An Empowering Climate as a Protective Factor against Sexual Violence in Sport?

Jeannine Ohlert 1,2,3,*, Helena Schmitz 2, Alina Schäfer-Pels 3 and Marc Allroggen 3

1 The German Research Center for Elite Sport Cologne—Momentum, German Sport University Cologne, 50933 Cologne, Germany
2 Institute of Psychology, German Sport University Cologne, 50933 Cologne, Germany; h.schmitz@dshs-koeln.de
3 Department of Child and Adolescent Psychiatry/Psychotherapy, University Hospital Ulm, 89075 Ulm, Germany; alina.schaefer-pels@uniklinik-ulm.de (A.S.-P.); marc.allroggen@uniklinik-ulm.de (M.A.)
* Correspondence: j.ohlert@dshs-koeln.de; Tel.: +49-221-4982-8728

Abstract: Background: From qualitative studies with survivors of sexual violence, it is known that two important risk factors for sexual violence are unequal power relations and strong hierarchies; the concept of an empowering climate works against these risk factors and might thus serve as a factor in preventing experiences of sexual violence among athletes. The aim of the current study was to examine the relationship between an empowering climate within a sport group and experiences of sexual violence. Methods: In total, 644 athletes took part in an online survey measuring their perceptions of the empowering climate within their training group and their observations and experiences of sexual violence within the same group. MANOVAs were used to examine differences in perception of the empowering climate between those athletes who had observed or experienced sexual violence and those who had not. Results: The results reveal that athletes who had experienced or observed sexual violence rated the empowering climate subfactors within their training group as lower and the disempowering climate subfactors as higher. Conclusions: This study supports findings from prior qualitative studies and hints that a climate high in empowerment and low in disempowerment might be a protective factor against sexual violence in sport groups.

Keywords: sexual violence; interpersonal violence; empowering climate; disempowering climate; motivational climate; power relations; hierarchy; elite sport

1. Introduction

Sexual violence in sport has been a topic of focused research since the early 1990s, but it was brought to public attention again by the allegations against USA Gymnastics team doctor Larry Nassar in 2016. Several studies have documented that sexual violence occurs in many (presumably all) countries, especially in elite sport (e.g., Hartill et al. 2021; Ohlert et al. 2018; Parent et al. 2016; Vertommen et al. 2016). Thus, an important mission for researchers is to examine protective factors against sexual and interpersonal violence in sport.

From qualitative studies with survivors of sexual violence, it is known that two important risk factors for sexual violence are unequal power relations and strong hierarchies (e.g., Roberts et al. 2020). The concept of an empowering coach-created motivational climate stems from motivational psychology and describes a specific coaching style with the original aim of fostering intrinsic motivation and fun in sport and physical education (Duda and Appleton 2016). An empowering motivational climate is characterized by (among other attributes) a distribution of power between coaches and athletes (Duda and Appleton 2016); therefore, it might be a protective factor against sexual and interpersonal violence in sport.
Thus, the aim of the current study was to examine the relationship between an empowering motivational climate and athletes’ experiences of sexual violence.

Incorporating diverse definitions and operationalizations of violence, Parent and Fortier (2018) postulated a general classification of violence against athletes and discussed its manifestations. According to the authors, athlete-directed violence can be categorized into interpersonal violence, self-directed violence, and institutional violence (World Health Organization 2002). Interpersonal violence, in particular, can be expressed in the form of sexual, psychological, and physical violence, as well as neglect (Parent and Fortier 2018). The present study focuses on sexual violence in a broad sense, which “is usually used as an umbrella term” (Rulofs et al. 2019, p. 271) for various behaviors that range from sexual situations without body contact (such as sexist remarks or messages with sexual content) to transgressive behaviors (e.g., invading one’s space or touches that make someone feel uncomfortable) or sexual violence with body contact (for example, nonconsensual kisses, sexual touches, and penetrative sex; Jud 2015). Therefore, only the term “sexual violence” will be used in this paper.

In recent years, an increasing number of studies have investigated the prevalence of sexual violence in sport in diverse countries. Depending on the form, intensity, and measures of sexual violence, the prevalence rates vary and might not be comparable. A comprehensive study revealed that more than one-third of 1665 elite athletes (31%) from Germany, the Netherlands, and Belgium (Flanders) had experienced some form of sexual violence in organizational sport (Ohlert et al. 2020). A recent European project reported similar findings. Sexual violence without body contact had been experienced by 35% of 10,302 individuals, whereas 20% of those individuals reported having experienced sexual violence with body contact in connection to sport (Hartill et al. 2021). Canadian persons affected by sexual violence with body contact revealed that their coach was the perpetrator in 5.3% of cases (Parent et al. 2016). However, Bjørnseth and Szabo (2018), Hartill et al. (2021), and Vertommen et al. (2016) identified that not only coaches (around 20%) but, even more so, peer athletes (around 45%) are potential perpetrators of sexual violence.

