

Mobile Work and Mental Health

A Preliminary Study of Fly-in Fly-out Workers in the Alberta Oil Sands

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EXECUTIVE SUMMARY

Fly-in fly-out (FIFO) work is an integral part of various industries around the world. The oil sands industry of northeast Alberta has relied heavily on a FIFO workforce (including drive-in drive-out) since the early 2000s. Workers arrive from other places in Alberta and across Canada for rotations of 6 to 21 days, living in work camps while working 10- or 12-hour shifts at nearby worksites.

Impacts of this type of mobile work—long commutes, camp living, distance and time away from family, and intensive and demanding work—on the mental health and wellbeing of FIFO workers are increasingly studied in other places, such as Australia, yet remain sorely underexamined in Canada. This is a notable gap, given that 1) FIFO workers and the construction trades are shown to have high incidences of stress, depression, anxiety, and suicide (Parker et al. 2018); 2) work is the number one source of stress for Canadians (Shepell and the Mental Health Commission of Canada 2018); 3) mental health is the number one type of workplace disability (Employment and Social Development Canada 2016).

The Mobile Work and Mental Health (MWMH) study provides preliminary, broad-ranging research on the wellbeing of FIFO workers in the oil sands. The project adopted a social determinants of mental health framework and a mixed-methods approach: an extensive in-person questionnaire (n=72) composed of both closed- and open-ended (objective and subjective) questions, and a set of in-depth follow-up interviews (n=15). Research took place between December 2019 and June 2020, allowing us to capture some early experiences of the COVID-19 pandemic.

Most participants in the study were white males and contract workers, many of whom were working maintenance and shutdowns. Most had worked on and off in the oil sands for 6 or more years and were residents of central or southern Alberta, with 20% coming from other provinces.

Findings of the MWMH project echo previous research findings in this and other FIFO contexts (Angel 2014b; Parker et al. 2018; Bowers et al. 2018), helping us better understand issues of wellbeing among FIFO workers generally. Given the demographics of our participants, our findings also shed light on the experiences of some overlooked members of the workforce: *contract workers* and *trades women*. Contract workers comprise a major share of the oil sands FIFO workforce yet are not often included in oil industry research studies. In addition, the disproportionate number of trades women participating in the study (31%) allowed for important analysis of gendered phenomena. While the number of racialized non-white participants, both Indigenous and non-Indigenous, was lower than is found in the workforce, throughout the study we also note where findings suggest particular impacts on these workers.

Results of the study indicate *significant general and mental health challenges among this population, high stress stemming from FIFO work and a demanding and unpredictable work environment, and a work culture of mistrust regarding employer commitment and support for mental health*. Our recommendations point to needed improvements in the health and privacy of camp conditions, more flexible rotational schedule options, broader and more flexible availability of trusted mental health training and resources, and a number of areas for further research.

Oil sands and other FIFO-reliant industries, as well as government bodies and community and labour organizations, need to act immediately and on many fronts to better understand, prevent, and provide resources and support for mental health challenges faced by mobile workers and their families.

KEY FINDINGS

DIRECT IMPACTS OF FIFO CONDITIONS

- *Distance and time away from home/family is the most stressful of FIFO conditions*, with 87% of participants reporting some (43%) or a lot (44%) of stress stemming from distance. The difficulty of establishing and maintaining relationships with family, feelings of loneliness, and the inability to be at home for family events or emergencies are significant stressors among FIFO workers.
- *Camp living is also stressful*, with 77% reporting some (46%) or a lot (31%) of stress stemming from camp living. Wellbeing in camp is most affected by isolation, a feeling of “entrapment” (58% disagreed that they are free to do what they want in camp, and 39% had never left camp while on rotation), poor morale (52% disagreed that morale in camp is good), limited or unhealthy food options, and difficulty maintaining healthy eating, exercise, and sleep habits. Half of the participants reported difficulty falling asleep (57%) and never or only occasionally waking up feeling rested in camp (49%); this is compared to 29% and 11%, respectively, when at home.
- Two-thirds (69%) of respondents report some or a lot of stress from *travel/commuting*, with one-third (32%) rating travel as difficult; they cite unpredictable conditions (weather, cost, schedule) and long and tiring journeys. Travel was more stressful for workers living outside of Alberta, on night shift, and/or on a “short-off” rotation (1-3 days off, versus 6-14).
- Two-thirds (66%) of respondents agreed that they were able to *balance the demands of work and personal life*, although this was notably lower among those who had worked for a longer period in the oil sands and those with short-off (1-3 days off) rotational schedules, as well as for supervisors. Workers on short-off rotations (correlated in our survey population with working intensive shutdown maintenance projects, living in Alberta, and less likely to have children) were in contact with family and friends less frequently when in camp than those on long-off rotations (6-14 days off). Supervisors and those working continuously (versus

on and off) in the oil sands were more likely to still have work on their minds when they went to bed or returned home.

- *Transitioning* between work and home (on and off rotation) is an important facet of work-life im/balance for FIFO workers. Participants rated transitioning home as somewhat more difficult (39%), citing fatigue and role transition. One-third (29%) rated the transition back to work as difficult, with those in more unpredictable circumstances (working on and off and/or at a higher number of sites) more likely to do so; this is probably due to the challenges of constantly adjusting to new work environments, including after an extended absence.
- In terms of effects of specific events, most of the interviewees—all of whom participated in the study after the onset of the *COVID-19 pandemic*—reported being affected by its early months. Workers reported disrupted travel, prolonged stays, variable compliance with safety protocols in camps, concerns with high contact among highly mobile workers, and fears of further layoffs. With regard to the economic downturn, three-quarters of survey participants indicated being affected by layoffs, intensified demands, and/or constant uncertainty.

HEALTH MEASURES AND BEHAVIOURS

- Participants' ratings of *general mental health* and *daily stress* are worse than is found in the population. About half rated their mental health as very good or excellent (46%) or rated most days as somewhat or very stressful (51%).
- Nearly half (46%) of survey participants had *diagnosed long-term health conditions*, with half of these (51%) describing their conditions as mental or both mental and physical. These proportions are higher than is reported in the general population.
- *Work-related stress* is worse than has been found in the general population. More than three-quarters (78%) reported stress from work, with one-third (29%) reporting a lot; stress from financial concerns, which are highly related to work situation, was reported by 77%, with 35% indicating *a lot*. Respondents were split in their assessments of daily stress in the workplace (with roughly one-third agreeing, disagreeing, or being neutral). However, and consistent with the literature, *higher levels of daily workplace stress and work-related stress were correlated with health problems*: presence of a diagnosed long-term health condition and use of mental health services.
- Supervisors, women, racialized non-white people, those without spouses, people in their 30s, and people working continuously emerged as populations with worse mental health and/or more stress.
- Workers reported *poorer eating habits, poorer sleep, less energy, more exercise, and less drug and alcohol consumption at work (on rotation)* compared to when home (off rotation), with some *important gender differences*. Women were significantly more likely to use pain relievers both at home and at work and, most notably, to have difficulty falling or staying asleep (41% nearly every day) when staying in camp.

- In terms of self-worth and psychosocial wellbeing, participants reported *taking less interest or pleasure in doing things and more frequently feeling down or distressed at work*, compared to when at home, with women more likely to feel down or distressed at home than men, but less likely to feel like a failure.
- Consistent with the broader literature, participants that reported *thoughts of harming themselves were almost all men* (1 in 7 male participants). Several participants had lost colleagues to suicide.

ACCESS TO AND USE OF HEALTH SERVICES

- More than one-third of participants (35%) had *sought help for their mental health (counselling, medication, and/or information)* in the past year – twice as high as reported in the general population. The most frequent reasons cited for seeking help were family and relationship issues, anxiety, depression, trauma, and general mental health.
- The majority (76%) of participants had access to healthcare services while on rotation (on site and/or in camp). *However, more than half of those with access indicated they would not use these services; this was especially true for healthcare offered on site, where 57% of participants with access to these services indicated they were “not likely” to use them.* Workers indicated concerns that known or suspected medical issues would have negative consequences, such as layoffs, lost time, or loss of respect from employers and crew members.
- Almost one-quarter of participants (22%) indicated *not receiving health care when needed in the past year*, citing lack of time, inconvenience, bad experiences, no funds, and/or not receiving help when requested. Nearly 80% of participants reported *working when sick* and one-third reported *not taking time off work for an injury*. Many pointed out that they were “there to work,” and some indicated that taking time off was frowned upon given project deadlines and added pressures on work crews.

WORK CULTURE

- Survey participants reported and commented on a *culture of “work before health.”* *Over 40% of participants disagreed that there is good communication at work about psychological safety, that employers are committed to minimizing stress, and that management values wellbeing as much as productivity.* Comments indicated that this is exacerbated by mistrust around the safety of reporting health issues at work, a culture of presenteeism, and being in “full work mode” when away from home on rotation.
- Most workers reported trusting individual relationships and social ties at work, often with workmates, but *mixed experiences of general morale at the worksite.*
- Almost half (46%) *reported discrimination at work*, with women significantly more likely to do so (68%). The most frequent forms of discrimination were sexism

(mentioned by two-thirds of female participants), favouritism (e.g., nepotism, regional affiliation, job title), height, and racism.

- Almost half (48%) indicated they would feel somewhat or not at all comfortable seeking help for mental health, with stigma, fear of professional consequences, and lack of information among the top explanations.

KEY RECOMMENDATIONS

POLICY AND PRACTICE

Policies and practices aimed at improving mental health and wellbeing among FIFO workers require an expanded understanding of the "workplace", sustained multi-stakeholder collaboration, education and communication tied to policy and action, concerted efforts to improve organizational culture, and review of key legislation.

INSIDE THE WORKPLACE, key recommendations include:

- Better and more consistent quality of food, privacy/safety, and cleaning in *work camps*, along with a relaxing of regulations, more health services, and appropriate staff to ensure all of the above.
- *Rotation and travel schedules* that more flexibly accommodate distance and family situations, prioritize schedules with six or more days at home, and establish minimum time buffers between beginning/end of work rotations and long journeys. Offer consistent coverage of travel costs.
- *Manage work schedules* (hours, and day/night shifts) to reduce fatigue and stress.
- Enhance or establish *trusted (i.e., third-party) mental health supports*, including regularly available counselling on site/in camp (including drop-in supports), mental health first responders, stress management workshops, wellness activities as part of paid work time, increased EFAP sessions, peer support programs (e.g. Mates in Construction), and anti-stigma back-to-work supports for psychosocial injury.
- Ensure *safe, third-party reporting mechanisms* for psychological safety issues—including gendered and racialized harassment and bullying—and for punishing these forms of health and safety violation.
- Investigate and adopt *alternative forms of mental health resource delivery* that take into account FIFO realities of distance, travel, etc.
- Enhance *mental health training and education* across all ranks and activities in the workplace, including regular communication about mental health issues and resources, anti-discrimination and anti-bullying training, developmental training for supervisors, and suicide prevention awareness and training.
- Create mechanisms to *manage stressful operator-contractor relations*.
- *Concerted efforts to change organizational culture around mental health*, such as adopting industry-wide tools and standards, mechanisms for monitoring mental

health, creating multi-stakeholder task forces and worker-led teams, and conducting regular research and review of best practices for preventing and addressing mental health challenges for FIFO workers.

OUTSIDE THE WORKPLACE, key recommendations include:

- *Alberta Government funding and leadership for psychological safety and mental health*, focused on independent training for workers, OHS training materials on psychological safety, and worker peer-support and suicide prevention programs that take into account the conditions of FIFO work.
- *Alberta Government review of OHS, Worker's Compensation, employment legislation, and health services to identify gaps in supports for FIFO and other interjurisdictional workers. Mandate minimum mental health payments in employee support programs.*
- *Union and community organization leadership in prioritizing information and training on mental health and in identifying and developing responses to policy gaps affecting FIFO workers.*
- *Efforts across all stakeholders to develop means for communicating with and receiving systematic information from employers about FIFO and mental health, and to help develop trusted third-party health services and options.*

FURTHER RESEARCH

Canada is falling behind in conducting research on FIFO workers and their mental health and wellbeing. Our findings suggest that more basic and systematic research data are needed, including:

- Comparative studies of mental health among FIFO and non-FIFO workers; of FIFO population in different contexts; of mental health policies and practices across companies; of operations, contract workers, and non-oil FIFO employees (such as camp staff)
- Impacts of rotational schedules and rotational phase
- Cumulative effects, using longitudinal research methods
- Worker perspectives on what is needed, including perspectives from especially affected sub-populations (e.g., women, racialized non-white workers, supervisors)
- Masculinity and the gendered dynamics of FIFO work, resource industry work cultures, and OHS training and practices
- The roles that employers, supervisors, unions, and health and safety associations can and do play in supporting mental health of FIFO workers
- Legislative and interjurisdictional “cracks” in supports for FIFO workers and their families
- Organizational culture around FIFO and mental health
- Effects on families, and interactive effects between individual worker and family mental health

- Various modes of delivering mental health supports for FIFO workers
- Attention to impacts for specific groups; women, racialized non-white workers, supervisors, those working continuously, and those working in more precarious FIFO work.

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1. INTRODUCTION: MENTAL HEALTH AND FIFO WORK

Fly-in fly-out (FIFO) arrangements (which we take to include drive-in drive-out and bus-in bus-out) involve workers traveling hundreds or thousands of kilometers away from their homes on work rotations of one or more weeks. Fort McMurray and the surrounding Athabasca Oil Sands of northeast Alberta have relied heavily on this type of work since the early 2000s. In 2014, prior to the oil downturn, there were more than 50,000 rotational mobile workers from across Canada staying in 120 work camps in the Athabasca Oil Sands region (Regional Municipality of Wood Buffalo 2015)—an area of boreal forest some 140,000 square kilometers in size under which lie the world’s third largest petroleum deposits (in the form of bitumen). While the number of FIFO workers has subsided in recent years, and workers are more often coming from less-distant locations, the industry continues to rely on a FIFO workforce of tens of thousands of people. Research demonstrates that resource and industrial construction workers take on mobile and FIFO work for a number of reasons, including financial incentives and limited job choices at home or in their trade; at the same time, financial and family strains can contribute to feeling forced to exit or re-enter FIFO work (Construction Sector Council 2007; Dorow and Mandizadza 2018; cf Nichols Applied Management 2018).

While there is a growing literature on FIFO work, its lived complexity is under-recognized and under-researched (Langdon et. al 2016), especially in Canada. The mental health and wellbeing of FIFO workers is one notable gap. While government, industry, and academic research on the impacts of FIFO conditions on the health of workers has been growing in Australia (see, for example, Parker et al. 2018; Chen et al. 2003; Gardner et al. 2018), it is almost altogether missing in Canada, where the oil and gas industry emphasizes health and safety (see, for example, <https://www.capp.ca/explore/health-safety>) but has given limited attention to researching and promoting mental and psychological health; the construction industry, trades associations, and unions have been somewhat more proactive (Buildforce Canada 2019; Saskatchewan Construction Safety Association 2021; Canadian Labour Congress 2017; O’Reilly 2020; Samra 2017).

There is great value in identifying which work-related conditions and factors pose especially salient risks to FIFO workers’ mental health (Parker et al. 2018: 70). Psychological health problems and illnesses are the number one cause of disability in Canada (Employment and Social Development Canada 2016), and mental illness among Canada’s working population is only expected to increase in both prevalence and cost (Mental Health Commission of Canada 2011). Forms of psychological distress are known to be especially acute in construction and other male-dominated industries (Roche et al. 2016; BuildForce Canada 2019). Poor mental health and high stress are known to stem from social and organizational conditions both at and beyond the workplace (Pajovic and Shuey 2021). Workplace constraints and resources play a key role in shaping rates and levels of psychological distress, while also being modulated by

and intertwined with outside factors ranging from public health policy to family life circumstances (Marchand et al. 2006, 2015). What's more, healthy workplaces are directly tied to higher productivity and profitability (Kelloway and Day 2005; Deloitte Insights 2019). As a result, employers and employees are showing increased awareness of workplace wellbeing (Moss 2020; Samra 2017).

The realities of FIFO work—including time and distance from family, the isolation of camp living, and demanding rotational schedules and work hours—can intensify and complicate the layers of individual, workplace, and broader societal conditions that interact to shape wellbeing, leading to high levels of anxiety, depression, burnout, and psychological distress (Parker et al. 2018). While FIFO can have positive lifestyle, career, and family benefits (Misan and Rudnik 2015), its overall mental health impacts can be quite negative and need to be better understood.

The Mobile Work and Mental Health (MWMH) study begins to address the gap in research on the wellbeing of FIFO workers in Canada. The study is based on an extensive questionnaire (n=72) and a subset of qualitative interviews (n=15) with FIFO workers in the oil sands industry of Alberta.

Almost all of the participants were tradespeople working for or as a contractor. While a majority had worked on and off in the oil sands, including doing the intensive and crucial work of maintenance shutdowns (turnarounds), they had been doing so for a long time: 75% of the sample had worked in the oil sands 6 or more years. As is found in the oil sands FIFO population, the majority were white, male, and Alberta-based, although importantly, the study attracted about twice the proportion of females found in the construction and oil sands workforce. The vast majority earned between \$65,000 and \$200,000 per year, with women twice as likely as men to be earning under \$100,000.

Our study *sheds light on the wellbeing of FIFO workers in the oil sands*. While the MWMH project is not based on a representative or large sample, our findings echo many of those found in major studies of the FIFO workforce (both operational and contracted) in Australia. In addition, the MWMH project *responds to a dearth of literature on FIFO trades women and begins to fill an important gap in understanding the wellbeing of contract workers*, including those who have worked shutdown and maintenance and who have worked contract jobs in the oil sands for a number of years. Research in the oil sands industry itself tends to focus on the “regular” operational FIFO workforce. However, contract workers not only make up the majority of the oil sands workforce but also regularly work side-by-side with operational workers. Previous research has shown contract workers—who tend to have less job security and autonomy while carrying heavy workloads (cf Saxinger 2016)—to have the poorest mental health among FIFO workers (Parker et al. 2018: 16, 33). Research has also shown that trades women face mental stresses associated with sexual harassment and gender discrimination as well as barriers to entering and maintaining FIFO-based trades work (Kelly 2020; Nagy and Teixeira 2019; Pirotta 2009).

Surveys were conducted from December 2019 to April 2020, and interviews in May and June of 2020. This report is based predominantly on survey material, with interview material used selectively to extend understanding of phenomena arising from the survey. While survey administration was drawing to a close just as COVID-19 started, interviews included reflections on the early impacts of the pandemic.

The project was co-led by Dr. Sara Dorow, a sociologist with 12 years of experience conducting research in the oil sands region, and Valerie O’Leary, a critical incident stress management practitioner with 15 years of experience responding to community and workplace stress and trauma, including five years working directly with mobile workers in the oil sands. Throughout the report, we integrate reflections from Valerie based on her extensive firsthand knowledge.

The aims of the project were to:

- **gain understanding of mental health and wellbeing among FIFO workers in relation to experiences of travel and rotation, camp life, and distance and time away from home and family;**
- **identify the interrelated facets of rotational mobile work that produce, intensify, or mitigate ongoing mental health challenges for workers;**
- **consider the role that demographic, employment, and workplace characteristics play in FIFO-related mental health impacts;**
- **identify prevention and support measures for affected individuals, families, and worksites.**

The Alberta oil sands industry cites FIFO as a solution to meeting the labour needs of remote projects, ensuring worker safety and performance, and responding to workers’ desire for families to remain in home communities (Oil Sands Community Alliance 2018). However, research to date shows that this solution poses challenges to individual, family, workplace, and community wellbeing, including through increased pressures on health and social service systems (Parker et al. 2018; Donatelli et al. 2017; Dorow and O’Shaughnessy 2013).

Recent research, most notably in Australia, indicates that stress, depression, fatigue, sleep loss, and related psychological, emotional, and physical health challenges stem from a range of factors associated with FIFO rotational work in the resource and mining sectors. These include frequency and length of periods away from families and social networks, long and/or complex commutes, jarring adjustments between on- and off-rotation, the isolation and regimentation of camp living, extended and nonstandard working hours, and emotional and physical exhaustion (Parker et al. 2018; Mclean 2012; Torkington et al 2011; Carter and Kaczmarek 2009; Gardner et al 2018; Straughan, Bissell, and Gorman-Murray 2020; Wright and Griep 2019; Bowers et al. 2018). The

changing market conditions (“boom and bust”) and 24/7 demands of resource industries bring additional elements of uncertainty and stress to trades workers (Mayes 2020; Straughan et al. 2020; Dorow and Mandizadza 2018).

Importantly, these factors create “social isolation, stress and poor help-seeking behaviours” (Mclean 2012:126) as well as high levels of psychological distress and burnout (Parker et al. 2018), all of which are associated with higher rates of stress leave-taking, drug use, and suicide (Angel 2014a; Vojnović 2014; CBC 2015; Bilsker and White 2011). In comparing FIFO workers to both a benchmark group of non-FIFO workers and the general population in Australia, Parker et al. (2018: 113-116) found the FIFO group to have significantly higher levels of anxiety, depression, burnout, and psychological distress; emotional wellbeing was similar to that of the non-FIFO benchmark group, but worse than in the population. The effects of organizational characteristics of FIFO on mental health also depend on the different social positioning of workers, including and especially along lines of gender in what is a male-dominated industry (Dorow and Mandizadza 2018; Pirota 2009; Gardner et al. 2018; Angel 2014a; Kelly 2020), with additional effects on gendered familial roles and relationships (Baker and Ciuk 2015; CBC News 2017; Mayes 2020; Meredith et al. 2014; Straughan et al. 2020). Mental health impacts intersect with and are exacerbated by workplace discrimination and bullying (Miller et al. 2020).

In the case of Fort McMurray and the oil sands specifically, we must add individual and collective strain in the wake of the 2015 downturn, the devastating wildfire of 2016, and the onset and ongoing impacts of COVID-19 that started in March 2020. The pandemic forced even stricter isolation measures on workers at camps, and caused new layoffs, schedule changes, and travel disruptions (Amnesty International 2020; Krugel 2020; Mason 2020; Tuttle 2021). At the same time, COVID-19 may have forced new attention to health risks for this population, in part because of the ways FIFO and other mobile workers were adversely affected (Neis et al. 2021). Finally, we need to take into consideration policy changes, especially to the Occupational Health and Safety Act and Workers’ Compensation Act. In 2020, amendments to the Acts via Bill 47 reshaped the work environment of Alberta workers. Implications of this for oil sands FIFO workers are briefly discussed in our concluding recommendations (Section 10).

The MWMH project yielded rich preliminary results that echo findings in other countries (notably Australia). Throughout, we attempt to compare our results to previous findings and, where possible, to the general population.

Our results point to some clear areas of concern regarding the mental health of FIFO workers. We found *poor general health and mental health, including among particular subgroups; barriers in the work culture and working conditions to accessing and providing care; and high levels of stress associated with key conditions of FIFO work—distance and time away from home and family, camp living, and to some degree, travel and commuting*. Our results also suggest *correlations between high levels of work stress and the prevalence of both diagnosed long-term conditions and mental health help-*

seeking. The MWMH project also revealed a disturbing *lack of trust in organizational and employer support* for the health and mental wellbeing of oil sands workers.

The final section of the report provides a preliminary set of recommendations for policy and practice and points to areas for further research on FIFO-related mental health and wellbeing. These are shaped in part by workshops and written feedback gathered from a diverse set of stakeholders in August 2021. Our thanks to the sixteen people from industry, community, and government who participated; their insights and questions were very useful in crafting the final draft of the report.

The report is organized into the following sections, each of which begins with its own summary of section highlights:

1. **INTRODUCTION: MENTAL HEALTH AND FIFO WORK**
2. **METHODOLOGY:** provides an overview of the Social Determinants of Mental Health conceptual framework and the mixed-methods approach, including the survey components, development of the interviews, and how key timing and other contextual factors affected the study.
3. **DEMOGRAPHICS: OVERVIEW OF SURVEY PARTICIPANTS:** outlines characteristics of the participants involved in the survey, including comparisons to previous studies such as the Regional Municipality of Wood Buffalo project accommodation census (RMWB 2012) and the Oil Sands Community Alliance (OSCA) survey of the oil sands operations-related rotational workforce (Nichols Applied Management 2018).
4. **HEALTH, MENTAL HEALTH, AND STRESS:** builds on the previous section with a profile of the reported general physical and mental health of participants, including stress factors, significant life events, diagnosed long-term health conditions, and workplace sickness and injury. The oil downturn, the 2016 Fort McMurray wildfire, and COVID-19 are considered among recent impactful events.
5. **WORKING CONDITIONS IN THE OIL SANDS:** outlines findings from the survey regarding workplace conditions that impact participants' mental health and wellbeing, including workplace ties and sociality; sense of efficacy and control; workplace morale, respect, and discrimination; and employer commitment to wellbeing.
6. **FIFO AND MENTAL HEALTH: DISTANCE, CAMP, AND TRAVEL:** encompasses facets of FIFO as social determinants of mental health, laying out how distance and time away from family and home, camp living, and travel and commuting impact FIFO workers in relation to their individual, family, and workplace health.
7. **WORK-LIFE IM/BALANCE:** provides workers' assessments of work-life balance and addresses how rotation schedule, transitioning between work and home, and relationships at work and home impact FIFO workers.

8. **HEALTH AT WORK AND AT HOME: COMPARING RELATIONSHIPS, BEHAVIOURS, AND SELF-WORTH:** compares FIFO workers' health-related experiences and behaviours between work and home, including exercise and diet; tobacco, drug, and alcohol use; sleep and rest; and depression and self-worth.
9. **ACCESS TO AND USE OF HEALTH SERVICES:** outlines health care access and provision for FIFO workers, (under-)use of those services, and type and frequency of use of mental health supports among participants.
10. **RECOMMENDATIONS AND NEXT STEPS:** suggests practices and policies that could prevent or mitigate the negative mental health issues associated with FIFO work, including suggestions from MWMH participants, and points to areas for further research.

Many existing studies of mental health and wellbeing among FIFO workers utilize a psychological distress model to measure mental health. As described in the next section, our study draws from a more comprehensive and holistic social determinants of mental health mode accounting for contextual factors such as job conditions, broader social and economic relationships, and factors of race, gender, and citizenship status. The MWMH study thus addresses how FIFO conditions interact with and/or contribute to workers' health challenges, the interconnected nature of physical and mental health, and the relationship between new and pre-existing health conditions. We believe these findings are relevant for service providers and policymakers in a range of contexts where there are high incidences of mobile, remote, and volatile work, including the communities in which workers live.

Insights from Valerie O'Leary (Critical Incident Stress Management-Fort McMurray)

In my years of working in crisis and trauma response in the oil sands and elsewhere, I have noticed that there is a growing awareness regarding the correlation between physical and mental health within the workplace. Unfortunately, it is not always being addressed in the oil sands. I do recognize how it would be more difficult to identify because of the vast number of employees, the long shifts and rotations, and employees fearing they will lose their jobs if they should admit they are struggling. The workplace can be a key location for activities designed to improve wellbeing among employees and help build personal psychological body armor through workplace wellness programs. Conducting annual Stress Management/Mental Wellness workshops can help identify those at risk and connect them to treatment before it turns into something less manageable.

2. METHODOLOGY

We adopted a *Social Determinants of Mental Health* (SDMH) model, which considers the production and prevention of mental health issues within socio-economic context. SDMH considers health and wellbeing across multiple scales, including the individual lives of workers, the structured arrangements of their work, and the impacts of institutions, policies, and practices beyond the workplace (World Health Organization 2014; Tausig and Fenwick 2011; Marmot et al. 2008). Work stress is thus connected not only to job conditions and employment relations (Muntaner et al. 2010; Wilkinson and Marmot 2003) but also to family, race, gender, and citizenship status (Tausig and Fenwick 2011; Poland et al. 2008; Hilario et al. 2018). Importantly, SDMH moves us beyond an individual- and incident-based model to one that considers more sustained and preventative mental health supports in the lived context of FIFO work. Holistic, systemic analyses of the various social and economic conditions of mobility that interact to shape mental health can help to promote wellbeing for workers (Langdon et al. 2016).

Our utilization of a sequential mixed-methods approach—a survey, followed by interviews—is in keeping with a SDMH conceptual framework, as it focuses on “real-life contextual understandings, multi-level perspectives, and cultural influences” (Creswell et al. 2011: 4). We started with a questionnaire to gather broader baseline data and then extended our findings through interviews about lived experience. This report is largely based on the results of the questionnaire, with some supporting analyses drawn from interview material.

THE SURVEY

The survey component of the study took a broad view of the issues, informed by questions found in extant studies such as the Canadian Community Mental Health survey, the Oil Sands Community Alliance Operational-Related Rotational Workforce Study, an Alberta Government OHS Survey, and several studies conducted in Australia with FIFO workers (see Appendix: Survey Questionnaire). It used a combination of closed- and open-ended (objective and subjective) questions about demographics, general health, employment situation, travel/commuting, camp experiences, workplace experiences, mental health and stress, health behaviors (including comparisons between work and home), access to and use of health services, and needs and recommendations around mental health.

Surveys were conducted from December 2019 to April 2020. They were administered face to face by members of the research team, mostly through telephone or online video chat (such as Zoom), with some 25% occurring in person (in Fort McMurray and Edmonton, Alberta). With participants' permission, surveys were recorded to ensure accuracy for open-ended responses. The survey usually took between 60 and 90 minutes to complete.

While the original plan was to conduct surveys in work camps, our attempts to partner with industry were unsuccessful; we were unable to secure permission and support from oil sands companies or work camp operators. We therefore recruited through multiple means: direct (e.g. at Fort McMurray airport), social media, unions, word of mouth, and a variety of provincial and national mental health and trades organizations. Despite a less systematic approach than desired, recruitment yielded a diverse set of participants and a rich data set, albeit few participants directly employed by operators (the operational workforce).

INTERVIEWS

Following the completion of the survey phase, and based on initial analyses of results, we sampled a subset of participants for follow-up interviews. (All survey participants were asked if they were open to being contacted for a follow-up interview, and all but a few agreed.) The interview sample was selected based on a matrix of characteristics: gender, home location, job title, family situation, and reported mental health. Our aim was to gather more nuanced understanding of a range of initial findings from the questionnaire.

Interviews were conducted in May and June 2020 using a semi-structured approach. They explored camp living and morale, work-life im/balance, rotation and shift, and oil sands work culture, and served to place experiences of health in a more detailed understanding of individual work history and family situation. Since the COVID pandemic had begun, we also asked about impacts of COVID on work, family, and FIFO conditions. (See a summary of COVID-related findings from our interviews in Section 4.)

TIMING OF THE STUDY AND OTHER CONTEXTUAL FACTORS

The timing and context of any study is important to understanding results. In the case of the MWMH project, reluctance on the part of oil sands companies and camp operators to partner with us posed challenges for recruitment. We were able to recruit just three-quarters of the number of survey participants originally planned (72 rather than 100), and unable to attract many from the operational workforce. And as with any non-randomized voluntary sample, we might have attracted people whose backgrounds or experiences increased their likely interest in a survey on mobile work and mental health. In addition, several key facets of timing shaped the who and what of the project:

- **Economic Downturn:** when we conducted research in late 2019 and early 2020, the oil sands industry had been in an economic downturn for five years. This had several implications, including a reduced FIFO workforce, fewer FIFO workers coming from longer out-of-province locations, and the general stress of uncertainty about continued job prospects—including a number of participants who had been laid off or unable to find a new contract. This most likely contributed to a relatively high number of survey participants from Alberta (80%), and to participants' characterizations of a stressful organizational culture.

- Shutdown/Maintenance: Our research occurred between intensive shutdown periods, which means we were contacted by a number of participants who were just coming off of a maintenance turnaround or, later, heading into one.
- Big-Impact Events: As we completed our surveys and started our interviews in March and April 2020, the pandemic was just beginning. We thus heard initial experiences and reflection regarding its impact. In addition, we knew that many of our participants would likely have experienced the Fort McMurray wildfire of spring 2016.

3. DEMOGRAPHICS: OVERVIEW OF SURVEY PARTICIPANTS

Highlights

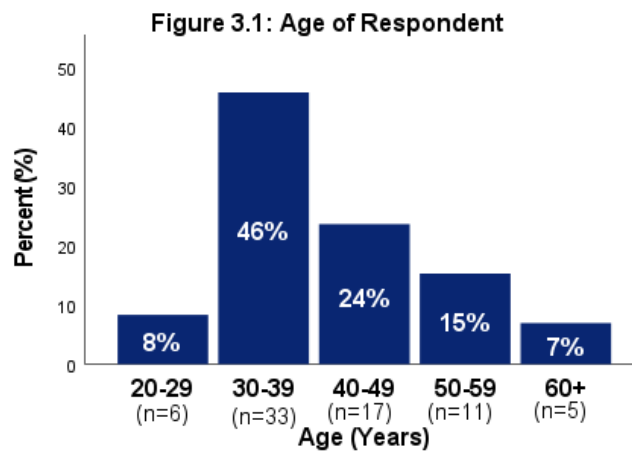
- The majority of survey participants (n=72) were people in the trades working on and off for contractors, had been working 6-20 years in the oil sands, had worked at more than 5 job sites, and were members of a labour union. Most worked maintenance and construction.
- Participants were almost evenly split between those working “short-off” (1-3 days off) and “long-off” (6-14 days off) rotations, with a variety of day, night, and combined shifts.
- Most (80%) resided in Alberta, with others coming from British Columbia, Manitoba, Ontario, and several Atlantic provinces.
- While most participants were white males, the survey attracted a higher percentage of women (31%) than is found in the workforce. Of those participants identifying with a non-white racial or ethnic group (17%), half were Indigenous.
- Almost two-thirds of participants were married or in common law relationships and almost half had children. Most were in their 30s and 40s.
- Most participants earned between \$65,000 and \$100,000 (42%) or between \$100,000 and \$200,000 (43%) per year, but with a significant gender skew: women were more than twice as likely as men to be earning under \$100,000/year.
- One-third rated their job security as bad or very bad, and two-thirds had experienced a major change in their job situation in the past 12 months.

In this section we provide a snapshot of the characteristics of those who participated in the MWMH survey. While there is little comparable data in Canada on the demographics of the rotational FIFO workforce, where possible we provide reference to similar, comparative studies, such as the Regional Municipality of Wood Buffalo project accommodation census (RMWB 2012), and an Oil Sands Community Alliance (OSCA) survey of the oil sands operations-related rotational workforce (Nichols Applied Management 2018), with some reference as well to the largest such study to date in

Australia (Parker et al. 2018). It is important to note that the RMWB survey occurred during an economic boom, and thus captured information on a large number of people, including more short-term construction workers; the OSCA occurred during a downturn and did not include contract workers. We also refer to some statistics found in studies of oil and gas and the construction trades in Canada. In subsequent sections of the survey, we provide comparisons to findings from studies of FIFO work and mental health in other contexts, most notably Australia.

AGE, GENDER, AND ETHNICITY

Participants ranged in age from 22 to 64, but nearly half (46%) were 30-39 years old.

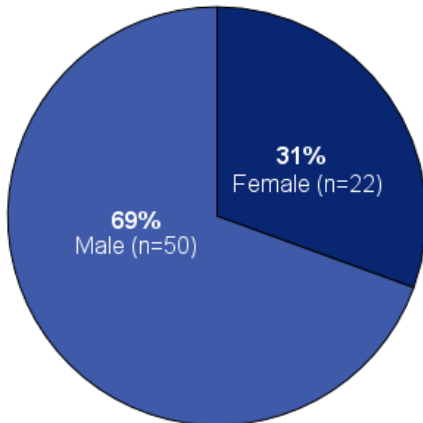


Source: Survey Data, Q. 1.1. (N=72)

This profile is similar to that found in Parker et al.'s Australian study (average age 41) but slightly younger than in previous studies in the oil sands. OSCA's Oil Sands Operations-Related Rotational Workforce Study (Nichols Applied Management 2018) found that approximately half (47%) of operations-related rotational workers were over the age of 44 (Nichols Applied Management), an increase in age since their 2007 study (when only 27% of respondents were over the age of 44). They suggest that this increase in age of workers could relate to type of occupation, the phasing out of physically intensive construction jobs (primarily filled by younger workers) and the shift towards operations jobs (less physically intensive). Note that the majority of MWMH participants were not working directly for an operator and a number were working on-and-off (including turnaround maintenance, or shutdowns).

The resource industry and construction trades are traditionally male-dominated fields. The demographics of our participants reflect this, yet we attracted a higher proportion of females than is found in the workforce: 31% of participants identified as women, and 69% of participants identified as men. The OSCA report found 15% of operations

Figure 3.2: Gender of Respondent

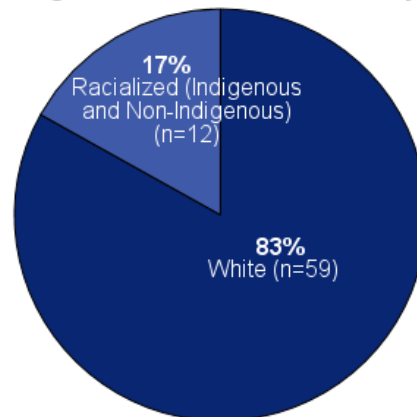


Source: Survey Data, Q 1.2. (N=72)

rotational workers are women (Nichols Applied Management 2018), the 2012 RMWB report found 17% women among the work camp population, and PetroLMI (2018) reported 22% in the oil and gas sector in Canada (Jaremko 2018); Parker et al.'s (2018) sample was 83% male. Some 13% of employees in the construction industry in Canada are women, with only 4.7% of construction tradespeople being female (Frisa 2021). The overrepresentation of women in the MWMH Survey provides an important opportunity to explore gender and health among FIFO workers in the oil sands.

A majority of participants (83%) identified as white. This is comparable to the 2012 RMWB census of project accommodations, which found 80% identified as Caucasian. Half of the non-white MWMH participants (8.5%) identified as Indigenous. This is slightly higher than the overall workforce - Indigenous workers made up 5% of the overall provincial labour force in 2016 (Government of Alberta 2017) - but is lower than in the OSCA report (13%) (Nichols Applied Management 2018).

Figure 3.3: Ethnic or Racial Identity



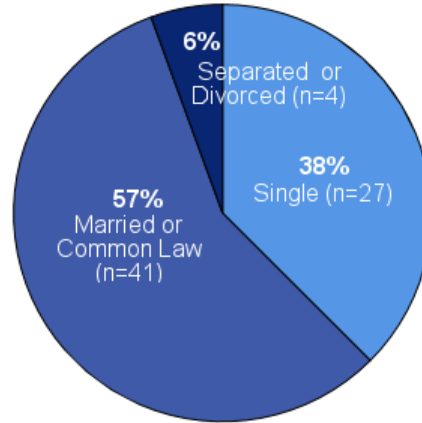
Source: Survey Data, Q1.3. Of Racialized participants, six identified as Indigenous, and six identified as members of an other racialized group, via Q 1.10.

Finally, almost all (90%) of our participants were born in Canada, all were citizens, and most used English in their daily lives.

MARITAL AND FAMILY STATUS

Almost two-thirds of participants were married or in common law relationships. This is lower than in the OSCA report, which found that 71% of oil sands operational workers were married (Nichols Applied Management 2018), but slightly higher than in the 2012 RMWB Census, where 51% of the work camp population reported being married/common-law. In their large Australian study, Parker et al.'s survey participants were 75% married/partnered. Note that consistent with previous research (Cherry et al. 2018), there was a clear gender skew in the MWMH sample: 64% of males and 41% of females reported being married/common-law.

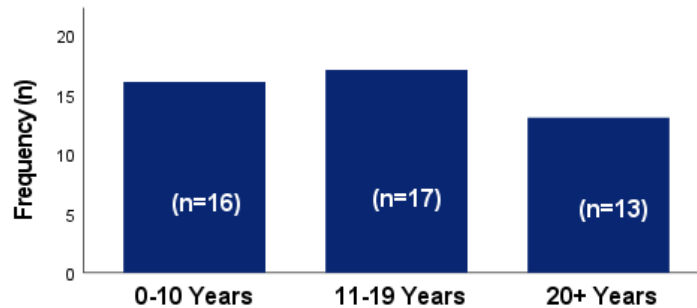
Figure 3.4: Marital Status of Respondent



Source: Survey Data Q1.4. (N=72).

