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More than just another bib: group dynamics in an elite Nordic ski team

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ABSTRACT

The social environment within individual sport teams can have a significant influence on the success, development, and well-being of athletes. We explored elite individual sport athletes' group experiences through the lens of social identity theorising. Participants were six members (4 male, 2 female, M_{age} = 21.5 years) of a National Development Nordic Ski team. At two time points in the competitive season, we used Social Identity Mapping (Bentley et al., 2020) in combination with semi-structured interviews to explore athletes' experiences as a member of the ski team. Social Identity Mapping provided a visual representation of each participant's social identities and was used to facilitate athletes' views of their group experiences in the semi-structured interviews. Interview data were thematically analysed to explicate participants' perceptions of social identity and cohesion, and their perceived relevance to success and development in elite individual sport. Major themes included social group memberships and identities, the presence of subgroups, the ebb and flow of cohesion and conflict, and teammate and coach influence on the group. On this basis, we argue that social identity mapping can be a valuable resource for athletes and coaches seeking to create a positive and cohesive team environment within an elite individual sport team.

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Group dynamics; individual sport; team cohesion; social identity; Nordic skiing

There is almost no skill or ability you can have that is so good it allows you to ruin the social qualities of the team.

-Aksel Lund Svindal, Norwegian Olympic gold medallist in alpine skiing, 2018 (para. 6).

As exemplified by the foregoing quote, even in a sport traditionally classified as an individual endeavour, athletes recognize how the social dynamics within a group may be intertwined with team and individual success. Indeed, success in team and individual sports results from working together to improve performance; whether it be in team cohesion on the playing field, cooperation during training, or camaraderie at a race or match (Carron et al., 2002). At first glance, establishing productive group dynamics – – "the actions, processes and changes that occur within and between groups" (Forsyth, 2014, p. 2) – may seem to be more important in highly task interdependent sports (i.e. team sports) than in individual sports where one athlete's performance does not directly impact that of another. Although certain aspects of group dynamics may be more consequential when group members directly interact with one another (e.g. the positive association between team efficacy and performance is stronger in teams with high interdependence; Gully et al., 2002), scholars have nonetheless begun to recognize that social influences from coaches and teammates (e.g. motivation, social facilitation, social comparisons) also play an important role in the success of athletes in individual sport teams (Evans et al., 2013; Eys & Brawley, 2018). Broadly speaking, sport team involvement offers opportunities for satisfying social interactions and can fulfill a range of psychological needs. Moreover, outcome interdependence is engrained in many individual sport teams (Evans, Eys, Bruner et al., 2012). Even in individual sport teams without a collective team goal (i.e. so that there is an absence of outcome interdependence), elite-level athletes train together as they prepare to compete alongside one another and against one another (Evans et al., 2013). Answering recent calls for greater attention to the group dynamics within individual sport teams (Eys & Brawley, 2018), the current research aims to understand the group dynamics that emerge and unfold over the course of a season in an elite Nordic ski team.

The sport of Nordic skiing provides an insightful context for studying group dynamics among teams of individual sport athletes. Nordic skiing is classified as a contrient individual sport (i.e. a sport where no task interdependence is involved, team members directly compete against one another in competition, and there are no group outcomes; Evans et al., 2012). Furthermore, Nordic Ski teams exhibit high levels of group distinctiveness in that they allow people to positively distinguish themselves from the lay population, but still identify with other skiers (Brewer, 1993). For an elite Nordic skier, eight months of the year are spent training alongside fellow teammates, with the remaining four months encompassing the competition season, during which time athletes compete against one another. Within the competition season, there are also specific selection races in early January where all Canadian skiers compete for only a handful of spots on various world championship teams. Whereas this intrateam competition might be a source of motivation for some athletes, it may also be a source of stress and/or tension between athletes

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(Harenberg et al., 2016). Yet while a range of studies highlight the psychological challenges of Nordic skiing (e.g. Duda & White, 1992; Gustafsson et al., 2007), there is a lack of research on the group dynamics, both in Nordic skiing and in elite individual sport teams more generally.

Emerging research in group dynamics has called for further investigation on group constructs such as social identity in individual sport (Bruner et al., 2015). Social identity has been defined as " … those aspects of an individual's self-image that derive from the social categories to which he [or she] perceives himself [or herself] as belonging" (Tajfel & Turner, 1978, p. 283). Social identity can be conceptualized as having three distinct sub-components: (a) cognitive centrality (the importance of the group membership to one's self concept), (b) ingroup affect (the positivity of feelings associated with group membership), and (c) ingroup ties (perceptions of belongingness, bond, and similarity between group members; Cameron, 2004). Although a measure of social identity in sport has been developed to capture the degree to which athletes identify with their team in terms of these three dimensions (Bruner & Benson, 2018), the social world is complex and multifaceted (Cruwys et al., 2016). Athletes connect with a number of salient groups in their lives (e.g. families, sport teams, friends) and as a result have multiple social identities. The identification processes and compatibility of these groups has been of interest to scientists for many years. Recently researchers have developed methods to simultaneously capture these social identities using an online Social Identity Mapping (oSIM) tool to assess the multidimensionality and connected nature of social identities (Bentley et al., 2020).

Despite the scarcity of qualitative research on how elite individual sport athletes manage the varying social identities they possess, several studies reveal how such athletes may encounter challenges of balancing numerous identities and affiliations inside and outside sport. For example, interviews with triathletes transitioning from amateur to professional sport highlighted how athletes struggled to adjust to their new identity as a professional athlete (Sanders & Winter, 2016). Another point to consider is that athletes entering a new team environment are often seeking social acceptance while competing against their teammates for valued resources (e.g. playing time, status within the team; Benson et al., 2016). As a final point illustrating the complexities of social life within sport teams, relates to the fact that even though teammates share a common team identity, subgroups and clique often arise within individual sport teams due to situational influences (e.g. stress of poor performance) and shared characteristics (e.g. team tenure, social background, similarity in person characteristics; Martin, Evans et al., 2016a; Martin, Wilson et al., 2016b). Understanding how elite individual sport athletes view the multiple groups to which they belong would provide insight into how they navigate the duality of competing against their teammates while potentially relying on these same individuals as training partners and for social support.

Increasingly in the social and health psychology literature, belonging to a greater number of valued social groups has been found to be associated with a range of positive outcomes including heightened self-esteem (Jetten et al., 2015), better adjustment (Iyer et al., 2009), greater resilience (Steffens et al., 2016), protection against depression relapse (Cruwys et al., 2013), increased well-being (Brook et al., 2008), and better recovery after illness (Haslam et al., 2008). One reason for this is that, according to the social identity approach, shared social identity is the basis for mutual influence and support in sport teams (Hartley et al., 2020; Rees et al., 2015). Furthermore, the degree to which an athlete identifies as a team member can amplify the motivational relevance of the group environment (Bruner et al., 2018). For example, social identity strength in team sport settings has been linked to improved performance (Murrell & Gaertner, 1992; Slater et al., 2020) and to other athlete outcomes such as moral behaviour (Bruner et al., 2018). Amongst other things, this work has also shown that how teammates interact with one another contributes to fluctuations in social identity strength across time (Benson & Bruner, 2018). Together, these research findings indicate that social identity can also be an important construct for understanding the meaning that individual sport athletes attach to their group experiences.

