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Profiling perpetrators of interpersonal violence against children in sport based on a victim
survey

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Abstract

The current article reports on perpetrator characteristics gathered in the first large-scale prevalence study on interpersonal violence against children in sport in the Netherlands and Belgium. Using retrospective web survey design, 4,043 adults answered questions on their experiences in youth sport. The study looks at the number of perpetrators as well as individual descriptive characteristics (sex, age, and role in the sport organization) of perpetrators of psychological, physical and sexual violence as reported retrospectively by victim-respondents. This information was then clustered to provide an overview of the most common perpetrator profiles. Results show that in all types of interpersonal violence in sport, perpetrators are predominantly male peer athletes who-frequently operate together in (impromptu) groups. Several differences between the three types of interpersonal violence are highlighted. While incidents of physical violence perpetrated by coaches tend to be less severe compared to those by other perpetrators, acts of sexual violence committed by a coach are significantly more severe. The presented findings shed new light on perpetrators of interpersonal violence in sport, nuancing the predominant belief that the male coach as the main perpetrator while providing nuanced information that can be utilized to improve prevention and child protection measures and other safeguarding initiatives in sport.

Keywords: child abuse; harassment; maltreatment; organized sport; youth sport; characteristics

The scientific attention to interpersonal violence (IV) in sport has long been sporadic, but since the late 1990s interest has grown. The research primarily focused on the victims of sexual harassment and sexual violence in sport, with various studies looking into their prevalence in (student) athlete populations, while others took a qualitative approach to analyzing the processes, potential risk factors, and consequences (Brackenridge, 2001). With rates for sexual harassment ranging from 19% to 92% and those for sexual abuse between 2% and 49%, it has repeatedly been demonstrated that sexual violence is a highly prevalent problem in sport, while it has become clear that both girls and boys and women and men are victimized, and that specific aspects of organized sport seem to facilitate coach-athlete interactions to grow into hierarchical, abusive relationships of power (Mountjoy et al., 2016).

Although often more prevalent than sexual violence, far less attention has been paid to psychological and physical violence against children in sport (Vertommen et al., 2016). The only large-scale study available, with over 6,000 student-athletes in the UK gives an alarmingly high prevalence estimate of 75% for psychological harm and 24% for physical harm (Stafford, Alexander, & Fry, 2013; Stafford & Fry, 2013). These results should be interpreted with caution, however, as the study suffered from a very low response rate (under 1%). Asking a representative sample of 4,043 Dutch and Belgian adults about their experiences in sports before the age of 18, we found substantially lower prevalence estimates: 38% for psychological violence and 11% for physical violence (Vertommen et al., 2016).

Remarkably little research has been dedicated to perpetrator characteristics in sport. Research on sexual harassment in sport grew out of studies on sexual harassment in public settings such as the workplace, problematizing it as an issue of employment conditions and gender relations (Brackenridge & Fasting, 2002). This explains the more organizational, rather than clinical approach taken in the literature on sexual harassment in sport. This feminist perspective that contributed to our understanding of sexual harassment in sport can

explain the focus on male coaches as perpetrators (Brackenridge & Fasting, 2002; Kirby & Greaves, 1996; Lenskyj, 1992). Indeed, early studies often solely targeted male coaches as the agents and female athletes as the victims.

~~Nevertheless~~ and Confirming prevalence rates observed outside sport, studies on sexual violence in sport found that the majority of reported perpetrators are male (Fasting & Brackenridge, 2009; Fasting, Brackenridge, & Kjølberg, 2013; Sand, Fasting, Chroni, & Knorre, 2011). In their study with 356 female Turkish athletes, Gündüz et al. (2007) noted that 40% of the victims reported spectators as the perpetrators of sexual harassment, while 33% mentioned teammates, and 25% coaches. Interestingly, some studies find that more often than coaches or other adult sport staff, peer athletes are being identified as the agents of sexual harassment. According to Elendu and Umeakuka (2011), who studied experiences with sexual violence in a sample of 1214 male and female athletes at southern Nigerian universities, 96% of the cases of gender harassment and 86% of the incidences of sexual harassment reported by victims was perpetrated by peers, with sexual coercion also being far more frequently attributed to peers (80%) than to coaches (34%). Rintaugu and colleagues (2014) documented that in Kenyan universities 32% of the reported perpetrators of sexual harassment were 'spectators,' with teammates being mentioned in 23% and coaching staff in 8% of all incidences (N = 339 female athletes). Asking 6,000 student-athletes about their experiences with negative behaviors in sport in the only large-scale survey in the UK, Alexander, Stafford, and Lewis (2011) found that teammates and/or other peer athletes were most often reported as the perpetrators of sexually offensive as well as emotionally and physically harmful behaviors. The authors also observed that the higher young athletes climb the competitive ladder, coaches become a more significant source of physical violence.

Aside from the scientific literature, information on perpetrator characteristics can also be derived from various administrative records such as court records, media reports, and

incident report systems of sport organizations. Although gaining access to court records is often difficult, these data have the highest credibility because they represent ‘proven facts’ as recorded by police and court officials (Fasting et al., 2013). Having gained access to Danish judicial records documenting 160 cases of convicted abusers in sport, Toftegaard Nielsen (2004) noted that all perpetrators were male, with the majority being coaches with a mean age of 35 years. Fasting (2013) analyzed 15 court reports, all describing male coaches (aged between 19 and 58 years) convicted for sexual abuse in sport in Norway. Considering that up to 95% of sexual offenses are not being reported (dark number) and that only a small number of reported incidents will lead to an actual conviction, court data only show us ‘the tip of the iceberg.’