Almost half of the participants (47%) had children, with most reporting 1-3 children. More than two-thirds of participants' children were dependents under 20 years of age.

Figure 3.5: Ages of Children

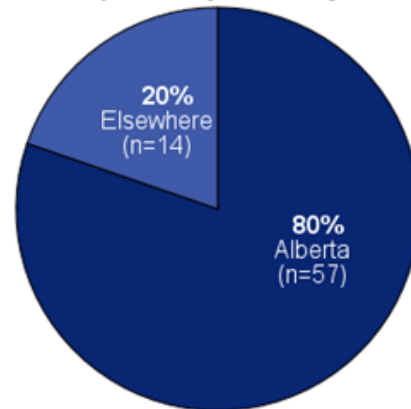


Source, Survey Data Q.1.5A, (N=33, only includes respondents with at least one child, per Q1.5; Missing/Valid Skip=39). Includes multiple responses.

PRIMARY RESIDENCE

The survey attracted a high number of Alberta-based FIFO workers: 80% of respondents lived in Alberta when not working in the oil sands. This included some people originally from out of province who had moved to Alberta to be closer to work. While a couple of Alberta-based workers lived in Fort McMurray, we know from the survey that most traveled to work from in or around the two main urban centers in Alberta (Calgary and Edmonton). Those coming from outside of Alberta (20%) were from British Columbia, Manitoba, Ontario, New Brunswick, Nova Scotia, and Newfoundland and Labrador.

Figure 3.6: When you finish a work rotation, to what place do you usually return?



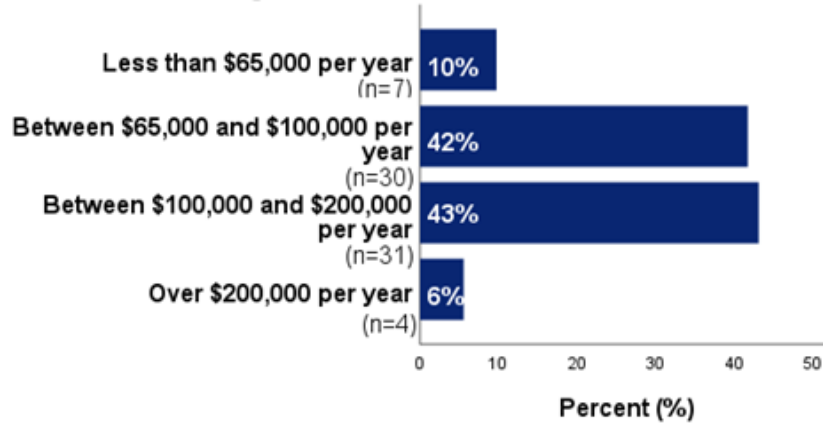
Source: Survey Data, Q.1.11, (N=72, missing=1)

The OSCA study reported that 66% of workers came from Alberta, and the majority of those lived in Edmonton (25%) or Calgary (22%) (Nichols Applied Management 2018). The proportion from Alberta was even lower in the RMWB 2012 census: 49%. The higher percentage of Alberta-based workers in our study can be explained by recruitment issues but also by the economic downturn, which has led to less reliance on out-of-province FIFO workers.

INCOME AND EDUCATION

The vast majority of our respondents earned between \$65,000 and \$200,000 per year. However, there was a *highly significant gender skew in income*: 86% of females earned under \$100,000 per year, compared to 36% of males. This difference cannot be explained by level of education or years of experience in the oil sands, for which there were no notable gender differences. Other factors might contribute; on average, women had fewer years' experience in their field than men, and as discussed in this report, most female participants report forms of gendered discrimination including being passed over for promotions. Lower average income for women might also help explain why *women were much more likely to be involved in paid work outside of the oil sands*: 62% of females, compared to 20% of males.

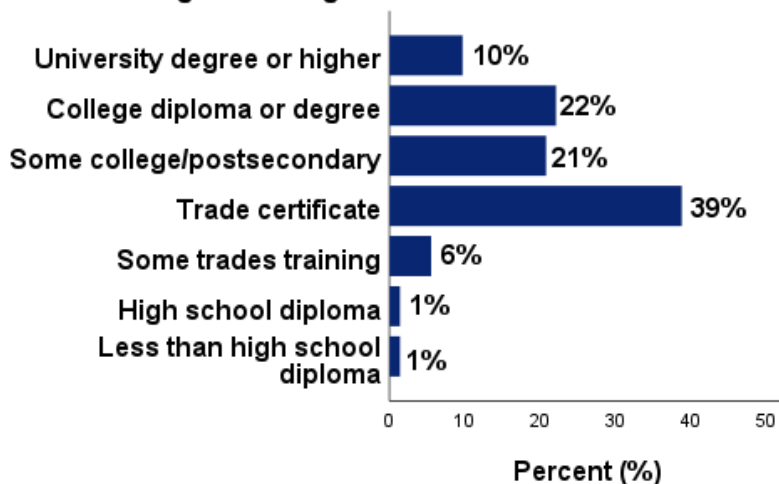
Figure 3.7: Individual Annual Income



Source: Survey Data Q1.6. (N=72).

With regard to education, 39% of survey participants' highest level of education was a trades certificate, 43% had some college or a college diploma, and another 10% had a university degree or higher. This is similar to average education levels found in the OSCA study, but higher than found in the RMWB 2012 census report (which would have captured a higher percentage of short-term construction workers including day labourers). Education levels in Australian FIFO samples are higher (Parker et al. 2018).

Figure 3.8: Highest Level of Education

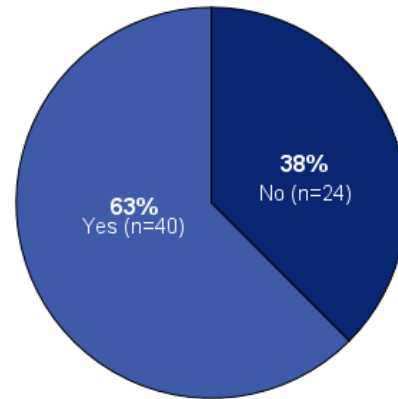


Source: Survey Data, Q 1.7. (N= 72).

EMPLOYMENT AND JOB CHARACTERISTICS

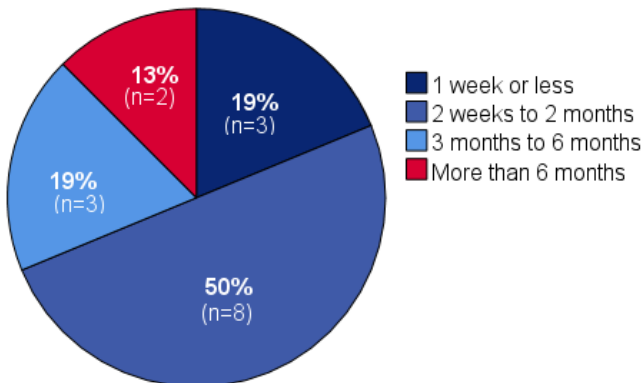
Some two-thirds of our respondents were employed at the time the survey was conducted. The relatively high percentage that were currently unemployed (38%) is a reflection of job losses but also of the nature of their employment: as seen below, more than 80% of our participants were working for or as a contractor, and as we learned during survey administration, many were working shutdown maintenance periods. Two-thirds of those who were unemployed had been so for two months or less. At the time of the survey, a number of our participants had just lost a job and/or were on the cusp of starting another.

Figure 3.9: "Are You Currently Employed"



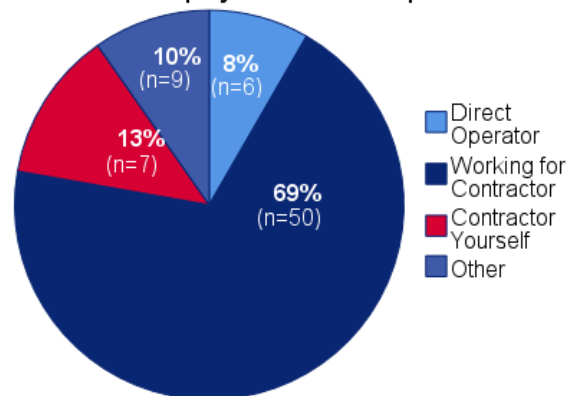
Source: Survey Data, Q 2.0. (N=72, missing=8).

Figure 3.9a: Time Unemployed



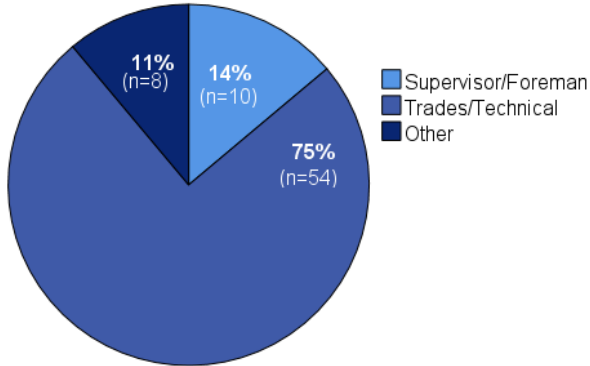
Source: Survey Data, Q2.0A. (N=16). Note: Only includes respondents who reported unemployment via Q 2.0.

Figure 3.10: Respondent's current (or most recent) employment relationship



Source: Survey Data Q 2.1, (N=72)

Figure 3.11: Current (or Most Recent) Job Title

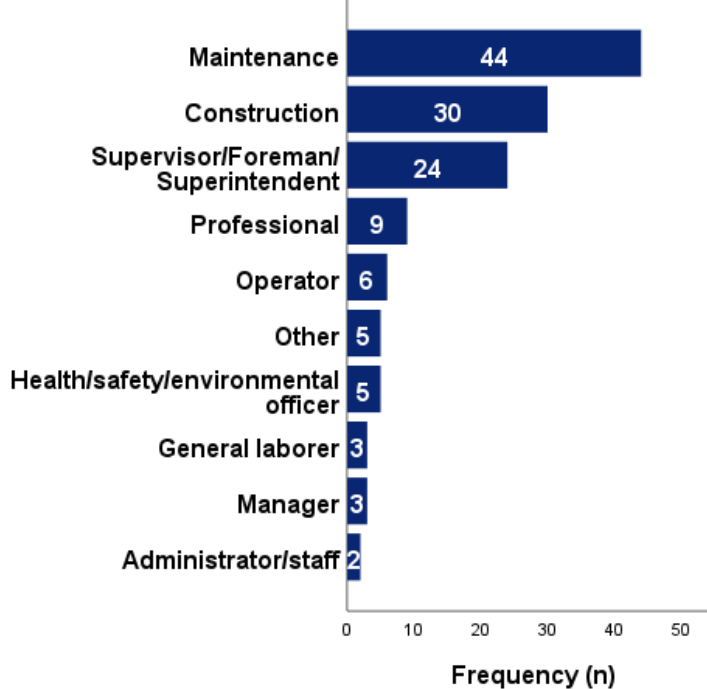


Source: Survey Data, Q. 2.3, (N=72).

When asked for their current job title, 75% of participants identified as working in the trades or technical fields, with 14% indicating supervisor/foreman. All of the latter (n=10) were male, indicating a clear gender skew.

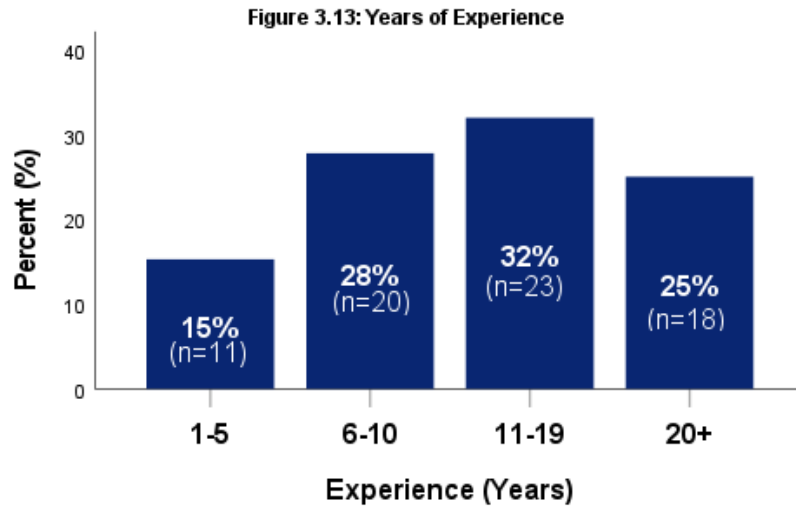
In terms of occupation, participants could choose as many as applied. Maintenance and construction were the most frequent choices. The main gender difference here was around maintenance work: 46% of women chose this, compared to 68% of men. (As seen below in subsequent data, this is related as well to men being more likely to have worked on and off, more job sites, and for a shorter period of time with their current employer.) Note that on the occupation question, some women (n=4) did indicate supervisor/foreman/superintendent as one role they had held.

Figure 3.12: Occupation



Source: Survey Data, Q 2.2. (N=72). Note: Because respondents were able to select multiple responses, totals will not add up to 72.

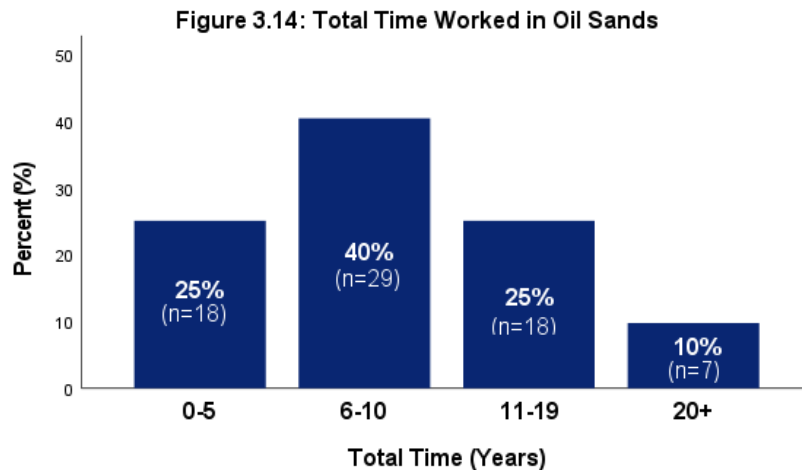
Participants' years of experience in their particular occupation ranged from 1 to more than 20 years, with the largest percentage having 11-19 years of experience. There was a significant gender difference here: 32% of female participants had 1-5 years' experience, compared to 8% of male participants.



Source: Survey Data Q. 2.4, (N=72). Experience refers to approximate years in the workforce, not necessarily in oil sands. See Figure 3.14 for comparison.

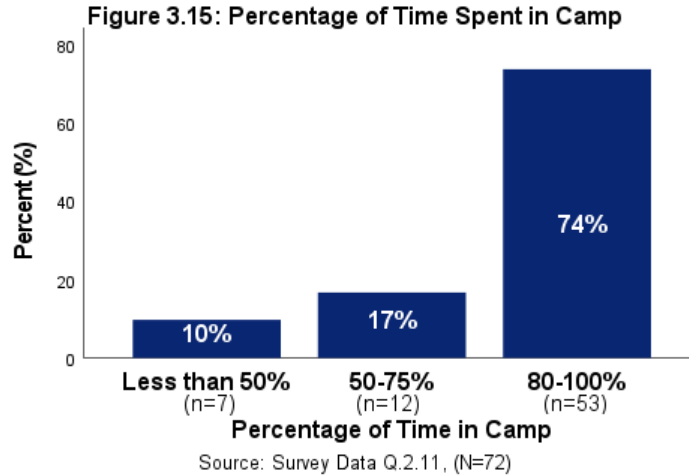
In terms of years worked in the oil sands, some 40% had worked in the oil sands industry for 6-10 years, with no notable gender differences. These findings are notably different from the RMWB 2012 census, in which 63% of work camp dwellers had worked less than five years;

again, this is most likely an effect of the construction boom at the time. The distribution of years of experience in the OSCA operational workforce study (Nichols Applied Management 2018) is more similar to the MWMH study.



Source: Survey Data Q. 2.10, (N=72).

Camp stays were the norm for our participants, with three-quarters (74%) indicating that they had stayed in camp for 80-100% of their working time in the oil sands.



Importantly, the MWMH survey also asked about whether participants had worked continuously or on and off in the oil sands industry, and the length of time they had worked with their most recent employer. As seen here, some two-thirds had worked on and off and had worked for their current or most recent employer for five years or less—with 38% having worked for their current employer for less than one year. These statistics reflect the high percentage of participants working on contract and working in maintenance.

Figure 3.16: If more than one year, have you worked...

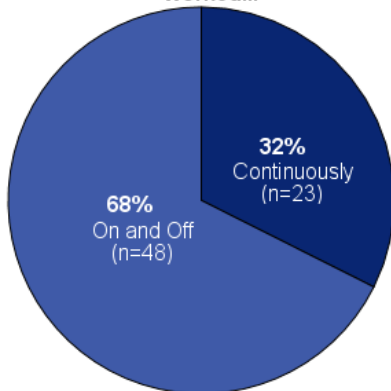
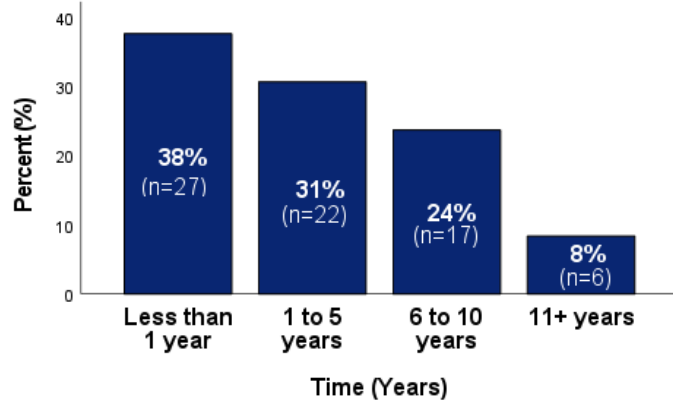
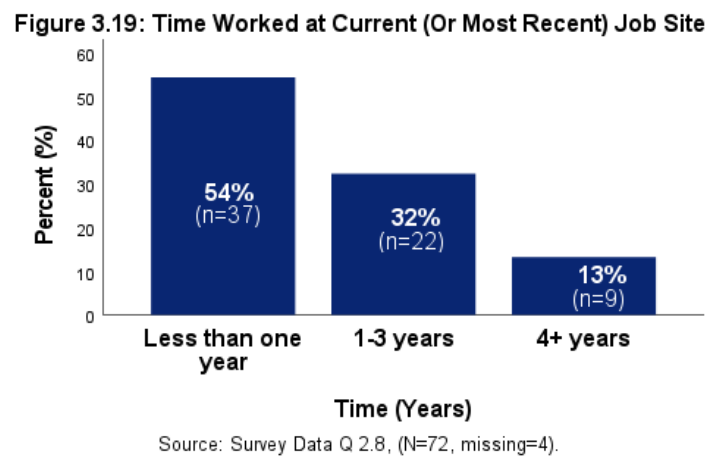
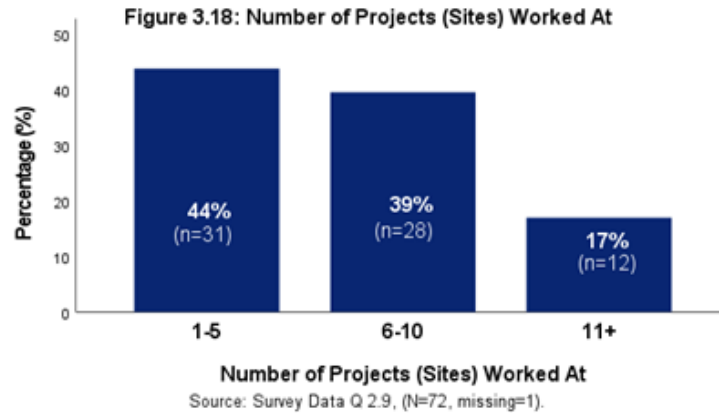


Figure 3.17: Time with Current (Or Most Recent) Employer

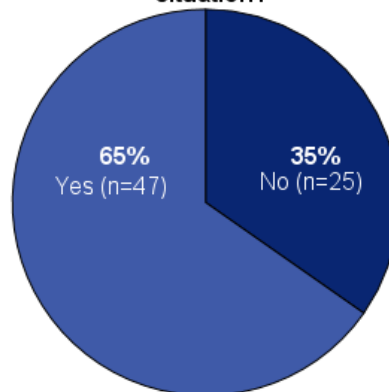


The on-and-off and changeability of contract and maintenance employment also means that workers are mobile not only between work and home but across job sites. Over half of our participants had worked at 6 or more job sites, and over half had worked at their current site for less than one year.



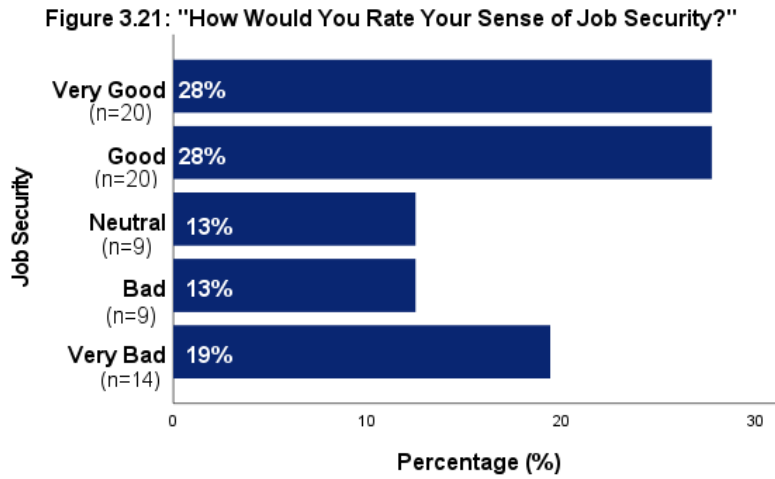
The contingent nature of work for our participants is also evident in experiences of major changes in their job situations. A surprising two-thirds indicated having experienced such a change in the past year.

Figure 3.20: In the past 12 months, have you experienced any major changes in your job situation?



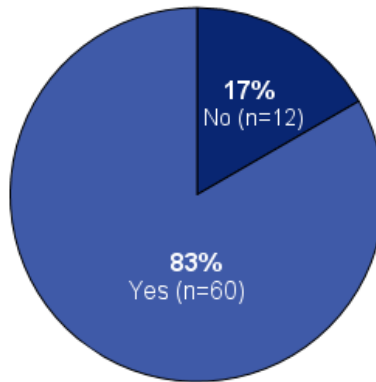
Source: Survey Data Q.2.14, (N=72).

Just over half (56%) of our participants rated their job security as good or very good. At the same time, however, one-third rated it as bad or very bad.



Finally, the vast majority of our participants (83%) indicated being a member of a labour union.

Figure 3.22: Currently a Member of a Labor Union?

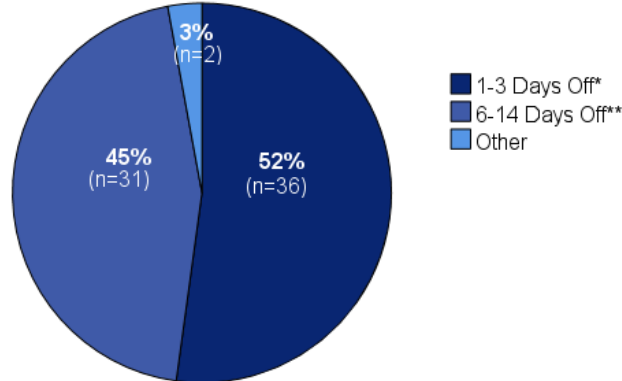


Source: Survey Data Q 2.6, (N=72).

ROTATIONS AND SHIFTS

Rotation schedule along with type and length of work shift are key components of FIFO work in the oil sands. We asked our participants to give us their current or most recent work rotation, and then re-coded their answers according to “short-off rotations” of 1-3 days off (with work stints of 6-18 days) and “long-off rotations” of 6-14 days off (with work stints of 7-18 days).¹ As seen here, our participants were almost equally split between these two categories of rosters.

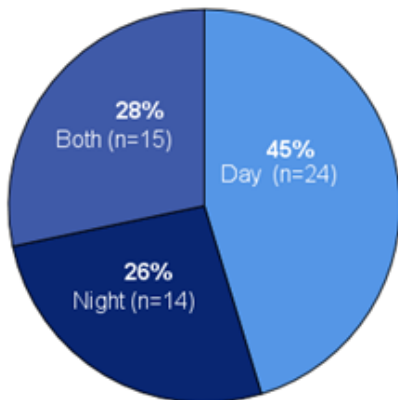
Figure 3.23: Current Work Schedule and Rotation



Source: Survey Data Q.2.15, (N=72, missing=3). Shift rotations are organized by number of days on plus number of days off, for example: 6+2 = six days of work followed by two days off. *6+1, 12+2, 11+3, 14+3, 18+3; **7+7, 14+14, 10+10, 11+9, 14+7, 15+6, 20+10, 20+8, 18+10)

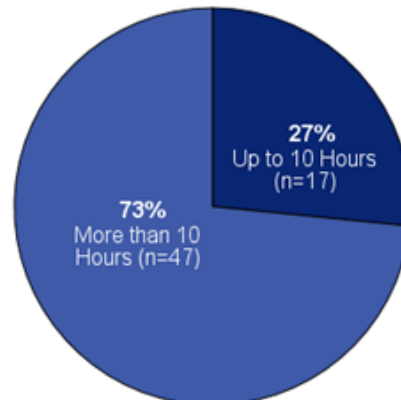
Among the MWMH participants who provided shift information, the highest proportion was working day shift, with the remainder working nights or a combination of day and night shifts. Some three-quarters (73%) were working shifts of 10 or more hours.

Figure 3.24: Shift Schedule



Source: Survey Data Q 2.15, (N=72, missing=19).

Figure 3.25: Shift Length



Source: Survey Data Q 2.15, (N=72, missing=8)

¹ This slightly differs from the approach taken by Parker et al. (2018), who considered rotations (rosters) by “ratio”, i.e. time for “recovery” relative to time worked.

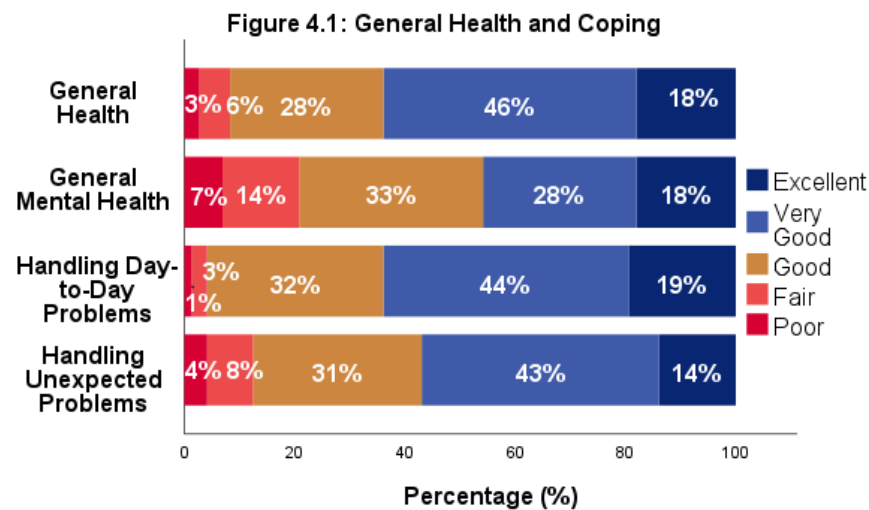
4. HEALTH, MENTAL HEALTH, AND STRESS

Highlights

- Participants' reported mental health and levels of daily stress were significantly worse than is found in the general population.
- Daily stress was significantly higher among racialized people and women.
- Nearly 80% reported "somewhat" or "a lot" of stress from both work and financial concerns, with one-third agreeing that most days at work are stressful.
- Supervisors' wellbeing is notably poor: they reported worse general mental health and stress, citing high work demands and the stress of managing work crew safe and healthy.
- Almost half reported diagnosed long-term health conditions, with non-white participants and those working on and off being more likely to do so.
- Higher levels of work-related and daily work stress were correlated with having a diagnosed long-term health condition and seeking help for mental health issues.
- Cumulative effects are suggested: people who had worked continuously in the oil sands reported worse mental health, and people who had worked a longer time for their current employer reported higher daily stress and higher job stress.
- Some two-thirds of respondents reported significant life changes affecting their health in the last 5-10 years; 76% indicated having been affected by the economic downturn, and 68% by the 2016 wildfire.
- Participants interviewed in the early months of COVID-19 pointed to growing anxieties stemming from unpredictable travel, new rounds of layoffs, increased workloads, and work and camp conditions conducive to transmission.
- Nearly 80% reported working when sick and one-third reported not taking time off work for an injury. 33% reported difficulty carrying out their work due to health issues.

GENERAL HEALTH AND MENTAL HEALTH

The MWMH survey asked participants about their general health in order to better contextualize mental health and stress related to FIFO work (Section 5). Of the four general reported health measures among our survey population, general mental health stands out: only 46% reported it to be very good or excellent, and 21% reported it to be fair or poor. *This is notably worse than in the general population, two-thirds (67%) of whom report their general mental health to be very good or excellent, and only 6% as fair or poor* (Statistics Canada 2020b; Government of Canada 2006; Grey Bruce 2017; cf Bowers et al. 2018).



Source: Survey Data, Q 1.13_1, 1.13_2, 1.13_3, 1.13_4. (N=72).

The following groups of people were likely to report *poorer* general mental health:

- single or divorced/separated (as opposed to married)
- without children (compared to those with)
- working continuously (rather than on and off) in the oil sands
- supervisors
- people in their 30s.

There is overlap between supervisors and people in their 30s in the study population. As seen in subsequent sections, these are two groups for whom a series of stressors and mental health issues arose. Impacts of working continuously are also found throughout the study, suggesting cumulative effects.

There were no significant differences between men and women in these general health measures, but gender differences did arise in more specific measures of stress and wellbeing, as seen below. (Women in Canada overall tend to report poorer mental health – CCHS 2018.)

Not surprisingly, job security was related to ability to handle unexpected problems and day-to-day demands. Research indicates connections between perceived job insecurity and mental health issues such as depression and anxiety (Kim et al. 2021; Watson and Osberg 2018), with links to suicide (Bilsker and White 2011). In our study, the poorer the rating participants gave to their job security, the poorer the rating they assigned to their ability to handle unexpected problems and day-to-day demands (cf Probst et al. 2007).

A social determinants of mental health approach calls our attention to contextual relationships between the workplace and life outside. Workers' comments on their negative ratings of mental health or their ability to handle problems and demands echoed what we found more broadly in the study: a complex combination of work and life issues.

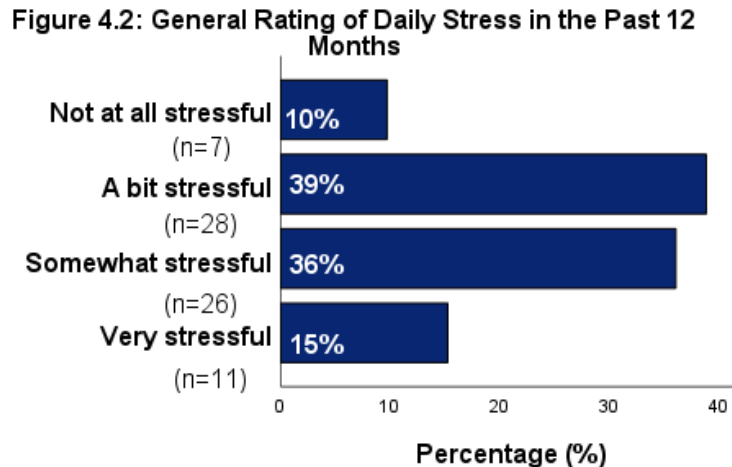
- Workers said that relationship stresses and social disconnection were caused or deepened by the isolation and distance from home. One dubbed his broken relationship to his partner a “victim of Fort McMurray” and another pointed out that he was just a “visitor” when he returned home. Another listed off work, money, greed, and sleeplessness as weighing on him.
- As has been found in other studies, the realities of FIFO distance and back-and-forth take a toll on mental health, but *where* this occurs can vary (Dorow and Mandizadza 2018; Parker et al. 2018). For example, one participant said of his mental health, “excellent when home and fair when up there”; another flipped this, saying that he felt alienated when back home and unable to control anything.

These connections are explored further in Sections 6-8.

STRESS

The survey also asked about general stress during most days over the past 12 months. Stress is a distinct and correlate measure alongside mental and physical health. Stress is a response to conditions, including conflict between external demands and amount of control, that effects mental health as it increases (www.ccohs.ca/oshanswers/psychosocial/stress.html). While generalized stress can stem from many corners, work is a key source of stress with long-term implications for a range of mental health disorders as well as numerous physical health issues (Pajovic and Shuey 2021; Crompton 2011; Goh et al. 2016). In the case of FIFO work, interrelations between work and not-work (home, camp) make it important to both discern different sources of stress *and* consider their overlap. It is also important to consider specific and differential effects on different subpopulations (note that stressors related to specific facets of FIFO are discussed below in Sections 6 and 7).

Half (49%) of survey participants indicated that most days over the past year had been “somewhat” or “very” stressful. *This is quite a bit higher than reported in the general population, where only around 20% report most days as “quite a bit” or “extremely” stressful (Chireh and D’Arcy 2018; Grey Bruce 2017).*²



Source: Survey Data, Q6.7. (N=72)

General daily stress was significantly higher among racialized people, women, people in their 30s, and supervisors. This echoes other findings regarding mental health among these groups (Statistics Canada 2020b; St-Pierre et al. 2019). Supervisors, for example, may face more complex demands and longer working hours, leading to inter-role conflict (e.g., with family) (Schieman et al., 2006) and difficulty coping (Ipsos 2017).

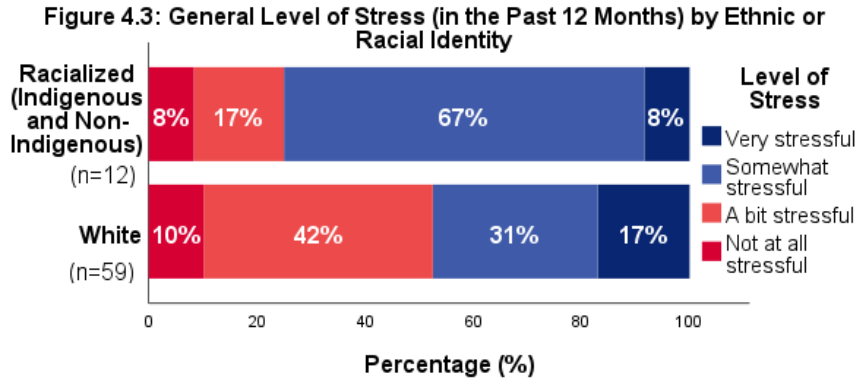
² Different scales were used in the comparison data. Even taking these into account, the percentage experiencing more than a bit of stress appears to be higher in the FIFO study.

As the following comments from anonymized participants show, **supervisors' experiences with stress** stem from responsibility for overseeing demanding work, keeping crews safe, and trying to help workers with mental health needs with too little support from employers. They often carry these burdens back home with them.

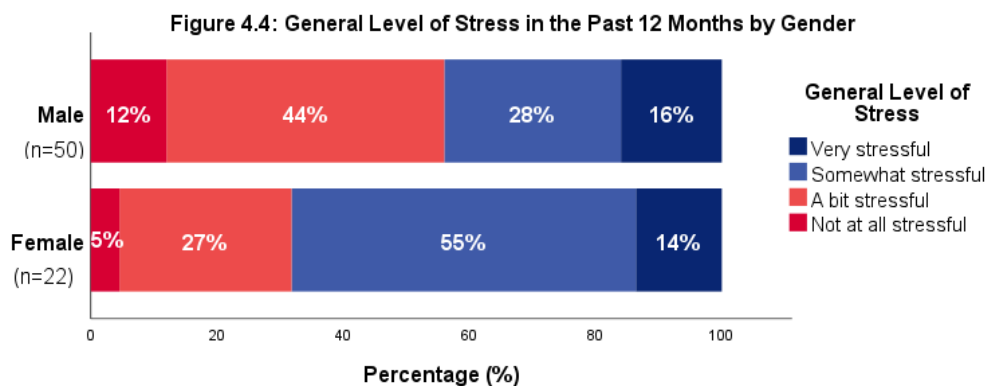
Trevor is a foreman *"responsible for setting up the night and the day shift for success."* Since he became a supervisor, he also works when home (off rotation) to make sure that he *"didn't leave them in a bad situation"* and that everything is *"done properly."* Trevor thinks that the work he performs as a supervisor is *"more mentally taxing"* than when he was a laborer. As a foreman, Trevor has *"a lot of OHS responsibilities"* that he says are *"always on my mind,"* particularly when new people are joining the crew. Trevor defines the work that he does as *"dangerous because we use a lot of high-pressure washing, you can cut really bad, we had a few guys cut their feet."*

Kyle is also a supervisor. Oftentimes, he feels that he is *"expected to deliver on the mental side"* of the *"extremely physically taxing"* work that his trade is exposed to. As a result, taking care of his crew *"completely wipes me out."* The *"stress levels and anxiety are always the worst aspects"* of his job, and he carries these back home. Kyle thinks that his tension levels come from multiple sources of high expectation: his own, his employer's, and the site's. Having experienced the loss of two of his crewmates and friends, he tries to make sure to build confidence with his team to support them if they are struggling with life's harsh circumstances. He has advised them to seek help if they need to be heard: *"Don't ever think that you have to contain this stuff within yourself because it will stew and it will consume you, and it will destroy you."* However, he feels *"at a bit of a loss for what to do to help people."* Kyle puts pressure on himself because he *doesn't "want to fail"*; he does everything he possibly can to ensure that nobody gets hurt. He says he cares deeply, even if his *"company might not."*

As a supervisor, Brian is also concerned for the people that he works with, aware that *"everybody loses if someone gets hurt."* Brian seeks to *"draw the best out of people,"* considering that *"people are different."* He works closely with people with mental health conditions and aims to find ways to support them. However, he is a bit frustrated that employers *"put the onus on us"* supervisors to create a mentally healthy environment when mental health issues need to be addressed at a broader institutional level.



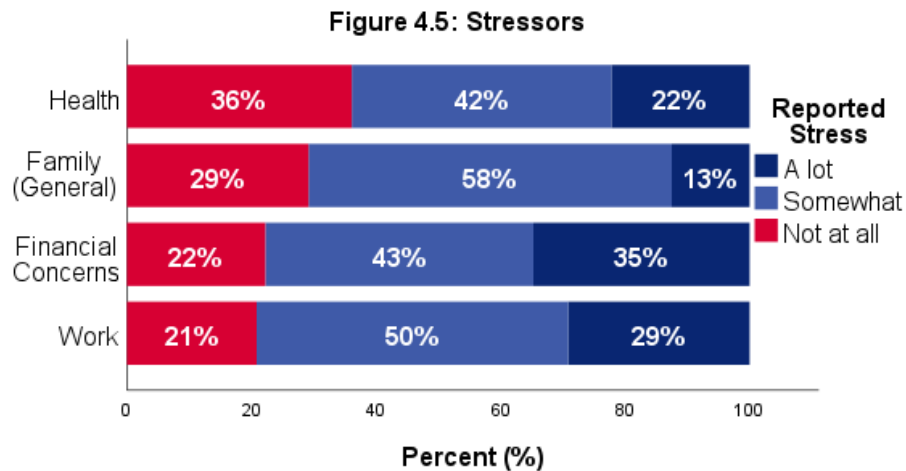
Source: Survey Data, Q 1.3; 6.7. (N=72, missing=1).



Source: Survey Data, Q1.2; 6.7. (N=72)

Higher levels of stress among racialized workers can be explained in part by a higher proportion of long-term health diagnoses, as discussed below. In the case of both racialized workers and women, we must take into account parallel health disparities found in the general population (Pederson et al. 2010; Siddiqi et al. 2017) as well as other conditions of work, including discrimination and harassment. Female participants often commented on the generalized stress that stems from being the only woman (or one of very few women) in camp or on a worksite, which means being under scrutiny and constantly on vigil in the face of sexual harassment (Kelly 2020).

