IS IT A MAN'S WORLD? GENDERED PROFESSIONAL EXPERIENCES IN SNOW AND AVALANCHE SAFETY

Andrea Mannberg[1,*], Maria Johansson[2], and Eeva Latosuo[3]

[1] CARE and School of business and economics, UiT the Arctic University of Norway, Norway
[2] Umeå University, Umeå, Sweden
[3] Simon Fraser University, BC, Canada

ABSTRACT: Snow and avalanche safety is a male dominated field. The aim of this paper is to increase the knowledge on the gendered conditions and prerequisites this poses for snow and avalanche safety professionals, and to shed light on why relatively few women enter and stay in the industry. Our analysis is based on qualitative survey data from a survey sent out to male and female-identifying avalanche professionals in North America, Continental Europe, and Scandinavia (N = 299). We inductively coded and categorized the responses into themes based on patterns and commonalities, using a conventional content analysis. Our preliminary results show that the majority of our participants think that increasing the share of women and non-binary individuals would be beneficial to the industry. However, our data also show that women experience important challenges related to their gender, both during their training and in their work. Based on our findings, we propose actions that we hope can help the avalanche safety industry becoming a world for anyone with a passion for snow.

KEYWORDS: Gender representation, workplace diversity, gendered experiences, qualitative analysis

1. INTRODUCTION

Snow and avalanche safety is a male dominated field. Research on gender in other male dominated industries suggests that gender segregation poses a significant barrier to gender equality by perpetuating disparate conditions and expectations for men and women in numerous ways. For example, men are still to a higher extent considered the norm, men's bodies are valued more, and men are expected to possess knowledge to a greater extent than women (Bridges et al 2020; Johansson 2020; Reimer & Eriksen, 2018). In addition, women are often mainly valued for their social competence and their supposed ability to create a pleasant atmosphere (Johansson & Ringblom, 2017; Ringblom, 2022; Wright, 2016). Further, organizational culture and gender composition at work constitute a risk factor for sexual harassment of female workers (Riddle & Heaton, 2023).

Gender stereotypes and gender bias also have consequences for how knowledge skills and abilities are coded and valued. People often associate certain skills with masculinity and femininity, with masculine skills perceived as more valuable. These skills are often viewed as oppositional, with men and women seen as lacking the skills typical of the other gender (Heilman, 2012). Skills that are coded as masculine are linked to agency, including traits like competence, ambition, assertiveness, independence, and rationality. Feminine coded skills emphasize communality, such as kindness, collaboration, deference, and emotional sensitivity (Heilman, 2012; Heilman et al., 2024).

The gender gap in the outdoor industry has been identified since the early 1990s (Gray, 2018). Most research has been in the field of outdoor education, where women comprise approximately half the professionals, yet face gender bias resulting in challenges of recognition in the profession (Mitten et al., 2018). A recent study of British Mountain Guides shows that the problem cannot be explained by gendered skill requirements (Irwin et al., 2023). The all-male participants described the operational skills of mountain professionals using both traditionally male and female traits and abilities. Research on gender in the snow and avalanche safety industry is very scant. However, two recent studies show that the avalanche industry workforce in North America is predominantly white and male, and that the lower proportion of female professionals is consistent for all types of avalanche employment (Warren et al., 2020; Reimer et al., 2020). The study by Reimer et al., (2020) further shows that gender makes difference how people are treated; one of the main factors is the perceived competence. Notably, the study describes patterns of gender discrimination and sexual harassment in forms of hostile work environment and unwanted touching.

The aim of this study is to increase the knowledge on the gendered conditions and prerequisites the male domination poses for snow and avalanche safety professionals. We specifically aim to gain an understanding of *why* there are so few women and non-binary individuals in the industry, and *if* avalanche professionals perceive an increased

* Corresponding author address:
Andrea Mannberg, Department of Business and Economics and Center for Avalanche Research and Education, UiT the Arctic University of Norway, PO box 6050, 9037 Tromsø, Norway;
tel: +47 77 64 60 92;
email: andrea.mannberg@uit.no

gender balance as something beneficial. To reach these aims, we ask 4 research questions:

1) Which characteristics do avalanche professionals associate with an ideal worker in the industry., i.e., is it a man's job?

