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Gender Influences on Return to Work Following Mild Traumatic Brain Injury

Running Head: Gender, work and TBI

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Conflicts of interest

The authors report no conflicts of interest

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ABSTRACT

Objective: To examine the influence of gender on the return to work experience of workers who had sustained a work-related mild traumatic brain injury (wrMTBI). **Design:** Qualitative study using in-depth telephone interviews. **Setting:** Community living adults in Ontario, Canada.

Participants: Purposive sampling was used to recruit participants. Eligibility criteria were mild/moderate TBI diagnosis based on multidisciplinary assessment and workplace injury. Six males and six females with mild TBI participated. **Interventions and Main Outcome**

Measure(s): N/A. **Results:** Our findings suggest that gender impacts return to work experiences in multiple ways. Occupational and breadwinner roles were significant for both men and women following wrMTBI. Female participants in this study were more proactive than men in seeking and requesting medical and rehabilitation services; however, the workplace culture may contribute to whether and how health issues are discussed. Among our participants, those who worked in supportive, nurturing (e.g., “feminine”) workplaces reported more positive return to work (RTW) experiences than participants employed in traditionally “masculine” work environments. For all participants, employer and co-worker relations were critical elements in RTW outcomes. **Conclusion:** The application of a gender analysis in this preliminary exploratory study revealed that gender is implicated in the return to work process on many levels for men and women alike. Further examination of the work reintegration processes that takes

gender into account is necessary for the development of successful policy and practice for return to work following wrMTBI.

Key words:

Traumatic brain injury; employment; return to work; gender

Abbreviations:

TBI	Traumatic brain injury
MTBI	Mild TBI
RTW	Return to work
wrMTBI	work related MTBI
wrTBI	work related TBI
WSIB	Workplace Safety and Insurance Board (Ontario)

Gender Influences on Return to Work Following Mild Traumatic Brain Injury

Employment and income status are considered key determinants of individual and community health in western societies;^{1,2} an interruption to the typical employment pattern during the life course, therefore, has significant consequences at individual and societal levels. In addition to being an economic necessity, having paid employment after sustaining a traumatic brain injury (TBI) can have a positive impact on a worker's well-being, and returning to the same workplace can enhance this effect.³ In Ontario, as in many North American and international jurisdictions, the early and safe return to work policies in place are based on the assumption that it is best for the worker's health and recovery, and for the employer, if employment resumes as early as possible following a workplace injury. Employers and employees are legally obligated to report workplace injuries, and to develop and comply with a return to work (RTW) plan outlining suitable and safe work duties that provides employment in the workplace where the injury occurred.⁴ Yet, while returning to work is a significant goal for most injured workers, the interplay of injury-related factors, one's occupational demands, and supports provided in the workplace can influence work re-integration following TBI.⁵ Additionally, returning to a workplace where a TBI occurred can introduce a degree of complexity because, in addition to managing the work itself, the worker must confront adversities such as returning to the scene of their injury and re-negotiating relationships with co-workers and employers without having the option of not disclosing their injury.

Gender and the labor force

Gender impacts many aspects of work. Industries, workplaces and occupations are often segregated by gender and while men and women often have the same job roles, they may be assigned to different tasks and thus be exposed to different types of risks and hazards.^{6,7} Both paid and household labor are gendered. Women are more likely to be involved in lower paying, lower status jobs,⁸⁻⁹ to be paid less for the same work,¹⁰ and to be employed in casual or temporary positions than men.¹¹ Women are also more likely than men to perform domestic and caregiving work, without wages, whether or not they also have paid employment.¹² Men, on the other hand, are more likely to be employed, and sustain fatal injuries, in high-risk occupations,¹³ and reach higher levels of success than women do in female-dominated occupations.¹⁴ Because gender plays such a prominent role in the labor market, it is worth examining whether, and how, gender might influence return to work following mild TBI. In this study, we focus on the intersection of gender with RTW processes following a work-related mild TBI (wrMTBI).

