Psychosocial distress associated with work-related musculoskeletal disorders: A qualitative study

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Research article

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Abstract

Background

Millions of working hours are lost globally as a result of work-related musculoskeletal disorders (WMSDs). American health care professionals spend approximately 13 days away from work as a result of such injuries. There is a significant body of research on the different ways in which psychosocial factors contribute to the cause of WMSDs. However, there is insufficient evidence on the psychosocial distress acquired by WMSDs and their effect on an individual's overall health and wellbeing. The purpose of this study was to investigate psychosocial distress among workers with WMSDs from different occupational fields.

Methods

A phenomenological qualitative approach was used. Eight participants with work injuries were interviewed. The interview guide comprised eight semi-structured, open-ended questions. Phenomenological analysis was used to develop patterns, categories, and themes.

Results

Analysis of the interviews revealed three themes: the materiality of work, development of psychosocial distress, and adaptation strategies. Participants demonstrated positive working attitudes, values, and beliefs. Work provided a sense of self-worth and meaning to life. However, work injuries disrupted and challenged all aspects of the participants' lives including work, home, family, and personally, resulting in psychosocial distress.

Conclusion

This study concludes that WMSDs could negatively affect the psychosocial health of workers. Depending on the severity of WMSDs and the significance of materiality of work, the amount and magnitude of psychosocial distress occur accordingly. Individual attempts using different adaptation strategies to regain control over the environment are required to reduce psychosocial distress and physical symptoms, promote family stability, and perform expected roles and responsibilities. Employers should develop and carry out health promotion programs to improve the health and well-being of people at work.

Introduction

More than 2.5 million Americans reported work-related musculoskeletal disorders (WMSDs) in 2016, resulting in a loss of more than 1 million working days with a median of 9 days away from work [1]. In Europe, 35% of the workforce reported that work conditions affected their health [2]. Numerous studies investigated the prevalence of WMSDs, concluding that psychosocial issues, work activities, and environmental organizations are risk factors associated with developing WMSDs [2, 3]. A wide range of recommendations were made, including managing psychosocial work issues, modifying and adapting

environment and work activities, design of tools, adjusting worker behavior, and policy proposition. However, studies have rarely examined the repercussion of WMSDs on the psychosocial health of workers.

Statement Of Purpose

This research study examined the following: 1) materiality of work to understand the importance, attitude, values, and beliefs associated with working to the individual, 2) psychosocial distress experienced as a consequence of WMSDs, and 3) adaptation strategies. The overall aim was to understand and recognize psychosocial experiences due to WMSDs.

Research Questions

This study sought to answer three questions based on workers with WMSDs: 1) What is their perspective on the materiality of work?; 2) What types of psychosocial distress are experienced after the injury?; and 3) What are the adaption strategies of workers with WMSDs?

Background

Historians discuss the centrality and importance of work in the advancement of ancient civilizations. From the beginning, work is a fundamental theme of human and social structure. With technological advancement, work continues to increase in complexity, presenting further opportunities and possibilities, and expanding in its meaning, value, and belief. Societies measure an individual's worth by the ability to contribute to the monetary needs of the family as well as being able to care for one's self [4]. People are continuously striving to find the meaning of life through work [5, 6]. An individual develops a sense of identity through participating in meaningful work [7, 8]. It provides individuals with a sense of identity, income, social relationships, outlet, recognition, and belonging to a society that values and respects working and independent individuals, eventually influencing the worker's wellbeing [9–13]. For many adults, paid work is a major, if not the principal source of purposive activity, social relationships, independence, identity, and self-respect [10, 14, 15]. In addition, work has a positive outcome on the individual's relationships, and the development and maintenance of identity in and out of the workplace [10, 16]. Through work, people seek a sense of balance and normalization in life between their needs and values to secure a feeling of satisfaction and belonging [6, 13]. Depending on the individual's gender, race, age, culture, religion, immigration status, and social class, work provides an opportunity for survival, purpose, structure, and/or a sense of power [12].

