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Abuse Experiences and Physical Self-Perceptions of Para Athletes in Greece

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Abstract

The present study examined: a) The abuse experiences in a sample of athletes with disabilities in Greece; b) The athletes' physical self-perceptions and their respective association with the incidence of abuse experiences; c) The influence of certain demographic factors (e.g. gender, type of disability) on both abuse experiences and physical self-perceptions. The Physical Self-Perception Profile (PSPP) and the Interpersonal Violence against Children in Sport (IViS) were used. Both scales have been used and validated worldwide. A total of 58 Greek athletes with physical disabilities or visual impairments were selected to collect data on the three types of abuse experience (IViS) and the seven factors of the physical self-perception profile (PSPP). The two scales were further administered to a control sample of 56 non-disabled University students in the School of Physical Education and Sport Science, at the National and Kapodistrian University of Athens (NKUA). The University students were regularly involved in physical activity and were perceived as control athletes. Contrary to the expectations, the analyses revealed no significant differences between athletes with and without disabilities in terms of abuse experiences or physical self-perceptions, indicating more similarities than differences between the groups. Furthermore, correlation analysis showed no significant association between abuse experience and physical self-perception. However, gender and disability type influenced abuse outcomes: females and individuals with visual impairments reported higher levels of abuse experiences compared to males and those with physical disabilities. The present findings may provide valuable insights for safeguarding persons with disability within the sports sector. They further underscore the need for organizations, coaches, and policymakers to establish inclusive, protective environments in sports for athletes with and without disabilities.

Keywords

Para Sport, Athletes with Disabilities, Disabled Athletes, Abuse Experience, Interpersonal Violence, Physical Self-Perception, Abuse in Sport, Safeguarding in Sport, Gender Differences, Disability Type

1. Introduction

According to the Cambridge Dictionary (2024), abuse is perceived as the use of something for the wrong purposes, in a harmful or wrong moral way, or to treat someone violently or cruelly. Tuakli-Wosornu et al. (2020) provided a more precise definition of abuse as "volitional acts that result in or have potential to result in physical injury and/or psychological harm". According to the IOC (International Olympic Committee) three types of abuse are present, namely psychological, physical, and sexual abuse. Psychological abuse "targets a person's inner life in all its profound scope" in a pattern of "deliberate, prolonged, repeated non-contact behaviors within a power differentiated relationship" (Mountjoy et al., 2016). Referring to the same statement, physical abuse is defined as a "physical trauma or injury" caused by direct actions (e.g. beating, kicking, pushing etc.) or indirect actions (e.g. forced inappropriate physical activity, forced systematic doping practices etc.). Finally, sexual abuse is defined as "any conduct of a sexual nature, whether non-contact, contact or penetrative, where consent is coerced/manipulated or is not/cannot be given" (Mountjoy et al., 2016: p. 1021).

In turn, physical self-perception refers to an individuals' evaluations of their physical abilities, appearance, and overall bodily competence, and is considered a key component of self-esteem and psychological well-being (Fox, 1990). In the context of sport, physical self-perception is particularly relevant, as it may be shaped by athletic performance, feedback from coaches or peers, and, potentially, by negative experiences such as abuse (Çelik & Odacı, 2012; Ozbas et al., 2013; Stirling & Kerr, 2013).

The Physical Self-Perception Profile (Fox, 1990) was chosen for this study due to its strong theoretical foundation, broad international validation and its relevance for athletic populations, including those with disabilities. The instrument's multidimensional structure allows for a nuanced understanding of how athletes perceive their physical selves across domains such as sport competence, physical conditioning, strength, and body attractiveness.

In the Physical Self-Perception Profile (Fox, 1990), these forms are categorized in sub factors, which have been described by Edwards et al. (2005). According to Edwards et al. (2005), perceptions of athletic ability, the capacity to pick up new abilities, and self-confidence in a competitive setting are all considered aspects of sport competence. Perceptions of one's physical state, endurance and fitness, capacity for persistent exercising, and self-assurance in an exercise environment are all considered aspects of physical conditioning. Body attractiveness is the sum of

one's perception of physical attractiveness, ability to sustain physical attractiveness, and self-assurance in appearance. Perceived strength, muscle growth, and confidence in oneself in challenging settings are all examples of physical strength. A general indicator of one's physical self-perception is physical self-worth or self-esteem, which addresses overall emotions of fulfilment, happiness, pride, respect, and confidence in one's physical appearance (Edwards et al., 2005).

Several studies suggest that abuse experiences may be related to individual self-perceptions (Çelik & Odacı, 2012; Ozbas et al., 2013; Stirling & Kerr, 2013). Ozbas et al. (2013) found that self-perceptions and self-esteem were related to childhood emotional, sexual, and physical abuse experiences in a sample of sports students. In turn, Stirling & Kerr (2013) suggested that self-perceptions are essential for understanding the psychological consequences of abuse in sport. These studies indicate a potential relationship that requires further research.

Parent & Fortier (2017) reported in a review study that most studies in the field have used qualitative methods of data collection to examine different forms of abuse. Kerr et al. (2019b) examined abuse toward elite athletes with disabilities in Canada perpetrated by family members, coaches or teammates, employers, schoolmates or coworkers, intimate partners or support providers. The study found that while quantitative data revealed no significant difference in abuse prevalence between athletes with and without disabilities, participants with disabilities reported significantly lower well-being. Qualitative findings pointed to internalized bias, ableism and discrimination as well as a misuse of power within dependence relationships (Kerr et al., 2019b) and general unawareness about disability (Baylies, 2002).

Other studies reported that an increased risk of abuse is related to demographic variables such as gender, ethnic origin, social background, and disability (Vertommen et al., 2016; Kerr et al., 2019b; Jones et al., 2012; Putnam, 2003; Alexander et al., 2011; Fasting et al., 2011; Leahy et al., 2002; Sobsey & Doe, 1991; Sobsey, 1994). While much of the research has focused on abuse in sport settings, Rutland et al. (2022) reported that para-athletes from countries such as Brazil, Ghana, and India also experience abuse outside of sport. These studies indicated that the safety of children and adults with disabilities participating in Para sports might not be warranted due to societal barriers, since already outside of sport, victimization prevalence of children and adults with disability is about four times higher than in the general population (Sobsey & Doe, 1991; Sobsey, 1994; Jones et al., 2012). Vertommen et al. (2016) found that athletes participating in disabled sport reported "prevalence estimates (that) are remarkably high for all three types (psychological, physical, and sexual) of IV (interpersonal violence)" (Vertommen, 2016: p. 107).

The importance of including demographic factors when examining abuse experiences of Para athletes has been pointed out by several researchers in previous studies. The influence of factors such as gender (Ohlert et al., 2021; Vertommen et al., 2016; Parent & Vaillancourt-Morel, 2021; Kerr et al., 2019a), disability type

(Haegele et al., 2017), disability severity (Olsvik, 2006; Nosek et al., 2001) and disability onset (Lund et al., 2021) were reported to be associated with abuse experience in athletes or individuals with disability.

With respect to physical self-perceptions, studies examined individuals (Taleporos & McCabe, 2001; Niemiec, 2018; Shpigelman & HaGani, 2019; Olney & Brockelman, 2005; Kennedy et al., 1995; Bogart, 2014; Hayter & Dorstyn, 2014) and athletes (Ferreira & Fox, 2008; Wickman et al., 2018; Shapiro & Martin, 2010; Sherrill et al., 1990, 1997; Efe, 2023) with disability and reported inconsistent findings on the general and physical self-perceptions. Certain researchers (Ferreira & Fox, 2008; Taleporos & McCabe, 2001; Shapiro & Martin, 2010) reported individuals and athletes with disability to have lower levels of self-perceptions, while others (Wickman et al., 2018; Sherrill et al., 1990) reported no significant differences in self-perception between individuals and athletes with and without disabilities. All of the above-named researchers however, acknowledged the importance of examining the effects of demographic factors when researching the physical self-perceptions of individuals and athletes with disability and their non-disabled counterparts. The factors found to be associated with self-perception in those groups were gender and disability type (Efe, 2023; Shpigelman & HaGani, 2019; Olney & Brockelman, 2005), onset and severity of disability (Taleporos & McCabe, 2001; Shpigelman & HaGani, 2019, Hayter & Dorstyn, 2014), and involvement in sports (Ferreira & Fox, 2008).