Defining Sex & Gender

Sex refers to the biological features that identify one as male or female, and it is one's sex upon which one's gender is assumed.^{15,16} In contrast, *gender* is a social construct that signifies the socially appropriate behaviors or roles ascribed to male and female bodies.^{15,16} Gender shapes how people learn, relate to one another, and express attitudinal or behavioral patterns that are created and maintained through socioeconomic, political and cultural institutions^{15,17,18} *Gender analysis* is a theoretical framework that explores the consequences of gender inequities.¹⁵

Although gender analysis is increasingly employed in health scholarship,¹⁹ the examination of gender in workplace health and safety research remains limited.^{7,20} Moreover, while RTW

barriers and facilitators following MTBI have been investigated qualitatively,^{3,21,22} the construct of gender and how it intersects with work reintegration processes has not been examined. Thus, in this study we explored the relationship between gender and RTW following TBI to address this gap.

METHODS

An exploratory qualitative approach using in-depth telephone interviews was employed. Telephone interviews were used to enhance feasibility (workers may have returned to full-time work) and to decrease costs (workers resided throughout Ontario). Ethics approval was provided by the Research Ethics Board at a major rehabilitation hospital in Ontario, Canada.

Participant Recruitment and Inclusion Criteria

Participants were purposively sampled from a participant pool of an outpatient unit at a major hospital in Ontario, Canada that provides service to individuals with workplace injuries. Purposive sampling aims to identify participants who have specific knowledge relevant to the area under investigation;²³⁻²⁵ in this case, RTW experiences following wrTBI. The outpatient unit provides assessment services to people with wrTBI who have experienced delayed recovery and persistent symptoms following mild to moderate TBI, and who are referred by the province's workers' compensation board, the Ontario Workplace Safety and Insurance Board (WSIB).

In this study, individuals were eligible to participate if they had been assessed as having a mild to moderate TBI that was sustained at the workplace. Assessment initially occurred at the time of injury and was corroborated through an extensive multidisciplinary assessment (e.g. neurology, physiatry, neuropsychology, occupational therapy, physical therapy) at the outpatient clinic. An initial Glasgow Coma Scale score may have also been available to the assessment team if it was collected at time of injury. Patients of this rehabilitation hospital are routinely asked if they would like to participate in future research. To recruit participants for this pilot study, we drew upon a consecutive series of 37 patients from a prior study using the same population²⁶ who had expressed interest in participating in future studies. The staff sent an introductory letter and consent form to these participants to inquire about their interest to participate in the present study. We were able to contact and/or received positive responses from 12 of 37 potential participants. Of the 37 potential participants, we do not know how many were eligible; however, many declined because they had not returned to work and therefore did not see the relevance of participating in the study. Interviews were completed at a convenient time to accommodate participants' schedules.

Data Collection

Demographic and injury severity data were obtained from medical records of patients who consented to participate. Data were collected using semi-structured telephone interviews that focused on gaining an understanding of participants' experiences with returning to work and the workplace accommodation process. A semi-structured interview guide was developed, allowing the researchers to guide discussions while still being open to additional personal insights that

participants felt to be most relevant. Within the interviews, participants were first asked to describe how their injuries occurred, their resulting impairments, and their experiences of the rehabilitation processes. This was followed by in-depth discussions about their experiences with returning to work. All interviews were conducted by one of the authors who had 15 years' experience performing qualitative interviews related to health and the workplace. The interviews ranged from 45 to 90 minutes; the average duration was 1 hour. We considered the data as being saturated when no new themes emerged.^{25,27,28} If additional data were required to reach saturation, participants could be drawn from a large pool of eligible patients seen at the clinic annually.

Data Analysis

Interviews were audio-recorded, then transcribed verbatim by a professional transcriptionist. An inductive thematic analysis approach was used to analyze and identify themes related to gender within the interview data. Thematic analysis is a multi-step approach that has been used extensively in health, sociological and psychological studies^{e.g., 29-31} to identify “thematized meaning” across a data set.³²

In step one, two researchers (Drs. Stergiou-Kita and Mansfield) and one research assistant read each interview several times to become familiar with the data. In step two, these three individuals independently coded each interview using a line-by-line coding method. They discussed the codes and reached consensus on a set of codes applicable across the interviews. Codes were also reviewed by a fourth researcher (Dr. Colantonio) to ensure consistency and comprehensiveness. In step three, Atlas Ti5,^a a qualitative data management software program,

was used to organize the coded data and generate code summaries. In step four, code summaries, which included data from across all interviews, were analyzed to identify key themes reflecting gendered experiences in the return to work process.