Because of the centrality of work in people's lives, the inability to work due to injury or unemployment may result in psychosocial health issues. Work-related injuries leading to restricted and limited participation in meaningful and purposeful activities result in significant strain and stress on an individual's psychosocial health [10]. Kim [17] underlines that occupational injuries are more severe and

necessitate longer treatment than non-occupational injuries due to associated psychosocial consequences, such as depression. Alnaser [11], de Carvalho et al. [18], and Chan and Spencer [19] examined different populations with work-related injuries and highlighted that participants' experience psychosocial issues, such as depression, anger, dissatisfaction, and low quality of life, due to restricted participation in leisure and social activities, and limitations in performing activities of daily living. The impact of WMSDs is relevant, especially for clients who reach their potential in outpatient care but still suffer from other limitations preventing their return to work [20]. Such individuals usually experience significant setbacks upon their return, such as depression, anxiety, and stress [17, 19, 20]. Moreover, workers with WMSDs have increased psychological distress and, in turn, greater pain intensity and severity, as well as symptoms of depression, and fear of re-injury and pain. Because of these symptoms, workers with WMSDs avoid physical activities at and outside the workplace and delay their return [21, 22].

NISOH [23] defines musculoskeletal disorders as injuries and/or disorders of the muscles, nerves, tendons, joints, cartilage, and spinal discs. It considers musculoskeletal disorders as WMSDs if the work environment and performance of work contribute significantly to the condition, and if the condition exacerbates due to identical work conditions. Psychosocial distress is a negative emotional experience of psychological issues such as depression, anxiety, fear, stress, frustration, and dissatisfaction, as well as social issues such as isolation and the inability to perform personally, at home, and at work, in addition to spiritual roles, responsibilities, and duties that may inhibit the individuals' coping abilities [11, 17, 24]. Several quantitative research studies examined WMSDs among different occupational populations including healthcare professionals, factory, industrial, port, assembly line, and construction workers [3, 18, 25–34].The purpose of this qualitative research study was to investigate psychosocial distress among workers with WMSDs from different occupational populations.

Methodology

Design

A phenomenological qualitative research approach was used to gain an understanding of the individual experience of psychosocial distress among workers with WMSDs from different occupational populations. Interviews were used to recreate the participant's experience before and after their work injury. Data were collected through personal face to face interviews.

Participants

Participants were recruited through purposeful sampling with criterion sampling to study information-rich cases in-depth [35]. Participants were located from various work-hardening programs. Eight participants (four males and four females) were recruited and varied in age, gender, occupation, and injury. The average age was 43 years. Pseudonyms were used to preserve the anonymity of participants (Table 1).

Data collection procedure

Approval was obtained from the Health Sciences Institutional Review Board (IRB) of Florida International University (FIU). Consent forms to participate and to record the interview were obtained from all participants prior to their participation in the study. Participants were interviewed for a maximum of 30 minutes. The study was conducted in accordance with the Declaration of Helsinki.

Instrument

An interview guide was used to ensure that the phenomena in question are collected and followed reliably [35]. The Adaptation Interview Guide [19] for hand injury was modified for WMSDs. The interview guide comprised eight semi-structured, open-ended questions. Interview questions included life before the injury, the importance and purpose of work, duties at work, cause of injury, significance of returning to work, elaboration on emotions and role difficulties during the injury, sources of support, and changes as a result of the injury.

Data analysis

Phenomenological analysis was used to develop patterns, followed by categories, and finally themes [35]. Interviews were recorded and transcribed verbatim. The focus of understanding and interpreting interview transcripts was the materiality of work, psychosocial distress, and adaptation strategies. Transcripts were read, and a coding technique was applied by placing a word or phrase in front of each participant's response that describes its meaning. Codes were grouped to develop categories as related to the phenomenon under investigation. Themes emerged by combining the related categories and interpreted to highlight the participants' experiences.

Trustworthiness Techniques

The following trustworthiness techniques were applied, as suggested by Anney [36] and Krefting [37]. Member checks and peer review were utilized to ensure accurate reflection and interpretation of the participants' experiences before and after the injury. A dense description of the study was conducted to confirm the consistency of the findings and the transferability of the conclusion. In addition, a confirmability audit was performed to follow the progression and validity of the findings.

Findings

Three themes emerged following the analysis of the interviews. These were materiality of work, development of psychosocial distress, and generating adaptation strategies.