Whereas theory underscoring a social identity approach provides a rich perspective of how individuals view themselves in relation to others, *cohesion* is a related construct that is relevant to athlete success, behaviour and development. Cohesion is a multidimensional construct representing members' attraction to the group and their sense of unity on task and social matters (Carron et al., 1998). Cohesion has been positively associated with athletes' strong identification with their group (Bruner et al., 2014). For this reason, a strong shared social identity can be seen as a key ingredient for developing a strong collective sense of cohesion (Slater et al., 2020). Although individual sport athletes may not work together directly in competition to reach a collective objective, the amount of time spent working together in practice may create social bonds and unity within the team. For example, in a group of elite female swimmers, team affiliation and shared experiences with teammates were discussed by athletes as the most positive aspects of their swimming involvement (Hassell et al., 2010). In a study involving elite athletes from a range of individual sports, teammates were described among the main sources of motivation, teamwork, social comparison, and social facilitation (Evans et al., 2012). Interpersonal influence among athletes may also be shaped by team cohesion and competitiveness. Coaches may influence team cohesion through specific coaching strategies. For example, coaches of high-performance cross-country running teams engaged in distinct strategies to facilitate group integration on both task matters (i.e. goal-setting for training and competition, establishing clear roles among teammates) and social matters (i.e. recruiting athletes who would mesh well with existing members, organizing social events; Cormier et al., 2015). This suggests that despite the ostensively individual nature of many sports, both task and social cohesiveness may still play a vital role in the success of the athletes who take part in them. In the current study, we investigated how individual athletes' experiences were shaped by their involvement in an elite Nordic ski team over the course of a competitive season, focusing on the complex interplay of the multiple groups and resulting social identities. A complementary aim was to gain descriptive insight into the group processes and group states that unfolded over time in this elite sporting context. In this context, it is important to

note that humans are members of multiple groups concurrently and that different groups can gain and lose importance over time. Moreover, research in other fields has shown that the compatibility of a person's social identities is a predictor of perceived social support, adjustment and performance (Cheng et al., 2008; Iyer et al., 2009; Rosenthal et al., 2011) Recognizing the complex competitive social environment in which elite Nordic skiers train together but often become competitors, we therefore explore the compatibility of the skiers' Nordic ski team social identity with their other salient social groups (e.g. friends, families) in order to better understand the nuances of this social identity and its bearing on team dynamics.

Our qualitative study took a critical realist approach, which contends that although knowledge is acquired through subjective frames of reference, it is important that it be challenged and continually revised through scientific research (Bhaskar, 1978). A crucial element of critical realism is its emphasis on direct engagement with existing theory through the process of abduction (i.e. "inference or thought operation, implying that a particular phenomenon or event is interpreted from a set of general ideas or concepts"; Danermark, Ekström, Jakobsen, & Karlsson, 2002, p. 205) and theoretical retroduction. This means that critical realism often leverages existing knowledge – in this case, concerning the relevance of social identity and cohesion to sport settings – to advance or reconsider theory as it applies to the studied phenomena. More specifically, we used this qualitative approach combined with the participatory visual method of *social identity mapping* (SIM) to explore elite Nordic skiers' perceptions of team cohesiveness, as well as of their own social identities. Whereas interviews provide detailed and descriptive accounts of athletes' experiences, the SIM procedure provides a visual representation of each participant's social identities and diverse social lives. We also used the SIM as a springboard for semi-structured interviews. In this way, the use of SIM builds upon a rich tradition of qualitative research which has used "participatory", "arts-based", or "visual" methods to help participants represent their social contexts (e.g. via self-portraits or relational maps; Bagnoli, 2009) and reflect upon and describe their own experiences in sport (e.g. Kendellen & Camiré, 2020). In essence, then, the visualizations provide a meaningful basis for participant reflection and further interaction and communication between the researcher and participant to creatively explore the social phenomena being studied (Crilly et al., 2006; Gauntlett, 2007).

Method

Researcher positionality

As noted by Misener and Doherty (2009), "researcher positionality acknowledges the impact of the researchers' backgrounds, assumptions, and relationships with research participants and subject matter to provide more thoughtful and critical representation of ourselves within our research" (p. 466). The first author has personal experience with the elite Nordic ski team that participated in this study, having been a member of the team himself for two years in his past. The first author had both positive and negative experiences in his two years with the team. From a positive perspective, his time with the team provided him the experience of travelling around the country and the world to train and compete in new places, which he remembers fondly. During his second year with this team, however, his internal conflict of viewing teammates as his competitors came to a peak, which led him to leave that level of competition. His knowledge of, and relationship with, the team was helpful in facilitating participation, as well as providing insights while structuring the methods of this study. Given his history with the team, the first author knew some of the participants personally, which may have influenced their engagement in the study. As an example, the first author first met and started racing against, the divergent case 13 years before he conducted this study, and is still friends with him today. As the interviewer was once an athlete much like the participants, we acknowledge that there are both advantages (i.e. increased rapport with interviewees, higher levels of engagement) and disadvantages (e.g. participants may have assumed a shared understanding of certain topics/experiences and thus it was important to probe for specific details) afforded by such a position.

Participants

Following ethical approval, the coach of the Canadian National Team Development Centre ski team identified eight athletes with current or prior affiliation with the team to participate in the study. Of the eight athletes who were invited to participate, six ($N = 6$) consented to take part. Participants included three male athletes (P1, P2, P3; $M_{age} = 21.33$, $SD = 2.08$ years) and two female athletes (P4, P5); $M_{age} = 20.0$, $SD = 1.41$ years) currently on the team. In addition, we interviewed a former male member of the team, P6, who was several years older than current members but nonetheless continued to race competitively and occasionally train with the team. We purposefully recruited this participant to gain an alternative perspective. We considered this participant as a *divergent case* – that is, a case in which the experiences and perspective of one participant is noticeably distinct from the others (Strauss & Corbin, 2010). Given their membership of this prestigious team, coupled with Canadian National level racing experience, all six athletes are considered elite Nordic skiers.

Team context

The team consisted of 14 athletes (8 men, 6 women), 2 coaches (head coach, assistant coach), and an integrated support team consisting of a doctor, physiotherapist, chiropractor, strength coach, and sport psychologist. The athletes who come from all across Canada, spend ~240 days out of a year together, not including, any days they choose to spend time together outside of team-scheduled activities. Approximately 90% of the athletes live with teammates for social and practical reasons (e.g. similar schedules, proximity to training partners, similar lifestyles). In the off season (May – October), there are three team scheduled workouts. Training the other four days of the week is self-directed but athletes would often choose to train with one or two other team members for these workouts.

During the off-season there would also typically be 2–3 training camps, which are more intensive.