2) Which causes do avalanche professionals perceive as leading to the low representation of women and non-binary individuals in the industry?

3) Which, if any, gendered experiences do women and non-binary professionals have during their training and work in the industry?

4) Which benefits and drawbacks do avalanche professionals perceive of increasing the share of women and non-binary individuals?

2. MATERIALS AND METHOD

2.1 Survey material

To answer our research questions, we use data from an online survey that collected mainly through open-ended questions. All participants were asked to describe personal characteristics (i.e., skills, abilities, and personality) that an avalanche professional should ideally have. We also asked all participants to elaborate on the benefits and drawbacks of increasing the gender balance in the industry as a whole and in their specific field. Finally, all participants answered a question on their perceptions on why there are so few women and non-binary individuals in the industry.

Female and non-binary individuals were asked to describe challenges (if any) faced during training and work, and expectations about the future. We also asked them if they had any advice to other non-males working in, or aspiring to work, in the snow and avalanche safety industry. The full survey contained additional questions, not analyzed in this paper (see survey material: https://osf.io/jfuwb/).

2.2 Participants

We sent out the survey to male and female-identifying avalanche professionals in North America, Continental Europe, and Scandinavia. The survey was distributed via various avalanche related organizations in the different regions (i.e., A3, EAWS). In total, 299 individuals opened the survey. Of the 275 who provided information about gender identity, 42% identify as male, 57% as female, and 1% as non-binary/other. 8% were under age 30 at the time of the survey, 75% were 30 – 50 years old, and 17% individuals were over 50. About a third of the sample live and work in North America, 25% in Scandinavia, and 13% in continental Europe. Remaining participants live and work in other regions. Many participants have more than one profession (mean: 1.75). About 45% work as avalanche forecasters, 37% as avalanche instructors, 32% as certified mountain guides, 20% work in the ski patrol, 12% work with active avalanche control, and about 9% are researchers. Although our sample is small, it thus represents a fairly large number of avalanche professions in the industry.

2.3 Analytic procedure

Despite the limitations associated with the survey format, the open-ended questions allow respondents to convey concise, performative "messages" that reflect their understanding of their profession and their industry. When exploring a phenomenon that is sparsely researched, such as gendered professional experiences in the snow and avalanche safety industry, a conventional content analysis is useful, since it starts with the empirical material and allows the categories and themes to be derived from the data set (Krippendorff 2004; Hsieh and Shannon 2005).

We used the following procedure to analyze the data. Two researchers first individually coded answers to the relevant open-ended questions inductively based on patterns, meaning units and communalities in the material. We started by reading through the data "naively" and noted words/codes that captured the perceived core in the respondents' statements. We chose words/codes that were as close as possible to the words that the respondents used, but at times more theoretical concepts were used as codes if that code captured the content in a more concise way. The codes were thereafter categorized and paired together into subthemes based on commonality. All subthemes were organized under an overarching theme. The thematic categorization was more deductive in the sense that it was influenced by the researcher's prior knowledge of theories and previous research on gendered inequality at (male dominated) work. In the second phase, the two researchers scrutinized and discussed the initial analysis together. The first researcher thereafter further advanced the analysis. In the third phase, the preliminary themes and anonymized data was shared with the third researcher, who went through the coding procedure and themes identified, with a specific focus on identifying inconsistencies and missed topics. Finally, all researchers jointly finalized the analysis of the data.

Through this process, extracted codes and categories were analyzed and structured into four main themes corresponding with the research questions. The emphasis in the analysis was on

meaning making, patterns and commonness, applying a perspective where language is understood as constitutive, rather than descriptive, of the lived reality. Although some codes and categories where more common than others, the main goal was not to provide generalizations or quantitative measurements concerning "how many" or "how often" something was mentioned. Instead, the study offers a nuanced and comprehensive description of the many ways our informants made meaning of their experiences in everyday working life. Our aim was to write this paper in a way that is transparent, coherent and "true" to the material.

3. RESULTS

3.1 *The non-gendered avalanche professional*

Against the backdrop of being a male dominated professional context, we asked the respondents to describe an ideal avalanche professional with the question: "*In your opinion, which personal characteristics should a person who works in your profession have?".* Contrary to previous research, the participants thematically describe knowledge, skills, and abilities (KSA) that comprises characteristics typically associated with both femininity and masculinity. The characteristics span multiple domains and reflect the multifaceted nature of the profession, providing a detailed framework of the essential attributes necessary for excellence in the avalanche safety field. The attributes are categorized into several key topics (see figure 1), each encompassing specific skills and characteristics.

