

## TERRITORIAL BEHAVIOUR AND AGGRESSION OF ATHLETES IN RELATION TO THEIR RESILIENCE LEVEL

*Csilla Csukonyi<sup>1</sup>, Márton Ágoston*

*<sup>1</sup>University of Debrecen, Faculty of Arts, Institute of Psychology, Debrecen, Hungary.*

### **Abstract**

*We examined athletes' territorial behavior and aggression and their relationship with resilience. The sample consists of 116, mainly amateur athletes. Our results show a significant positive relationship between territorial need and aggression but only in 'non-material territorial need' from the territorial subscales. Furthermore, we found no significant difference in the relationship between territorial need and aggression comparing individual and team athletes. Resilience was a non-significant mediator between territorial need and aggression. The results may provide helpful information for practitioner specialists and researchers in the applied field, as they both support previous research and attempt to address a new research topic.*

**Keywords:** *territorial need, aggression, resilience*

### THEORETICAL BACKGROUND

Sport and regular exercise undoubtedly play an essential role in maintaining health and preventing disease. It is also an important factor for physical and mental health. The sport also triggers a certain amount of aggression, which must be controlled so as not to overstep the boundaries of sportsmanship. This research investigates whether resilience is a protective factor in managing aggression in territorial behavior and whether it makes a difference between individual and team athletes. The practical significance of this thesis lies in finding out how much variance territorial behavior explains athletes' aggression and whether resilience can subordinate this effect so that the variance of aggression would be regressed on the mediating role of resilience. Aggression is a more nuanced concept in sports, as it is acceptable and even encouraged in certain circumstances. It is, therefore, important to distinguish between the kind of aggression essential to achieve results in sporting competitions (e.g., in combat sports, defeating the other within the rules) and that which goes beyond sportsmanship. Aggression in sports can be modeled on aggression in animals. Just as we understand and accept the aggression shown by animals for survival as an evolutionary advantage, we also understand and accept the aggression demonstrated by athletes for positional advantage and to achieve goals. Another factor is the physical contact the sport requires (BURTON, 2005). In sports where



physical contact is allowed to a greater extent, excessive aggression and violence are more likely to occur (BURTON, 2005).

## **TERRITORIAL BEHAVIOUR**

Territorial behavior implies an inherited behavior pattern that protects our territorial or psychological ownership. It can be divided into marking and defensive behavior (BROWN et al., 2005). Observing in a given context is the territorial behavior by which we establish and communicate our psychological attachment to an object or territory to our environment (NAGY, 2016). In the case of identity-oriented marking, we try to modify our environment in such a way that it refers to our identity (NAGY, 2016; SUNDSTROM - SUNDSTROM, 1986). This type of marking is used to create and express our identity toward others. Control-oriented marking informs us about the boundaries of territory and who has psychological ownership of that territory (BECKER - MAYO, 1971; NAGY, 2016). Its function is to make the psychological ownership of certain objects or domains evident to others and, thus, even to deter others from accessing them. Defensive behavior against marking behavior is triggered concerning territorial behavior when two or more people have different interpretations of a particular object or a conflict arises over a specific territory (BROWN - ALTMAN, 1983). Behavior that precedes such territorial violation is called prior protection, and behavior that follows is called reactive protection (NAGY, 2016). Prior protection prevents psychological property rights violations (DYSON-HUDSON - SMITH, 1978). It differs from control-oriented marking in that people do not do this overtly but try to make the attempt impossible. The higher the likelihood of violation, the stronger the link between psychological ownership and prior defense (BROWN et al., 2005). Reactionary defense aims to challenge and attempt to restore territorial rights after a violation of psychological ownership (NAGY, 2016). Nagy (2016) created a questionnaire related to territorial needs in her research. Territorial demand differs from territorial behavior in that it is not necessarily an active behavioral manifestation but merely an internal drive. However, in the present study, I needed to make a sharp distinction between the two concepts, as I will be more interested in the behavioral manifestation of aggression.

