

Hardiness and coping strategies in nationally selected athletes during COVID -19 pandemic

Personalidad resistente y estrategias de afrontamiento en atletas seleccionados nacionales durante pandemia COVID -19

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Abstract

The objective of this work is to identify the relationship between the variables of the hardiness and those of approximation of coping in sport. The sample is made up of 42 selected national athletes, with experience in world championships of their sport, 23 men (54.8%) and 19 women (45.2%), the age ranged from 16 to 54 years,  $M = 22.67$  and  $SD = 7.64$ . The methodology used is cross-sectional, empirical, associative and simple correlation, descriptive and reliability analyses, in addition to correlations. The instruments used were the hardiness Questionnaire in Central American and Caribbean Athletes and the Approach to Coping in Sport Questionnaire. The results, adequate reliability in the instruments and a correlation value of  $r = .584$  ( $p < .05$ ). The conclusion confirms the existence of a positive and significant correlation between the variable of hardiness control and mental withdrawal of coping approach in sport.

Stress, Sport, Hardiness, Control

Resumen

El objetivo de este trabajo es identificar la relación existente entre las variables de la personalidad resistente y las de aproximación del afrontamiento en el deporte, La muestra está conformada por 42 atletas seleccionados nacionales, con experiencia en mundiales de su deporte, 23 hombres (54.8%) y 19 mujeres (45.2%), la edad osciló entre 16 y 54 años,  $M = 22.67$  y una  $DT = 7.64$ . La metodología utilizada es transversal, empírica, asociativa y de correlación simple, los análisis descriptivos y de fiabilidad, además de las correlaciones. Los instrumentos utilizados fueron el Cuestionario de Personalidad Resistente en Deportistas Centroamericanos y del Caribe y Cuestionario de Aproximación al Afrontamiento en el Deporte. Los resultados, fiabilidad adecuada en los instrumentos y un valor de correlación de  $r = .584$  ( $p < .05$ ). La conclusión se confirma la existencia de una correlación positiva y significativa entre la variable de control de la personalidad resistente y retraimiento mental de aproximación del afrontamiento en el deporte.

Estrés, Deporte, Personalidad resistente, Control

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## Introduction

Psychology, at present has gained an imperative importance given the circumstances in the pandemic by Covid-19. Respiratory syndrome (SARS-CoV-2), was identified as COVID-19 in December 2019, this global event affected humanity in the economic, educational (Falasifah, Fitria, & Hakim, 2021) and social (Xing *et al.*, 2020; De La Serna, (2022), therefore, has wreaked havoc on the emotional and psychological health of people (Seale *et al.*, 2020). Without pandemic, the athlete when presented in competitions and in the training itself faces situations that lead him to feel stress, this is where sport psychology in recent decades has had enormous relevance, it is already part of the multidisciplinary team that helps in the development and control of emotions of high-level athletes (Ponce, 2017; Ponce, 2021, Piñeros, 2021). Sports competition represents a confrontation with stress, this emotional state, causes phenomena of lack of concentration, control, confidence, appearance of nervousness and negative thoughts, some researchers have done work where they provide tools such as self-talk, obtaining as a result that anxiety and stress decrease considerably and therefore athletes can get ahead with their competitive commitments (Barahona-Fuentes, Soto, & Huerta, 2019).

Hardiness is defined as an integral concept that measures resistance to stress, if there is a higher hardiness, the subject perceives as opportunities for growth their problems, or their challenges and assumes them with pleasure because they see it as a benefit, and on the contrary someone who has a low hardiness, can even get sick of stress, does not resist being exposed to constant challenges (Ponce, 2017; Ponce-Carbajal, Tristán, Jaenes, Rodenas, & Peñaloza, 2020; Ponce-Carbajal, López-Walle, Jaenes, Peñaloza, & Méndez, 2020). The hardiness is made up of variables that are control, commitment and challenge, a scale with evidence of adequate reliability not only in a trifactorial manner but also in a unifactorial manner, which shows that it is a concept that has the ability to measure in both ways (Jaenes, 2008; Jaenes, Godoy, & Román, 2009; Ponce, 2017; Ponce-Carbajal, Tristán, Jaenes, Rodenas, & Peñaloza, 2020; Ponce-Carbajal, López-Walle, Jaenes, Peñaloza, & Méndez, 2020; Ponce-Carbajal, López-Walle, & Méndez, 2021a; Ponce-Carbajal, López-Walle, & Méndez, 2021b).