RESULTS

Participant Characteristics

Twelve workers who were diagnosed with a wrMTBI were interviewed. Six of the 12 participants were women, and 10 participants were married. Nine of the 12 participants were middle-aged (age range 40-69 years). Four participants had completed high school, and the remaining completed some level of post-secondary education. All participants in our sample had returned to work in the public sector, trades or protective services jobs of varying company size (< 20 to >50 employees). Three participants reported having returned to full time work initially and the remaining 9 returned on a gradual basis. Table 1 summarizes participants' demographic characteristics. Participants reported on their RTW experiences following wrMTBI that had taken place two to six years prior to the time of the interview.

Insert Table 1 about here

Similar impairments following a wrMTBI were reported by all participants: headaches, chronic pain, extreme fatigue and sleep disorders; psychosocial impairments such as depression and

mood swings; and cognitive impairments affecting memory, focused attention and information processing. The majority of participants reported having numerous physical, cognitive and mental health problems at the time they returned to their pre-injury job.

The following themes related to issues of gender identity, gender relations and gendered workplace cultures were identified: i) the importance of paid work and occupational roles; ii) help-seeking behavior and RTW processes; and iii) supportive and non-supportive workplace cultures. Each theme is discussed below with supporting quotes from the interviews.

Importance of paid work and occupational roles

Participants from varied social class, educational and industry backgrounds discussed the importance of work in relation to their breadwinner role and as a financial necessity. A participant discussed how his injury affected his feelings of self-worth and sense of male identity:

I felt like my manhood was taken away. I couldn't go to work. I couldn't go and do what I went back to school to do. I quit a factory job making good money to go back to school to do this [trades job] to make life even better.

Another participant described how important work was to her sense of professional identity:

I really had a hard time with not being productive, because if I'm not an [educator], who am I, you know. And I think women [in general] ... [and] in particular for professional women, we link our self-identity with you know, what we do and how we serve.

The impact of a wrMTBI on personal finances was discussed by participants as a significant factor in their RTW decision-making process. A participant discussed how she returned to work too soon following her TBI because she was fearful of losing her job in a depressed local labor market:

But to find that kind of work [locally] is limited. You get into a spot where you can support your children on your own income without having to have the stress of worrying about that second income coming in -- it's nearly impossible in rural areas. So, you know, you deal with it [issues at the workplace] because you really don't have any other option.

Help-seeking behavior and RTW processes

Some gender differences were evident in how workers sought and requested assistance with the RTW process. Gendered behaviors influenced participants' understanding and awareness of their impairments and their abilities to self-advocate and navigate formal support systems. Women participants tended to be more proactive in seeking health care and requesting multiple medical opinions. For example, a participant was skeptical of relying upon medical specialists assigned to her case by workers' compensation representatives. She was concerned that WSIB-appointed physicians might be motivated to reduce the costs of an insurance claim and, as a result, would not provide a thorough diagnosis and prescribe necessary medical treatment. In addition to seeing the WSIB doctor, this participant sought medical specialists who eventually diagnosed her with atypical neuralgia:

So I think it was about two weeks later I had an appointment with my neurologist... and I say my neurologist because when WSIB send me to somebody, like a professional, they will say one thing. However, when my doctor schedules me with somebody that she hears is really,

really good [then] I will finally get some answers....So I had gone to see a neurologist through my doctor, not WSIB. Anyhow, he's the one who ultimately said that I had atypical neuralgia and at that time, that's when he wrote, "She's in chronic pain, this pain is disabling."

In contrast, male participants reported being less involved in seeking health care support. A participant described how he experienced debilitating symptoms but did not challenge the WSIB medical specialist's recommendation that he was ready to return to work. Another participant received minimal health care support following his TBI and did not follow up when test results were not communicated to him:

Since then I haven't been back to a doctor. My doctor that I had all my life, he retired, so I had this other doctor for about a year and a half maybe and I've never ever seen him. All I've seen is the nurse practitioner for, you know, flu and stuff like that. I'm just tired. I went through all this crap for four years and I'm waiting for something good...for somebody to say okay here's a solution.