While research in the field has expanded in recent years, the available findings to date are by no means representative of the global spectrum yet. They are predominantly focussing on Western and Northern European and Northern American populations (Parent & Vaillancourt-Morel, 2021; Willson et al., 2022; Kerr et al., 2019a; Vertommen et al., 2016), while, apart from few exceptions (Rutland et al., 2022) the rest of the world is not covered yet. The association between abuse experiences and self-perceptions of athletes with and without disabilities in Greece has not been examined yet. Based on the above, the present study was designed to examine the abuse experiences and physical self-perceptions of athletes with and without disabilities in Greece. Further, it was anticipated that the demographic variables (gender, onset, sports involvement, severity) would have an interactive effect with respect to the abuse experiences and self-perceptions of Greek athletes with and without disabilities.

Based on previous ambiguous research findings, the following hypotheses were formulated:

1) There is a difference in experienced abuse and/or physical self-perception in athletes with and without disabilities.

2) Differences in abuse experiences and physical self-perceptions are influenced by demographic factors (gender, disability status, disability type, onset of disability, severity of disability, sports involvement in years).

3) Prevalence of experienced abuse are associated to scores of physical self-perception.

In summary, this study searches to contribute to a deeper understanding of the complex interplay between abuse experience, physical self-perception, and Para athletic identity among athletes in Greece. The aim is to contribute to research work in this field and to provide valuable information for practitioners, targeted interventions and support systems that promote the well-being and inclusivity of athletes with disabilities.

2. Methods

2.1. Study Design

An ex post facto design was used for the purposes of the study, with quantitative data collection and analyses (Thomas & Nelson, 1990).

2.2. Participants

A total number of 114 participants were tested for the purposes of the study. The total sample was classified in 58 Greek athletes with disability (experimental group) and 56 Greek university students in the department of physical education and sport science (control group). 97.4% of the overall sample were Greek citizens, while the remaining 2.6% were individuals living in Greece. All participants were fluent in Greek and could respond to paper pencil questionnaires. A snowball method was used to recruit the participants in the experimental group, and a convenience sampling method was used to recruit the control group. Recruitment of initial participants was facilitated by faculty members and students of the National and Kapodistrian University of Athens with longstanding connections to the Greek parasport community. Through direct contact by phone or email, athletes, coaches and physiotherapists working with athletes with disabilities were approached and informed about the study. During subsequent direct interactions, additional participants were recruited via personal referrals or directly in the training facilities. Although no formal waves of snowball sampling were implemented, this approach allowed for a natural extension of the sample through social and professional networks. In order to minimize potential sampling bias from localized networks, data collection also included athletes from Thessaloniki and other regions of Greece via video-assisted interviews.

2.2.1. Experimental Group

Inclusion criteria were active involvement in organized parasports for at least two years, age above 18 years, and the presence of a physical disability or blindness-visual impairment. Exclusion criteria were underage, parasports participation for less than two years and presence of a cognitive disability. Independent completion of questionnaires without the presence of the researcher or via video call was rejected for reliability purposes.

With respect to the experimental group of 58 Greek athletes with disability, 65.5% (N = 38) were male and 34.5% (N = 20) were female. The average age was 34.8 years (SD = 11.6), and the mean weight was 73.5 kg (SD = 14.3). The partic-

ipants were engaged in various types of sports and disciplines. These sports were allocated to 11 different categories. The most represented categories were track and field (31.0%), goalball (15.5%) and swimming (13.8%). Most athletes were involved in technical training, tactical training, and physical conditioning (62.1%), while 20.7% stated to mainly do technical training and physical conditioning. Only 8.6% reported that their training consisted of technical and tactical training mainly. All participants stated to regularly train every week. Most participants trained three or more times a week (82.8%) with an average training duration of 112.4 minutes (SD = 43.9). They were involved in organized sports for 15.1 years (SD = 11.7) on average, and most of them competed on national level (43.1%), followed by those who participated in global level competition, like the Paralympic Games or World Championships (24.1%) and athletes competing in European Championships (15.5%). All participants of the experimental group were actively training every week.

Surveyed athletes presented a variety of different disabilities, such as visual impairments (31.0%), cerebral palsy (17.2%), paraplegia (13.8%) and amputation (6.9%). The disabilities varied from being congenital or with a late onset, mean onset time being 13.1 years of age (SD = 15.1). The severity of the disabilities, determined by the disability certification centre of Greece (KEPA) varied from 50% to 100% (M = 84.3, SD = 11.5). Most of the para-athletes indicated an income of 0 - 1000 Euro (38.6%) and 1001 - 2000 Euro (31.6%).

2.2.2. Control Group

The control group consisted of 56 students in the department of physical education and sports science (TEFAA) of the National and Kapodistrian University of Athens (NKUA). 58.9% of participants represented in this sample were female (N = 33) and 41.1% (N = 23) were male. The mean age was 24.4 years (SD = 6.75) and their mean weight was 67.3 kg (SD = 11.74). The sports field varied, covering more team sports and ball games compared to the comparison sample. Most individuals engaged in football (23.2%) and track and field (19.6%). Another 19.6% participated in other team sports, namely basketball, handball, volleyball, and water polo. 10.7% of the participants named swimming as their second sport. The majority (75%) reported their training to consist of technical, tactical, and physical conditioning exercises. Most participants trained three or more times a week (82.1%) with an average training duration of 92.7 minutes (SD = 32.6). The participants were involved in organized sports for 12.8 years (SD = 6.4) on average and competed on national (41.1%), regional (12.5%), global (5.4%) and European level (3.6%) respectively. A total of 37.5% of the participants in the control group did not provide data with respect to the level of competition previously involved, and 8.9% stated not to be physically active every week and their responses referred to past times. Additionally, the participants were asked to provide information on whether they had suffered major injuries during their sporting career. 50% indicated that they had.

41.5% of the surveyed athletes in the control group indicated an income of 1001

- 2000 Euro and 20.5% an income of 2001 - 3000 Euro. Income information of 5.4% of the control group was missing.

2.3. Measuring Instruments

A demographic questionnaire, as well as two main questionnaires were used in this study. One of the questionnaires examined the physical self-perceptions and the other the abuse experience. Both questionnaires were developed by teams of experts as part of much-cited studies (Vertommen et al., 2016; Vertommen et al., 2017; Ohlert et al., 2021; Fox & Corbin, 1989; Sonstroem et al., 1992; Aşçi et al., 1999).

2.3.1. IViS (Intrapersonal Violence in Sports)

The IViS (Vertommen et al., 2016) has been developed being part of a doctor's dissertation on "Interpersonal violence against children in sport" (Vertommen et al., 2017) and surveys intrapersonal violence in three subdivisions. Psychological abuse experience was determined by 14 items, physical abuse was determined by 10 items and sexual abuse was determined by 17 items. The items have been developed by an expert group choosing a two-scale system, combining respondent's self-assessed frequency scores and expert severity ratings to construct a measurement for "overall severity of abuse experience" within each abuse type (Vertommen et al., 2017: S.72). Severity was categorized by a classification system from one to three, one being of low, two being of medium and three being of high severity.

"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. Events the experts had rated as most severe were classified as severe regardless of their frequency." (S.72)

Contact to T. Vertommen was established via LinkedIn and permission for the use of the IViS for the purposes of this project was granted. Despite the difference in target population, the researcher obtained Vertommen's approving opinion on using the IViS on the population of adult athletes with disability. For purposes of the study, not only examining abuse within sport, but within all life settings of a Para athlete, the standardized verbal instructions given to the participants included: "Relate your answers to experiences in your whole life, not only to sport settings" and "Only some questions are formulated to be exclusively sport-specific". The translation of the questionnaire was carried out by a native Greek speaker and senior academic with extensive experience in international sport research. Although no formal back-translation or pilot testing was conducted, the translation was reviewed within the research team and deemed appropriate for use in the Greek adult athlete population.

