

Interpersonal Violence (IV) in Sport and Mental Health Outcomes in Teenagers

Journal of Sport and Social Issues

1–15

© The Author(s) 2021

Article reuse guidelines:

sagepub.com/journals-permissions

DOI: 10.1177/01937235211043652

journals.sagepub.com/home/jss

Sylvie Parent¹ ,
Marie-Pier Vaillancourt-Morel²,
and Allyson Gillard¹

Abstract

The aim of the present study was to examine the associations between interpersonal violence (IV) experienced in the context of sport by teenagers and three mental health outcomes: self-esteem, psychological distress, and post-traumatic stress disorder (PTSD) symptoms. A convenience sample of 1055 French-Canadian athletes between the ages of 14 and 17 who were participating in an organized sport was recruited to participate in an online survey. Results showed that psychological violence and neglect as well as sexual violence were independently related to lower self-esteem while physical, psychological/neglect, and sexual violence were all independently related to higher psychological distress and PTSD symptoms. Early intervention programs for athletes that experience IV is critical as it may help prevent the development of subsequent mental health issues.

Keywords

teenagers, sport, violence, mental health

Introduction

Prevalence studies in the last decade show that interpersonal violence (IV) against children in the context of sport – namely physical, sexual and psychological violence as well as neglect – is a major social and health issue affecting many young athletes (Alexander et al., 2011; Ohlert et al., 2019; Parent et al., 2016; Vertommen et al.,

¹Department of Physical Education, Faculty of Education, Université Laval, Québec, QC, Canada

²Department of Psychology, Université du Québec à Trois-Rivières, Trois-Rivières, QC, Canada

Corresponding author:

Sylvie Parent, Ph.D., Pavillon de l'Éducation physique et des sports, 2300, rue de la Terrasse, local 2206, Université Laval, G1 V 0A6, Québec, QC, Canada.

Email: Sylvie.parent@fse.ulaval.ca

2016). Even if IV in sport is increasingly recognized (Fortier et al., 2020), its consequences have not been well documented (Mountjoy et al., 2016).

Qualitative studies showed that athletes victims of IV in sport reported consequences on their mental health such as anxiety, depression, suicidal ideations, and low self-esteem (Brackenridge, 1997; Fasting et al., 2002; Fasting et al., 2007; Kavanagh, 2014; Stirling & Kerr, 2008). Vertommen et al. (2018) work was the first quantitative study to investigate the associations between IV against children in sport, mental health and quality of life in adulthood. In a sample of 4043 Dutch and Belgians adults aged between 18 and 50, childhood IV in sport was negatively related to quality of life and mental health in adulthood. In addition, a dose-response effect was observed in which reporting more than one type of IV in the sport context, polyvictimization, was related to poorer quality of life and mental health in adulthood. In their study with 1529 German elite athletes aged between 16 and 59, Ohlert et al. (2019) examined the associations between sexual violence, well-being and risk of depression and yielded similar results. Indeed, athletes who have experienced sexual violence, in sport or in another context, reported lower levels of well-being and were at greater risk for depression. Experiencing sexual violence in the sport context was related to worse outcomes than experiences of violence outside the sport context.

Despite increased knowledge of consequences of IV in sport, previous results are limited as they are mainly (1) established on qualitative reports, (2) based on adult retrospective reports of childhood IV in sport or (3) focused only on specific types of IV (e.g., sexual abuse). Vertommen et al. (2018) suggested to examine more closely the impacts of IV in sport on mental health in relation to person acting as the perpetrator (e.g., parent, coaches, peers). The aim of the present study was to examine the associations between IV experienced in the context of sport by teenagers and three mental health outcomes: self-esteem, psychological distress, and post-traumatic stress disorder (PTSD) symptoms taking into account the type of IV and the relationship with the perpetrator. We will also examine if these associations differed between girls and boys.

Methods

Participants and Procedure

A convenience sample of French-Canadian athletes aged between 14 and 17, who were participating in an organized sport was recruited for an online survey assessing their experiences in sport. Participants provided informed consent and then completed online self-report questionnaires. A total of 1259 athletes met inclusion criteria. Among them, 1055 (83.8%) were included in this study. Full demographic details and the sports background of the sample are presented in Table 1. All procedures were approved by the ethics committee of the institution where the study was conducted (approval number 2014-131 Phase III/ 26-10-2016).

Table 1. Demographics of the Study Total Sample and Within Boys and Girls.