## **TERRITORIAL BEHAVIOUR AND AGGRESSION**

Territorial behavior and territorial defense are inherited behaviors (NAGY, 2016). For humans, territorial aggression can refer to space, as well as to property and possession, which is crucial to stress well-defined. In most cases, human territorial aggression occurs concerning defending psychological possession rather than territory (OLCKERS, 2013). Research suggests territorial behavior is closely related to psychological possession, which some hypothesize may be a sub-dimension, while others suggest may be a trigger. Olckers (2013) has divided the dimensions of psychological ownership into two main



categories: on this basis, we can speak of supportive and preventive psychological ownership. Six sub-dimensions of support can be distinguished: 1) self-efficacy; 2) self-identity; 3) belonging; 4) accountability; 5) autonomy; 6) responsibility. By contrast, only one sub-dimension of preventive-based psychological ownership has been identified: territoriality (OLCKERS, 2013). As Brown et al. (2005) formulated, the stronger the sense of ownership of an object or territory, the more certain it is that a person will develop territorial behavior because of that object or territory. According to Avey, Avolio, Crossley, and Luthans (2009), territoriality can lead to people becoming attached to their property to the point where they no longer want to share it.

## **TERRITORIAL BEHAVIOUR AND SPORT**

Competitive sports can be a fertile ground for research on human territoriality, as sometimes territorial reactions similar to those of animals can be observed in humans during games and sports (NEAVE - WOLFSON, 2003). Athletes and sports teams tend to be more successful "at home" than abroad, as confirmed by several studies (ALLEN - JONES, 2014; FURLEY, 2019). According to the classic model of home field advantage, four factors contribute to this advantage: 1) the support of the home fan base; 2) the travel fatigue of the visiting team; 3) familiarity with the venue; 4) and the assumption, supported by research, that refereeing decisions tend to favor the home team (ALLEN - JONES, 2014). A recent study points out that the home-field advantage can be at least partially explained by a natural mechanism related to defending our territory, which is expressed at the physiological level and in behavior (FURLEY, 2019; NEAVE - WOLFSON, 2003). Neave and Wolfson (2003), in their study with football players, found that athletes' testosterone concentrations were significantly higher before home matches than away or during training. According to Allen and Jones (2014), this spatial response translates into a home-field advantage in terms of increased risk-seeking behavior, improved muscle metabolism, and improved field vision in athletes. Furley, Schweizer, and Memmert (2018) approached the issue from the perspective that athletes' nonverbal cues differ between home and away. This phenomenon was particularly striking among amateurs. The behavioral dimensions of assertiveness, dominance, and aggression were all related to territoriality. Athletes' territoriality cues on the home court may contribute to the home court advantage, for example, going out onto the turf with a higher head, and warming up with more dominant movements, thus intimidating the opponent. In support of this idea, previous research has shown that specific pre-competition nonverbal manifestations in athletes affect their confidence levels and expectations of race outcomes, and this can unconsciously influence behavior and performance (FURLEY, 2019).



## **RESILIENCE AND SPORT**

In the case of mental resilience, in a narrower, psychological sense, it is a dynamic process involving positive adaptation in a crisis. There are two conditions: (1) exposure to a significant threat or severe adversity; (2) positive adaptation in the face of significant attacks on development (MASTEN et al., 1990). The performance of athletes can be affected by a number of factors, ranging from acute pain to chronic depression to adequate nutrition. Research to investigate these is in its heyday and we are learning more and more about the importance of a bio-psycho-social approach and the theoretical and practical preparation for training. One of the most prominent aspects of the psychological aspect is resilience or mental fitness. The impact of resilience on sports performance has been the subject of several studies, almost all of which have demonstrated a performance-enhancing effect of resilience. For example, Hosseini and Besharat (2010) found that resilience is positively related to sports performance and psychological well-being and negatively related to psychological distress. Based on statistics, resilience explained 41% of the variance in sports performance and 32% in psychological well-being in their model.

## **AGGRESSION AND RESILIENCE**

Early theories of mental resilience also considered personality traits that support positive outcomes related to life crises, aggression, and suffering (HOSSEINI et al., 2010; SADEGHIFARD et al., 2020). Clinical studies have recently examined patterns of resilience in the context of incompetence, catastrophic events, depression, aggression, and pain. Findings suggest that resilience has positive, constructive, and protective effects on coping and 'growth adaptation' to stressful life events (HAMID et al., 2012). Sadeghifard and colleagues (2020) investigated the relationship between aggression and individual resilience, with a mediating role for spirituality. The impact of spirituality on resilience to life problems and on various aspects of mental health, such as anger and aggression, is of great importance. This study found a significant relationship between aggression and resilience, but in their model, increasing levels of aggression decreased resilience.