As a result of the increasing awareness of high prevalence rates, sport organizations, child protective services, and governing bodies have all become concerned with the issue of sexual violence in sport (Parent and Fortier 2018). A growing number of researchers are addressing the topic of interpersonal and sexual violence with the aim of identifying risk factors and, ultimately, facilitating preventive actions against it (Brackenridge and Fasting 2002). Parent and Fortier (2018) differentiate between individual, relational, organizational, and sociocultural risk factors of sexual violence in sport. The IOC Medical Commission Expert Panel’s definition of sexually violent behavior indicates that relational factors, in particular, are associated, as sexual violence is “based upon an abuse of power and trust” (Ljungqvist et al. 2007, p. 3). Qualitative research confirms that asymmetric and abusive power relations (Brackenridge and Fasting 2005; Gaedicke et al. 2021; Roberts et al. 2020), as well as dysfunctional relationships (Brackenridge 2001), may contribute to the occurrence of sexual violence in sport. A second risk factor is the intentional physical and psychological isolation of the affected person from their social support network (Roberts et al. 2020). Isolation leads to a stronger dependency on the offender and prevents observation by bystanders, as well as disclosure (Roberts et al. 2020). On an organizational and sociocultural level, strong hierarchies and norms that tolerate dominant and abusive behavior increase the conformity of athletes to those norms (Roberts et al. 2020) and force them to shift their own boundaries (Parent and Fortier 2018). However, quantitative studies are still needed to support these qualitative findings.
The social environment created by sport, as well as an imbalance and abuse of power, have been repeatedly mentioned as risk factors for sexual violence in sport (Parent and Fortier 2018). Hence, concepts that focus on social environments, the empowerment of athletes, and on deemphasizing hierarchies in teams may have a promising role in preventing sexual violence in sport. One of these concepts, which stems from psychological research on intrinsic motivation in sport, is the idea of an empowering (versus a disempowering) motivational climate that is created by the coach (Duda and Appleton 2016). This type of climate intends to interfere with power imbalances by embracing coach-created, “task-involving, autonomy supportive, and socially supportive features” (Duda et al. 2017, p. 85) in accordance with the tenets of two motivational theories, the achievement goal theory (AGT; Ames 1992; Nicholls 1989) and self-determination theory (SDT; Deci and Ryan 1985, 2000).

AGT (Ames 1992; Nicholls 1989) addresses differences among individual definitions and evaluations of achievement motivation. According to the authors, either ego- or task-involving criteria can be used as a reference for judging and interpreting one’s own achievement-related performance. Ego-involving criteria utilize the demonstration of one’s own superiority as a reference for subjective success and competence. Outperforming others and possessing superior levels of abilities are evaluated as success and high competence. However, task-involving criteria focus on exerting effort, learning, witnessing task mastery, and experiencing personal improvement. Regarding the development of achievement of goals (both ego- and task-involving), AGT places specific emphasis on the social environment and coach-created motivational climates (Ames 1992; Duda and Balaguer 2007). Coach-created motivational climates comprise interactions between coaches and their athletes in the form of feedback, evaluation of performance, and response to performance (Duda et al. 2017). Strongly task-involving coach behaviors predict positive outcomes in youth athletes, for example, higher values of intrinsic motivation, well-being, and a stronger intention to stay on the team (Alvarez et al. 2012; Reinboth and Duda 2006). On the other hand, a motivational climate that is mainly ego-involving has a negative impact on youth athletes, as evidenced by higher dropout rates, higher rates of performance anxiety, and more conflicts among athletes (Duda and Balaguer 2007; Ntoumanis et al. 2012).