	Total sample n = 1055 %(n)	Boys n = 292 %(n)	Girls n = 763 %(n)
Age			
14 years	29.2% (308)	25.0% (73)	30.8% (235)
15 years	30.9% (326)	32.9% (96)	30.1% (230)
16 years	22.1% (233)	24.3% (71)	21.2% (162)
17 years	17.8% (188)	17.8% (52)	17.8% (136)
Ethnicity			
Canadian	95.3% (1005)	93.8% (274)	95.8% (731)
Others	4.5% (48)	6.2% (18)	3.9% (30)
Sexual preference			
To the other sex	92.5% (976)	96.2% (281)	91.1% (695)
To the same sex, both sexes, no attraction	3.2% (34)	2.7% (8)	3.4% (26)
Disability			
Yes	1.0% (11)	1.7% (5)	0.8% (6)
No	99.0% (1044)	98.3% (287)	99.2% (757)
Early sport specialisation			
Yes	24.3% (256)	20.5% (60)	25.7% (196)
No	75.7% (799)	79.5% (232)	74.3% (567)
Hours of practice weekly			
Less than 5 h	14.3% (151)	13.0% (38)	14.8% (113)
6 to 10 h	37.3% (393)	32.5% (95)	39.1% (298)
11 to 15 h	26.4% (278)	28.8% (84)	25.4% (194)
16 to 20 h	14.0% (148)	15.8% (46)	13.4% (102)
21 to 25 h	5.1% (54)	7.5% (22)	4.2% (32)
More than 25 h	2.9% (31)	2.4% (7)	3.1% (24)
Sport level			
Local or regional	19.2% (203)	20.2% (59)	18.9% (144)
Inter-regional	7.2% (76)	12.0% (35)	5.4% (41)
Provincial	46.6% (492)	45.2% (132)	47.2% (360)
National	20.6% (217)	16.4% (48)	22.1% (169)
International	5.4% (57)	5.8% (17)	5.2% (40)

Measures

IV in Sport. The *Violence Toward Athletes Questionnaire* (Parent et al., 2019) (VTAQ) was used to assess experiences of IV against teenagers in sport. The VTAQ consisted of 70 items assessing different types of violence from different perpetrators. The athlete version (teammates and opponents) included four items for psychological violence, two items for physical violence, and three items for sexual violence. The coach version included 16 items for psychological violence and neglect, nine items for physical violence, and 11 items for sexual violence. The parent version included 17 items for psychological violence and neglect and eight items for physical violence. Items are rated on a four-point Likert scale measuring the frequency with which various events

took place in the sport context, where 0 = *never*; 1 = *rarely, 1 to 2 times*; 2 = *sometimes, 3 to 10 times*; 3 = *often, more than 10 times*. The scale showed high internal consistency in our sample with ordinal Cronbach's α between .79 and .98.

Total and subscales' scores were examined as yes/no dichotomous variables using a low threshold to categorize athletes as having experienced IV in sport which represents that the participant reported at least one experience of IV in the context of sport (i.e., 1 to 2 times or more). A total score was coded 0 = no violence and 1 = at least one event of at least one type of violence, three subscales by type of IV (i.e., physical, psychological/neglect, and sexual) were coded 0 = no experience of this type of IV and 1 = at least one event of this type of IV, three subscales by type of perpetrator (i.e., athlete, coach, parent) were coded 0 = no experience by this perpetrator and 1 = at least one event by this perpetrator, and nine subscales by type of IV and type of perpetrator (e.g., physical violence by an athlete) were coded 0 = no experience of this type of IV by this perpetrator and 1 = at least one event of this type of IV by this perpetrator. The three subscales by type of IV were summed to create a variable that represents the number of different types of IV experienced (0 to 3 types of IV) and the three subscales by type of perpetrator were summed to create a variable that represents the number of different perpetrators (0 to 3 different perpetrators).

Self-esteem. Five items from the General Self-Esteem Scale of the Self-Description Questionnaire-II (Marsh, 1990) were used to assess teenagers self-perception of themselves as effective, capable individuals who have self-confidence and self-respect and who are proud and satisfied with the way they are. Items were rated along a five-point true/false scale (0 = *false*, 4 = *true*), which were summed to provide a total score ranging from 0 to 20. This scale has shown good internal consistency and concurrent validity (Cronbach's $\alpha > .82$; (Leach et al., 2006; Marsh et al., 2004)). In the present study, Cronbach's α was .85.

Psychological distress. The Kessler Psychological Distress Scale was used to measure frequency of psychological distress symptoms in the past month including behavioral, emotional, cognitive, and psychophysiological manifestations (Kessler et al., 2002). The scale included ten items rated on a five-point Likert scale (1 = *none of the time*, 5 = *all the time*), which were summed to provide a total score ranging from 10 to 50, with higher scores indicating greater psychological distress. This scale had been previously validated with teenagers and had good concurrent validity and internal consistency (Cronbach's $\alpha > .92$; (Chan & Fung, 2014; Kessler et al., 2002)). In the present study, Cronbach's α was .88.

PTSD symptoms. The primary care PTSD screen was used to measure four PTSD-related symptoms in the past month using: re-experiencing, numbing, avoidance, and hyperarousal (Prins et al., 2003). The four items were rated on a yes/no scale (0 = *no*, 1 = *yes*), which were summed to provide a total score ranging from 0 to 4, with higher scores indicating greater PTSD symptoms. This scale had good

concurrent validity and good test-retest reliability (Prins et al., 2003). In the present study, Cronbach's α was .74.

Covariates (Control Variables). A sociodemographic questionnaire was used to gather data on age, sex, ethnicity, sexual preference, and disability or functional limitations. Questions on their sport activities were also used to assess the number of hours of weekly practice (training and competition), the sport level (i.e., highest competition level reached), and early single-sport specialization (0 = *no* and 1 = *yes*) which was defined as an intense training in a single sport for more than eight months per year before the age of 12 years old (LaPrade et al., 2016). For the measurement of this variable, we developed three questions based on previous work on the subject (Jayanthi et al., 2013; Jayanthi et al., 2015; Laprade et al., 2016): before the age of 12 years old, (1) did you stop practicing one or many sports to focus on a main sport?, (2) did you practice a single sport more than 8 months per year?, and (3) did you considered that your main sport was more important than other sports? We considered that participants that answered yes to the three questions experienced early sport specialization.