Procedure

Although critical realism does not prescribe a specific set of procedures or methods (e.g. Fletcher, 2017), we highlight below how design choices were guided by this orientation in our description of the procedures that were undertaken. We used two distinct but complementary methods to explore the group dynamics of an elite Nordic ski team. Through the use of oSIM (Bentley et al., 2020), as well as semi-structured interviews, we explored athletes' perceptions of social identity and team cohesion to gain insight into their significance and influence on elite Nordic skiers and their team. The present study is the first of its kind to apply SIM to a sports setting, allowing individuals to provide a visual representation of their own personal perceptions of their social identity. Prior to data collection, the first author conducted a pilot trial with a varsity Nordic skier. Following the completion of this pilot trial, the six participants who agreed to participate received an email in the week prior to their interview date containing a link to complete the SIM, as well as instructions on how to use it. The first portion of each interview was spent discussing the elements of the athlete's social identity map, before commencing the semi-structured interview questions pertaining to social identity and team cohesion. This protocol was followed at two time points over the course of the participants' competition season; the first taking place in the early phase of the season (T1; November/December), the second taking place about half way through the season (T2; February/March).

Social identity mapping

We used an online SIM tool (oSIM) to create a social identity map for participants (Bentley et al., 2020; see Figure 1 for an example and Appendix 1, the supplemental file for a detailed description). The SIM captures responses to a range of questions about participants' social identities, including the importance and positivity of each group as well as how representative a person feels as a member of each group, and displays this information visually (by changing the size, location, and colour scheme of the boxes). Participants can also connect each group to one another using different coloured lines to represent (in) compatibility.

Semi-structured interview guides

The first interview solicited demographic information about each participant before focusing on the main topic questions (see Appendix 1). Initial interviews lasted an average of 31 minutes, ranging from 22 to 47 minutes. Consistent with our critical realist stance, the interview guide was info rmed by existing theory and sought to understand the social conditions that shaped athletes' experiences. Questions were designed to gain insight into each participant's own thoughts about his/her social identity (e.g. In your years of experience as a member of a ski team, could you describe the feelings you have experienced in regards to being a member of [ski team name]?), as well as different aspects of his/her group experiences as a member of the ski team (e.g. Could you explain the similarities, or differences, in team cohesion and unity between the training season and competition season?). The second interview guide was adapted from the first set of interviews to reflect insights gained and to avoid redundancies (e.g. questions pertaining to skiing and racing background) within the questions (see Appendix 2). The second interview also explored potential changes in social identity and team cohesion from the first set of interviews, and potential factors associated with such changes across the race season. The second round of interviews ranged from 15 to 38 minutes. One question was added to the second interview guide pertaining to participants' intentions to reapply for team membership in the following season, in order to explore factors that may influence their decision. All interviews were conducted by

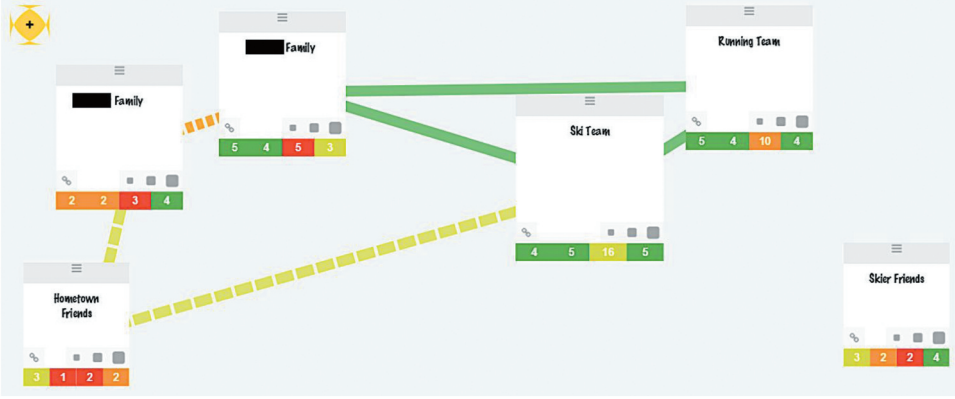

Figure 1. An example of *online social identity mapping*. This validated visual activity is used to facilitate people to identify the social group memberships that are psychologically meaningful to them, as well as key information about each group. The size of the boxes represents the importance of each group. The four ratings at the bottom of each box represent (1) the positivity of the group from 1 to 10, (2) the amount of support people receive from group members from 1 to 10, (3) the number of days in a typical month that one engages in activities related to each group membership from 0 to 30, and (4) how representative one perceives oneself to be of each group (from 1 to 10). The lines between groups are used to indicate the degree it is easy versus hard to be a member of each group. The colour scheme is a short hand to indicate very low (red), somewhat low (orange), somewhat high (light green) and high (green) ratings. Finally, participants can move the boxes around on the screen such that proximity represents similarity between groups.
For more details see the supplementary materials and (Bentley et al., 2020; Cruwys et al., 2016).

the first author using video conferencing software and were transcribed verbatim for analysis.

Data analysis

As there are no procedural guidelines for analysing data with critical realism as a guiding approach, we followed the thematic analysis protocols set out by Braun et al. (2017). All 12 interviews were transcribed by the lead author, totalling 92 pages of single-spaced text. Transcribing the interviews constituted the first phase of the analytical process – serving to familiarize the researchers with the data. This was followed by reading and re-reading the transcripts, searching for meaning and patterns within the data. NVivo10 software was used to help with the code generating process. The next phase involved generating initial codes by extracting meaningful segments of text. These initial codes were then organized into themes, grouping the text segments with related segments, which involved looking back into the transcripts to ensure that the context was not lost during this process. This involved going back and forth between the insights provided by the participants and the existing research. In critical realist terms, we sought to identify demi-regularities (i.e. shared experiences that constitute common tendencies) as well as experiences that uniquely stood out (Fletcher, 2017). Upon defining prominent themes, members of the research team (the 2nd and 5th authors) engaged in regular critical friend meetings. A conceptual discussion was held by the entire research team, to discuss the meanings derived from the dataset and the extent to which the themes were unique from each other and internally coherent. As critical realism acknowledges the importance of theory while recognizing its limitations for understanding social life, the final stage of analysis involved a back-and-forth process of considering how our data aligned with, conflicted, or expanded upon existing theoretical accounts of group dynamics (Fletcher, 2017). A structural analysis of the layout of each oSIM was used to identify differences between oSIMs at T1 and T2. Codes were used in place of participants' names to protect their identities (e.g. Male Participant 1 = $P1_M$).

Results

We identified five major themes relating to the emergent group processes and group states that athletes perceived as relevant to their experiences and performance: (1) social group memberships and identities, (2) presence of subgroups, (3) the ebb and flow of cohesion and conflict, (4) teammate influence, and (5) coach influence. In addition to the main themes, we present an alternative perspective offered by the athlete deemed a divergent case (Strauss & Corbin, 2010).