The influence of coach behaviors on athletes can be further understood and optimized through application of SDT (Ryan and Deci 2017). This theory (Deci and Ryan 1985, 2000) defines three basic psychological needs that every individual aims to satisfy. The need for autonomy describes the feeling of being able to self-organize and regulate one’s own behavior. The need for competence contains the perception of meeting the demands of a task and feeling effective. Finally, the need for relatedness refers to the desire to engage in interaction with, be connected to, and care for others (Baumeister and Leary 1995). Studies have revealed that these three basic psychological needs must be nourished and satisfied in order for athletes to experience well-being (Balaguer et al. 2012) and motivation in sport (Balaguer et al. 2008). The social environment created by significant others, e.g., the coach, is also a key determinant in SDT (Ryan and Deci 2017). Hence, autonomy-supportive, controlling, and socially supportive coach behaviors are all, from an SDT perspective, significant aspects with respect to the establishment of motivational climates (Duda et al. 2017). Uniting key features of both theories, Duda and Appleton (2016) proposed the conceptualization of a coach-created empowering climate. An empowering climate, therefore, addresses the satisfaction of all three basic psychological needs of SDT and also includes task-involving features of AGT in order to increase intrinsic motivation, well-being, and optimal functioning (Duda et al. 2017). On the other hand, a disempowering climate focuses on an ego-oriented climate and control, factors that foster unequal power relations and hierarchies within a sport group. However, it is possible for a coach to use elements of both kinds of climates within their sport group (Duda and Appleton 2016).
Supporting the conceptualization of an empowering climate, a task-involving motivational climate is positively related to feelings of competence, autonomy, and relatedness in athletes (Reinboth and Duda 2006). Motivational climate research has revealed that positive consequences and motivational processes result from autonomy-supportive, socially supportive, and task-involving motivational climates. Duda and Balaguer (2007) discovered an association between motivational outcomes and an increase in autonomy-supportive coach behaviors, and research in youth sport also supports an increase in sport participation and motivation through socially supportive coach behaviors (Sheridan et al. 2014). Task-involving motivational climates, as observed within an empowering climate, increase orientation toward task goals, encouraging athletes to focus on trying hard and on working together to do their best (Newton et al. 2000). Duda et al. (2017) concluded previous findings of empowering and motivational climate research by predicting positive and adaptive sport experiences if youth athletes participate in an empowering climate.

In addition to the previously mentioned positive impacts on personal and sport-related levels, a coach-created empowering climate can also be considered a promising protective factor against sexual violence in sport, as inducing an empowering coaching climate decreases several risk factors for victimization. For example, power imbalances and strong hierarchies between coaches and athletes are reduced in an empowering climate by increasing athletes’ autonomy and involvement in decisions. The risk factor of physical and psychological isolation might additionally be prevented by empowering coaching behavior, which includes supporting social relationships within the group and encouraging athletes to work together instead of reinforcing competitive behaviors and rivalries (Duda and Appleton 2016). Thus, athletes within an empowering motivational climate should have a strong bond with their teammates, which makes it harder to isolate them.

However, a motivational climate, can simultaneously include empowering and disempowering features. Increasing the former and decreasing the latter can counteract many risk factors for victimization and act as a protective factor against sexual violence (and other forms of interpersonal violence). On the other hand, a disempowering climate supports unequal power relations and hierarchies, encourages competition within a team, and leads to unequal treatment of athletes (Duda and Appleton 2016). This kind of climate leaves most of the power with the coach and thus creates strong dependencies. It should be noted that the concept of an empowering climate does not refer to the coaching process only but also to the broader concept of empowerment within the environment of the club, which is also an important protective factor against sexual violence in sport (Griffith et al. 2008; Perkins and Zimmerman 1995).

As stated above, quantitative studies are needed to support findings of qualitative research that identify unequal power relations and strong dependencies as risk factors for experiences of sexual violence. Furthermore, the psychological concept of an empowering (and disempowering) climate seems to be a promising theoretical avenue. The aim of the current study was to quantitatively examine the relationship between perceptions of an empowering climate within a team and athletes’ perceptions of sexual violence. As an empowering climate includes the whole group of athletes, whereas sexual violence (at least in its more severe forms) usually affects only certain persons within a group, we decided to pursue group-level observation and include not only participants’ own experiences but also their observations of sexual violence against others within the training group. According to the aforementioned theoretical considerations, we expected that (1) athletes who had observed or experienced at least one incident of sexual violence would report lower values of an empowering climate than athletes who had not observed or experienced sexual; (2) athletes who had observed or experienced at least one incident of sexual violence would report higher values of a disempowering climate than athletes who had not observed or experienced sexual violence; and (3) there would be a correlation between the number of unique sexual violence observations and experiences and the perception of an empowering or disempowering motivational climate.
2. Materials and Methods

2.1. Participants

In total, 830 German athletes participated in the study, but only 644 athletes answered the questions about empowering climates and sexual violence in sport and were therefore included in this study. A majority of the participants (63%) were female (no one indicated a different gender identity), and the mean age was 20.5 years ($SD = 6.47$ years). They represented 48 different sports (with the largest shares from handball, rowing, swimming, and equestrian sports) and showed a fairly high level of performance within their sport, with only 15% of participants indicating that they were not members of at least a regional selection team. The mean value of experience in their sport was 11.9 years ($SD = 6.07$ years). Six percent of the athletes identified as Paralympic athletes.