Statistical Analyses

Descriptive and correlational analyses were conducted using SPSS. To handle missing data (highest frequency of missing data was 8.7%) regression analyses were conducted in *Mplus* 8.0 using the full information maximum likelihood estimation method (Muthén & Muthén, 1998-2017). Multiple linear regression models were run for each mental health outcome including all covariates (i.e., sex, age, ethnicity, sexual preference, disability, early sport specialization, hours of practice weekly, and sport level). To disentangle the unique and shared effects of violence types and perpetrators, two different sets of multivariate linear regressions were conducted. In the first set of regressions, all violence in sport variables were examined separately as an independent predictor to examine its effect above and beyond covariates (individual models). In the second set of regressions, all violence types were entered concurrently as predictors to assess whether any type was uniquely associated with mental health outcomes, above and beyond the effect of covariates and other violence types (simultaneous models). A simultaneous regression model was also examined for the three different perpetrators and another one for the combination of violence types and perpetrators.

Results

Descriptive Statistics

Table 2 presents the self-reported frequency of IV in sport in the total sample as well as in boys and girls. A total of 84.5% ($n = 892$) of participants reported at least one incident of IV in the context of sport.

Table 2. Frequencies of Each Type of IV in Sport (low threshold measure = at least one experience).

	Total sample <i>n</i> = 1055 %(<i>n</i>)	Boys <i>n</i> = 292 %(<i>n</i>)	Girls <i>n</i> = 763 %(<i>n</i>)
At least one type of IV	84.5% (892)	83.6% (244)	84.9% (648)
Number of different types of IV			
0	15.5% (163)	16.4% (48)	15.1% (115)
1	36.4% (384)	33.2% (97)	37.6% (287)
2	31.6% (333)	31.8% (93)	31.5% (240)
3	16.6% (175)	18.5% (54)	15.9% (121)
Number of different perpetrators			
0	15.5% (163)	16.4% (48)	15.1% (115)
1	23.2% (245)	28.1% (82)	21.4% (163)
2	30.2% (319)	31.2% (91)	29.9% (228)
3	31.1% (328)	24.3% (71)	33.7% (257)
Type of violence			
Physical violence	39.9% (421)	49.3% (144)	36.3% (277)
Psychological violence and neglect	81.2% (857)	77.7% (227)	82.6% (630)
Sexual violence	28.2% (297)	25.3% (74)	29.2% (223)
Relationship with the perpetrator			
Athlete	68.2% (719)	68.2% (199)	68.2% (520)
Coach	68.2% (720)	63.7% (186)	70.0% (534)
Parent	40.6% (428)	31.5% (92)	44.0% (336)
Type of violence by relationship with the perpetrator			
Physical violence by an athlete	18.5% (185)	29.1% (85)	14.4% (110)
Psychological violence by an athlete	62.4% (658)	58.9% (172)	63.7% (486)
Sexual violence by an athlete	22.7% (239)	21.2% (62)	23.2% (177)
Physical violence by a coach	28.0% (295)	33.9% (99)	25.7% (196)
Psychological violence and neglect by a coach	63.7% (672)	57.2% (167)	66.2% (505)
Sexual violence by a coach	11.6% (122)	8.2% (24)	12.8% (98)
Physical violence by a parent	10.1% (107)	8.9% (26)	10.6% (81)
Psychological violence and neglect by a parent	38.8% (409)	30.1% (88)	42.1% (321)

Associations Between IV in Sports and Mental Health Outcomes

Individual Models. Each violence in sport variable was entered as the sole predictor of each mental health outcome controlling for sex, age, ethnicity, sexual preference, disability, early sport specialization, hours of practice weekly, and sport level. Results, presented in Table 3, showed that having experienced at least one IV in sport was significantly associated with lower self-esteem, higher psychological distress and higher PTSD symptoms. The number of violence types experienced and number of different perpetrators were also associated with lower self-esteem, higher psychological distress and higher PTSD symptoms. All types of violence and all different perpetrators were individually associated with lower self-esteem and higher psychological distress and

Table 3. Associations between IV in Sport and Mental Health Outcomes (Individual Models).