Supportive and non-supportive workplace cultures

In addition to personal impairments that affected the RTW process, participants described the significant role that workplace cultures and social relations in the workplace played in shaping their post-injury work experiences. Social relations could include relations with employers and co-workers.

Participants reported both supportive and unsupportive workplace settings and discussed how this shaped their return to work and post-injury experiences. For example, a participant

described how his supervisor and co-workers worked together to support him. He described a nurturing workplace setting where he was comfortable communicating his needs for support to co-workers:

So just generally speaking, my office was a pretty nurturing [place]. Everyone was being very careful of everyone and deadlines and productivity were not the watchwords of the day; it was just about making sure that everybody was okay... Like it took a fair bit of time for me to train some of my co-workers and my summer staff, that you know, the old [me] you could kind of pass in the hallway and say you know, I need this [item] set up for tomorrow afternoon by one o'clock, and I would nod and smile and say yeah, no problem, and it would get done. The new [me], it would be better if you sent me an e-mail.

Another participant described retuning to work in a supportive workplace setting where her employer advocated for her with both the administration and the WSIB. The employer restructured the participant's job so she could continue to have meaningful work: "So what she [the employer] did was [hire] another full time employee, so that one does a ton of paperwork, and all I do is work with [students] kids."

In contrast, other participants reported that returning to work at the pre-injury job was a stressful, sometimes punitive experience. Some participants—both men and women—who worked in traditionally male-dominated workplaces such as protective services described workplace environments where requests for work modifications and supports following TBI were often denied. A participant reported feeling marginalized by his coworkers: when he returned to work, his managers and co-workers behaved as if the injury had never taken place. Similarly, another

participant perceived her TBI as damaging her occupational identity and opportunities for advancement in a predominantly male workplace:

I still have this injury kind of attached to my name. As far as promotions, I haven't had any.You know, it's probably oh "She's a girl, she can't hack it, she can't -- she couldn't take it." We're [women employees] yeah, treated differently and then after an injury, yeah. Even though no one would say it to me, I kind of knew it.

DISCUSSION

The findings from this preliminary exploratory study are based on interviews with 12 participants who experienced a wrMTBI. The findings highlight the role that gender plays in RTW following wrMTBI and areas where men and women's return to work experiences can converge and diverge. To the best of our knowledge, this is the first qualitative study that applies a gender lens to investigate RTW processes following a wrMTBI. First, in contrast with studies reporting differences in men's and women's identification with occupational roles,^{33,34} our findings revealed similarities in the importance of work for both men and women. For example, Côté and Coutu³³ report that men typically identify more strongly with worker roles, while women identify with multiple roles (e.g. mother, worker and/or spouse). Similarly, in a study examining how working class men constructed their masculine identities, Dolan³⁴ reveals that all men in the sample, regardless of whether they adhered to other male stereotypes, strongly believed in their role as financial providers ("breadwinner") for their families. However, in our

study, men and women each discussed adversities associated with loss of an occupational role, and how closely occupational roles were related to both their self-identities and the need to financially support themselves and their families. The similarities in perceived importance of occupational and breadwinner roles could reflect changing gender dynamics based on changing social, political and economic conditions. For example, whereas men's identification as breadwinner has historically been considered a uniquely masculine role,^{33,34} changes in household composition (e.g., single income families led by women) or changing labor markets could also influence views on occupational roles.

Second, gender norms were evident in the way participants sought help. Female participants were more likely to engage in self-advocacy and to report following up with health and insurance providers when they required assistance. While gender differences in help-seeking behaviors are well-documented in the health literature,³⁴⁻³⁹ they have not been qualitatively examined in studies of RTW processes. Male participants in this study were also often reticent to discuss injury-related work limitations with employers and co-workers and to request rehabilitation services. This is consistent with studies of occupational health and safety in high-risk workplaces.⁴⁰⁻⁴² Reticence to discuss health and occupational safety needs may be re-enforced by gendered workplace cultures and the gendered nature of discourses about health.⁴³ Further inquiry into the role that gender relations play within an occupational health and safety context is thus also warranted.