## **TERRITORIAL BEHAVIOUR AND FLEXIBILITY**

In Nagy's (2016) research, there was a moderately significant relationship between spatial need and the control sub-dimension of mental endurance ( $r=0.378$   $p<0.001$ ), suggesting that people who have difficulty controlling external factors have a marked need to possess objects. In his research, control and non-material and spatial need shown in the group were not associated. The active sense of responsibility subscale and the 3 dimensions of spatial need did not show significant correlations in any of the relationships. A moderately significant correlation was found between the failure



processing subscale of resilience and the group sub-dimension of territorial need ( $r=0.43$   $p<0.01$ ). This suggests that people who can come out of a failure positively and believe the current failure will not affect future success have a high territorial need group. Thus, based on the research, no significant results were found between the two variables; some subscales may be significantly related to each other, which provides a reasonable basis for further confirmation.

## METHODS

The first research question concerns the relationship between territoriality and aggression, as mentioned above (Olckers, 2013). The question is whether a positive correlation between territoriality and aggression can be measured. We assumed that there would be a consistent positive cointegration between territoriality and aggression. The second research question is which territorial need subscales (material, non-material, and group territorial need) predictor variables will significantly affect aggression. We hypothesized that non-material territorial claims would be most closely related to aggression because Olckers (2013) describes in his research that people are more prone to formulate territorial claims to psychological property. Thus the associated expressed aggression will be higher in the sample. A third research question is whether there is any difference in the effect of territorial behavior on aggression between individual and team athletes. It was also hypothesized that there would be no difference between the two samples regarding the level of territorial behavior.

Although we found no previous research on this, we also investigated whether the relationship between territorial demand and displayed aggression would change if we included the resilience variable. Previous research suggests that resilience reduces negative affectivity and the emergence of inappropriate behaviors associated with stress and negative emotions; the outcome will be similar. Thus, we investigated whether the mediating role of resilience would significantly reduce aggression displayed by territorial demand. Our research was conducted with the approval of the Research Ethics Committee of the University of Debrecen, license number: UD-IP-2021/171. Data were collected utilizing an online questionnaire using Google Forms software. The questionnaire was also shared on several social platforms (e.g., Facebook™, Instagram™). Only persons over 18 were allowed to participate in the survey. Subsequently, SPSS (Statistical Package for Social Sciences, v.22; IBM Corp. Released, 2013) was used and statistical analyses were performed within it.



## **SAMPLE DESCRIPTION**

The sample consisted of 123 people who completed a questionnaire shared across multiple platforms and were available for me to analyze the data. We wanted to include regular, even professional athletes in the study. From the total sample, the analyses presented in this paper included those who indicated that they played some form of sport at least weekly or at least one hour per week. Seven people did not meet these criteria, and their data were removed from the database. Thus, 116 individuals made up the final sample (93.5% of the total study population). The sample consisted of 51 males (44%) and 65 females (56%), with a mean age of 32.8 years (SD=9.42) (minimum = 18 years, maximum = 63 years).

## **METHODOLOGY**

The survey consisted of a 73-question, cross-cutting test package. Questions covered physical activity (type of sport, type and amount of exercise), spatial needs, flexibility, and aggression. The following questionnaires were used.

### **TERRITORIAL NEED QUESTIONNAIRE**

I used the Territorial Needs Questionnaire developed by Nagy (2016) to measure territorial needs, which was reduced to 17 items after cluster analysis. The questionnaire aims to assess the territorial need. The items are grouped into three dimensions, which are 1) material territorial need; 2) non-material territorial need; 3) group territorial need. The material territorial need is a dimension related to the possession of material goods. The dimension contains seven items. The non-material territorial need is conceptual, i.e., the possession of status, position, and tasks. The group territorial need is about the group or team we are a part of (NAGY, 2016). The dimension consists of 3 items.

### **CONNOR-DAVIDSON RESILIENCE SCALE**

The Connor-Davidson Resilience Scale (CD-RISC, CONNOR - DAVIDSON, 2003) measures resilience, i.e., the ability to cope successfully with stress. In the present research, I measured resilience with the Hungarian 10-item adaptation of this test (KISS et al., 2015).