Materiality of work

Although employment results in a steady income, income was not found to be the most important aspect of working for the study participants. Each participant expressed that the materiality of work equated to a sense of meaning and self-worth. According to the participant John: "Without work, I am useless; I am of

no help to anyone.” John did not represent the only participant with such strong emotions regarding work materiality. For example, Kathy stated: “Work gives me value and a sense of worth.” Additionally, the participant Allan stated, “It is very rewarding and the most important thing. It is my career, so it is extremely important to me.” Observing the progression and changes, Allan described work to be “very rewarding.” In addition to bringing meaning to one’s life, participants identified work as providing them with a sense of belonging. Furthermore, participants enjoyed hobbies that somewhat resembled their occupation or with an abstract similarity. For example, John, whose occupation is a marble maker, enjoys painting, whereas Jenny, a secretary, enjoys gardening. Kate, a contract compliance specialist, likes fishing.

All participants expressed that they enjoyed working because it enabled them to provide for themselves, their families, and loved ones. Maintaining a certain amount of income was important to Kate to secure her needs and “to be responsible for myself financially.” According to Kathy: “It is very important that I remain employed; I have a family to support.” The participant Sarah described work as “my livelihood.” In his role as the sole breadwinner for his family, Paul expressed that continuing to work was important to provide as done previously.

Development of psychosocial distress

Psychosocial distress was divided into two subthemes as a result of the injury. These were psychological distress and social distress.

Psychological distress

Depression, sadness, and hopelessness

Most of the participants experienced signs of depression and sadness as a result of their injuries. Kate was often depressed, stating, “It was depressing because I had pain.” Jenny often felt hopeless when returning to work because of the pressure to complete her work duties on time. Although she was able to maintain her workload, she had missed several deadlines, resulting in feelings of hopelessness as she was aware of her capabilities. Due to the injury, Allan described feeling “a little down.” In addition, the participant John expressed feelings of hopelessness, uselessness, as well as extremely overwhelmed and sad at his current situation, resulting in him crying on occasion. He felt that his independence was taken from him and was depressed by the lack of improvement through therapy. Kathy, Paul, and Mike also expressed similar feelings. They disclosed that their injuries lead to feelings of great sadness, distress, and, at times, depression, particularly when attempting to conduct work and home responsibilities.

Fears, worries, anxieties, and stress

Following their injuries, several participants were fearful at the thought of potentially losing their job because of their absence from work or the quality of their work. Sarah felt extreme fear and anxiety, although she had only missed a few days of work due to the injury sustained. Sarah continued by stating that because she had just purchased a house and a new car, “Who was going to pay?” and “I could not

afford not to work." In addition, Allan and John were worried about when they would recommence work. Moreover, they were extremely anxious about the progress of their recovery, with Allan voicing, "I started wondering if I was ever going to become better or be able to walk properly, and that is when I would get anxiety." Kathy was alarmed that her injury would become permanent and limit her performance. Furthermore, the injury impaired the ability of Jenny to perform work duties, leading her to start worrying about meeting deadlines. Paul expressed his distress at being unable to perform at his usual level before the injury.

Loss in working days was not found to be the only fear expressed by participants. Several participants were apprehensive of what their boss or staff may think about their performance. For example, John was afraid of the opinion of his boss and/or staff in response to the aftereffects of his injury: "I feel like I will be fired; that they will see me dropping things and I will get fired because of it ." Jenny felt as though she was slower in completing tasks for her boss, which created immense pressure. Kathy experienced increased anxiety regarding her future, stating, "I am at work to suffer an injury that would cause me to get fired and not be able to support my family." Participants explained that they felt stressed because they had to take time off work or were incapable of performing the duties expected from them. John described his stress with "Oh, I do not want to miss work." As expressed by the participants, this stress increased due to the constant pressure to meet deadlines, perform work duties as expected, meet teamwork expectations, come to work on their own, improve, and contemplating the future with their injury.

Frustrations

All participants expressed frustration as a result of their injuries. These frustrations arose due to experiencing limitations in performing daily activities, duties, and responsibilities. Kate described her pain as "frustrating because I was limited with what I could do," whereas Jenny highlighted the time away from work to relieve the pain as "It's just frustrating. I wish it would go away." In addition, John expressed great frustration because he was "clumsy" in the handling and manipulation of objects with his hand. While washing and cleaning, cups and dishes dropped from his grasp. Moreover, he had difficulty opening sealed items and buttoning his shirt. John became considerably upset, was morose, angry, and quite irritable. Kathy described how her lower back pain instigated constant fatigue and exhaustion as a nurse and handling patients, stating, "I am truly frustrated." Similarly, Mike expressed his frustration that he was unable to function normally during work and rest days. Due to shoulder impingement, Mike was unable to transport, carry, and hold items, in addition to reaching for objects above his head. Paul, a person of great work moral character, described himself as "We do not let obstacles such as injuries keep us from being great," and he felt "knowing that I could not perform at my best was frustrating."