The definition of Coping, as those cognitive and behavioral efforts that are performed internally and externally that the individual perceives as a threat or considers that they overcome it, then, coping strategies are those developed by athletes to confront situations or complications, with the conviction to control their emotions, there are two types of coping, the first, The second type is focused on the problem and seeks to generate solutions, taking into consideration the cost-benefit and choosing an alternative and this gives the opportunity to make improvements for subsequent events or competitions with those strategies that have given better results (Lazarus and Folkman, 1984).

Roth and Cohen (1986) presented two different coping styles. The first is the approach style, which refers to the athlete's interest in solving the problem by facing the facts. The second is the avoidance style, in which the athlete avoids the situation that causes him/her discomfort. These researchers propose the analysis of the four relationships and establish a recognition of the way in which the athlete usually acts (Krohne, 1996). Coping in sport is about the athlete choosing an appropriate strategy during his competitions and it is a support for the good management of his negative emotions, having an organized reception of information, planning his responses, according to his resources available and executing with the most accurate actions, giving the opportunity to have control over anxiety, through a good choice of actions to be executed to resolve the conflictive situation (Cantón-Chirivella, Checa-Esquivia and Vellisca-González, 2015).

The approach to coping in sport, is integrated by several variables such as Emotional Calm, Active Planning/Cognitive Restructuring, Mental Withdrawal, Risk behaviors and Search for social support, this questionnaire has been used in several investigations finding adequate values in its internal consistency (Kim, Duda, Tomás, & Balaguer, 2003; Balaguer, Duda, Kim, 2003; Ponce-Carbajal, López-Walle, & Méndez, 2021b).

Therefore, this research aims to identify the existence of a relationship between hardiness variables and coping approach variables in sport, under conditions of confinement in COVID-19 pandemic, in a sample of athletes, who were nationally selected and with experience at world level in competitions in their sport, which makes them a very special group of athletes.

### Description of the method

The design of this research is empirical associative, simple correlation and cross-sectional (Ato, López-García, & Benavente, 2013). The population for this research were 42 participating athletes, all nationally selected, with experience in world championships in their sport, the sample consists of 23 men equivalent to 54.8% and 19 women corresponding to 45.2%, the age of the athletes ranges between 16 and 54 years, with a mean of 22.67 and a standard deviation of 7.64. as inclusion criteria, it was established that those athletes who were once part of the Mexican national team of any sport participated, another selection criterion were those athletes who had participated in at least one world championship in their sport specialty. In the exclusion criteria, those athletes who did not finish the instruments properly, another criterion was those who were currently still contemplated for any competition and finally those who decided to withdraw their participation for some personal reason.

### Instruments

The first evaluation instrument is called hardiness Questionnaire in Central American and Caribbean Athletes (PRDCC; Ponce-Carbajal *et al.* 2015) that measures hardiness, this questionnaire is composed of 18 items, and is integrated by three factors: commitment (6 items), control (6 items) and challenge (6 items). This instrument has been used in a trifactorial manner by some investigations (Kobasa, 1979a; 1982; Jaenes, Godoy-Izquierdo and Román, 2008; Meda-Lara, Yeo-Ayala, Juárez-Rodríguez, Palomera-Chávez, and Moreno-Jiménez, 2021), commonly the properties are adequate obtaining acceptable reliability values for all subscales (Commitment  $\alpha = 0.81$ , Control  $\alpha = 0.79$ , Challenge  $\alpha = 0.75$ ). The response scale is Likert-type from 0 to 3 where 0 is "strongly disagree" and 3 "strongly agree".