2.3.2. PSPP (Physical Self-Perception Profile)

The PSPP (Fox & Corbin, 1989) is a validated and widely used measuring tool for examining the perceived self. The Physical Self-Perception Profile includes 38

items, each containing two statements and a 4 point Likert scale. Results are formulated as six 6-item factors and one 2-item extra factor. Four of the 6-item factors as well as the 2-item factor were developed to examine perceptions within certain subdomains of the physical self. Those factors are sport competence, physical conditioning, physical appearance, physical strength, and the extra physical appearance item. A fifth factor was created to measure overall physical self-worth and a sixth factor to assess global self-worth.

K. Fox and C. Corbin were contacted via E-Mail and ResearchGate. Their permission to use the PSPP for the purposes of the study was granted. Furthermore, the researchers established contact with faculty members at the University of Thessalia, Trikala, who provided permission to use the already validated version of the PSPP translated into Greek. The content differed slightly from the English version, since it was validated for the use in Greek children and youth (Kolovelonis et al., 2013). The Greek faculty at the University of Thessalia approved its feasibility for the purposes of the present research study.

2.4. Procedure

Data was collected in a variety of sports clubs in the biggest cities of Greece, named Athens and Thessaloniki. Initial contacts to clubs, coaches or individual athletes were made possible through the assistance of faculty members and students in the Department of Physical Education and Sport Science, in the National and Kapodistrian University of Athens. Contact was established individually via E-Mail or SMS messages. The messages included general information about the researcher and the study purposes. After permission was granted to visit the athletes during training, personal contact was established, and the questionnaires were administered eventually. Most participants agreed to participate and fill in the questionnaires at the end of a training session.

Just before the data collection, the participants were encouraged to read the information brochure carefully, read and sign the informed consent form. For participants with visual impairments, it was ensured that the documents were read by a native speaker or the coach. In two cases, a caregiver supported the data collection, but these cases were excluded from subsequent data analysis.

The participants in the control group were recruited in the department of physical education and sports science (TEFAA) of the National and Kapodistrian University of Athens (NKUA). Informed consent was given, and data was collected from 56 university students of sport science, attending three different courses during the spring semester of 2023-24.

The primary researcher visited the areas where the data collection was held. A native English-speaking researcher supported the data collection process. The research team provided standardized instructions to all participants and provided encouragement to ask questions and get help during the administration of the demographic, the PSPP, and the IViS questionnaires. The whole data collection process lasted approximately 20 - 30 minutes for the majority of the sample (ath-

letes with physical disabilities and controls). For the visually impaired-blind athletes, the data collection process lasted approximately 30 - 40 minutes.

2.5. Statistical Analysis

The SPSS for Windows (version 20) was used for data analysis. The IRS (Intraclass Reliability Coefficient) was employed to record the reliability findings (Grimm, 1993). A multivariate analysis of variance (MANOVA) was used to determine the difference between the group of athletes with and without disabilities in the PSPP and IViS factors (Stevens, 2002). The univariate analysis and the t-parameter estimates were used as post-hoc comparisons. Accordingly, the interaction effect between 1) disability and gender, 2) gender and disability type, 3) disability onset and disability severity with respect to the PSPP and IViS factors were examined. Further, the interaction effect of disability and involvement in years with respect to the PSPP factors was examined.

The basic assumptions for the multivariate analysis were examined with the Bartlett Box test and the Box-M value (Pedhazur & Schmelkin, 1991). It was anticipated that both above named tests would be non-significant, indicating homogeneity of variance and variance-co-variance matrixes between the two groups. Finally, the Spearman's Rho Correlation Coefficient was used to examine the intercorrelation between the PSPP and IViS factors for the groups separate and combined. The criteria for evaluating the intercorrelations were: <0.20 (low), 0.21 - 0.50 (moderate), >0.50 and more (high) (Cohen, 1988).

3. Results

3.1. Test-Retest Reliability

A total of 18 participants of the control group were selected for reliability analysis. The reliability sample, consisting of university students, was recruited in a university lecture. The participants that agreed to be included were administered the PSPP and the IViS questionnaires twice. The two measurements were held 7 days apart, both in the university facilities, at the beginning of an evening class. The results revealed intraclass reliability coefficients ranging from 0.815 to 0.931 for the PSPP and from 0.877 to 0.936 for the abuse factors. The overall findings are presented in Table 1.

Table 1. Reliability analysis for the dependent variables (N = 18), IRC: Intraclass Reliability Coefficient.

Variable	IRC
Sport competence	0.903
Physical conditioning	0.878
Physical appearance	0.897
Physical strength	0.930
Physical self-worth	0.931
Global self-worth	0.913

Continued

Extra physical appearance item	0.815
Psychological abuse	0.936
Physical abuse	0.878
Sexual abuse	0.877
Abuse total score	0.926

3.2. Descriptive Statistics

A total of 58 individuals constituted the group of athletes with disabilities (experimental group) and a total of 56 individuals constituted the sample of university students identified as athletes without disabilities (control group). Both groups responded to the PSPP and the IViS questionnaires. Their responses as a total sample, and as separate groups of athletes with and without disabilities, are presented in Table 2.

Table 2. Means and standard deviations of PSPP and IViS answers.

Variable	M	SD	N
PSPP Total			
Sport competence	2.91	0.66	114
Physical conditioning	2.99	0.68	114
Physical appearance	2.69	0.65	114
Physical strength	2.81	0.72	114
Physical self-worth	2.81	0.73	114
Global self-worth	2.96	0.65	114
Extra physical appearance item	2.83	0.7	114
PSPP experimental group			
Sport competence	2.85	0.72	58
Physical conditioning	3.00	0.69	58
Physical appearance	2.67	0.73	58
Physical strength	2.8	0.77	58
Physical self-worth	2.87	0.82	58
Global self-worth	3.03	0.71	58
Extra physical appearance item	2.87	0.78	58
PSPP control group			
Sport competence	2.97	0.59	56
Physical conditioning	2.99	0.68	56
Physical appearance	2.72	0.57	56
Physical strength	2.82	0.66	56
Physical self-worth	2.75	0.63	56
Global self-worth	2.88	0.57	56
Extra physical appearance item	2.79	0.62	56

Continued

IViS total			
Psychological abuse	10.1	7.5	114
Physical abuse	4.9	7.6	114
Sexual abuse	6.2	9.6	114
Total score abuse	21.5	21.5	114
IViS experimental group			
Psychological abuse	10.00	7.25	58
Physical abuse	5.69	7.9	58
Sexual abuse	6.62	9.37	58
Total score abuse	22.83	21.19	58
IViS control group			
Psychological abuse	10.23	7.74	56
Physical abuse	4.05	7.34	56
Sexual abuse	5.71	9.99	56
Total score abuse	20.07	21.99	56

Comparisons between the experimental group (with) and the control group (without) in the Physical Self-Perception Profile (PSPP) and the Interpersonal Violence in Sports Questionnaire (IViS) are visualized in Figure 1 and Figure 2.