Social skills are perceived as critical for an avalanche professional, with a special emphasis on interpersonal and team skills. This includes being a team player, empathetic, possessing strong people skills, being approachable, and an effective communicator. These traits ensure that the professional can work harmoniously with colleagues and stakeholders, fostering a collaborative environment. **Emotional skills,** e.g., stress management and emotional stability**,** are perceived as equally vital. Our data suggest that an ideal professional should remain calm and level-headed under pressure, be patient, decisive, and maintain a sense of humor. **Field-specific skills** related to safety and risk management are described as indispensable. This includes the ability to conduct risk assessments, manage risks effectively, and have an appropriate level of risk tolerance. These skills ensure that the professional can make informed decisions that prioritize safety. Physical characteristics and skills are necessary due to the demanding nature of the work. The professional should be a competent skier or
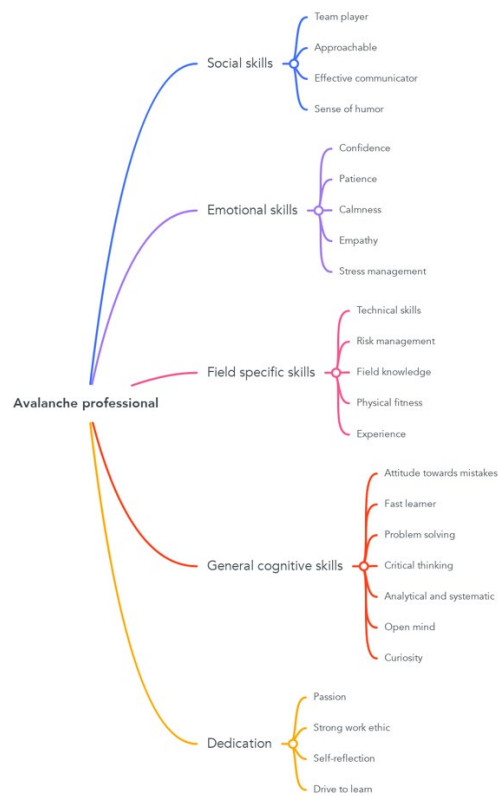

Figure 1. Attributes of avalanche professional.

sledder, adept at traveling in mountainous terrain, physically fit, and strong. These physical attributes enable them to perform effectively in challenging environments. Field-specific knowledge is fundamental, requiring technical skills and substantial experience. A deep understanding of the specific field, coupled with practical experience, allows the professional to apply their knowledge effectively in real-world scenarios. **General cognitive skills** encompass a range of cognitive and analytical abilities. According to our informants, an ideal professional should be a problem solver, attentive to details, a fast learner, able to see the big picture, an analytical and critical thinker, and systematic in their approach. These cognitive skills enable thorough analysis and effective problem-solving.

Dedication is characterized by a strong work interest and drive for continuous development. Our informants describe that an avalanche professional should exhibit passion and interest in their work, a willingness to keep learning, curiosity, open-mindedness, self-reflection, and the ability to learn from and admit mistakes. Awareness of one's limitations is also crucial for personal and professional growth. Work ethic and reliability are foundational attributes. Adaptability, flexibility, reliability, endurance, and a hard-working nature are essential traits. These qualities ensure that the professional can maintain a consistent and

dependable performance, even under varying and challenging conditions.

The participants provide a comprehensive profile of the ideal avalanche professional, highlighting the importance of a balanced combination of social, emotional, physical, cognitive, and ethical attributes. The data does not reveal any substantial differences in answers from male and female identifying individuals. Indeed, it is striking how much agreement there is in the participant pool. The two quotes below exemplifies.