2.2. Measures

2.2.1. Empowering and Disempowering Motivational Climates

Empowering and disempowering motivational climate was assessed via the German version of the Empowering and Disempowering Motivational Climate Questionnaire (EDMCQ) by Duda and Appleton (2016), which is named EDMCQ-D (Ohlert 2018). The questionnaire consists of 34 items within five subfactors: task-involving, autonomy-supportive, and socially supportive, forming the empowering climate; and ego-involving and controlling, which represent the disempowering climate. Items refer to the general climate within the training group during the last four weeks and are rated on a 5-point Likert scale from 1 = “Totally disagree” to 5 = “Totally agree.”

The sample satisfied the requirement of internal consistency; Cronbach alpha values were as follows: 0.77 for controlling and autonomy-supportive, 0.80 for socially supportive, 0.81 for ego-involving, and 0.86 for task-involving.

2.2.2. Experiences of Sexual Violence

To measure experiences of sexual violence, the German translation (IViS-D; Ohlert et al. 2018) of the Interpersonal Violence in Sport Questionnaire (IViS; Vertommen et al. 2016) was used. The IViS comprises 17 items on sexual violence (17 different situations of sexual violence that might occur in sport; see Table 1 in Results). In contrast to the original IViS-D, participants were asked whether they had ever either observed the respective situation in sport during their lifetime and/or experienced it themselves. If they indicated “yes” to either of the options, they were asked whether the situation had happened in their current training group (yes or no) and who was responsible for the situation (coach, athlete, or another person).

2.2.3. Demographics and Other Questions

Participants were requested to answer several demographic questions, including their gender, age, kind of sport, level of performance, and years of experience in their sport. Although more questions were included in the questionnaire, they are not relevant to this study and are thus not reported here.

2.3. Procedure

The study was conducted following the ethical guidelines of the APA and the procedure for studies on sexual violence in sport (Timpka et al. 2015). The ethics committee of the involved university gave ethical approval. An online questionnaire was created using the “EFS Survey” software; participants had to be at least 16 years old. The link for the questionnaire was distributed via email by different German sport organizations to their respective athletes, focusing on those athletes who were at least part of a regional selection team.
At the beginning of the questionnaire, participants were informed that their participation was voluntary and that they could abort the survey at any time without consequences. Before starting the questions on interpersonal violence, participants were given information that referred to the sensitive nature of the topic and indicated where they could find help (via telephone or internet) if they felt uncomfortable while or after answering the questions. This information was repeated at the end of the questionnaire. Athletes did not receive any compensation for taking part in the survey.

### 2.4. Analyses

The questionnaire data were imported into SPSS, and all further analyses were executed with this software. A data-cleaning procedure was performed, following Tabachnick and Fidell (2013), which included the detection and deletion of multivariate outliers.

The three subfactors of a empowering climate and the two subfactors of a disempowering climate were calculated using the mean value of the respective items. The first two hypotheses were split into four subhypotheses each: (a) comparing athletes who had observed any incidence of sexual violence within their own training group, (b) comparing athletes who had experienced one or more situations of sexual violence within their own training group, (c) comparing only those athletes who had experienced sexual violence from their coach, and (d) comparing only those athletes who had experienced sexual violence from peer athletes from their training group with the remaining persons of the sample. The total sample for the different analyses always consisted of 644 participants; the group sizes differed according to the grouping factors (see Table 2 for the distribution). The two respective groups served as independent variables for four different MANOVAs (a to d) with the five factors of an empowering and disempowering climate as dependent variables, thus including both hypotheses simultaneously in the analysis.

To examine the last hypothesis, Pearson correlations were calculated between the five subfactors of an empowering and disempowering climate and the number of (a) observed and (b) experienced situations within the training group.