Social group memberships and identities

Three of the six participants ($P1_M$, $P2_M$, and $P3_M$) removed non-ski racing related social groups from their oSIM maps between the two time points, perhaps suggesting a more exclusive focus on skiing-related groups during competition season. During an interview at T2, one participant stated that " … during the summer … you have a lot more activities going on and you're not quite as busy, so definitely this time around … it [participant's oSIM] seemed like it revolved around skiing a little more" ($P2_M$). Despite the number of social groups remaining steady or increasing for two of the participants, they also portrayed a shift of their social focus onto skiing through the reduced size of non-skiing related boxes ($P4_F$), and the addition of ski racing-related social groups ($P6_M$). The remaining participant ($P5_F$) explained that his additional boxes (representing different social groups) at T2 did not reflect a change in his social settings, but an improved understanding of the purpose of the exercise. In discussing the oSIMs during the interviews, four participants ($P1_M$, $P2_M$, $P3_M$ and $P4_F$) explained that their social lives either revolve around skiing 12 months of the year, or that this is increasingly the case during race season. With the exception of one athlete, oSIM revealed that all of athletes became more exclusively focused on their social identity as a member of their skiing and racing team as the competitive season progressed. The subsequent results describe a range of group processes that unfolded over the course of the competitive season.

Cognitive centrality

Participants indicated their team membership had a strong presence in their mind on a regular basis. Many indicated that their team membership crossed their mind daily as a result of being engaged in daily team activities, such as team workouts. Athletes also described using their team membership to elevate their status within the skiing world. One participant explained that identifying with an elite training centre helps other skiers understand their level of achievement, as well as the level of commitment they devote to being a high-performance athlete: "To say that you're part of the training centre is something that shows what kind of level of skier you are" ($P4_F$). Athletes pointed out that with this status came the responsibility of being a role model for younger skiers, as well as the need to be mindful of one's public reputation. Participants also discussed team membership as a means of positively distinguishing themselves in the context of the non-skiing world by emphasizing their profession as high-performance athletes in Nordic skiing: "It's kind of like how people will ask you about your occupation and stuff, it is my occupation. Instead of being an electrician I was a skier, and a member of [team name]" ($P6_M$). Some participants explained how the degree to which they identified as a team member changed over time. Two participants explained that the frequency with which team membership crossed their mind decreased since their first year on the team. One of them indicated that numerous years on the team led to team membership feeling less important than in their earlier years with the team: "Having been involved in a training centre for quite a while now, it doesn't feel quite as important or high level to me" ($P1_M$).

Ingroup affect

Five of the six participants spoke of positive feelings regarding their membership in the team. These positive feelings included feelings of fun, pride, excitement, and strong sense of

community. Examples include "I'm really happy I'm on the team" ($P4_F$), as well as, "I still have a lot of positive feelings about [the team]" ($P6_M$). $P5_F$, the lone participant who did not speak to these positive feelings, indicated that although he initially shared such positive feelings, many of those feelings dissipated over his tenure on the team. When asked about feelings regarding the team, the only moments that stuck out to him were negative.

Ingroup ties

Participants conveyed that they felt a strong psychological connection to their teammates and group. All participants explained that their teammates are the people with whom they mostly, sometimes exclusively, socialize outside of training. As $P4_F$ noted "the people that are on this team are the people who I hang out with the most". Due to all of them being on essentially the same daily schedules, it becomes easiest to schedule outings or other social activities with teammates rather than with those on other schedules. One participant explained "more and more I've gravitated towards teammates just because um, it's a similar, similar lifestyle right, and … your calendar is very similar so it's a lot easier to do social events with teammates" ($P1_M$). Along similar lines, $P2_M$ stated "if I'm hanging out with people or going for lunch … it's usually with the people on the team, or a group of people related to the team".

Presence of subgroups

Elaborating on observations relating to ingroup ties, the majority of participants believed that everyone had positive social relationships with one another: "I would say overall … everyone gets along very well" ($P2_M$), as well as, "overall it's been really positive" ($P3_M$). Nevertheless, there were varying perspectives on this. Two participants described some fractures within the team. One, citing subgroups as a cause, explained that, "In terms of a social activity that that entire team did together without it being a team event, I can't really think of a single time this year that everyone … has been a part of it." ($P1_M$) The other participant explained the fractures as simply due to different parts of the team being in different parts of the world at certain times. Another participant made a distinction when reflecting on their teammates stating that, "there's people I consider my friends on the team and there's people I consider teammates on the team" ($P5_F$). All participants, however, did note the presence of social cohesion at least at certain time periods, if not over the full course of the year.

Several demographic factors were discussed in relation to the division of subgroups: "Yeah, sometimes there'd be subgroups … generally based on age … Or, gender too" ($P6_M$). Each participant acknowledged the presence of these subgroups; however, participants varied in the degree to which they viewed subgroups as having negative implications for team dynamics. One participant stated, "we have a good continuity of like young guys, medium guys and older guys, like everybody kind of mixes there. And guys and girls, you know, old young, everybody gets along, everybody's friends" ($P2_M$). In contrast, others noted that there was some conflict between these different subgroups:

> The older athletes can easily get irritated with the Juniors on the team. And there might be a little bit of conflict between the older boys and the younger boys. Quite a bit on the team, there's a lot of head-butting. ($P5_F$)

More evidence of this interpersonal strife exacerbated by subgroup formation was apparent in the following quote:

> [It's] a little more hostile amongst these different pockets on the team. It's not quite as much like a single team …. There is I would say some barriers between different uh, blocks of the team, where you don't see everyone socializing together." ($P1_M$)

The three main subgroups that were identified by participants were those of the Senior men, the Junior men, and the women (seemingly regardless of age). The biggest divide, however, seemed to be between genders, as highlighted in the following quotes:

> "Like the girls will have pizza nights and like things like that, that are outside of the team and the boys aren't invited, it's just the girls." ($P5_F$)

> "I don't hang out with a ton of the guys on our team." ($P4_F$)

Reasons for these subgroups are explained by $P3_M$, who stated, " … it depends who you're training with day to day, you find you're closest with them". Although this suggests that demographic characteristics (e.g. gender) may be important, it might also be the case that people closer in ability are more likely to train together.

The ebb and flow of cohesion and conflict

Whereas subgroups were established early-on in the season, participants described two situational factors that appeared to be catalysts for rising interpersonal tensions between teammates. Participants found that living with their teammates for an extended period of time, whether it be for a training camp or a race trip, often resulted in increased irritability and deteriorating inter-teammate relations: "I've definitely had points where you're kind of frustrated, you've been with the same people for so long … little things start to bother you … " ($P3_M$) It was further explained that this potential area of conflict surrounding team trips can be exaggerated during the race season when teammates change from being solely training partners to competitors as well. In the words of $P5_F$:

> I find that it's really easy to start like butting heads with other teammates when you're … spending so much time with them, you're always training with them, you're always eating with them, you're … staying in the same place and … I find that yeah in the winter it's definitely a little bit more challenging.

As illustrated by this quote, conflict may be more prevalent during the race season as a result of rivalries emerging between teammates and the frequency of extended team trips for races.