"Essential skills/training for the job, passion for learning, drive and motivation to do their best each day, ability to manage risk, ability to empathize and connect with others, patience, determination, self-reliance, curiosity, be a good team player, humble - including a willingness to ask questions or admit they don't know something" (Participant 190 - female)

"Can do attitude, the ability to be humble, ability to take and give critical feedback, high overall physical and mental resilience, an ability to effectively deal with high levels of uncertainty, an ability to anticipate/plan yet also pivot and think on your feet, have an effective way to manage physical and mental stress, have an ability to recognize errors early, then error correct and be open about it, an ability to work effectively in a team environment" (Participant 10 – Male)

The only differences that we note are that males emphasize intelligence, technical skills, and humor slightly more, while women and non-binary individuals highlight the importance of adaptability to a higher extent.

3.2 *Perceived reasons for low representation of women and non-binary individuals*

The analysis of the respondents' answers to the question: "*Why do you think that there are relatively few women in the snow and avalanche safety industry?"* outlines several themes and subthemes to explain the underrepresentation of women in this field (see Figure 2)

The cultural aspects of the industry play a significant role, with the "masculine culture" being a primary deterrent. This culture is often described as a "boys' club," characterized by male dominance, competitiveness, and macho attitudes, making it difficult for women to fit in. The competitive nature of the industry and longstanding traditions further exacerbate these challenges. Skewed recruitment practices further contribute to the problem, one of the participants stated:

"The 'bro' attitude within the industry is still quite dominant, women would not apply for jobs where they know that a male competitor is friends with the employer or team members. There are still very much connection and "knowing the right person" hires happening within the industry and they do not necessarily benefit females." (Participant 48, woman)

The statement pinpoints difficulties in entering and advancing in the industry due to unclear career paths, homosociality (preference for socializing with the same gender), and reliance on informal networks. These factors create barriers to job availability and advancement, limiting opportunities for women and often requiring them to know the right people to get ahead.

The lack of role models and mentors is another critical issue. The scarcity of women in prominent positions means there are few role models for aspiring female professionals, which can discourage women from pursuing or continuing careers in this field.

Gender attitudes, often described as "old boy's club", i.e., stereotypical perceptions of women, and adherence to traditional ways of thinking, also contribute to the problem. These entrenched views are perceived as perpetuating a resistance to change and an undervaluing of women's contributions. **Sexism** remains a pervasive issue. Our participants describe both overt and more subtle sexism. Overt sexism includes sexual harassment, prejudice, discrimination, and toxic behaviors, which all contribute to an unwelcoming atmosphere, one stated:

"It's tough. I experienced sexism, ableism, harassment, countless inappropriate jokes / pin up girls in work spaces." (Participant 45, woman)

Subtle sexism manifests through stereotypes, societal norms, and cultural expectations, further discouraging women from joining or staying in the industry. Subtle sexism also includes the perception that women are different and "want different things". Participants of both genders voice that women may prefer other career options, dislike cold environments, or have different personal choices and priorities. Risk acceptance and confidence are also highlighted by female participants. Women are perceived as less drawn to risk and often lack the confidence in their KSA compared to men. This lack of confidence is compounded by a lack of support and the expectation that women need to prove themselves more than their male counterparts.

Structural aspects of the industry include the "nature" of the work itself, which is perceived as physically demanding and unsustainable. High turnover rates, challenging work conditions, long hours, and seasonal work further deter women. The perception that the job requires significant physical strength, and the precarious financial opportunities also make it less appealing to women. Work-life balance issues, especially related to family responsibilities, pose additional challenges. The structure of work in this industry often conflicts with societal expectations placed on women regarding family and home life. A narrow recruitment base further limits the number of women entering the field. Educational pathways leading to these careers are often male-dominated, and fewer women have relevant experience. Gendered interests in outdoor recreation
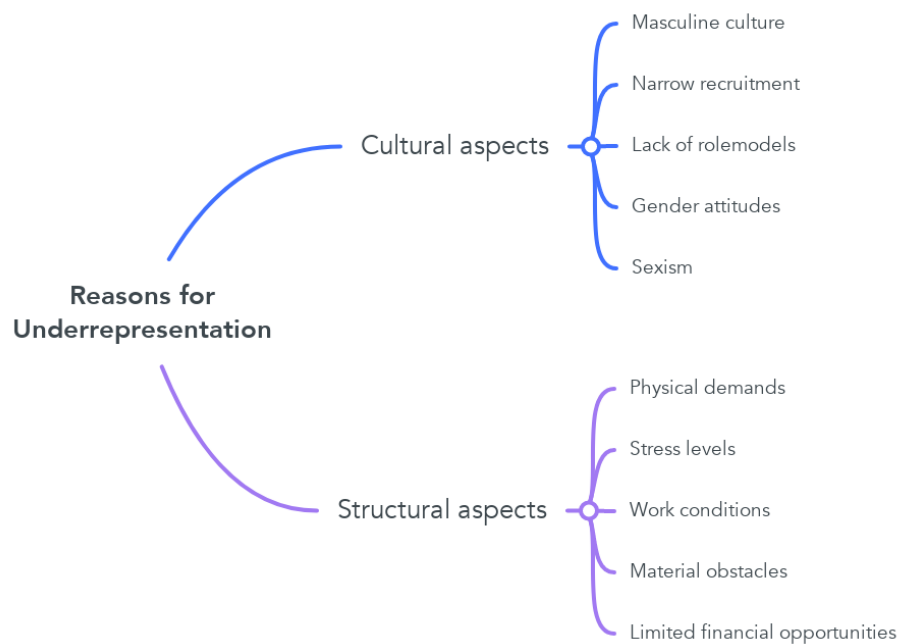
Figure 2. Perceived reasons for underrepresentation of women and non-binary individuals