### **BUSS-PERRY AGGRESSION QUESTIONNAIRE**

The Buss-Perry Aggression Questionnaire (AGQ, BUSS - PERRY, 1992) is a 29-item questionnaire that measures self-reported aggressive feelings and behaviors. In recent research, we used a Hungarian adaptation of the test to measure aggression, attributed to Gerevich et al. (GEREVICH et al., 2007). The questionnaire contains four scales: physical aggression, verbal aggression, hostility, and anger.



## RESULTS

Descriptive statistics and reliability tests were performed on the instruments included in the research, the results of which are presented in Table 1. These indicate that the reliability of the instruments is high, except for the group area needs questionnaire. Preliminary correlation analysis showed a significant but weak correlation between aggression and territorial need ( $r = 0.27$ ;  $p < 0.05$ ).

Table 1: Descriptive statistics of research tools (n = 116)

	AGQ*	CD-RISC**	TI***	ATI****	NTI*****	CSTI*****
Minimum	37	11	42	7	10	10
Maximum.	110	40	119	49	49	21
Mean	64,98	30,62	69,90	26,36	26,70	16,84
Std. deviation	13,69	5,42	14,56	8,11	7,23	2,92
Reliability ( $\alpha$ )	0,85	0,82	0,83	0,80	0,71	0,46

\* Aggression (Aggression Questionnaire)

\*\* Resilience (Connor-Davidson Resilience Scale)

\*\*\* Territorial Need Questionnaire

\*\*\*\* Material territorial need

\*\*\*\*\* Non-material territorial need

\*\*\*\*\* Group territorial need

Table 2, as follows, shows the correlation matrix of variables and sub-dimensions.

Table 2: Correlation matrix

r	AGE	CD-RISC	TIK	ATI	NTI	CSTI	FA	VA	DA	EA
AGE	1	-0,098	0,270*	0,227*	0,281**	0,018	0,705**	0,616**	0,755**	0,664**
CD-RISC		1	0,107	-0,033	0,066	0,462**	0,011	0,258**	-0,074	-0,31**
TIK			1	0,883**	0,888**	0,336**	0,097	0,281**	0,237*	0,172
ATI				1	0,629**	0,063	0,073	0,221*	0,195*	0,164
NTI					1	0,203*	0,103	0,239**	0,259**	0,198*
CSTI						1	0,027	0,195*	-0,001	-0,090
FA							1	0,408**	0,402**	0,145
VA								1	0,391**	0,150
DA									1	0,327**
EA										1

\*  $p < 0,05$

\*\*  $p < 0,01$





Linear regression analysis was used to examine the impact of territorial need on aggression. Preliminary tests showed that the model's assumptions were met without exception. According to our linear regression model, spatial need explained 7.3% of the variance of the outcome variable, aggression ( $R^2 = 0.073$ ;  $p < 0.003$ ), which means that spatial need is significantly associated with aggression, although the value is not as high. The effect of spatial need  $\beta = 0.270$  ( $p = 0.003$ ). This means that a one standard deviation increase in spatial need predicts a 0.254 increase in aggression. The results of this study confirm and support the claims that territoriality (whether need or dynamic behavior) is positively related to aggression and even explains its variance (AVEY et al., 2009; FURLEY et al., 2018; NAGY, 2016; NEAVE - WOLFSON, 2003). The territorial need was a significant predictor of aggression, as shown in Table 3.

Table 3: Summary of results of simple linear regression analysis where aggression was the dependent variable and territorial claim was the predictor variable ( $n = 116$ )

	B*	$\beta^{**}$	SE***	t	p	95% CI****	
TI	0,254	0,270	0,085	2,991	0,003	0,088	0,411

\* unstandardized coefficient

\*\* standardized coefficient

\*\*\* standard error of  $\beta$

\*\*\*\* 95% confidence interval of  $\beta$

Multiple linear regression analysis was used to examine the effect of the territorial need subscales on aggression. The three predictor variables were entered into the model in one step using the forced entry method. The model was found to meet the pre-conditions.