Lastly, we noted that injured workers could experience a workplace environment as being supportive or unsupportive. Gender relations shaped RTW experiences most notably in

traditionally male workplaces where workers reported feeling pressured to “tough out” the post-injury experience.^{44,45} What appeared to make a difference was whether the workplace culture was considered “nurturing” (or what may be traditionally considered a more “feminized” workplace) versus a “masculinized” workplace culture that valued risk, competition and profits over social justice principles and individual workers’ needs.^{46,47} In this study, participants returning to traditionally male-dominated, masculinized workplace cultures (i.e., protective services, construction, transportation) often reported an unsupportive work environment following wrMTBI. Health care professionals, employers and worker’s compensation representatives might need to consider how gender “plays out” in different workplace settings and potentially influences return to work and rehabilitation processes. This could include understanding what gender norms exist within a specific workplace and how gender norms are re-enforced within workplace settings, in order to support safe workplaces and successful rehabilitation and return to work processes.

Study Limitations

This preliminary exploratory study has some limitations. We examined the perspectives of a small and select group of women and men with wrMTBI, thus some sample bias is present. Although we sought participants with mild to moderate wrTBI, the response from those only with a mild injury also suggests sample bias. However, given that we interviewed individuals with a specific set of experiences, the topic was well-defined, and the participants provided articulate and detailed data, we considered a sample size of 10 to 15 participants as sufficient to achieve thematic saturation.²⁷ While the insights are important, future studies with a larger sample with varied degrees of injury severity and from more diverse backgrounds are required to

further investigate the themes identified in this study. Our study included participants who were English-speaking and had relatively high levels of education compared to the broader wrMTBI population being studied, as identified in a study on the same population.²⁶ Future studies should also be designed to include participants whose language is other than English. Participants in our sample were insured by the Workplace Safety and Insurance Board in Ontario, Canada in addition to having access to universal health care through provincial health care plans; as such, their experiences may not reflect experiences of workers with different insurance and healthcare systems. Lastly, we applied a gender analysis in this study to afford a unique perspective on the return to work process. A more comprehensive analytical framework, such as intersectionality, could provide greater insight into how additional variables such as race/ethnicity and social status contribute to and complicate this process.^{7,48}

CONCLUSION

Returning to work following a wrMTBI is a difficult and complex process. Gender roles, relations, and the implicitly gendered nature of workplace cultures contribute to the complexity of the RTW processes for men and women alike. These exploratory findings suggest the need for further research to investigate the gendered nature of work reintegration experiences, and for knowledge transfer activities that enable health care and workers' compensation providers, employers and employees to create appropriate policies and workplace supports for satisfactory return to work following wrMTBI.

SUPPLIERS

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REFERENCES

1. World Health Organization, Commission on Social Determinants of Health. Closing the gap in a generation: health equity through action on the social determinants of health. Final report of the Commission on Social Determinants of Health. Geneva: **WHO**; 2008. [cited 2014 Jan 6]. Available from: URL: http://whqlibdoc.who.int/publications/2008/9789241563703_eng.pdf .
2. Mikkonen J, Raphael D. Social determinants of health: the Canadian facts. Toronto: York University School of Health Policy and Management; 2010.
3. Hooson JM, Coetzer R, Stew G, Moore A. Patients' experience of return to work rehabilitation following traumatic brain injury: a phenomenological study. Neuropsychol Rehabil 2013;23:19-44.

- 381 4. Workplace Safety and Insurance Board (WSIB). By the numbers: 2012 WSIB statistical
382 report. Schedule 2. Toronto, ON: WSIB; 2013. Available from: URL:
383 <http://www.wsibstatistics.ca>
- 384 5. Stergiou-Kita M, Dawson D, Rappolt S. An integrated review of the process and factors
385 relevant to vocational evaluation following traumatic brain injury. *J Occup Rehabil*
386 2011;21:374-94.
- 387 6. Messing K, Punnett L, Bond M, Alexanderson K, Pyle J, Zahm S, Wegman D, Stock SR,
388 de Grosbois S. Be the fairest of them all: challenges and recommendations for the treatment
389 of gender in occupational health research. *Am J Ind Med* 2003; 43: 618–29.
- 390 7. Armstrong P, Messing K. Taking gender into account into occupational health research:
391 continuing tensions. *Policy and Practice in Health and Safety* 2014;12:3-16.
- 392 8. Boudarbat B, Connolly M. The gender wage gap among recent post-secondary graduates in
393 Canada: a distributional approach. *Can J Econ* 2013;46:1037-65.
- 394 9. Misra J, Murray-Close M. The gender wage gap in the United States and cross nationally.
395 *Sociol Compass* 2014;8:1281-95.
- 396 10. Lips HM. The gender pay gap: challenging the rationalizations. Perceived equity,
397 discrimination, and the limits of human capital models. *Sex Roles* 2013;68:169-85.
- 398 11. Menéndez M, Benach J, Muntaner C, Amable M, O'Campo P. Is precarious employment
399 more damaging to women's health than men's? *Soc Sci Med* 2007;64:776-81.
- 400 12. Mackenzie CR. 'It is hard for mums to put themselves first': how mothers diagnosed with
401 breast cancer manage the sociological boundaries between paid work, family and caring for
402 the self. *Soc Sci Med* 2014;117: 96-106.