and natural sciences contribute to this imbalance, as do difficulties in finding climbing or skiing partners to build necessary experience.

Material obstacles such as gear that doesn't fit properly can also be significant deterrents, making the physical aspects of the job even more challenging for women.

The results present a comprehensive overview of the various cultural, structural, and personal factors that contribute to the low representation of women in the snow and avalanche safety industry. These factors range from deep-seated industry traditions and overt sexism to material obstacles and confidence issues, collectively creating a challenging environment for women. Men and women differ slightly in their responses where women more often attribute the underrepresentation of women and non-binary individuals to the cultural, structural and organizational aspects of the industry whereas men more often place the explanation on women themselves and their perceived preferences.

3.3 *Women and non-binary individuals' experiences of being a minority*

The results below are based on the answers to two questions:

1) *"Did you experience challenges or problems, that you think are more common for women and non-binary individuals, during your training to become an avalanche professional/aspiring avalanche professional?"*, and

2) *"Have you experienced challenges or problems, that you think are more common for women and non-binary individuals, in your work as an avalanche professional/aspiring avalanche professional?"*

The answers reveal that women and non-binary individuals face overt and hostile sexism, including harassment, assault, and discrimination. They experience diminished respect, patronizing comments, unwanted romantic attention, workplace bullying, and accusations of using their sexuality to advance. Bias, both conscious and unconscious, leads to disrespect, condescension, and gaslighting, with specific behaviors like mansplaining and master suppression techniques being common. In terms of **KSA**, women experience that they are often held to a higher standard, requiring them to work twice as hard to prove themselves and facing more scrutiny, one of the participants said:

"At this time, I felt like I had to compete with other women for the coveted spot as the token "capable female", and work twice as hard and be twice as good to earn the promotions and approval that were all but guaranteed for my male co-workers." (Participant 57, woman)

Women feel that employers and male colleagues frequently assume that they are less qualified, less capable, and less competent. This leads to women's qualifications being undervalued or

overlooked, and a need to constantly prove their worth. Additionally, women feel that they are often seen through the lens of their gender first, and their individual competences second, which can limit their opportunities and lead to them being sidelined in discussions and decisions.

Our informants further describe **work-life balance** issues, particularly around family responsibilities. Women often face societal expectations to choose between career and family, with children affecting their careers more significantly than men's.

Organizational culture within the industry poses further challenges, with competitive and traditional values often excluding women. The male-dominated culture, characterized by homosociality and a lack of support, makes it hard for women to fit in and feel a sense of belonging, despite support from peers:

"I am fortunate to have found a group of women who are incredibly supportive, along with some wonderful men who are allies. Unfortunately the number of men in our industry who think this isn't a problem or, worse, perpetuate the boys club atmosphere, is still very large." (Participant 157, woman)

The "boys' club" mentality results in unclear recruitment processes, favoritism, and a non-GEDI (Gender Equality, Diversity, and Inclusion) friendly workplace. This includes pay disparity, lack of promotion opportunities, and a lack of systems for reporting misconduct. Women are often the only ones in their roles, leading to feelings of isolation and being an outsider, compounded by a lack of role models and self-doubt.