Despite having a lower credibility and sometimes lacking crucial information, media reports can be a source for incidents of IV in sport. In 2008, Brackenridge and colleagues analyzed 159 articles in the British printed media and found that 98% reported a male coach as the abuser of children in sport (Brackenridge, Bishopp, Moussalli, & Tapp, 2008). The study further uncovered different perpetrator strategies (‘intimate’, ‘aggressive’ and ‘dominant’ modes of interaction), showing consistency with themes emerging from similar behavioral analyses of rapists and child molesters.

Given that many cases of IV in sport are never reported to judicial authorities or covered by the media, the third source of information are incident records kept by sport organizations. Studies relying on such case files are highly depending on the degree of completeness and quality of the data (Brackenridge, Bringer, & Bishopp, 2005). Analyzing 132 cases of child sexual abuse in British association football (soccer), Brackenridge and colleagues (2005) found that 92% of the alleged perpetrators were male, of whom 35% were coaches/teachers, 14% administrative staff, 21% referees, and 7% peers or teammates, with the ages of the perpetrators ranging from 7 to 60 years. Reviewing 652 cases reported to the

Safeguarding Cases in Sport panel in the UK, Rhind et al. (2015) again found the majority (91%) of perpetrators to be male and older than 18 (92%).

Our research group examined 323 incidents of sexual harassment and abuse in sport obtained from the helpline of the Dutch National Olympic Committee and Dutch Sport Federation (Vertommen et al., 2015) and likewise observed that the majority (77%) of the alleged perpetrators were male coaches aged between 31 and 50 years; and 13% of the incidents involved another athlete or group of athletes. Notably, in 5% of the cases the perpetrator was younger than 16 years and 28% of the alleged perpetrators with victims under the age of 12 were younger than 16 themselves. Finally, in high-performance environments an overrepresentation of incidents was noted, confirming previous findings that elite athletes are at greater risk of sexual violence than those competing at the lower (amateur) levels (Brackenridge, Kay, & Rhind, 2012).

Although some information is available about perpetrators of sexual violence in sport, the current lack of descriptive data on perpetrators of other types of IV in sport jeopardizes prevention strategies. The narrow focus on male coaches as possible perpetrators of sexual violence leads to other types of IV and other categories of perpetrators being overlooked. A detailed description of the individual characteristics of perpetrators of IV in sport and their victims will provide us insight into the dynamics of abusive relationships in the sport context. Differentiation of psychological, physical and sexual violence, the three main subtypes of IV, will enable us to target prevention initiatives at specific victim and perpetrator groups. To make a first step in this direction, it is our main objective to give a detailed overview of the characteristics of (alleged) perpetrators as reported by a representative sample of Dutch and Flemish adults who experienced at least one type of IV while participating in sport before the age of 18 (see Vertommen et al., 2016). The main research question is: What are the characteristics of perpetrators of IV against children in sport?

Method

The present study draws on the data that our research group collected for our study on the prevalence of IV in sport in the Netherlands and Belgium (Vertommen et al., 2016). Operationalizations of the concepts violence, maltreatment, and abuse vary worldwide, which complicates the interpretation and comparison of prevalence rates across studies. For our study we adopted the definition of violence as documented in article 19 of the Convention on the Rights of the Child (United Nations, 1989): “[..] *all forms of physical or mental violence, injury and abuse, neglect or negligent treatment, maltreatment or exploitation, including sexual abuse while in the care of parent(s), legal guardian(s) or any other person who has the care of the child*”. A distinction was made between behavior deemed to be a normal part of the game from that considered to overstep the ethical mark (Brackenridge, 2010), i.e. deliberate or non-accidental IV. Accordingly, violence occurring within the bounds of prescribed constitutive rules is not considered in this study.

The online questionnaire consisted of four sections, starting with a demographic and descriptive section inquiring into the respondents’ sport career up until the age of 18, where they could indicate up to five different sports, together with the highest level achieved in each. The next three sections probed the respondents’ childhood experiences while playing sports: 14 items on *psychological violence*, comprising, among other types, aggressive verbal intimidation, negative critique on performance or body, threats, and neglect, for instance “you were criticized or threatened because you did not want to participate in training sessions or matches/competitions”, 10 items on *physical violence* and forced overtraining, for instance “You were hit with an object (e.g. shoe, racket, hockey stick)”, and 17 items on *sexual violence* including sexual harassment and abuse, for instance “you were being touched during training in a way that made you uneasy / feel uncomfortable”. Further examples, as well as more detailed

information on the development and testing of the online questionnaire, can be found in Appendix A of (Vertommen et al., 2016).

IV severity was operationalized by using a compound variable that combined expert opinion on severity with frequency of occurrence. An expert group, consisting of 28 independent professionals in the field of child maltreatment policy, research and/or clinical practice, scored each of the 41 items from 1 to 3 (low, medium, high) indicating how they perceived the severity of the reported incident(s). Our classification system thus relied on both these expert severity ratings and the respondents' self-reported frequency scores (see Table 1 in Vertommen et al., 2016). Items describing incidents with the lowest expert severity rating and respondent frequency scores were classified as mild IV, including one-time events with a medium severity rating, while those detailing events having received the lowest or a medium severity rating and a regularly/often score were categorized as moderate. For detailed information about the definition, operationalization, (validation of) the questionnaire and the severity classification, we refer to the article of XXXX (Vertommen et al., 2016). Approval for the research protocol was obtained from the Antwerp University Hospital ethics committee (file code 13/44/430).