Social distress

Dependency

Three participants voiced their concerns about their dependency on others due to the severity of their injuries. John, who valued independence, working hard, and accomplishing things, dreaded dependency. He perceived that being dependent was a reason for being unworthy of living, stating, “If you have to feed me, then that means I do not want to be living.” Allan appreciated the help he received from others during his period of dependency and inability to walk; however, this did not prevent his feelings of unease and guilt. During this time, Allan consumed more food and “wanted to be isolated a lot more.” Sarah started recounting her dependency by stating that:

I did not like being dependent. When it comes to doing simple little stuff, I did not like feeling dependent on someone else to do something that I find…small little things you do every day that you do not even put any thought behind doing.

She felt quite frustrated because of her dependency on others for something simple such as grasping objects from cabinets or reaching for items on high shelves. Sarah despised the feeling of dependency.

Disrupted roles and daily activities

Five participants indicated that their injuries impacted their roles and daily activities at home. Allan explained that he used to spend 2–3 hours daily on house chores, but as a result of his injury, he would was limited to a maximum of 60 minutes due to the discomfort and pain. He described that his daily activities were more difficult “from going to the bathroom and taking a shower.” Sarah experienced similar feelings regarding housework, stating,

It was great to know that I had family that was willing to help me, but you still do not want to have to ask about things that are as simple as tying your shoelaces.

She noted her restrictions in several household activities, such as cleaning, sweeping, and moping. In addition, Sarah expressed that simple normal daily activities were challenging to complete, especially bathroom activities. John had difficulty performing household and daily activities. He struggled with washing dishes without dropping and breaking them, handling and opening sealed cans and containers, and dressing and undressing. Kate stated, “I was limited with what I could do throughout the day,” and “I could not comb my daughter's hair or cook.” She described how the pain interfered with her ability to perform daily activities and roles, explaining that performing simple activities required more time than expected. Furthermore, gender role expectations were expressed by male participants. Mike discussed feeling upset about the inability to perform certain household activities, which had to be completed by his wife, “I am the man of the house and she should not have to take care of these things.” He explained that he previously managed more strenuous activities such as lifting items, mowing the lawn, washing the cars, as well as cleaning, wiping, and sweeping the house. Similar to Mike, John and Paul also expressed that the injury caused them to feel like less of a man, with John even describing himself as a “useless old man.”

Interrupted social and leisure activities

Several participants expressed restrictions in social participation or interacting with others, particularly in family social activities. Paul explained that he did not participate in activities that required running with his children due to lower back pain, with his wife overtaking all playing roles. Similarly, Kathy stressed that she stopped certain activities involving carrying her children, stating, “The pain stops me from spending time with them (children) and my husband because it makes me want to take Ibuprofen and sleep.” In addition, Paul, who has shoulder impingement, clearly voiced his distress, stating, “Any family activities that were planned, I was not able to do.”

Leisure activities were also restricted due to the participant’s injuries. Mike expressed that he was unable to undertake many leisure activities that he previously enjoyed such as painting, cleaning, and yard work, “I have not been able to do a lot of the things that I would normally do on the weekends such as working in the yard and painting the house.” Kathy and Allan expressed feelings of anxiety as they were unable to complete tasks in a manner identical to prior the injury. Furthermore, Paul discontinued his favorite leisure activity, namely coaching his daughter’s basketball team.

Generating adaptation strategies

Many participants adjusted how they completed their tasks to remain functional both at work and at home. Sarah, Mike, Jenny, and Kathy were rather cautious with lifting items or individuals. Sarah and Mike, who were employed at the airport, stated that they made adjustments to how they completed job tasks in using proper lifting mechanics. Sarah asserted, “I definitely had to change the way I did things at work when I went back.” Sarah and Mike both mentioned that they introduced measures such as properly identifying heavier bags and asking for help where required. Kathy reported that she no longer transfers patients or lifts heavy equipment alone and asks for help where necessary.