Physical and bodily aspects are also described as significant barriers. Women often face issues with gear that doesn't fit properly, bearing proportionally heavier loads, and dealing with physical demands that are not adequately considered for women's bodies. This includes dealing with periods, lack of privacy, and personal hygiene issues. These challenges, along with a lack of dedicated facilities such as change rooms, make the work environment physically and emotionally taxing.

These results highlight the multifaceted and systemic nature of the problems women face in training and work, encompassing overt sexism, biases in skills assessment, work-life balance conflicts, organizational culture issues, and physical challenges. These factors collectively contribute to the significant barriers that women encounter in their professional environments.

3.4 *Perceived benefits and drawbacks of increasing the gender balance in the industry*

We asked the participants about the perceived benefits and drawbacks of increasing the share of female and non-binary individuals, both in the industry in general and in the participant's specific field. The answers show that our participants see important benefits and very few drawbacks with increasing the gender balance in the industry. We do not find any evidence of a "not in my backyard" mentality, i.e., that increasing gender diversity in the general industry is good, but that is has drawbacks in one's own industry.

Of the few drawbacks described, several relate **to reversed discrimination** and its consequences, i.e., increasing the gender balance by using quotas or affirmative action. Participants see a risk that women will be used as tokens, and that focusing on identity rather than merits will reduce the skill in the workforce. There is also a fear that women in the industry will experience maltreatment, in terms of being resented, harassed, and ostracized at work. One participant writes:

"Cons: slow uptake, backlash from people who don't think this is important, tokenism, potentially huge and continued emotional labour on female and non-binary workers who do not have a supportive workplace, perceived unfairness based (ironically) on gender". (Participant 49 – female)

Male participants further acknowledge that breaking up the boy's club will force men to change and reflect on their habits, and that this may not be easy. In terms of **product quality**, a few participants see a risk that a higher female presence can lead to lower work output and higher production costs. Female participants note that their (on average) lower physical strength, hormonal swings, and risk aversion may affect their capacity to perform certain tasks. They further highlight that traditional gender roles in the increases the need for flexibility at work. Finally, our participants foresee possible negative effects on **teamwork**. An increased presence of women can contribute to a sexualization of the workplace and their input may be downplayed if they are not accepted in the team. Some further fear that women will revert to passive aggressive strategies and that this will deteriorate communication.

The vast majority of our participants explicitly state that they see no drawbacks at all increasing the share of women and non-binary individuals in the industry. Instead they expect that an increased gender balance will contribute to **improved work output**, **better teamwork**, and to a **healthier work culture** for all. The three identified themes are deeply intertwined, since good teamwork is essential for both work output and a healthy work culture in many fields within the snow and avalanche safety industry.

Participants in our sample perceive that having more women on the team will contribute to change in work culture via a less competitive and aggressive, and more collaborative, teamwork that focuses more on "us" than "I". More diversity

can increase the awareness of, and acceptance for different perspectives, preferences, and needs. Several male participants state that they, with women on the team, feel that they can show and talk about 'soft values'. Female colleagues make it more acceptable to admit being uncertain, making mistakes, and taking conservative decisions. Increased diversity further reduces the acceptance of 'locker-room' jargon and attitudes. All the above contribute to improved teamwork via more open communication, to a healthier work environment via increased understanding and a more pleasant atmosphere, and to improved work output via a less aggressive pack-mentality. Our participants further highlight that including women as potential workers widens the talent pool. More diverse skills and experiences may in turn contribute to better, and more creative solutions to problems, and to breaking old, and malfunctioning, habits. A workforce that is more representative of the customer base may further contribute to an improved match between supply and demand, and to make the organization more approachable for customers. The quote below exemplifies:

"better work environment, easier to discuss soft values, improved analysis and risk identification with a less homogeneous team" (Participant 152 – Male)

4. CONCLUSION

Our findings challenge the stereotypical notion that the profession is suited only for men, revealing that the ideal avalanche professional embodies a blend of social, emotional, physical, cognitive, and ethical attributes. These qualities are found in both men and women, and most participants believe that a more gender-diverse workforce would enhance output, teamwork, and workplace culture. However, significant cultural, structural, and personal barriers contribute to the underrepresentation of women and non-binary individuals, who face unique challenges related to their gender during training and work.