The second is the Approach to Coping in Sport Questionnaire (ACSQ-1) in its Spanish version (Kim *et al.*, 2003; Balaguer *et al.*, 2003). The questionnaire has 28 items and 5 variables: Emotional Calmness (7 items), Cognitive Restructuring (6 items), Search for Social Support (5 items), Mental Withdrawal (6 items) and Risky Behaviors (4 items). This questionnaire has been used in several investigations showing appropriate internal consistency values of more than .70 (Kim, Duda, Tomás, & Balaguer, 2003; Ponce-Carbajal, López-Walle, & Méndez, 2021b). The response scale is a 5-point Likert-type scale from 1 "never" to 5 "always".

The psychometric properties of Approaching Coping in Sport, usually present adequate values, however, in the last factor of risk behaviors it is below the  $\alpha = .70$  of Cronbach's alpha, but this could be explained since it only has four items, specifically in the research by Kim *et al.*, 2003, where the values for Emotional Calm ( $\alpha = .71$ ), Active Planning/Cognitive Restructuring ( $\alpha = .74$ ), Seeking Social Support ( $\alpha = .78$ ), Mental Withdrawal ( $\alpha = .78$ ) and Risky Behaviors ( $\alpha = .64$ ) are adequate and the latter moderately acceptable according to researchers (Nunnally & Bernstein, 1994; Hair, Anderson, Tatham, & Black, 1998).

### Procedure

The procedure consisted of making the digital questionnaires in Google Forms and the questionnaire was launched in social networks and by invitation to some coaches, with the purpose that the athletes could respond online, since, due to the confinement, they were not in person at the facilities where they usually trained, however, thanks to the interest of the coaches and the athletes themselves, if participation in this study was possible. It is worth mentioning that in the questionnaire they were informed of the details of their participation such as informed consent, as well as the anonymity of their answers and that they would only be used for scientific research purposes, respecting the moment in which they wished to withdraw from the study. Therefore, they were free to leave the study at any time they wished, and if there were any questions, a WhatsApp number was provided where they could communicate with any questions at any time.

Data analysis

The data analysis was performed with the statistical package SPSS version 25, the descriptive statistics such as mean, standard deviation and frequencies were calculated, correlation analysis was performed to confirm the existence of Spearman correlations between the variables of the resistant personality and those of the approach to coping in sport.

Results

Table 1 presents the descriptive statistics of the frequencies of the various sports to which the athletes belong and who participated in this study.

Sports		Frequencies
1	Swimming	9
2	Taekwondo	8
3	Soccer	6
4	Cheerleading	5
5	Diving	4
6	Field Hockey	3
7	Triathlon	2
8	Modern Pentathlon	1
9	Gymnastics	1
10	Baseball	1
11	Athletics	1
12	Chess	1
	Total	42

Table 1 Frequencies of the sports participating in this investigation

Table 2 presents the reliability or internal consistency of the components of hardiness and coping approach in sport, showing mostly adequate results above .70, and some evidenced moderately adequate values.

Variables		Reliability
1	control	0.85
2	commitment	0.6
3	challenge	0.7
4	total PR	0.85
5	Cognitive Restructuring	0.74
6	Mental Withdrawal	0.7
7	Emotional Calming	0.5
8	Seeking Social Support	0.84
9	Risk Behavior	0.6

Note:  $\alpha > .70$

Table 2 Crombach's alpha reliability of the variables of the hardiness and Approaching Coping in Sport questionnaires

Correlations

Presents the results of the Spearman correlation matrices, the relationship between hardiness control and with mental withdrawal approach coping in sport is observed with a value of  $r = .584$  ( $p < .05$ ) only.

The objective of this research was the identification of correlations between the factors of hardiness and coping approach factors in sport, finding a positive and significant relationship in hardiness control and mental withdrawal, in conditions of confinement in the Covid-19 pandemic.