Sampling and data collection were performed by a market research company using a longitudinal panel. The panel consists of a convenience sample of the Internet population in Belgium and the Netherlands. Panel members were invited to participate in the study by email. The briefing letter contained information on the content of the web survey, a link to an informative website about the methodology of the study, a directory of counselling services, and a hyperlink to the actual questionnaire. Respondents could only proceed after agreeing with the informed consent request. Respondents were able to pause or terminate the survey at any point.

Having indicated experiences with one of the items describing IV, respondents were asked additional questions about their experiences with specific attention to perpetrator characteristics. When answering these additional questions, respondents were asked to focus on the most 'severe' event, or series of interconnected events (according to their own opinion). Questions about the perpetrator were: (a) Who did this to you? Response categories were: a teammate/fellow player, another athlete from my own or another club (not from my team), my coach/trainer/supervisor, another adult from the club/facility, a supporter/a regular spectator or visitor, someone else I know, someone I didn't know. (b) Did it involve one or more persons? (one, two, three, or more). (c) Did it concern a man/men, a woman/women or both? (d) How old was this individual / were these individuals at the time it happened? Since respondents were asked to recall experiences from their childhood and adolescent years, we did not ask them to indicate the precise age of the perpetrator but to choose from the following options: much younger than I was, younger than I was, about my own age, older than I was, much older than I was, I do not know/cannot recall. With our survey we thus gained information on the number of perpetrators, their gender(s) and role(s) in relation to the minor athlete for each of the three IV types.

The original study sample consists of 4,043 adults, prescreened on having participated in organized sport before the age of 18. The sample consists of 49% Dutch and 51% Belgian adults, 55% females and 45% males. More details on the sociodemographic and sport participation characteristics can be found in Table 1 of XXXX (Vertommen et al., 2016). In the total sample of 4,043 adults who participated in youth sport, psychological violence was reported by 1,520 respondents (37.6%), physical violence by 455 respondents (11.3%), and sexual violence by 578 respondents (14.3%) (Vertommen et al., 2016). Since one respondent might have experienced psychological as well as physical and/or sexual (i.e., a combination of two or three types of IV) the total number of victims is 1,785 (i.e. 44.2% of the sample).

Of respondents reporting psychological violence, 53% was female and 52% was Belgian. Of respondents reporting physical violence, 57% was male and 57% was Belgian. Of respondent reporting sexual violence, 66% was female and 59% was Belgian (Vertommen et al., 2016). Due to a small amount of item non-response in the perpetrator characteristics, the total number of respondents varies slightly.

This study also aims to cluster perpetrator profiles based on the perpetrator's gender and role within the sport organization, as well as the number of perpetrators for each of the three main IV types in relation to the victim's gender and sport level. In order to comprehensively determine the characteristics of the perpetrators, we applied three analytic strategies. First, we used mosaic plots to visualize perpetrator characteristics in two dimensions (gender and role, age and role). The mosaic plot (Friendly, 1994; Hartigan & Kleiner, 1981) is a graphical representation of a two-way frequency table. It is divided into rectangles, where the vertical length of each rectangle is proportional to the proportions of the B variable within levels of A. They give an overview of the data and facilitate relationships between the variables to be identified. Chi square tests were used to examine differences between male and female respondents, and between athletes competing at different levels. Secondly, we determined the impact of perpetrator characteristics on IV severity in multivariate analyses, using predictors perpetrator gender, role, number of perpetrators, and victim's gender. Because IV severity is measured at ordinal level, we applied the ordinal logistic regression model (see e.g., Agresti, 2012). Thirdly, the statistically significant perpetrator characteristics were used as input to construct concrete perpetrator profiles (e.g., "male + older + coach"). These profiles allowed the perpetrators to be ranked according to their frequency of occurrence in relation to IV severity. Throughout this study, the significance level was set at 1%. All statistical analyses were performed using IBM SPSS software version 23.

Results

Insert Table 1 about here

Number of perpetrators

A considerably large number of cases involved more than one perpetrator: 70% for psychological violence, 54% for physical violence, and 56% for sexual violence (see Table 1). Significantly more female than male victims reported incidents of psychological violence with an isolated perpetrator ($N = 1512$; $\chi^2 = 15.46$; $df = 1$; $p < .001$), as was the case for physical violence ($N = 454$; $\chi^2 = 12.66$; $df = 1$; $p < .001$). For sexual violence, no significant gender differences were found in the number of perpetrators ($N = 578$; $\chi^2 = 6.04$; $df = 1$; $p > .01$).

