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Relation between individual differences of personality and aggressiveness

in soccer fans: a systematic review

Relação entre diferenças individuais de personalidade e agressividade em

torcedores de futebol: uma revisão sistemática

Relación entre las diferencias individuales de personalidad y agresividad en

los fanáticos del fútbol: una revisión sistemática

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*Informações do Artigo:**Geovani Garcia Zeferino*geogarciapsico@gmail.com*Recebido em: 29/10/2021**Aceito em: 11/12/2022***ABSTRACT**

The aim of this study was to systematically review the literature that associates personality and aggressiveness in soccer fans. Articles published between 1990 and 2020 were searched for in the BVS, LILACS, PePSIC, PsycINFO, SciELO, Science Direct, Scopus, and Web of Science indexers, following the PRISMA guidelines. The search, carried out by two judges, obtained 98.6% agreement. Of the 113 articles, only six met the inclusion criteria, and five found significant correlations between the variables. Bias analysis pointed out the methodological limitations of these studies. The need for further research that relates these variables in this population.

KEYWORDS:

Individual differences; Personality; Aggressiveness; Soccer.

RESUMO

O presente estudo objetivou revisar sistematicamente a literatura que associa personalidade e agressividade em torcedores de futebol. Foram pesquisados artigos publicados entre 1990 e 2020 nos indexadores BVS, LILACS, PePSIC, PsycINFO, SciELO, Science Direct, Scopus e Web of Science, seguindo as diretrizes PRISMA. A busca, feita por dois juízes, obteve 98,6% de concordância. Dos 113 artigos encontrados apenas seis atenderam aos critérios de inclusão, sendo que cinco apontaram correlações significativas entre as variáveis. As análises de vieses apontaram limitações metodológicas nestes estudos. Concluiu-se ser necessário novas pesquisas que relacionem estas variáveis nessa população.

PALAVRAS-CHAVE:

Diferenças individuais; Personalidade; Agressividade; Futebol.

RESUMEN

Este estudio tuvo como objetivo revisar sistemáticamente la literatura que asocia personalidad y agresión en aficionados al fútbol. Se buscaron artículos publicados entre 1990 y 2020 en los indexadores BVS, LILACS, PePSIC, PsycINFO, SciELO, Science Direct, Scopus y Web of Science, siguiendo las directrices PRISMA. La búsqueda, realizada por dos jueces, obtuvo 98,6% de acuerdo. De los 113 artículos encontrados, sólo seis cumplieron los criterios de inclusión, y cinco indicaron correlaciones significativas entre las variables. Los análisis de sesgo señalaron limitaciones metodológicas de estos estudios. Se concluye la necesidad de realizar más investigaciones relacionadas con estas variables en esta población.

PALABRAS CLAVE:

Diferencias individuales; Personalidad; Agresión; Fútbol.

Soccer has more followers and fans than any other sport globally (Murad, 2017). According to a survey by the Statistic Brain Research Institute (2016), soccer had about 3.5 billion supporters worldwide. In Brazil, for example, the number of fans is so vast that Brazilians link their national identity to the sport and consider Brazil the country of soccer (Pires & Carvalho, 2019). In some cases, however, this prestige generates rivalry among fans, which creates the possibility of breaking the rules and customs and may manifest in violent conduct against opposing fans and even the police (Winands et al., 2017).

The aggression manifesting in and around stadiums comes at a cost to soccer-related events, as more of the public keeps a distance from these venues because of riots among fans (Gonçalves & Dutra, 2018; Murad, 2017). Unfortunately, fan violence has sometimes been accepted by a subset of fans as a means of recognizing and defending the interests of both the team and the fans (Besta et al., 2015). Therefore, public opinion considers these groups vandals and troublemakers for creating and stimulating violence during games (Hollanda & Medeiros, 2019).

Here we must make a conceptual distinction. Aggressiveness refers to a disposition innate to the human species and, in some situations, necessary for survival (Pequeno, 2019). It can occur when there is an intention to generate some injury or damage — physical, emotional, psychological, or material — to someone else (Dambacher et al., 2015). On the other hand, according to Segundo and Canet (2019), violence is a learned manifestation that depends on environmental factors to emerge. It is a concrete manifestation of aggression and will never have a constructive or necessary character for human survival (Pequeno, 2019).