Table 4: Results of the multiple linear regression ( $n=116$ )

	B	$\beta$	SE	t	p	95% CI	
ATI	0,133	0,079	0,197	0,676	0,500	-0,272	0,540
NTI	0,452	0,239	0,225	2,006	0,047	0,072	0,827
CSTI	-0,166	-0,035	0,435	-0,382	0,703	-1,170	0,752

In the linear regression model, material, non-material, and group spatial needs together explained 8.4% of the variance in the outcome variable, aggression ( $R^2 = 0.084$ ;  $p = 0.019$ ). Of the three predictor variables, only non-material spatial need was a significant predictor of the outcome variable ( $\beta = 0.239$ ;  $p = 0.047$ ). The effect of material spatial need was  $\beta = 0.079$  ( $p = 0.5$ ), while the effect of group spatial need was  $\beta = -0.035$  ( $p = 0.703$ ), which are not meaningful in this study as they are not significant. This means that an increase of one standard deviation along the non-material area need significantly predicts an increase of 0.239 standard deviations along the aggression line, while for the other two predictor, this figure is 0.079 and -0.035, but not significant.



From the beta values in Figure 1, it is clear that a unit change in non-material territorial needs leads to a much more significant shift in value aggregation than for the other two subscales. The problem of significance raises the issue of the reliability of the measurement instruments. The reliability index for the area needs sub-dimension was only  $\alpha=0.41$ , significantly below the expected value. We also tested a moderation procedure in which territorial need was a predictor variable and aggression was an outcome variable. As a moderator variable, we included the variable "type of sport," a dichotomous variable indicating whether one was an individual or a team athlete.

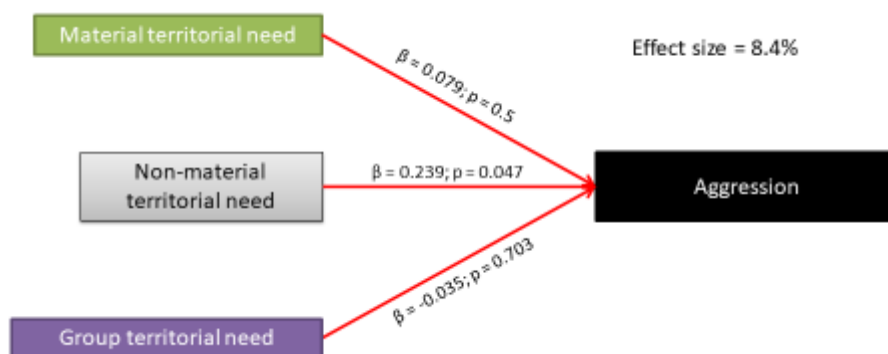
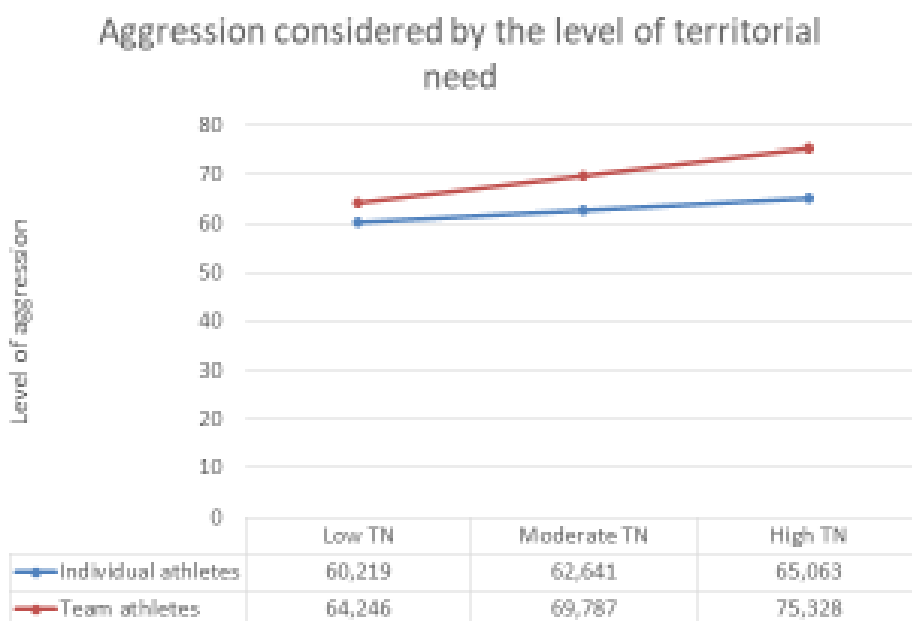