Perpetrators' sex

The majority of the victims reported the perpetrators to be male (psychological violence: 51%, physical violence: 66%, and sexual violence: 76%) (Table 1), with a substantial number of victims reporting both female and male perpetrators (23%, 15%, and 15%, respectively). With respect to psychological and physical violence, female victims reported more male perpetrators than male victims did (for psychological violence: $N = 1513$; $\chi^2 = 601.54$; $df = 2$; $p < .001$, for physical violence: ($N = 453$; $\chi^2 = 93.02$; $df = 1$; $p < .001$). Male respondents, on the other hand, reported much higher rates of 'male perpetrators only' (82%, compared to 22% in female respondents). Compared to male victims, female victims reported more cases of physical violence that involved female or both male and female perpetrators. This trend was not found for sexual violence, where the gender distribution in perpetrators was similar for the two respondent groups ($N = 573$; $\chi^2 = 4.00$; $df = 2$; $p > .01$).

Association between the perpetrator's sex and role

In Figure 1, mosaic plots show the relationship between the perpetrators' sex and role, and age and role. When respondents reported perpetrators of both sexes, they were counted both in the male and the female categories. As a consequence, totals exceed 100%.

The plots clearly show that *athletes* are the most frequently reported perpetrators. Only in the sexual violence category, 'other known persons' are mentioned more often, which includes (para-) medical staff, board members, referees, and other sports personnel (excluding athletes and coaches). About 19% of the victims of sexual violence indicated that one of the perpetrators was a coach, while this was 38% and 43% for psychological and physical violence, respectively.

The majority of perpetrators of psychological violence were male peer athletes, with 47% of the respondents reporting at least one male peer perpetrator and 35% at least one female peer perpetrator. As to the perpetrators of physical violence, 40% of the victims mentioned male peer athletes, while 31% of the total concerned male coaches. Victims of sexual violence reported known male adults (excluding the coach) most often (41%) as (one of) the perpetrator(s). Male peer athletes are more often identified as the perpetrators (33%) than are male coaches (17%).

Association between the perpetrator's age and role

The vast majority of perpetrators of psychological violence towards fellow athletes were same-age or older athletes (72% of total) (see Figure 1). Logically, coaches and other known or unknown perpetrators tended to be older than their victims. About 40% of the

victims of physical violence reported a 'same-age' athlete as the perpetrator, while 30% report an 'older' coach, and 10% a 'much older' coach. The most prevalent group of sexual perpetrators were same-age athletes (27%), with only 18% being older or much older coaches, which was a smaller proportion than the total of unknown perpetrators (30%), such as fans, supporters, visitors or casual onlookers.

Relationship between the perpetrator's role and the victim's sport level

Respondents were asked to indicate the highest level of competition achieved before age 18 (i.e., recreational, local, regional, national, and international). Contrasting the perpetrator's role against the respondents' sport level, we note the following differences. With respect to psychological violence, athletes competing at the *national level* exclusively report fewer peer athlete perpetrators ($N = 1520$; $\chi^2 = 17.05$; $df = 4$; $p < .01$) compared to the athletes competing at the other four levels. When comparing respondents that report physical violence based on their sport level, we found that the proportion of peer athlete perpetrators decreased when the sport level of the athlete increased: from 60.4% peer athlete perpetrators in recreational athletes to 28.6% in international athletes ($N = 452$; $\chi^2 = 20.81$; $df = 4$; $p < .01$). Athletes competing at the national level indicated other known persons significantly less frequently than those competing at the other levels as the perpetrators of sexual violence ($N = 529$; $\chi^2 = 19.79$; $df = 4$; $p < .01$). No significant differences were found in relation to coach perpetrators, although we do note that they are reported more frequently as the perpetrator of physical violence the higher the athlete's performance level (from 31.7% in recreational sport to 53.6% in international elite sport, $N = 453$; $\chi^2 = 8.94$; $df = 4$; $p = .063$).

Impact of the perpetrator's characteristics on IV severity

The ordinal logistic regression analysis examining the impact of the sex, role and number of perpetrators, and the sex of the victim on the severity of the incidents revealed some significant differences for the three types of IV (see Table 2).

Insert Table 2 about here

When the perpetrators of psychological violence are exclusively male, incidents tend to be significantly less severe than those reported for female perpetrators or perpetrators of both sexes. The perpetrator's sex does not influence the severity of the incidents involving sexual and physical violence. Sexual violence is significantly more severe when a coach is mentioned as the perpetrator. By contrast, when a coach has violated a minor physically, incidents are less severe than when the act was committed by others (e.g., athletes or other adults in the sport organization). In all three IV types incidents are significantly more severe when more than one perpetrator is involved. The victim's sex had no impact on the severity of the reported incidents.

Perpetrator profiles

The ordinal regression analyses relating IV type and severity to perpetrator characteristics provided a nuanced picture. We created perpetrator profiles based on three identifying features: the number of perpetrators, the sex of the perpetrator(s), and the position/role of the perpetrator(s). As seen earlier, the variable role gave inherent information on the age of the perpetrator. Therefore, the variable age was excluded from the characterization. In order to restrict the total number of perpetrator profiles, 'number' was recoded into two categories, 'single' versus 'several', while 'role' was recoded into three categories, 'athlete', 'coach' or 'other'. This yielded a total of 27 possible perpetrator profiles, such as 'one male coach', 'several female athletes', 'several male and female known others',

‘one male unknown other’. For a clear overview of the most common perpetrator profiles per IV type, we composed a ‘top ten’ list for male and female victims (see Table 3-5) where the tenth is denoted as ‘other profiles’ combining the 18 less common profiles.