### 3. Results

#### 3.1. Initial Data Analysis

In total, 58% of the participants reported having observed at least one form of sexual violence in sport in their life, and 31% reported at least one personal experience of sexual violence. The ratios for the single observed and experienced situations of sexual violence in sport are depicted in Table 1. To summarize the various experienced situations into different forms of sexual violence, 23% included sexual violence without body contact, 18% were sexual transgressions, and 3% were situations with body contact. Regarding observed sexual violence, 51% occurred without body contact, 36% were privacy violations, and 4% were situations with body contact. Almost one-third ($n = 190; 30\%$) of the participants had observed at least one situation of sexual violence within their own training group, whereas 14% ($n = 91$) had experienced sexual violence within their own training group. Of these experiences of sexual violence, 6% ($n = 38$) were perpetrated by the athlete's coach and 11% ($n = 70$) by a peer athlete.

| Item                                           | Observed | Experienced | Did Not Occur |
|------------------------------------------------|----------|-------------|---------------|
| Someone was the subject/victim of sexist jokes | 36%      | 12%         | 61%           |
| Someone was the subject/victim of sexual remarks about their body and looks | 33%      | 10%         | 65%           |
Table 1. Cont.

| Item                                                                 | Observed | Experienced | Did Not Occur |
|----------------------------------------------------------------------|----------|-------------|---------------|
| Someone was looked at with an intrusive sexual glance                 | 28%      | 10%         | 69%           |
| Someone’s privacy was invaded (another person was standing too close to them, etc.) | 24%      | 10%         | 72%           |
| Someone was whistled or yelled at in a sexist way                     | 22%      | 9%          | 76%           |
| There was physical contact that made a person uneasy/feel uncomfortable| 19%      | 10%         | 78%           |
| Someone was being touched during training in a way that made them uneasy/feel uncomfortable | 16%      | 7%          | 81%           |
| Someone received calls, notes, emails, texts, photos, or clips (possibly on their mobile/the internet) that had a sexual connotation or were sexually explicit | 11%      | 5%          | 86%           |
| Someone was asked to be alone with another person, which made them uneasy/feel uncomfortable | 6%       | 3%          | 92%           |
| Someone received calls, notes, emails, texts, photos, or clips (possibly on their mobile/the internet) that featured themselves in a compromising or sexually explicit pose or situation | 6%       | 2%          | 93%           |
| Someone was being rubbed or massaged in a way that made them uneasy/feel uncomfortable | 4%       | 2%          | 95%           |
| A person touched someone sexually against their will                  | 3%       | 3%          | 94%           |
| Someone was forced to kiss another person/was made to kiss another person against their will | 2%       | 1%          | 97%           |
| A person exposed him/herself to someone (in their presence or via social media) | 2%       | 1%          | 97%           |
| Someone was asked to undress, assume a sexually explicit pose, or perform sexual acts in the presence of another person (with or without camera) or via social media | 1%       | 0.2%        | 99%           |
| Someone was forced to have sex with penetration                        | 0.3%     | 0.6%        | 99%           |
| A person tried to have sex with someone against their will           | 0.2%     | 0.5%        | 99%           |

Table 2 shows the means and standard deviations of the five subfactors of the empowering and disempowering climate for the whole sample and the different subgroups used in this study. In general and on a descriptive level only, it can be stated that the three subfactors of an empowering climate were rated as high, whereas the two factors of a disempowering climate were assigned lower values.

Table 2. Means and standard deviations of empowering and disempowering climate ratings for the whole sample and several subgroups.
Table 2. Cont.

| Group                                      | Empowering Climate | Disempowering Climate |
|--------------------------------------------|--------------------|-----------------------|
|                                            | Task-Involving M (SD) | Autonomy-Supportive M (SD) | Socially Supportive M (SD) | Ego-Involving M (SD) | Controlling M (SD) |
| Experience of SV by coach (n = 38)         | 3.71 (0.84)         | 3.78 (0.84)           | 3.84 (0.77)         | 2.84 (0.76)         | 2.37 (0.71)       |
| No experience of SV by coach (n = 606)     | 3.97 (0.68)         | 4.05 (0.67)           | 3.95 (0.88)         | 2.41 (0.87)         | 2.13 (0.67)       |
| Experience of SV by peer athlete (n = 70)  | 3.82 (0.71)         | 3.89 (0.72)           | 3.73 (0.94)         | 2.69 (0.91)         | 2.32 (0.70)       |
| No experience of SV by peer athlete (n = 574)| 3.97 (0.69)     | 4.06 (0.68)           | 3.97 (0.86)         | 2.40 (0.86)         | 2.12 (0.67)       |