13. Bilsker D, Goldenberg L, Davison JA. A roadmap to men's health: current status, research,
policy and practice. Vancouver (BC): **Centre for Applied Research in Mental Health
and Addiction**; 2010. Available from: URL: <http://www.sfu.ca/carmha/publications.html>
14. Hultin M. Some take the glass escalator, some hit the glass ceiling? Career consequences of
occupational sex segregation. *Work Occup* 2003;30:30-61.
15. Johnson J, Greaves L, Repta R. Better science with sex and gender: a primer for health
research. Vancouver (BC): Women's Health Research Network; 2007. Available from:
URL: [http://bccewh.bc.ca/publications-
resources/documents/BetterSciencewithSexandGenderPrimerforHealthResearch.pdf](http://bccewh.bc.ca/publications-resources/documents/BetterSciencewithSexandGenderPrimerforHealthResearch.pdf).
16. Johnson J, Greaves L, Repta R. Better science with sex and gender: facilitating the use of a
sex and gender-based analysis in health research. *Int J Equity Health*. 2009;8:14. Available
from: URL: <http://www.equityhealthj.com/content/8/1/14>
17. Knaak S. On the reconceptualizing of gender: implications for research. *Sociol Inq*
2004;74:302-17.
18. Schofield T, Connell RW, Walker L, Wood JF, Butland DL. Understanding men's health
and illness: a gender-relations approach to policy, research, and practice. *J Am Coll Health*
2000;48:247-56.
19. Sharman Z, Johnson J. Towards the inclusion of gender and sex in health research and
funding: an institutional perspective. *Soc Sci Med* 2012;74:1812-6.
20. Jensen SQ, Kyed M, Christensen AD, Bloksgaard L, Hansen CD, Nielsen KJ. A gender
perspective on work-related accidents. *Saf Sci* 2014;64:190-8.

21. Levack W, McPherson K, McNaughton H. Success in the workplace following traumatic brain injury: are we evaluating what is most important? *Disabil Rehabil* 2004;26: 290-8.
22. Soeker MS. Occupational adaptation: a return to work perspective of persons with mild to moderate brain injury in South Africa. *J Occup Sci* 2011;18:81-91.
23. Silva S, Fraga S. Qualitative research in epidemiology. In: Lunet N, editor. *Epidemiology – current perspectives on research and practice*. Rijeka (HR): InTech; 2012. p 63-84.
Available from: URL: <http://www.intechopen.com/books/epidemiology-current-perspectives-on-research-and-practice>.
24. Miles MB, Huberman AM, Saldaña J. *Qualitative data analysis: a methods sourcebook*. 3rd ed. Thousand Oaks (CA): SAGE Publications; 2013.
25. Francis J, Johnston M, Robertson C, Glidewell L, Entwistle V, Eccles M, Grimshaw J. What is an adequate sample size? Operationalising data saturation for theory-based interview studies. *Psychol Health* 2010;25: 1229-45.
26. Colantonio A, Comper P. Post injury symptoms after work related traumatic brain injury in Canadian population. *Work* 2012;43:195-201.
27. Morse J. Determining sample size. *Qual Health Res* 2000;10:3-5.
28. Green J, Thorogood N, editors. *Qualitative methods for health research*. London: Sage; 2004.
29. Harkins C, Shaw R, Gillies M, Sloan H, MacIntyre K, Scoular A, Morrison C, MackKay F, Cunningham H, Docherty P, MacIntyre P, Findlay I. Overcoming barriers to engaging socio-economically disadvantaged populations in CHD primary prevention: a qualitative

study. BMC Public Health 2010;10:391. Available from: URL:

<http://www.biomedcentral.com/1471-2458/10/391>.