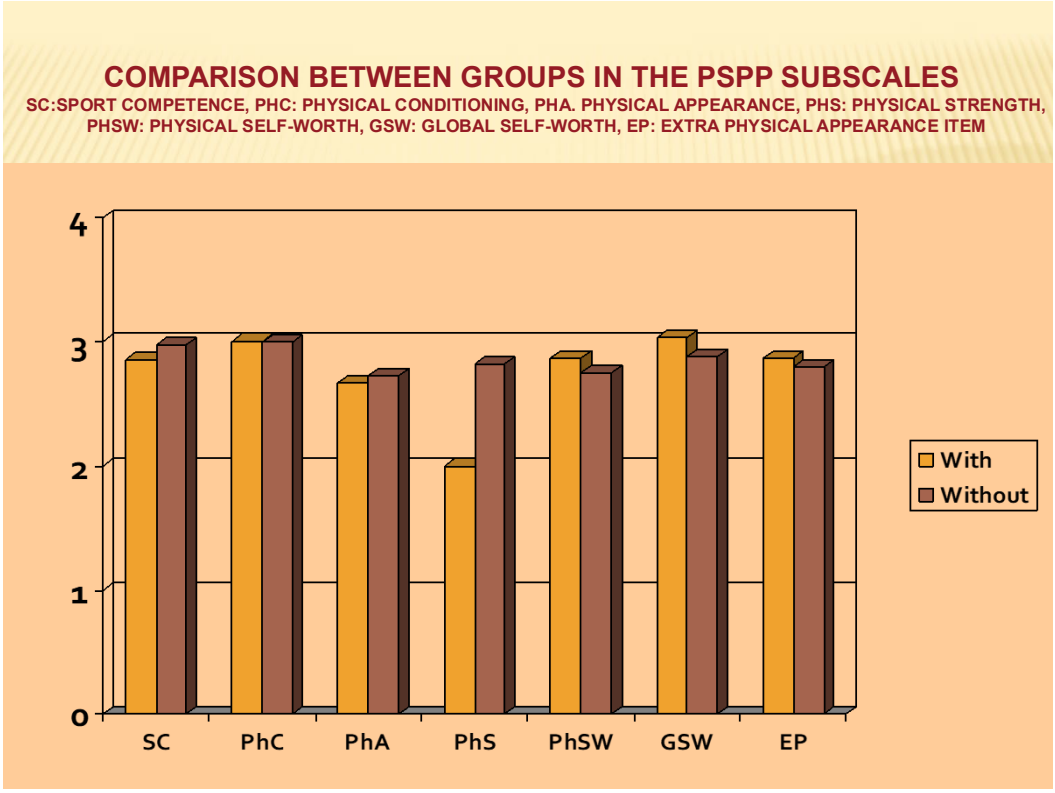

Figure 1. Comparison between groups in physical self-perceptions.

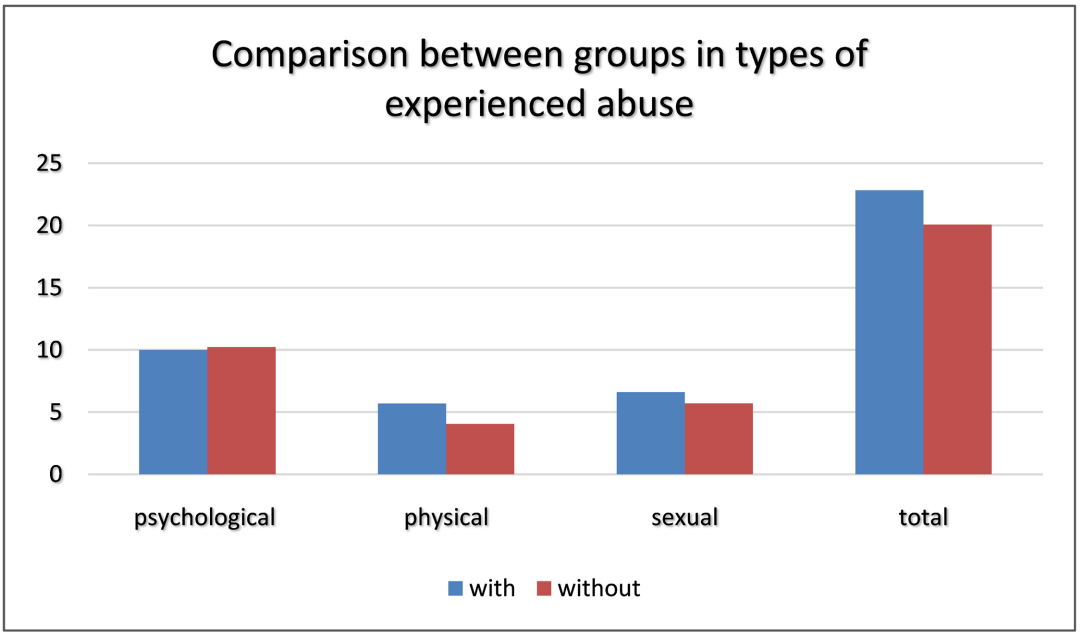

Figure 2. Comparison between groups in abuse experience.

3.3. Hypothesis Testing

Initially, the differences between the two groups (athletes with disabilities/athletes without disabilities) were examined with respect to their responses in the three abuse factors (IViS: psychological abuse, physical abuse, sexual abuse). The multivariate analysis of variance revealed no significant differences between the two groups in IViS factors (Wilk's Lambda = 0.979, F = 0.776, $p = 0.510$, $\eta^2 = 0.021$). The univariate post-hoc analysis revealed no significant differences with respect to psychological abuse (F = 0.027, $p = 0.869$, $\eta^2 = 0.001$), physical violence (F = 1.311, $p = 0.255$, $\eta^2 = 0.012$) and sexual violence (F = 0.250, $p = 0.618$, $\eta^2 = 0.002$) respectively. Accordingly, the difference between the two groups were examined with respect to the total abuse score. The independent sample t-test revealed no significant difference between the two groups (t = 0.681, $p = 0.497$).

Accordingly, the difference between the two groups (athletes with disabilities/athletes without disabilities) with respect to the seven physical self-perception factors were examined. The multivariate analysis of variance revealed no significant differences between the two groups (Wilk's Lambda = 0.940, F = 0.966, $p = 0.460$, $\eta^2 = 0.060$). The univariate post-hoc comparisons revealed no significant differences for:

1) sport competence (F = 1.036, $p = 0.311$, $\eta^2 = 0.009$)
2) physical conditioning (F = 0.013, $p = 0.908$, $\eta^2 = 0.001$)
3) physical appearance (F = 0.189, $p = 0.664$, $\eta^2 = 0.002$)
4) physical strength (F = 0.036, $p = 0.850$, $\eta^2 = 0.001$)
5) physical self-worth (F = 0.773, $p = 0.394$, $\eta^2 = 0.007$)
6) global self-worth (F = 1.563, $p = 0.214$, $\eta^2 = 0.014$)
7) extra physical appearance item (F = 0.331, $p = 0.566$, $\eta^2 = 0.003$)

3.4. Secondary Hypotheses

3.4.1. Interaction Disability—Gender

Accordingly, the interaction effect between disability and gender with respect to experienced abuse were examined as a secondary hypothesis. The multivariate analysis showed no significant interaction effect (Wilk's Lambda = 0.941, F = 1.681, $p = 0.160$, $\eta^2 = 0.059$), but the gender effect was significant (Wilk's Lambda = 0.903, F = 2.875, $p = 0.026$, $\eta^2 = 0.099$). Between-Subject post-hoc comparisons revealed a significant gender effect with respect to sexual abuse (F = 10.035, $p = 0.002$, $\eta^2 = 0.084$) and the total abuse score (F = 5.571, $p = 0.020$, $\eta^2 = 0.048$). Examination of the main scores revealed that the female respondents declared they had experienced sexual abuse more often (M = 8.94, SD = 11.58) compared to their male counterparts (M = 3.77, SD = 6.81).

Multivariate analysis was then performed with respect to physical self-perception scores and showed no significant effects, nor for gender (Wilk's Lambda = 0.971, F = 0.446, $p = 0.871$, $\eta^2 = 0.029$) or disability (Wilk's Lambda = 0.944, F = 0.875, $p = 0.529$, $\eta^2 = 0.056$) as single factors, neither for the interaction effect (Wilk's Lambda = 0.976, F = 0.367, $p = 0.919$, $\eta^2 = 0.024$).