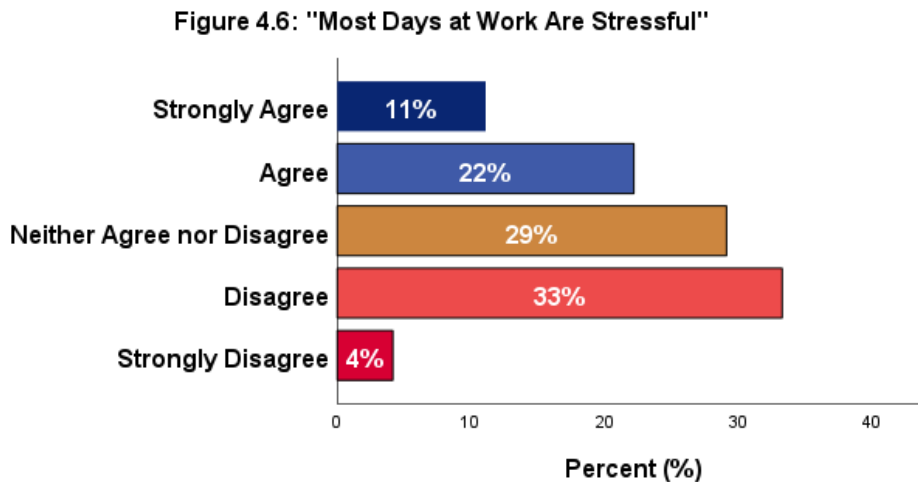
The survey also asked about stress stemming from specific facets of people's lives. As might be expected, there was a high correlation between family stress and having children—although how this is exacerbated by FIFO conditions is worthy of further study in Canada. (Note that stressors stemming directly from FIFO conditions, including distance from family, camp living, travel, and rotational schedule, are discussed in Sections 6 and 7.)



Source: Survey Data, Q 6.13_5, 6.13_3, 6.13_2, 6.13_1. (N=72).

Stresses from work and from financial concerns were the most acute, with nearly 80% of participants indicating “somewhat” or “a lot” (as opposed to “not at all”). Reported stress from work in the MWMH survey seems to be higher than found in surveys of the general population (Szeto and Dobson 2013; Pajovic and Shuey 2021; Employment and Social Development Canada 2016). Financial concerns are exacerbated by job insecurity (including fear of redundancy) and the cost of commuting (cf Ryser et al. 2016) and directly contribute to ill mental health for FIFO workers (Parker et al. 2018: 18, 76).

The survey also asked about stress experienced in the workplace. Our participants were almost evenly split between agreeing and disagreeing that “most days at work are stressful.”



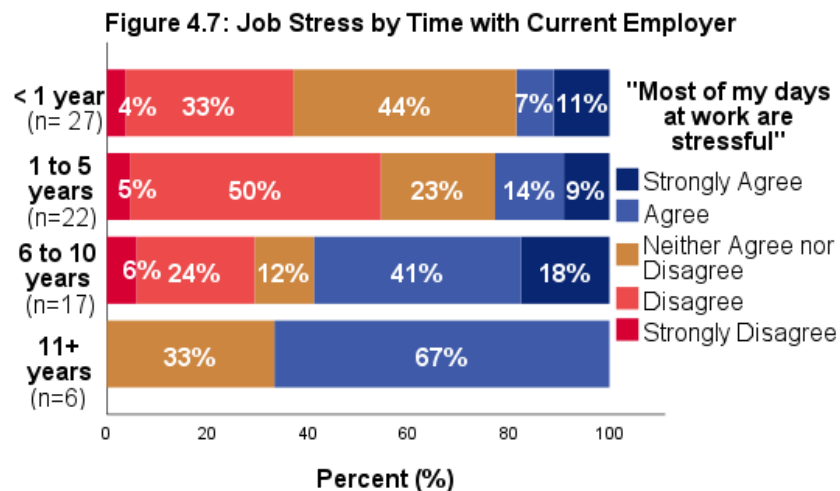
Source: Survey Data, Q 5.1_7. (N=72).

Workplace stress is reported by Canadians as the primary cause of mental health problems (Shepell and the Mental Health Commission of Canada 2018) and, in general, higher work-related stress is associated with likelihood of seeking treatment and being treated for mental disorders (Szeto and Dobson 2013). In the MWMH study, *levels of work-related and daily work stress were correlated with both diagnosed long-term health conditions and help-seeking for mental health issues.*

Higher daily stress at work was found among two groups:

- People in their 30s and 40s
- People who had worked a longer time for their current employer.

With regard to the latter, the percentages agreeing/strongly³ that most days at work were stressful ranged from 18% among those who had worked one year or less with their current employer to 67% of those who had worked more than eleven years for their current employer.⁴ This was one indication among several in the study of potential cumulative mental health effects from FIFO work in the oil sands.



The following groups were more likely to report stress from family (generally): people with children, people working continuously, and supervisors. In addition, participants' comments regularly connected family stress to the financial stress and uncertainty of work in a changing resource economy. As qualitative research shows, concern over the ability to provide for family is exacerbated by how much people give up in order to enter FIFO work (Parker et al. 2018; Dorow and Jean 2021).

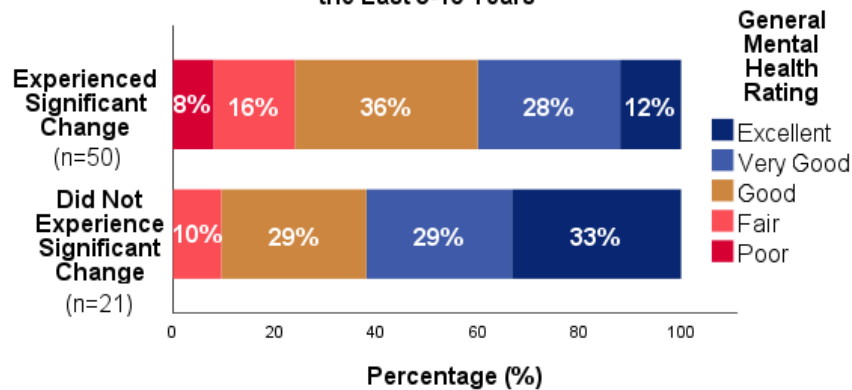
³ Throughout the report, we use “agree/strongly” or “disagree/strongly” when combining values from each end of the scale, i.e., to mean “agree or strongly agree” or “disagree or strongly disagree.”

⁴ Note that some survey respondents used their length of time working with the union as “length of time with current employer.”

SIGNIFICANT LIFE EVENTS

Mental health is often highly correlated with significant life events, and that bears out in this study. Some two-thirds of respondents (n=50) reported experiencing significant life changes affecting their health during the last 5 to 10 years. This is higher than in some other studies (El-Hajj and Benhin 2021). Challenging life events are correlated with mental health: 62% of those who did *not* report such an event rated their mental health as very good or excellent, compared to 40% of those who *did* report such an event.

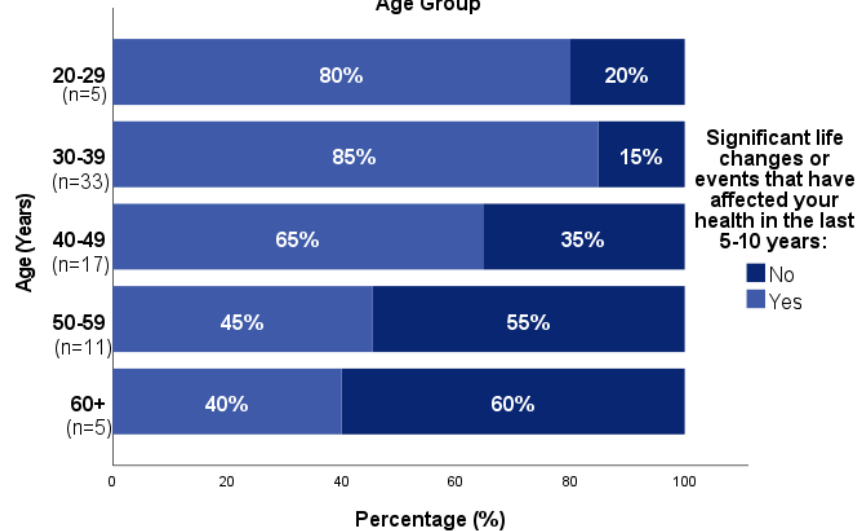
Figure 4.8: General Mental Health by Significant Life Changes or Events in the Last 5-10 Years



Source: Survey Data, Q 1.13_2, 6.3. (N=72, missing=1)

Significant life events affecting health were more likely to be reported not only by some of the same groups reporting poorer mental health—*single and divorced/separated, childless, and 30-39 year olds*—but *also by women and racialized people*. 80% of 20-29-year-olds and 85% of 30-39-year-olds reported such events. These age groups may be more likely in general to be open about such events and their impacts. This is also often a time in the life course of more changes in work, education, and family situation.

Figure 4.9: Experience of Significant Life Changes or Events in the Last 5-10 Years by Age Group



Source: Survey Data, Q 1.1; 6.3 (N=71, missing=1)

PARTICULAR EVENTS: THE OIL BUST, THE WILDFIRE, AND COVID-19

Specific events and changes in economic, environmental, and social conditions can have a strong impact on workers' wellbeing. The survey asked FIFO workers if and how they had been affected by the downturn in the oil markets over the last several years and/or by the wildfire that devastated Fort McMurray and nearby communities in 2016. (The pandemic did not begin until we were almost done administering the survey.)

Some three-quarters (76%) of respondents indicated that the downturn had affected them. When invited to indicate how they had been affected, participants pointed most often to the stress and anxiety accompanying job loss, potential job loss, or new uncertainties with the conditions of contract work. They pointed to less work available, more work expected, greater uncertainty, and decreased wages (often through re-negotiated contracts or collective agreements). Some had been "pushed back into" FIFO work due to job losses in their home communities. Others did not know when they might get another contract; one currently unemployed trades woman was on the edge of losing her house as a result. A couple of people with homes in Fort McMurray had experienced irreversible loss in property value.

Kristy experienced a major change in her work life when she **lost her permanent job** and moved to being an outage (shutdown) worker in the oil sands. Becoming a *"transient worker"* during shutdowns has affected Kristy's mental and physical health in different ways. Kristy dislikes the *"uncertainty"* of the shutdown lifestyle: *"you feel kind of certain that you're going to have a job in the spring, but you are never sure. . . And sometimes, they call you at really weird times that you're not expecting, and just expect you to drop your life, and just go to work for eight weeks, [...] and isolate yourself into camp without warning."* On top of that, Kristy thinks that the *"changes in the pace of work"* from full-time work to the outage work increased her sense of anxiety. Kristy perceives that the work she performs during the shutdowns needs to be *"done really fast, and it's pushed hard there."*

As for the wildfire, 68% said it had affected them—most who said "no" indicated they were not working in the oil sands at the time. Those who were affected mostly spoke of disruptions to work, evacuation experiences, the devastating losses experienced by co-workers and friends in Fort McMurray, the chaos when evacuees were temporarily sheltered in nearby work camps, and frustration with communication and management decisions. Some spoke of this as a "collective trauma"—one that intersected with the already challenging anxieties of the downturn—and others pointed to the high stress for family members back home as they watched events unfold from afar.

The COVID-19 pandemic unfolded as we moved into the interview phase of the MWMH study. While its impacts are changeable and ongoing, we summarize here what we learned from interviews about the many ways that the early months of COVID-19 affected FIFO workers in the oil sands.

FIFO workers interviewed in **the early months of the COVID-19 pandemic** (April and May 2020) referred to the onset of a *“fear driven-atmosphere”* in their working lives. As Kyle put it, *“Everybody is just, kind of scared [...] You got children and young families and they have to go home on their days off and still isolate. They can’t see their kids.”* In camp, they were asked to *“wear a mask and sanitize hands and, we all keep our six feet rule. I take my vitamins, and if anyone coughs, I run away, screaming [...] Everybody’s so panicked, like they just, they do not want anybody anywhere near.”* If someone did get sick, then *“it’s like, ‘you’re gonna sit in camp for two weeks”* and isolate, unpaid; in some cases, as Tara pointed out, *“you can sign a waiver and go home and self-isolate for 14 days.”*

Stresses around changing schedules and travel conditions were also high. Caught in changes around both, Trevor missed the beginning of his shift as a foreman; and then once he was back at work, he ended up staying more than two months— away from his wife and young children back in Atlantic Canada—due to cancelled flights and the need to quarantine. He and others described arduous new journeys; as Brian put it, *“some people, they’re living in Montreal and they’re able to come to work but [now] it’s like two days of flying to get to Fort McMurray.”*

Going home was also stressful because of the uncertainty of returning to work. Contract workers were especially affected by the layoffs induced by COVID and the economic downturn. Chuck said it was *“stressful, going home, ‘cuz the whole time you’re kind of wondering if you’re gonna get a call in, like ‘yeah, no, don’t bother coming back’.”* Kyle was worried about *“lots of friends who are contractors who may not survive these last four months, ‘cuz they just don’t have work for them.”*

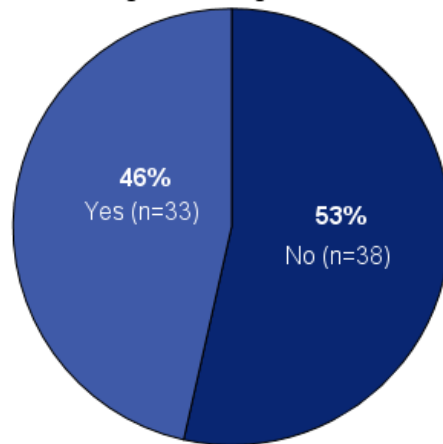
Layoffs also brought added stresses to those still working. Kyle, a supervisor, felt fortunate to have a job but was experiencing a *“completely new and foreign kind of stress [under COVID]. We’re being told to deliver the same quality and the same timelines, with no people [...] And it’s not even as much directly from the client anymore, it’s from our, our own contractors. A lot of us have sort of stood up and said, ‘Well no, this can’t be done’ and we’re basically just being told, like, ‘Do it or there’s a hundred people behind you that’ll do it for you’.”*

There were some possible upsides stemming from the pandemic. Tara mentioned increased attention to mental health in the wake of the pandemic, and others were hopeful that new schedules might stick. As Trevor put it, *“They’re looking at moving to the 14 and 14, which would be good. It would cut out three extra flights a year, which is a lot of money. I have more time at home because you lose two days automatically from traveling.”*

DIAGNOSED LONG-TERM HEALTH CONDITIONS

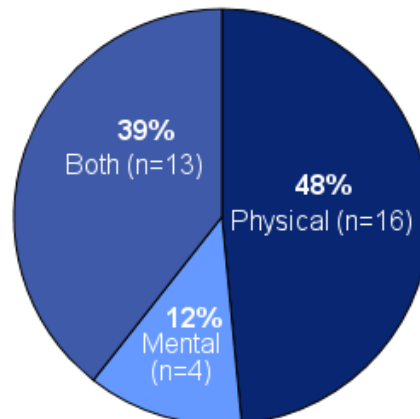
As we might expect, there was a correlation between significant life events and diagnosed long-term health conditions, both of which also correlated with reported difficulty handling unexpected or difficult problems. Just under half of survey participants (n=33) reported a diagnosed long-term (LT) health condition. Of these, about half were described as physical health conditions, and the other half as mental health conditions or both (physical and mental). These percentages are higher than has been found in surveys of the general population. Fourteen percent of Canadians ages 12 and older report a diagnosed mental health condition (Statistics Canada 2020b), and 17-21% of people in the workplace do so (Ipsos 2017; Canadian Centre for Occupational Health and Safety); 44% of the population reports at least 1 of 10 common chronic illnesses (Public Health Agency of Canada 2019).

Figure 4.10: Diagnosed Long-term Health Condition



Source: Survey Data, Q 6.4. (N=71, missing=1)

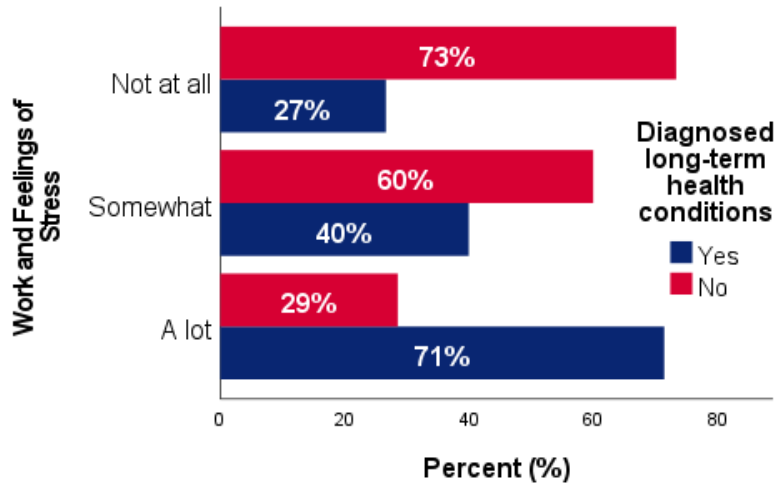
Figure 4.10a: If Diagnosed with a long term health condition, would you describe it as...



Source: Survey Data, Q 6.4A. (N=33, includes only respondents with diagnosed long-term health conditions, per Q6.4.)

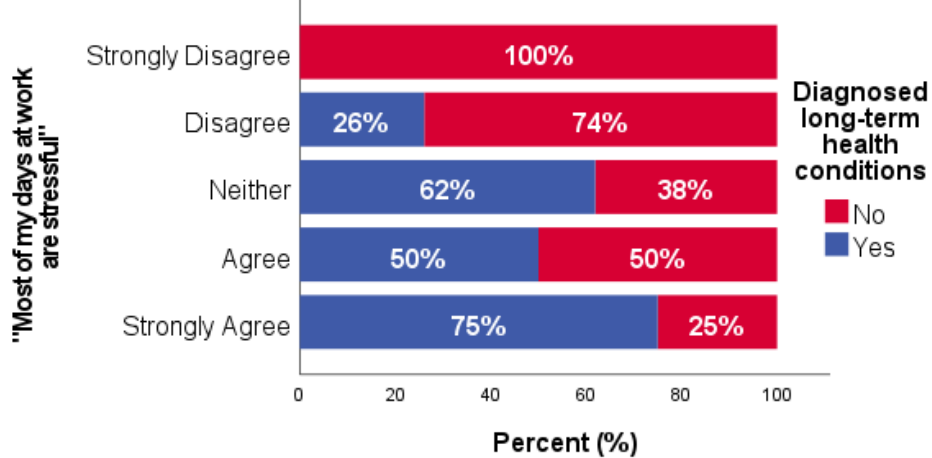
Echoing the literature (Ohrnberger et al, 2017), higher levels of work-related and daily on-the-job stress were correlated with having a diagnosed long-term health condition.

Figure 4.11: LT Health Diagnosis by Amount of Work Stress



Source: Survey Data, Q. 6.13_1, 6.4. (N=72, missing=2).

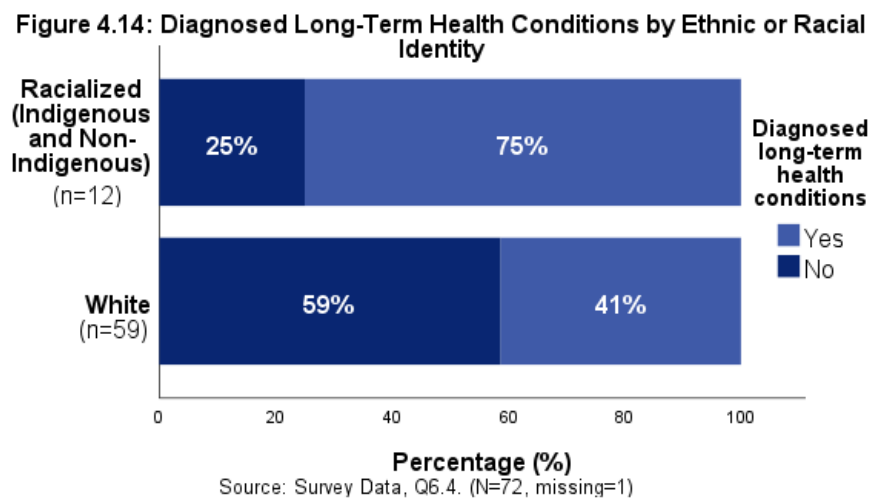
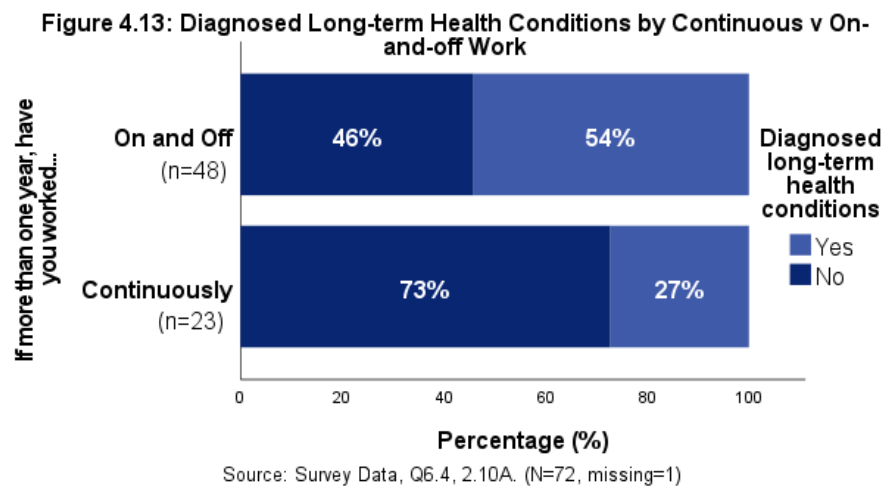
Figure 4.12: LT Health Diagnosis by Daily Stress at Work



Source: Survey Data, Q. 6.4, 5.1 7. (N=72).

What's more, our data suggest a relationship between levels of work stress and *type of LT diagnosis*. Participants reporting a lot of stress were more likely to describe their LT condition as "both" physical and mental, pointing to possible compounding health effects of work stress in the oil sands. (Note: correlations between stress emanating from FIFO conditions and diagnosed long-term conditions were not strong.)

Diagnosed LT conditions were significantly more likely to be reported by people *working on and off* and people who identified as *racialized non-white*. 75% of the latter group reported diagnosed LT conditions. This is consistent with studies that show racial inequalities in health and health care in Canada (Pederson et al. 2010; Siddiqi et al. 2017); it is also important to note that racialized participants were more likely to be working on and off (rather than continuously) in the oil sands, indicating compounded precarity in their job situation. Job precarity and insecurity can contribute to long-term health issues, with some evidence for the reverse being true (De Witte et al. 2016; Burgard 2020).



Type of diagnosed LT condition in relation to demographic and work characteristics is also worth noting:

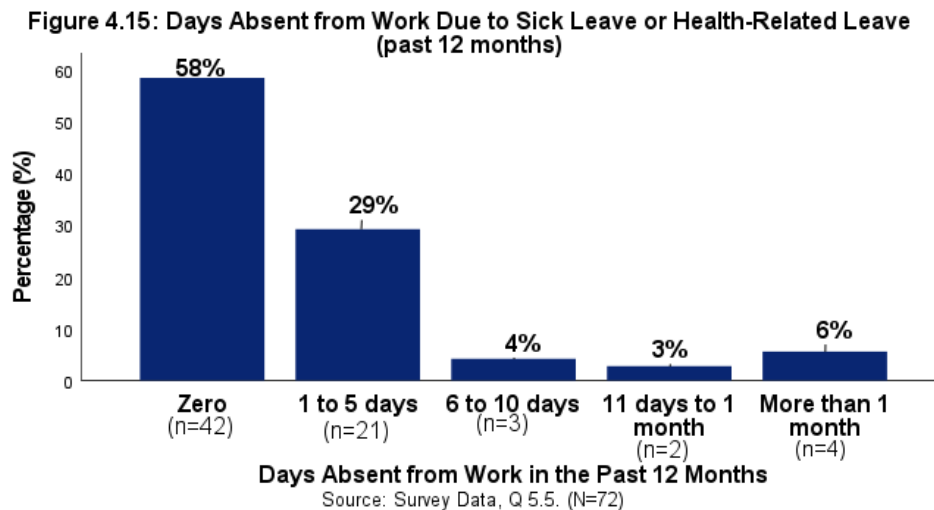
- People in their 30s, and supervisors, were more likely to report their conditions as “both” physical and mental; 66% of supervisors with a diagnosed LT condition did so, compared to 39% in the sample overall.

- People working on and off were more likely to report a physical health issue (rather than mental health or both). Physical health may be a factor contributing to the need or desire to work on and off.
- People reporting low job security were more likely to report a mental health issue only. Not surprisingly, our findings suggest a two-way street: while mental health challenges may be an effect of job insecurity, in some cases struggles with mental health had contributed to difficulty in maintaining steady work (cf Kim et al. 2021; Burgard 2020).

WORKPLACE SICKNESS AND INJURY

Finally, we consider effects of sickness and injury on work and ability to work. These are important for understanding “presenteeism” (an expectation of coming into work despite being sick), in/ability to carry out work, and mutual impacts of mental and physical health (Centre for Addiction and Mental Health 2020b).

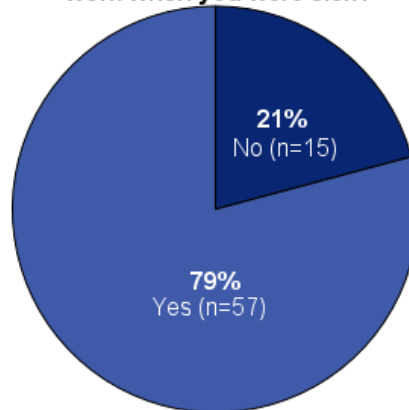
Among the MWMH participants, almost 60% of respondents had taken zero days of sick leave in the last year.



Racialized workers were more likely to have been absent from work more than five days over the past year, compared to the survey sample overall; this finding is consistent with the disproportionate number of racialized workers reporting a diagnosed LT health condition.

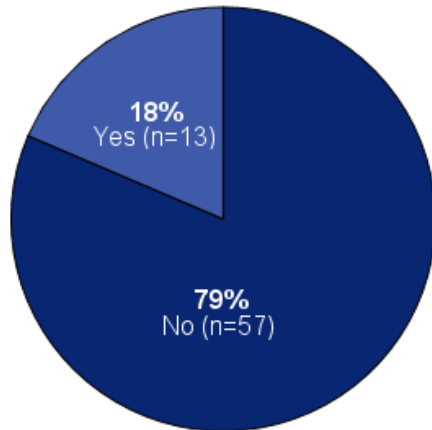
At the same time, nearly 80% of participants reported working when sick and one-third reported not taking time off work for an injury. Female participants were more likely to report taking time off for an injury.

Figure 4.16: Over the past 12 months did you work when you were sick?



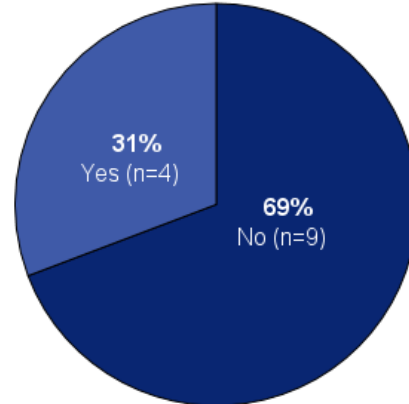
Source: Survey Data, Q 5.6. (N=72)

Figure 4.17: During the past 12 months, were you injured at work?



Source: Survey Data, Q 6.6. (N=70, missing=2).

Figure 4.17a: If Yes, did this result in time off work?

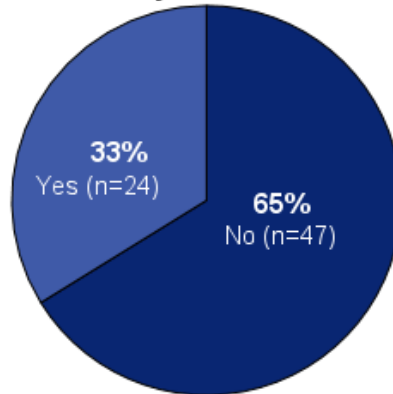


Source: Survey Data, Q 6.6A. N=13. Note: Only includes participants who reported an injury at work in Q 6.6.

When asked about working when sick, many respondents answered “of course” or something similar and then rattled off a list of viruses and injuries they had simply worked through. Some indicated that this was just “part of the job” given the physical work, long hours, being in close quarters with so many other people in camp, and expectations—of employers, and of themselves—that they are “there to work.” These conditions of FIFO work in the oil sands, combined with job insecurity, seem to contribute to this “presenteeism” (Centre for Addiction and Mental Health 2020b; Reuter et al. 2019 The relationship of this finding to a culture of non-reporting is discussed below in Section 9.

These trends are especially notable given that *one-third of respondents reported difficulty carrying out work due to health issues.*

Figure 4.18: Because of any physical or mental health issues, do you have any difficulty carrying out your work?



Source: Survey Data, Q 6.5 (N=72, missing=1).

The following subgroups were more likely to report such difficulties:

- working for a contractor
- lower rated job security and lower income
- working dayshift only
- in their 20s and 30s
- higher educational attainment.

These last two categories may be due to willingness and comfort around disclosure, although other findings suggest that people in their 30s were especially experiencing stress and poor health.

Insights from Valerie O’Leary (Critical Incident Stress Management-Fort McMurray)

When responding to sudden deaths on site, co-workers would often tell me they felt guilty, admitting they knew the individual was not well. Although they would suggest to the person that they seek medical attention, the worker would say they would see a doctor when off shift, they didn’t want to create more work for co-workers, the job needed to get done), or they couldn’t afford to miss work because they didn’t have sick days.

5. WORKING CONDITIONS IN THE OIL SANDS

Highlights

- In terms of *social relationships*, a majority of participants reported having trustworthy and affirming relationships at work and interacting with people (usually workmates) in camp. However, levels of social interaction were curtailed as workers more frequently moved across work sites.
- In terms of *sense of efficacy and control* at work, participants were mixed in how free they felt to decide how they carried out their work, and 64% felt there was constant time pressure. Those on short-off rotations (1-3 days off) and with a shorter tenure with their current employer felt less free—most likely these are people in more precarious contract work and/or working shutdown maintenance. Supervisors felt more decision-making freedom but also more time pressures.
- Almost all (86%) indicated no control over rotation and work schedules.
- In terms of *worksite morale*, less than half of respondents found it to be good (42%) or felt they received the respect they deserved (49%). More intensely negative rating of worksite moral was correlated with lower job security, lower income, and working night shift.
- Women (68%, compared to 36% of men) and Alberta-based workers were likely to report *discrimination*. Comments on discrimination pointed to sexism and sexual harassment; favouritism; height; and racism.
- In terms of *employer commitment to wellbeing*, over 40% of participants disagreed that there was good communication about psychological safety, that employers were committed to minimizing stress, and that management valued wellbeing as much as productivity.
- People reporting higher work stress or poorer mental health, and racialized non-white workers, were especially likely to poorly rate employer commitment to wellbeing.
- Results of the survey on employer commitment to wellbeing are a crucial component of a key finding of the study: a culture where health concerns are seen to take a backseat to productivity, timelines, and financial pressures for both employers and employees.

Working conditions and environment are an important social determinant of mental health and wellbeing. Wellbeing describes the quality of working lives. It has profound implications for workers' mental and physical health (Schulte and Vainio 2010; Tausig 1999) and influences productivity both on individual and societal levels (Fisher 2014; Schulte and Vainio 2010). Wellbeing at work depends on the work environment: the social organization of work, management styles, a culture of respect, interpersonal relationships with other workers and supervisors (sociality and psychosocial factors) and the quality of those relationships, job security, pay, hours of work, and other related factors (Utriainen, Ala-Mursula and Kyngäs 2015; Schulte and Vainio 2010; Wilkinson and Marmot 2003; Employment and Social Development Canada 2016; Canadian Centre for Occupational Health and Safety 2018; Kelloway and Day 2005).

Wellbeing at work has also been proven to depend on subjective factors like workers' perception of success at their job, experience of supportive and fair leadership, and the ensuing motivation, engagement, and productivity, or lack thereof (Fisher 2014; Utriainen, Ala-Mursula and Kyngäs 2015). Within the FIFO work context, researchers have found low morale, a perceived lack of employer support, inter-worker conflict, and bullying and discrimination (Miller et al. 2020; Parker et al. 2018; Ryser et al. 2016). In one of the most extensive studies of FIFO and mental health to date, Parker et al. (2018) found that satisfaction with personal relationships both on and off site had a significant effect across all mental health measures (23).

To understand workplace conditions and wellbeing, the survey asked about on-the-job stress, sociality (social connections and interactions), individual sense of autonomy and control, workplace inclusivity and respect, and work-life balance. We especially focus here on aspects of wellbeing related to the conditions of FIFO work, although in the lived experiences of workers, these overlap with characteristics of oil sands workplaces and work culture. The final two sections address findings regarding employer commitment to, and workplace culture around, health and wellbeing. This is important, given that the mental strain of high job demands can be mitigated by resources and supports (Parker et al. 2018; Bakker & Demerouti, 2007).

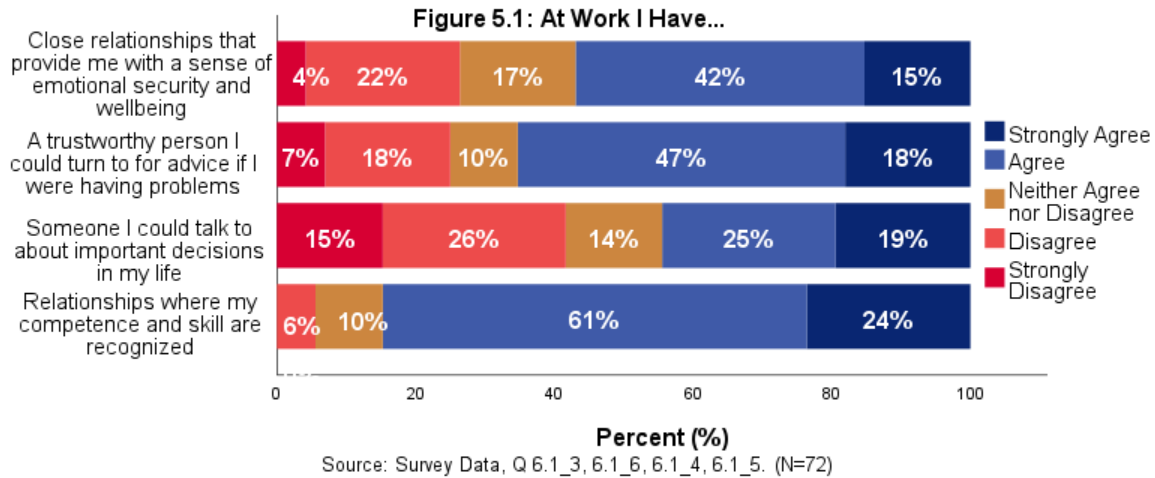
WORKPLACE TIES AND SOCIALITY - AT SITE AND IN CAMP

Social ties and social interactions—including the degree to which they promote help-seeking—are important for both promoting mental health and buffering against negative mental health (Kawachi and Berkman 2001; Parker et al. 2018). The survey asked about closeness of participants' workplace relationships, and also about degrees of interaction with workmates and in camp. Isolation and disengagement have been found to be a key factor in FIFO worker mental health (Parker et al. 2018: 16, 123).

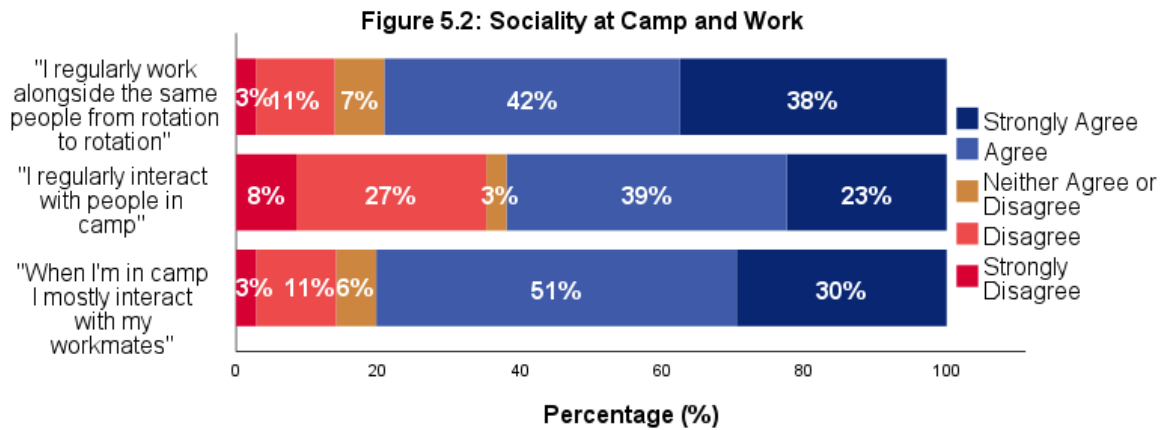
Just over half (57%) of participants agreed/strongly to having relationships at work that provided a sense of emotional security and wellbeing, with a similar percentage (65%) agreeing/strongly that they had someone to turn to for advice. Someone with whom they

could discuss important life decisions was less common, with 44% agreeing/strongly and 40% disagreeing/strongly.

What stands out is having relationships where competence and skill are recognized: 85% agreed/strongly. Subjective comments from participants expressed a great deal of pride in the skills they were able to exercise on the job and thus contribute toward a successful project (cf Construction Sector Council 2007). However, as discussed below, this individual recognition of skill did not necessarily translate to an overall sense of respect (these are compared to home-based relations in Section 8.)



Levels and types of social interaction are related to FIFO conditions: the degree and intensity with which people work alongside the same individuals and crews from rotation to rotation, the fact of living in camp for intense periods of time, and frequency of turnover and movement across sites (more common for contract workers) (cf Sellenger Centre 2013). More than three-quarters of the sample indicated mostly working alongside the same people from rotation to rotation. The chances of this depend on the stability of work situation and regularity of rotation schedule. For example, participants who had worked a longer time with the same employer, or who had worked continuously in the oil sands (rather than on and off), were more likely to report working alongside the same people across rotations.

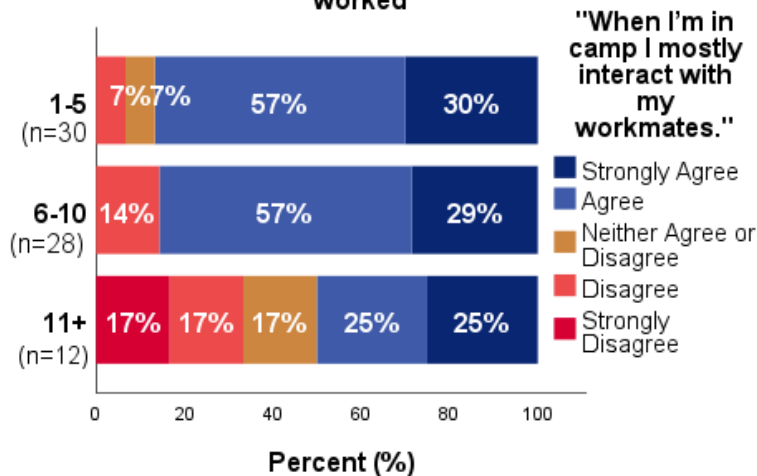


Source: Survey Data, Q 5.1_4, 4.1_5, 4.1_6. (N=72)

While not directly part of paid work, staying in camp is inseparable from “being at work” (Dorow and Jean 2021). The survey found that almost two-thirds (62%) of participants agreed/strongly that they regularly interacted with people in camp. There was a strong likelihood (with 86% agreeing/strongly) that interactions in camp were with workmates. Even among those who *disagreed/strongly* that they interacted regularly with people in camp, three-quarters of them (n=24) reported that when they did, they mostly interacted with workmates (n=18). Some also commented on interacting with camp staff on a fairly regular basis.