3.2. Differences in Empowering Climate Perceptions between Subgroups

3.2.1. Observation versus No Observation of Sexual Violence

When dividing the sample into those athletes who had observed any situation of sexual violence within their own training group and those who had not, the MANOVA revealed a significant main effect of the group on the multivariate level with Hotelling’s trace criterion ($F(5, 638) = 10.29, p < 0.001, \eta^2_{(part)} = 0.08$). On the univariate level, the effect was evident for all three subfactors of an empowering climate (task-involving: $F(1, 642) = 29.43, p < 0.001, \eta^2_{(part)} = 0.04$; autonomy-supportive: $F(1, 642) = 37.56, p < 0.001, \eta^2_{(part)} = 0.06$; socially supportive: $F(1, 642) = 37.56, p < 0.001, \eta^2_{(part)} = 0.06$; mean values are shown in Table 2), indicating that athletes who had observed at least one incident of sexual violence within their training group perceived a less empowering climate. For the two subfactors of a disempowering climate, the same effect occurred (ego involving: $F(1, 642) = 35.76, p < 0.001, \eta^2_{(part)} = 0.05$; controlling: $F(1, 642) = 33.40, p < 0.001, \eta^2_{(part)} = 0.05$), indicating that athletes who had observed any incident of sexual violence reported higher values for a disempowering climate within their training group. All effects ranged from small to medium effect size according to Cohen (1988) and were thus in the zone of desired effects according to Hattie (2009).

3.2.2. Experiences versus No Experiences of Sexual Violence

When comparing those athletes who reported at least one experience of sexual violence within their training group and those who did not, the MANOVA again showed a main effect of the group on the multivariate level with Hotelling’s trace criterion ($F(5, 638) = 2.58, p = 0.026, \eta^2_{(part)} = 0.02$); however, the effect size was small. On the univariate level, significant main effects of the group were apparent for task-involving ($F(1, 642) = 5.85, p = 0.016, \eta^2_{(part)} = 0.01$) and autonomy-supportive ($F(1, 642) = 4.89, p = 0.027, \eta^2_{(part)} = 0.01$). For the subfactor socially supportive, the group difference did not reach significance ($F(1, 642) = 2.94, p = 0.087, \eta^2_{(part)} = 0.01$). For the disempowering climate, significant main effects of the group were noted for both subfactors (ego-involving: $F(1, 642) = 11.05, p < 0.001, \eta^2_{(part)} = 0.02$; controlling: $F(1, 642) = 5.59, p = 0.018, \eta^2_{(part)} = 0.01$); however, the effect sizes were also small.

3.2.3. Experiences versus No Experiences of Sexual Violence by the Athlete’s Coach

The differentiation of the athletes into those who had experienced sexual violence by their own coach and those who had not resulted in a significant difference within the MANOVA with a small effect size ($F(5, 638) = 3.37, p = 0.005, \eta^2_{(part)} = 0.03$). As with the previous MANOVA, the main effect of the group on the subfactor socially supportive did not reach significance on the univariate level ($F(1, 642) = 0.59, p = 0.443$). For the other four subfactors of an empowering and disempowering climate, significant main effects of the group were noted but all with a small effect sizes: task-involving: $F(1, 642) = 4.82, p = 0.028, \eta^2_{(part)} = 0.01$; autonomy-supportive: $F(1, 642) = 5.64, p = 0.018, \eta^2_{(part)} = 0.01$; ego-involving: $F(1, 642) = 9.13, p = 0.003, \eta^2_{(part)} = 0.01$; controlling: $F(1, 642) = 4.39, p = 0.036, \eta^2_{(part)} = 0.01$. 

When dividing the sample into those athletes who had observed any situation of sexual violence within their own training group and those who had not, the MANOVA again showed a main effect of the group on the multivariate level with Hotelling’s trace criterion ($F(5, 638) = 10.29, p < 0.001, \eta^2_{(part)} = 0.08$). On the univariate level, the effect was evident for all three subfactors of an empowering climate (task-involving: $F(1, 642) = 29.43, p < 0.001, \eta^2_{(part)} = 0.04$; autonomy-supportive: $F(1, 642) = 37.56, p < 0.001, \eta^2_{(part)} = 0.06$; socially supportive: $F(1, 642) = 37.56, p < 0.001, \eta^2_{(part)} = 0.06$; mean values are shown in Table 2), indicating that athletes who had observed at least one incident of sexual violence within their training group perceived a less empowering climate. For the two subfactors of a disempowering climate, the same effect occurred (ego involving: $F(1, 642) = 35.76, p < 0.001, \eta^2_{(part)} = 0.05$; controlling: $F(1, 642) = 33.40, p < 0.001, \eta^2_{(part)} = 0.05$), indicating that athletes who had observed any incident of sexual violence reported higher values for a disempowering climate within their training group. All effects ranged from small to medium effect size according to Cohen (1988) and were thus in the zone of desired effects according to Hattie (2009).
3.2.4. Experiences versus No Experiences of Sexual Violence by Peer Athletes

