

## **Hardiness and coping strategies in in martial arts athletes**

### **Personalidad resistente y estrategias de afrontamiento en deportistas de artes marciales**

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#### **Abstract**

The objective of this study is to identify the correlations between resistant personality variables and coping strategies in martial arts athletes. Methods: The design used was cross-sectional, non-experimental, and correlational, the sample was 79 athletes, aged between 13 and 46 years of age,  $M = 21.86$   $SD = 6.64$ , 29 men (36.7%) and 50 women (63.3%). Two instruments were used, the first is the Hardiness in Central American and Caribbean Athletes (HPCACA) by Ponce et al. (2015) of 18 items. The second is the Approach to Coping in Sport Questionnaire, ACSQ-1, in Spanish (Kim et al., 2003), with 28 items. The contribution of this study is for the social circle of athletes and administrators who are interested in identifying a strategy that leads them to achieve the objectives more directly and quickly, taking an example of the results presented since they help to measure the needs or successes. of these specific athletes.

#### **Resumen**

El objetivo de este estudio es identificar las correlaciones entre, las variables de la personalidad resistente y las estrategias de afrontamiento en deportistas de artes marciales. Métodos: El diseño que se utilizó fue de corte transversal, no experimental, y correlacional, la muestra fue de 79 deportistas, con edades entre 13 y 46 años,  $M = 21.86$   $DT = 6.64$ , 29 hombres (36.7%) y 50 mujeres (63.3%). Se utilizaron 2 instrumentos, el primero es el Personalidad Resistente en Deportistas de Centroamericanos y del Caribe (PRDCC) de Ponce et al. (2015) de 18 ítems. El segundo es el Cuestionario de Aproximación al Afrontamiento en el Deporte (Approach to Coping in Sport Questionnaire, ACSQ-1) en versión en castellano (Kim et al., 2003), de 28 ítems. La contribución de este estudio es para el círculo social de los deportistas y administrativos que estén interesados en identificar una estrategia que los lleve a conseguir los objetivos de forma más directa y rápida tomando ejemplo de los resultados presentados ya que ayudan a dimensionar las necesidades o aciertos de estos deportistas en específico.

**Commitment, Coping, Challenge**

**Compromiso, Afrontamiento, Desafío**

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## Introduction

Sport is one of the most valuable tools in recent years, due to its contributions to the benefit of the people who practice it, such as the prevention of chronic degenerative diseases () and mainly in the benefits it brings to social well-being since those Those who practice it are immersed in a positive context of values that lead to kindness, tolerance, camaraderie and other positive adjectives that make for a peaceful society and a healthier quality of life than those who do not practice it (Barbosa, & Urrea , 2018).

Above all, in martial arts moral values are more present, those who practice this discipline consider that this sport forms them as better people who are there to serve society, a society is perceived as going through a crisis of values ( Soto, 2013). In addition to this particular characteristic of martial arts, sport in general promotes values, however, when it comes to competing, we have a situation that also generates stress since it is about performing (Mata et al., 2023).

However, there are also moments or situations of stress since in competitive sport they are being evaluated or measured against an opponent and this can cause high levels of stress, which can potentiate a result or lead a competition to complete chaos (Angeles & Hernández, 2007 ).

So stress is a sport variable that some researchers are studying with the aim of helping athletes find a balance that allows them to be successful in competitions and in their daily activities, and more and more sport psychologists are joining the various teams to support and improve the mental health of athletes (Jaenes & Caracuel, 2012). Some researchers have studied psychological variables in athletes to help identify areas of opportunity such as burnout (Cantú-Berrueto et al., 2015; Ponce-Carbajal, 2021b), motivation (Hernández, Hernández, 2023), emotional intelligence ( Miranda-Rochín et al., 2023), mental toughness (Ponce, 2017), self-confidence (Martínez-Romero et al., 2016), resilient personality (Jaenes, 2009; Ponce-Carbajal et al., 2015; Ponce , 2017) or coping strategies ((Kim et al., 2003; Ponce-Carbajal et al., 2021; Ponce-Carbajal et al., 2022).

Hardiness is a concept that researchers Kobasa and Maddi promoted in 1974 since they found it interesting to analyze two situations, the first in which people become worn out and sick due to being exposed to stressful situations and the other in which that a difficult situation causes the person to feel that they learn and grow as they solve the problem, even if it represents a challenge (Maddi, 2002). In 1982 Kobasa, Maddi and Puccetti published that in the case of being in stressful situations, physical exercise served as a stress protector. Even Kobasa, Maddi and Puccetti published (1982) a study of how exercise serves as a protector between stress and illness. Interest in this line became a commitment to continue researching and that led them to materialize their ideas by founding Hardiness. Institute in 1984 in California (Khoshaba, and Maddi, 1999).

The resistant personality has the characteristic that it can be studied in a single-factor and three-factor manner (Jaenes 2009; Ponce-Carbajal et al., 2015) since its psychometric properties allow it since it has adequate values in both cases. The variables that make it up are the 3Cs Control, Commitment and Challenge (Mund, 2017), and in the last decade it has been an element of study in various sports such as diving (Villarreal-Aranda et al., 2022), soccer players (Sheard and Golby, 2010), in crossfit (Vezzani, 2015), marathon (Jaenes, 2009), swimming (Prieto et al., 2014).

Coping strategies is a concept that began in the 1980s with a boom in various research groups in sports psychology (Doron et al., 2013); some researchers have focused on the various coping strategies that athletes often use (Cirimele, 2011) and also the connection it has with stress (Flores et al., 2017).