Levels of social interactions can be shaped not only by FIFO rotational mobility, but also by movement across sites and projects within the oil sands. The more sites survey

Figure 5.3: Interaction with Workmates by Number of Sites worked

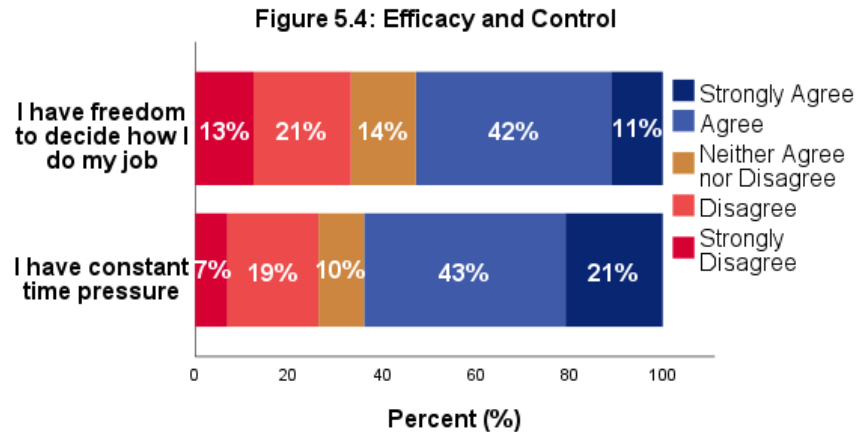


Source: Survey Data, Q. 2.9, 4.1_6. (N=70, missing=2)

respondents had worked at, the more likely they were to disagree/strongly that they interacted with workmates in camp. Note that a higher number of sites worked is also a proxy for certain types of intensive work, such as maintenance shutdowns, and our study included a relatively high number of these workers.

SENSE OF EFFICACY AND CONTROL

Another factor affecting wellbeing stems from individual sense of autonomy, efficacy, and control in the workplace, all of which relate to experiences of time pressure. As multiple studies show, heavy job demands accompanied by the lack of autonomy and control in the workplace may result in mental strain and stress for workers (Häusser et al. 2010; Johnson and Hall 1988; Karasek 1979; Bakker & Demerouti, 2007), with negative consequences for mental health.



Source: Survey Data, Q 5.1_1, 5.1_2. (N=72).

Only about half of the participants agreed/strongly that they had the freedom to decide how to do their jobs. However, this varied by demographics and working conditions. Some groups were *more* likely to indicate feeling freedom in how they did they work:

- supervisors
- those with long-off rotations, e.g. 7 and 7, or 14 and 7
- day and split shift workers
- workers with longer tenure with their current employer.

Time pressures are closely related to autonomy and control. Two-thirds of respondents agreed/strongly that they felt constant time pressures in their work. Supervisors reported relative freedom in their work but also pointed to time pressures that undermined their sense of control (cf CCOHS 2018; Bowen et al. 2014; Pinto et al. 2014). Some supervisors indicated putting this on themselves, and others resignedly said it came with the territory. In both cases, they commented on the stresses of managing a crew, responding to unpredictable demands, and being “in the middle” between upper management (often managers working for the operator) and people on the ground.

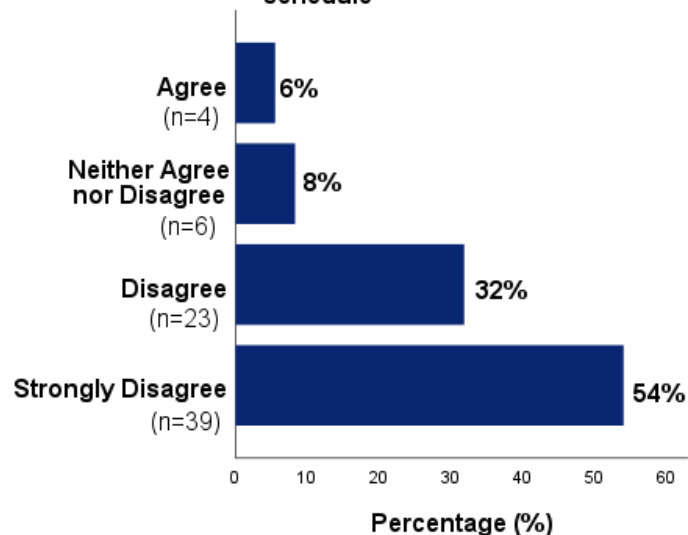
Insights from Valerie O’Leary (Critical Incident Stress Management-Fort McMurray)

Over the years, some managers/supervisors have reported that they felt stuck “being in the middle” when it comes to operations. Staying neutral can be a challenge between contractor and operator, and I often heard about some kind of disconnect between head office and the employees with boots on the ground. It might be helpful for head office personnel to visit site quarterly and meet with employees.

Another important job characteristic associated with time pressures is number of sites worked: the more sites participants worked, the higher the reported pressures. Note that a higher number of sites worked is also a proxy for certain types of intensive work, such as maintenance shutdowns, and goes hand in hand with the stresses of project-based work (Pinto et al. 2014).

One area in which workers clearly feel they have little control is *rotation and schedule*. Workers almost unanimously dismissed this as simply something one had to accept. “It is what it is” was a common refrain, even though research suggests it can make a real difference to levels of psychological distress (Parker et al. 2018). This feeling extended to the general volatility of work in the resource sector, which was understood to be an inevitably stressful facet of work conditions that one simply had to accept.

Figure 5.5: "I have some control over my work rotation and schedule"

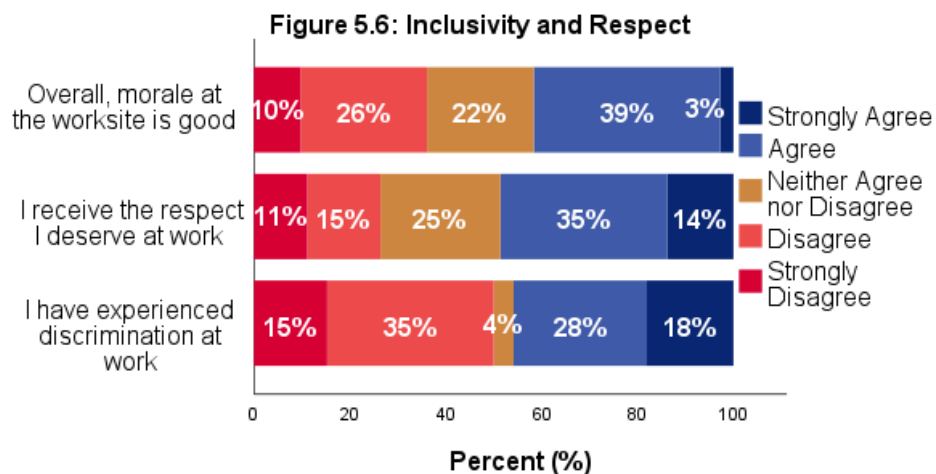


Source: Survey Data, Q 5.1_3. (N=72)

WORKPLACE MORALE, RESPECT, AND DISCRIMINATION

Inclusion, respect, and job morale are crucial for workers and their mental health. As social beings, people want to belong to the group and be recognized as its valuable members (Yuen and Binning 2008). Not feeling respected or treated equally may translate into negative mental health outcomes and disengagement from work (Smith, Tyler and Huo 2003; Kelloway and Day 2005). This may further lower morale and worsen social cohesion in the workplace, further damaging workers' mental health. In addition, respect and equal treatment from supervisors are crucial to workers. Studies show that perceived disrespectful and unfair treatment may lead to increased stress, absenteeism, and feelings of illness (Crompton 2011; Yuen and Binning 2008).

The survey asked a suite of questions related to perceptions of workplace morale, respect, and discrimination.



Source: Survey Data, Q 5.1_8, 5.1_5, 5.1_10. (N=72)

Only 42% of respondents agreed/strongly that morale at the worksite was good. In keeping with some of the other findings regarding workplace experiences, particular groups were more likely to give a negative rating to worksite morale:

- people with lower job security
- people making under \$65,000 per year
- night shift workers (some 57% disagreed/strongly)
- Alberta-based workers

The down-rating of worksite morale among those with lower job security and income can be explained by their relatively precarious position and possibly also by differential treatment. In fact, multiple studies show that workers who are paid less often feel demoralized and reduce their efforts on the job (Breza, Kaur, and Shamdasani 2018). The same applies to job insecurity (Asfaw and Chang 2019; Probst et al. 2007; Dekker and Schaufeli 1995). Regarding shift, other research has shown more dissatisfaction and stress among night shift workers (Parker et al. 2018). Differences between workers

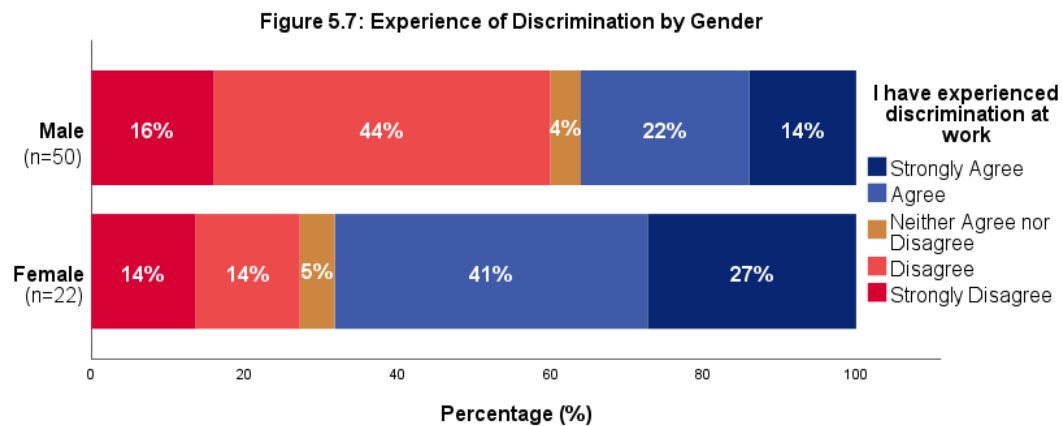
based in and outside of Alberta require further exploration, although this may have to do with other working conditions such as rotation schedule.

Only about half of the participants agreed/strongly that they received the *respect* at work that they deserved; this is lower than found in some other studies (Samra 2017). Certain groups stand out as especially aggrieved: single people and people in their 30s. Night shift workers were also much more likely to rate respect negatively.

Findings on *discrimination* help to fill out this picture in important ways. Nearly half of the survey respondents indicated they had experienced discrimination. This is more than *four times higher* than reported in the general working population in Canada (Ipsos 2017).

Two groups in particular were likely to report discrimination:

- women
- Alberta-based workers



Source: Survey Data, Q 1.2, 5.1_10 (N=72).

Other groups likely to report discrimination were people in their 20s and people with higher education, i.e., groups that might be more acculturated to identifying and naming discrimination (Cardarelli, Cardarelli, and Chiapa 2007; Chou and Choi 2011). When asked to comment, participants mostly referred to the following issues:

- sexism and sexual harassment (discussed by *two-thirds* of female participants)
- favouritism (e.g. nepotism, regional affiliation, job title or trade)
- height (being “too short” or “too tall”)
- racism.

Most notable in the study is gender discrimination and harassment, which has a direct effect on job satisfaction and mental health (Bowling and Beerh 2006) and is a continuing problem in the construction and resource extraction industries (Kelly 2020; Laplonge 2016; Nagy and Teixeira 2019; O’Shaughnessy 2011; Pirotta 2009). One

female participant's description of the range of stereotypes women encounter was echoed by a number of women in the study:

"Sexism. Like, you know, if I'm a girl at work, 'obviously' I want to sleep with one of the guys. Or I'm a girl, so 'obviously' I'm not good enough to do a job or I'm not strong enough to do a job."

Another participant pointed to the "bad old boys' network" by which she was overlooked for promotion or overtime hours even when she had clear seniority.

*Female participants offered understanding of their **experiences of gender discrimination and harassment** while working FIFO in the oil sands:*

Eileen commenced working in the oil industry in the late 70's. At that time, "women weren't very welcome"; previous to the late 80's, there were not even any women's bathrooms. "They didn't really have facilities to cater to women at that time". Nowadays, Eileen doesn't experience the same level of discrimination. However, she finds that discrimination against women has not disappeared.

Kristy is younger than Eileen, having entered the industry less than ten years ago. She thinks that women are still entering "in the land of men" when they go to work. Although, nowadays people "can't openly be sexist" against women, Kristy is sure that "every woman has faced some level of discrimination" in the oil sands. Women are assigned "tasks like cleaning up and stuff, and never asking the men to do it." In the oil sands "people have had issues being pregnant and being accommodated for the pregnancy because the companies don't wanna keep you on [because] they have to pay for your work out of their own pocket."

Marge has been in the industry for more than twenty years. She feels upset because "men still don't treat women with respect on the job, and most men don't even want you there." Marge thinks that women face a "lot of challenges" in camp, "the old-school mentality that women are not supposed to be on the job" is still shaping interactions among workers. Marge perceives that most men in this context believe that women are "supposed to be home" and "not supposed to make as much money as men."

It is not clear why Alberta-based workers were more likely to report discrimination, but it might be a combination of issues: women were disproportionately based in Alberta, as were men of colour; experiences with height-based stereotypes came up repeatedly among Alberta-based men; and for some, a sense of regional favouritism was at play. One male respondent said:

"I am fairly white-bread, but at the end of the day the oil sands is run by several small groups in other provinces. You have to be in the clique. If you don't fall in line you can ruin your career relatively easily."

Note that workers based elsewhere sometimes referred to Alberta workers as “entitled,” indicating complex readings and experiences of favouritism. Favouritism included a few complaints by white workers of reverse racism or by men of reverse sexism. Other issues included health, income, and language. We were most surprised by the concerns about height-based discrimination, mentioned by 6 respondents.

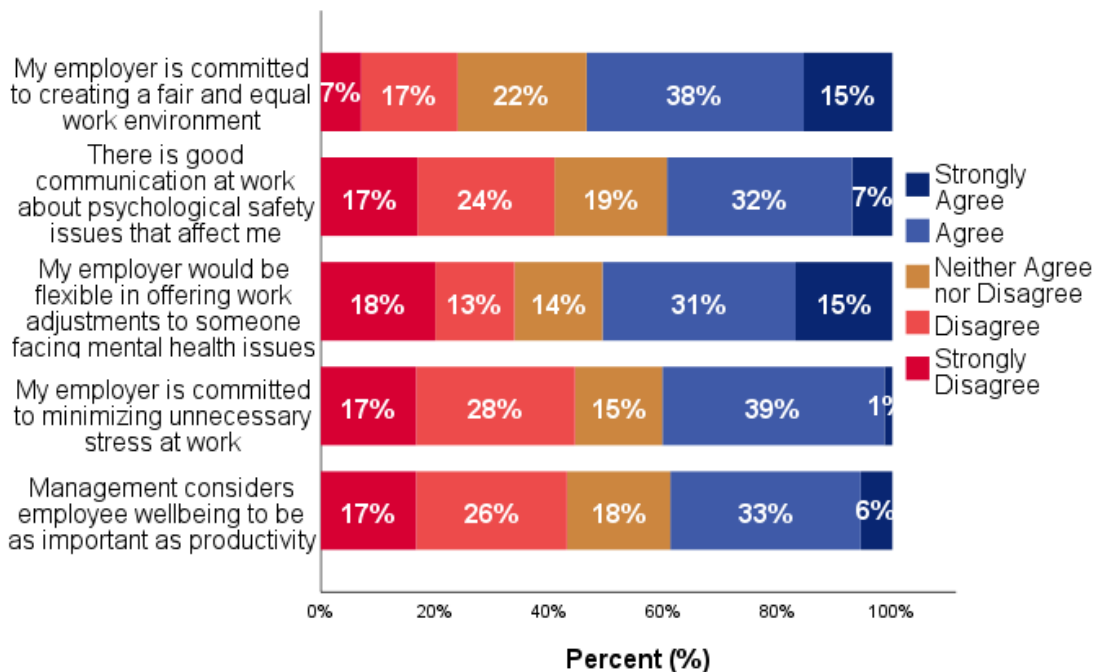
EMPLOYER COMMITMENT TO WELLBEING

A final and highly informative set of questions asked participants to rate their employers’ commitment to wellbeing in the workplace. Such commitment is directly correlated with workers’ experiences and perceptions of wellbeing. As research shows, perceptions of unfair treatment by organizations and supervisors can have a direct effect on mental health, burnout, and productivity (Ambrose and Schmike 2009; Stansfeld and Candh 2006; Cropanzano and Wright 2011). By the same token, support from managers and the organization can reduce strain and stress, including by creating an atmosphere in which workers feel it is safe to raise health concerns (Viswesvaran et al. 1999; Chiaburu and Harrison 2008; Mullen 2005); this is all the more important in male-dominated workplaces, where masculinist notions of resilience or competitiveness might preclude raising or addressing psychosocial health (Seaton et al. 2019).

Parker et al. (2018) point out that there is little to no research on the link between a “safety culture” and mental health. In the oil sands, reports on health and safety are only beginning to pay attention to mental health. Participants in our survey noted a strong safety culture—whether in organizational practice and/or lip service—alongside a perceived low commitment to mental health.

In the areas of workplace communication about psychological safety, employer commitment to minimizing stress, and management valuing wellbeing as much as productivity, a high percentage of our participants—*over 40% in each case—disagreed/strongly*, and a very low percentage (7%, 1%, 6%) strongly agreed. Overall, these findings indicate lower ratings of the working environment than found in other studies (Samra 2017).

Figure 5.8: Employer Commitment to Wellbeing



Source: Survey Data, Q 5.4_1, 5.4_2, 5.4_3, 5.4_4, 5.4_5. (N=72, except "My employer is committed..." (n=71), "My employer would be flexible" (n=65), and "There is good communication..." (n=71)).

As discussed elsewhere in this report, these findings are especially notable given recent changes to Alberta’s OHS Act with respect to psychological safety and wellbeing. See Section 10 for further discussion of Bill 47.

Some aspects of *work situation* made a difference in perceptions and evaluations of employer care:

- Trades/technical workers (compared to supervisors and others) were less likely to agree that their employer would be flexible in offering work adjustments for mental health, *suggesting a perceived differential power relation in receiving accommodation.*
- Those who had worked with their current employer for less than one year were less likely to agree that there is good communication at work about psychological safety issues—*indicating possible cracks in early training, information, and trust in the workplace.*

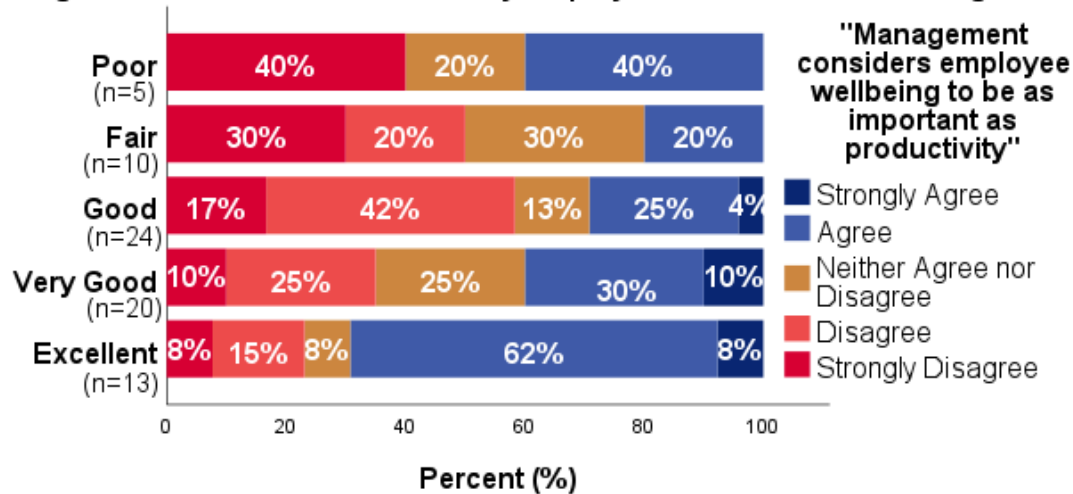
Interest in wellbeing within the organization and among leadership also makes a difference. Low ratings of employer commitment to minimizing stress at work were, as we might expect, correlated with workers’ ratings of stress stemming from the conditions of camp and work.

- 65% of those who agreed/strongly that most day at work were stressful disagreed/strongly that their employer was committed to minimizing stress (compared to 45% in the sample as a whole).
- Non-white participants were significantly more likely to disagree/strongly (67%, compared to 41% among white participants); this may be related to the higher co-occurrence of reported health challenges among racialized participants but also to discrimination.

And finally, negative assessment of employer interest in wellbeing is correlated with *individual health*. This finding underscores the importance of workplace supports to worker wellbeing.

- People who rated their general mental health positively also tended to indicate that management cared about wellbeing as much as productivity, whereas those with poorer general mental health tended to disagree.
- Low ratings of employer commitment to minimizing stress were correlated with lower ratings of individual mental health.

Figure 5.9: General Mental Health by Employer's Concern for Wellbeing



Source: Survey Data, Q 1.13_2, 5.4_1. (N=72).

Correlations between perceptions of employer supports and individual health become even more apparent among those reporting *significant life events* and *diagnosed long-term health conditions*, although in these cases we would need to know more to understand what is, potentially, a bidirectional cause and effect. Those reporting significant life events or diagnosed LT conditions were more likely to downgrade employment commitment to mental health: 56% and 58%, respectively, disagreed/strongly that employers value wellbeing as much as they value productivity; 56% and 57%, respectively, disagreed/strongly that employers are committed to minimizing stress; and 43% and 59%, respectively, disagreed/strongly that employers would be flexible in offering work adjustments for mental health issues.

Type of diagnosed long-term health condition makes a difference to how respondents perceive employer commitment to wellbeing. Those reporting a *mental health* condition were especially likely to give lower ratings to employer communication about psychological safety and commitment to a fair and equal work environment.

Overall, these correlations suggest that perceptions and experiences of employers' lack of commitment to wellbeing directly contribute to stress and negative health. They also suggest that those with health issues might be more acutely aware of, and/or may have more directly encountered, employer responses to health needs.

Our findings regarding employer commitment to wellbeing are highly relevant to a larger result of the study: a work culture where health concerns are seen to take a backseat to productivity, timelines, and making money—for both workers and employers. This is further discussed in Section 9.

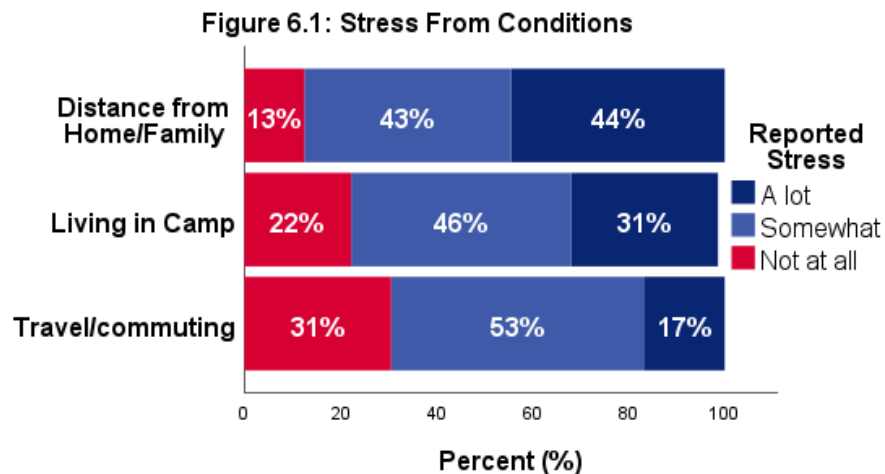
6. FIFO AND MENTAL HEALTH: DISTANCE, CAMP, AND TRAVEL

Highlights

- Nearly 90% of respondents reported some or a lot of stress stemming from *distance and time away from home and family*, citing relationship strain, loneliness, and difficulty being home for events or emergencies.
- Distance stress increased the more time workers spent with family when off rotation, which is, in turn, an effect of family situation (having children and/or married or common law).
- Some 77% reported some or a lot of stress from *camp living*. A majority disagreed that morale in camp is good or that they can do what they want in camp. Some results suggest camp living has cumulative negative effects on individuals.
- Camp conditions contributing to poor wellbeing include isolation, limited and/or unhealthy food options, restrictive regulations (including ability to leave camp), and an unhealthy environment.
- Almost half of participants agreed that they were satisfied with the facilities in camp, but this varied by employment conditions.
- 70% of respondents indicated experiencing stress from *travel*, but with only 17% rating this as intense. Key stressors include unpredictable travel conditions (cost, weather) and long and tiring journeys.
- Workers on short-off rotations (1-3 days off, as opposed to 6-14), living outside of Alberta, and night shift workers were more likely to rate travel back and forth as difficult.
- Initial findings suggest traveling by air (as opposed to driving) can contribute to reduced travel stress, but this must be considered in relation to rotation and shift schedules.

In this section, and against the backdrop of the previous sections, we present findings on health and wellbeing as they directly relate to the conditions of FIFO work, i.e., we consider facets of FIFO as social determinants of mental health. As Parker et al. (2018: 70) point out, what needs unpacking is the “black box” that connects the characteristics of FIFO work to its impacts. Previous research on FIFO workers shows that shift rosters and social isolation (Bowers et al. 2018, Chen et al. 2003, Wong et al. 2002), extended working hours (Donatelli et al. 2017), living in remote locations (Commission for Occupational Safety and Health 2019), and difficulties balancing time away with family time (Gardner et al. 2018) often lead to anxiety, depression, emotional strain, increased stress, and fatigue among FIFO workers.

We consider the mental health impacts of three main aspects of FIFO work: distance and time away from family/home, living in camp, and travel/commuting. Two-thirds to more than three-quarters of our participants indicated experiencing somewhat to a lot of stress from all three of these facets of FIFO work. We discuss each of these three facets in more detail below, considering not only *who* is affected but also how these factors relate to individual, family, and workplace health.



Source: Survey Data, Q 6.13_7, 6.13_6, 6.13_8. N=72, except "Living in Camp" (N=72, missing=1).

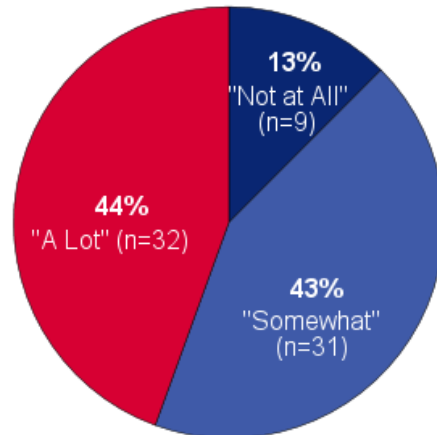
DISTANCE AND TIME AWAY FROM HOME AND FAMILY

Nearly 90% of respondents reported some or a lot of stress stemming from distance and time away from home and family, with nearly half reporting “a lot.” *This was a generalized stress* across the MWMH sample, with no notable differences by sub-population. Comments from participants indicate three important drivers of this stress (cf Parker et al. 2018; Dorow and Mandizadza 2018; Sellenger Centre 2013):

- the *difficulty of establishing and maintaining relationships* with family, partners, and friends;
- *loneliness*;
- the *inability to be or get home* for family crises and “*missing out*” on events.

Importantly, distance from family also arose in participants' comments on stress from *health*, with a number of participants concerned about being far from family who had medical needs. Others remarked on the stress of FIFO on the health and wellbeing of family members (cf Government of Australia 2015).

Figure 6.2: Reported Stress from Distance/Time Away



Source: Survey Data, Q. 6.13_7. (N=72).

Insights from Valerie O'Leary (Critical Incident Stress Management-Fort McMurray)

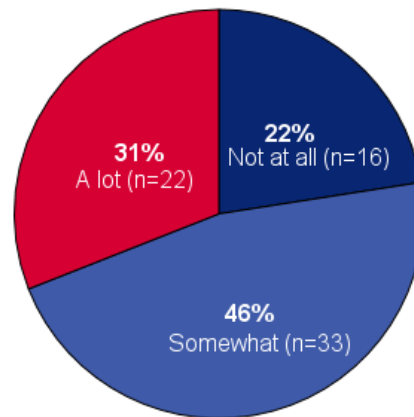
Through numerous conversations with new employees in camps, I often heard "this is harder than I thought" when talking about rotational work and being away from home, away from family and friends. It is a culture shock and while some adapt quickly, others struggle.

Three-quarters (75%) of our participants reported being in contact with friends or family at least daily when away on rotation, with no relationship to level of stress. However, results suggest a possible relationship between stress and the *intensity* of family contact when home. Almost half (44%) of those who noted a lot of stress from distance from family spent *all* of their time when home with family, compared to just 20% of those who indicated either "somewhat" or "not at all" for stress from distance from home/family. This is related to family situation, since amount of time spent with family off rotation was, in turn, highly correlated with having children and/or being married or common law. The nature of the intensity and quality of family ties as they relate to distance-related stress requires further attention and study.

WORK CAMP LIVING

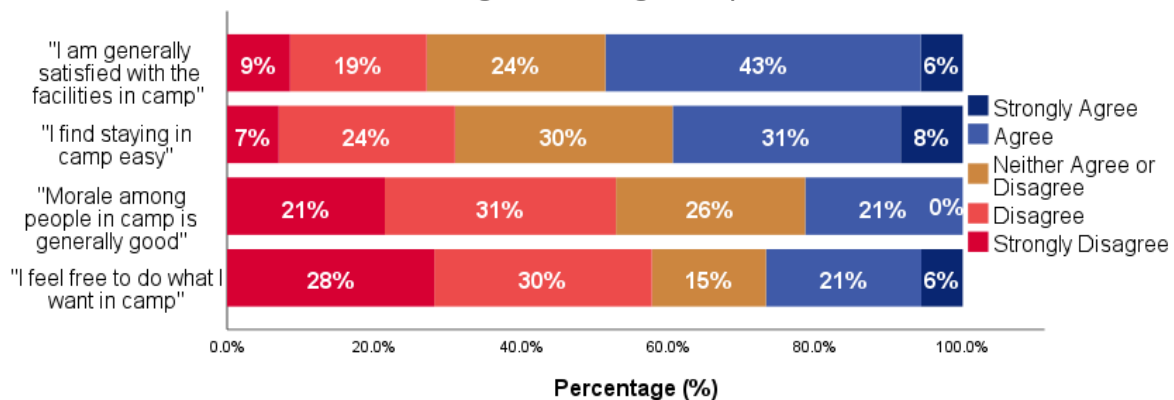
Over three-quarters (77%) of survey participants reported *some or a lot of stress* from camp living. This was a generally distributed stress, in that there were almost no differences among subpopulation groups, with two exceptions: *having children* and *longer years working in the oil sands* were correlated with higher levels of reported camp stress. The latter, along with qualitative comments from participants, suggests a cumulative effect from the grind of camp living.

Figure 6.3: Reported Stress from Living in Camp



Source: Survey Data, Q 6.13_6. (N=72, missing=1)

Figure 6.4: Rating of Camp



Source: Survey Data, Q 4.1_1, 4.1_3, 4.1_4, 4.1_7. (N ~72; "I am generally satisfied..." (n=70), "I find staying in camp easy" (n=71), "Morale among people..." (n=70), and "I feel free..." (n=71)).

Stress and ease of camp living are shaped by both physical and social aspects of camp. Almost half of participants agreed/strongly that they were satisfied with the facilities in camp, but again, this varied by employment conditions: those who were *unemployed*, *had worked at more job sites*, and *had worked a longer time with their current employer* were more likely to be dissatisfied. These factors further emphasize the need to examine how stress and dissatisfaction from camp living and other FIFO conditions are cumulative and/or tied to precarity and uncertainty in job situation.

Workers had lots to say about the material and social conditions of camp. Their subjective comments indicate that several of the most impactful aspects of camp are:

- isolation
- food
- restrictive environment
- unhealthy environment.

As found in much research, camp living can be lonely, isolating, and incite a feeling of entrapment, which in turn can lead to poorer mental health and poorer health habits, including higher alcohol consumption (Parker et al. 2018; Dorow and Jean 2021; Straughan et al. 2020). Parker et al. (2018: 124) found lack of autonomy at work (when on rotation) to be a significant negative predictor of depression, anxiety, and burnout among FIFO workers.

With regard to food, participants pointed to a lack of healthy options, monotony, concerns with hygiene, and individual dietary needs that could not be met in camp. As one participant put it, “camp with lousy food makes it a lot harder.” Another said that one thing she would definitely change about camp is “the cleanliness in the kitchen and a proper well-balanced diet.”

Other problems with physical amenities included shared bathrooms and lack of accommodation of night shift workers (e.g., quiet during the day when they are trying to sleep). One worker summarized the combination of things that make camp difficult:

“The food is terrible, especially lunches. Suppers aren’t so bad except they seem to have just one spice. With the size of bed and bathrooms, all together this makes for bad morale.”

Some people pointed to how the downturn and cost cutting had made morale and amenities even worse:

“People are away from families and homes, and again, in the last few years, because of the downturn, they don't go out of their way to make camps bearable. Food has gone downhill. Their attitude is ‘if you don't like it, piss off’.”

We should also note that a minority indicated liking camp because they didn’t have to cook or make their bed.

In their comments, workers often tied health-related stress to camp living. There were concerns about weight gain and the difficulty of maintaining an exercise regime when in camp, but also challenges in managing specific health conditions—such as diabetes, blood pressure, and high cholesterol—in the context of camp. Participants indicated that the inability to accommodate dietary needs contributed to stress and anxiety.

Ulises suffers from diabetes. He feels stressed finding ways to meet his health needs within *“the rigidity of camp life.”* Oftentimes, he misses out *“on meals and didn’t eat at all because it was better than being sick.”* Ulises also has a digestive condition that makes him feel *“violently sick”* if he eats the pre-packaged food and the *“dumped oil vegetables”* that are served in some camps. So far, any accommodations he has sought have been refused. Ulises thinks that *“they could be more flexible with the meal guidelines or providing options”* for people with particular health conditions. However, the environment in camp is so *“rigid and inflexible on my meals, even though there’s medical reasons for it. . . I found that extremely frustrating.”*

Participants often referred to a generalized malaise and disaffection in camp. A majority of respondents disagreed/strongly that first, morale in camp is good and second, that they can do what they want in camp. They were concerned about the negative environment among people “stuck” together far from home in an institutional environment for extended periods of time. Representative comments from participants included:

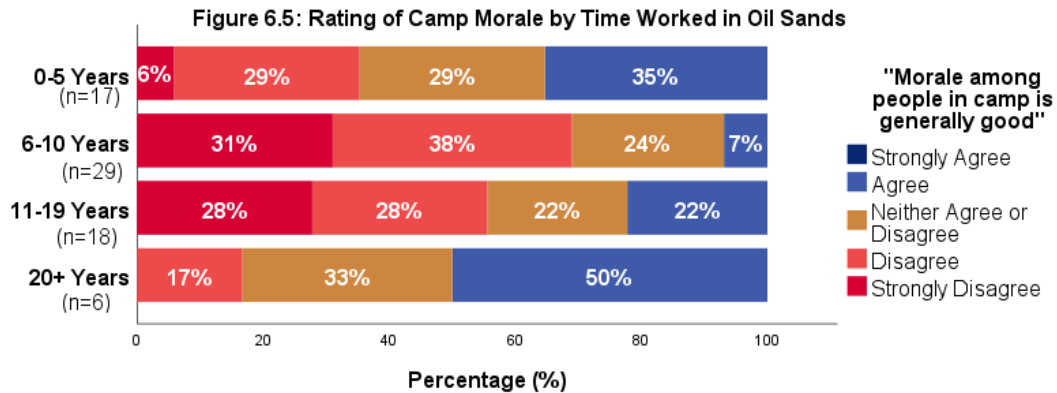
“Such a melting pot of people who somehow agree on complaining.”

“In the beginning it's okay but as time goes on you can really feel it. People get angry quickly, get in a fit, get into it with security.”

“Everybody hates camp, you’re away from home, nobody wants to be there.”

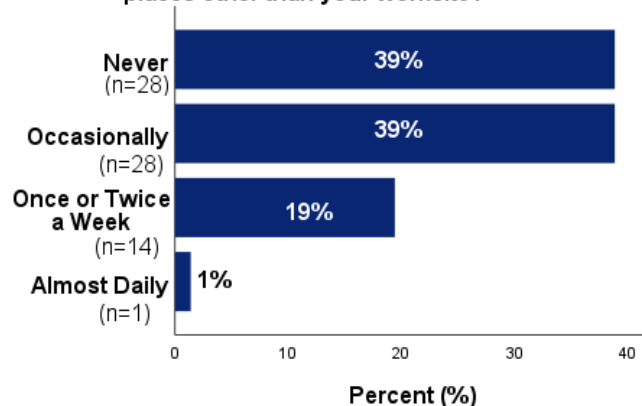
FIFO workers thus seem to limit social interactions in camp for a couple of related reasons. They might lack the time and energy for socializing after long workdays and/or develop a kind of “familiarity fatigue” as they work and live alongside the same people. At the same time, they might deliberately aim to avoid the negative culture (moodiness, bad morale, drugs, harassment). Such avoidance can compound isolation and a feeling of being stuck (Dorow and Jean 2021).

Particular groups were especially likely to report negatively on the atmosphere in camp, including racialized workers, people in their 30s and 40s, and those working in the oil sands between 6 and 19 years (with overlap among the last two groups). These findings suggests that cumulative stresses should be examined for how they might be compounded by factors such as age, race, and gender.



Our findings show that the feeling of being institutionalized was reinforced by the inability to leave camp (cf Parker et al. 2018: 34). As seen here, over three-quarters of our survey participants never or only occasionally left camp when on rotation.

Figure 6.6: "How often do (or did) you leave camp to visit places other than your worksite?"



While formal camp policies sometimes prohibit leaving camp, workers also noted:

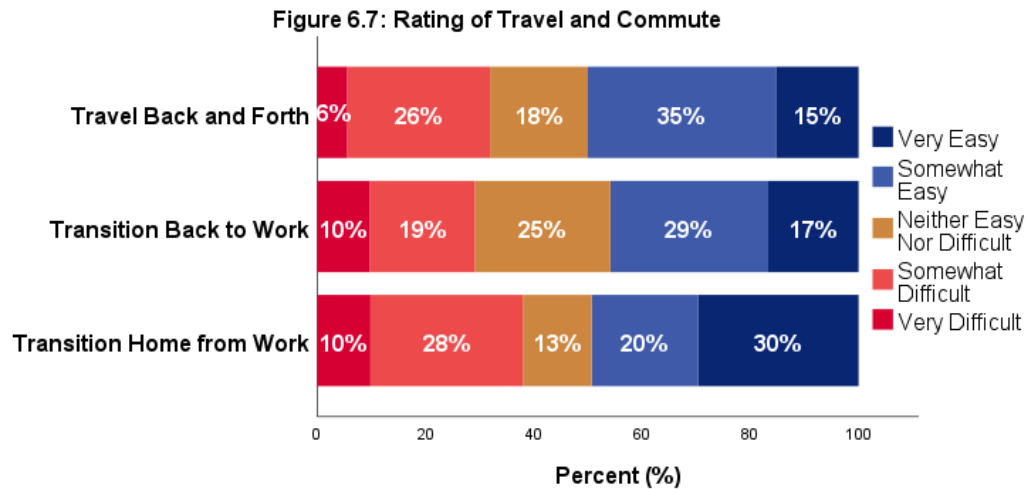
- being too far from town
- a culture that discouraged leaving camp (e.g., need to ask permission, and don't want to risk extra scrutiny)
- lack of transportation (with some noting the cancellation of shuttles into town since the downturn).

Long uninterrupted stints in camp can also contribute to a sense of isolation. More than one-third (36%) of our respondents had experienced at least one stay of three months or more during their time working in the oil sands. This is found across different types of work but is especially common on extended shutdown maintenance projects.

The feeling of institutionalization that emerges out of camp living can, along with other aspects of FIFO work, contribute to severe negative mental health outcomes (Parker et al. 2018). Several of our respondents knew people who had committed suicide in camp. As one of them pointed out, returning to camp can be very difficult because of the reminder, on each return, of that experience and what led to it.

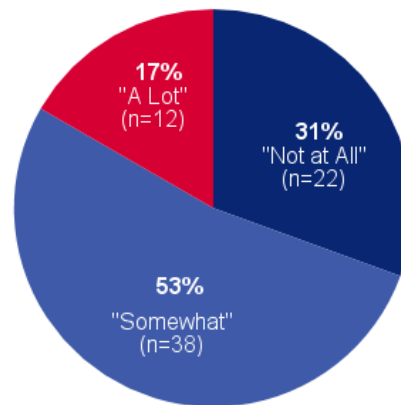
TRAVEL AND COMMUTING

About one-third of respondents characterized travelling back and forth as somewhat/very difficult (transitioning between work and home is discussed in Section 7). Twice that proportion (70%) indicated experiencing *stress* from travel, but with only 17% rating this as intense. Participants referred to the stress of unpredictable travel conditions (cost, weather), long and tiring journeys, and sometimes, compressed transition time (cf Ryser et al. 2016). Some of the more seasoned FIFO travelers downgraded the stress, citing that they were “used to it” and went on autopilot when traveling.