In conclusion, this study highlights the gendered conditions and challenges faced by women and non-binary individuals in the snow and avalanche safety profession. It underscores the need for cultural and structural changes to create a more inclusive environment that values diverse skills and perspectives. Addressing these barriers and promoting gender diversity can enhance the industry's effectiveness and create a more supportive and equitable workplace for all professionals.

5. CALL FOR ACTION

Based on our analysis, and the finding by O'Brien (2023) that non-gendered professional learning environments help female outdoor professionals to develop the full spectrum of skills and to consider themselves equally valued as their male peers, we suggest 11 actions that may help achieving this change.

5.1 Recruitment

Implement inclusive recruitment practices. Develop transparent, equitable recruitment processes that actively seek to diversify the workforce. Ensure that job postings, selection criteria, and promotion paths are free from gender bias. Recruitment via personal networks is tempting, as it often provides more indepth information about the prospective worker. However, in a male-dominated field, this type of recruitment can reduce the chance to identify talented "newcomers" to the industry. We therefore recommend using more open recruitment processes in addition to informal networks. Research on discrimination (Goldin & Rouse, 2000; Carlsson & Rooth, 2007) show that merely knowing the ethnicity or gender of a job applicant may affect our judgement of their competence. A possible mitigation strategy to reduce this risk is to blank information about name and gender during the first sortment of applicants. **Broaden the talent pool.** Engage with educational institutions and outdoor organizations to encourage women and non-binary individuals to pursue careers in avalanche safety. Provide scholarships, internships, and training programs to support their entry into the field. **Establish mentorship programs** and create opportunities for women and non-binary individuals to connect with experienced professionals. **Highlight the achievements of diverse role models** to inspire and support newcomers.

5.2 Culture and organization

Foster a collaborative work environment and **promote cultural change.** Encourage teamwork and open communication to reduce competitiveness and aggressive behaviors. Promote a culture where admitting mistakes and uncertainty is seen as a strength rather than a weakness. Initiate and support initiatives aimed at transforming the masculine-dominated culture within the avalanche safety industry. Encourage inclusive behaviors and dismantle the "boys' club" mentality to create a welcoming environment for all genders.

Strengthen policies and **address gender bias and stereotypes.** Implement and enforce robust policies against sexual harassment and discrimination. Create safe channels for reporting misconduct and ensure that all complaints are

taken seriously and addressed promptly.Conduct regular training sessions to raise awareness about gender biases and stereotypes. Educate staff on the value of both masculine- and feminine-coded skills to ensure all competencies are recognized and valued equally.

Facilitate work-life. Develop policies that support work-life balance, such as flexible working hours and parental leave (for both men and women). Acknowledge and accommodate the unique needs of different individuals. Ensure that all gear and facilities are designed to accommodate the needs of a diverse workforce.

Monitor and evaluate progress. Regularly assess the effectiveness of diversity and inclusion initiatives. Collect and analyze data on gender representation and experiences in the workplace to identify areas for improvement and celebrate successes.

Finally, we would like to stress that a prerequisite to bring about any change, is a leadership devoted to change. That entails listening to those who's experieces differ from their own, and seeking out knowledge when needed. We would therefore like to end with a call for action concerning leadership.

Implement a gender sensitive leadership. Leadership that is aware of the gendered power structures in the industry is crucial for advocating change and facilitating progress. Create leadership programs that develop the knowledge, skills and abilities needed to ensure gender issues are addressed accordingly in education and work organizations.

We let one of our participants get the last word.