Insert Table 3 about here

Female victims of psychological violence most often reported ‘several female athletes’ as perpetrators (20.2%), followed by ‘several athletes and others of both sexes’ (10.5%), and ‘one male coach’ (10.4%). The most common perpetrator profiles for male victims of psychological violence were ‘several male athletes’ (32.2%), ‘several female athlete(s) and other(s)’ (9.9%), ‘one male coach’ (9.4%), and ‘one male athlete’ (9.4%).

Insert Table 4 about here

As to physical violence, the most common profile for female victims was ‘one male coach’ (24.1%), followed by ‘one female coach’ (14.1%), while in male victims the profiles ‘several male athletes’ (21.0%) and ‘one male athlete’ (14.4%) were most prevalent. The severity of reported incidents tended to be more severe for the multiple perpetrator profiles than for single perpetrator profiles.

Insert Table 5 about here

The most common profiles for female victims of sexual violence were ‘one male other’ (20.6%), as well as ‘several male others’ (18.7%) and ‘one male coach’ (15.6%). In male victims, ‘several male others’ (19.6%), ‘several male athletes’ (17.9%) and ‘one male other’ (15.1%) were the most frequent perpetrators.

Discussion

Based on the retrospective accounts of 1,785 adults in Belgium and the Netherlands on experiences with IV in sport before the age of 18, we evaluated the characteristics (number, sex, age, and role within the sport organization) of the alleged perpetrators and clustered these to build meaningful perpetrator profiles. In order to identify distinct perpetrator groups, we clustered the sex, role, and number of perpetrators into 27 different profile categories, which were then reduced to nine most common profiles and one collapsed ‘other’ category.

Our analyses yielded several overarching perpetrator characteristics for all three types of IV. Firstly, the majority of the respondents having experienced psychological, physical, or sexual violence in sport report more than one perpetrator (from 54% in physical violence to 70% in psychological violence). Secondly, we found the overwhelming majority of perpetrators to be male (from 51% in psychological violence to 76% in sexual violence). This is in line with the general literature on aggressive behavior, which suggests that men are much more likely to engage in physical and sexual aggression than women (Chesney-Lind & Pasko, 2003). It is worth noting that, about 70% of coaching staff in sport clubs in Flanders (Belgium) and the Netherlands is male, which means that the exposure to males is significantly higher than exposure to females in sport (Oomens & van der Linden, 2015; Vlaamse Trainersschool, 2015).

A third key finding of our study is that in all three types of IV perpetrators were mainly peer athletes, a trend that was also observed in several other studies (Alexander et al., 2011; Elendu & Umeakuka, 2011; Gündüz et al., 2007). This may be due to the fact that peer athletes spend the most time together and often have a closer relationship with each other than with other sport participants (Elendu & Umeakuka, 2011). Although female perpetrators are a minority, female victims of psychological violence accordingly most often report ‘several

female athletes' as the perpetrators. Many of the items included in the psychological violence scale we used refer to bullying behavior (Vertommen et al., 2016). Alexander and colleagues (2011) also found that children reported having been subjected to different forms of peer bullying in a sport context, which, apart from psychological abuse, can also comprise physical or sexual violence. Studies in other social settings, such as schools, also show high rates of peer bullying involving verbal and emotional abuse (Stassen Berger, 2007; Tapper & Boulton, 2005). According to a Dutch study on peer aggression in sport, the prevalence of aggressive behavior among children might even be higher in sport clubs than it is in schools, which is based on the assumption that it is more difficult for a child to gain and maintain a dominant social status in a context that is less structured (e.g. sport) and that organized sport may reinforce aggressive behavior among children (Baar & Wubbels, 2011). It is therefore important not to overlook peer bullying as a substantial part of IV in sport.

Lastly, in all types of IV the reported incidents were rated as significantly more severe when more than one perpetrator was involved. Since we based our severity classification on both the severity and frequency of the act, multiple experiences are likely to have generated higher severity scores (see Vertommen et al., 2016).

Besides the abovementioned perpetrator features characteristic of all three types of IV, we also observed some interesting differences. Female victims of psychological violence report significantly more female perpetrators compared to female victims of physical and sexual violence. 'Several female athletes' is the most common perpetrator profile for female victims of psychological violence, while this perpetrator profile is not common in other types of IV. Adding to previous studies on IV in sport, we noted that acts of psychological violence committed by male perpetrators are rated as less severe than those committed by female perpetrators or multiple perpetrators of both sexes. Since severity was based on the self-reported frequency and the expert-rated item severity (see Vertommen et al., 2016), we can

assume that incidents involving female perpetrators or perpetrators of both sexes were more severe in nature and/or more frequent.

With regard to physical violence in sport, we note that, compared to male athletes, female athletes report more incidents with a single perpetrator. Correspondingly, the frequency of the 'one male coach' profile is more prevalent among female athletes. Physical abuse of male athletes is predominantly perpetrated by several male athletes, whether or not in a group context. As explained above, this type of IV may also include peer bullying. Secondly, the regression analysis showed that incidents tended to be less severe when perpetrated by a coach. However, like Alexander and colleagues (2011), we also observed that coaches tend to become more physically violent toward athletes the higher their performance level, although this association was not statistically significant. In addition, athletes competing at higher levels report less peer-to-peer violence than lower-level athletes.