	Self-esteem			Psychological distress			PTSD symptoms		
	b (SE)	p	β	b (SE)	p	β	b (SE)	p	β
Violence in sport	-2.02 (0.35)	.000	-.18	5.14 (0.61)	.000	.26	0.56 (0.11)	.000	.17
Number of types	-0.95 (0.13)	.000	-.22	2.42 (0.23)	.000	.32	0.31 (0.04)	.000	.25
Number of perpetrators	-1.025 (0.12)	.000	-.27	2.54 (0.20)	.000	.37	0.30 (0.04)	.000	.26
Type of violence									
Physical violence	-0.97 (0.25)	.000	-.12	3.11 (0.45)	.000	.21	0.33 (0.08)	.000	.13
Psychological violence and neglect	-2.10 (0.32)	.000	-.21	4.71 (0.56)	.000	.25	0.49 (0.10)	.000	.16
Sexual violence	-1.37 (0.27)	.000	-.15	3.23 (0.49)	.000	.20	0.59 (0.08)	.000	.22
Relationship with the perpetrator									
Athlete	-1.62 (0.26)	.000	-.19	3.68 (0.47)	.000	.24	0.43 (0.08)	.000	.17
Coach	-1.38 (0.27)	.000	-.16	4.17 (0.47)	.000	.27	0.53 (0.08)	.000	.20
Parent	-1.89 (0.25)	.000	-.23	4.30 (0.43)	.000	.29	0.48 (0.08)	.000	.20
Type of violence by relationship with the perpetrator									
Physical violence - athlete	-0.35 (0.32)	.272	-0.03	2.76 (0.57)	.000	.15	0.20 (0.10)	.039	.07
Psychological violence - athlete	-1.66 (0.25)	.000	-.20	3.71 (0.45)	.000	.25	0.42 (0.08)	.000	.17
Sexual violence - athlete	-1.44 (0.29)	.000	-.15	3.23 (0.52)	.000	.19	0.58 (0.09)	.000	.20
Physical violence - coach	-0.95 (0.28)	.001	-.11	2.68 (0.49)	.000	.17	0.38 (0.08)	.000	.14
Psychological violence and neglect - coach	-1.49 (0.26)	.000	-.18	4.20 (0.46)	.000	.28	0.52 (0.08)	.000	.21
Sexual violence - coach	-1.19 (0.38)	.002	-.10	3.19 (0.68)	.000	.14	0.61 (0.12)	.000	.17
Physical violence - parent	-1.78 (0.39)	.000	-.14	4.74 (0.70)	.000	.20	0.61 (0.12)	.000	.16
Psychological violence and neglect - parent	-1.90 (0.25)	.000	-.23	4.33 (0.44)	.000	.29	0.47 (0.08)	.000	.19

Note. b = unstandardized coefficient. SE = standard errors. β = standardized coefficient. Controlling for sex, age, ethnicity, sexual preference, disability, early sport specialization, hours of practice weekly, and sport level. Coefficients in bold are significant at $p < .05$.

PTSD symptoms. For the combination of violence types and perpetrators, all variables were individually associated with lower self-esteem, higher psychological distress and higher PTSD symptoms except for physical abuse by another athlete which was unrelated to self-esteem.

Simultaneous Models. All types of violence in sport were entered concurrently as predictors of each mental health outcome, thus controlling for the presence of other violence types and including all covariates. Results, presented in Table 4, showed that psychological/neglect and sexual violence were independently related to lower self-esteem and physical, psychological/neglect, and sexual violence were all independently related to higher psychological distress and PTSD symptoms. The same simultaneous model was examined for the different types of perpetrator. Results, presented in Table 4, showed that having experienced violence from an athlete and a parent were independently related to lower self-esteem. Also, having experienced violence from an athlete, a coach, and a parent were all independently related to higher psychological distress and PTSD symptoms. For the combination of violence types and perpetrators, results, presented in Table 4, showed that having experienced psychological violence perpetrated by an athlete, sexual violence perpetrated by an athlete, psychological violence or neglect perpetrated by a coach, physical violence perpetrated by a parent, and psychological violence or neglect perpetrated by a parent were all independently related to lower self-esteem and higher psychological distress. Having experienced psychological violence perpetrated by an athlete, sexual violence perpetrated by an athlete, psychological violence or neglect perpetrated by a coach, sexual violence perpetrated by a coach, and physical violence perpetrated by a parent were all independently related to higher PTSD symptoms.

Sex Differences in the Associations Between IV in Sports and Mental Health Outcomes

We examined whether the associations between IV in sport and mental health outcomes were moderated by sex. Thus, an interaction between the IV variable and sex was added to each individual model. Most interactions were nonsignificant, suggesting that the association between IV and mental health outcomes was comparable for boys and girls. However, the associations between having experienced psychological violence or neglect by a coach and self-esteem as well as psychological distress were significantly moderated by sex. The association between the number of different perpetrators and PTSD symptoms as well as between having experienced violence from a parent and PTSD symptoms were also significantly moderated by sex. Simple slope tests showed that the association between having experienced psychological violence or neglect by a coach and self-esteem was significant only in girls (girls: $b(SE) = -1.83(0.31)$; $p < .001$; $\beta = -.26$; boys: $b(SE) = -0.68(0.47)$; $p = .148$; $\beta = -.05$). The same result was observed for the association between violence from a parent and PTSD symptoms (girls: $b(SE) = 0.57(0.09)$; $p < .001$; $\beta = .25$; boys:

Table 4. Associations between IV in Sport and Mental Health Outcomes (Simultaneous Models).