A second source of conflict pertained to the outcomes of important selection races. Participants explained that it can be difficult to navigate situations where some teammates achieve their season goal of qualifying for international competition when other team members fall short of that goal. One participant explained the significance of these races when they

stated, "When someone has a better race than you that means they're going on a race trip [international competition] and you're not." ($P4_F$) Participants articulated that these circumstances can create difficult social environments that can be difficult to emotionally manage. The emotions involved in not qualifying when other teammates do were explained by one participant when they reflected, "You're very happy for your teammates who [qualified], but also you're kind of … a little bummed." ($P3_M$) This area for potential conflict was further explained by $P6_M$: " … you feel proud for your teammates that make it on when you don't, and then … when your teammates don't make it on and you do, that's a pretty tough thing to try to juggle". Indeed, the lead author shared several personal experiences of the conflict associated with team selection, such as the pride when making the national team but also experiencing the difficulty of not qualifying and feeling some resentment towards a teammate qualifying.

Similar to how interpersonal tensions can rise over the course of the season and in response to specific events, athletes discussed how the training season appeared to be the time when task cohesion is at its highest, stemming from the lack of important competitions during this time period. During this time, participants explained that they are able to focus on their training and improvement as an athlete, and not worry about things like teammates beating them in a workout because that has no bearing on their competition results. As $P1_M$ put it:

> Everyone on the [team name] is quite competitive right, in nature, which is why we're pursuing higher performance sport. But in the summer, it's easier to let that take a back seat to … build a foundation for when the racing actually happens and so I think with that in mind you see people … if they have a bad day it doesn't necessarily take as big of a psychological toll cause like, it's easy to be like oh I've been training a lot, you know it doesn't matter this isn't when I'm competing, you just let it go so things stay a lot more positive and there is a lot more camaraderie.

Participants believed that the training season was the time to foster a strong team dynamic so that when it does become tested through the race season, it will be strong enough to withstand any difficult situations that may arise. These difficult situations during the race season can result from the within-team competition that is involved in cross country skiing – evident in $P1_M$'s observation that:

> As you get into the winter when day to day feelings and … results mean a lot more, for sure people are more on edge and … don't feel quite as much like a team … because, yeah, you are rivals and competitors. ($P1_M$)

The impact that team cohesion can have on the performance of athletes was discussed by a variety of participants. One observed that a team with a negative team atmosphere will rarely have anyone performing to their potential. In this instance, negative team atmosphere was characterized by a lack of encouragement, limited mutual support, and heightened stress and anxiety around competition. On the other hand, "when … a team of individuals is able to maintain a pretty positive overall team atmosphere … usually it will reflect good results." ($P1_M$). Other participants explained that it is important to view one's own success, and that of their teammates, as the team's success, and view the success of the team as a top priority. This sentiment was captured by $P2_M$, " … as a centre [team] and as athletes we're gonna do better when we work together and if we're really trying to do well together, so the success of my teammates is my success too. Together we can do really well." Although there are no team competitions at this level of Nordic skiing, athletes believed this mentality helped to maintain a positive team atmosphere and ultimately, pave the way towards more success in races.

Teammate influence

Despite the individual nature of competition in Nordic skiing, the influence which one teammate can have on the mindset and atmosphere among the entire team was seen to be quite substantial both in and out of competition. In this vein, participants noted that if one teammate causes tension between only a couple of the athletes on the team, that tension can then spread through the entire team, exemplifying the impact that one individual can have on the group. When discussing team dynamics in competition periods, $P5_F$ explained that the mindset of one athlete going into a race can have an effect on the mindsets of others as well:

> We all look up to [teammate] and so like when we see [teammate]'s stressed out and not racing as well as [teammate] can it kinda … well it affected me and it probably did the other [teammates] as well. So I don't know it's just kinda like, everyone's … everyone's races kinda affected everyone I'd say in a way.

As another example of how teammates can influence each other's mindset was proved by $P5_F$'s observation that, "I was very negative, and so was [teammate] so we both brought each other down I'd say because we were both not being very positive". Such examples suggest that both verbal and non-verbal actions can have equally significant impacts on the rest of the team.

On a more individual level, it can be difficult for athletes to know how to view their teammates on race day, when they are both teammates and rivals. One participant offered insight into this challenge, explaining that how one they perceived their teammates on race day dictated how they interact with them: " … once people start looking at each other as a, like another bib, another competitor, it starts to get a bit more negative" ($P1_M$). This participant also pointed to the significance of viewing one's teammates/competitors in a positive light on race day when they state that, " … having a happy, positive relationship with your teammates and them reflecting that on you is for sure going to make you feel better and be more relaxed." These examples highlight the potential impact that an individual's mindset and behaviours can have on both their own performance and that of their teammates, particularly given athletes' social identities as group members.

Coach influence

Participants explained that the coach may influence team dynamics in several ways. Given the potential interpersonal conflict and dysfunction that can arise from spending too much time together, $P5_F$ explained that the coach strategically

scheduled team practices a few days per week throughout the training season. The rationale for this tactic was to allow athletes to lead lives outside of their training, or to train with only those they wish to train with on the other days of the week, which this participant believed to be very beneficial. This coaching strategy was described by a skier: "There was a lot more team training as a whole, like every day on just regular training days .... But more frequently now, just regular zone 1 training days are self-supported. You do what you want. If you want to train from the door, or go somewhere else, which I have found to be beneficial." ($P1_M$)

In addition to flexibility in team and individual training sessions, several participants spoke of the value in having team functions or activities that were either partially – or entirely – removed from the sport of skiing, in an effort to shift the focus from ski training to enjoyment and building camaraderie. Examples provided by the participants of such activities included adventure-based workouts, team barbeques, and frequent group discussions/team meetings. Team meetings the night before races were also noted by most participants as being one of the best ways to form and maintain team cohesion throughout the race season: "a team meeting as a whole the night before races definitely, when you go over things as a team, talk about tactics as a team, it definitely builds more of a team mentality." ($P2_M$)

In addition to the training structure and activities set out by the coach, a collectively acknowledged set of team policies was also described as beneficial in fostering strong cohesion within the team. In an individual sport like Nordic skiing, different athletes will have different results on any given day, so managing one's emotions when surrounded by a number of teammates can be difficult at times. Emphasizing this issue, $P2_M$ observed:

> If you haven't done well, if people are not happy if things haven't gone well, that's fine you can be upset about it but you're not allowed – like our team rule is that you're not allowed to let that influence the way you deal with other people and you're not allowed to make it someone else's problem.

Other participants reiterated this idea of not letting their own emotions dictate how they treat their teammates, highlighting things to avoid such as gloating or moping around other teammates. Along these lines, $P4_F$ reflected on the significance of creating team policies early in the year:

> At the beginning of the year when we're a new team I think our coaches definitely really try and constantly reiterate the fact that we are one team and our actions can affect the feelings of our teammates.

Creating an environment early where group members recognized the interdependent nature of their relationships with one another was reported to be an integral component to developing and maintaining feelings of unity throughout the race season.

Alternative perspectives

$P6_M$, the divergent case in our sample, provided insights into the social dynamics of elite Nordic ski racing which were not echoed by other participants. The first related to some of the pros and cons of being a team member, reflecting his unique perspective of having been both inside and outside the group:

> The team has its ups and downs, it may affect you. You try to ride the ups with the team and then you distance yourself from the downs ... I found that last season, and starting this season, being on my own has brought a little bit more consistency to social aspects of my racing. It's just myself or a very small group of people; there's not a whole lot of influence ... I've found I've been able to improve my approach to racing a little bit better through the consistency of not having those big peaks and troughs that go along with ... being on a team that has its good times and bad times.