Our results on sexual violence show that 'known others' within the sport organization (excluding coaches and fellow athletes) are largely held responsible for sexual transgressions. Gündüz and colleagues (2007), as well as Rintaugu and colleagues (2014), indeed demonstrated that spectators appear to be responsible for a sizable proportion of reported incidents of sexual harassment. In addition, having direct access to athletes, members of the athlete's entourage (e.g., (para-) medical staff and club board members) are potential perpetrators. While early studies on sexual harassment in sport observed that unwanted behaviors toward female athletes most often involved a male coach, more recent studies that adopted a broader definition of abuse and violence found peer athletes to be the main perpetrator group (Alexander et al., 2011; Elendu & Umeakuka, 2011). This new insight clearly needs further research.

Being the first study to relate the perceived severity of IV to perpetrator characteristics, we found that the severity of the experienced sexual violence when perpetrated by coaches tends to be higher than when these acts were attributed to other perpetrators. One hypothesis is that the hierarchical coach-athlete relationship provides favorable conditions for sexual grooming (Brackenridge & Fasting, 2005), which may be more intense, covert, and long-lasting than peer-to-peer sexually oriented, offensive behaviors and thus culminate more easily in severe forms of sexual violence.

Implications for prevention policy

To date, the bulk of information on perpetrators of IV in sport in Belgium and the Netherlands originates from media reports that mostly concern severe cases of child sexual abuse by adult male coaches, producing waves of public indignation. The coverage of court cases also draws our attention to criminal offenses in sport, again providing us with an identical picture of the older male coach as the perpetrator. Prevention initiatives, such as the requirement to conduct criminal history checks for aspiring leaders and coaches, have likewise been developed based on the assumption that older (male) adults are the most likely perpetrators of IV. The results of this study reveal a diverse and nuanced perpetrator profile, enriching our perspective on perpetrators of interpersonal violence in sport. Given that our and other recent results disconfirm this notion, new prevention initiatives should include measures aimed at other likely perpetrator groups. Indeed, while criminal history checks are effective in preventing recidivism in convicted sexual offenders, this tool is not useful to prevent first time offences, offences of minors and non-criminal offenses (e.g., bullying, grooming behaviors). Besides considering them potential perpetrators of IV against (young) athletes, coaches should also be involved as custodians to signal any trespasses in the sport context, whether they occur among peers or are perpetrated by other adults. These findings

suggest that we should invest in qualitative coach programs to educate coaches on the phenomenon of interpersonal violence in sport and underlying dynamics that can create a conducive climate for interpersonal violence against athletes.

Awareness raising initiatives are required to inform different stakeholders (coaching staff, board members, parents, spectators, but also athletes of all ages, sport levels and disciplines) about risk factors, forms, dynamics, taboo and myths of interpersonal violence in sport. At the same time, athletes should be empowered to speak up about negative experiences and should be informed about reporting and counseling structures that are in place to assist anyone with questions, complaints or disclosures of violence. The prevention of interpersonal violence in sport, consisting of preventive and pedagogical, as well as repressive and curative measures, should be integrated in a broader policy framework on a safe sports environment.

Limitations, future research and recommendations

We based the perpetrator characteristics exclusively on the victims' retrospective accounts gathered through an online survey. Such information is subjective, may suffer from recall bias and hence does not necessarily reflect reality (Hardt & Rutter, 2004). Furthermore, the study asks about characteristics of *alleged* perpetrators as reported by the persons who experienced this behavior, rather than verified information on convicted offenders.

Secondly, due to the study's rationale, the collected perpetrator information (number, sex, age, and role) is rather limited and descriptive. Other sources of (qualitative) information on perpetrator characteristics (e.g., treatment files, interviews) would enable us to compose a more in-depth psychological profile comprising personality characteristics, offending strategies, and underlying (group) dynamics and processes.

Thirdly, our study solely focuses on the individual characteristics of perpetrators. However useful it is to study individual characteristics of perpetrators of IV in sport, this should not distract us from also looking at the context in which such behaviors take place. Although not within the scope of the present study, many studies have shown that (sexual) violence in sport is a sociological/cultural, as well as an interpersonal/psychological phenomenon (Brackenridge, 2001). Evidently, improving perpetrator theories requires a micro-, meso- and macro-level approach.

Lastly, since the duration of participation in youth sport is unknown, we cannot reflect on the length of exposure of these victim respondents. However, the size and the representativeness of the sample suggest that a wide variety of athletes, performing at different levels of sport and with different levels of intensity, are represented in this study.

Being one of the first to look into defining characteristics of perpetrators of IV in sport, this study is a starting point for further research. An in-depth analysis of all available sources of information while acknowledging their relative limitations will shed more light on perpetrator profiles. There is a need for a more thorough analysis of the psycho-social characteristics of (alleged) perpetrators, as well as the underlying motives and dynamics of IV in sport, which requires a qualitative approach. To be able to create potential victim and perpetrator profiles, case reports of IV in sport should be studied in detail and those affected by and those accused of the acts interviewed extensively. In most sport organizations reporting systems are currently not in place, even though standardized case report systems would be a valuable source of information on criminal and non-criminal interpersonal behaviors that can ultimately contribute to their prevention. In its Consensus Statement on harassment and abuse in sport, the International Olympic Committee has provided a strong impetus in this direction by explicitly recommending sport organizations to establish a response system for handling concerns and complaints with well-established reporting and

referral mechanisms (Mountjoy et al., 2016). If these incident databases are made available to researchers, knowledge transfer would become bi-directional, which would greatly benefit future child protection and safeguarding initiatives.