The chaos caused by soccer fans has led to deaths worldwide (Knapton et al., 2018). In the United Kingdom, for example, records of over 152 deaths in England, along with hundreds of injuries (Henderson et al., 2019). There are also registers of 66 deaths and 145 injuries in Scotland resulting from fights or confusion generated by fan groups known as 'hooligans', which create disorder and promote violence wherever they go (Murad, 2007). In Brazil, 176 deaths were recorded from 1999 to 2016 alone (Murad, 2017).

These extreme consequences only sometimes accompany Fan clashes. In less extreme situations, fans display their marks (signs and scars) caused by fights with opponents as proof of their masculinity and fidelity (Ziesche, 2017). These 'badges of honor' allow them to: (1) have recognition from other fans of the chosen team (Appelbaum et al., 2012); (2) be identified with their team, achieving fan status (Murad, 2017); and (3) display devotion to their

recognized team through fanatical behavior (Wachelke et al., 2008).

Of course, not all fan encounters leave physical imprints. In other episodes, fans verbally assault rival fans, players, and the refereeing team (Ferreira et al., 2018; Marra, 2017). In some situations, aggression results from the consumption of alcohol and other drugs (Ostrowsky, 2018). In others, such behaviors occur due to infiltrated criminality and anonymity granted to those wishing to generate violence in the crowd without punishment (Murad, 2017).

The literature notes that problems caused by soccer fans' aggression also result from (1) provocations from rivals after a team's defeat (Silva, 2017); (2) racism (Arnold & Veth, 2018); (3) xenophobia, homophobia and machismo (Kossakowski et al., 2017); (4) fights and vandalism in public places (Fanti et al., 2019); (5) mistakes made by referees against the soccer fans' team (Marra, 2017; Silva, 2017); and (6) an exacerbated level of team identification (fanaticism) (Coriolano & Conde, 2016; Zeferino et al., 2021). In addition, other aspects also help to explain the aggressive behavior among soccer fans, namely: (1) the importance of the match; (2) the match score (Silva, 2017); (3) the attitudes of club members — athletes, coaches, and managers — who in many cases provoke and assault opponents (Murad, 2007); (4) the influence of media outlets that intensify the rivalry between clubs, exaggerating the discourse of violence (Reis & Lopes, 2016); and (5) police violence (Lopes & Reis, 2017).

Even though the literature points out the relationship between all these factors and aggressive behavior in soccer fans, only a few studies investigate how individual characteristics, such as personality, could also explain this type of conduct (Coriolano & Conde, 2016). Personality is the set of personal characteristics that differentiate one individual from another, allowing us to infer how stable quality is, and it can be predicted to manifest in different situations (Meira & Neiva, 2016). Personality can be understood as the interaction of temperament (a genetic inheritance to respond uniquely to the environment) and individual character (both socially and culturally developed), which activates a specific set of behaviors,

including aggression, in certain situations (Mecler, 2015).

Therefore, personality is a possible variable of aggressiveness (Chester & De Wall, 2017; Escobedo et al., 2019; Higuchi & Veiga, 2018; Jurado et al., 2018; Madalena et al., 2018; Meira & Neiva, 2016; Xie et al., 2016). Thus, this study aimed to analyze through a systematic review the state-of-the-art literature that associates aggressiveness and individual differences in personality of soccer fans.

Method

This systematic literature review has followed Preferred Reporting Items for Systematic Reviews and Meta-Analyses guidelines (PRISMA). The intention was to systematize the study according to validity criteria to reduce bias and increase methodological quality (PRISMA Statement; Moher et al., 2015).

Search Procedures

Two independent judges performed the systematic literature review procedure. Two strategies were used: (1) virtually searching the studies published over 30 years, between January 1, 1990, and December 31, 2020, on the indexers BVS, LILACS, PePSIC, PsycINFO, SciELO, Science Direct, Scopus, and Web of Science; and (2) tracking the reference sessions of articles that met the eligibility criteria of this review to identify additional studies that fit the proposed objectives. In addition, the Boolean operators used were 'football fandom' OR 'football hooliganism' OR 'hooligans' OR 'soccer fan' OR 'sport spectators' AND 'individual differences' OR 'personality' AND 'aggressiveness' OR 'aggressive behavior' OR 'violent behavior' OR 'violence', and their respective correlates in Portuguese and Spanish.