Some participants resorted to medication and cold or hot packs to reduce the pain. Others preferred massage, aromatherapy, and relaxation techniques to relieve the psychosocial and physical distress. Jenny, Kate, and Paul reverted to former activities and hobbies such as training, stretching, exercising, and gardening to mitigate the distress. Other adaptation strategies employed by the participants included taking frequent breaks during work, using free days from work for relief, becoming extremely cautious when performing tasks and activities, working from home, and praying as a source of spiritual strength. Only John applied extreme adaptation strategy and changed his job to become a janitor.

Discussion

This study examined the materiality of work, development of psychosocial distress due to injury, and coping/adaptation with life after the injury. There was a consensus in the participants’ opinion about the value of working, which was considered more than just an income. All participants have positive attitudes about their jobs, placing high values on working, and holding certain beliefs in their work roles and responsibilities. Steady employment gave participants the feeling of a meaningful life. Alnaser [11] and Pillemer [15] highlighted that a society’s value of working and independence is most likely to be inverted on its inhabitants. In this study, participants reside in a Western society, such as the United States where

very high values, respect, and appreciation are placed on workers as well as the importance of being independent. Participants expressed that working gave them each a sense of self-worth and identity, helping foster a sense of independence in being able to provide for themselves and their families. The word “family” was mentioned on numerous occasions during the interviews. The continuing reiteration and coinciding with “work” and “family” suggest that work is a central part of family stability and in meeting its needs and demands.

Although participants shared similar values concerning their occupations, the materiality of the work shifted after their injury. Consequently, most participants were concerned with financial hardships that would be incurred in their familial situations, which generated psychosocial distress. They expressed fear, worry, and increased anxiety with the knowledge of having to be absent from work for several days. Therefore, the financial insecurity imposed by the injury can affect the individual’s current standard of living, ability to pay bills, and meet family needs. Participants voiced their frustration with the slow progress of their injuries and stress over their capacity to perform work duties. The longer the period of recovery or negative thoughts (catastrophic thinking) such as unemployment, the greater the level of negative confidence in the ability to perform and making the right decisions and actions. Kim [17] concludes that longer-lasting occupational injury treatment results in a more persistent and intense depression and stressors. This distress is not due to the sense of worth derived from working but at the prospect of being unable to pay bills and provide for themselves and their families. Such concerns are warranted because the participants are concerned about their family stability, which is of utmost priority to the individual. The results indicate that pessimistic thoughts (catastrophic thinking) of the financial future to be one of the main sources of psychological distress associated with the injury.

An interrelationship exists between social distress and psychological distress. As participants experienced more social distress, psychological distress intensified, which, in turn, lead to the development of additional psychosocial distress such as isolation and anger. An increase in the dependency level, limitations in work duties and executing household roles, and the constraint in performing activities of daily living generated feelings of depression, sadness, and hopelessness. A sense of frustration appeared to emerge with every failed attempt to perform occupations and activities at the level prior to the injury. In addition, such psychological distress increases when facing participation restrictions in family social and personal leisure activities. Kim [17] explains that functional activity limitation is a risk factor for depression after experiencing an occupational injury. Feelings of lost identity, catastrophic thinking such as uncertain future employment and unsecured family stability, and inability to attend to personal responsibilities create fears, worries, and stress. Return to work is necessary to achieve a balance even in the absence of full recovery and with pain endurance. Timmons and Fesko [38] highlight that work is a crucial source of emotional health, and unemployment can generate feelings of anger, depression, loneliness, and a sense of unhappiness and uselessness. Moreover, Dickie [39] explains that unemployment threatens and challenges a person’s work identity, thus creating psychological problems. Bair et al. [40] underline that depression and pain coexist in a positive relationship, as when one is upward or downward, the other follows concurrently. This was observed when participants expressed that their depression symptoms lingered as physical symptoms, such as

pain, continued. Sullivan et al. [22] highlight that psychosocial issues after an injury stimulates the disabling level of pain. Furthermore, the author emphasizes the role of psychosocial interventions to minimize pain levels associated with disability and to improve the success rate of return to work.