	Self-esteem			Psychological distress			PTSD symptoms		
	b (SE)	p	β	b (SE)	p	β	b (SE)	p	β
Type of violence									
Physical violence	-0.45 (0.26)	.082	-.06	2.01 (0.45)	.000	.14	0.16 (0.08)	.047	.06
Psychological violence and neglect	-1.73 (0.33)	.000	-.17	3.61 (0.58)	.000	.19	0.32 (0.10)	.002	.10
Sexual violence	-0.90 (0.28)	.001	-.10	1.99 (0.49)	.000	.12	0.49 (0.09)	.000	.18
Relationship with the perpetrator									
Athlete	-1.10 (0.27)	.000	-.13	2.28 (0.47)	.000	.15	0.26 (0.08)	.002	.10
Coach	-0.49 (0.29)	.090	-.06	2.35 (0.50)	.000	.15	0.33 (0.09)	.000	.13
Parent	-1.45 (0.27)	.000	-.18	2.93 (0.46)	.000	.20	0.30 (0.08)	.000	.12
Type of violence by relationship with the perpetrator									
Physical violence - athlete	0.50 (0.33)	.123	0.05	0.92 (0.56)	.102	.05	-0.08 (0.10)	.414	-.03
Psychological violence - athlete	-1.01 (0.27)	.000	-.12	1.87 (0.46)	.000	.13	0.18 (0.08)	.028	.07
Sexual violence - athlete	-0.70 (0.31)	.023	-.07	1.05 (0.53)	.049	.06	0.34 (0.09)	.000	.12
Physical violence - coach	-0.04 (0.29)	.892	-0.00	0.03 (0.51)	.960	.00	0.06 (0.09)	.486	.02
Psychological violence and neglect - coach	-0.60 (0.28)	.036	-.07	2.20 (0.49)	.000	.15	0.28 (0.09)	.001	.11
Sexual violence - coach	-0.32 (0.38)	.403	-0.03	1.22 (0.66)	.066	.06	0.33 (0.12)	.005	.09
Physical violence - parent	-0.86 (0.40)	.032	-.07	2.46 (0.69)	.000	.11	0.34 (0.12)	.006	.09
Psychological violence and neglect - parent	-1.12 (0.28)	.000	-.14	2.12 (0.48)	.000	.14	0.16 (0.09)	.067	.06

Note. b = unstandardized coefficient. SE = standard errors. β = standardized coefficient. Controlling for sex, age, ethnicity, sexual preference, disability, early sport specialization, hours of practice weekly, and sport level. Coefficients in bold are significant at $p < .05$

$b(SE) = 0.21 (0.15)$; $p = .165$; $\beta = .07$). The association between having experienced psychological violence or neglect by a coach and psychological distress was higher in girls but significant in both boys and girls (girls: $b(SE) = 4.79 (0.54)$; $p < .001$; $\beta = .35$; boys: $b(SE) = 2.78 (0.83)$; $p = .001$; $\beta = .15$) as was the one between the number of different perpetrators and PTSD symptoms (girls: $b(SE) = 0.34 (0.04)$; $p < .001$; $\beta = .36$; boys: $b(SE) = 0.18 (0.07)$; $p = .009$; $\beta = .10$).

Discussion

Our study showed that experiencing at least one episode of IV in sport is associated with lower self-esteem, higher psychological distress and higher PTSD symptoms in teenage athletes. These results are in line with those of Vertommen et al. (2018) suggesting that children's experiences of severe IV in sport are negatively related to mental health in adulthood (i.e., psychological distress). In line with recent research (Ohlert et al., 2019; Vertommen et al., 2018), we also found that experiencing a greater number of violence type, polyvictimization, was associated with more severe symptomatology. Our results also extend past results as they are, to our knowledge, the first to show an association between a greater number of different perpetrators and more severe symptomatology for IV in sport. This is consistent with results of research outside the sport context as studies examining childhood maltreatment showed that the number of perpetrators is a unique predictor being related to higher levels of psychological distress (Kallstrom-Fuqua et al., 2004; Liu et al., 2012). In general, the associations between IV in sport and mental health outcomes were comparable and significant for boys and girls. A meta-analysis reported that associations between childhood maltreatment and adult mental health outcomes were similar between men and women (Gallo et al., 2018).

Types of IV in Sport and Mental Health Outcomes

We found that all three types of IV in sport, physical, psychological/neglect, and sexual violence, are independently related to higher psychological distress, higher PTSD symptoms and lower self-esteem. Qualitative studies have yielded similar results as athletes reported psychological effects including lower self-esteem when experiencing psychological and sexual violence in sport (Fasting et al., 2002; Kavanagh, 2014; Stirling & Kerr, 2013). Our results are also in line with those of Vertommen et al. (2018) that demonstrate that all three types of IV are related to poorer mental health. All violence experienced in sports may, similarly to childhood abuse and neglect occurring in the family, lead to feelings of blame, powerlessness, stigmatization, and betrayal which may all in turn affect the athlete's self-esteem and psychological well-being (Finkelhor & Browne, 1985; Kallstrom-Fuqua et al., 2004). This is an important finding as IV is often normalized in sport and even perceived as positive because athletes think that it is necessary to reach high levels (Stirling & Kerr, 2008, 2013; Vertommen et al., 2018). Thus, even though IV in sport could be seen as instrumental, our results show all types of IV in sport have detrimental effects on the athletes.

Types of Perpetrator and Mental Health Outcomes

Having experienced IV from an athlete, a coach, or a parent were all independently related to higher psychological distress and PTSD symptoms. In the sport context, coach and peer athletes spend a lot of time together developing trust-based relationships (Jones, 2001; Stirling & Kerr, 2009). Thus, all these perpetrators represent close others and research outside the sport context has shown that abuse by trusted perpetrators are related with poorer mental health outcomes (Ullman, 2007). Experiencing IV from a coach, another athlete or a parent can then break that trust relationship and have a negative impact on mental health outcomes as the athlete can feel betrayed.