Coping strategies are a concept that involves tools with which people face situations that are classified as a problem and give them the opportunity to solve it (Marques 2006). This involves cognitive and behavioral efforts, both internal and external, that are perceived as threatening or, on the contrary, are overcome. When facing this conflict, it is the right time to decide on a strategy.

This confrontation aims to control emotions and ensure that they do not have an impact, especially in competition situations, since usually in the sporting environment, within the objectives, athletes must remain in an optimistic and positive state to increase the chances of success (Lazarus & Folkman, 1984).

Coping strategies are a construct considered multivariate since we can distinguish two groups. The first is oriented towards the objective in which a change in the problem is intended through analysis and planning (Smith et al., 2011), and the second is oriented to emotions where the objective is to regulate them through self-control and seeking support (Poliseo & McDonough, 2012). In the case of a sports and competitive context, stressful situations are very common, so it is very common that strategies have to be used to cope with the situation that arises and in this way athletes are able to use it and can choose the best option.

The favorable resolution of a stressful situation is completely in the hands of the athlete according to their psychological and emotional abilities since they are the ones in charge of making decisions during a competition (Cantón-Chirivella et al., 2015).

Therefore, this concept is of vital importance for athletes since if they manage to balance their emotions this means they make better decisions. The approach to coping in sport is made up of the following variables: emotional calm, active planning or cognitive restructuring, mental withdrawal, risky behaviors, and seeking social support. Currently, coping strategies have been studied by various research groups in sports such as golf (Pinto, 2011; Pinto & Vazquez, 2013), Soccer (Catalá & Peñacoba, 2019) and athletics, boxing, cycling, diving, gymnastics, weightlifting, karate, modern pentathlon, taekwondo and volleyball (Ponce-Carbajal et al., 2021a)

## Methodology to be developed

### Design

The design used was cross-sectional, non-experimental, and correlational, the sample was 79 athletes, aged between 13 and 46 years,  $M = 21.86$ ,  $SD = 6.64$ , 29 men (36.7%) and 50 women (63.3%)

### Instruments

The first is from Hardiness in Central American and Caribbean Athletes questionnaire (HPCACA; Ponce-Carbajal et al. 2015; Ponce, 2017) this questionnaire is composed of 18 items, and three variables: commitment (7 to 12), control (1 to 6) and challenge (13 to 18) of 6 items. In some research, resilient personality has been treated as a unifactorial concept since its creation (Kobasa, 1979; Kobasa, Maddi and Kahn, 1982) but it has also been analyzed in a trifactorial way, since this scale is integrated by three variables such as control, commitment and challenge (Jaenes, Godoy-Izquierdo and Román, 2008), generally in both cases this instrument in its reliability analysis properties are adequate ( $\alpha > 0.7$ ) so it is used in both ways. This instrument has a Likert-type response scale from 0 to 3 where 0 is "totally disagree" and 3 is "totally agree".

The second is the Approach to Coping in Sport Questionnaire (ACSQ-1), this questionnaire was developed by Kim and Duda (1997) and was translated into Spanish by Kim, Duda, Tomás and Balaguer (2003). It is composed of 5 variables, Emotional Calmness (7), Active Planning/Cognitive Restructuring (6), Mental Withdrawal (6), Risky Behaviors (4), and Seeking Social Support (5), using 28 items, with a 5-point Likert format, where 1 takes the value of "never" and 5 the value of "always". This scale has validity based on its internal test structure and its relationship with other variables, as well as adequate levels of reliability ( $\alpha > 0.7$ ) (Kim, Duda and Ntoumanis, 2003).

### Procedure

The procedure began with the design of the digital questionnaire using Google Forms. The link to the test was sent to the coaches and in turn to the athletes of various martial arts disciplines. It was made clear to them that participation is completely anonymous and voluntary. And that the study could be reviewed at any time.

## Resultados

The results found in this research were interesting since in the internal consistency of both instruments they presented positive and significant values in the case of the resistant personality in the control variable the reliability resulted in .76, in the commitment variable with .81 and in the .80 challenge.

In the coping approach variables, values were mostly found above .70, for example in emotional calm with .74, active planning or cognitive restructuring with .80, mental withdrawal with .86, and in the last 2 are moderately adequate with .47 and .60 in risk behaviors and search for social support respectively.

In the correlations, the results confirm the relationships between the variables in a three-factor and unifactor way. In a three-factor way, it was found that with the control they correlated emotional calm with a value of .506\*\*, active planning or cognitive restructuring with values of .490\*\*, risk behaviors with a value of .253\* and search for social support .487\*\*.

The correlations with commitment were presented in emotional calm with a value of .305\*\*, active planning or cognitive restructuring with values of .231\*, risk behaviors with a value of .375\*\*, and search for social support .379\*\*.

Search for social support .406\*\* and risk behavior were correlated with the challenge With values of 301\*\*

In a unifactorial way, the results were that the resistant personality correlates with emotional calm with .443 active planning or cognitive restructuring with values of .362\*\*, risk behaviors with a value of .376\*\* and search for social support .518\* \*.

## Annexes

Appropriate tables and sources.

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## Conclusiones

Athletes who practice martial arts boast a resistance to stress that allows them to control their emotions and manage decision-making in stressful situations, and it represents a commitment to make the best decision, which places them in a state of analysis and emotional calm that at a given moment could guarantee a good strategy for solving problems

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