A possible association exists between the workers' attitudes, values, and beliefs about work and their magnitude of psychosocial distress. In this study, participants expressed positive and elevated attitudes, values, and beliefs regarding work and working. This may explain why participants reached high levels of psychosocial distress, such as depression and isolation. However, the notion of association requires further investigation to comply with this extrapolation.

Adaptation is an ongoing process that an individual performs daily. However, with injury, adaptation becomes a conscious process that an individual needs to operate to control their surroundings. In the present study, participants intentionally attempted adaptation strategies to control their environments, facilitate performing work and household duties, reduce symptoms of their injuries, and bring order to their lives. At work, adaptation strategies are made due to fear of re-injury, to minimize the level of pain, to prevent future injuries, and to preserve employment and work identity. At home, adaptation strategies are formed to become as independent and functional as possible, to reduce the burden on significant others, and to participate in household duties and responsibilities. Towards self, behaviors are adapted to ease psychosocial distresses including symptoms of depression, stress, frustration, anger, and isolation, and to moderate physical distress such as pain.

Conclusion

At the society and individual levels, considerable emphasis is placed on the value of work and independence. It is essential to protect the overall health of individuals through maintaining their working status and independence and functioning level. In this study, WMSD was demonstrated to represent not only physical symptoms. Depending on the severity of the WMSD and the significance of the materiality of work, the amount and magnitude of psychosocial distress follow. To lessen psychosocial distress and physical symptoms, bring balance to family stability, and perform expected roles and responsibilities, an individual attempts different adaptation strategies to regain control over the environment. Education and work institutions must be aware of the psychosocial distress that accompanies WMSDs and to develop insight into the contributing factors.

Future research is required to address the outcome of work injuries on the wellbeing of workers. Investigating the relationship between the materiality of work and psychosocial distress is imperative. In addition, examining the association between managing psychosocial distress and success of return to work is a future avenue of research.

Limitations Of The Study

The generalizability of the findings may be limited. A great number of participants of varying age, gender, socioeconomic status, marital status, family structure, length of employment, educational levels, occupations, positions, and work injuries are likely to yield more saturated findings. Studying the phenomenon from the perception of different cultures may produce greater understanding of the materiality of work, psychosocial distress, and coping/adaptation strategies.

Implications Of The Study

The results of this study will add to the current body of knowledge on the effects of WMSD on the psychosocial health of workers. Occupational rehabilitation education programs should emphasize the effect of WMSDs on the psychosocial health of the worker. Work hardening and rehabilitation programs should consider psychosocial distress in return to work interventions. It is imperative that employers understand and realize that workers with injuries undergo a phase of psychosocial distress and provide sufficient support and assurances. Employers should carry out health promotion and well-being programs that include improving or maintaining mental health status.

Abbreviations

WMSD:Work-related Musculoskeletal Disorder

Declarations

Availability of the data and materials

The datasets analyzed during the current study are available from the corresponding author on reasonable request

Compliance with ethical standards

Conflict of interest. The authors declare that they have no conflict of interest

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Contributions

Alnaser MZ conceptualized the study, its design and the structure of this paper. Alnaser MZ organised and coordinated the data collection process. Alnaser MZ drafted and reviewed the entire manuscript.

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Ethical declarations

Ethics approval and consent to participate

Ethics approval for this study was given by the Health Sciences Institutional Review Board of Florida International University on 19th January 2018 (FIU IRB Number: IRB-18-0054). All participants provided written consent.

Consent for publication

Not applicable.

Competing interests

The authors declare that they have no competing interests in this study.

References

1. S. Bureau of Labor Statistics (BLS). 2016 Survey of occupational injuries & illnesses: Chart package. 2017. Retrieved August 27, 2018 from https://www.bls.gov/
2. Europe Agency for Safety and Health at Work (EASHW). OSH in figures: Work-related musculoskeletal disorders in the UE – Facts and figures. Publication Office of the European Union 2010. doi:10.2802/10952
3. Silva JMN, Silva LB, Gontijo LA. Relationship between psychosocial factors and musculoskeletal disorders in footwear industry workers. 2017; 27. e20162315. http://dx.doi.org/10.1590/0103-6513.231516