Finally, groupings were made according to sexual violence experienced from peer athletes of the training group. In this case, the MANOVA resulted in a non-significant main effect of the group on the multivariate level with Hotelling’s trace criterion ($F(5, 638) = 1.54$, $p = 0.174$). However, on the univariate level, for three subfactors, a significant main effect of the group was still reached: socially supportive: $F(1, 642) = 4.74$, $p = 0.030$, $\eta^2_{\text{part}} = 0.01$; ego-involving: $F(1, 642) = 7.13$, $p = 0.008$, $\eta^2_{\text{part}} = 0.01$; controlling: $F(1, 642) = 5.11$, $p = 0.024$, $\eta^2_{\text{part}} = 0.01$. For the subfactors task-involving and autonomy-supportive, the group difference was not significant, with an assumed alpha value of 0.05 (task-involving: $F(1, 642) = 2.78$, $p = 0.096$, $\eta^2_{\text{part}} < 0.01$; autonomy-supportive: $F(1, 642) = 3.73$, $p = 0.054$, $\eta^2_{\text{part}} = 0.01$).

3.3. Correlations between Sexual Violence and an Empowering Climate

In order to assess the relationship between the number of unique sexual violence incidents within one’s own group and an empowering climate, Pearson correlations were performed with the different subfactors on one hand and observations and experiences of sexual violence on the other hand. All correlations are shown in Table 3. On a general descriptive level, the correlations for the observed situations of sexual violence seem to be slightly higher than those for experiences of sexual violence. Correlations for observed sexual violence still lie in the zone of desired effects according to Hattie (2009).

Table 3. Pearson correlations between the different subfactors of an empowering climate and observations and experiences of sexual violence.

|                           | Empowering Climate | Disempowering Climate |
|---------------------------|--------------------|-----------------------|
|                           | Task-Involving     | Autonomy-Supportive   | Socially Supportive | Ego-Involving | Controlling |
| Number of unique observed | $-0.21^{**}$       | $-0.26^{**}$          | $-0.24^{**}$       | $0.23^{**}$   | $0.24^{**}$ |
| Number of unique experienced situations of sexual violence | $-0.12^{**}$       | $-0.13^{**}$          | $-0.09^{*}$       | $0.10^{*}$    | $0.10^{*}$  |

$^{*} p < 0.050$, $^{**} p < 0.001$.

4. Discussion

The aim of the current study was to examine the relationship between, on one hand, observations and experiences of sexual violence within an athlete’s own training group and, on the other hand, the empowering and disempowering climate within that group. Our results reveal that, as hypothesized, athletes who reported at least one incident of sexual violence within their sport group also indicated a less empowering climate and a more disempowering climate. This especially held true for observed sexual violence. Furthermore, the number of unique observed situations of sexual violence also significantly correlated with the different subfactors of an empowering and a disempowering climate. Finally, the effect sizes for personal experiences seemed to be lower than those for observed situations.

Several aspects of our study deserve further discussion. First of all, it should be noted that our study is the first to combine observations and experiences of sexual violence with the concept of an empowering climate, which was originally used in motivation research. Furthermore, it should be noted that the time frames measured for sexual violence and for an empowering climate are not similar (see limitations below); thus, our results should be interpreted with care. Still, this study shows that the concept of an empowering climate seems to be a promising factor with significant connections to observations and experiences of sexual violence within an athlete’s own training group across different kinds of sport. With respect to observed sexual violence, on all subfactors of an empowering and disempowering climate, the expected differences between the two groups of athletes were found. This suggests that a stronger empowering climate might be a protective factor...
against sexual violence; on the other hand, it also suggests that a stronger disempowering climate could be a risk factor. This applies to all subfactors, independent of each other. As the two second-order factors (empowering and disempowering) are generally seen as independent of each other (Duda and Appleton 2016), it seems that the most beneficial (i.e., protective) climate within a training group is a highly empowering and low disempowering one, whereas a strongly disempowering and low empowering climate could lead to the highest possibility for situations of sexual violence. In a group with a climate that is both highly empowering and highly disempowering, it is possible that the two effects counteract each other, although this is speculation. Still, our results highlight the benefits of a strong empowering and low disempowering climate and are in line with our theoretical considerations, as well as with the results of previous studies on risk factors for sexual violence (e.g., Brackenridge and Fasting 2005; Leahy et al. 2004; Roberts et al. 2020).