3.4.2. Interaction Effect of Gender and Disability Type

For the experimental group, the interaction effect of disability type (visual vs. physical) and gender was examined with respect to the dependent variables (IViS and PSPP factors). The multivariate analysis showed no significant effect on abuse experience (Wilk's Lambda = 0.871, F = 1.895, p = 0.126, partial eta squared = 0.129) and on Physical Self-Perception (Wilk's Lambda = 0.911, F = 0.670, p = 0.696, partial eta squared = 0.089). Yet, Between-Subject post-hoc tests revealed a significant interaction effect on:

psychological abuse (F = 5.719, $p = 0.020$, partial eta squared = 0.096)

sexual abuse (F = 5.121, $p = 0.028$, partial eta squared = 0.087)

total abuse score (F = 5.458, $p = 0.023$, partial eta squared = 0.092).

Also, a significant effect of disability type on physical abuse was shown (F = 4.402, $p = 0.041$, partial eta squared = 0.075). Examination of mean scores showed a higher prevalence of psychological and sexual abuse among female and visually impaired participants compared to their male or physically impaired counterparts. The mean scores also showed a higher prevalence of physical abuse towards visually impaired athletes (M = 8.47) in comparison to athletes with physical disabilities (M = 4.33) regardless of the gender. Main results are presented in **Figures 3-5**.

3.4.3. Interaction Effect of Disability Onset and Severity

For the experimental group, the interaction effect of disability onset (congenital vs. acquired) and disability severity (<84%/>83%) was examined with respect to the dependent variables (IViS and PSPP factors). The analysis revealed no significant effect on abuse experience (Wilk's Lambda = 0.884, F = 1.601, $p = 0.189$, $\eta^2 = 0.116$) and on Physical Self-Perception (Wilk's Lambda = 0.818, F = 1.464, $p =$

0.204, $\eta^2 = 0.182$). Following Between-Subject post-hoc tests with respect to PSPP factors revealed significant interaction effects on:

Physical conditioning (F = 5.271, $p = 0.026$, $\eta^2 = 0.092$)

Physical self-worth (F = 4.044, $p = 0.05$, $\eta^2 = 0.072$)

Global self-worth (F = 5.499, $p = 0.023$, $\eta^2 = 0.096$)

Extra physical appearance item (F = 4.677, $p = 0.035$, $\eta^2 = 0.083$)

Examination of mean scores showed significantly higher self-perception scores for higher disability severity (>83%) in acquired disabilities, and higher self-perception scores for lower disability severity (<84%) in congenital disabilities for the above-named factors.

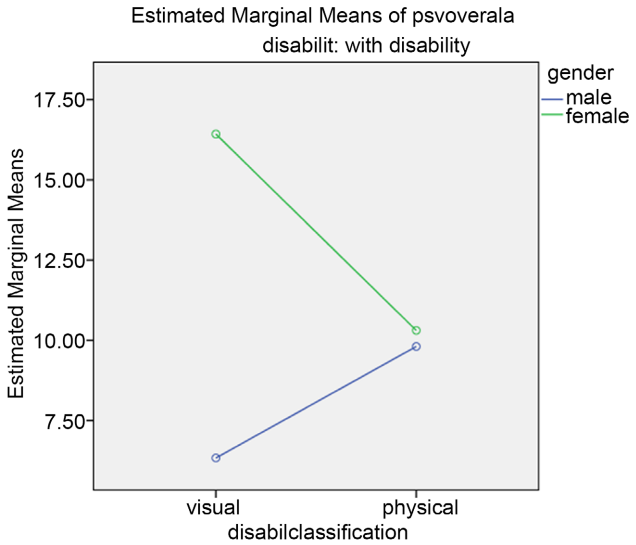

Figure 3. Interaction effect of disability type (visual/physical) and gender (male/female) on prevalence of psychological abuse (psyvoverala).

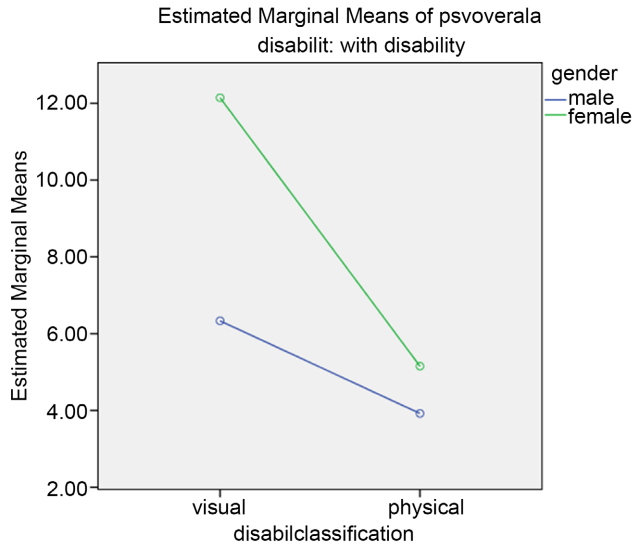

Figure 4. Effect of disability type (visual/physical) on prevalence of physical abuse (phvoverala).

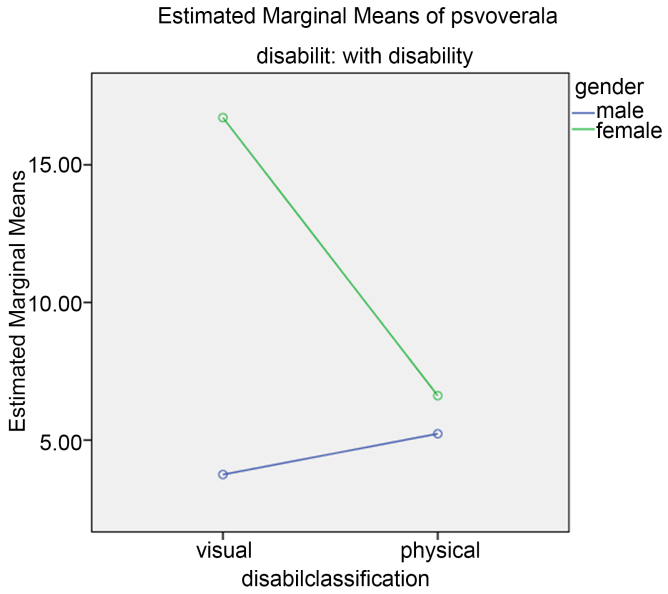

Figure 5. Interaction effect of disability type (visual/physical) and gender (male/female) on prevalence of sexual abuse (sexvoverala).

3.4.4. Interaction Disability—Involvement in Years

Accordingly, the interaction effect between disability (with and without disability) and sports involvement (less than 14 years/14 years or more) with respect to the PSPP factors were tested. The multivariate analysis showed a significant interaction effect (Wilk's Lambda = 0.850, F = 2.545, $p = 0.019$, $\eta^2 = 0.150$). The Between-Subject post-hoc tests revealed a significant interaction effect for physical conditioning (F = 5.835, $p = 0.017$, $\eta^2 = 0.052$). Further, as a single factor, involvement in years showed significant effects on physical conditioning and physical appearance (F = 4.208, $p = 0.043$, $\eta^2 = 0.038$). Examination of the mean scores revealed, that, in the control group, physical conditioning values were higher for individuals that have been involved in sports for 14 years or more (M = 3.37, SD = 0.67), compared to those who were involved less than 14 years (M = 2.76, SD = 0.55). The experimental group showed no difference effected by sports involvement (M = 3.00). Further examination of mean scores showed a group-independent significant difference in perceived physical appearance in participants who have involved in sports for 14 years or more (M = 2.84, SD = 0.66) in comparison to those who are less experienced (M = 2.59, SD = 0.64).

3.4.5. Correlation between PSPP Factors and IViS Factors

Data of the dependent variables (PSPP and IViS factors) were tested for normal distribution. Skewness and Kurtosis values were strongly positive in the IViS factors and strongly negative in the PSPP factors. Analysing histograms and Normal Q-Q Plots, normal distribution can be assumed for PSPP factors but not for IViS factors. Given these outcomes, requirements for a Pearson Correlation were not met, therefore, a Spearman Correlation Analysis was used to examine the intercorrelation between the PSPP and IViS factors.

