEQ)

Ten itemed the pain self-efficacy questionnaire with 7 point likert scale ranging from , where 0=not at all confident and 6=completely confident was used to gauge the range of self-efficacy. Score ranges from 0-6, higher score reflect stronger self-efficacy belief (Nicholas, 2007).

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Procedure

For the purpose of data collection 100 individuals with orthopedic (outdoor) were conveniently selected from the hospitals. After getting permission from hospitals administration diagnosed orthopedic patients were approached. They were briefed about the questionnaires. Informed consent form along with the demographic sheet and self-inventories were handed over to the participants with instructions to complete the questionnaire as honestly as possible and ensure to that no item remain unchecked. There was no time bound for completion of feedback form as they were permitted to complete these questionnaires at their comfort. So, in order to find the association between pain related self-efficacy and depression among orthopedic patients, as well as to explore the gender base differences; the final statistical analysis was done.

Result

Statistical analysis was carried out with the help of Statistical Package for Social Sciences. Correlation and Independent sample t-test analyze were used to analyze the data.

Table 1

Pearson Moment Correlation of Pain Self-Efficacy and Depression (N=100)

Scales	Depression
Pain Self-efficacy	-.25**

** $p < .01$

The table indicates that there is a significant relationship between pain self-efficacy and depression among individuals diagnosed with Osteoarthritis.

Table 2

Independent sample t-test showing comparison of Depression and Pain Self-efficacy between male and female individuals with Osteoarthritis

	Men (n=50)		Women (n=50)		t	p	d	95% CI	
	M	SD	M	SD				LL	UL
DEP	26.44	4.88	27.48	5.23	1.02	.30	-	-3.04	0.96
PSE	29.64	12.7	22.16	6.54	3.69	.00	0.73	-11.50	-3.45

Note. DEP= Depression; PSE= Pain Self Efficacy

The results indicated that there is no significant difference in the levels of depression between both genders. Moreover there is a significant difference in the pain self-efficacy where male participants reported more pain relate self-efficacy as compare to female.

Discussion

The current research intended to find out the association between pain self-efficacy and depression among individual with Osteoarthritis. The results of the study indicated a significant

negative relationship of pain self-efficacy with depression among orthopedic outdoor which supports the first hypothesis of the study (see Table 1). These results are consistent with the findings of previous studies suggesting self-efficacy to be inversely related with depression indicating an inverse correlation between self-efficacy and depression (Baker et al., 2008; Dieserud et al., 2011; Miro et al., 2008; Robinson, et al., 2000).

Individuals with depression feel sadness or a dejected behavior are more sensitivity to enduring and long lasting pain. Actually, it seems that a higher percentage of people suffering from depression, also undergo chronic pain experiences (66% vs. 43%). Similarly, it is acknowledged that both constructive and destructive state of mind can intensify or reduce the intensity of pain (Dahlhamer, 2016; Miro, et al., 2008).

The analysis of present study also demonstrated significant gender differences with reference to depression. The results of the study are contradictory from the prior literature (Keogh et al., 2006; Munce & Stewart, 2007; Tsang et al., 2008) which stated that gender differences have been perceived with respect to the relationship between depression and chronic pain experiences. Although female showed higher levels of depression as Dahlhamer et al. (2018) reported higher occurrence rate of both depression among female patients with chronic pain.

Exploring gender differences with reference to status of pain self-efficacy it was found out that male individuals displayed higher level of pain self-efficacy than female. Consistent results were reported by Robinson et al. (2005) indicating that women have less emotive response for experienced pain. Self-efficacy has been proved as significant mediator that links pain and physical condition in adults (Crombez, et al., 2012; Menendez, et al., 2013; Urquhart et al., 2015; Robinson, et al., 2000; Wright, et al., 2008).

Conclusion

It is concluded that depression scale has significant negative relationship with pain self-efficacy among orthopedic patients. The result revealed that female experience higher level of depression as compared to male. Study results also demonstrated that male patients exhibited higher level of pain self-efficacy than female orthopedic patients. The present study provides important implication for future research especially in understanding the relationship between pain-related self-efficacy and depression among individuals with pain disorder. Present study result is a useful addition in the already existing knowledge about pain self-efficacy and depression among orthopedic patients.

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