At first glance, it seems notable that the effect sizes for observed sexual violence are slightly stronger than those for experienced sexual violence—especially for peer violence. However, at second glance, this difference, although not previously hypothesized makes sense; studies on perpetrator strategies have revealed that, in general, perpetrators pick their victims deliberately, concentrating on those athletes who seem to be recepible or vulnerable (St-Pierre et al. 2022). Thus, not everyone in a sport group is “eligible” as a victim, and these individual characteristics exist independently of the empowering climate within the group. However, observation mean that someone else in the group is affected, thus creating stronger links to an empowering climate. Furthermore, even the small effects for experienced sexual violence point in the right direction and hint that a strong empowering and low disempowering climate might strengthen even vulnerable athletes.

The smallest effects were observed for peer sexual violence, as in this case, almost only the disempowering climate factors revealed any effect. As differences between the effects were not the focus of this study, any explanation would be speculative; one possible reason for this effect may be that within the group of athletes, enforcement of hierarchies, promotion of rivalries, and unequal treatment by the coach may be risk factors for sexual violence. On the other hand, a more empowering climate (i.e., giving athletes a voice and making them feel competent) may not be enough to counteract the negative consequences of strong hierarchies and rivalries among athletes. However, these assumptions need to be tested in further studies.

When investigating the different subfactors of an empowering and disempowering climate, it is eye-catching that the subfactor socially supportive seems to show weaker evidence than the others subfactors. For all other factors, the effects were similar, no matter whether the context is observed sexual violence, experienced sexual violence in general, or sexual violence by the coach. One explanation for this effect may be that perpetrators of sexual violence use trust-building strategies to groom potential victims (St-Pierre et al. 2022), and these strategies can be seen as socially supportive by athletes. Thus, social support might not be a decisive subfactor within an empowering and disempowering climate when it comes to sexual violence.

Although the results of this study support the results of previous qualitative research, several limitations should be noted when interpreting the results. As this is the first quantitative study on the relationship between the empowering climate and observations and experiences of sexual violence, our results can only hint at the direction of the effects. This was neither a longitudinal study nor an intervention study; thus, the causal relationship of the two constructs still remains unclear. Furthermore, the questions about empowering climate and sexual violence refer to two different periods of time (the empowering climate, to the last two weeks; and the sexual violence questions, to the entire time within the current training group). Thus, the climate within the group might have changed over time, and sexual violence experiences and observations might relate to a time when there was a different climate. However, as this situation would only lead to weaker effect sizes, that limitation does not counteract our results. Another limitation is the fact that within the correlative analysis with of number of unique experienced situations, the frequency with
which respective situations were experienced was not incorporated. As a result, a situation is only counted once, even if the athlete experienced that situation more than once or even regularly. Therefore, the correlations found here are still underestimated. Lastly, it has to be noted that our study is very comprehensive and included a large number of athletes; however, it is not representative of organized sport in Germany, as a few kinds of sport are represented in the sample. Therefore, the results should not be generalized to all kinds of sport.

Thus, further studies are needed to support our results. First of all, longitudinal studies could examine whether a highly disempowering (and low empowering) climate predicts the experiences of sexual violence reported at a later time. Second, intervention studies could support the assumption that workshops led by coaches who implement an empowering (vs. less disempowering) climate within their groups would lead to fewer experiences of sexual violence by the athletes. As intervention programs already exist based on motivational psychology (e.g., the TARGET model; Woolfolk 2019) and an observing system on an empowering climate has already been validated (Smith et al. 2015), the changes implemented by the coach within an empowering climate could also be examined from a different angle. Other interesting research ideas in this area relate to whether a motivational climate that is simultaneously highly empowering and highly disempowering would extinguish the effects found in this study or whether one factor would dominate the other. Finally, it is worth studying whether an empowering climate also counteracts other forms of interpersonal violence, namely psychological and physical violence. As there is empirical evidence for the fact that the three forms of interpersonal violence overlap significantly (e.g., Ohlert et al. 2020; Vertommen et al. 2016), it can be assumed that an empowering climate would also work as a protective factor against other forms of interpersonal violence.

In conclusion, although our study provides only initial insights into the connection between an empowering motivational climate and experiences of sexual violence, our findings support the results of prior qualitative studies and thus lead to the assumption that a strong empowering climate (and a low disempowering climate) can act as a protective factor against experiences of sexual violence by athletes. Although further studies are needed to strengthen this evidence, preventive workshops with coaches could already be making use of this concept. Even if an empowering climate does not prove to be a protective factor against sexual violence, it will almost certainly lead to happier and more motivated athletes, as it is already an established concept in the area of motivational psychology. Furthermore, an empowering climate is one factor in the broader concept of empowerment within sport clubs, which is known to protect young athletes from experiences of sexual violence (Griffith et al. 2008; Perkins and Zimmerman 1995).

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