3.5. PSPP

3.5.1. Combined Groups

For the groups (with and without disability) combined, all PSPP factors correlated positively with each other. A strong correlation was found between global self-worth and physical self-worth (Spearman's $p = 0.717$, $p < 0.001$). Physical self-worth correlated the strongest with physical appearance (Spearman's $p = 0.776$, $p < 0.001$) and the extra physical appearance item (Spearman's $p = 0.730$, $p < 0.001$). Only moderate correlations were found between physical self-worth and physical strength (Spearman's $p = 0.468$, $p < 0.001$), physical conditioning (Spearman's $p = 0.379$, $p < 0.001$) and sports competence (Spearman's $p = 0.300$, $p < 0.001$).

Global self-worth correlated strongly with the extra physical appearance item (Spearman's $p = 0.586$, $p < 0.001$), physical appearance (Spearman's $p = 0.571$, $p < 0.001$) and physical conditioning (Spearman's $p = 0.519$, $p < 0.001$).

Physical appearance correlated strong with the extra physical appearance item (Spearman's $p = 0.669$, $p < 0.001$), and moderate with physical strength (Spearman's $p = 0.460$, $p < 0.001$) and physical conditioning (Spearman's $p = 0.371$, $p < 0.001$).

Sport competence had strong correlations with physical strength (Spearman's $p = 0.579$, $p < 0.001$) and physical conditioning (Spearman's $p = 0.574$, $p < 0.001$).

3.5.2. Experimental Group

In athletes with disability, sport competence was strongly associated with physical strength (Pearson's $p = 0.739$, $p < 0.001$) and physical conditioning (Spearman's $p = 0.621$, $p < 0.001$). Sport competence was moderately correlated with physical appearance (Spearman's $p = 0.369$, $p = 0.004$).

Global self-worth was strongly correlated with physical strength (Spearman's $p = 0.727$, $p < 0.001$), the extra physical appearance item (Spearman's $p = 0.637$, $p < 0.001$), physical strength (Spearman's $p = 0.523$, $p < 0.001$) and physical appearance (Spearman's $p = 0.516$, $p < 0.001$). Global self-worth was moderately correlated with physical conditioning (Spearman's $p = 0.479$, $p < 0.001$) and sport competence (Spearman's $p = 0.483$, $p < 0.001$).

Physical self-worth was strongly associated with physical appearance (Spearman's $p = 0.750$, $p < 0.001$), the extra physical appearance item (Spearman's $p = 0.721$, $p < 0.001$) and physical strength (Spearman's $p = 0.515$, $p < 0.001$). Physical self-worth was moderately correlated with sport competence (Spearman's $p = 0.329$, $p = 0.012$) and physical conditioning (Spearman's $p = 0.319$, $p = 0.015$).

3.5.3. Control Group

In non-disabled students of physical education and sports science, global self-worth was strongly correlated with physical self-worth (Spearman's $p = 0.724$, $p < 0.001$), physical appearance (Spearman's $p = 0.684$, $p < 0.001$), physical conditioning (Spearman's $p = 0.562$, $p < 0.001$) and the extra physical appearance item (Spearman's $p = 0.508$, $p < 0.001$).

Physical self-worth correlated strongly with physical appearance (Spearman's p

= 0.829, $p < 0.001$) and the extra physical appearance item (Spearman's $p = 0.729$, $p < 0.001$). Physical self-worth has moderate correlations with physical conditioning (Spearman's $p = 0.414$, $p = 0.002$), physical strength (Spearman's $p = 0.394$, $p = 0.003$) and sport competence (Spearman's $p = 0.268$, $p = 0.046$).

Sport competence correlated strongly with physical conditioning (Spearman's $p = 0.522$, $p < 0.001$) and moderately with physical strength (Spearman's $p = 0.363$, $p = 0.006$).

3.6. IViS

3.6.1. Combined Groups

For both groups combined, moderate to strong correlations were found between the IViS factors. Total score correlated strongest with psychological abuse (Spearman's $p = 0.860$, $p < 0.001$), followed by sexual abuse (Spearman's $p = 0.780$, $p < 0.001$) and physical abuse (Spearman's $p = 0.736$, $p < 0.001$).

3.6.2. Experimental Group

For the group of athletes with disability strong correlations were found between the IViS factors. Total score had the strongest correlation with sexual abuse (Spearman's $p = 0.872$, $p < 0.001$), followed by psychological abuse (Spearman's $p = 0.850$, $p < 0.001$) and physical abuse (Spearman's $p = 0.817$, $p < 0.001$).

3.6.3. Control Group

Within the group of non-disabled students of physical education and sports science moderate to strong correlations were found between the IViS factors. Total score correlated strongest with psychological abuse (Spearman's $p = 0.875$, $p < 0.001$), followed by sexual abuse (Spearman's $p = 0.682$, $p < 0.001$) and physical abuse (Spearman's $p = 0.590$, $p < 0.001$).

3.7. PSPP—IviS

Spearman Correlation Analysis showed one significant correlation between PSPP and IViS factors. In the control group, results showed a moderate correlation between physical strength and sexual abuse (Spearman's $p = 0.283$, $p = 0.035$).

4. Discussion

The present study examined the abuse experiences and physical self-perceptions of athletes with (EG: physical and visual impairments) and without disabilities (CG) in Greece. There were no differences between the two groups in all the variables tested. Demographic factors were examined with respect to abuse experiences and physical self-perceptions. Accordingly, the disability status and gender had no interaction effect upon the self-perceptions and abuse experienced by the individuals involved. Gender, however, differentiated the responses with respect to sexual abuse and the total abuse score (sexual, physical and psychological abuse). Females experienced abuse to a wider extent compared to their male counterparts, regardless of disability status. The disability type had an interaction effect

with gender upon psychological, sexual, and total abuse experienced, while disability type alone had an effect upon the physical abuse experienced. Being female and visually impaired determined a higher prevalence of psychological, sexual, and total abuse compared to being male and physically impaired. Further, visually impaired athletes experienced more physical abuse compared to athletes with physical disabilities. In the experimental group, onset (congenital/acquired) and severity (under 84%/ over 83%) of disability had a post hoc interaction effect on the PSPP factors of physical conditioning, the extra appearance item and physical and global self-worth. High self-perception scores in these factors were present in individuals with acquired disabilities of higher severity and with congenital disabilities of lower severity. Onset and severity of disability, as single factors, did not determine self-perception for the EG. Finally, disability status and sport involvement (under 14 years/14+ years) had an interaction effect on self-perception. Involvement in sports for more than 14 years influenced responses on self-perceptions in physical conditioning positively in individuals without disability, while there was no difference in athletes with disability. Perceived physical appearance values were higher in athletes involved in sport for more than 14 years, regardless of the disability status. Finally, no association was evident between the self-perceptions and abuse experiences in the whole sample.

4.1. Similarities and Differences with the Literature

4.1.1. PSPP and Abuse

The present findings on abuse experiences of athletes with and without disability are partially in agreement with previous reports (Kerr et al., 2019b, Willson et al., 2022; Vertommen et al., 2016; Parent & Vaillancourt-Morel, 2021). Parent and Vaillancourt-Morel (2021) as well as WHO, 2024; Kerr et al., 2019b; Willson et al. (2022) reported no difference between groups of athletes with and without disability with respect to psychological, physical, or sexual abuse and maltreatment experiences. Kerr et al., 2019b, Willson et al. (2022) used the term "maltreatment", defined as "…all types of physical and/or emotional ill-treatment, sexual abuse, neglect, negligence, and commercial, or other exploitation, which results in actual or potential harm to the child's health, survival, development, or dignity in the context of a relationship of responsibility, trust, or power" (19.09.2022, https://www.who.int/news-room/fact-sheets/detail/child-maltreatment).