Figure 1: Model of multiple linear regression with results

The sample of individual athletes consisted of a total of 79 participants, of whom 20 were male (25.3%) and 59 were female (74.7%). Their mean age was 34.1 years (SD = 9.53; minimum = 19 years, maximum = 63 years), and they trained on average 2.92 times (SD = 1.57) and 4.18 hours (SD = 2.67) per week. The sample of team athletes consisted of 37 individuals, of whom 31 were male (83.8%), and six were female (16.2%). Their mean age was 30 years (SD = 8.64; minimum = 18 years, maximum = 50 years), and they trained on average 2.95 times (SD = 1.153) and 6.3 hours (SD = 3.21) per week. The analysis suggests that our moderation model explains 14.6% of the variance in aggression ( $R^2 = 0.146$ ;  $p < 0.001$ ). The main effect of the independent variable (spatial need) on the outcome variable (aggression) was significant ( $b = 0.235$ ;  $p = 0.002$ ), with a positive direction of the relationship. The main effect of the moderator variable ("1" = individual sport; "2" = team sport) was positive, meaning that a one-unit standard deviation change (which in this case is a change from the individual sport criterion to the team sport criterion) predicted a significant increase in aggression ( $b = 7.146$ ;  $p = 0.005$ ). The interaction criterion does not show a significant effect ( $p = 0.164$ ), so we cannot say that the individual or team sport variable is having a moderating impact on the relationship between territorial need and aggression, nor can we draw any firm conclusions about the direction of the relationship ( $b = 0.214$ ).

Including the interaction term in the model did not significantly improve the model ( $p = 0.164$ ). The explained variance increased by only 1.2% with the inclusion of the interaction term ( $R^2$  change = 0.012), which is negligible. The main effect of spatial need in the model was significant. The primary effect analysis for the sporting nature variable also yielded significant results. The study showed a positive sign for the main effect, which implies that team athletes have higher levels of aggression due to the positive linear relationship because we labeled the individual athlete sample with the lower number when running our model analysis. Depending on the relationship between spatial need and aggression, we did not obtain significant results on the validity of the interaction because by moving the nature of the sport into the dichotomous variable model, we only obtained a non-significant moderating effect in the linear regression model. Figure 2 shows the level of aggression based on the moderator variable at low, medium, and high levels of spatial need. For team athletes, the level of aggression increased more steeply along the spatial need than in the individual athlete sample, supporting the positive beta value of the interaction term, as the team athlete sample was labeled with a higher value.

Figure 2: The level of aggression with the condition of territorial need in individual and team athletes



We set up a mediation model as we investigated the effect of resilience on the relationship between territorial need and aggression. We conducted a new linear regression model with resilience as a mediating variable, and our predictor variable in this model was also spatial need. With this model, we examined the direct effect of spatial need and its indirect effect through resilience. We discussed the immediate impact of the predictor variable (spatial need) on the mediator variable (resilience) and found that spatial need has a non-significant positive effect on the level of resilience ( $\beta=0.107$ ;  $p=0.298$ ) and explains 1.1% of the variance non-significantly ( $R^2=0.011$ ;  $p=0.298$ ). Accordingly, no clear correlation



between resilience and spatial need can be established, which partially contradicts Nagy's (2016) research in which the subscale of the spatial need group showed a correlation with the resilience control subscale. In the full effect model (i.e., when the predictor variable is used to predict the outcome variable without the mediator model being present), we obtained the following results ( $\beta=0.270$ ;  $p=0.001$ ). When we tested the mediation model (see Figure 3), we found that 8.9% of the variance of the outcome variable (aggression) was explained by the predictor and mediator variables combined ( $R^2=0.089$ ;  $p=0.004$ ). Resilience showed a non-significant negative relationship with aggression ( $\beta=-0.129$ ;  $p=0.153$ ). For spatial need, significant results were obtained for the direct effect: those with higher levels of spatial need tended to have higher levels of aggression ( $\beta=0.283$ ;  $p=0.001$ ). The indirect effect was found to be  $\beta=-0.014$ , a negative indirect effect. In terms of effect size, the effect mediated by the mediator variable explains about 1.4% of the maximum possible effect ( $\kappa^2=0.014$ ), which is small. Thus, we can say that considering the direct impact of the predictor and mediator variables, only spatial need is significantly related to explaining the output variable in our model.