Types of IV and of Perpetrator and Mental Health Outcomes

Results show that while controlling for all other violence experienced in the sport context, physical violence from an athlete or a coach was not independently associated with any of the mental health outcomes analyzed in our study. Sexual violence from a coach was also not associated with self-esteem and psychological distress. What is important to underline is that these types of violence were negatively related to the mental health outcomes in the individual models, but not in the one controlling for all others IV in sport. Thus, the negative effects of these violence might be better explained by the psychological violence that is often co-occurring with physical and sexual violence.

Physical and sexual violence are also normalized in the context of sport, which is well-known in the sport literature (Parent & Fortier, 2018). Parent et al. (2016) and Toftegaard (2001, 2010) reported that some teenage athletes normalize sexual relationships with coaches. Research outside the sport context has shown that even if an abuse is not perceived as a negative experience or as an abuse by the victims, it is related to negative outcomes later in life (Senn et al., 2001; Vaillancourt-Morel et al., 2016). Moreover, a longitudinal follow-up has pointed out that, in some cases, repercussions of sexual abuse in the family might emerge more clearly over time, at critical periods of development, but not necessarily during adolescence or closely following the abuse (Trickett et al., 2011). Thus, for example, even if our results showed that sexual violence from a coach was unrelated to self-esteem and psychological distress in teenager athletes, negative outcomes might emerge over time as they try to make sense of this normalized intolerable behavior.

Limitations

Our results should be interpreted in light of certain limitations. First, the use of a convenience sample limits the representativeness of our sample. Also, to be included in the current study, participants had to be currently involved in an organized sport. As some athletes may have leave sport in response to a violence experience, our results may be different if we also questioned retired athletes. Future research should replicate our findings with a representative sample of adolescents. Second, the correlation design

makes it impossible to determine causality between violence experienced in sport and mental health. In future research, it could be very interesting to use longitudinal designs to understand more clearly the impact of experiences of violence in sport on the mental health status of young athletes. Third, only self-report measures were used in our study, which have inherent biases (memory). However, considering that we questioned teenagers, memory bias is probably less an issue than in study where adult participants reflect on their victimization in childhood.

Conclusion

By sharing these results, we hope that perceptions concerning the impact of “less severe” forms of IV in sport will be reconsidered and cease to be underestimated. As our results demonstrate, even with a low threshold measure, associations with mental health outcomes are still observed. On a practical standpoint, associations between IV in sport and mental health outcomes underlines the importance of assessing violence or neglect experiences when screening athletes for mental health issues or working with young athletes who present symptoms of psychological distress, PTSD symptoms or low self-esteem. This could be the role of specific stakeholders in the athlete’s entourage, such as the sport psychologist and medical team. Alternatively, when dealing with young athletes who reported IV in sport, it is important to help them recover and ensure they have access to resources they need to heal. In future research, it would be interesting to document the support received from the sport community (e.g. parents, coaches, teammates, sport managers) by young people who disclose experiences of violence in sport. Indeed, we know that negative reactions of the entourage (e.g. do not believe) is a strong predictor of psychopathology (Easton, 2019; Lange et al., 1999).

Declaration of Conflicting Interests

The author(s) declared no potential conflicts of interest with respect to the research, authorship, and/or publication of this article.

Ethical Approval Information

Approval was granted from Laval University Ethics Committee (approval number 2014-131 Phase III/ 26-10-2016).

Funding

This work was supported by the [Social Sciences and Humanities Research Council of Canada] under Grant [108560]; and [ministère de l’Éducation et de l’Enseignement supérieur du Québec] under Grant [104153].