Source: Survey Data, Q 3.3_1, 3.3_2, 3.3_3 (N=72, except "Transition Home from Work" (n=71).

Figure 6.8: Reported Stress -Travel and Commute

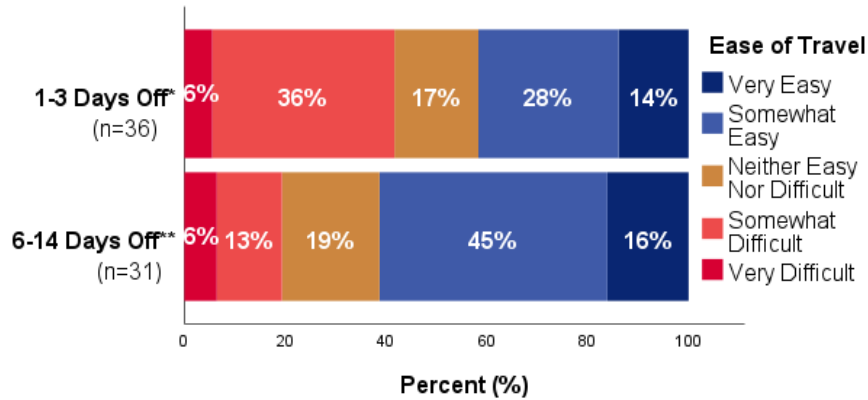


Source: Survey Data, Q 6.13_9. (N=72)

Several groups were more likely to rate travel as somewhat or very difficult:

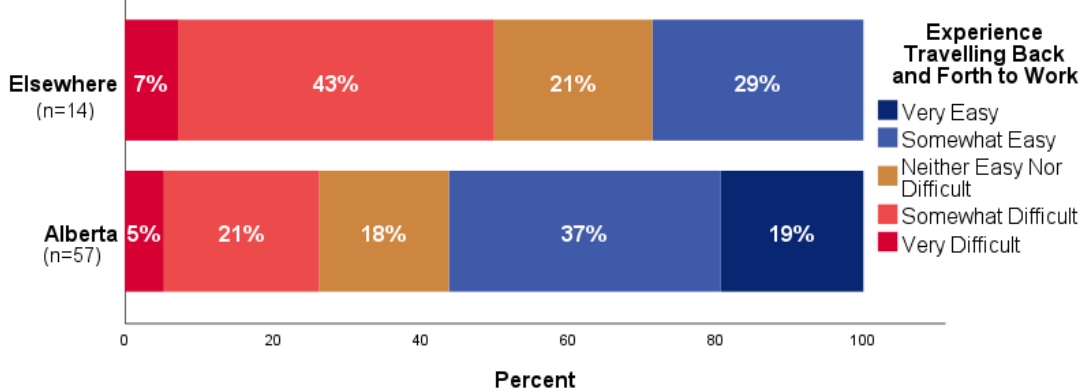
- workers on short-off rotations (42%, compared to 19% for long-off rotations)
- workers living outside of Alberta (more than 50% rated travel as somewhat or very difficult compared to 26% of Alberta-based workers)
- night shift workers (57% rated travel as somewhat or very difficult).

Figure 6.9: Ease of Travel Back and Forth to Work by Rotation Schedule



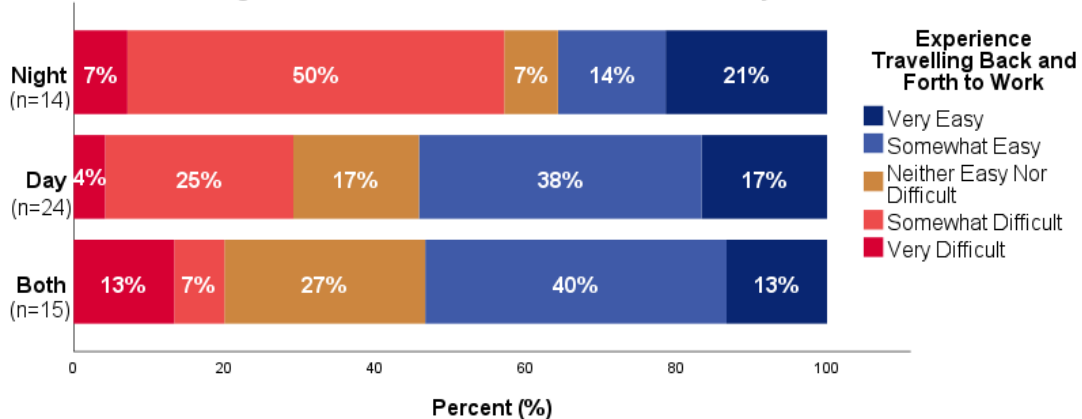
Source: Survey Data, Q 2.15, 3.3_1. (N=69, missing=2). Shift rotations are organized by number of days of work plus number of days off, for example: 6+2= six days of work followed by two days off. *6+1, 12+2, 11+3, 14+3, 18+3. **7+7, 14+14, 10+10, 11+9, 14+7, 15+6, 20+10, 20+8, 18+10.

Figure 6.10: Ease of Travel Back and Forth to Work by Geographic Home



Source: Survey Data, Q 1.11, 3.3_1. (N=72, missing=1)

Figure 6.11: Ease of Travel Back and Forth to Work by Shift



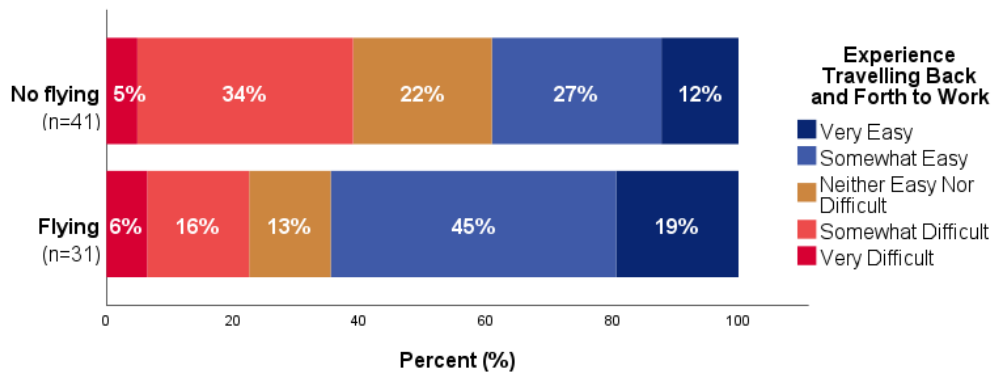
Source: Survey Data, Q. 2.15, 3.3_1. (N=72, missing=19)

These are all important for different reasons. Workers on short-off rotations often describe the rush and stress of trying to get home and back; workers outside of Alberta have longer or more complex journeys; and night shift workers are often going directly from travel to a work shift or from a work shift to travel (cf Parker et al. 2018; Parkes 2010). These findings are, however, qualified by considering not just travel itself, but the psychosocial transition between work and home, discussed below in Section.

FIFO OR DIDO – DOES FLYING MAKE A DIFFERENCE TO STRESS AND WELLBEING?

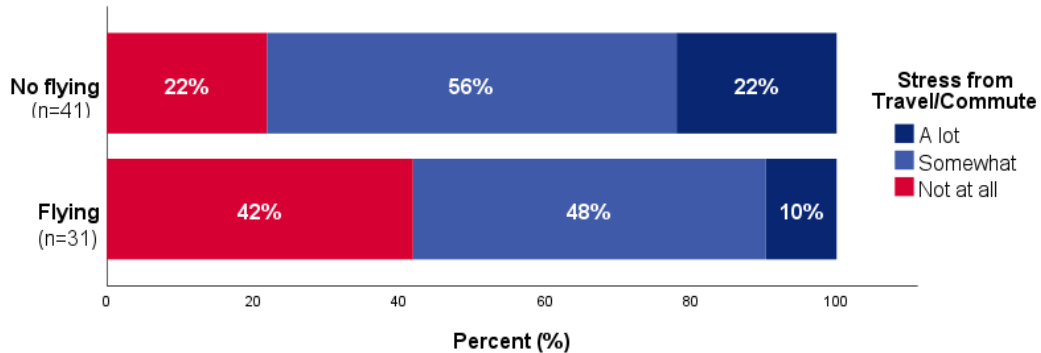
The survey asked how workers got from their front door to the work camp. Participants described everything from hopping in their truck and going door-to-door, to complex routes involving driving, flying, shuttling, and taking a cab. When re-coded as flying or not flying, 43% of survey respondents reported flying as part of the journey, and 57% did not. Here we take a closer look at the challenges and health effects of FIFO commuting as correlated with flying or not. Whether people fly or not makes a difference in how they rate their health, stress, and wellbeing, with *people who fly being healthier and more satisfied*—but as discussed below, flying is also a proxy for other facets of fly-in fly-out and drive-in drive-out work.

Figure 6.12: Difficulty Travelling Back and Forth to Work by Air Travel



Source: Survey Data, Q 3.1, 3.3_1. (N=72)

Figure 6.13: Reported Level of Stress from Travel/Commute by Air Travel



Source: Survey Data, Q 3.1, 6.13_9. (N=72)

The group not flying was also more likely to report poor general health and to have diagnosed long-term health conditions. They were also more generally dissatisfied: more intensely negative about camp life, camp facilities, and job morale. As indicated, this group is mostly Alberta-based and tends to be on short-off rotations, and thus is more likely to be working maintenance shutdowns. Their positioning within the oil sands FIFO workforce and the implications of this for mental health deserve further attention, especially given that contract work, job insecurity, and short-off rotations significantly increase indicators of psychological distress (Parker et al. 2018).

7. WORK-LIFE IM/BALANCE

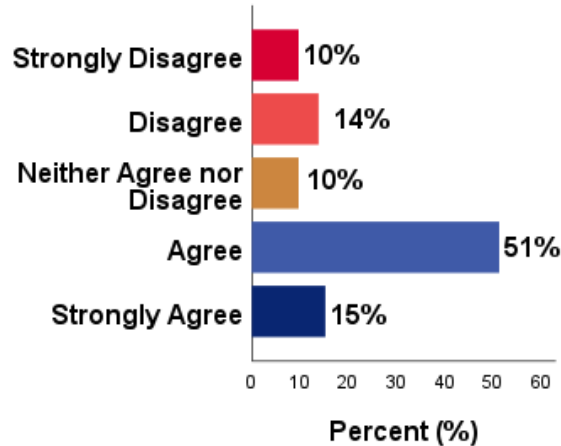
Highlights

- Two-thirds agreed that they were able to reasonably balance the demands of work and personal life. Those *less likely* to indicate work-life balance were in less secure, more disruptive, and more compressed rotational work; had worked longer in the oil sands; and/or were supervisors.
- Long-off rotations seem to have some positive effects, which must also take into account family situation and type of work.
- *Transitioning back home* after a rotation was especially difficult for people in mid-life with families, and Alberta workers making squeezed commutes.
- *Transitioning back to work* was especially difficult for those in less predictable work circumstances, i.e., those working on and off and those who had worked at a higher number of sites.
- In terms of “carrying” work home, supervisors and those who had been working continuously in the oil sands were more likely to have work on their minds when back home.

As indicated in Section 6, distance and time away from family is one of the most stressful aspects of FIFO work. Work-life balance is thus especially challenging and complex for FIFO workers, with direct consequences for health and wellbeing for themselves and their partners and families (Parker et al. 2018; Ferguson 2011; Dorow and Mandizadza 2018; Straughan et al. 2020; Sellenger Centre 2013). In general, work-family imbalance or disintegration is found to be a top contributor to mental disorders, regardless of gender (Wang et al. 2007).

When asked about their ability to balance work and life, two-thirds of respondents agreed/strongly.

Figure 7.1: "I am able to reasonably balance the demands of work and personal life"



Source: Survey Data, Q 5.4_6. (N=72).

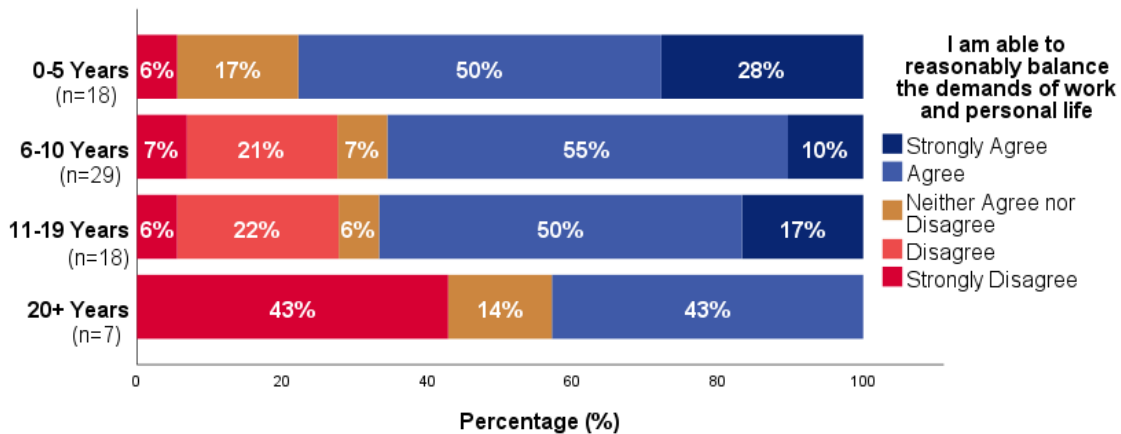
However, this varied in important ways by the conditions of work, demographics, and employment relations. The following groups of workers were *less* likely to indicate the ability to balance:

- workers with short-off rotations (e.g. 12 and 2, or 6 and 1)
- people who had worked more sites (over 40% of those who had worked 11+ sites disagreed/strongly)
- people who had worked a longer period in the oil sands
- workers on day shift
- supervisors
- workers based in Alberta.

Once again, findings suggests the need for further study of the negative assessment of work-life balance that accompanies two overlapping issues: 1) less secure, more disruptive, and more compressed rotational work (which can affect social ties and morale both at work and at home – see Sellenger Centre 2013); 2) increased length of time working in the industry. Given that insecurity and the need to continue FIFO work are also negatively associated with partner wellbeing (Parker et al. 2018: 168), these cumulative effects may very well go beyond the individual worker.

Supervisors are another group with a consistent series of stresses, in their case related to high-demand work and work-home spillover.

Figure 7.2: Work-Life Balance by Years Worked in Oil Sands



Source: Survey Data, 2.10, 5.4_6. (N=72)

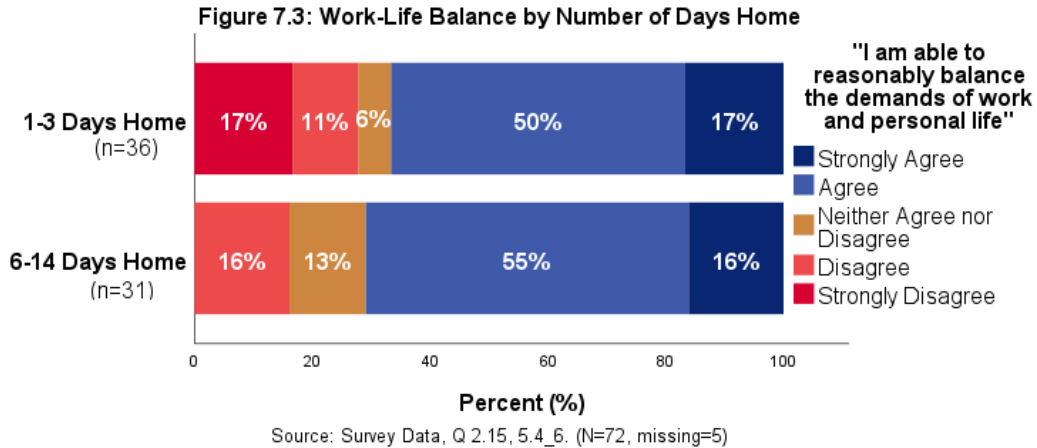
Below we consider in more detail the effects on work-family balance of rotational schedules and continuous versus on-and-off employment relations.

EFFECTS OF ROTATION SCHEDULE

While the survey did not ask direct questions about degree of stress related to rotation, it did gather information on rotation schedules and invite participants to comment on the relative pros and cons of those schedules. This is an important facet of FIFO because it affects how often workers travel home, how long they can be home, and how much time they have to “decompress.” At the same time, it is an aspect of working conditions over which they feel they have little control (see Section 5).

Other research indicates mixed results regarding the effects of rotation schedules (also called rosters) on family and social life for FIFO workers. Parker et al. (2018) find that rotations involving an imbalance—longer time on site and shorter time at home—have worse effects on wellbeing. The MWMH study also finds short-off rotations to be slightly more difficult, but that this must be considered in relation to other conditions such as working on-and-off and working periodic maintenance. While most studies look at how long the work side of the rotation is, we coded them according to number of days off (1-3 versus 6-14), in keeping with studies that consider time for recovery (Parker et al. 2018).

It is important to note that those with longer times off (i.e., “regular” schedules usually associated with longer-term work) were more likely to be in their 30s or 40s, and in a married or common law relationship. Those on short-off rotations tended to be in Alberta—a group that was more often working periodic shutdown maintenance jobs and was also significantly more likely to feel they had no control over their schedule. While those on long-off rotations were a bit more positive about their ability to balance work and life, these must be further studied in relation to family situation, and in relation to the stress associated with constant, repeated rotations and work-home transitions.



Those on long-off (6-14 days home) rotations were more likely to report spending most or all of their time off with family, and to more frequently contact family when in camp. This is probably an effect of family situation (being married/common law and/or having children) but might also be related to the nature of the work associated with different rotations: those on short-off-time rotations are more often staying in camp in between rotations, working intensive maintenance shutdowns, and perhaps at home for longer periods in between contracts.

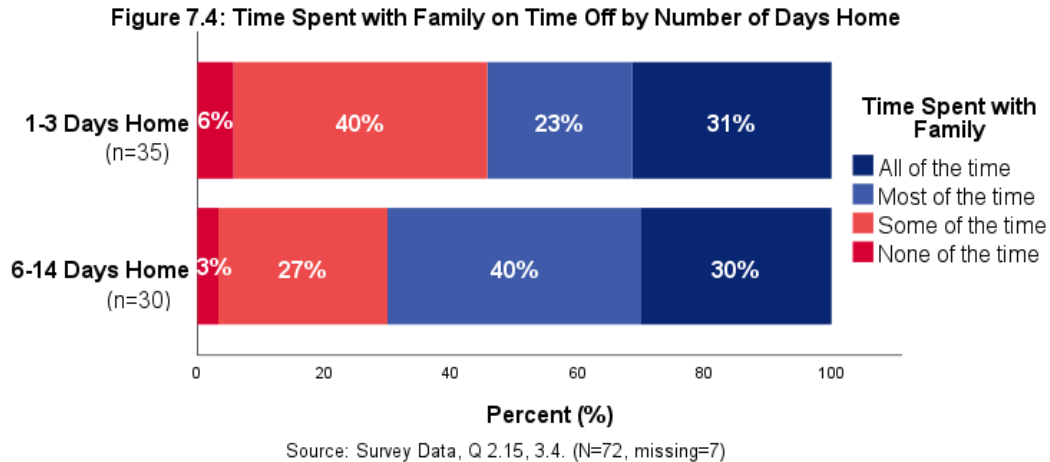
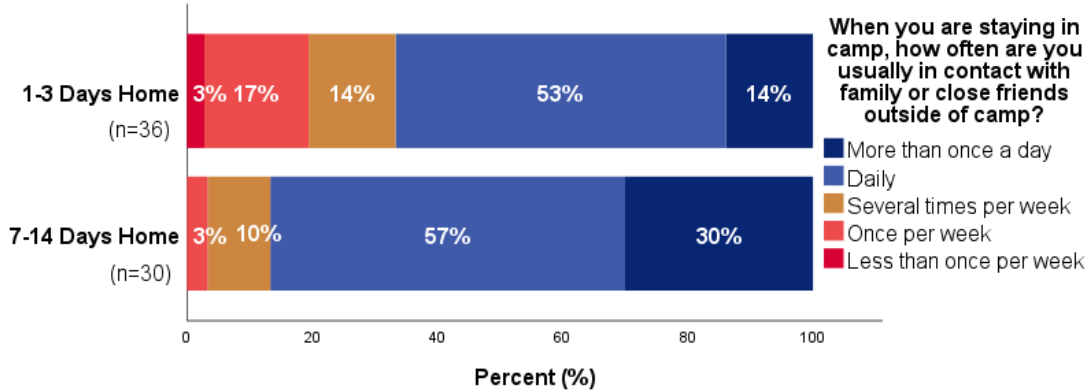


Figure 7.5: Frequency of Contact with Family In Camp by Rotation Schedule



Source: Survey Data, Q 2.15, 4.5. (N=72, missing=6)

Interestingly, some of the participants on short-off rotations were positive about being able to spend many months in a row at home in between contracts. At the same time, they were negative about the downward pressures on relationships during their absences of two or more months, absences also marked by heavy work demands and time pressures. They rated distance from home and family as especially stressful.

“I manage the work-life balance pretty well, but if issues arise... I have had mental health issues in the past, and it gets harder to balance given how much effort you have to put in.”

As indicated below, they also faced stresses around transitioning between work and home.

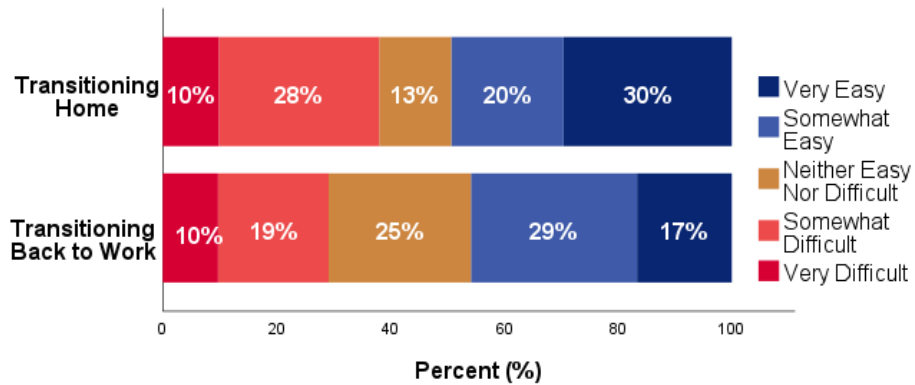
TRANSITIONING BETWEEN WORK AND HOME

We know from the literature on FIFO that the ease or difficulty of transitioning back and forth between work and home is an important facet of work-life balance (Parker et al. 2018; Dorow and Jean 2021; Straughan et al. 2020). As seen below, findings from the MWMH study suggest that while transitioning back home is somewhat more difficult than transitioning back to work, workers rated both transitions about the same. These findings are worthy of more study; Parker et al. (2018: 16) found (among a largely operational rotational workforce) that workers felt somewhat worse transitioning back to site than when transitioning home. What’s more, family wellbeing can be negatively impacted during phases when FIFO workers leave and return home (Parker et al. 2018; Dorow and Mandizadza 2018), as all parties adjust to the changed family configuration and role expectations.

Insights from Valerie O’Leary (Critical Incident Stress Management-Fort McMurray)

Throughout my several years of visiting camp as a critical incident responder, difference in stress levels between those employees who work manageable shifts and those who work short shifts have always been obvious. What has remained a constant factor is the need for the first day home to be a day of rest due to exhaustion. It is almost impossible for family to understand camp life and how exhausting it can be. Maybe we need a brochure for family members outlining common effects on employees, on what to expect and how to support them.

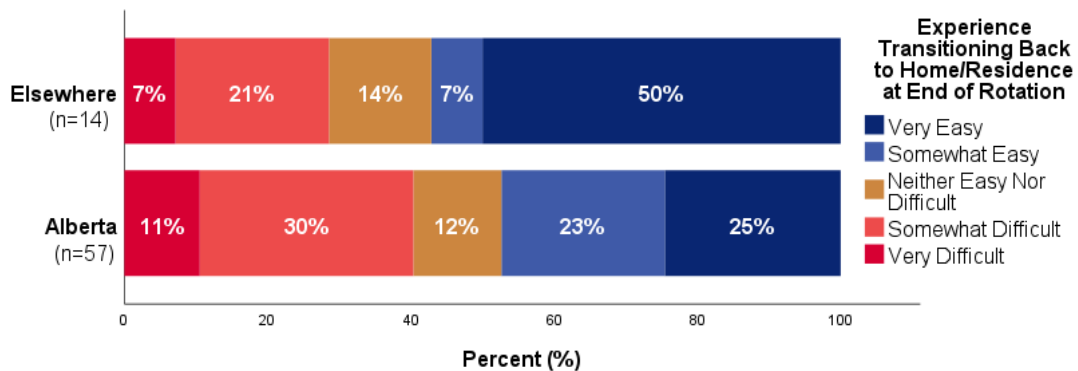
Figure 7.6: Transitioning Between Home and Work



Some 38% rated *the transition home* as somewhat or very difficult, commenting on issues such as fatigue and role transition. The following groups were more likely to do so:

- people in their 40s and 50s
- Alberta-based workers.

Figure 7.7: Difficulty Transitioning Home by Geographic Residence



The finding regarding age may be related to where people are in their life course: people in their 40s and 50s were more likely to spend most or all of their time with family when back home. As for Alberta-based workers, this may be a function of working shutdown schedules and/or short-off rotations. Parker et al. (2018) found that while the accumulated effects of fatigue from demanding work schedules and travel are found across all FIFO rotational workers, i.e., both contract and operations personnel, the return home can be made more difficult by squeezed commutes and rotations with shorter periods at home (cf Parker et al. 2018).

In the MWMH study, Alberta-based workers were often driving back and forth during a window of just 2-3 days. They described trying to make the 4-7 hour commute each way (e.g., to Edmonton or Calgary), even if it meant just one day with family. Some spoke of how important this was to maintaining relationships, but also how impossible and exhausting it was to sustain. These findings underscore that when it comes to work-family balance, FIFO workers find themselves between a rock and a hard place.

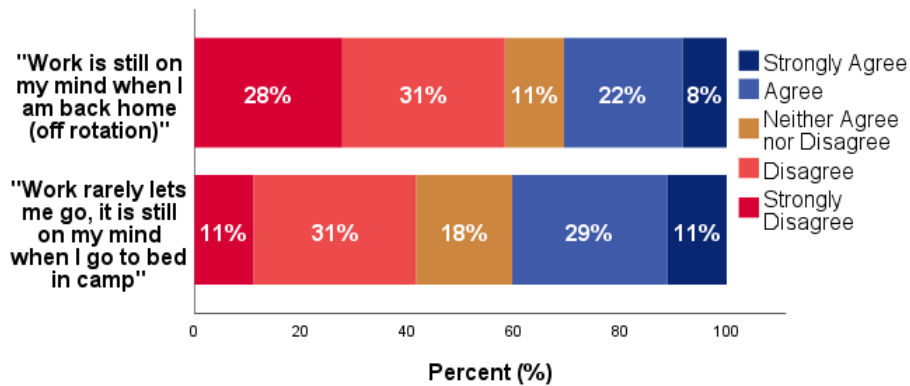
The *transition to work* mode painted a slightly different picture, with 29% rating it as somewhat/very difficult. Other studies have found that workers cite sadness, dread, and anxiety in returning to another rotation (Parker et al. 2018: 16; Dorow and Mandizadza 2018; Straughan et al. 2020). In the MWMH study, two groups were more likely to assess the transition back to work as difficult:

- those working on and off
- those who had worked at a higher number of sites (with overlap between this and the above group).

Challenges for these groups are most likely associated with adjusting to work after a longer time away and/or of having to continually adjust to different work situations. Consistent with previous findings, comments from workers point to the “anticipatory” stress of getting ready for another long stint away after time at home with family.

One final measure of work-life balance is the degree to which people “carry” work with them beyond the workplace (Brown and O’Hara 2003; Gorman-Murray and Bissell 2018). Some 30-40% of workers agreed/strongly that they did so.

Figure 7.8: Carrying Work Beyond the Workplace



Source: Survey Data, Q 5.1_6, 5.1_9. (N=72).

Importantly (and perhaps unsurprisingly), *supervisors* were considerably more likely to still have work on their minds when they went to bed, as were those who worked the *day shift* (with some overlap in these two groups). Those working *continuously* were more likely to have work on their minds when back home, suggesting another kind of cumulative stressor on work-life balance for FIFO workers, including operations employees. Accumulated stresses for supervisors are important not only for them individually but for their proven role in supporting workplace mental health and work-family balance (Babic et al. 2020; Hämmig 2017).

RELATIONSHIPS AT WORK AND AT HOME

Given the back-and-forth lives of FIFO workers between intensive periods of time at work and at home, one important facet of work-life balance to consider is the nature and strength of relationships across these domains. Understanding differences and similarities across work and home are of deep importance to understanding mental health. As seen in the next section, FIFO workers have much stronger relationships at home than at work, with important gender differences. This is notable, given that the MWMH study found no gender differences in other measures of work-life balance.

8. HEALTH AT WORK AND AT HOME: COMPARING RELATIONSHIPS, BEHAVIOURS, AND SELF-WORTH

Highlights

- Participants reported stronger relationships of trust and support at home than at work, especially with regard to reliable help with important decision-making.
- There are some possible gender differences in relationship strength, reliability, and recognition across home and work. Women were twice as likely to strongly agree that they have a trustworthy person at work (27% compared to 14% of men). At the same time, women more intensely agreed that their competencies were recognized at home (68% strongly agreed compared to 42% of men).
- Nearly half (46%) of the respondents reported overeating or having a poor appetite a couple of times or more per week when at work and staying in camp, compared to half this proportion (22%) when at home.
- Participants reported alcohol and drug use as a way to escape from camp routines and restrictions when home. Participants tended to consume more frequently at home, especially alcohol (44% at home compared to 12% when in camp) and cannabis (29% at home compared to 4% at work). Frequencies at work are very likely underreported. Women were more likely than men to report using pain relievers and to do so more frequently both at work and at home.
- There was a significant distinction between home and work with regard to tiredness or lack of energy. Over half (56%) reported having little energy a couple of times a week or more when at work, versus 31% at home.
- Participants reported relatively poor sleep and rest when on rotation, staying in camp, with over half (57%) having difficulty falling or staying asleep a couple of times per week or more. This was significantly worse for women.
- Taking interest and pleasure in life was higher at home than at work. Thoughts of self-harm were much more common in men than women.

Research shows that FIFO workers often experience the sense that they live parallel lives between work and home, i.e., they have different “work” and “home” selves (Dorow and Mandizadza 2018; Saxinger 2016; Angel 2014b). At the same time, the stresses from each carry over into the other (Straughan et al. 2020). This raises the question of how different conditions between work and home might affect health and wellbeing as well as health behaviors. By the same token, the nature of FIFO work may have equally (or all-encompassing) negative or positive effects on both work and home.

However, no research exists comparing health behaviors and conditions at work and home among FIFO workers. We present here the results of a novel subsection of our survey that asked participants a series of parallel questions regarding relationships and health-related behaviors when at work versus when at home. This allows us to compare factors such as social support, diet, sleep, and alcohol and drug use. These findings provide a broader context for some of the mental health findings of the study, build on the focus on workplace conditions in Section 5, and suggest areas for further research.

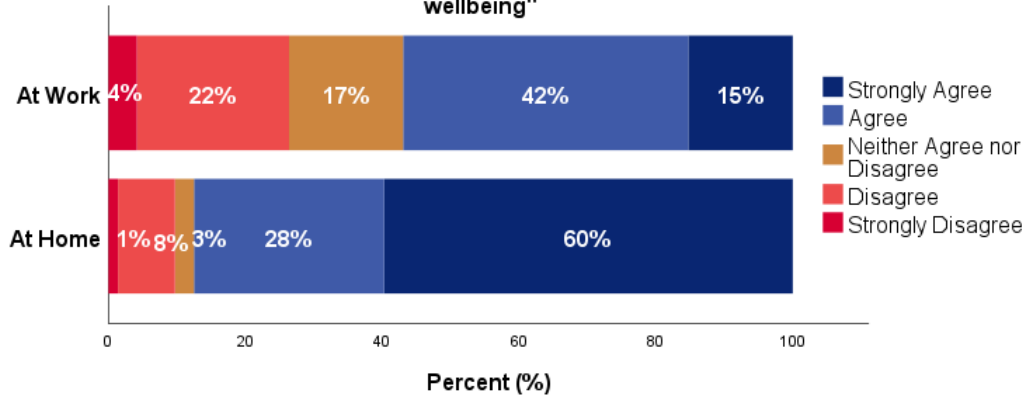
Insights from Valerie O’Leary (Critical Incident Stress Management-Fort McMurray)

Over the years of responding to critical incidents on site, I have had many employees come to see me about something unrelated to the incident. Many times, it had to do with relationship issues at home and that their partners didn't understand how exhausting the rotations were. Upon returning home, they felt that their partners would place a high demand on taking care of household duties.

RELATIONSHIPS

First, we compare human relationships and support between home and work. Research pretty consistently finds that close relationships contribute to psychological health and wellbeing (Stansfeld et al. 2013). Over half (57%) of participants agreed/strongly that they have close relationships that provide **a sense of emotional security and wellbeing** at work, while 88% agreed/strongly that they have such relationships at home. Notable here is a substantial difference in the *intensity* of close relationships, with 60% of respondents strongly agreeing that they had close relationships at home, compared to 15% at work.

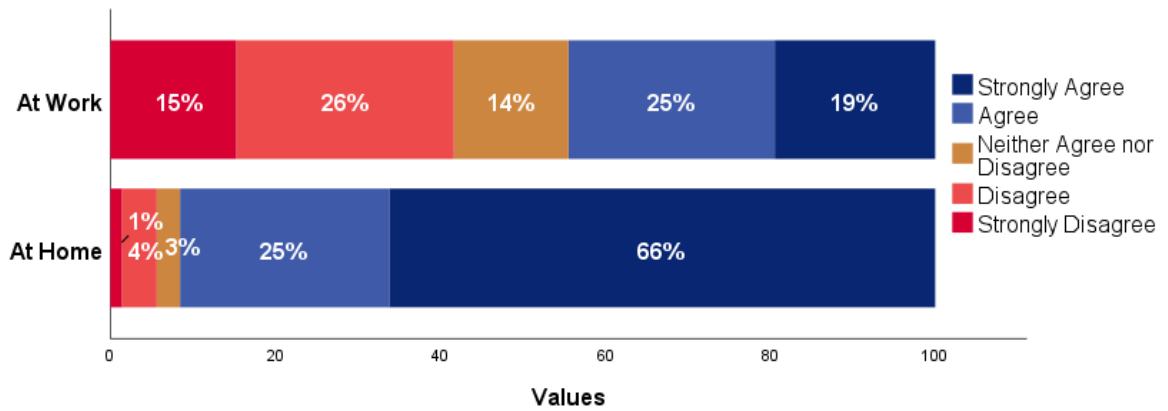
Figure 8.1: "I have close relationships that provide me with a sense of emotional security and wellbeing"



Source: Survey Data, Q 6.1_3. (N=72)

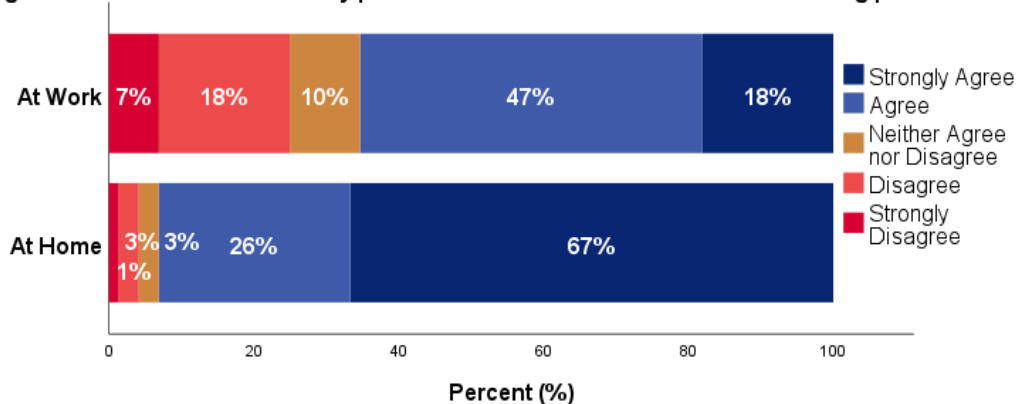
Relationships were further explored in questions about close confidantes, i.e., **people one could turn to when making an important decision** or when seeking advice in the face of problems. In both cases, the vast majority (more than 90%) of participants felt they had such a person at home, with half that proportion (44%) feeling they did at work. Of particular interest for the purposes of this study is the ambivalence workers felt about the ability to talk to someone at work about important life decisions.

Figure 8.2: "There is someone I could talk to about important decisions in my life"



Source: Survey Data, Q 6.1_4, 6.2_4. (N=72; "At Work" (n=72), "At Home" (n=71)).

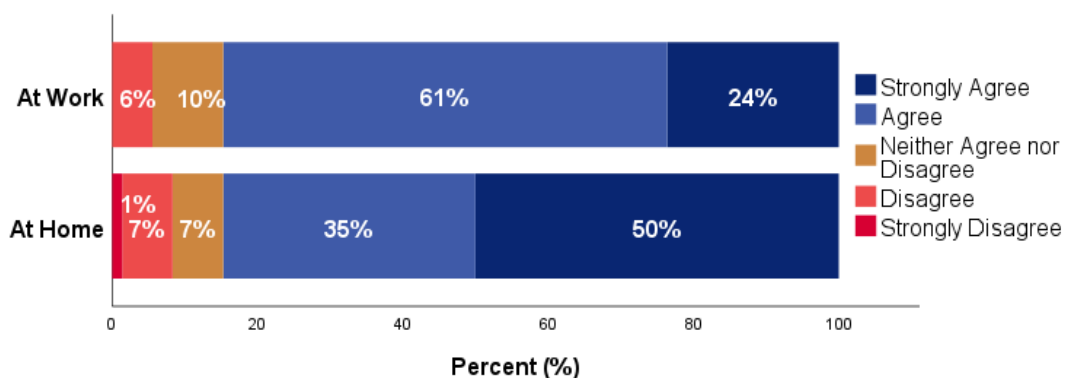
Figure 8.3: "There is a trustworthy person I could turn to for advice if I were having problems"



Source: Survey Data, Q 6.1_6, 6.2_6. (N=72)

The survey also compared **recognition of competence and skill**. An almost equal percentage (85%) of participants agreed/strongly that their competence and skill were recognized at home and at work, but the strength of that relationship was notably stronger at home (50% strongly agreed, compared to 24% at work). This was something of a surprising result. We expected participants to feel validated at work for their technical skills, especially given how many indicated enjoying the work itself. This less enthusiastic rating of recognition at work might be related to aspects of oil sands work culture described by participants (see Section 9).

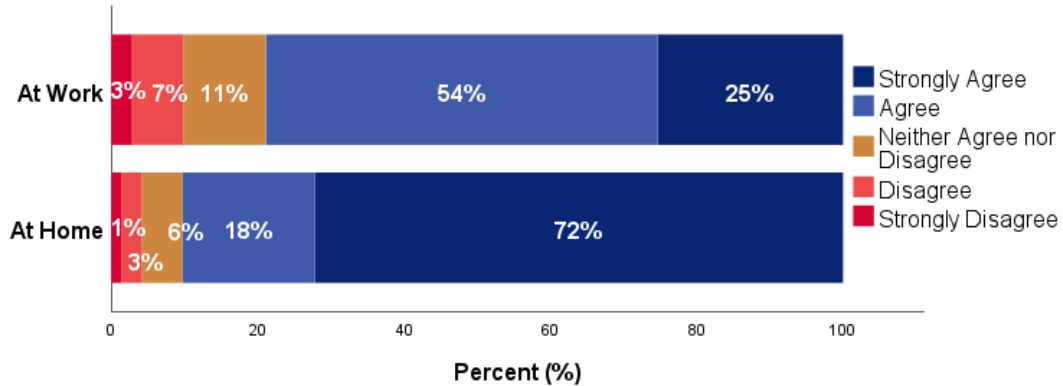
Figure 8.4: "I have relationships where my competence and skill are recognized"



Source: Survey Data, Q 6.1_5, 6.2_5. (N=72)

Findings were similar with regard to having **people one can count on in an emergency**, with participants feeling more intensely confident in the context of home. Importantly, this question prompted commentary from a number of participants regarding emergencies at home that required them to leave camp quickly. The remote location of the camps, and in some cases uncertainty about employer support for a quick return home, created stress for workers. Some workers indicated that drive-in jobs can help create a sense of control and choice in these situations.