Figure 3: A mediation model

As regards the indirect effect of territorial need on aggression, the lack of significance means that the mediation of resilience has failed to produce a natural indirect effect. When examining the direct effect of territorial need, we found a positive effect on aggression, which was expected based on previous research and previous hypotheses (Allen & Jones, 2014; Furley, 2019; Furley et al., 2018; Neave & Wolfson, 2003) and is consistent with the fact that people with higher territorial need more often have needs and emotions translated into negative affective behaviors, which are manifested in aggression. As for the model controlling for the mediator variables, there was no mediation effect. The direct effect of territorial need remained significant, as determined by the confidence interval and Sobel test. The model has a minimal, non-significant negative mediation effect.

Regarding effect size, the mediated effect of spatial need through resilience explains a non-significant 1.4% of the maximum possible effect, implying that, with a significant

result, it may have a small mediating effect on the relationship between spatial need and aggression. On the one hand, the effect condition that there should be a significant relationship between the predictor and the mediating variable still needs to be fulfilled. Thirdly, when controlling for mediation, the relationship between the predictor and the outcome variable remained significant relative to the overall effect and even increased, so that no mediating effect can be assumed. Fourth, there was no indirect effect, as the confidence interval indicated by the bootstrap is 0 (-0.059 - 0.017). This is also supported by the non-significant Sobel test, which for the model is -0.849 ( $p=0.396$ ). Looking at our results, it is striking that only the relationship between territoriality and aggression is confirmed. Using resilience as a mediating variable was intended to reduce the presumed aggressiveness stemming from territoriality. This idea is not correct, given the positive relationship. This may imply that introducing another mediating variable could reduce the comorbidity of territoriality and aggression.

## DISCUSSION

Some factors, including the association between territoriality and aggression, have been supported by previous research (AVEY et al., 2009; FURLEY et al., 2018; NAGY, 2016; NEAVE - WOLFSON, 2003). Within this, we could make comparisons by dividing the sample into two groups, and in these cases, the number of items in both groups was relatively high. We measured resilience and aggression using scales that are widely used and validated internationally and domestically, with high-reliability values based on previous research.

Although we focused explicitly on the relationship between territoriality and aggression, we would have obtained a more nuanced picture of the underlying factors of aggression if we had included more predictor variables in the linear regression model, thus examining the effect size differences between the predictor variables. The results support the claim that territorial need may be a significant but small predictor of aggression. We could not determine this result when examining the territorial need subscales separately, only concerning the non-material subscale. These results provide general support for the hypothesis that there is a relationship between territorial need and aggression (OLCKERS, 2013). Among the territorial need subscales, the non-material subscale has the most considerable indirect effect on aggression and is the only significant one. Significant differences exist between the territoriality subscales, for which there is no strong association with aggression for the material subscale. For the group subscale, the negative sign of the association was a completely surprising result for me. No significant differences were found between individual and team athletes in the relationship between territorial need and aggression, supporting the hypothesis. This result is because the subjects are primarily amateur athletes, who are much closer to the general population



and are unlikely to be a specific group on the subject, so their opinions may be similar or similar in the two groups.

Furthermore, it has not been shown that flexibility significantly reduces the positive relationship between territorial need and aggression. The use of resilience as a mediating variable was intended to reduce, to some extent, the assumed aggressiveness resulting from the need for space. This idea was achieved to the extent that the effect mediated by resilience was indeed negative, i.e. it reduced the effect, but the result could not be called significant, for which reasons are given above. It is worth mentioning the fields of industrial psychology and cultural anthropology, where the understanding of territoriality and aggression and the need to reduce it could provide a valuable basis for research, both because it could increase the focus and effectiveness of interventions and because its preventive nature is also fundamental since it could educate and raise awareness in this area. Another area of research is sport psychology. Understanding the motivating and facilitating factors behind success in keeping athletes in balance before, during, and after competitions are also important. For sports, it is vital to manage aggression in a way that does not hinder performance. This research has identified a putative cause of aggression and one of its main protective factors. Performance-related research, tests, and questionnaires among competitive athletes may be interpreted differently than in the general population. It may be worth investigating whether there is a significant difference between competitive and amateur athletes on this issue. The extent and nature of the conceptual difference between territorial demand and territorial behavior also require further research. It would be important to define and measure the differences between the two so that future research can better target the issue. An exciting area of investigation could be whether there are differences in territoriality and aggression between representatives of different sports when observing competitive athletes; after all, Burton (2005) suggests that physical contact, and thus the presence of aggression, may be higher in competitive sports and could help to increase mental preparation for different sports.

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