ORCID iD

Sylvie Parent  <https://orcid.org/0000-0002-2023-7780>

References

- Alexander, K., Stafford, A., & Lewis, R. (2011). *The experiences of children participating in organised sport in the UK*. NSPCC.
- Brackenridge, C. (1997). He owned me basically...: Women's experience of sexual abuse in sport. / Il me possédait fondamentalement, T...: L'expérience d'abus sexuel des femmes en sport. *International Review for the Sociology of Sport*, 32(2), 115–130. <https://doi.org/10.1177/101269097032002001>
- Chan, S. M., & Fung, T. C. T. (2014). Reliability and validity of K10 and K6 in screening depressive symptoms in Hong Kong adolescents. *Vulnerable Children and Youth Studies*, 9(1), 75–85. <https://doi.org/10.1080/17450128.2013.861620>
- Easton, S. D. (2019). Childhood disclosure of sexual abuse and mental health outcomes in adulthood: Assessing merits of early disclosure and discussion. *Child Abuse & Neglect*, 93, 208–214. <https://doi.org/10.1016/j.chiabu.2019.04.005>
- Fasting, K., Brackenridge, C., & Walseth, K. (2002). Consequences of sexual harassment in sport for female athletes. *Journal of Sexual Aggression*, 8(2), 37–48. <https://doi.org/10.1080/13552600208413338>
- Fasting, K., Brackenridge, C., & Walseth, K. (2007). Women Athletes' personal responses to sexual harassment in sport. *Journal of Applied Sport Psychology*, 19(4), 419–433. <https://doi.org/10.1080/10413200701599165>
- Finkelhor, D., & Browne, A. (1985). The traumatic impact of child sexual abuse: A conceptualization. *The American Journal of Orthopsychiatry*, 55(4), 530–541. <https://doi.org/10.1111/j.1939-0025.1985.tb02703.x>
- Fortier, K., Parent, S., & Lessard, G. (2020). Child maltreatment in sport: Smashing the wall of silence: A narrative review of physical, sexual, psychological abuses and neglect. *British Journal of Sports Medicine*, 54(1), 4–7. <https://doi.org/10.1136/bjsports-2018-100224>
- Gallo, E. A. G., Munhoz, T. N., Loret de Mola, C., & Murray, J. (2018). Gender differences in the effects of childhood maltreatment on adult depression and anxiety: A systematic review and meta-analysis. *Child Abuse & Neglect*, 79, 107–114. <https://doi.org/10.1016/j.chiabu.2018.01.003>
- Jayanthi, N., Pinkham, C., Dugas, L., Patrick, B., & LaBella, C. (2013). Sports specialization in young athletes: Evidence-based recommendations. *Sports Health*, 5(3), 251–257. <https://doi.org/10.1177/1941738112464626>
- Jayanthi, N. A., LaBella, C. R., Fischer, D., Pasulka, J., & Dugas, L. R. (2015). Sports-specialized intensive training and the risk of injury in young athletes: A clinical case-control study. *American Journal of Sports Medicine*, 43(4), 794–801. <https://doi.org/10.1177/0363546514567298>
- Jones, K. (2001). Sport and friendship. *Journal of Philosophy of Education*, 35(1), 131–140. <https://doi.org/10.1111/1467-9752.00214>
- Kallstrom-Fuqua, A. C., Weston, R., & Marshall, L. L. (2004). Childhood and adolescent sexual abuse of community women: Mediated effects on psychological distress and social relationships. *Journal of Consulting and Clinical Psychology*, 72(6), 980–992.
- Kavanagh, E. J. (2014). *The dark side of sport: Athlete narratives on maltreatment in high performance environments*. Bournemouth University.
- Kessler, R. C., Andrews, G., Colpe, L. J., Hiripi, E., Mroczek, D. K., Normand, S. L., Walters, E. E., & Zaslavsky, A. M. (2002). Short screening scales to monitor population prevalences and trends in non-specific psychological distress. *Psychological Medicine*, 32(6), 959–976. <https://doi.org/10.1017/S0033291702006074>

- Lange, A., de Beurs, E., Dolan, C., Lachnit, T., Sjollema, S., & Hanewald, G. (1999). Long-term effects of childhood sexual abuse: Objective and subjective characteristics of the abuse and psychopathology in later life. *Journal of Nervous & Mental Disease, 187*(3), 150–158. <https://doi.org/10.1097/00005053-199903000-00004>
- LaPrade, R. F., Agel, J., & Baker, J., Brenner, J. S., Cordaso, F. A., Côté, J., Engebretsen, L., Feeley, B. T., Gould, D., Hainline, B., Hewett, T., Jayanthi, N., Kodner, M. S., Myer, G. D., Nissen, C. W., Philippon, M. J., & Provencher, M. T. (2016). AOSSM early sport specialization consensus statement. *Orthopaedic Journal of Sports Medicine, 4*(4), 1–8. <https://doi.org/10.1177/2325967116644241>
- Leach, L. F., Henson, R. K., Odom, L. R., & Cagle, L. S. (2006). A reliability generalization study of the self-description questionnaire. *Educational and Psychological Measurement, 66*(2), 285–304. <https://doi.org/10.1177/0013164405284030>
- Liu, R. T., Jager-Hyman, S., Wagner, C. A., Alloy, L. B., & Gibb, B. E. (2012). Number of childhood abuse perpetrators and the occurrence of depressive episodes in adulthood. *Child Abuse & Neglect, 36*(4), 323–332. <https://doi.org/10.1016/j.chiabu.2011.11.007>
- Marsh, H. W. (1990). *Self Description Questionnaire (SDQ) II: A theoretical and empirical basis for the measurement of multiple dimensions of adolescent self-concept*. Psychological Corporation.
- Marsh, H. W., Parada, R. H., & Ayotte, V. (2004). A multidimensional perspective of relations between self-concept (Self Description Questionnaire II) and adolescent mental health (youth self report). *Psychological Assessment, 16*(1), 27–41. <https://doi.org/10.1037/1040-3590.16.1.27>
- Mountjoy, M., Brackenridge, C., Arrington, M., Blauwet, C., Carska-Sheppard, A., Fasting, K., Kirby, S., Leahy, T., Marks, S., Martin, K., Starr, K., Tiivas, A., & Budgett, R. (2016). International Olympic committee consensus statement: Harassment and abuse (non-accidental violence) in sport. *British Journal of Sports Medicine, 50*(17), 1019–1029. <https://doi.org/10.1136/bjsports-2016-096121>
- Muthén, L. K., & Muthén, B. O. (1998–2017). *Mplus user's guide* (8th ed.). Muthén & Muthén.
- Ohlert, J., Rau, T., & Allroggen, M. (2019). Association between sexual violence experiences and well-being and risk for depression in elite athletes Depends on the context of the incidents. *Journal of Clinical Sport Psychology, 13*(2), 311–329. <https://doi.org/10.1123/jcsp.2019-0008>
- Parent, S., & Fortier, K. (2018). Comprehensive overview of the problem of violence against athletes in sport. *Journal of Sport and Social Issues, 42*(2), 227–246. <https://doi.org/10.1177/0193723518759448>
- Parent, S., Fortier, K., Vaillancourt-Morel, M. P., Lessard, G., Goulet, C., Demers, G., Paradis, H., & Hartill, M. (2019). Development and initial factor validation of the violence toward athletes questionnaire (VTAQ) in a sample of young athletes. *Society & Leisure, 42*(3), 471–486. <https://doi.org/10.1080/07053436.2019.1682262>
- Parent, S., Lavoie, F., Thibodeau, M. E., Hébert, M., Blais, M., & Team, P. A. J. (2016). Sexual violence experienced in the sport context by a representative sample of quebec adolescents. *Journal of Interpersonal Violence, 31*(16), 2666–2686. <https://doi.org/10.1177/0886260515580366>
- Prins, A., Ouimette, P., Kimerling, R., Cameron, R. P., Hugelshofer, D. S., Shaw-Hegwer, J., Thrailkill, A., Gusman, F. D., & Sheikh, J. I. (2003). The primary care PTSD screen (PC-PTSD): Development and operating characteristics. *Primary Care Psychiatry, 9*, 9–14. <https://doi.org/10.1185/135525703125002360>
- Senn, T. E., Carey, M. P., & Coury-Doniger, P. (2001). Self-defining as sexually abused and adult sexual risk behavior: Results from a cross-sectional survey of women attending an