The choice of the keyword 'hooligans' was because it represents specific groups of soccer fans who are usually involved in acts of violence (Murad, 2017); the keywords 'football hooliganism' refers to vandalism and acts by aggressive fans (Van Hiel et al., 2007). Finally, the keywords 'sport spectators' were included because this phrase is a broader term in the sports

context that can encompass results related to soccer, sport, or games (Appelbaum et al., 2012). The descriptors choice aimed to identify studies in a more diverse population, following the recommendations of Newman (2014). The keywords 'aggressiveness' and 'violence' and their respective manifestations present conceptual differences in the specialized literature. It is evident, however, in studies in the area that authors have used these terms with an approximate sense or meaning, referring to them as actions that generate harm to other people, whether fans or not (Buss & Perry, 1992; Coriolano & Conde, 2016; Knapton et al., 2018; Maia & Coimbra, 2017).

Table 1*Studies Characteristics*

Studies	Features				
	Design	Sample	Age (sd)	Sex	Country
Russell & Goldstein, 1995	Survey, Correlational	60 fans	$M = 32$ ($sd = 11,4$)	Men	Netherlands
Van Hiel et al., 2007	Survey, Correlational	109 fans	$M = 31,13$ ($sd = 9,72$)	Men and women	Belgium
Besta et al., 2015	Survey, Correlational	155 undergraduates 24 hooligans	$M = 19,6$ ($sd = 0,91$) $M = 22,9$ ($sd = 2,26$)	Men and women	Polonia
Shoham et al., 2015	Survey, Correlational	350 fans	$M = 31,7$ ($sd = 12,6$)	Men and women	Israel
Knapton et al., 2018	Survey, Correlational	350 fans	$M = 32,88$ ($sd = 10,85$)	Men	Sweden
Fanti et al., 2019	Survey, Correlational	473 fans	$M = 22,24$ ($sd = 3,90$)	Men	Chipre

Note. M = average; sd = standard deviation.

Inclusion criteria were: (1) peer-reviewed empirical articles published between 1990 and 2020; (2) language is English, Spanish, or Portuguese; (3) results examined associations between aggressiveness and personality in soccer fans. Exclusion criteria were: (1) validation studies of measuring instruments; and (2) participants are other than sports fans. After removing all duplicates, two reviewers examined the remaining studies and fully agreed on those included for discussion in this review. Table 1 summarizes each article included in this systematic review according to the main sample characteristics, study type, and the country in which collected the data.

Bias Risk Assessment

Downs and Black (1998) formulated a checklist to assess bias risk in the studies included in this review. The checklist contains 27 items, of which items 1, 2, 3, 6, 7, 10, 11, 12, 18, and 20 were relevant to evaluating the selected articles, corresponding to observational and cross-sectional studies. This procedure was based on Duch et al. (2013) work. The evaluation resulted in a maximum score of 10 points, with higher scores indicating superior quality. Two independent judges performed this procedure and solved the disagreements by consensus.