The peaks and troughs were not explicitly mentioned by the current members of the team; however, one could imagine that such an influence would exist in any type of sports team. In further discussion $P6_M$ reflected on the advantages of being on a team, as well as on the disadvantages:

> There's an important balance you need to be able to strike between doing what's important for yourself, but then also having the team atmosphere there to get the benefits out of having faster training partners or, coaching or a team atmosphere that's supportive or helpful.

An example was provided of an athlete who is "getting the best of both worlds" – being able to look after their own needs while still getting the benefits of having a team, and who is currently one of the top Nordic skiers in the world. $P6_M$ spoke of a Norwegian athlete (Johannes Hoesflot Klaebo) who won many international races this season including multiple Olympic gold medals, while being a member of the Norwegian National Ski Team, but doing much of his training on his own, "He doesn't train with the team very often. He's often training solo. ... It's kind of interesting to see that one of the best skiers in the world is often training solo and only dabbling with the team environment."

Discussion

With an emphasis on understanding athletes' perceptions of social identity and team cohesion, our findings provide insight into the group dynamics involved in a team of elite Nordic skiers. Using two complementary methods (specifically, SIM and semi-structured interviews), we gained insight into a range of social constructs and group processes that are pertinent to athletes' experiences over the course of a competitive season in an elite Nordic ski team. The group experiences of these elite athletes were depicted in core themes pertaining to social group memberships and identities, cohesion, subgroups, sources of conflict, and teammate and coach influence on the group.

To our knowledge, the current study is the first to use the SIM in a sport setting, building upon previous research that has used the SIM in other populations (e.g. community members, Cruwys et al., 2016; individuals recovering from addiction, Haslam et al., 2016; ex-prisoners, Kyprianides et al., 2019). Our goal was to connect the findings from the maps created by our participants to existing research in social identity and sport. The first pattern that emerged in the social identity maps was the trend of diminishing numbers of social groups with which athletes identify as they move from the training season into the competition season. Given the high priority of ski racing in

these athletes' lives, the reduction of time and thought put into non-skiing related social circles across time might reflect the need to spend more time both physically and mentally preparing for their competitions. The increase in time spent travelling during competition season would also contribute to the availability of an athlete to engage in activities with other social groups.

Looking deeper into participants' social identities, it became evident that much of their self-definition stemmed from their ski team membership. McAdams's (1990) life story framework suggests that past life experiences strongly shape future conceptions of the self. Given the proportion of these athletes' lives dedicated to their sport, it is perhaps unsurprising that their self-concept is focused on their identity as skiers and members of their ski team. The prevalence of group identification, along with the positive affect towards the group noted by the participants, supports previous evidence of a positive relationship between ingroup positivity and group identification (Kessler & Hollbach, 2005). Our findings also support Kessler and Hollbach's finding that intensity of emotions determines the degree of change in group identification (see also Wolf et al., 2020). One participant in particular described a decline in ingroup affect and group identification; however, the temporal sequence of these changes is unclear. As it pertains to connectedness within the team, participants explained that strong ingroup ties result from common individual goals (e.g. making Team Canada), as well as the shared experiences associated with training and travelling together (i.e. common fate; see Drury et al., 2009).

One of the predominant themes was the presence and influence of subgroups within the team. This supports research on subgroups in sport suggesting that the formation of cliques or subgroups in sport is common (Martin et al., 2016a). One distinction between the three subgroups described by the participants is that they were also the various different racing categories for the athletes (i.e. Junior, Senior; Men, Women). Given that training groups in Nordic skiing often form naturally based upon speed and ability, these training groups may have provided the impetus for subgroup formation outside of training due to the time spent together and perceived similarity. Two different subgroups formed between the Junior and Senior Men, while the Junior and Senior Women appear to be within the same subgroup. Although we can only speculate as to why these subgroups emerged, the results may be an indication of demographic faultlines within the team that serve to increase the comparative fit of distinct subgroups (Oakes et al., 1994). Along these lines, research has shown that subgroups can form around demographic characteristics such as gender and ability when these are subjectively meaningful for group members and consequential for group outcomes (Lau & Murnighan, 2005).

Several participants explained that they believed that team cohesiveness was important for achieving optimal performance. This aligns with qualitative work with coaches of elite cross-country running teams (Cormier et al., 2015), as well as further supporting the cohesion-performance relationship (Carron et al., 2002). Building on Cormier's connection between cohesion and satisfaction, our results suggest that cohesion may facilitate higher levels of enjoyment in the overall experience of being a member of the team. Anecdotally, athlete retention being a significant issue in elite Nordic skiing in Canada, fostering cohesion through deliberate team building activities may help athletes stay positive and motivated to continue pursuing high performance Nordic skiing.

Athletes in the current study believed that task and social cohesion tended to be stronger in the training season than during the competition season. The absence of competition in the off-season enabled the athletes to focus on task mastery and development rather than outperforming others. From a theoretical perspective, these findings align with observations that motivational climate has an impact on both individual and team psycho-bio-social states and performance (Harwood et al., 2015). During the competitive season, athletes on the team competed directly with one another and ascribed importance to outperforming teammates (i.e. ego orientation). At other times during the season, however, athletes focused less on intra-team competition and more on self-improvement (i.e. task orientation). The perceived change in cohesion throughout the year is also consistent with research indicating that high levels of intra-team competitiveness may, for some athletes, undermine feelings of closeness and cohesion (Evans et al., 2013). Overall, these intricate team dynamics within the sport of Nordic skiing support calls for further research into the dynamics involved in individual sport environments, such as rowing and cross-country running, which may also have a similar "fundamental shift" in the competitive season (Evans et al., 2012).

Given the individual nature of competition in Nordic skiing, one might assume this is a context rife with conflict between teammates surrounding competition. Many participants in the present study, however, alluded to their collective goal of remaining positive towards each other throughout their competition season. These findings are supported by other work indicating that athletes may acknowledge competition between team members outside of the competition season but then avoid discussing it during their competitive seasons, in order to preserve the cohesion within the team (Evans et al., 2013). Nevertheless, our findings illustrate two particular sources of social conflict within the team. One of these related to team trips where athletes were required to live in close quarters with their teammates for extended periods. The fatigue induced by the exhaustive training and racing during these trips led to a decreased tolerance of the behaviours of some teammates. Research into the effects of training camp duration on team cohesion is scarce, but one possible explanation is that the social divide between subgroups outside of training and competition incites further conflict, especially between groups. The second area of conflict identified by the participants was the emotions surrounding high stakes selection races. Participants explained the difficulty in handling situations and emotions where one teammate achieves a major season goal while another teammate does not can lead to conflict between teammates if handled poorly (see also Tamminen et al., 2016; Wolf et al., 2020). Evans et al. (2013) work suggests that cohesion may help to buffer or protect against some of the challenges that arise when competing against teammates. With the outcomes of these selection races having significant career development implications, the magnitude of these races and

the resulting emotions could represent one extreme of this proposed gradient.