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Table 1**Perpetrator characteristics by victims' sex**

		Psychological Violence			Physical Violence			Sexual Violence		
		Females	Males	Total	Females	Males	Total	Females	Males	Total
		<i>n</i> (%)	<i>n</i> (%)	<i>n</i> (%)	<i>n</i> (%)	<i>n</i> (%)	<i>n</i> (%)	<i>n</i> (%)	<i>n</i> (%)	<i>n</i> (%)
Number of perpetrators	One	271 (34.0)	177 (24.8)	448 (29.6)	108 (55.7)	101 (38.8)	209 (46.0)	180 (47.2)	72 (36.5)	252 (43.6)
	Several	526 (66.0)	538 (75.2)	1064 (70.4)	86 (44.3)	159 (61.2)	245 (54.0)	201 (52.8)	125 (63.8)	326 (56.4)
Perpetrators' sex	Male	175 (22.0)	589 (82.3)	764 (50.5)	82 (42.1)	216 (83.7)	298 (65.8)	298 (78.8)	140 (71.8)	438 (76.4)
	Female	385 (48.3)	19 (2.7)	404 (26.7)	71 (36.4)	15 (5.8)	86 (19.0)	29 (7.7)	23 (11.6)	52 (9.1)
	Both	237 (29.7)	109 (15.1)	345 (22.8)	42 (21.5)	27 (10.5)	69 (15.2)	51 (13.5)	32 (16.4)	83 (14.5)

Note. The total number of respondents per type of interpersonal violence varies according to a small amount of item non-response.

Table 2**Ordinal logistic regression: Impact of perpetrator characteristics on the severity of interpersonal violence against children in sport**

		Psychological Violence (<i>n</i> =1520)			Physical Violence (<i>n</i> =452)			Sexual Violence (<i>n</i> =529)					
		OR	95% CI		<i>p</i>	OR	95% CI		<i>p</i>	OR	95% CI		<i>p</i>
			Lower	Upper			Lower	Upper			Lower	Upper	
Perpetrator's sex	Male ^a												
	Female	1.479	1.096	1.996	0.010	0.771	0.416	1.428	0.408	0.909	0.497	1.662	0.756
	Both	1.655	1.226	2.233	0.001	1.487	0.562	3.933	0.424	0.851	0.511	1.419	0.536
Perpetrator's role	Coach	1.084	0.864	1.362	0.485	0.168	0.078	0.363	0.000	1.733	1.061	2.828	0.028
	Athlete	1.215	0.920	1.605	0.170	1.857	0.855	4.034	0.118	0.989	0.641	1.527	0.962
	Known other	1.480	1.141	1.920	0.003	2.023	0.861	4.754	0.106	1.651	1.102	2.473	0.015
	Unknown	1.164	0.774	1.750	0.466	2.469	0.494	12.328	0.271	1.077	0.670	1.732	0.760
Number of perpetrators	One ^a												
	More than one	3.593	2.732	4.726	0.000	2.047	1.130	3.708	0.018	1.696	1.128	2.549	0.011
Victim's sex	Male ^a												
	Female	0.936	0.723	1.211	0.613	1.58	0.917	2.723	0.099	1.247	0.872	1.784	0.227

^a Reference category

Table 3**Most common perpetrator profiles in psychological violence against children in sport**

Perpetrator profiles	Female respondents				Male respondents			
	Mild	Moderate	Severe	Total	Mild	Moderate	Severe	Total
	<i>n</i> (row %)			<i>n</i> (%)	<i>n</i> (row %)			<i>n</i> (%)
1 Several male athletes	4 (26.7)	6 (40.0)	5 (33.3)	15 (1.9)	60 (26.3)	122 (53.5)	46 (20.2)	228 (32.2)
2 Several female athletes	37 (23.4)	73 (46.2)	48 (30.4)	158 (20.2)	0 (0.0)	2 (66.7)	1 (33.3)	3 (0.4)
3 One male coach	46 (56.8)	29 (35.8)	6 (7.4)	81 (10.4)	39 (58.2)	24 (35.8)	4 (6.0)	67 (9.4)
4 Several athlete(s) and other(s) of both sexes	4 (4.9)	40 (48.8)	38 (46.3)	82 (10.5)	9 (22.5)	19 (47.5)	12 (30.0)	40 (5.6)
5 Several athlete(s) of both sexes	14 (18.4)	40 (52.6)	22 (28.9)	76 (9.7)	4 (18.2)	10 (45.5)	8 (36.4)	22 (3.1)
6 One male athlete	13 (65.0)	6 (30.0)	1 (5.0)	20 (2.6)	37 (55.2)	26 (38.8)	4 (6.0)	67 (9.4)
7 Several female athlete(s) and other(s)	0 (0.0)	4 (66.7)	2 (33.3)	6 (0.8)	19 (27.1)	29 (41.4)	22 (31.4)	70 (9.9)
8 One female coach	40 (57.1)	24 (34.3)	6 (8.6)	70 (9.0)	1 (20.2)	4 (80.0)	0 (0.0)	5 (0.7)
9 Several male coach(es) and athlete(s)	2 (22.2)	6 (66.7)	1 (11.1)	9 (1.2)	16 (25.8)	33 (53.2)	13 (21.0)	62 (8.7)
10 Other profiles	77 (29.2)	106 (40.2)	38 (46.3)	264 (33.8)	41 (28.3)	61 (42.1)	43 (29.7)	145 (20.5)
Total	237 (30.3)	334 (42.8)	210 (26.9)	781 (100.0)	226 (31.9)	330 (46.5)	153 (21.6)	709 (100.0)