4. Christiansen CH. Defining Lives: Occupation as Identity: An Essay on Competence, Coherence, and the Creation of Meaning. Am J Occup Ther. 1999; *53*(6): 547-558. doi:10.5014/ajot.53.6.547
5. Bellah RN, Madsen R, Sullivan W, Swidler A, Tipton S. Habits of the heart: individualism and commitment in American life. 2008. Berkeley: University of California Press.
6. Cartwright S, Holmes N. The meaning of work: The challenge of regaining employee engagement and reducing cynicism. Human Resource Management Review. 2006; 16(2): 199-208. https://doi.org/10.1016/j.hrmr.2006.03.012
7. Meaning at Work Research Report. 2007. Retrieved November10, 2018, from http://www.e-penna.com/newsopinion/research.aspx
8. Hinojosa J, Kramer P, Royeen CB, Luebben AJ. Core concept of occupation, in: Perspectives in Human Occupation: Participation in Life, P. Kramer, J. Hinojosa and C.B. Royeen, eds. 2003. Lippincott Williams & Wilkins, Philadelphia, pp. 1–17.
9. Leiulfsrud AS, Ruoranen K, Ostermann A, Reinhardt JD. The meaning of employment from the perspective of persons with spinal cord injuries in six European countries. Work. 2016; 55(1): 133-144. doi: 3233/WOR-162381
10. Conroy M. A qualitative study of the psychological impact of unemployment on individuals. Masters Dissertation. 2010. Dublin, DIT, September 2010.
11. Alnaser MZ. Psychosocial issues of work-related musculoskeletal injuries and adaptation: a phenomenological study. 2009; 32(2): 123-132. doi:10.3233/WOR-2009-0798
12. Blustein DL, Kenna AC, Gill N, DeVoy JE. The psychology of working: A new framework for counseling practice and public policy. The Career Development Quarterly. 2008; 56: 294-308.
13. Gahnström-Strandqvist K, Liukko A, Tham K. The Meaning of the Working Cooperative for Persons With Long-Term Mental Illness: A Phenomenological Study. Am J Occup Ther. 2003; 57: 262-272.
14. Smith YJ, Stephenson S, Gibson-Satterthwaite M. The meaning and value of traditional occupational practice: A Karen woman's story of weaving in the United States. Work. 2013; 45(1): 25-30. doi: 3233/WOR-131600
15. Pillemer KA, Moen P, Wethington E, Glasgow N. Social integration in the second half of life. 2000. Baltimore: Johns Hopkins Univ. Press.
16. Johansson U, Tham K. The meaning of work after acquired brain injury. Am J Occup Ther. 2006; 60: 60–69.
17. Kim Depression as a psychosocial consequence of occupational injury in the US working population: findings from the medical expenditure panel survey. BMC Public Health. 2013; 13: 303-313. doi.org/10.1186/1471-2458-13-303.
18. de Carvalho MP, Schmidt LG, Soares MCF. Musculoskeletal disorders and their influence on the quality of life of the dockworker: A cross-sectional study. Work. 2016; 53(4): 805-812. doi: 10.3233/WOR-162249