Findings from the present study suggest that a single team member, whether it is an athlete or coach, has the power to influence the team dynamics within the entire team. This has been observed in relation to injury events, where a single athlete can have a cascading effect on a range of group processes within a basketball team (Surya et al., 2015). Our findings extend this work by highlighting the point that despite the lack of task interdependence among teammates in Nordic skiing, the behaviours of a single team member can still disrupt or enhance the social dynamics within the group through identity-based contagion processes. More specifcsally, participants explained that one athlete having a negative mindset and projecting that towards their teammates can influence both team cohesion and individual mindsets, and thereby individual performance. Participants also noted that the coach can play an integral role in fostering team cohesion throughout the year by implementing specific tactics, supporting research on the range of ways coaches may promote (or undermine) team cohesion (Turman, 2003). In this regard, helping athletes to see themselves as one unified team and sharing in each other's success was noted to benefit to the dynamics within the team, and can be seen to be an example of what Haslam et al. (2011) refer to as *identity entrepreneurship* (for evidence of its impact in sport and exercise contexts, see Steffens et al., 2019; Stevens et al., 2019). The current findings are also consistent with work indicating that the setting and monitoring of team goals, as well as the encouragement of team social events are effective ways to foster strong team cohesion (Cormier et al., 2015).

One participant in this study was a divergent case, in that, unlike other participants, he was not a current member of the team. This participant explained that training outside of a team environment improved his approach to racing as it meant that he did not have to experience the ups and downs of being a member of an elite Nordic ski team. The explanation is supported by theoretical work on fundamental social motives (Neel et al., 2016) which argues that individuals differ in the extent to which they desire independence from others. Anecdotal reports from one of the top Nordic skiers in the world – Johannes Hoesflot Klaebo – further support this general idea. Klaebo (2017) has employed an integrated approach, completing much of his training as an individual to focus on his own personal needs, while gaining the benefits of travelling and racing as a member of his nation's National Ski Team. The fact that he has won numerous gold medals at Olympic and World Cup races suggests that this can be a successful approach to individual sport for some athletes, and this is another issue that warrants further research.

Limitations

Several limitations are worth noting. The head coach of the team chose which athletes would be permitted to participate in this study. While this may be inconsequential, the coach may have had preferences about which athletes he wanted to be provide information about the team's dynamics, and which he did not. For reasons that were not explained to the research team, the most senior athletes on the team were not included in this process. We acknowledge that the coaches' purposeful selection process to not include the most tenured athletes on the team may have implications on the totality of the athletes' perceptions of the team environment.

An additional limitation was the inexperience of the participants when they completed their first oSIM. Multiple participants explained the reason for differences between their oSIMs at T1 and T2 was simply a better understanding of all of the features of the programme at T2. A final limitation is the focus on a single club within Canada. Given the small number of participants it is clearly the case that athletes' experiences should not be construed as representing the social dynamics that unfold within all Nordic ski teams (or sporting teams more generally).

Future research

Further research should consider the more granular classification of individual sport based upon types of interdependence (i.e. collective, cooperative, contrient, independent) as outlined by Evans, Eys et al. (2013). As noted by Jones and Wallace (2005), developing knowledge-for-understanding is an important first step prior to practical prescription. A better understanding of the benefits and challenges of individual sport team experiences is thus required to enhance the practical implications of future research with a view to developing a more productive athlete development infrastructure and paving the way for athletes to achieve their potential in individual high-performance sport. One direction for future research would be to investigate the interplay between social identity, competition, and conflict in individual sports teams. Further research into the impact which subgroups have on team cohesion and performance is also needed to establish whether subgroup interventions could be beneficial to the overall well-being of a sports team and its members. Finally, further research is needed to better understand the impact of team members on the day-to-day mindset and enjoyment of their teammates in contrient sports (i.e. sports where no task interdependence is involved, and group members directly compete against one another in competition) as well as the value of identity leadership interventions to target social identity (Mertens et al., 2020; Slater & Barker, 2019).

Conclusion

The current findings provide insight into how individual athletes' experiences were shaped by their involvement in an elite Nordic ski team over the course of a competitive season. Athletes described the changing nature of their relationship with teammates and the group as a whole as they progressed from training sessions early in the season to major competitions.

In this context, athletes described the various roles which teammates can play in their development, enjoyment, and performance, but also the tensions that can arise as teammates become rivals at elite levels of competition. Overall, though, our results point to the social and performance benefits of having a cohesive and unified team, even in a sport which is individual in nature. The findings also highlight the significance of the coach's role in fostering strong team dynamics (i.e. identity entrepreneurship) and in allowing athletes to feel

that they are more than just a bib.

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Appendices

Appendix A Mapping your Social World

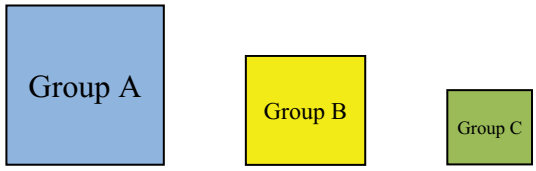
A. Understanding Your Groups

1. Identifying your groups

Please think about **all the groups that you belong to**. These groups can take **any form**, for example, they could be broad opinion-based or demographic groups (e.g. feminist; Australian); leisure or social groups (e.g. book group or gardening group); community groups (e.g. church group); sporting groups (e.g. rugby or tennis club); work groups (e.g. sales team); professional groups (e.g. trade union); or any others you can think of.

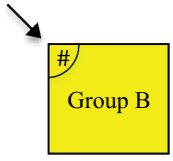
2. How important is each group to you?

Now, please **write down the name of each group** on a separate post-it note according to how important each group is to you. Please write down the name of each very important group on a **large** post-it note, the name of each moderately important group on a separate **medium**-sized post-it note, and the name of each less important group on a separate **small** post-it note. Chose colours as you like.



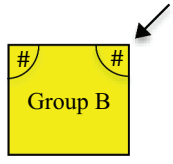
3. How positive do you feel about being a member of each group?

On a scale ranging from 1 (not at all positive) to 10 (very positive), please indicate the extent to which you feel positive about being a member of each group in the **top left corner** of each post-it.



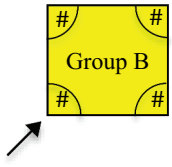
4. In a typical month, how many days would you engage in activities related to each group?

Please indicate the **number of days** in a typical month that you engage in activities related to each group (raging from 0 to 30 days). Write this in the **top right corner** of each post-it.



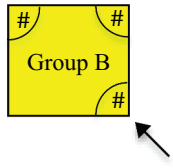
5. For how many years have you been a member of each group?

Please indicate the **number of years** that you have belonged to each group in the **bottom left corner** of each post-it (you can also use a decimal; e.g. if you have belonged to a particular group for 6 months, it would be 0.5). See Figure below for an illustration.



6. How representative are you of the group as a whole?

On a scale ranging from 1 (not at all) to 10 (very well), please indicate the extent to which you feel you are representative of the group (i.e. exemplify what it means to be a member of the group) in the **bottom right corner** of each post-it.