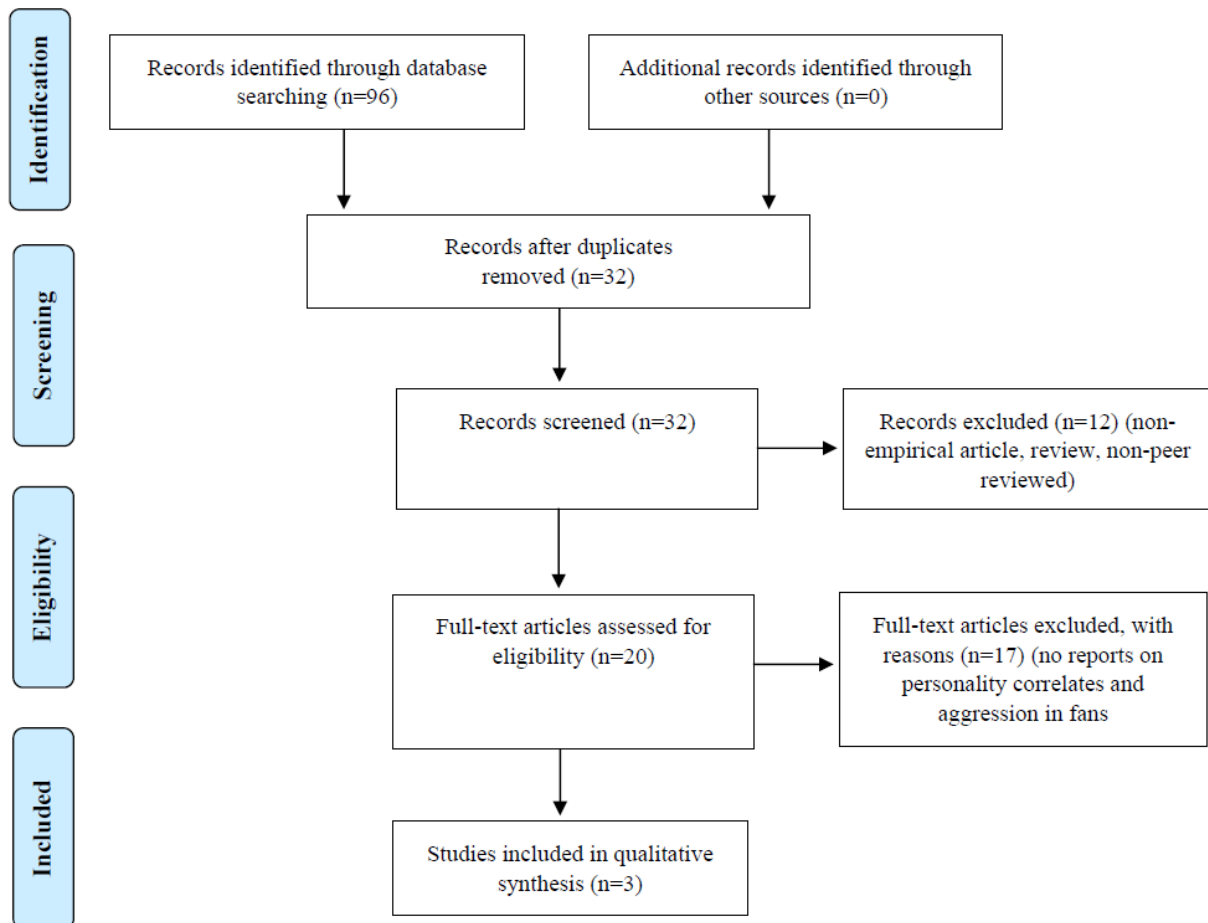
Results

The search obtained 98.6% agreement between the two judges, with disagreements solved by consensus. After using descriptors and delimited operational criteria, 113 articles were identified. After the removal of duplicates, 36 articles remained, of which 30 did not meet the inclusion or exclusion criteria: (a) not an empirical article ($n = 1$); (b) a review or commentary ($n = 4$); (c) an assessment instrument validation ($n = 2$); (d) a book or chapter ($n = 2$); (e) a dissertation or thesis ($n = 2$); or (f) did not investigate correlations or associations between aggressiveness and personality in soccer fans ($n = 19$). Therefore, this review included only five studies that met the inclusion criteria. They marked them with an asterisk (*) in the

references section. To find other potential studies for this review, the reference sessions of these five studies were reviewed, but no additional potential studies were found (see Figure 1).

Figure 1.

PRISMA Flow Chart.



All six studies had different authors and were conducted over a long period (between 1995 and 2019), indicating a need for continuity in the field. All studies aimed to investigate associations between aggressiveness and individual personality differences, including two studies evaluating pathological traits (Fanti et al., 2019; Russell & Goldstein, 1995).