19. Chan J, Spencer J. Adaptation to hand injury: An evolving experience. Am J Occup Ther. 2004; 58: 128–139.
20. Hardison ME, Roll SC. Factors Associated With Success in an Occupational Rehabilitation Program for Work-Related Musculoskeletal Disorders. The Am J Occup Ther. 2017; 71(1): 7101190040p1–7101190040p8. http://doi.org/10.5014/ajot.2016.023200
21. Pipkins C. Work-related musculoskeletal disorders: Psychological factors in licensed nurses. UT Son Dissertations. 2015; 6. Retrieved from http://digitalcommons.library.tmc.edu/uthson_etd/6
22. Sullivan MJL,Adams H, Rhodenizer T, WilStanish A Psychosocial Risk Factor–Targeted Intervention for the Prevention of Chronic Pain and Disability Following Whiplash Injury. Phy Ther. 2006; 86(1): 8–18. doi.org/10.1093/ptj/86.1.8
23. The National Institute for Occupational Safety and Health (NIOSH). Ergonomics and musculoskeletal disorders. 2018. Retrieved from https://www.cdc.gov/niosh/topics/ergonomics/default.html
24. Holland JC. NCCN practice guidelines for the management of psychosocial distress. 1999; 13:459–507.
25. Alnaser MZ, Aljadi SH. Physical therapists with work-related musculoskeletal disorders in the State of Kuwait: A comparison across countries and health care professions. Work. 2019; 63: 261-268. doi:10.3233/WOR-192927.
26. Daneshmandi H, Kee D, Kamalinia M, Oliaei M, Mohammadi H. An ergonomic intervention to relieve musculoskeletal symptoms of assembly line workers at an electronic parts manufacturer in Iran. Work. 2018; 61(4): 515-521. doi: 3233/WOR-182822.
27. Passali C, Maniopoulou D, Apostolakis I, Varlamis I. Work-related musculoskeletal disorders among Greek hospital nursing professionals: A cross-sectional observational study. Work. 2018; 61(3):489-498. doi: 3233/WOR-182812.
28. Al-Hourani Z, Nazzal M, Khader Y, Almhdawi K, Bibars A. Work-related musculoskeletal disorders among Jordanian dental technicians: Prevalence and associated factors. Work. 2017; 56(4): 617-623. doi: 3233/WOR-172524.
29. Choi SD, Brings K. Work-related musculoskeletal risks associated with nurses and nursing assistants handling overweight and obese patients: A literature review. Work. 2016; 53(2): 439-448. doi:10.3233/WOR-152222.
30. Vieira ER, Schneider P, Guidera C, Gadotti IC, Brunt D. Work-related musculoskeletal disorders among physical therapists: A systematic review. JBMR. 2016; 29(3): 417-428. doi: 3233/BMR-150649.
31. Abaraogu UO, Okafor UAC, Ezeukwu AO, Igwe SE. Prevalence of work-related musculoskeletal discomfort and its impact on activity: A survey of beverage factory workers in Eastern Nigeria. Work. 2015; 52(3): 627-634. doi: 3233/WOR-152100
32. Alnaser MZ. Occupational therapy practitioners with occupational musculoskeletal injuries: Prevalence and risk factors. J Occup Rehabil. 2015; *25*(4):763-769. doi:25:763-769.
33. Xu Y, Cheng ASK, Li-Tsang CWP. Prevalence and risk factors of work-related musculoskeletal disorders in the catering industry: A systematic review. Work. 2013; 44(2): 107-116. doi:

10.3233/WOR-2012-1375.

34. Rahman MNA, Rani MRA, Rohani JM. Investigation of work-related musculoskeletal disorders in wall plastering jobs within the construction industry. Work. 2012; 43(4): 507-514. doi: 3233/WOR-2012-1404.
35. Patton MQ. Qualitative Research & Evaluation Methods (3rd). 2002. London, England: Sage Publications..
36. Anney VN. Ensuring the Quality of the Findings of Qualitative Research: Looking at Trustworthiness. Journal of Emerging Trends in Educational Research and Policy Studies (JETERAPS). 2014; 5(2): 272-281.
37. Krefting L. Rigor in qualitative research: The assessment of trustworthiness, Am J Occup Ther. 1991; 45(3), 214–222.
38. Timmons JC, Fesko SL. The impact, meaning, and challenges of work: perspectives of individuals with HIV/AIDS. Health Soc Work. 2004; 29(2):137-44. doi:1093/hsw/29.2.137.
39. Dickie VA. Establishing worker identity: A study of people in craft work. Am J Occup Ther. 2003; 57(3):250-261.
40. Bair MJ, Robinson RL, Katon W. Depression and pain comorbidity: A literature review. Arch Intern Med. 2003; 163(20):2433-2445. doi:10.1001/archinte.163.20.2433.

Table

Table 1. Participants' demographics

Name	Age	Occupation	WMSD	Cause
Mike	50	TSA Security	Shoulder impingement	Lifting heavy bags
Sarah	34	TSA Security	Low back pain	Lifting heavy bags
Paul	48	Civil Eng.	Low back pain	Fall down at work
Kathy	34	Nurse	Low back pain	Transfers, lifting, no breaks
Kate	58	Compliance Spc.	Tendonitis	Typing
John	60	Marble Maker	Carpel tunnel syndrome	Stirring mixtures and Painting
Jenny	26	Secretary	Shoulder impingement & Tingling in fingers	Typing
Allan	34	Asst. behavior anlst.	Dupuytren's contracture & low back pain	Typing, prolonged sitting, playing sports with kids at work