Note. The perpetrator profiles are listed in descending overall frequency of occurrence

Table 4**Most common perpetrator profiles in physical violence against children in sport**

Perpetrator profiles	Females				Males			
	Mild n (row %)	Moderate n (row %)	Severe n (row %)	Total n (%)	Mild n (row %)	Moderate n (row %)	Severe n (row %)	Total n (%)
1 One male coach	14 (30.4)	18 (39.1)	14 (30.4)	46 (24.1)	5 (14.7)	16 (47.1)	13 (38.2)	34 (13.2)
2 Several male athletes	0 (0.0)	0 (0.0)	5 (100.0)	5 (2.6)	1 (1.9)	3 (5.6)	50 (92.6)	54 (21.0)
3 One male athlete	0 (0.0)	1 (9.1)	10 (90.9)	11 (5.8)	4 (10.8)	0 (0.0)	33 (89.2)	37 (14.4)
4 One male other	2 (22.2)	2 (22.2)	5 (55.6)	9 (4.7)	1 (4.3)	1 (4.3)	21 (91.3)	23 (5.9)
5 One female coach	9 (33.3)	11 (40.7)	7 (25.9)	27 (14.1)	1 (50.0)	1 (50.0)	0 (0.0)	2 (0.8)
6 Several male others	0 (0.0)	0 (0.0)	2 (0.0)	2 (1.0)	0 (0.0)	0 (0.0)	21(100.0)	21 (8.2)
7 Several male coaches	1 (16.7)	3 (50.0)	2 (33.3)	6 (3.1)	0 (0.0)	7 (50.0)	7 (50.0)	14 (5.4)
8 Several female athletes	0 (0.0)	3 (17.6)	14 (82.4)	17 (8.9)	0 (0.0)	0 (0.0)	3 (100.0)	3 (1.2)
9 Several athlete(s) and other(s) of both sexes	0 (0.0)	0 (0.0)	13 (100.0)	13 (6.8)	0 (0.0)	0 (0.0)	6 (100.0)	6 (2.3)
10 Other profiles	3 (5.5)	11 (20.0)	41 (74.5)	55 (28.8)	3 (7.7)	5 (12.8)	31 (79.5)	39 (15.2)
Total	29 (15.2)	49 (25.7)	113 (59.2)	191 (100.0)	15 (5.8)	35 (13.6)	207 (80.5)	257 (100.0)

Note. The perpetrator profiles are listed in descending overall frequency of occurrence

Table 5**Most common perpetrator profiles in sexual violence against children in sport**

Perpetrator profiles	Female respondents				Male respondents			
	Mild n (row %)	Moderate n (row %)	Severe n (row %)	Total n (%)	Mild n (row %)	Moderate n (row %)	Severe n (row %)	Total n (%)
1 Several male others	1 (1.5)	41 (61.2)	25 (37.3)	67 (18.7)	2 (5.7)	17 (48.6)	16 (45.7)	35 (19.6)
2 One male other	17 (23.0)	27 (36.5)	30 (40.5)	74 (20.6)	4 (14.8)	10 (37.0)	13 (48.1)	27 (15.1)
3 One male coach	8 (14.3)	30 (53.6)	18 (32.1)	56 (15.6)	1 (10.0)	4 (40.0)	5 (50.0)	10 (5.6)
4 Several male athletes	0 (0.0)	14 (58.3)	10 (41.7)	24 (6.7)	2 (6.3)	21 (65.6)	9 (28.1)	32 (17.9)
5 One male athlete	10 (33.3)	9 (30.0)	11 (36.7)	30 (8.4)	6 (28.6)	8 (38.1)	7 (33.3)	21 (11.7)
6 Several female athlete(s) and other(s)	0 (0.0)	14 (56.0)	11 (44.0)	25 (7.0)	0 (0.0)	6 (60.0)	4 (40.0)	10 (5.6)
7 Several athlete(s) and other(s) of both sexes	0 (0.0)	12 (63.2)	7 (36.8)	19 (5.3)	0 (0.0)	2 (33.3)	4 (66.7)	6 (3.4)
8 Several others of both sexes	1 (7.7)	10 (76.9)	2 (15.4)	13 (3.6)	1 (8.3)	7 (58.3)	4 (33.3)	12 (6.7)
9 Several athletes of both sexes	0 (0.0)	9 (64.3)	5 (35.7)	14 (3.9)	0 (0.0)	4 (57.1)	3 (42.9)	7 (3.9)
10 Other profiles	2 (5.4)	20 (54.1)	15 (40.5)	37 (10.3)	4 (21.1)	7 (36.8)	8 (42.1)	19 (10.6)
Total	39 (10.9)	186 (51.8)	134 (37.3)	359 (100.0)	20 (11.2)	86 (48.0)	73 (40.8)	179 (100.0)

Note. The perpetrator profiles are listed in descending overall frequency of occurrence

Figure 1

Mosaic plots of the characteristics of perpetrators of interpersonal violence in sport