"The problem is that we are asking women and gender non-binary people to show up in an industry that doesn't support them, and then wondering why they don't stay. If we truly want to retain women and gender non-binary people, we need to truly give them tools, training, agency, equipment, and institutional support. We need everyone on our teams to truly believe that they belong in the room. We need to incorporate structures to support staff who might need more tools and training, or different training, than we are historically accustomed to providing. Anything less than that is lip service, and it puts the burden of institutional change entirely on the people who need support most." (Participant 191, Male)

ACKNOWLEDGEMENT

REFERENCES

Bridges, D., Wulff, E., Bamberry, L., Krivokapic-Skoko, B., and Jenkins, S.: Negotiating gender in the male-dominated skilled trades: A systematic literature review. Construction management and economics, 38(10), pp. 894-916, 2020

Carlsson, M., and Rooth, D-O.: Evidence of ethnic discrimination in the Swedish labor market using experimental data, Labour Economics 14(4), https://doi.org/10.1016/j.labeco.2007.05.001 , 2007

Goldin, C. and Rouse, C.: Orchestrating Impartiality: The Impact of "Blind" Auditions on Female Musicians, American Economic Review 90(4), 2000

Gray, T.: Thirty Years on, and Has the Gendered Landscape Changed in Outdoor Learning?. In: Gray, T., Mitten, D. (eds) The Palgrave International Handbook of Women and Outdoor Learning. Palgrave Studies in Gender and Education. Palgrave Macmillan, Cham. https://doi.org/10.1007/978-3-319-53550-0_3, 2018.

Heilman, M. E.: Gender stereotypes and workplace bias. Research in organizational Behavior, 32, pp. 113-135,2012

Heilman, M. E., Caleo, S., and Manzi, F.: Women at work: pathways from gender stereotypes to gender bias and discrimination. Annual Review of Organizational Psychology and Organizational Behavior, 11, pp. 165-192, 2024

Hsieh H-F and Shannon SE.: Three approaches to qualitative content analysis. Qual Health Res. 15(9):1277–1288. 2005

Irwin, A., Thacker, J., Brame, G., and Hamlet, O. E. D.: 'Having a grand view of what the day entails': A qualitative investigation of the non-technical skills utilized by Mountain Guides. Journal of Outdoor Recreation and Tourism, 43, https://doi.org/10.1016/j.jort.2023.100688, 2023.

Johansson, M.: Business as Usual?: Doing gender equality in Swedish forestry work organisations (Doctoral dissertation, Luleå University of Technology), 2020

Johansson, M., and Ringblom, L.: The business case of gender equality in Swedish forestry and mining-restricting or enabling organizational change. Gender, Work & Organization, 24(6), pp. 628-642, 2017

Krippendorff K.: Content analysis: an introduction to its methodology. Thousand Oaks (Calif.): Sage, 2004

Mitten, D., Gray, T., Allen-Craig, S., Loeffler, T., and Carpenter, C.: The invisibility cloak: Women's contributions to outdoor and environmental education. The Journal of Environmental Education, 49(4), 318–327. https://doi-org.proxy.lib.sfu.ca/10.1080/00958964.2017.1366890, 2018.

O'Brien, K.: Transformational Learning on the Journey to Mountain Leadership. In: Hall, J., Boocock , E., Avner, Z. (eds) Gender, Politics and Change in Mountaineering. Global Culture and Sport Series. Palgrave Macmillan, Cham. https://doi-org/10.1007/978-3-031-29945-2_13, 2023.

Reimer, R.: Diversity and mental health in Canada's avalanche and guiding professions. The Avalanche Journal, 121, February 2020, 14-17. Canadian Avalanche Association. Retrieved on June 22, 2024, from https://issuu.com/theavalanchejournal/docs/the_avalanche_journal_volume121, 2020.

Reimer, R. and Eriksen, C.: The wildfire within: gender, leadership and wildland fire culture. International Journal of Wildland Fire, 27(11), https://doi.org/10.1071/WF17150, 2018

Riddle, K. and Heaton, K.: Antecedents to sexual harassment of women in selected male-dominated occupations: a systematic review. Workplace Health & Safety, 71(8), pp. 356-365, 2023

Ringblom, L.: "It is just a joke!" informal interaction and gendered processes underground. NORA-Nordic Journal of Feminist and Gender Research, 30(2), pp. 94-107, 2022

Warren, K., Stimberis, J., Latosuo, E., and Morris, H.: Survey. 2020 Census of Avalanche Professionals. The Avalanche Review, November 2020. the American Avalanche Association. Retrieved on June 22, 2024 from https://theavalanchereview.org/avalanche-professional-demographics, 2020.

Wright, T.: Women's experience of workplace interactions in male-dominated work: The intersections of gender, sexuality and occupational group. Gender, work & organization, 23(3), pp. 348-36, 2016