B. Mapping your Groups in Relation to Each Other

7. How different are the groups from each other?

Please arrange your groups on the provided sheet such that the **distance between the groups** indicates **how different the groups** are from each other. If two groups are very different from each other (e.g. they do different things, it feels different being a member of each, they have different members), place these far from each other on the provided sheet. If two groups are very similar to each other, place these close to each other.

For example, if Group B and Group C are very similar, place these close to each as shown below:

For example, if Group B and Group C are very different, place these far from each other as shown below:

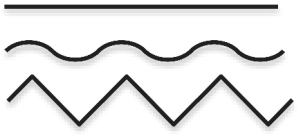
8. How easy or difficult is it to be a member of your groups at the same time?

Please indicate how easy or difficult it is to be a member of two different groups (e.g. as a member of your chess club, it might be very easy to be a member of your family but not easy at all to be a member of your rugby club). As shown below, if it is very easy, please connect two groups by a **straight** line. If it is moderately easy, please connect two groups by a **wavy** line. If it is not at all easy, please connect two groups by a **jagged** line. See illustrations below:

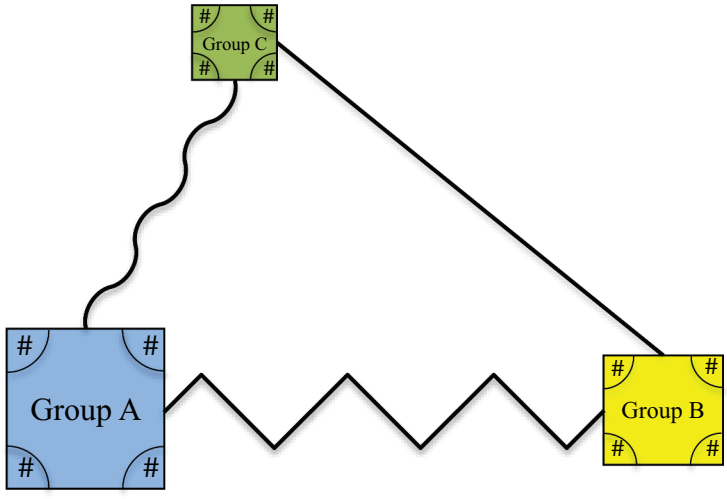
very easy:

moderately easy:

not at all easy:



See Figure below that shows how to connect your groups:



You now are ready to complete your social map.

Appendix 2 Semi-Structured Interview Guide for Time Point 1

Introductory Questions:

1) To begin, could you please provide me with some information about your skiing and racing background?

Key Questions:

2) Could you please describe your experience in creating your social identity map? Did the experience make you aware of anything that you hadn't thought of before? Please explain.
3) I am interested in the size and connections of your NTDC box. Could you please explain its significance compared to other boxes on your map, as well as the connection it has to other boxes?
4) I am going to begin by providing you with a brief description of social identity to ensure we are both working with a similar definition. Social identity is the identity formed by an individual through membership in groups. To put it another way, it suggests that peoples' perceptions of themselves are influenced by the groups with which they associate.

Can I clarify anything for you before we continue?

5) Among athletes involved in team sports, such as volleyball or football, it is common to see extremely strong senses of team identity, stemming from the need to rely on each other for optimal performance in competition. In individual sports however, success by one teammate does not necessarily have the same impact on the success of another. With this in mind, could you discuss your thoughts or perceptions of team identity among your team?
6) If I were to ask you to think about your team as a whole right now, how would you describe the level of unity of the team?
7) We've discussed social identity broadly, but it can be broken down into three dimensions. The first is cognitive centrality, which can be defined as the frequency with which the group comes to mind, as well as the importance of the group to self-definition. Could you talk about how being a member of this team might influence your perception of yourself, both as a skier and a person?
8) The second dimension of social identity is Ingroup Affect, which is defined by the specific emotions or feelings that arise as a result of group membership. In your years of experience as a member of a ski team, could you describe the feelings you have experienced in regards to being a member of NTDC?
9) The third and final dimension of social identity is Ingroup Ties, which is defined as the extent to which group members feel stuck to or a part of certain social groups. In your day to day life, could you tell me about how often you engage in non-NTDC related activities with your teammates vs non-teammates?
10) Discuss your team's dynamics in activities outside of your training and coach sanctioned activities. How often does the team socialize outside of team sanctioned events? Can you provide examples?
11) Discuss the role of the "team" on race day in the context of teammates. Being an individual sport, one may assume each athlete is solely concerned with their own needs on race day. Could you provide your own personal thoughts about this?
12) Training with the same group of athletes for an 8 month off season must build a certain level of camaraderie within the team. Could you explain the similarities, or differences, in team cohesion and unity between the training season and competition season?
13) In your experience with the variety of coaches you have had to date, could you explain any methods your coaches have used in order to foster strong relationships among you and your fellow teammates?
14) If you were to be the coach of NTDC or a similar team, how would you go about fostering strong relationships among your athletes?
15) As of now, I have asked all my questions. Is there anything you would like to add regarding anything we have discussed today?

Appendix 2 Semi-Structured Interview Guide for Time Point 2

1) Could you please describe your experience of creating this second social identity map? Did anything jump out at you, or did anything cross your mind during this experience that was different from when you created your first map?
2) Could you discuss the size of your NTDC box in comparison to the other boxes on your map? Does this box have the same significance in your life compared to when we last spoke? Please explain.
3) How would you describe the level of unity or cohesiveness within the team right now?
   Has it changed since we last spoke? In what ways?
4) Could you discuss the amount of time you've been spending with the team versus not with the team since our meeting in December?
   More time? Less time? By choice? Due to team obligations?
5) As you may recall from our last interview, social identity can be broken down into three dimensions. The first we discussed is cognitive centrality, which can be defined as the frequency with which the group comes to mind, as well as the importance of the group to self-definition. Over the past few weeks, how often would you say your membership with NTDC crosses your mind? Or to put it another way, how strongly do you feel you identify with NTDC right now?
6) The second dimension of social identity which we discussed last time was ingroup affect, or the specific emotions or feelings which arise in you as a result of your membership with the group. Could you please discuss what feelings or emotions would you associate with your membership with NTDC right now? How has that changed since we last spoke in December?
7) The third dimension of social identity is ingroup ties, or the extent to which group members feel stuck to or a part of certain social groups. Could you discuss how close or connected you feel to your teammates right now? How does this compare to when we last spoke?
8) How did Trials go for the team this year? How would you describe the cohesiveness within the team over those several days of racing?
9) Could you discuss the role of the team, if any, on race day in the context of your teammates?
10) Since we last spoke, can you please describe if your coach has done anything specifically to promote or facilitate team cohesion or unity? Please explain.
11) Looking ahead to the future, do you intend to reapply to NTDC next year? Why or why not?
12) Do you have any final thoughts regarding your membership with the team, or the current level of cohesion within the team, and how those two things may differ now from when we last spoke in December?
13) I have now asked all my questions. Is there anything you would like to add regarding anything we have discussed today?