- STD clinic. *Child Abuse & Neglect*, 35(5), 353–362. <https://doi.org/10.1016/j.chiabu.2011.01.013>
- Stirling, A. E., & Kerr, G. A. (2008). Elite female Swimmers' experiences of emotional abuse across time. *Journal of Emotional Abuse*, 7(4), 89–113. https://doi.org/10.1300/J135v07n04_05
- Stirling, A. E., & Kerr, G. A. (2009). Abused athletes' perceptions of the coach-athlete relationship. *Sport in Society*, 12(2), 227–239. <https://doi.org/10.1080/17430430802591019>
- Stirling, A. E., & Kerr, G. A. (2013). The perceived effects of elite athletes' experiences of emotional abuse in the coach-athlete relationship. *International Journal of Sport and Exercise Psychology*, 11(1), 87–100. <https://doi.org/10.1080/1612197X.2013.752173>
- Toftegaard, N. J. (2001). The forbidden zone: Intimacy, sexual relations and misconduct in the relationship between coaches and athletes. *International Review for the Sociology of Sport*, 36(2), 165–182. <https://doi.org/10.1177/101269001036002003>
- Toftegaard, N. J. (2010). Intimate relations and sexual abuse in danish sport. In C. Brackenridge & D. Rhind (Eds.), *Elite child athlete welfare: International perspectives* (pp. 93–100). Brunel University Press.
- Trickett, P. K., Noll, J. G., & Putnam, F. W. (2011). The impact of sexual abuse on female development: Lessons from a multigenerational, longitudinal research study. *Development and Psychopathology*, 23(2), 453–476. <https://doi.org/10.1017/S0954579411000174>
- Ullman, S. E. (2007). Relationship to perpetrator, disclosure, social reactions, and PTSD symptoms in child sexual abuse survivors. *Journal of Child Sexual Abuse*, 16(1), 19–36. https://doi.org/10.1300/J070v16n01_02
- Vaillancourt-Morel, M. P., Godbout, N., Bédard, M., Charest, E., Briere, J., & Sabourin, S. (2016). Emotional and sexual correlates of child sexual abuse as a function of self-definition status. *Child Maltreatment*, 21(3), 228–238. <https://doi.org/10.1177/1077559516656069>
- Vertommen, T., Kampen, J., Schipper-van Veldhoven, N., Uzieblo, K., & Van Den Eede, F. (2018). Severe interpersonal violence against children in sport: Associated mental health problems and quality of life in adulthood. *Child Abuse & Neglect*, 76, 459–468. <https://doi.org/10.1016/j.chiabu.2017.12.013>
- Vertommen, T., Schipper-van Veldhoven, N., Wouters, K., Kampen, J. K., Brackenridge, C., Rhind, D., Neels, K., & Van Den Eede, F. (2016). Interpersonal violence against children in sport in the Netherlands and Belgium. *Child Abuse & Neglect*, 51, 223–236. <https://doi.org/10.1016/j.chiabu.2015.10.006>

Author Biographies

Sylvie Parent PhD, is professor in the Department of physical education at Université Laval, Canada. Her research interest focus on surveillance and prevention of violence toward athletes, especially children and teenagers. She is also involved with sport partners in the province of Quebec to put in place measures of prevention and management of violence in sport.

Marie-Pier Vaillancourt-Morel PhD, is professor at the Department of Psychology at Université du Québec à Trois-Rivières, Canada. Her research interest focus on sexuality, couple, and trauma, mainly on the effects of childhood interpersonal trauma and pornography use on couples' sexual well-being.

Allyson Gillard is a Ph.D candidate at the Département of physical education at Université Laval, Canada. Her research interest focus on sexual violence in sport, especially risk and protective factors.