Figure 8.5: "There are people I can count on in a personal emergency"



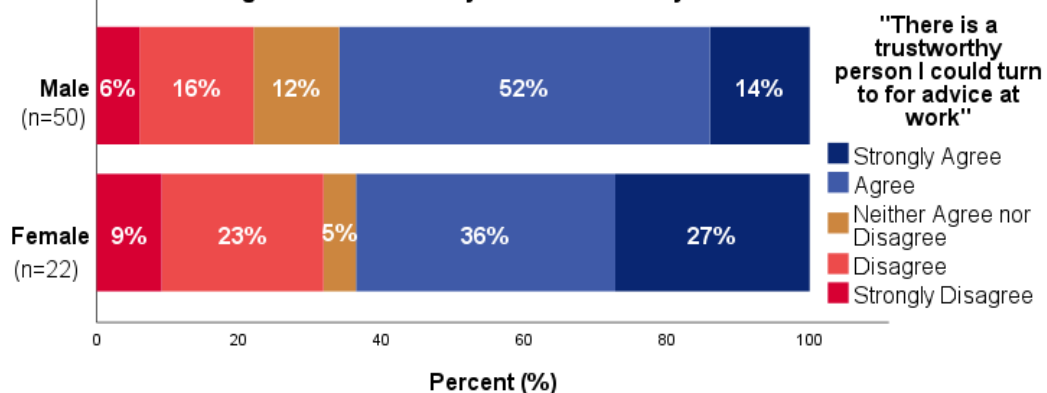
Source: Survey Data, Q 6.1_7, 6.2_7. "At Work" (n=71), "At Home" (n=72).

NOTE: we added the word "personal" to the survey after the first set of surveys, realizing that this needed to be distinguished from work-related emergencies (such as an injury-related stoppage).

GENDERED DIMENSIONS OF RELATIONSHIPS AT WORK AND AT HOME

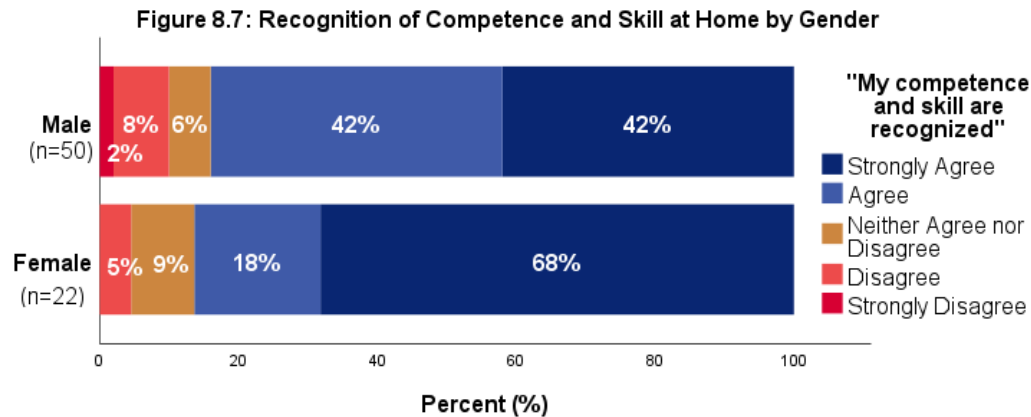
There are some notable *gender differences* in relationship strength, reliability, and recognition across home and work. Female participants were more likely to strongly agree that they have a trustworthy person at work (27% versus 14% of men). Research suggests that women in the trades may actively seek to establish protective relationships with male co-workers or superiors in order to deflect gendered harassment or to receive professional help (Kelly 2020). At the same time, men may either under-report close relationships at work or be subject to a masculinized culture of competitiveness in the oil sands (Dorow 2015; Miller 2004; O'Shaughnessy 2011), which can disrupt close relationships and emotional intimacy (Filteau 2014; Parker et al. 2018).

Figure 8.6: Trustworthy Person at Work by Gender



Source: Survey Data, Q 1.2, 6.1_6. (N=72).

In addition, female participants were more adamant about having relationships at home where their skills were recognized (68% of women strongly agreed v. 42% of men). In interviews, we heard from women about the recognition and admiration they receive from their children about their skill, as well as a sense of accomplishment in providing for family. This seemed to be a source of confidence and purpose that connected work and home (see Alksnis et al. 2008; Horrell et al. 1990).

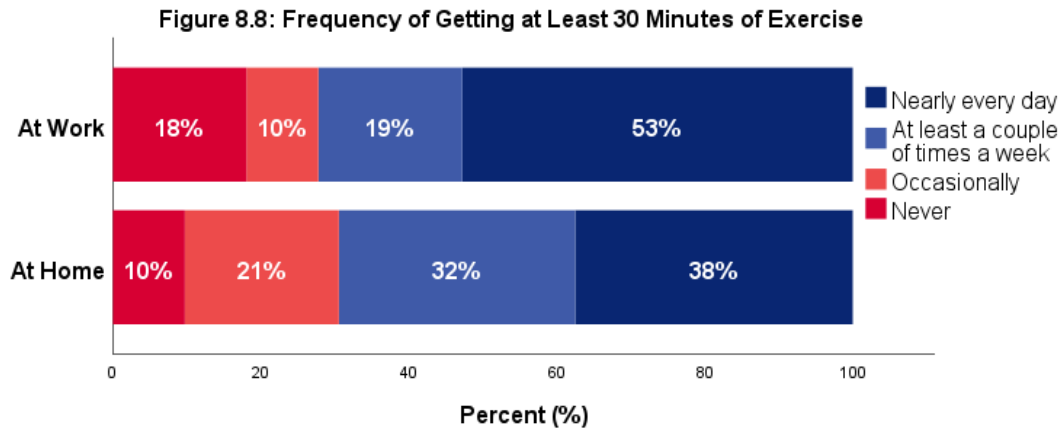


EXERCISE, DIET, AND TOBACCO, DRUG AND ALCOHOL USE

Exercise, diet, and consumption of substances like alcohol and tobacco have a well-established and bi-directional link to mental and physical health. Individuals who regularly exercise report significantly better mental health (Chekroud et al. 2018) and are generally at a lower risk of cardiovascular disease, diabetes, and several cancers (Penedo and Dahn 2005; Saunders et al. 2020). Regular exercise also improves mood and helps to mitigate depression, anxiety, and stress (Martland et al. 2020; Penedo and Dahn 2005; Saunders et al. 2020). Alcohol consumption not only exacerbates mental health issues but stems from issues such as loneliness, work-life conflict, and repeated psychological transitions between work and home, as Parker et al. (2018: 21) found to be the case among FIFO workers. The use of psychoactive substances is also linked to numerous physical diseases (e.g., cardiovascular diseases, cirrhosis of the liver, lung cancer, hepatitis C) as well as multiple negative effects on mental health, including depression and anxiety (Jané-Llopis and Matytsina 2006). The same pattern applies to diet – food consumption has a direct impact on both physical and mental human health (Ventriglio et al. 2020).

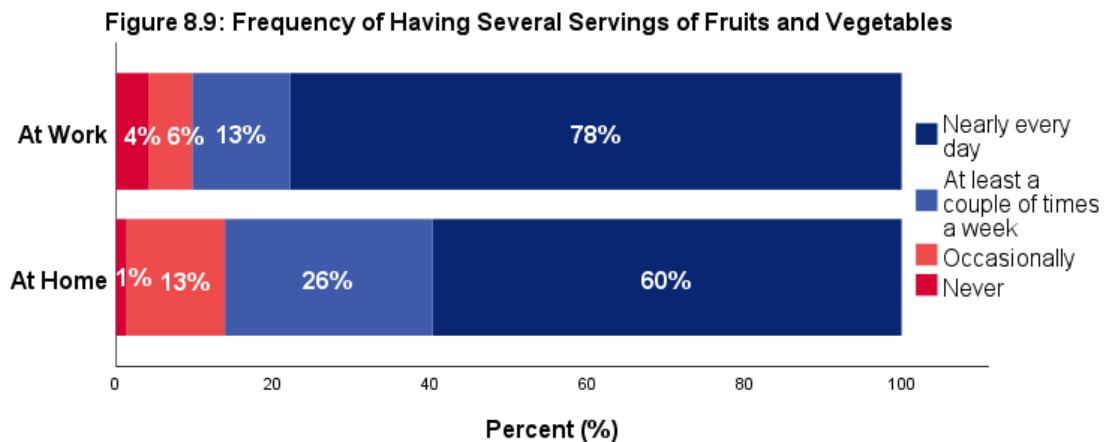
Given the above-mentioned links, we asked participants about their personal care and health routines and compared these between work and home. “Work” in this section refers to camp, as this is where workers access food and exercise facilities—although some workers, depending on their particular type of work, referred to getting exercise while working at site. Tobacco and drug use take place both at camp and on site.

In terms of **exercise**, participants tended to report slightly higher frequency at camp/work. In follow-up qualitative comments, we learned that many participants are tired when they get home, trying to rest, recover, and adjust to the routine and habits of their family. Some indicated getting regular exercise in the course of their work. In general, rates of exercise were lower than the 150 minutes/week recommended by Canadian Physical Activities Guidelines, especially when at home.



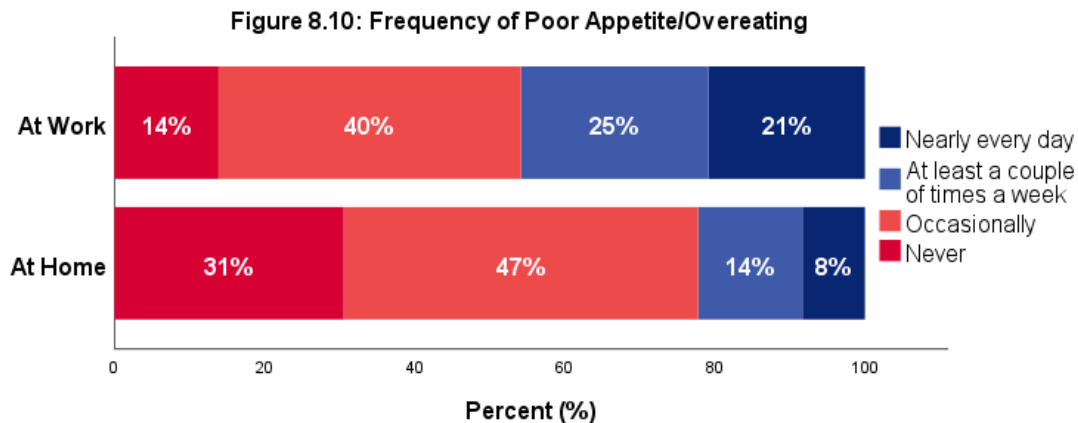
Source: Survey Data, Q 6.8_1, 6.9_1. (N=72)

The routine of camp seems to allow more frequent access to a balanced diet, complaints about food quality and monotony notwithstanding (see Section 6 above). Respondents report more regularly **eating fruits and vegetables** in camp, compared to home.



Source: Survey Data, Q 6.8_4, 6.9_4. (N=72)

However, eating patterns complicate this picture. Nearly half (46%) of the respondents reported **overeating or having a poor appetite** at least a couple of times per week when at work and staying in camp, compared to half this proportion (22%) when at home. People talked about the monotony of work and the comfort of eating as one perk in the day, or of the heavy offerings in the dining hall with constant access to “treats.”



Source: Survey Data, Q 6.10_4, 6.11_4. (N=72)

While there were not significant gender differences for this question, women did tend to report more frequent eating challenges than men when in camp, while eating much better at home. A quarter (26%) of men reported overeating or having a poor appetite at least a couple of times per week while at home (with qualitative comments indicating that overeating was more common), compared to just 14% of women. This may be due to gendered messages about dieting and weight control (Cusack 2000; Siegel and Sawyer 2019; Szymanski and Feltman 2015) and or to gendered roles: women might more often be preparing meals for themselves and/or their families.

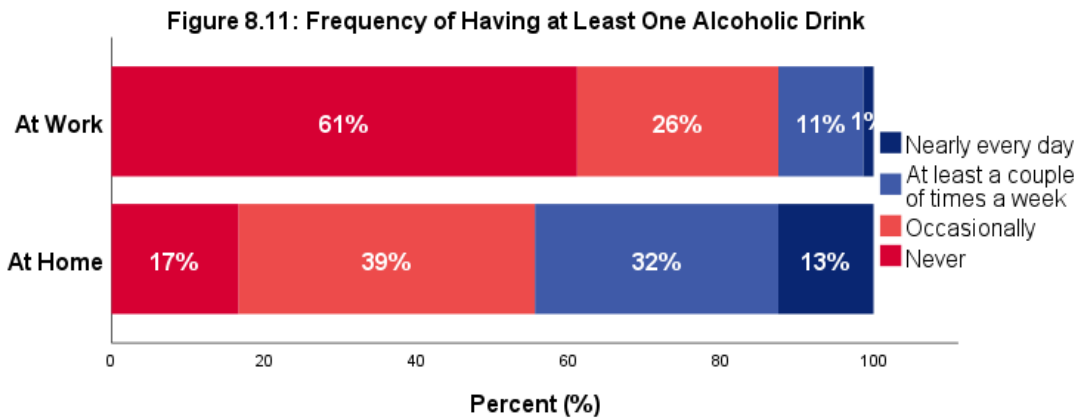
As indicated above, these issues are further complicated for individuals with dietary restrictions or medical conditions that impact their eating patterns, such as allergies, IBS, and diabetes. Participants with such conditions reported struggling with the limited options of camp food, leaving some to rely on food brought from home and stored in personal mini fridges for the duration of their stay. One person reported needing to drive (more than 10 hours) rather than fly so they could transport all the food items needed.

With regard to **alcohol and drug use**, a similar pattern emerges regarding workers' wanting to unwind and have a break from camp routines and restrictions when home. Survey results suggest that participants tend to consume more at home. This was especially true for alcohol consumption. While only 12% of respondents indicated consuming alcohol a couple of times a week or more when on rotation, 44% reported doing so when at home. This seems to be somewhat higher than average in the Canadian population (Statista 2021).

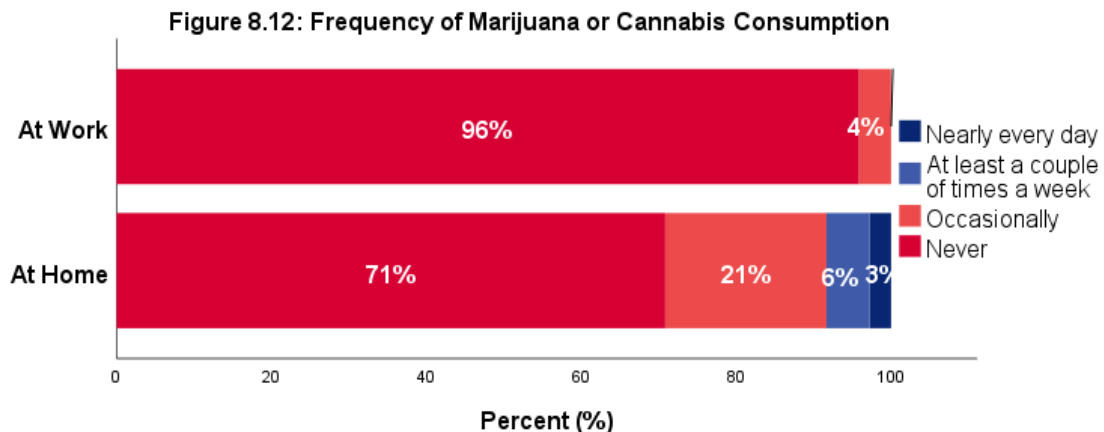
Only 4% of participants reported ever using cannabis at work, while 29% reported occasional or more frequent use when at home; the latter is consistent with findings in the population (Health Canada 2020). There was a very low reported usage of illegal drugs in both settings.

Conditions of employment and camp living most likely shape responses regarding alcohol and drug use at work. Stringent work and camp policies, including regular searches and ready dismissal if banned substances are found, contribute directly to

lower usage when on rotation. Access to alcohol can be limited when in camp (e.g. “dry” camps). In addition, cannabis is not a drug of choice at work because it stays in the system, and there is regular testing. Finally, and perhaps most importantly, these factors most likely contributed to underreporting of drug and alcohol use in our survey (cf. Aquilino 1994; Feunekes et al. 1999; Boniface et al. 2014; Northcote and Livingston 2011). Subjective comments from MWMH participants make it clear that alcohol and drugs are commonly used in camp and sometimes on the work site.



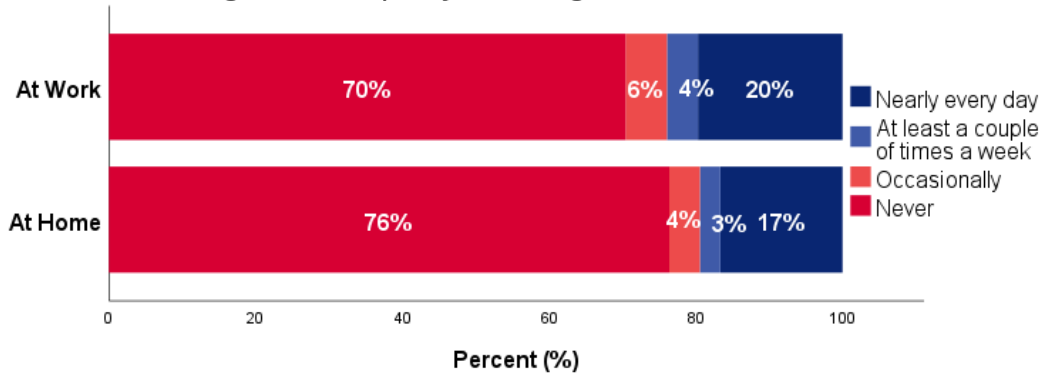
Source: Survey Data, Q 6.8_7, 6.9_7. (N=72). Note: "Alcoholic Drink" includes Beer, Wine, or any other Liquor.



Source: Survey Data, Q 6.8_6, 6.9_6. (N=72)

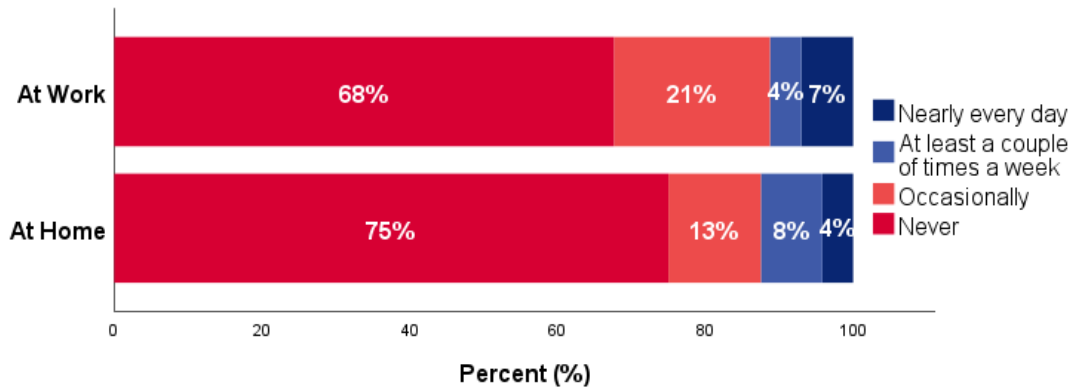
Tobacco smoking habits were about the same across home and work, with 20-24% smoking at least a couple of times a week. There is a higher proportion of smokers overall in the study population than in the general population, where 17% are current smokers and 12% smoke daily (Grey Bruce 2017).

Figure 8.13: Frequency of Smoking Tobacco Products



Source: Survey Data, Q 6.8_5, 6.9_5. "At Work" (n=71), "At Home" (n=72).

Figure 8.14: Frequency of Using Pain Relievers



Source: Survey Data, Q 6.8_8, 6.9_8. "At Work" (n=71), "At Home" (n=72).

Use of **pain relievers** was also similar across work and home, but with some important gender differences. Women were more likely than men to report using pain relievers, and to do so more frequently, both at work and at home. 45% of women used them at work occasionally or more (v. 26% of men); and at home, 36% of women reported using them occasionally or more (v. 20% of men). There might be an element of gendered identity or performance at play here. Men may be underreporting use of pain relievers at work in a culture where one is supposed to “tough out” pain; within this same culture, women in the trades might medicate at a higher rate in order to be able to help prevent any signs of “weakness.” It is difficult to know without further study.

In connection to pain relievers and substance use, the survey did not include a question about the use of sleeping pills. This is unfortunate given the importance of sleep disruption that emerged in other questions and should be studied further. In their major study, Parker et al. (2018: 175) found FIFO workers to use tranquilizers or sleeping pills four times more often than the benchmark (non-FIFO) group.

SLEEP, REST, AND ENERGY

Sleep and rest are foundational to health. Sleep disruptions are associated with numerous adverse short- and long-term consequences: memory disorder, increased receptivity to stress, hypertension, cancer, diabetes, and cardiovascular diseases (Medic et al. 2017). Multiple studies show that quality and quantity of sleep are linked to mental health (Robillard et al. 2016; Steptoe et al. 2008), levels of productivity (Magnavita and Garbarino 2017) as well as mood and wellbeing (Totterdell et al. 1994; Triantafyllou et al. 2019). Sleep disturbance and energy loss are signs of depression (Health Canada 2002). Sleep is also foundational to the quality of social interactions (Totterdell et al. 1994), which, among other things, may have a further impact on mental health. Lack of sleep also reduces human motivation for physical activities (Axelsson et al. 2020) and is detrimental to the ability of people to focus and be attentive (Lowe et al. 2017). Combined, those outcomes of sleep deprivation may lead to an increased risk of mental illness, physical injuries, and even death.

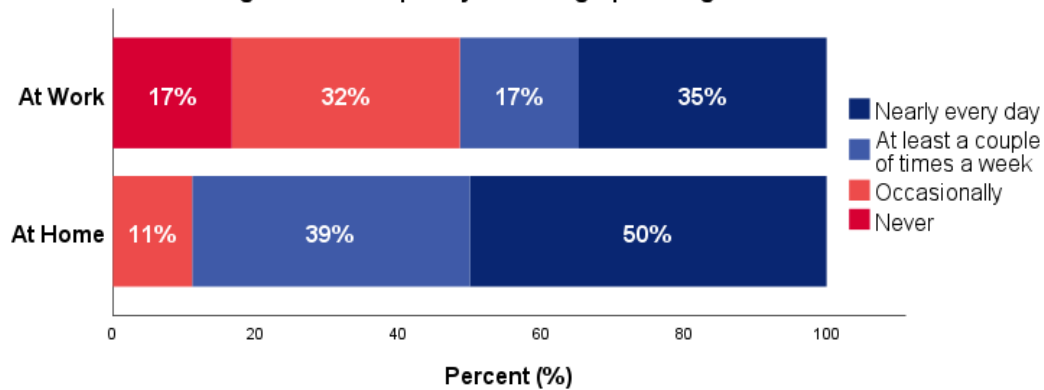
At the same time, lack of sleep and fatigue are associated with work environment: weak social supports, job control, and organizational justice, as well as high work demands and job strain (Linton et al. 2015).

Sleep is of particular importance in camp as an indicator of quality of wellbeing. Research from other countries shows that FIFO workers often lack in both quality and quantity of sleep (Barnes et al. 1998; Muller et al. 2008). In comparing FIFO and non-FIFO workers, Parker et al. (2018: 15) found sleep quality to be significantly worse among the former. This can lead to fatigue, which increases the risk of work-related accidents and injuries (Muller et al. 2008; The Sellenger Centre for Research in Law, Justice and Social Change 2013).

It is important to note that demanding work conditions also leave little time for restorative practices or sleep among FIFO workers in the oil sands. With average 12-hour shifts plus time to prepare and commute to the work site, the workday can top out at 13, 14, or more hours, leaving workers with only 10 hours to unwind, call home, eat, shower, and sleep. This leaves a palpable “time squeeze” (Dorow and Jean 2021).

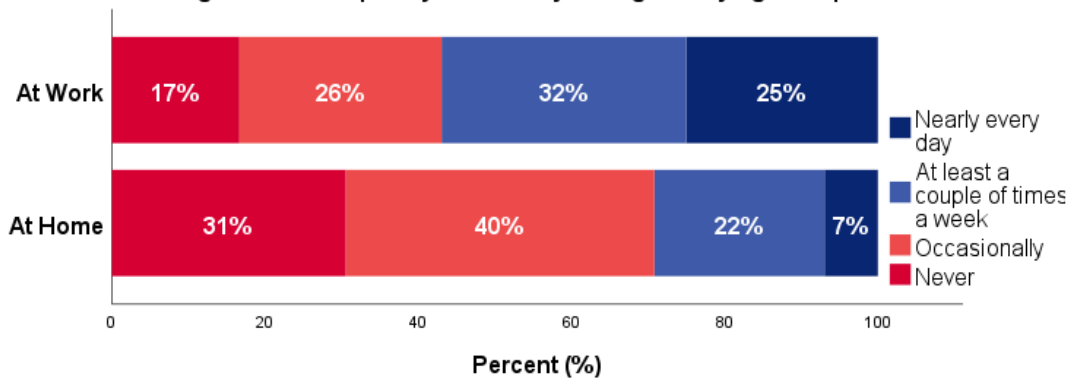
In our survey, almost 90% of participants reported waking up **feeling rested** at least a couple of times a week or more when at home, with just 52% feeling rested at that rate when at work and staying in camp; 17% (1 in 6) reported never waking up rested when in camp (compared to 0% at home). While these rates are similar to those found in the population, the differences between workday and non-workday sleep are starker in our sample than has been found in the population (ResearchCo 2021). Even more notably, 57% of participants report having **difficulty falling or staying asleep** a couple of times or more per week when in camp, versus half that proportion at home (29%). One in four (25%) people report having such difficulty *nearly every day* in camp. This is notably higher than found in the general population, where 11.3% of men and 16.75% of women report difficulty going to or staying asleep “most of the time” (Statistics Canada 2013).

Figure 8.15: Frequency of Waking Up Feeling Rested



Source: Survey Data, Q 6.8_2, 6.9_2. (N=72)

Figure 8.16: Frequency of Difficulty Falling or Staying Asleep

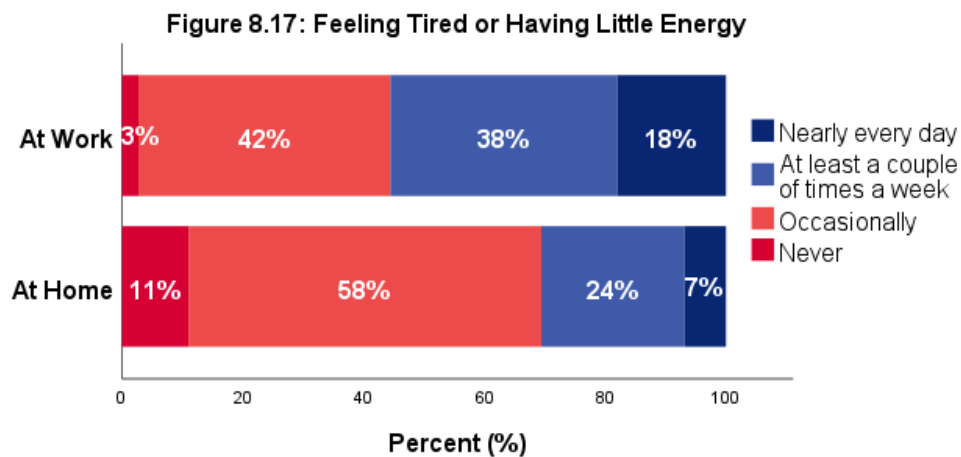


Source: Survey Data, Q 6.8_3, 6.9_3. (N=72)

Insights from Valerie O’Leary (Critical Incident Stress Management-Fort McMurray)

Most camps I have slept in were quiet, but my sleeping patterns were almost always disturbed. Sleep deprivation is not only physically and mentally unhealthy, but the risk factor of errors at work goes up 28%. According to a sleep study conducted by the University of Oxford, 17 hours without sleep is equivalent to a .08 blood alcohol level. One camp I stayed in addressed this and had door hangers in each room on tips for a better sleep. Brilliant! Most suggestions were common sense but when you are exhausted, it’s difficult to think clearly and this became a friendly reminder.

Not surprisingly, there was also a significant distinction between home and work when it came to reported **tiredness or lack of energy**. Over half (56%) of survey participants reported having little energy a couple of times a week or more when at work, versus 31% at home. The frequency of this difference is striking: the proportion who report feeling tired *nearly every day* when at work is more than double the proportion reporting this at home. This difference is bigger than we might have expected, given what we know from qualitative findings: people are still tired when they get home from work, which is compounded by a new sets of demands (family time, errands, house maintenance), and a minority are also letting off steam and partying. Straughan et al. (2020: 212) argue that exhaustion circulates between FIFO workers' home and work environments; home is not "away" from the work site, but rather, they come together through the transfer of exhaustion.

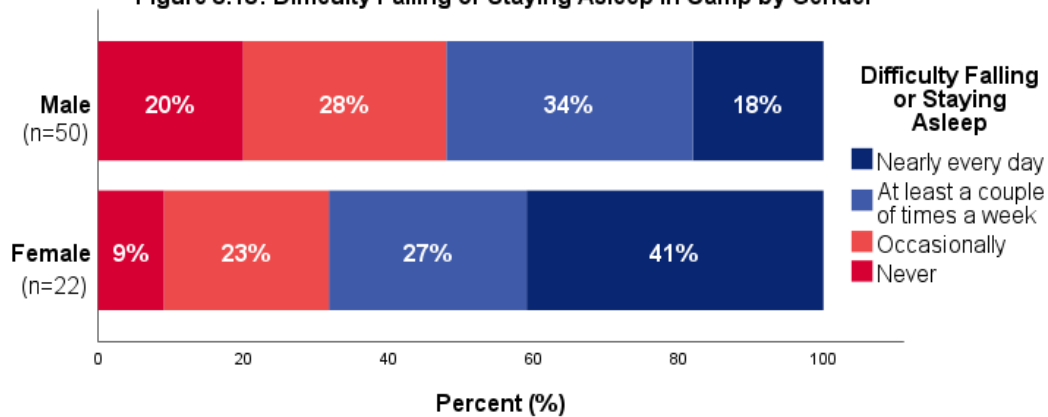


GENDER DIFFERENCES IN SLEEP AND ENERGY

While sleep and rest are worse among women in the general population (Statistics Canada 2013; ResearchCo 2021), our findings appear to be especially stark. Women in the MWMH survey reported a significantly higher frequency of difficulty falling or staying asleep, especially at work (41% "nearly every day" at work v. just 18% of men). There is a parallel difference for "waking up feeling rested," but not to the same degree (38% of men report doing so every day at work, compared to 27% of women).

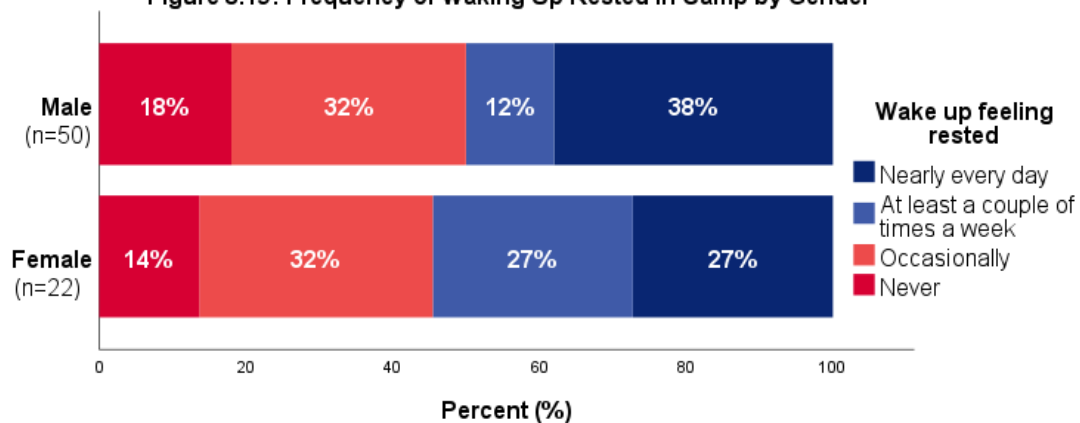
Differences in sleep between women and men when at home are negligible, *suggesting that FIFO conditions are harder on women's sleep and rest*. Research indicates that fatigue and sleep disturbance are a sign of social environment, including bullying (Linton et al. 2015). Female FIFO workers may be hyper-conscious of their environment while at camp, especially with reported instances of assault and break-ins of camp rooms (Kelly 2020; Ryser et al. 2016); these experiences can be heightened by camp conditions, such as staying in a shared "Jack and Jill" room versus a private room or being in a mixed wing as opposed to a women-only wing.

Figure 8.18: Difficulty Falling or Staying Asleep in Camp by Gender



Source: Survey Data, Q 1.2, 6.8_3. (N=72)

Figure 8.19: Frequency of Waking Up Rested in Camp by Gender



Source: Survey Data, Q 1.2, 6.8_2. (N=72)

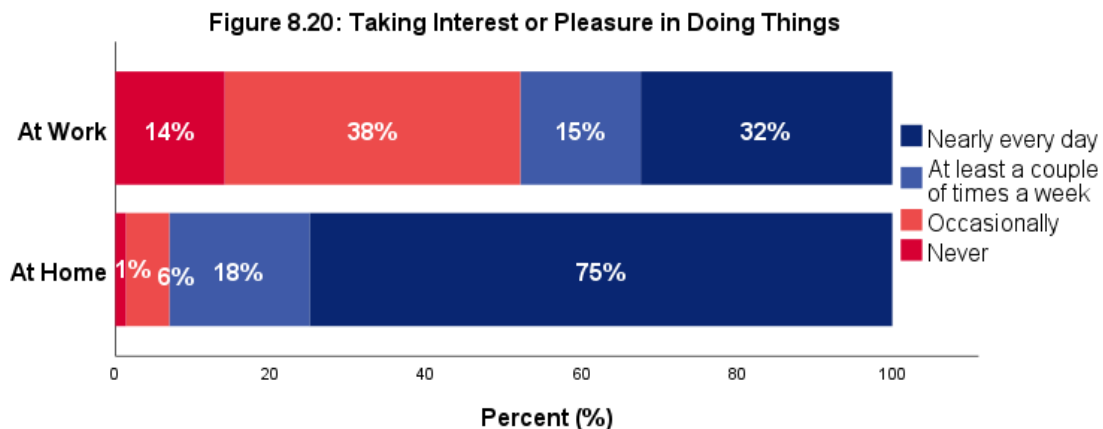
MENTAL HEALTH AND SELF-WORTH

While the physical health habits described above clearly impact mental health, and vice versa (Churchill and Farrell 2017; Choi et al. 2019; Totterdell et al. 1994), the survey also asked direct questions about mental health habits and attitudes, from the ability to enjoy things to thoughts of hurting oneself, at work versus at home. Loss of interest in activities, inability to concentrate, and feelings of hopelessness, unworthiness, or guilt are all signs of depression (Health Canada 2002).

We begin with questions that gaged level of ability to **concentrate and take interest** in activities. While participants' ability to concentrate on things like reading or watching a show did not differ much between home and camp, there was quite a stark difference reported in "taking interest or pleasure in doing things." Almost all (93%) of the MWMH FIFO workers reported taking pleasure in activities a couple of times or more per week when at home, versus half that proportion (47%) at work/in camp. The frequency is equally notable, with three-quarters of people reporting such pleasure at home on an almost daily basis versus only one-third at work. These numbers are *high compared to*

the general population, where 12% report little interest or pleasure in doing things on most working days (Ipsos 2017). This compares to half (52%) of our participants.

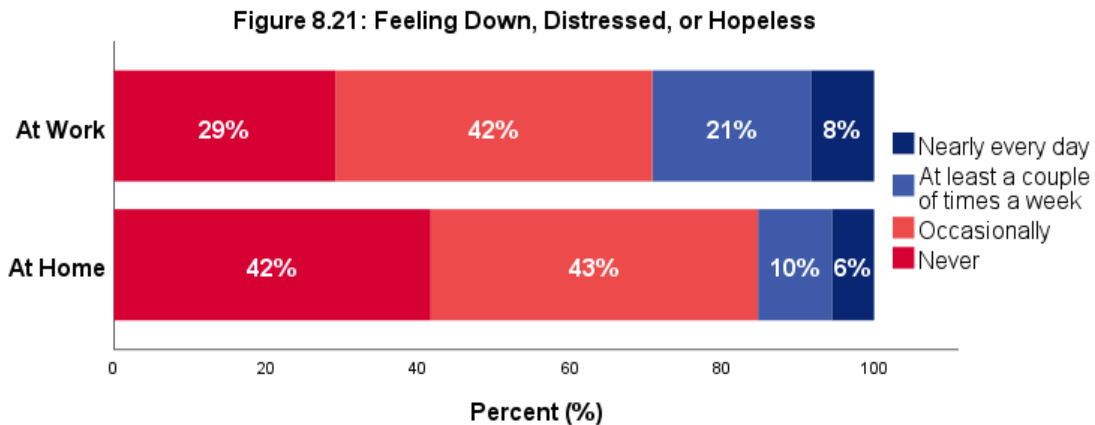
The enjoyment and passion participants expressed for working in their trade seems to be obscured here. This may be because participants interpreted the question about taking interest or pleasure in the context of camp living (which many find monotonous and prison-like), and/or pleasure from work was dampened by other stressful experiences. It would seem that the overall environment contributes to lowered levels of interest or pleasure while on work rotation, but this disconnect deserves further study.



Source: Survey Data, Q 6.10_1, 6.11_1. "At Work" (n=71), "At Home" (n=72).

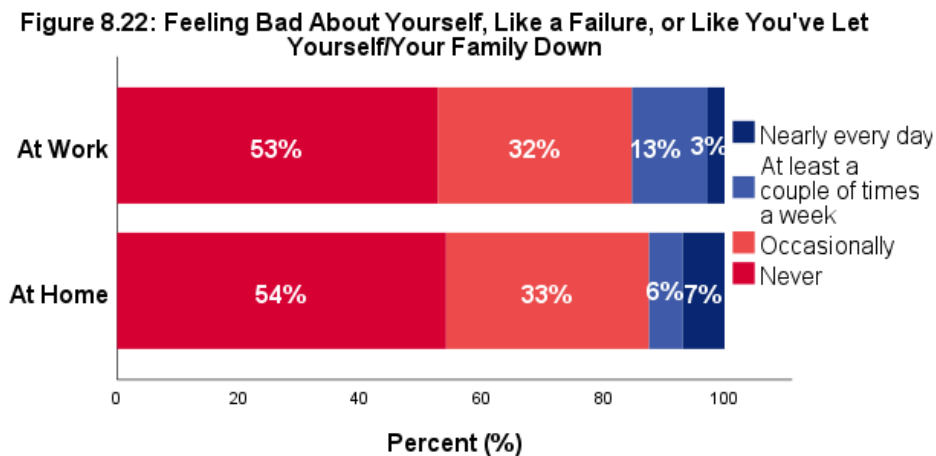
While the survey found a tendency to report more frequent experiences of **hopelessness** when at work (29%, versus 15% when at home), most participants reported only occasionally or never having such feelings at both work and home. Nonetheless, this appears higher than in the general working population, where 11% report feeling down, distressed, or hopeless on a majority of working days (Ipsos 2017).⁵ We know from our participants' feedback that the increased likelihood of feeling down at work comes in part from distance from family, the struggle of managing familial or intimate relationships across distance, camp conditions, and tiredness from work.

⁵ Based on differing scales of measurement.