On the other hand, Vertommen et al. (2016) reported "remarkably higher prevalence estimates" in all three types of violence (psychological, physical, and sexual) in the group of athletes with disabilities (Vertommen et al., 2016, p. 107). In a recent study, athletes participating in disability sports reported higher prevalence of psychological violence and neglect (Vertommen et al., 2022). Vertommen et al., (2017) used the term 'interpersonal violence', which is also applied in the IViS questionnaire used in the present study. According to Vertommen, the term 'violence' includes "all types and all ranges of severity, frequency and impact, with or without the intent to harm" (Vertommen et al., 2017: p. 12), and therefore differs

from the term 'abuse' mainly in also including non-intentional harm. Tuakli-Wosornu et al. (2020) reviewed eight studies with similar research aims and concluded that athletes with physical disability have a four times higher risk of being victimized compared to athletes without disability. Following the above inconsistent findings reported in the literature, Willson et al. (2022) reported that more research is required to shed light in the field and provide an understanding of harmful experiences in sports.

The present findings on physical self-perceptions of athletes with and without disabilities agree partially with the findings of previous studies (Sherrill et al., 1990; Ferreira & Fox, 2008; Shapiro & Martin, 2010). Sherrill et al. (1990) reported, that visually and physically impaired youth athletes presented similar patterns of self-perception as youth athletes without disability in a sample of 158 young individuals. Wickman et al. (2018) examined self-efficacy in children with and without disability and found similar values in both groups. However, Wickman et al (2018) noted that an eight-month physical activity intervention increased self-efficacy levels in children with disability. Comparability to the present findings is arguable however, since the population differed in age and athlete status and the wider concept of self-efficacy was examined instead of physical self-perceptions.

Ferreira & Fox (2008) reported differing findings for their population sample of basketball players with or without physical disability. Basketball players without disability reported higher levels of physical self-perception than wheelchair basketball players. Taleporos & McCabe (2001) reported disability to affect body esteem in non-athletes but did not provide comparable data through a control group. Generally, available research data in this field is rare and further research studies are needed. Shapiro & Martin (2010) found lower scores in perceived physical appearance, physical self-concept, and further endurance, which could be linked to the PSPP factor of physical conditioning used in the present study.

4.1.2. Gender/Disability Type (Abuse)

The present findings on the gender effect were in line with outcomes of previous studies (Vertommen et al., 2016; Ohlert et al., 2021; Parent & Vaillancourt-Morel, 2021; Kerr et al., 2019a). Vertommen et al. (2016) reported a higher prevalence of sexual abuse experience in women compared to men, while the latter reported higher prevalence of physical abuse experience. Likewise, the findings of Ohlert et al. (2021) indicated that females had a three times higher risk of experiencing sexual violence, compared to their male counterparts. Male elite athletes reported higher prevalences of severe physical violence, therefore agreeing with the findings of Vertommen.

Parent & Vaillancourt-Morel (2021) found a significant effect for gender, resulting in more psychological and physical abuse experience reported by women in comparison to men. This phenomenon is also reflected in the outcomes of Kerr et al. (2019a), where women reported higher levels of experienced psychological harm and neglect than men.

The present findings revealed that disability type (visual or physical impair-

ment) had an effect on physical abuse experience. Specifically, athletes with visual disabilities reported higher levels of abuse experience compared to athletes with physical disabilities. The above finding is in agreement with Haegele et al. (2017) who reported that athletes with visual impairments were at higher risk of experiencing psychological abuse (Haegele et al., 2017). Olsvik (2006) found vulnerability due to disability to be a risk factor for experiencing abuse from a perpetrator whose motive is "the need for power and control" (p.96). His findings led to the conclusion that the sample of athletes with visual impairments in the present study may have had a higher level of vulnerability than those with physical impairments.

The literature review revealed no studies examining the interaction effect of gender and disability type. The present findings therefore are considered exploratory and may not be related directly to previous findings.

4.1.3. Gender/Disability Type (PSPP)

With respect to the PSPP responses, gender combined with disability status did not differentiate the athletes in the present study. On the contrary, Efe (2023) found that the three factors of physical self, physical conditioning and sports competence were differentiated by gender. Higher perceptions of these factors were reported by male participants, compared to their female counterparts. In the same study, disability type was found to influence PSPP levels, hence disagreeing to the findings of the present study.

With respect to the PSPP responses, disability type and disability status did not differentiate the athletes in the present study. These findings are partly in line with outcomes of previous studies (Niemiec, 2018; Efe, 2023; Shpigelman & HaGani, 2019; Olney & Brockelman, 2005). Niemiec (2018) found no differences in the self-perception scores of visually impaired and their non-disabled counterparts, hence agreeing to the present findings. However, individuals with physical disability were not assessed by Niemiec (2018) and these findings may not be entirely comparable to the present.

On the other hand, in a recent study conducted by Efe (2023), visually impaired athletes were found to have higher scores in the general self, physical self, physical conditioning, sports competence, and physical attractiveness factors, compared to physically impaired athletes. Similar outcomes were reported by Shpigelman & HaGani (2019) and Olney & Brockelman, (2005), who compared the self-perceptions of individuals with visible physical disability to those with invisible physical disability. Comparability with respect to the present study is arguable since visual impairments are not always invisible since many individuals rely on using a cane, a guide dog, or a human guide. The findings of Efe (2023), Shpigelman & HaGani (2019) and Olney & Brockelman (2005) are inconsistent with Niemiec (2018)'s statement, who claimed that "one of the most common psychosocial consequences" of having a visual impairment is a reduction of self-esteem (Niemiec, 2018: p. 248). The little research existing in the field implies that future research is needed to verify or falsify the present findings.

4.1.4. Onset/Severity (Abuse)

No significant interaction effect, or separate effects of onset or severity of disability on abuse experience was found. The literature review revealed no studies examining the interaction effect of onset and severity of disability upon the abuse experience of athletes with disabilities. Few studies were retrieved examining the separate effect of onset or severity, with respect to the abused experiences of individuals with disabilities. Lund et al. (2021) found psychological abuse experience to be predominant in a group of individuals with childhood-onset of disability, compared to the group of individuals with adult-onset disability, while no differences were reported for physical and sexual abuse experiences. This may be partly explained by bullying behaviour in childhood, which is mainly directed against children with disabilities (Haegele et al., 2021).

Young et al. (1997) collected data but failed to reach to a concrete conclusion with respect to the effect of disability severity upon the abuse experiences of individuals with disabilities. The need for personal assistance was found to increase the risk of experienced abuse in women with disability in a later study (Nosek et al., 2001). Since the need for a personal assistance usually goes along with high severity of disability, this finding indicates that disability severity may be a risk factor for abuse experience, and therefore disagree to the present findings (Nosek et al, 2001). Tuakli-Wosornu et al. (2020) followed the findings of Nosek et al (2001) stating that "the relationship between level of impairment (level of support needs) and risk of non-accidental harm is unclear" (Tuakli-Wosornu et al., 2020: p. 9) and suggested that the previous speculation may be examined in the future.

4.1.5. Onset/Severity (PSPP)

Few studies were retrieved examining the effect of disability onset upon the self-perceptions of individuals with physical disabilities (Kennedy et al, 1995; Bogart, 2014). Kennedy et al. (1995) reported no difference between childhood onset and adulthood onset of individuals with spinal cord injury upon the recorded self-perceptions. Bogart (2014) compared different factors predicting life satisfaction between individuals with congenital and acquired disabilities and reported that congenital onset did to not predict a higher self-esteem. The reports of Kennedy et al. (1995) and Bogart (2014) are partially in agreement with the present findings.

On the other hand, previous studies on the impact of disability severity on body esteem and self-perceptions (Taleporos & McCabe, 2001; Shpigelman & HaGani, 2019; Hayter & Dorstyn, 2014) had partially differing findings compared to the present study. All of the above-named studies reported that individuals with severe disabilities had lower levels of self-esteem and self-perceptions compared to those with milder severity. These findings reflect that the population of athletes with disabilities is more similar than different compared to their non-disabled counterparts participating in organized sports (Sherrill et al., 1990). Being an athlete therefore identifies these individuals to a wider extent, compared to disability status or any other disability related variable (onset of experienced disability, type, severity, etc).