The methodological approach includes survey and correlational research. Regarding the main design, four studies used a single-group relational design to investigate the relationships among variables (Fanti et al., 2019; Knapton et al., 2018; Shoham et al., 2015; Van Hiel et al., 2007). Russell and Goldstein (1995) and Besta et al. (2015) had a group comparison design. All studies were cross-sectional. In four studies, participants' mean ages ranged from 29 to 32 years (Knapton et al., 2018; Russell & Goldstein, 1995; Shoham et al., 2015; Van Hiel et al., 2007), and in the other two studies, from 19 to 22 years old. Three studies (Fanti et al., 2019; Knapton et al., 2018; Russell & Goldstein, 1995) obtained data only from men and the other three from both men and women. Four of the six studies presented samples from European countries (Besta et al., 2015; Knapton et al., 2018; Russell & Goldstein, 1995; Van Hiel et al., 2007), and the other two included samples from Asia. Studies' sample sizes varied from 103 participants in Russell and Goldstein (1995) to 473 people in Fanti et al. (2019).

Three studies used scales to measure physical and verbal aggression (Fanti et al., 2019; Shoham et al., 2015; Van Hiel et al., 2007), while Russell e Goldstein (1995) evaluated only physical aggression. The other two studies developed questionnaires to assess participants' willingness to engage in aggressive behavior without clearly specifying what kind of aggression was being evaluated. Besta et al. (2015) also assessed authoritarian aggression and submission, opposition to equality, the fight for the country, and violent change. Regarding personality measures, four studies investigated specific personality traits: group-based dominance and opposition to equality (Besta et al., 2015), rejection sensitivity and need to belong (Knapton et al., 2018), impulsivity, verbal aggression, physical aggression, openness to out-group and self-esteem (Shoham et al., 2015), and Big Five dimensions neuroticism, extraversion, openness, agreeableness and conscientiousness (Van Hiel et al., 2007). The other two studies (Fanti et al., 2019; Russell & Goldstein, 1995) evaluated pathological personality

traits (psychopathy).

About their results, Knapton et al. (2018) found a significant relationship between rejection sensitivity and verbal and physical aggression ($r = .26$; $p < .01$), but not between the need to belong to groups and aggression. In the study by Besta et al. (2015), the traits of authoritarian aggression and submission were not related to aggressiveness but had strong correlations with other forms of aggression such as opposition to equality ($r = .44$; $p < .001$), fight for the country ($r = .21$; $p < .01$) and violent change ($r = .37$; $p < .001$). Van Hiel et al. (2007) found a statistically significant relationship between lower levels of openness ($r = -.40$; $p < .001$) and agreeableness ($r = -.20$; $p < .05$) and physical aggression and a significant correlation between lower levels of openness ($r = -.36$; $p < .001$) and agreeableness ($r = -.26$; $p < .01$) with verbal aggression. Shoham et al. (2015), in a regression model, found three personality traits as predictors of physical aggression: being involved in past physical aggression ($\beta = .25$; $p < .001$) and impulsivity ($\beta = .14$, $p = .01$) were positively associated with physical aggression whereas openness to out-groups ($\beta = -.22$, $p < .001$) had a negative relationship with physical aggression. There were no significant relations between personality traits and verbal aggression. In the study by Fanti et al. (2019), psychopathic traits were positively correlated with aggressiveness, with Grandiose Manipulation ($p = .50$; $p < .01$), Callous-Unemotional ($p = .52$; $p < .01$) and Impulsive-Irresponsible ($p = .64$; $p < .01$). In contrast, in Russell and Goldstein (1995), soccer fans had higher scores in the measure of personality (psychopathy), compared to non-fans, although did not differ about aggressiveness.

Concerning bias-risk analysis, the primary methodological studies' limitations were: (1) the non-representativeness of the participants compared to the target population for all studies, (2) the lack of description of the random variability estimates for data as confidence intervals (only Fanti et al., 2019 followed this criterion) and (3) lack of specification of the proportion of people who agreed to participate in the study (only Shoham et al., 2015 met this criterion).

In addition, Knapton et al. (2018), Van Hiel et al. (2007), and Russell and Goldstein (1995) did not accurately report the values of statistical significance of their results according to the criteria proposed by Downs and Black (1998). As a result, the studies by Shoham et al. (2015) and Fanti et al. (2019) were classified with the highest methodological rigor, obtaining a score of 8 of the 10 items evaluated.