Source: Survey Data, Q 6.10_2, 6.11_2. (N=72)

As our survey moved into assessment of more extreme feelings of **depression, failure, or despair**, reported differences between work and home diminished. This may be because such experiences are more generalized, i.e., they are part of daily life regardless of context. This finding, however, emphasizes the need to examine how conditions of FIFO work dis/allow the continuity of care and mental health interventions across work and home (cf Donatelli et al. 2017), and to assess the degree to which employers are prepared to respond to the socio-spatial realities of their workers.

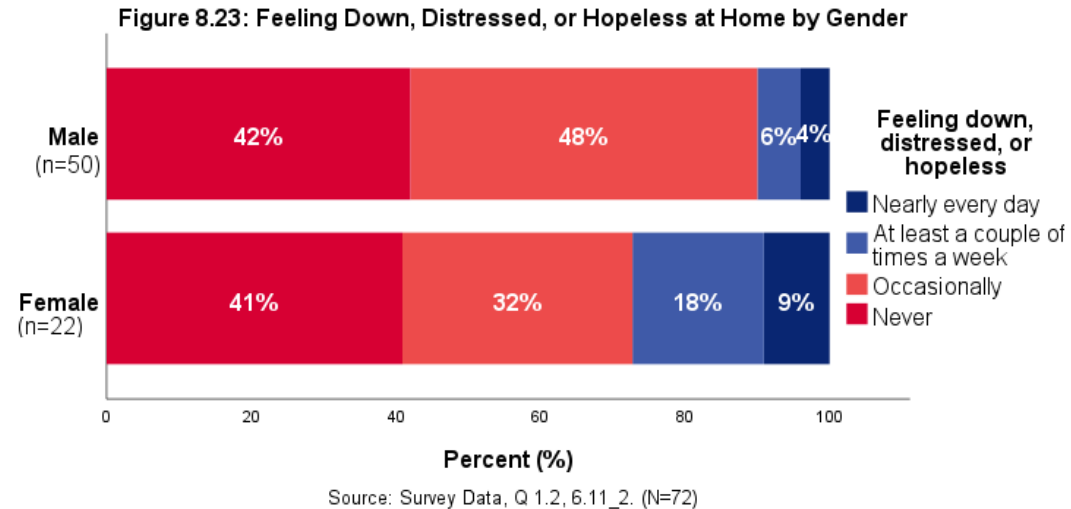


Source: Survey Data, 6.10_5, 6.11_5. (N=72).

One in ten of our participants reported having **thoughts of hurting themselves**. This appears consistent with the adult population, and is consistent across work and home, pointing to a segment of the workforce with pressing mental health needs. It is important to note that lack of access to meaningful relationships or of a sense of affirmation at camp-based work can elevate feelings of distress or crisis (cf Parker et al. 2018). In addition, the disruptions of FIFO work might impact ongoing forms of care or access to resources (see Section 9).

GENDER DIFFERENCES – MENTAL HEALTH

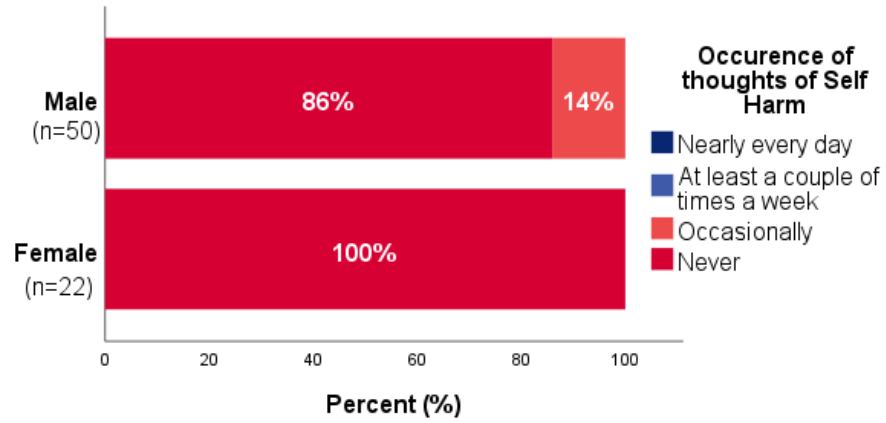
There are some notable *gender differences* in these preliminary findings regarding mental health. Women reported a higher frequency of feeling down, distressed, or hopeless at home: 27% a couple of times a week or more, in comparison to just 10% of men. While such discrepancies are found in the population, our findings warrant further study, given that women showed the same work attachment as men, reported higher social connections at home, and reported similar frequencies of hopelessness at work.



This finding may be related to results regarding feeling like a failure: 18% of men reported having such feelings at least a couple of times a week when at work, compared to 9% of women. This is reversed for feelings at home: 18% of women feel bad, like a failure, or that they have let themselves or their family down, versus 10% of men. Gendered differences in family roles and responsibilities might be at play (see Dorow and Mandizadza 2018). Again, further research is needed to corroborate and explore these findings.

Consistent with the literature is our finding regarding thoughts of hurting oneself. All participants who reported such thoughts at work were men (1 in 7), and all but one who reported such thoughts at home were men. Research finds that men, particularly young men, working in construction trades are at higher risk for suicide, and that these rates are influenced by unstable work and lower levels of training and income (Graham and Pinto 2021; King et al 2019; Milner et al 2014; Roberts et al 2013); Alberta has one of the highest rates of suicide in Canada (CBC 2015).

Figure 8.24: Occurrence of Thoughts of Self Harm at Work by Gender



Source: Survey Data, Q 1.2, 6.10_7. (N=72).

9. ACCESS TO AND USE OF HEALTH SERVICES

Highlights

- Three-quarters of participants indicated having a regular health care provider, with racialized non-white participants significantly less likely to have one.
- Three-quarters indicated having access to health care while at work (on site or in town), *but with a strong likelihood they would not use these services—especially on site, and especially among workers in more precarious circumstances* (lower income, currently unemployed).
- Respondents explained their avoidance as a lack of trust in confidentiality, with concern that known or suspected health issues could lead to repercussions such as a negative reputation, a layoff, or not being called back for the next job.
- Half of the participants (49%) indicated some or no comfort with seeking mental health supports, citing stigma, personal discomfort, fear of professional consequences, and lack of information.
- One-third (35%) had sought some kind of help for mental health issues in the past year; likelihood of doing so was highly correlated with reported amount of work stress.
- Almost all were aware of mental health services available through work, with some skepticism about trusting the privacy or sincerity of these resources.
- Findings regarding under-use of health supports reflect concerns about a culture of work before health.

Access to and use of health services is an important issue for FIFO workers, given the contextual factors of geographic mobility and a masculinist work culture (Parker et al. 2018; Vojnovic et al. 2014; Donatelli et al. 2017). The survey included a section on oil sands workers' attitudes toward, access to, and use of health services. This set of questions raised a crucial finding, which we also discuss: *an occupational culture that socializes and pressures workers to put productivity over their health, and to avoid reporting or using services at work*. Stigma and masculine norms around mental health

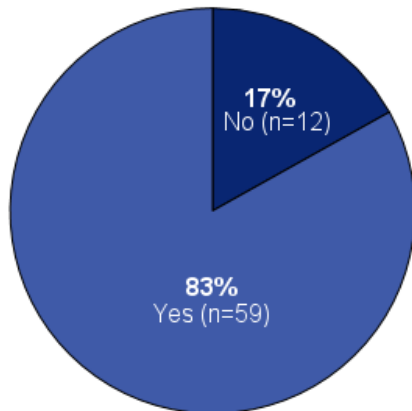
intensify this problem (Parker et al. 2018: 28; Bowers et al. 2018), as does fear of retribution (Sellenger Centre 2013). Crucially, disengagement has been linked to suicidal risk and intent among FIFO workers (Parker et al. 2018: 123).

Access to health care is a key concern for mental health. Canadians who are without a regular health care provider are significantly more likely to report unmet or partially met mental health needs than those with a provider (Statistics Canada 2019).

HEALTH CARE USE AND PROVISION

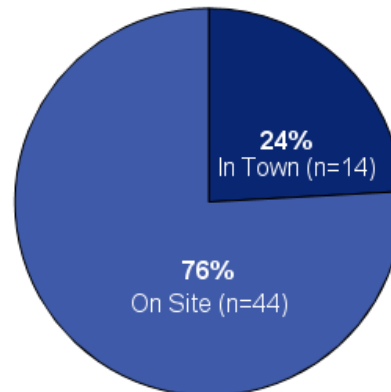
The survey asked about use of healthcare services *when at work/in camp*. The majority of respondents indicated having such an option. Of these, most (76%) had access on the worksite, where services ranged from first aid to a health center with nurses and health practitioners; some mentioned an EMT or a helpline. The other quarter were in situations where they could use health services in town, most often the emergency room or drop-in clinic. Some workers, when in a camp close enough to town, used services both on site and in town.

Figure 9.1: Access to Immediate Health Care Services While at Work or Camp



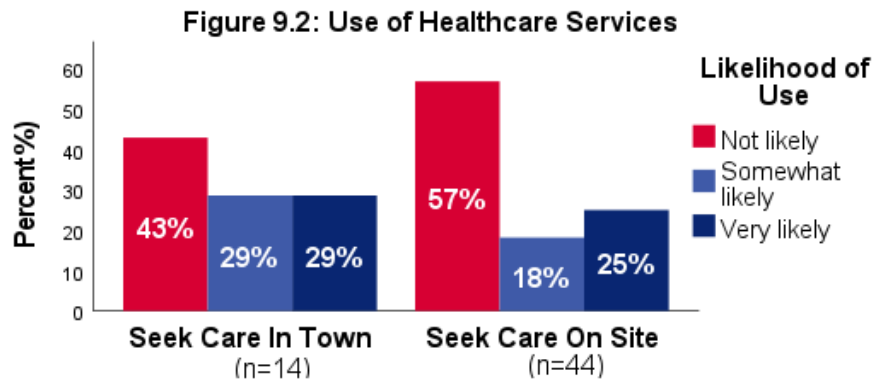
Source: Survey Data, Q 7.2. (N=72, missing =1).

Figure 9.1a: Location of Immediate Health Care Services



Source: Survey Data, Q 7.2. (N= 58). Note: Only includes respondents with access to healthcare when at work or camp, per Q.7.1.

However, more than half of survey participants indicated they would *not* be likely to use any of these services. *It was especially those with on-site options that indicated such reluctance, with 57% indicating they would not be likely to use health services available to them when at work.* Reasons for this avoidance varied. Some workers indicated they would only use any medical service if they absolutely had to, or that for anything short of an emergency they would wait until back home to deal with it. A number also mentioned that health services on site were geared toward emergencies and not ongoing health issues or prevention.



Source: Survey Data, Q 7.2B. (N=58).

Notably, the most prevalent and often the most vehement reason for not using services was to *avoid the gaze of the employer*. Some mentioned that they would go into town rather than on site—even if a health center was available on site, and even if they had to pay out-of-pocket in town—for the sake of privacy. As one worker put it, “No one will know you have gone.” At the same time, a few workers had had negative experiences with medical treatment in town and said they wouldn’t go again.

A number of participants discussed concern that lack of confidentiality at on-site health services could lead to repercussions, including negative reputational implications, the “headache” (for themselves or others) of cases where a health issue would become a formal “incident” (workplace injury), or worse yet, being laid off or not called back for the next job. This concern was probably deepened in our survey by the high representation of contract workers.

“I try not to use the medic on site. If you do use the medic on site, it becomes an incident. Even if it was a cold, there’s a lot of paperwork. The employer doesn’t enjoy that. It’s known that if you go to the medic and it wasn’t serious your chances of being laid off go up.”

“They can use it to run you off of site. I’ve seen other people go to the doctor for a problem and not be allowed back on site.”

Particular groups of people were more likely to indicate they *would* use health care services at work (if available):

- workers on long-off rotations
- racialized workers.

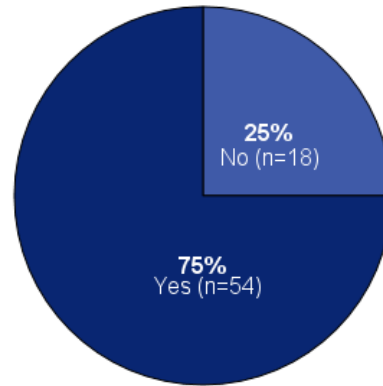
And some other groups were likely *not* to:

- workers in lower income categories
- workers currently unemployed.

Given mistrust of the consequences of health care reporting, it stands to reason that workers in more precarious positions would be reluctant to use health services at work. Perhaps racialized non-white workers were likely to use such services given the prevalence of long-term health conditions and lack of a regular health care provider.

Three-quarters (75%) of respondents indicated that they had a *regular health provider*. This is lower than the 86% reported in the general population (Statistics Canada 2020a).

Figure 9.3: Access to a Regular Health Care Provider



Source: Survey Data, Q 7.1. (N=72)

When asked why they did not have a regular provider, respondents pointed to issues of location and mobility, as well as direct avoidance:

“There’s no health service back home.”

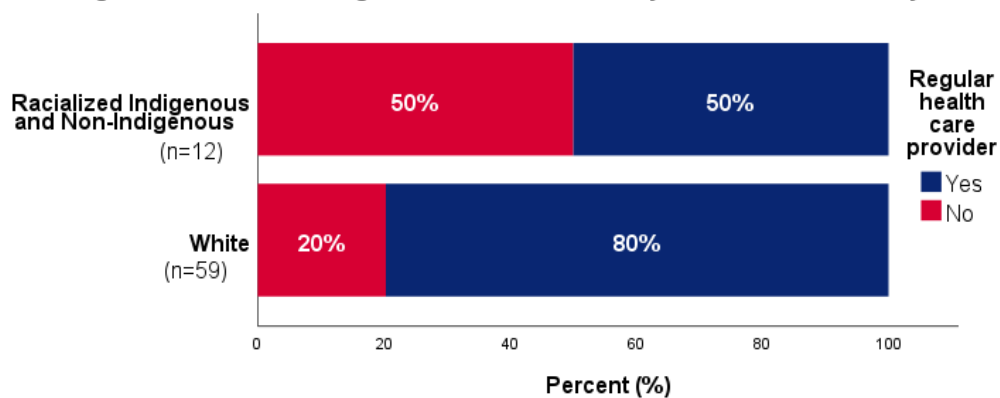
“I’m never in one place long enough.”

“I don’t trust what they give for medication.”

“I only go if something is broken.”

One group that was significantly likely to report *not* having a regular health care provider was racialized workers. These are concerning findings, given that these workers are also more likely to report long-term health issues (see Section 4).

Figure 9.4: Access to a Regular Healthcare Provider by Ethnic or Racial Identity



Source: Survey Data, Q 1.3, 7.1. (N=72, missing=1)

The survey also asked if participants felt that at any time in the past year they had not received health care when needed. Twenty-two percent said “yes,” pointing to infections, injuries, a dental problem, a cardiovascular issue, digestive issues, vaginal health, a chronic cough, and in several cases, mental health issues. When asked *why* they did not receive care, these participants indicated:

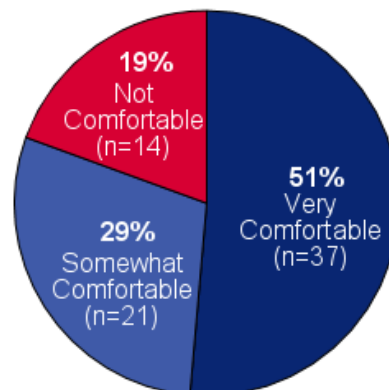
- not having time (including the extra time to go into town)
- inconvenience (for self and/or employer), with possible repercussions
- previous experiences with poor care
- not having the funds or coverage
- requesting but not getting help.

Taken together, these results are cause for concern for the health of contract workers but also for all workers, given that the health of contract FIFO workers has a direct impact on the oil sands workforce as a whole. It is also concerning when we consider that accessing both physical and mental health services can be lifesaving. One participant described a health issue that was caught “just in time” by a site doctor.

USE OF MENTAL HEALTH SERVICES

The survey inquired about people’s general comfort with seeking help for mental health, and also about actual supports accessed in the last year. Mental health continues to be under-discussed in the workplace (Employment and Social Development Canada 2016), which in turn undermines awareness and use of mental health resources, especially in male-dominated work environments (Parker et al. 2018; Roche et al. 2016). What’s more, perceived unmet needs and barriers to care are key to understanding help-seeking (Meadows et al. 2002).

Figure 9.5: In general, how comfortable would you be seeking formal support for mental health?



Source: Survey Data, Q 7.4. (N=72).

While most people indicated they would be comfortable seeking supports for mental health, comments on why people would be hesitant to do so were informative, echoing concern throughout the survey that it was not safe to reveal mental health struggles or conditions. The most common reason cited for discomfort were:

- stigma (n=9)
- personal discomfort and awkwardness (n=8)
- fear of professional consequences (n=7)
- uncertainty about how to do so, lack of information (6)
- can deal with it independently (n=6).

Stigma is a known barrier to mental health support and responsiveness in the workplace (Szeto and Dobson 2010), including in FIFO resource industries (Kalaf 2014; CCOHS n.d.).⁶

A number of participants said that “this is the oil sands – you don’t talk about that,” with some linking this silence to a male- and white-dominated workplace.

“I got a problem, I’m gonna deal with it, but certainly not at work here. If you got problems at work, you might not work. So you don’t want to be the problem, especially in a minority and the brown guy, the black guy or the woman. You know, you’ve got some sort of disability or an indigenous person that, you know, you don’t want to be the problem at work.”

“It’s hush-hush to talk about mental health, it’s not seen as tough. The type of people that go up there, there’s a masculinity thing. No one really talks about it - and so it’s taboo. Being away from family, being in a rough environment, the people around you affect you.”

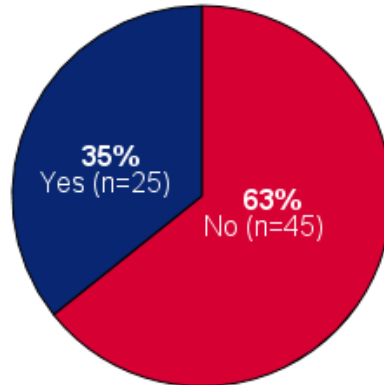
“I never did [before] because I’m stubborn, but now I’m reaching out. There’s lots of stress up there but lots of workers don’t want to acknowledge or admit it. The mentality is of a man who toughs through it. The boomers who are tough and the younger generation trying to impress; guys in middle trying to just get through it.”

The survey then asked more specifically about help or services participants had sought for challenges with emotional or mental health over the last year. In total, some 25 individuals, or 35% of the sample, had accessed information, medication, and/or counselling for mental health during the past year (some had accessed other resources, such as yoga or massage). This is slightly lower than found by Parker et al. (2018) in Australia, where just over half indicated accessing mental health supports, and seems to

⁶ We did not find significant gender differences in reported comfort seeking mental health support. This might suggest that there is a generalized cultural milieu that overrides the gender differences often found in research (Statistics Canada 2020).

be twice the proportion of people reporting so in the general population (Szeto and Dobson 2013; Statistics Canada 2020b). This can be interpreted both positively (a higher percentage is in fact receiving support) and negatively (a higher percentage is in need of support).

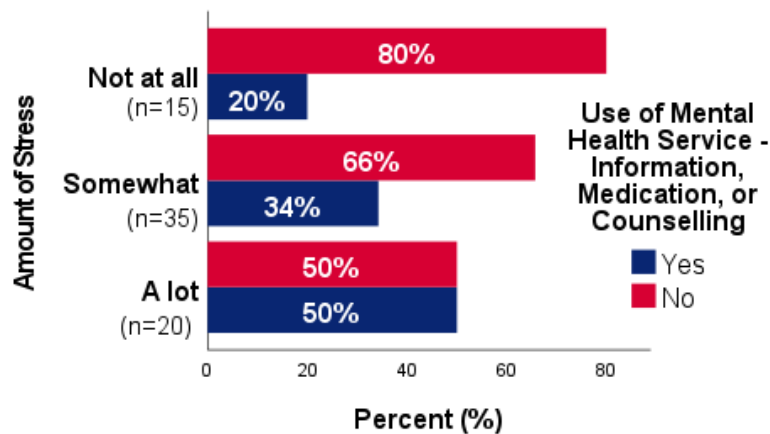
Figure 9.6: Help Sought in the Last Year (Mental Health Counselling, Medication, and/or Information)



Source: Survey Data, Q 7.5 (N=72, missing=2). "Other" (n=2) not included, but refers to seeking support outside of Information, Service, and Counselling, such as physical massage.

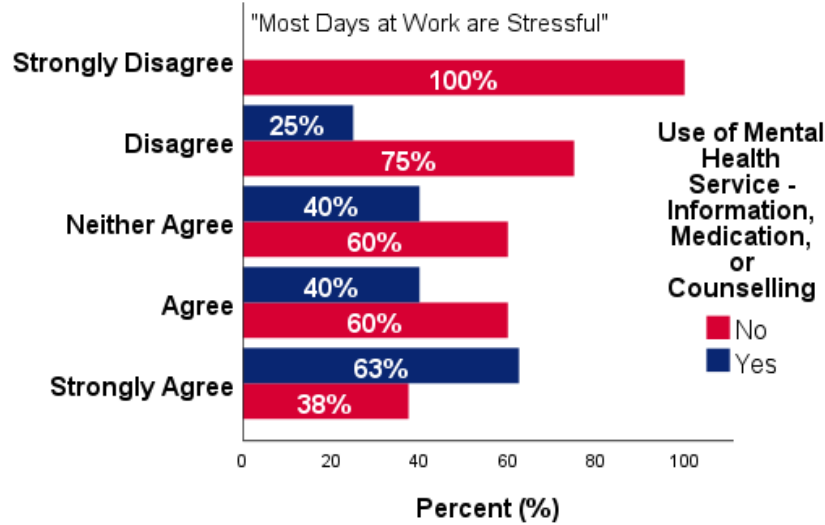
Echoing the research literature, higher intensities of work stress were correlated with seeking/needing mental health supports (Szeto and Dobson 2013).

Figure 9.7: Use of Mental Health Supports by Amount of Work Stress



Source: Survey Data, Q.7.4, 6.13_1. (N=72, missing=2).

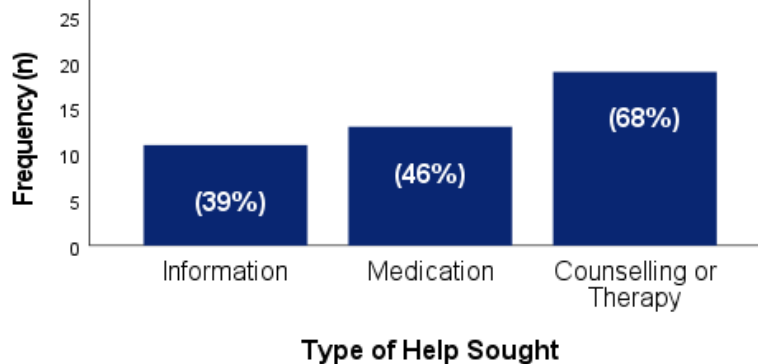
Figure 9.8: Use of Mental Health Supports by Daily Stress at Work



Source: Survey Data, Q.5.7_7, 7.4. (N=72, missing=2).

Most of the participants that reported help-seeking (n=22) had sought *medication and/or counselling*; 68% of those who sought help used counselling or therapy, 46% reported using medication, and 39% sought information (with overlap across categories of use). In Canada as a whole, counselling is found to be the mental health care need most likely to be reported, and the least likely to be met (Sunderland and Findlay 2012). And as is found in the general population, females were more likely to seek help than males: 27% of female participants sought medication compared to 14% of males, and 36% of female sought counselling or therapy compared to 22% of males; cf Statistics Canada 2020b).

Figure 9.9: Type of Help Sought Among Those Reporting Help-Seeking



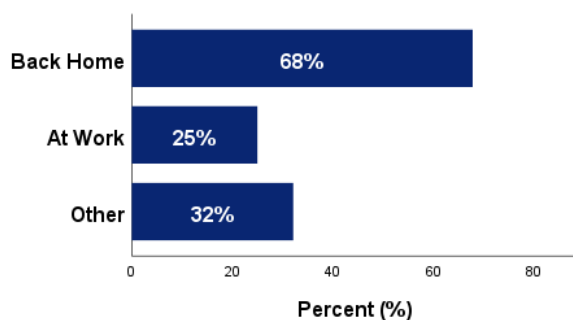
Source: Survey Data, Q. 7.5A. (N=28). Note: only includes respondents who reported using any form of help. Additionally, because respondents could select multiple responses, totals will not add up to 100%.

The kinds of *issues for which people seek mental health help* is important, and so we asked participants if they were comfortable briefly describing the issues for which they sought help. Twenty-six out of 28 shared this information with us. The most common mental health struggles were (with some multiple answers):

- family/relationship issues (n=7)
- anxiety (n=6)
- depression (n=6)
- trauma (n=5)
- general mental health (n=5)
- stress (n=3)

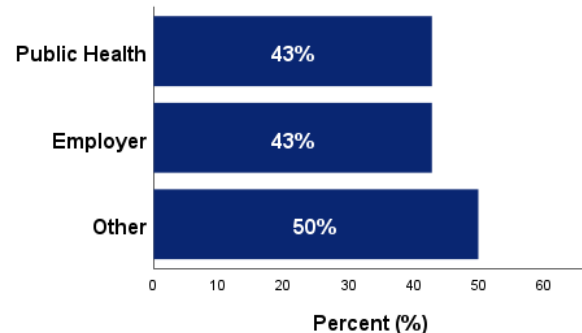
Most participants who accessed services did so back home, as opposed to at work, although participants named a number of “other” forms of access such as online, by phone, or through other institutions. Their mental health services were covered by a mix of employer-provided benefits and public health, but with half indicating that coverage came, at least in part, from elsewhere; unions and out-of-pocket were the most common “other” sources.

Figure 9.10: Where Were Mental Health Services Received?



Source: Survey Data, Q 7.5A. (N=28). Note: Only includes respondents who reported seeking help/support in any capacity. Additionally, because respondents could select more than one answer, totals will not equal 100%.

Figure 9.11: Who Provided the Services?



Source: Survey Data, Q 7.5B. (N=28). Note: Because participants could select multiple responses, totals will not add up to 100%.

Finally, all survey participants were asked if they knew about *services currently available through their work* in support mental health and wellbeing, and if so, what these were. Over 90% were aware of such services (and all 28 respondents who had accessed help in the last year were among this 92%), better than reported in some other FIFO studies (Sellenger Centre 2013). MWMH participants referred to:

- EFAP (Employee Family Assistance Program)
- Union
- Mental Health Helpline (1-800 number)

Others mentioned nurse practitioners at site, family doctors, and private psychologists. Participants mentioned challenges in accessing services (e.g., they were only available in the home office, not locally on site) and in getting reluctant workers to take advantage of them. Responses to this question showed a range of perspectives, from enthusiasm

about services available to skepticism about the quality and sincerity of employer offerings.

“There's a pamphlet somewhere. . . my employer provides information at the beginning of every job, so it's there and it's known. But whether people take that up is up to them.”

A CULTURE OF WORK BEFORE HEALTH

The oil sands is well known for a “safety culture” that emphasizes safety training, injury prevention, protective equipment, and safe work habits. Responses to the survey indicate that workers feel this safety culture exists alongside a *work culture that puts productivity, industry timelines, and work dedication ahead of health and wellbeing, including mental health and psychological safety* (cf Angel 2014b), with variation across employers and the quality of relationship between contractor and operator. There are several key facets of this culture, as described by participants across our study:

- industry productivity and individual income above all else
- mistrust of employer support (fear of being let go)
- lack of attention to mental health issues.

The above issues, in turn, contribute to

- a reluctance to report health issues or seek help.

Recognizing and addressing this reality is important if oil sands work is to meet workplace health regulations, taking into account Alberta's *Occupational Health and Safety Act*, which is responsible for the prevention of workplace injuries and ill health including psychological safety, and the *Workers' Compensation Act*, which regulates how workers who received injuries on the job must be compensated. Changes to these regulations in recent years might directly or indirectly reinforce the above-mentioned attitudes and dispositions of the work culture (see also Section 10).

Workers pointed to multiple ways in which this culture manifests itself:

- direct messages from supervisors and workmates
- informal narratives about expectations of workers
- lack of attention and responsiveness to health and wellbeing
- pressures to comply in order to be retained, re-hired, considered for better perks (e.g. overtime), and/or promoted – i.e. to “prove” oneself

Quotes from participants illustrate this range of issues:

“Lots of times you're feeling under the weather. This work is demanding on the body. Technically you could be considered ill but you're going to go to work. You lose income if you rest, it's frowned upon by the employer, and there's stress on the crew if they're down a guy.”

“Taking time off work when you’re sick is the fast track to being laid off.”

“You work through being sick. If you don’t show, your foreman will call you and bully you into showing up.”

“They advise you not to come in if sick but they don’t like it because they are looking for man hours. You’ll get laid off first if you do report.”

“Just go to work. You’re in camp, as long as you can pick your head up I don’t see the excuse. You’re away from your family, get paid. I tell the guys the same thing, make all the money you can.” (a supervisor)

“In management, you have to be sick enough to be taken out by ambulance to report in.”

Some aspects of this culture can be traced to characteristics of the resource extraction industry such as rapidly changing market conditions, tight timelines, and male-dominated work (Collinson 1998; Mayes 2014; Saxinger 2021; Straughan, Bissell and Gorman-Murray 2020). The construction industry has also been shown to perpetuate a culture of working to tight deadlines, long hours, and “proving” oneself, which are in turn linked with occupational stress and ill health (Bowen et al. 2014). Finally, and importantly for the purposes of this study, this culture appears to be perpetuated and reinforced by FIFO conditions:

- being a “captive” workforce while at work, on rotation
- being in full “work mode” when away from home and family
- spreading of sickness from travel and close quarters.

One participant summarized: “When you go to camp, you are there to make money. So it defeats the purpose if you don’t work; everybody gets sick up there because of the nature of the work, and it’s not optional.” In this same vein, a number of participants, including and especially supervisors, spoke to the pressures to meet deadlines and budgets that trickled down to them as contractors from the direct operator companies.

It is perhaps not surprising, then, that nearly 80% of participants reported working when sick and one-third reported not taking time off work for an injury (see Section 4). Many tied working while sick to this same organizational culture: not reporting and “manning up”; expectations (on the part of both employers and workers) that one has to be quite sick to not work; mistrust in employer support for people with health issues or injuries; and working through sickness because working and making money is the only reason you’re far from home for one or more weeks.

While this culture may be especially tied to the precarity and contingency of contract work, other research suggests that it may be more widespread (Angel 2014b; Barnetson and Matsunaga-Turnbull 2018; Parker et al. 2018).

10. RECOMMENDATIONS AND NEXT STEPS

Highlights

- Participants identified the following as *key factors of FIFO work contributing to poor mental health and wellbeing*: feelings of loneliness, isolation and being trapped; separation from family and relationships at home; camp conditions and atmosphere; job uncertainty/finances; masculine culture; substance abuse/addiction; and general morale. These echo the findings of the report overall.
- *Workers were most in favour of the following*: family counselling and referral, activities promoting workplace mental health, massage, stress management information, and nutritional audits.
- Based on study findings, *recommended changes to FIFO conditions* include better food, privacy, cleaning, and staffing, and more relaxed rules, in *work camps*; more flexible and balanced *rotation schedules*; and more time between *travel* and start/finish of work rotations.
- Regarding *work conditions and culture*, recommendations include managing work schedules and operator-contractor relations to reduce stress and establishing third-party reporting mechanisms.
- Recommended *mental health supports* include alternative modes of delivery; third-party mental health and counselling supports; enhanced mental health training across all levels and activities in the workplace; concerted efforts to change organizational culture around mental health.
- *Government should provide* funding and training materials for the above activities, prioritize a worker-driven approach, and review legislation that overlooks or disadvantages FIFO workers. *Unions and non-profit organizations* should prioritize mental health training and supports for workers and contribute to policy development.
- *Further research* is needed in a number of areas, including comparative and longitudinal studies of mental health impacts among FIFO workers and their families; research on policy implications and best practices; and issues such as cumulative effects and organizational culture; and implications for specific populations such as women, supervisors, and more precariously employed FIFO workers.

The findings of the MWMH project lead to a number of recommendations for practices, policies, and further research that could prevent or mitigate the negative mental health issues associated with FIFO work. Our recommendations stem from the results of the study, including survey questions that directly invited participants to share what they saw as key mental health issues for the FIFO workforce, to rate a series of suggested changes, and to offer recommendations of their own. In addition, we refer to outcomes and recommendations found in other related research, discuss related legislative issues, and integrate feedback provided by small groups of stakeholders (from industry, government, labour, and community) on a draft of the report. The recommendations consider the multiple, interrelated levels of social determinants of mental health, aiming for systemic forms of change.

There is, in short, a crucial and pressing need to provide regular and multiple opportunities to both discuss and address mental health, to identify and change the characteristics of oil sands FIFO work that contribute to negative mental health and wellbeing, and to proactively establish preventative measures.

KEY MENTAL HEALTH ISSUES IDENTIFIED BY WORKERS

Workers were asked in an open response format what they saw as the key issues affecting mental health for oil sands FIFO workers. Their responses, coded thematically and listed below in order of frequency of mention, echo the findings of the study overall:

- loneliness/isolation/feeling trapped
- separation from family and relationships at home
- camp conditions
- job uncertainty/finances
- masculine culture
- substance abuse/addiction
- general morale

Detailed comments from participants also reinforced the importance of considering the *interactive and compounded effects of the conditions of FIFO work on mental health*. Loneliness and isolation, for example, are inseparable from first, distance from family and home, and second, what was often described as the “prison-like” physical and social atmosphere of camp. To take another example, we have seen that the masculinist culture of work, combined with camp conditions, can compound isolation for women and contribute to a culture of “no complaint.” As one participant put it:

“Literally everything - the travel, the stress at work, camp, being away from your family is probably the biggest one. Old timers, been doing this for 40 years, they miss everything. I’ve seen guys who are completely broken. The work has broken them, became addicted to drugs, alcohol. They are trying to do what’s best for their family, but the wife left them, the kids don’t talk to them. We’re not all bad guys. We’re trying to do our best, it’s all hard. We don’t always want to

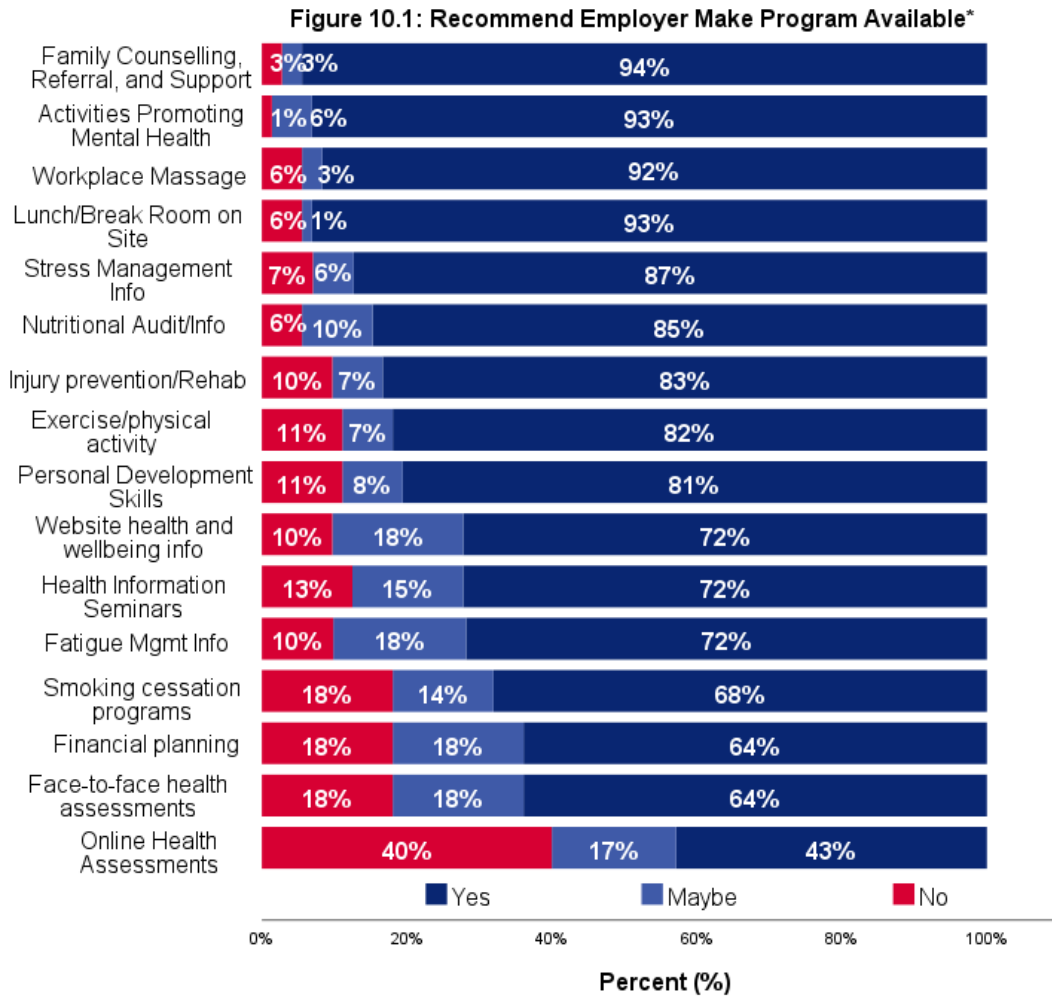
leave [home], but if there is no work anywhere else, *you don't do what you want, you do what you have to.*"

This open-ended question also brought forward a stressor that had been muted (and probably under-reported) in earlier parts of the survey: *the prevalence of substance abuse and addiction.* As one participant put it,

"Money, addiction, and relationships. It's the amount of hours and amount of money made. If you don't have goals then it leads to addiction and gambling."

RECOMMENDED EMPLOYER PROVISIONS – WORKERS' PERSPECTIVES

As seen in the following figure, the last set of questions in the survey posed a series of services and asked respondents if they would recommend that these be made available by employers – no, maybe, or yes.



Source: Survey Data, Q 8.2_1-8.2_16. (N=72, except "Fatigue Management Info" (n=71), "Online Health Assessments" (n=70), and "Stress Management" (n=71). *Legally required, but not accessible.

NOTE: since a lunch/break room is mandated, most respondents indicated they already had access to one; however, in a few situations, workers indicated they were not in fact being provided a lunch/break room or it was difficult to access when out at site.

Workers were also asked to offer suggestions for changes in employment practices and conditions that might improve mental health and wellbeing. These are integrated into the next section.

RECOMMENDATIONS – POLICY AND PRACTICE

Our recommendations are derived directly from the findings of the study while also shaped by important input from several other sources: our participants' recommendations, our respective experiences working with FIFO oil sands workers over a number of years, insights from the research literature, and input from industry, government, labour, and community participants at two workshops held in August 2021.

We organize recommendations by policies and practices needed “inside” and “outside” the workplace to speak to *employers and employees* as well as *government, unions, industry groups, and community organizations*. In doing so, we want to note three important overarching issues:

- FIFO and other forms of employment-related geographical mobility require expansion of the concept of “the workplace” in human resources policies, employment law, and occupational health and safety (Neis and Lippel 2019; Gesualdi-Fecteau et al. 2019). The stresses emanating from work camp life (not considered part of the workplace yet managed by employers through contracts), travel (which may or may not be covered by compensation or treated as work time), and family relationships across distance and time (which EFAP may not be equipped for) are three important examples.
- Many of the urgent issues around mental health for FIFO workers in the oil sands require *multi-stakeholder engagement over the long term*. While some of the issues below can be readily solved through a short-term change in policy or practice (e.g., by camp operators or employers), many of them require concerted, collaborative, ongoing commitment—as called for by the Mental Health Commission of Canada (2021), the Centre for Addiction and Mental Health (2020), and others.
- In the context of Alberta, recent changes to the Occupational Health and Safety Act (OHS) Act and the Workers' Compensation Act via Bill-47 have re-shaped worker-employer relations, making it harder for workers to refuse unsafe work (Hiebert and Green 2021); receive compensation if harmed at work, including by psychological injuries; be reinstated at work after an injury (Foster and Barnetson 2020b; Province of Alberta 2020). The expanded attention given to psychological safety via changes to the OHS Act in 2018 may be undermined by Bill-47. This is a concern for employers, employees, government, labour, and community organizations alike.