Mean scores showed significantly higher PSPP scores for individuals with a higher severity and acquired disabilities and for those with lower severity and congenital disabilities. One possible explanation might be the opportunity of athletes with acquired disabilities to experience wider physical self-awareness before acquiring the disability. The psychosocial differences before and after disability acquisition may, in turn, challenge the athletes to overcome the daily obstacles, enhance their self-awareness, return to sports and attempt to reach previous levels of performance.

Athletes with congenital disabilities, however, cannot benefit from self-comparison, but only compare to the non-disabled population and therefore might be more aware of their own limitations from the beginning of their lives. Their personal experiences could lead to lower PSPP scores, especially for those with higher severity. Qualitative research should be conducted in the future to confirm these hypotheses.

4.1.6. Involvement in Years (PSPP)

Ferreira & Fox (2008) examined the association between length of sport career and self-esteem and their findings are in agreement with the present study. Ferreira & Fox (2008) reported that a longer sport career had a positive effect on self-esteem, regardless of disability status.

4.1.7. Correlation Abuse and PSPP

The absence of association between self-perception and abuse experiences in the present study is in conflict to the findings of previous researchers (Çelik & Odacı, 2012; Ozbas et al., 2013). Specifically, Çelik & Odacı (2012) reported a negative correlation between self-perception and physical, sexual, and emotional childhood abuse in university students. Further, Ozbas et al (2013) stated that the self-esteem scores of sports and physical education students were shown to be unrelated to sociodemographic factors, but they were found to be related to the experience of emotional, physical, and sexual abuse throughout childhood. Neither Çelik & Odacı (2012), Ozbas et al. (2013) examined the self-esteem and abuse experience of individuals with disability. The above researchers however agreed with Black et al. (1994) and Lopez & Heffer (1998) who, in turn, shed more light into the risks of childhood abuse and their respective effect upon the perceived self in later life.

4.2. Limitations

Certain Limitations do not allow generalization of the present findings without caution. Firstly, this IViS questionnaire was initially designed and tested to assess childhood abuse experiences in sports. Further, the IViS validation sample was comprised mainly from athletes without disabilities and only a small portion was constituted from athletes mainly with physical disabilities. Nosek et al. (2001) underlined how important it is to adapt data collection techniques to people with disability (p. 186). The researchers who developed the IViS (Vertommen et al.,

2016) suggested that it could be used with adults with disability, but still, no validity or reliability study was retrieved in the field accordingly. The PSPP questionnaire in turn, was validated in Greek, but had never been used with a sample of individuals with disabilities. The attempt to overcome the above-named limitations was based on the reliability analysis conducted and the encouraging results which are presented in the results section.

Secondly, the data collection for the experimental group was held in a training environment and usually at the end of a training session. In certain cases, it was not feasible to perform the data collection in a quiet and private setting, and the presence of a native Greek speaker was imperative. In some instances, the participants were asking for clarifications that were provided by the native speaker who was present during that time. The quality of the provided clarifications however was not assessed and standardized. In turn, the data collection for the control group was held in the university, in a different environment and in a group setting. A certain number of participants (N = 8) in the control group did not read the instructions provided at the beginning and therefore, their data was excluded from subsequent analyses.

Thirdly, no qualitative data were collected. According to Langdridge (2004), qualitative research is concerned with the meaning, focusses on a deductive approach, and is usually based on a smaller number of participants in an attempt to discover evidence through e.g. semi structured or unstructured interviews. In the present study, the language barrier did not allow the primary researcher to proceed and collect data with a qualitative or mixed method design.

Finally, a private one on one-setting, including only the participant and the primary researcher during the assessment, couldn't be ensured. In most cases, either a parent, a teammate and or a coach was involved or present in the recruitment and data collection process. As Willson et al. (2022) stated, coaches and peers are among the most commonly reported perpetrators of abuse. Therefore, for reliability purposes they should have been excluded from the data collection process, but in the current study, the disability-related needs of the participants as well as the training environment in which the assessments were held, made it inevitable for parents and/or coaches to be present in most cases.

4.3. Recommendations for Future Researchers

Direct communication with athletes may be required in future research designs, excluding coaches, parents, and peers from the study setting. Literature suggested that coaches and parents may be perpetrators of abuse and should therefore not be present in the recruitment and assessment process. Language barriers should be diminished, and assessment settings should be further standardised. Future researchers are advised to conduct longitudinal studies and further, to use or develop a questionnaire more feasible for the population of athletes with disabilities. The design of a specific questionnaire however requires separate studies to ensure reliability and validity evidence for athletes with disabilities. Future researchers

are advised to perform mixed model research designs, including qualitative data collection with semi-structured or unstructured interviews that gather further important information on abuse experiences, violence settings, and perpetrators.

4.4. Recommendations for Practitioners

Abuse towards athletes with disability is evident. One may observe a tendency for blind/visually impaired athletes and female athletes to be more exposed to abuse, but still more research has to be conducted.

Policymakers should develop safe pathways for victims to safely report incidences of abuse without being afraid of facing consequences. Prevention of abuse cases should be aimed by increased education and better preparation of future coaches and other people involved in sports. Support services should be accessible and offered to victims and families. Control policies should be optimized, reducing possibilities of abusive behaviour, and counteracting abusive behaviour being facilitated by power/authority imbalances.

Further, the present findings may confirm that athletic status makes individuals more similar and hence less likely to face differences with respect to abuse experience regardless of disability status. Therefore, practitioners and policymakers should make sport more accessible to individuals with disability. Further, the chances of receiving support to reach elite athlete status should be equalized in Para sport and non-Para sport.

5. Conclusion

The present study investigated the experienced abuse and physical self-perceptions among athletes with and without disabilities in Greece. The main outcome was that athletes with and without disability were not different from each other with respect to abuse experiences and self-perceptions. The athletic status seemed to make the two groups (EG & CG) more comparable with respect to the prevalence of abuse experience and physical self-perceptions, which should be further examined in future research.

Comparing the present results to the existing literature, it appeared that permanent conclusions may not be drawn, due to the low number of conducted studies in the field.

Abuse experience: While some studies reported no significant differences in abuse experiences between athletes with and without disabilities, others suggested higher prevalence rates among athletes with disabilities, particularly in female athletes and those with visual impairments. The influence of gender, regardless of disability status, in the present result is aligned with the existing literature, while differing outcomes can be found for disability type (visual/physical). The effect of disability onset (congenital/acquired) and severity has been addressed in previous studies, but no solid findings have been reported, leaving the area open for future research.

Physical self-perception: Likewise, the present findings agree partly with previ-

ous research, showing that further research is required. Gender and disability type (visual/physical) appeared to influence self-perceptions. Onset and severity of disability appeared to slightly affect physical self-perceptions differently than anticipated, emphasizing the need for further investigation. Individuals with acquired disabilities, of higher severity, reported higher levels of self-perception. The time of sports involvement in years seemed to influence the physical self-perception levels of athletes, regardless of disability status. The findings are in agreement with a previous study, leading to the conclusion that more research is required for confirmation purposes.

The present study faced several limitations that should be considered when generalizing the outcomes. No qualitative data has been collected, limiting the depth of insights. Further, the psychometric properties of the questionnaires used for quantitative data collection were not tested for the target population of athletes with disability. Lastly, the assessment settings have not been standardized for all participants which may have influenced the responses and the depth of the collected data.

Recommendations for future researchers include: a) Using measuring tools adapted specifically for athletes with disabilities; b) Conducting longitudinal studies to track changes over time; c) Applying a mixed method design to capture both qualitative and quantitative data. Recommendations for practitioners and policymakers focus on implementing education programs and well-structured support systems to prevent and address abuse within sports and to safeguard athletes with and without disabilities.

Conclusively, while the present study shed light on the abuse prevalence and physical self-perceptions among athletes in Greece, further investigation is essential to optimize research designs and efficiency of measurement tools. Future studies may also address inconsistencies, raise awareness, and promote interventions for safe and inclusive sports environments for individuals with and without disabilities.

Conflicts of Interest

The authors declare no conflicts of interest regarding the publication of this paper.

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