Other limitations related to sample composition and age were also found beyond the checklist bias-risk analysis. Three studies had only samples composed of men (Fanti et al., 2019; Knapton et al., 2018; Russell & Goldstein, 1995), and for the other studies, which included women, there was a predominance of male participants. The participants' ages can be considered another problem that limits the inferences from the data from that review since, in four studies, the mean age was between 29 and 32 years old, and according to Murad (2017), older fans show less tendency to aggression related to soccer.

Measurement instruments also have limitations since two studies used instruments created for the research without evaluating their psychometric properties (Knapton et al., 2018; Van Hiel et al., 2007), and the other four used instruments that were not specific to the target population. Finally, regarding individual personality differences, three studies used only measures of maladaptive personality traits, such as sensitivity to rejection and the need to belong to groups (Knapton et al., 2018) and psychopathy (Fanti et al., 2019; Russell & Goldstein, 1995). Thus, the chosen instruments for assessing the personality of these last three studies mentioned do not discriminate among the individual adaptive differences of the participants.

Discussion

This study aimed to conduct a systematic review of the literature to identify studies that analyzed correlations or associations between individual personality differences and aggressiveness in soccer fans. According to the review criteria, only six studies were found. Therefore, the results corroborate Coriolano and Conde (2016), who points out the need for studies investigating the relationship between such variables. The dates of publication of the six target studies span 24 years. They were published in three countries in Europe and two in Asia, making it difficult to observe the progress of this field of research in distinct countries and verify the need for more development on this issue.

All of the studies in this review sought to investigate individual personality differences and verify possible relationships with aggressiveness in soccer fans. These relationships are a relevant theme in the literature, as can be observed in studies on aggressive behavior and personality traits in other sports fans and samples (Appelbaum et al., 2012; Cavalcanti & Pimentel, 2016; Escobedo et al., 2019; Kokkinos et al., 2017; Santos et al., 2018). Furthermore, a convergence of the results of personality association with aggressiveness in different samples demonstrates the relevance of this theme.

All the studies found can be classified as survey and correlational, suggesting that their authors sought to investigate and describe the distribution and characteristics of a specific target population, as recommended by Selltiz and collaborators (1987). Four studies had a single-group correlational design, and two had a group comparison design, verifying relationships between the characteristics of a specific target population, as suggested by Selltiz et al. (1987). In addition, all studies were cross-sectional.

All articles in this review included samples comprising mostly male soccer fans. Three studies (Fanti et al., 2019; Knapton et al., 2018; Russell & Goldstein, 1995) included only male participants in their samples. Besta et al. (2015), Shoham et al. (2015), and Van Hiel et al. (2007) included female participants in their samples, but only a small group of them. Indeed, women are typically underrepresented and less accepted in soccer studies. The predominance of male soccer fans is changing, however, as the number of women grows in the modality, both in terms of existing fan organizations and with the creation of exclusively female fan organizations (Murad, 2017; Pires & Carvalho, 2019). Future studies involving a female representative sample may better understand the phenomenon in differential psychology and gender and society studies.

The age range of the samples in the four studies is between 29 and 32 years old. However, this age group is considered old and perhaps influenced the perception of aggressive behavior in the fans because younger groups are more likely to engage in aggressive acts than older ones (Knapton et al., 2018; Murad, 2007; 2017). Strengthening this argument, in the study of Fanti et al. (2019), which contained younger fans (15 to 30 years; $M = 22.24$), the levels of aggression were high. Murad (2017) points out that the average age of the most aggressive soccer fans is between 15 and 24 years old.

Regarding the measurement instruments used, in some cases, the absence of broader and more accurate measures about the personality and aggressiveness constructs might generate limitations in the studies. Firstly, all six studies have limitations regarding aggression, as they did not use specific instruments for the target population. The studies by Knapton et al. (2018) and Van Hiel et al. (2007) investigated this construct through questionnaires constructed exclusively for their research. The authors were correct in using other forms of investigation, but measuring aggressiveness with specific scales or tests could establish a more detailed profile of soccer fans and predict risky situations (Wachelke et al., 2008). Besta et al. (2015)

evaluated aggression directed at the country and the political system. Russell e Goldstein (1995) evaluated only physical aggressiveness. On the other hand, Shoham et al. (2015) and Fanti et al. (2019) have investigated different kinds of aggression (e.g., physical, verbal, impulsivity/impatience, and ways to avoid aggression).