FOR ACTORS “INSIDE” THE WORKPLACE

This first set of recommendations focuses on changes to working conditions which, if enacted by employers, could directly reduce stress, prevent mental health problems, promote wellbeing, and increase psychosocial health and safety.

WORK CAMPS

- Provide *healthier and higher-quality food*, and on a more consistent basis (rather than quality going up and down with the price of oil). Conduct nutrition audits that take into account diverse dietary needs.
- Enhance *privacy, comfort, and safety* of accommodations, e.g., through more sound-proof construction, no shared bathrooms, night shift only wings, secured men’s and women’s wings. (Note: Parker et al. 2018 also recommend permanent rooms for operational workers.)
- Ensure and enforce more consistent *hygiene* across all camps, seasons, and economic conditions.
- Make *rules more flexible* for a balance of safety with autonomy and morale, i.e., relax rules around when camp residents can eat and sleep, strict dress codes, and leaving camp, and potentially drinking (there are differing perspectives on the efficacy of “dry” camps) (cf Ryser et al. 2016). (Note: Parker et al. 2018 find that more autonomy can lead to less drinking).
- Increase camp staff and maintain a *consistent staff-resident ratio* across time to help create better conditions both materially and socially (cf Ryser et al. 2016).
 - more social and physical activities—look to best practices, such as in Australian work camps
 - more support services, including counseling, addiction help, and anti-discrimination supports
 - more preventive opportunities like a regulated RMT massage therapist.

ROTATIONS

- Provide/mandate more *flexibility* with rotations to accommodate distance, family situation, etc.
- Prioritize/reward rotational schedules that provide for *more time at home* and/or that are more evenly balanced, such as 7 and 7, 14 and 14.
- For shutdown schedules, mandate a *limit for the number of weeks* in a row that are worked.

TRAVEL

- Develop and follow guidelines for *minimum time lags* between beginning/end of rotation work schedule and long travel (especially driving) journeys.
 - Allow enough time for both travel and time back home through appropriate management of rotations (see above).

- Support this through extra night in camp, etc. as needed.
- Cover *travel costs*, in part or in whole, to help ensure safe choices for travel.

WORK DEMANDS

- *Manage rotations and schedules to reduce stress* and fatigue from prolonged working hours and/or extended contracts. This may include having on-call workers or crews for contingency situations (e.g., when a demanding eight-week shutdown contract turns into ten or twelve or more weeks).
- Build in reasonable times and places (break rooms, bathroom facilities) for *breaks* during the workday.
- Create mechanisms for reviewing and responding to stress-inducing *relations between operators and contractors*, including deadline pressures, the supervisor “squeeze”, and an atmosphere of constant uncertainty. (See “organizational culture” below.)

MENTAL HEALTH SUPPORTS

The Centre for Addiction and Mental Health (2020b) emphasizes the need for *mental health supports tailored to the particular needs of a work context*. We provide here a non-exhaustive list of recommendations for enhancing the wellbeing of FIFO workers in the oil sands and elsewhere in Canada. Survey participants, stakeholder workshop attendees, and extant research (Parker et al. 2018; Ryser et al. 2016; Angel 2014b) all emphasize the need for a *suite of programs*—available on site, in camp, for families, and online—that promote mental health and wellbeing.

- Provide *counselling* that is regularly available on site/in camp, including through drop-in sessions (by appointment only is prohibitive).
- Provide *wellness activities* as part of paid work time to build social cohesion and mutual support in the workplace (Seaton et al. 2019).
 - These must recognize that the oil sands is a male-dominated workplace, and thus provide activities that take into account and raise awareness about the impacts of a masculinist work culture on all genders.
- Offer *stress management workshops* on a regular basis. *Such workshops are also crucial for helping in early identification of individuals at risk*.
 - This should include workshops for supervisors tailored to the particular stresses they face in the oil sands and in managing FIFO workers.
- Adopt and support robust programs like Mates in Construction (used in Australia and now in Newfoundland and Labrador) for *relationship-building and suicide prevention* (cf Neis and Neil 2020). (Note: Parker et al. 2018 find that proactive relationship-building both on and off site is beneficial to mental health).
- Enhance and enforce *zero tolerance policies* for discrimination, harassment, and bullying.

- Create and have clear mechanisms for *punishing violations* of psychological safety (such as laid out in the Alberta OHS Act), including acts of retaliation (cf Barnetson and Matsunaga-Turnbull 2018).
- Create strong anti-stigma back-to-work supports for workers on leave for any kind of injury or illness, including any absence related to psychosocial injury or mental illness (cf Centre for Addiction and Mental Health 2020a,b; Barnetson and Matsunaga-Turnbull 2018; Samra 2017).
- Increase the number of *EFAP sessions* available to workers and their families, for more sustained and trusted access and use (cf Samra 2017).
- Enhance *supports for families* of FIFO workers that take into account absences, extra stresses, etc. (cf Langdon et al. 2016).
- Create and support trusted *arm's-length, third-party health services and resources*, including *Mental Health First Responders* in camp/on site.
- Investigate and *utilize alternative forms of delivery* (e.g., online, and using social media) for HR mental health supports and counselling—including family counselling across distance—to enhance attractiveness, trustworthiness, and effectiveness, especially given frequent mobility and travel (cf Samra 2017; Donatelli et al. 2017).
- Create *worker-led teams* to guide programming and resources that promote mental health and to recommend preventative changes in the workplace.
- Provide safe, third-party mechanisms for *reporting issues affecting psychological safety and mental health* (including discrimination, harassment, bullying, and excessive work demands) (cf Angel 2014b; Barnetson and Matsunaga-Turnbull 2018; Szeto and Dobson 2010).

MENTAL HEALTH TRAINING AND EDUCATION

Changes in practice and policy must address both action and awareness. We offer here a number of recommendations regarding training, education, and communication – all of which are, in concert with action, crucial to shifts in organizational culture. In all cases, what is needed is worker-focused approaches to psychosocial occupational health and safety (Barnetson and Matsunaga-Turnbull 2018).

- Engage in regular, proactive, de-stigmatizing, and clear communication and education about *mental health and psychosocial safety*—building it into orientations, toolbox talks, etc.—including mental health *supports available to workers* (cf Parker et al. 2018).
- Build up and integrate anti-discrimination and anti-bullying training, awareness, and accountability at all levels—from workers to CEOs—especially around racist and sexist forms of *discrimination* (cf Szeto and Dobson 2010).
- Provide *stress management information* through multiple modes (in person and virtually).
- Develop *ongoing developmental training for supervisors* on mental health in the workplace, including a focus on the particular role they play in reducing harm and

promoting wellbeing amidst the specific stressors of oil sands FIFO work (cf Samra 2017).

- Review and adopt best practices in suicide prevention awareness and training (cf Neis and Neil 2020).

ORGANIZATIONAL CULTURE AND PLANNING

Many of the above recommendations are only as effective as changes made to work culture, by which we mean both the everyday environment in the workplace *and* the broader organizational commitment to mental health and wellbeing of the workforce. The latter in fact underpins the former. Changes in organizational culture that allow flexibility and balance in work-home life are essential to improving mental health; “perks” like improved food are not a lasting solution (Samra 2017; Parker et al. 2018).

As the MWMH study so clearly shows, there is a strong perception in the oil sands FIFO workforce that it is not safe to report mental health issues (or health issues generally) and that employers do not necessarily care about mental health. While this may be pronounced among contract workers, it is an equally important consideration for operations FIFO workers. Angel (2014b) also found that FIFO oil sands workers feel like a “cog in the wheel”; Barnetson and Matsunaga-Turnbull (2018) found that workers in Alberta are afraid to exercise their workplace health and safety rights.

- Adopt *workplace-wide and industry-wide tools and standards* for mental health and psychological health and safety.
 - The Centre for Addiction and Mental Health (2020a) provides recommendations for leaders with regard to mental health promotion, starting with 1) *creating a long-term organization-wide mental health strategy* and 2) *instituting mandatory mental health training for leadership*.
 - The Mental Health Commission of Canada (2021) has created a National Standard of Canada for Psychological Health and Safety in the Workplace (<https://www.mentalhealthcommission.ca/English/what-we-do/workplace/national-standard>).
- Build in mechanisms for regular monitoring of mental health that developmentally shape practices, policies, and programs. Regularly review progress. This is recommended by the Centre for Addiction and Mental Health (2020a,b). See also Angel (2014b), who outlines a *Mobile Worker Wellbeing Assessment Tool* (analogous to an environmental assessment tool) that focuses on the unique circumstances of FIFO workers and their work environment).
 - Include review of the safety of camps and work sites for women and racialized non-white people.
- Create a *task force* of operators, contractors, workers, and health and safety associations to examine and address the impact of operator-contractor relations on the wellbeing of supervisors and workers, and to examine how operators and contractors can partner on mental health and psychological health and safety practices for FIFO workers.

- Create worker-lead teams to guide programming and promotion of mental health and to recommend workplace prevention of psychosocial harm.
- Support regular research and review of best practices on mental health and wellbeing in the industry, including what can be learned from other sectors that rely on a non-residential workforce (cf Langdon et al. 2016).

FOR ACTORS “OUTSIDE” THE WORKPLACE

Government, unions, and community organizations can and must contribute in a number of ways to ensuring the wellbeing of FIFO workers. We provide here a starting list of recommendations.

TRAINING AND EDUCATION

- Government should fund *independent psychological OHS education* for workers, including worker Joint Health and Safety Committee representatives (cf Barnetson and Matsunaga-Turnbull 2018).
- Government should fund the *creation of workplace OHS training materials* that balance physical safety with psychological safety and mental health.
- Unions and community organizations should prioritize information and training on mental health that takes into account the *specific impacts of FIFO work*. Unions should also help lead the creation of worker-led teams to recommend changes promoting mental health.
- All should develop internal training on *how to talk to employers* about the mental health impacts of FIFO.

POLICY

- Government must *review OHS, Worker’s Compensation, and employment law* to take into account non-resident and interjurisdictional workers including FIFO workers (cf Neis and Lippel 2019). This should include a broad re-review of the impacts of Bill C-47.
- Mandate *minimum mental health payments and resources* in employee support programs.
- Provincial governments should work with each other and the federal government to identify supports and agreements for providing *interjurisdictional and long-distance health services and counselling*.
- Unions and community organizations should help identify and develop *responses to gaps in policy with regard to FIFO workers*.

PROGRAMS

- Government and unions should provide funding and support for the creation of *worker support and suicide prevention programs* such as Mates in Construction.
- All parties can contribute to mandating the availability of *arm’s length, third-party health services*.

Insights from Valerie O’Leary (Critical Incident Stress Management-Fort McMurray)

As a Crisis and Trauma responder to all companies, most of my work in Fort McMurray revolved around responding to issues out at site, sometimes for one shift or having to stay at camp and on site for numerous days. From my observation, I found these FIFO workers face a higher variety of psychosocial stressors on the job.

This research has captured and confirmed many of my observations while working on site, but it has also highlighted other areas that need to be addressed in order to achieve a healthier workplace. Work and working conditions are essential contributors to physical and mental health wellbeing.

*The Safety Culture in the oil sands industry is apparent and is taken very seriously—as it should be in this hazardous environment—but **there is a huge disconnect when it comes to safety and mental health**. If an employee is mentally struggling, they might not be able to concentrate on their work, which now creates a hazard.*

This work context also shapes individuals' exposure to a wide array of physical, environmental, and psychosocial factors that can influence health. Employees have spoken to me about psychosocial stressors including job strain, job insecurity, and negative spillovers from work to other areas in their life, causing hardship or leading to risky behaviours such as drinking, drugs and/or cheating on a spouse.

*One of my biggest concerns when responding to the oil sands after a critical incident are the **supervisors**, or people placed in charge to oversee everyone affected. Many times, they were directly involved but were also put in the position of being caregiver of a crew of 10 - 100 people. These supervisors did not have time to grieve or process what had happened as they were too busy helping others. While some would say “this isn’t my first rodeo,” others admitted how difficult it was to put their own emotions aside to help others.*

*Over the years, as I watched and listened to oil sands workers, I found myself reflecting on my own experience of **camp**. Each camp is different; some were good and some not so good. One minor flaw I perceived that could easily be changed is the lighting in the camp rooms, as most rooms were dark and dreary. Even with all the lights on and blinds open, I personally found it very depressing to go back to my room after a 12-hour shift. I must admit, I enjoyed the food most of the time but enjoyed it too much. Unfortunately, the choices were not the healthiest and I never saw options for people with dietary restrictions.*

*The last thing I would say that could potentially help new workers in the industry is to **partner them up** with an employee who has been there for 5+ years. New workers are lost, do not know what to expect, and can find rotational work harder than they imagined. Having a peer to help them navigate this new lifestyle, the financial do's and don'ts, and having a trusted peer to talk to when things are difficult could make a world of difference and save them (and the company) from hardship down the road.*

RECOMMENDATIONS – FURTHER RESEARCH

There is much work to be done on mental health in the workplace in Canada. Samra (2017: 42) argues that not enough progress has been made on measurements, data sets, and assessment tools regarding the impacts of mental health, the “business case” for mental health, and mental health and work-life relations.

The mental health of FIFO workers—along with the health of their family members and work cultures—is one important piece of this puzzle.

The findings of the MWMH study are not drawn from a random sample of workers. With a mobile population working in a remote setting, a larger representative study would require co-operation from and across industry, contractors, sector-specific organizations (such as PetroLMI and BuildForce Canada), and labour and community organizations. Indeed, our overarching recommendation is that there be *collaborative efforts to gather more systematic research data on the mental health and wellbeing of workers*.

Below we list 1) key issues and 2) key subpopulations for further research on the mental health and wellbeing of Canada’s FIFO workforces.

KEY ISSUES FOR FURTHER RESEARCH

- Comparative studies of mental health among FIFO and non-FIFO workers (cf Parker et al. 2018)
- Comparative studies of mental health among FIFO workers in different geographical and national contexts
- Comparative studies of mental health policies across companies working in the oil sands
- Cumulative effects of FIFO work on mental health that take into account subfactors such as attrition, continuous versus on-off work, geographical distance, etc.
- Conditions of FIFO work that lead to clinical depression and suicide (cf Miller et al. 2020)
- Masculinity and gender dynamics of the work culture and “safety culture,” and implications for harassment and discrimination (cf Angel 2014b)
- Impacts of different rotational schedules on wellbeing
- Impacts of different phases of the rotational cycle (cf Korneeva and Simonova 2020)
- Interactive effects of job in/security and FIFO
- Comparative studies of operations and contract FIFO workforces, and of non-oil FIFO workers (such as camp staff)
- Relationships between operations and contract workers in relation to FIFO
- Aspects of organizational culture affecting FIFO worker mental health; FIFO as focus of approaches to mental health in organizational culture

- Building cultures of trust around mental health in highly mobile and uncertain work contexts such as the oil sands
- Role of employers, supervisors, unions, and home communities in supporting mental health of FIFO workers
- FIFO worker perspectives on, and worker-driven responses to, mental health
- Tracking when and how mental health of FIFO workers and their families fall between jurisdictional cracks (cf Neis and Lippel 2019)
- Effects of FIFO on family members, and interactive effects with mental health of workers
- In/effectiveness of various alternative delivery modes for mental health resources and supports for FIFO populations

KEY SUBPOPULATIONS

Our findings point to at least several subpopulations of interest. We note that while some of these groups tend to be named as important target populations for bolstering an aging workforce (e.g., in the construction sector), successful recruitment and retention of workers depends on robust attention to mental health costs and needs.

- Women in the Trades – preliminary findings from the MWMH study include discrimination and harassment, income disparities, single status, lone parenthood, and a number of health and wellbeing issues, most notably sleep disruption in camp, higher use of painkillers, and more stress at home.
- Racialized Non-White Workers – preliminary findings from MWMH indicate concentrations of long-term health conditions, on-and-off work, discrimination, and lack of access to health care.
- People Working Continuously in FIFO Jobs and/or Working Long-off Rotations – preliminary findings from MWMH suggest cumulative/compounded effects of FIFO work and camp living.
- People Working More Precarious FIFO Jobs (contractors, on-and-off, and often on shorter-off rotations) – preliminary findings from MWMH suggest intensified financial stress, as well as fatigue and stress from transitioning between work and home and dealing with constant change in work situation.
- Supervisors – preliminary findings from MWMH include compounded stress and work-life imbalance.

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APPENDIX I: GLOSSARY

Bill C-47 – “Ensuring Safety and Cutting Red Tape Act” of 2020 that amended Alberta’s Occupational Health and Safety Act, Radiation Protection Act, and Workers’ Compensation Act

Closed-ended questions – survey research questions that pre-set the range of possible responses (e.g. A, B, C, or D; or a scale from “strongly agree” to “strongly disagree”) without the possibility of adding comments (see *open-ended questions* below)

Contract workers – workers hired on contract (directly or, more often, through a contracting company) to perform specific tasks in the industry for a short period of time; many contract workers do such work on a regular basis

Critical Incident – a sudden and unexpected event that may have a powerful traumatic effect, often with physical and emotional loss (harm, injury, or death) that overwhelms people’s coping capacity

Demographics – statistical data referring to a population or its subgroups

Fly-in Fly-out (FIFO) – work arrangements in which workers commute long distances from their place of residence on rotational schedules (usually involving one week or more at a time away from home); for the purposes of our study, this includes Drive-in Drive-out (DIDO)

Long-off Rotation – rotation schedule that entails 6-14 days off (and 7-18 days on); one of two categories into which we re-coded our survey participants’ rotation schedules (see *short-off rotations* below)

Occupational Health and Safety (OHS) – refers to health, safety, and wellness in the workplace, including the regulations, laws, practices, and activities aimed at making the workplace better for workers and at preventing injury, illness, and fatality

Open-ended questions – survey research questions that invite participants to express their response in their own words rather than selecting one of a range of pre-set responses (see *closed-ended questions* above)

Operations workforce – workers who are directly hired on a more permanent basis by oil sands operators (i.e., companies that directly own and operate resource extraction companies)

Shift Work – work performed by different groups of workers on a set schedule, and often over a 24-hour period; usually includes day, evening, and night shifts

Short-off Rotation – rotation schedule that entails 1-3 days off (and 6-18 days on); one of two categories into which we re-coded our survey participants’ rotation schedules (see *long-off rotations* above)

Shutdown/Turnaround – periods of two months or more in which industrial facilities are shut down in order to perform full maintenance and testing

Social Determinants of Mental Health – an approach to conceptualizing and researching mental health that emphasizes the contextual layers—individual, workplace, employment and social policy, family and social life, place and region—that shape mental health and wellbeing

Trades – skilled work learned through a structured program of on-the-job and, often, college training in a specialized trade in construction or manufacturing

Work Camp – a structure with facilities for temporarily housing and feeding workers while they are working at nearby project sites; in the oil sands, work camps can range from housing a few dozen people to housing thousands of people

Work-Life Balance – how people manage time and demands of both paid work and life outside of work (family, leisure, etc.), or act to minimize conflict between them

APPENDIX II: QUESTIONNAIRE

SECTION 1 - BACKGROUND QUESTIONS (DEMOGRAPHICS)

I would like to start by asking you a few background questions. As a reminder, our study will never make available information about individual participants. *You can also reply “don’t know” or “prefer not to answer” to any question throughout the survey.*

1. Please tell me your age.
2. What is your gender?
3. How would you describe your ethnic or racial identity?
4. What is your current marital status?
 - a. single
 - b. married or common law (and not separated)
 - c. separated/divorced
 - d. widowed
 - e. don’t know (DK)
 - f. prefer not to answer (PNA)

4A. **If single**, would you say you are in a long-term relationship?
5. Do you have children or other dependents?

5A. **If yes**, what are their ages?
6. Is your individual annual income:
 - a. less than \$65,000 per year
 - b. between \$65,000 and \$100,000 per year
 - c. between \$100,000 and \$200,000 per year
 - d. over \$200,000 per year
 - e. DK
 - f. PNA
7. What is the highest level of formal education that you have? (*more than one may apply*)
 - a. Less than high school diploma
 - b. High school diploma
 - c. Some trades training
 - d. Trade certificate
 - e. Some college/postsecondary
 - f. College certificate/diploma
 - g. University degree or higher

- h. other: _____
- i. DK
- j. PNA

8. Were you born in Canada?

8A: **If no,**

- i. How many years have you been in Canada?
- ii. Anything else you would like to add about your status in Canada?

9. What language do you most commonly use at home in your everyday life?

- a. English
- b. French
- c. Other: _____
- d. DK
- e. PNA

10. Do you identify with any Indigenous group or groups?

10A: **If yes,** with which group or groups do you identify? [*indicate all that apply*]

- a. First Nation
- b. Metis
- c. Inuit
- d. DK
- e. PNA

11. When you finish a work rotation (during your time off), to what place do you usually return? Do you normally return to:

- a. Fort McMurray / Regional Municipality of Wood Buffalo?
- b. Another place in Alberta?
- c. Elsewhere in Canada?

i. which province?

- d. Outside of Canada?

i. which country?

- e. Other: _____
- f. PNA

11c.i. **If elsewhere in Canada,** which province or territory?

11d.i. **If outside of Canada,** which country?

12. Is this also your place of permanent residence (i.e. your home address)?

12A. **If no**, is your place of permanent residence (i.e. your home address) in:

- a. Fort McMurray / RMWB
- b. Elsewhere in Alberta
- c. Elsewhere in Canada
- d. Outside of Canada
- e. PNA

12.c.i. **if elsewhere in Canada**, which province or territory?

12.d.i. **if outside of Canada**, which country?

13. The next set of questions focuses on your health and wellbeing. For each statement, I will ask you to finish the sentence with Excellent, Very Good, Good, Fair, or Poor. It is also fine if you indicate that you don't know, or prefer not to answer.

	1= Excellent	2= Very Good	3= Good	4= Fair	5= Poor	Don't know (DK)	Prefer not to Answer (PNA)
a. In general, my health is...							
b. In general, my mental health is...							
c. I rate my ability to handle unexpected and difficult problems (i.e. a family or personal crisis) as...							
d. I rate my ability to handle the day-to-day demands in my life (i.e. work, family and volunteer responsibilities) as...							

SECTION 2 - ABOUT YOUR WORK

0. Are you currently employed?

0A – **If yes**, is your current employment in the oil sands?

1. How would you describe your current (or most recent) employment relationship?

Are/were you:

- a. A direct employee of an oil sands site operator
- b. Working for a contractor
- c. A contractor yourself
- d. other: _____
- e. DK
- f. PNA

2. What is your current (or most recent) job title?

3. Which of the following categories best describe(s) your occupation?

(you may choose as many as apply)

- a. operator
- b. supervisor/foreman/superintendent
- c. manager
- d. professional (e.g. engineer/technician)
- e. construction
- f. health/safety/environmental officer
- g. maintenance
- h. general labourer
- i. administrator/staff
- j. other: _____
- k. DK
- l. PNA

4. Approximately how many years of experience do you have doing this kind of work?

5. Do you have any other paid work in addition to your job in the oil sands?

5A: **If yes**, what other kind of work do you do?

6. Are you currently a member of a labour union?

7. About how long have you worked for your current (or most recent) employer?

8. About how long have you worked at your current (or most recent) job site?

9. About how many different projects (sites) in the oil sands have you worked at?

10. Altogether, how long have you worked in the oil sands (in this and previous jobs, if any)?

10.A. **If more than one year**, have you worked:

i. continuously *OR ii.* on and off?

11. Roughly what percentage of that time (working in the oil sands) have you stayed in camp?

12. What would you say are your main reasons for taking work in the oil sands?

13. How would you rate your job security?

- a. very good
- b. good
- c. neutral
- d. bad
- e. very bad
- f. DK
- g. PNA

14. In the last twelve months or so, have you experienced any major changes in your job situation?

14A. **If yes**, do you mind telling me what changes you experienced?

15. What is your current work schedule and rotation?

16. How does this rotation and schedule compare to others you have had?

17. At what point are you in your current rotation?

18. How often do you take a formal vacation?

19. When is the last time you took formal vacation days of more than one week?

- a. In the last month
- b. In the last six months
- c. Six months to one year ago
- d. More than one year ago
- e. DK
- f. PNA

SECTION 3 – YOUR COMMUTING SITUATION

1. How do you normally travel back and forth for your work rotations?

If this is a combination of ways, please refer to all that apply. *(for example, private vehicle, bus, taxi, airplane to nearby airstrip, airplane to Fort McMurray airport, other)*

Please describe your travel route/routine, door to door.

2. Who currently makes your travel arrangements?

- a. employer
- b. yourself
- c. other: _____
- d. DK
- e. PNA

3. For the next set of statements, I'm going to ask you to rate on a scale from very easy to very difficult—you can reply “very easy” “somewhat easy” “neither easy nor difficult” “somewhat difficult” or “very difficult.” You can also indicate that you don't know, or prefer not to answer.

How would you rate your experience of...

	1= very easy	2= somewhat easy	3= neither easy nor difficult	4= somewhat difficult	5= very difficult	DK	PNA
a. Travelling back and forth to work?							
b. Transitioning back to work when you first start a new rotation?							
c. Transitioning back to your home/residence at the end of your rotation?							

3.A. If easy/difficult for transitioning back to work, can you briefly tell me what makes this easy/difficult?

3.B. If easy/difficult for transitioning back home/off work, can you briefly tell me what makes this easy/difficult?

4. When off rotation, roughly how much of your time is spent with family?
- a. All of the time
 - b. Most of the time
 - c. Some of the time
 - d. None of the time
 - e. DK
 - f. PNA
5. When is the last time you saw your family?

SECTION 4 - CAMP EXPERIENCES

1. For the following series of statements, please indicate the degree to which you agree or disagree. Like the earlier question, the five choices are “strongly agree” “agree” “neither agree nor disagree” “disagree” and “strongly disagree.” You can also indicate if you don’t know or prefer not to answer.

	1= strongly agree	2= agree	3= neither agree nor disagree	4= disagree	5= strongly disagree	DK	PNA
a. I find staying in camp easy.							
b. I would rate the camp where I currently stay (or most recently stayed) better than previous ones.							
c. I am generally satisfied with the facilities in camp.							
d. Morale among people in camp is good.							

e. I regularly interact with people in camp on a daily basis.							
f. When I'm in camp I mostly interact with my workmates.							
g. I feel free to do what I want in camp.							
h. I have relatives or friends in the oil sands region (outside of workmates) that I spend time with during my work rotation.							

1Ai. To briefly follow up, what would you say are the 1 or 2 best aspects of staying in camp, if any?

1Aii. What would you say are the 1 or 2 worst aspects of staying in camp, if any?

2. What is the longest continuous period of time you have ever spent in camp?

3. In the camp where you currently stay (or most recently stayed), how often do (or did) you leave to visit places other than your worksite (e.g. Fort McMurray or other nearby community)?

- a. almost daily
- b. once or twice a week
- c. occasionally
- d. never
- e. DK
- f. PNA

4. Does the site at which you work have policies that limit your ability to leave camp when on work rotation?

4A. If **yes**, can you tell me what those policies are?

5. When you are staying in camp, how often are you usually in contact with family or close friends outside of camp?

- a. more than once a day
- b. daily
- c. several times per week
- d. once per week
- e. less than once per week
- f. DK
- g. PNA

SECTION 5 - WORKPLACE EXPERIENCES

1. For the next set of statements, please indicate the degree to which you agree or disagree that the statement accurately describes your (most recent) work situation. This is once again on a five-point scale of responses: “strongly agree” “agree” “neither agree nor disagree” “disagree” and “strongly disagree.”

	1= strongly agree	2= agree	3= neither agree nor disagree	4= disagree	5= strongly disagree	DK	PNA
a. My job allows me freedom to decide how I do my job.							
b. I have constant time pressure.							
c. I have some control over my work rotation and schedule.							
d. I regularly work alongside the same people from rotation to rotation.							

e. Considering all my efforts and achievements, I receive the respect I deserve at work.							
f. Work rarely lets me go, it is still on my mind when I go to bed in camp.							
g. Most of my days at work are stressful.							
h. Overall, morale at the worksite is good.							
i. Work is still on my mind when I am back home (off rotation).							
j. I have experienced discrimination at work.							

1A: IF 'agree' or 'strongly agree' on item J: You indicated that you have experienced discrimination at work. Would you mind naming the kind of discrimination you have encountered?

2. What, if anything, do you find most enjoyable about your work?
3. What, if anything, do you find least enjoyable about your work?
4. For the next set of statements, using the same scale as above, please indicate the degree to which you agree or disagree that each statement accurately describes your experience with your current (or most recent) employer.

	1= strongly agree	2= agree	3 = neither agree nor disagree	4= disagree	5 = strongly disagree	DK	PNA
a. Management considers employee wellbeing to be as important as productivity.							
b. My employer is committed to minimizing unnecessary stress at work.							
c. My employer would be flexible in offering work adjustments to someone facing mental health issues.							
d. There is good communication at work about psychological safety issues that affect me.							
e. My employer is committed to creating an inclusive, equitable environment at work.							

f. I am able to reasonably balance the demands of work and personal life.							
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5. Over the past 12 months, approximately how many days in total were you absent from work due to sick leave or health-related leave?

6. Over the past 12 months did you work when you were sick?

Before we move on to the next section, which focuses on health,

I want to check if you would like to take a break?

SECTION 6 - HEALTH AND MENTAL HEALTH

1. For this first set of statements, I am going to ask you to think about your life when you are at work (i.e., when you are on your work rotation and staying in camp). For each statement, please indicate the degree to which you agree or disagree (strongly agree, agree, neither, disagree, or strongly disagree).

	1= strongly agree	2= agree	3= neither agree nor disagree	4= disagree	5= strongly disagree	DK	PNA
a. On a typical workday out at site, I regularly interact with co-workers.							
b. There are people who enjoy the same social activities I do.							

c. I have close relationships that provide me with a sense of emotional security and wellbeing.							
d. There is someone I could talk to about important decisions in my life.							
e. I have relationships where my competence and skill are recognized.							
f. There is a trustworthy person I could turn to for advice if I were having problems.							
g. There are people I can count on in an emergency.							

2. I will now ask you to switch to thinking about when you are *not* at work, i.e. when you are back at your residence/home (off rotation). For each statement, please indicate the degree to which you agree or disagree (strongly agree, agree, neither, disagree, or strongly disagree).

	1= strongly agree	2= agree	3= neither agree nor disagree	4= disagree	5= strongly disagree	DK	PNA
a. On a typical day off work, I regularly interact with friends or family.							
b. There are people who enjoy the same social activities I do.							
c. I have close relationships that provide me with a sense of emotional security and wellbeing.							
d. There is someone I could talk to about important decisions in my life.							
e. I have relationships where my competence and skill are recognized.							
f. There is a trustworthy person							

I could turn to for advice if I were having problems.							
g. There are people I can count on in an emergency.							

3. Thinking back over the last five to ten years of your life, would you say you have experienced any significant life changes or events that have affected your health?

3A. **If yes**, are you comfortable briefly naming the change(s)? (

4. Do you have any diagnosed long-term health conditions?

(These are defined as conditions expected to last or have already lasted 6 months or more, and that have been diagnosed by a health professional.)

4A. **If yes**, would you describe the condition as:

- a. physical
- b. mental
- c. both
- d. something else
- e. DK
- f. PNA

5. Because of any physical condition, mental conditions, or health problem, do you have any difficulty carrying out your work?

6. During the past 12 months, were you injured at work?

6A. **If Yes**, did this result in time off work?

7. Thinking about the amount of stress generally in your life for the past 12 months, would you say that most of your days are...

- a. Not at all stressful
- b. A bit stressful
- c. Somewhat stressful
- d. Very stressful
- e. DK
- f. PNA

8. For the next set of statements please indicate the frequency of the experience or activity over the last several months. Please answer with regard to when you were on rotation, and staying in camp. I will ask you to indicate “nearly every day, at least a couple of times a week, occasionally, or never”; please just answer whichever is closest. Please remember that you may also indicate that you don’t know or prefer not to answer.

Over the last several months, when on work rotation and staying in camp, how often did you....

	Nearly every day	At least a couple of times a week	Occasionally	Never	DK	PNA
a. Get at least 30 minutes of exercise?						
b. Wake up feeling rested?						
c. Have difficulty falling or staying asleep?						
d. Have several servings of fruit and vegetables?						
e. Smoke any tobacco products (cigarettes, cigars, pipes)? (Do not include electronic cigarettes, herbal cigarettes, bidis, or cannabis).						
f. Use marijuana or cannabis?						
g. Have at least one alcoholic drink, such as						

beer, wine, or any other liquor?						
h. Use any pain relievers? (By pain relievers, we mean products that contain opioids, such as codeine or morphine, or related drugs. Most of these products require a prescription, although some codeine products are available without a prescription, for example, Tylenol #1 or 222s. We are not asking about over the counter pain relievers such as Aspirin, Advil, regular Tylenol, etc)						
i. Consume unprescribed drugs (drugs that are considered illegal)?						

9. For the next set of statements please indicate the frequency of the experience or activity over the last several months. Please now answer with regard to when you were at home, or off work. I will ask you to indicate “nearly every day, at least a couple of times a week, occasionally, or never”; please just answer whichever is closest. Please remember that you may also indicate that you don’t know or prefer not to answer.

Over the last several months, when off work or at home, how often did you....

	Nearly every day	At least a couple of times a week	Occasionally	Never	DK	PNA
a. Get at least 30 minutes of exercise?						
b. Wake up feeling rested?						
c. Have difficulty falling or staying asleep?						
d. Have several servings of fruit and vegetables?						
e. Smoke any tobacco products (cigarettes, cigars, pipes)? (Do not include electronic cigarettes, herbal cigarettes, bidis, or cannabis).						
f. Use marijuana or cannabis?						
g. Have at least one alcoholic drink, such as beer, wine, or any other liquor?						

<p>h. Use any pain relievers? (By pain relievers, we mean products that contain opioids, such as codeine or morphine, or related drugs. Most of these products require a prescription, although some codeine products are available without a prescription, for example, Tylenol #1 or 222s. We are not asking about over the counter pain relievers such as Aspirin, Advil, regular Tylenol, etc)</p>					
<p>i. Consume unprescribed drugs (drugs that are considered illegal)?</p>					

Would you like a break?

10. For the next set of statements please indicate the frequency of the experience or activity over the last several months. Please answer with regard to when you were on rotation, and staying in camp; just like above, we will then follow up by asking you about when you were not in camp, i.e. off rotation. I will ask you to indicate “nearly every day, at least a couple of times a week, occasionally, or never”; please just answer whichever is closest. Please remember that you may also indicate that you don’t know or prefer not to answer.

Over the last several months, when on work rotation and staying in camp, how often did you...

	Nearly every day	At least a couple of times a week	Occasionally	Never	DK	PNA
a. Take interest or pleasure in doing things?						
b. Feel down, distressed, or hopeless?						
c. Feel tired or have little energy?						
d. Have poor appetite or overate?						
e. Feel bad about yourself, or that you are a failure, or have let yourself or your family down?						
f. Have trouble concentrating on things, such as reading, or watching a show?						
g. Have thoughts of hurting yourself?						

11. For the next set of statements please indicate the frequency of the experience or activity over the last several months. Please answer with regard to when you were at home or off work. I will ask you to indicate “nearly every day, at least a couple of times a week, occasionally, or never”; please just answer whichever is closest. Please remember that you may also indicate that you don’t know or prefer not to answer.

Over the last several months, when off work or at home, how often did you...

	Nearly every day	At least a couple of times a week	Occasionally	Never	DK	PNA
a. Take interest or pleasure in doing things?						
b. Feel down, distressed, or hopeless?						
c. Feel tired or have little energy?						
d. Have poor appetite or overate?						
e. Feel bad about yourself, or that you are a failure, or have let yourself or your family down?						
f. Have trouble concentrating on things, such as reading, or watching a show?						
g. Have thoughts of hurting yourself?						

12. We just talked about feelings that occurred to different degrees over the past several months. Overall, how difficult have these problems made it for you to do your work, take care of things at home, or get along with other people?

- a. Not difficult at all
- b. Somewhat difficult
- c. Very difficult
- d. Extremely difficult
- e. DK
- f. PNA

13. I'm now going to ask about stress in your day-to-day life over the last several months. Thinking about that, to what degree would you say each of the following contributes to feelings of stress you may have? Please respond "not at all, somewhat, or a lot."

	1= Not at all	2= Somewhat	3= A lot	DK	PNA
a. Work					
b. Financial Concerns					
c. Family					
d. Time pressures					
e. Health					
f. Living in Camp					
g. Distance from Home/Family					
h. Peer pressures					
i. Travel/commuting					

13A. Are there any other contributing factors you would add (that aren't in the list above)?

13b. Any comments you would like to make on how these factors contribute to stress?

14. Sometimes events can also contribute to stress. If you were working in the oil sands several years ago, in what ways did the *economic downturn* that started in 2015, and/or the *wildfire* of 2016, affect your wellbeing?

SECTION 7 - USE OF SERVICES

1. Do you have a regular health care provider? By this, we mean one health professional that you regularly see or talk to when you need care or advice for your health.

1A. **If no**, can you briefly explain why you do not have a regular health care provider?

2. When you are on rotation (at work and in camp), is there a place or person that you go to when you need immediate care for a minor health problem?

2A: **If yes**, where or who is that?

2B: **If yes**, how likely are you to use the services of that place/person?

- a. Very likely
- b. Somewhat likely
- c. Not likely
- d. DK
- e. PNA

3. During the past 12 months, was there ever a time when you felt that you needed health care, but you did not receive it?

3A. **If yes**, thinking of the most recent time you felt this way, what kind of health issue was it?

3B. Still thinking about this same event, why didn't you get care?

4. In general, how comfortable would you be seeking formal support for mental health (if you needed it)?

- a. very comfortable
- b. somewhat comfortable
- c. not comfortable
- d. DK
- e. PNA

4A. **If somewhat or not**, can you briefly explain why?

5. During the past 12 months, did you receive any of the following kinds of help

because of challenges with your emotional wellbeing or mental health?

(refer to as many as apply)

- a. Information (about these issues, treatments or available services)
- b. Medication
- c. Counselling, therapy, or help for problems with personal relationships
- d. Other type of help _____
- e. DK
- f. PNA

If YES,

5A. Where did you receive these services? (*You might have more than one answer.*)

- a. back home
- b. at work
- c. other _____
- d. DK
- e. PNA

5B. **Who** provided the services? (*You might have more than one answer.*)

- a. employer
- b. public health service
- c. other _____
- d. DK
- e. PNA

5C. If comfortable sharing, can you briefly describe for what kind of issue(s) you sought these services?

6. Do you know of services currently available through your work in support of mental health and wellbeing?

6A: **If Yes,** If so, what are they?

SECTION 8 - NEEDS AND RECOMMENDATIONS

1. What do you see as the key issues affecting mental health of oil sands workers like you (rotational workers staying in camp)?

1.A. What changes in employment practices or conditions do you think would help to ease these effects, i.e., improve wellbeing?

2. I am going to name a series of activities. For each of them, *please indicate whether you think it should be included in your employer's workplace health and wellbeing program*. Your response will help identify areas of interest and need. Please respond "yes" "no" or "maybe" – and please feel free to comment on each of your answers.

I.	Exercise/physical activity sessions	Yes	No	Maybe
II.	Fatigue management information sessions	Yes	No	Maybe
III.	Financial planning support	Yes	No	Maybe
IV.	Health assessments – 'face-to-face'	Yes	No	Maybe
V.	Health assessments – 'online'	Yes	No	Maybe
VI.	Health information seminars/workshops	Yes	No	Maybe
VII.	Injury prevention/rehabilitation services	Yes	No	Maybe
VIII.	Lunch/break room at the worksite	Yes	No	Maybe
IX.	Activities that promote good mental health	Yes	No	Maybe
X.	Personal development opportunities for life skills	Yes	No	Maybe
XI.	Smoking cessation programs (Quit smoking program)	Yes	No	Maybe
XII.	Stress management programs and strategies	Yes	No	Maybe
XIII.	Website with health and wellbeing information	Yes	No	Maybe
XIV.	Workplace massage	Yes	No	Maybe
XV.	Nutritional information or audit	Yes	No	Maybe
XVI.	Family counseling referral and support	Yes	No	Maybe
XVII.	Any other services you would like to see? _____			