30. Gillespie B, M Chaboyer W, Longbottom P, Wallis M. The impact of organisational and individual factors on team communication in surgery: a qualitative study. *Int J Nurs Stud* 2010;47:732-41.
31. Stewart BJ, Mikocka-Walus AA, Harley H, Andrews JM. Help-seeking and coping with the psychosocial burden of chronic hepatitis C: a qualitative study of patient, hepatologist, and counsellor perspectives. *Int J Nurs Stud* 2012;49:560-9.
32. Braun V, Clarke V. Using thematic analysis in psychology. *Qual Res Psychol* 2006;3:77-101.
33. Côté D, Coutu M. A critical review of gender issues in understanding prolonged disability related to musculoskeletal pain: how are they relevant to rehabilitation? *Disabil Rehabil* 2010;32:87-102.
34. Dolan A. 'You can't ask for a Dubonnet and lemonade!': working class masculinity and men's health practices. *Sociol Health Illn* 2011;33:586-601.
35. Doyal L. Sex, gender and health: the need for a new approach. *BMJ* 2001; 323:1061-3.
36. Hennessy M, Mannix-McNamara P. Gendered perspectives of men's health and help seeking: implications for public health and health promotion. *Int J Med Health Sci Res* 2014;1:13-28.
37. Farrimond H. Beyond the caveman: rethinking masculinity in relation to men's help-seeking. *Health* 2012;16:208-25.

38. Galdas PM, Cheater F, Marshall P. Men and health help-seeking behaviour: literature review. *J Adv Nurs* 2005;49:616-23.
39. Peerson A, Saunders M. Men's health literacy: advancing evidence and priorities. *Crit Public Health* 2009;19:441-56.
40. Breslin FC, Polzer J, MacEachen E, Morrongiello B, Shannon H. Workplace injury or "part of the job"? Towards a gendered understanding of injuries and complaints among young workers. *Soc Sci Med* 2007; 64:782-93.
41. Finnegan A, Finnegan S, McGee P, Srinivasan M, Simpson R. Predisposing factors leading to depression in the British Army. *Br J Nurs* 2010;21:1355-62.
42. Marchant T. Keep going: perspectives on ageing and masculinity of self-employed tradesmen in Australia. *Construction Management and Economics* 2013;31:845-60.
43. Charles N, Walters V. 'Men are the leavers alone and women are the worriers': gender differences in discourses of health. *Health Risk Soc* 2008;10:117-32.
44. Desmond M. Becoming a firefighter. *Ethnography* 2006;7:387-421.
45. O'Brien R, Hunt K, Hart G. 'It's caveman stuff, but that is to a certain extent how guys still operate': men's accounts of masculinity and help seeking. *Soc Sci Med* 2005;61:503-16.
46. Hilgert J. Building a human rights framework for workers' compensation in the United States: opening the debate on first principles. *Am J Ind Med* 2012;55:506-18.
47. O'Brien R. Other voices at the workplace: gender, disability, and an alternative ethic of care. *Signs* 2005;30:1529-55.

- 486 48. Bauer GR. Incorporating intersectionality theory into population health research
487 methodology: challenges and the potential to advance health equity. Soc Sci Med
488 2014;110:10-17.

Table I. Demographic and occupational characteristics (N=12)

Category	Grouping	<i>n</i>
Sex	Male	6
	Female	6
Age Range	20-39	3
	40-65	9
Marital Status	Single	2
	Married	10
Educational Background	High School	4
	Community College	4
	University	4
Industry Sector	Trades	4
	Health, education, public works	4
	Protective services	4
Company Size	Small	2
	Medium	3
	Large	7
Time Since Injury (at interview date)	3-4 years	10
	5-6 years	2
Employment Status at time of injury	Full-time	12

*small company: under 20 employees; medium company: 20-50 employees; large company: 100 or more employees