Knapton et al. (2018) investigated individual differences in personality through traits such as sensitivity to rejection and a sense of belonging. In this case, verifying the variations in broader individual characteristics and understanding how they express was impossible. Studies with other populations show that aggressive conduct is related to impulsivity and some personality traits: aggressive behavior is positively related to neuroticism and excitement-seeking (an extraversion facet) and negatively to conscientiousness and agreeableness (Chester & DeWall, 2017; Kokkinos & Voulgaridou, 2017; Miller et al., 2012). On the other hand, Shoham et al. (2015) and Van Hiel et al. (2007) used specific instruments to evaluate broader personality traits, allowing the verification of relations between aggressiveness and some specific traits. These findings suggest the need for additional research on the relation of personality traits with aggressiveness in the soccer context, using specific and broad measures. Further investment in appropriate and specific measures of aggression and personality for the soccer context here also recommended.

Only one study (Fanti et al., 2019) investigated specific groups of soccer fans (hooligans). In addition, four of the six studies investigated the level of fan involvement with the soccer team or group (Besta et al., 2015; Fanti et al., 2019; Russell & Goldstein, 1995; Shoham et al., 2015). This point assumes there is evidence that fans who identify more strongly with the team and their fan group tend to behave more aggressively (Coriolano & Conde, 2016; Kabiri et al., 2016; Murad, 2017; Winands et al., 2017). Studies investigating the association between fan involvement with the soccer team (fanaticism) with aggressiveness comparing specific groups of fans (such as soccer fan partners, hooligans, or organized soccer fans) are

welcome to understand individual differences related to aggressive behavior.

Regarding the limitations of this systematic review, it is noteworthy that it does not exhaust the results on the theme, even using specific and relevant descriptors of the field, such as hooligans, sports spectators, and football hooliganism. New studies, including other descriptors, may find additional results. Those are because previously carried out the research to choose them to identify the most-used terms in the field, as suggested by Clark and Watson (1995). The choice of indexers may also be a limitation, as other databases may include relevant studies not identified in this review. Methodological choices, such as language and publication period, may also have limitations by leaving out other relevant results. Still, despite these limitations, this review contributes to the field by investigating this theme in different countries. Thus, this study shows the scarcity of research associating differential psychology, personality, and aggressiveness with other groups of soccer fans. Considering the severe consequences of soccer fan aggressiveness, especially for countries where soccer has great representativeness, research on this field is crucial.

Final Considerations

Based on this review, it observed that some media describe specific groups of soccer fans (e.g., hooligans or organized soccer fans) with a greater tendency towards aggression. Therefore, this review also aims to foster ideas for future research by raising the following questions: Are specific groups of soccer fans more aggressive? Is the aggressiveness of soccer fans an effect of individual personality differences? If so, what traits are related to this conduct in a sample of soccer fans?

Understanding the relationship among these variables is critical, given the economic effects they generate. Financial loss happens when many fans stop visiting stadiums due to increased violence among fans and when public resources are allocated as a consequence of this violence, e.g., hospitals must treat the injured and maintain public safety. Moreover, in

addition to economic effects, leisure activities have been undermined in countries with many occurrences of fan violence. There is a large contingent of fans of soccer who have stopped going to entertainment activities in stadiums or other environments where soccer fans gather.

The evident lack of studies relating aggressiveness and individual personality differences underlines the importance of further research on this theme, promoting a breakthrough in knowledge for: (a) differential psychology, as it favors the understanding of the variables that predispose particular fans to aggression, either in or out of the stadium; (b) social psychology, by understanding and minimizing the risk factors related to the manifestations of aggression, as well as the context in which they emerge; and (c) sport psychology, for pursuing a sense of sportsmanship, self-assertion, team identity, and motivation to cheer without causing harm to others. In addition, through investigations in these areas, it will be possible to hold debates on this issue and develop preventive and interventional actions in soccer stadiums and other contexts.

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