The perception of control lowers stress through the acceptance of the situation, since there is nothing I can do to solve it since it is a global problem, therefore, the acceptance that the plans must stop and therefore the goals and objectives also, without causing emotional imbalance, so it contributes to emotional health.

This result, is unprecedented, since similar conditions had not been presented by the pandemic and being high-level athletes the results are new knowledge, however we can partially find results that share results with our research as is the work of Sepúlveda-Páez, Díaz-Karmelic and Ferrer-Urbina (2019), since in a research with water polo players they found that this variable of mental withdrawal, helps to balance emotions through the decrease of stress and the acceptance of difficult situations.

The COVID-19 pandemic has had a significant adverse impact on the mental health of university students and the main coping strategy adopted by students is problem-focused coping by seeking social support from their friends, family and university unlike our results (Falasifah, Fitria, & Hakim, 2021).

In other research conducted in pandemic times, in athletes of rhythmic gymnastics, athletics, soccer, tennis, taekwondo, basketball, volleyball, they found correlations different from our results since they found correlations in emotional calm, cognitive restructuring and behavioral risk (Iancheva, 2021).

In another research, in golfers were studied the coping strategies they use and what they found is that they use the strategy of social support, those amateur athletes who have a better performance (Pinto, and Vázquez, 2013). Unlike our results in a research in skiers, the coping strategy used by athletes is risk behaviors (Sarries and Pinto, 2016).

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#### 5. Conclusions

The existence of a relationship between the control variable of the resistant personality and mental withdrawal of coping approach in sports is confirmed, that is, in a confinement situation they took with acceptance and awareness that all activities directed towards their objectives should wait until the sanitary alert was lifted, taking this control measure with responsibility in favor of a healthy mentality and waiting for sanitary indications, in order to resume their activities gradually. Considering that due to the nature of the pandemic there was not much they could do, although it is an avoidant coping strategy, a strategy that is not usually found in the mental map of the high performance athlete. It is worth mentioning that the coping strategies usually used by athletes are positive, practically to take things and solve the problem, but being this time so different from normal situations, it is considered an atypical result, typical of the consequences and stressful emotional shocks, given the circumstances of confinement and stress in the face of uncertainty and trying to preserve health.

#### 6. References

Ato, M., López-García, J. J., & Benavente, A. (2013). *Un sistema de clasificación de los diseños de investigación en psicología*, 29(3), 1038-1059.

Balaguer, I., Duda, J., y Kim, M. (2003). *Estudio de las características psicométricas de la versión española del Cuestionario de aproximación al afrontamiento en Deporte*, 12 (2), 197-212.

Barahona-Fuentes, G. D., Soto, R., & Huerta, (2019). *Influencia del autodiálogo sobre los niveles de ansiedad y estrés en jugadores de tenis: una revisión sistemática*, 41, 135-141.

Cantón-Chirivella, E., Checa-Esquiva, I., y Vellisca-González, M. (2015). *Bienestar psicológico y ansiedad competitiva: el papel de las estrategias de afrontamiento*, 34(2), 71-78.

De La Serna, J. M. (2022). *Aspectos psicológicos del Covid-19*. España: Tektime.

Falasifah, M., Fitria, D. A., y Hakim, F. R. (2021). *Coping Strategies Among College Students During Covid-19 Pandemic*, 12(2), 73-83.

Iancheva, T. (2021). *Psychological Capital, Need for Security, Coping Strategies of Sports Students in Conditions of Covid-19*, 29(4s), 28-38.

Hair, J.F., Anderson, R.E., Tatham, R. L. y Black, W. C. (1998). *Multivariate Data Analysis*. New Jersey: Prentice –Hall.

Jaenes, J. C., Godoy-Izquierdo, D., y Román, F.M. (2008). *Elaboración y validación psicométrica de la Escala de Personalidad Resistente en Maratonianos*, 8(2), 59-81.

Jaenes, J.C., Godoy-Izquierdo, D. y Román, F., M. (2009) *Personalidad Resistente en maratonianos*, 18(2), 217-234.

Kim, M. S., Duda, J. L., Tomás, I., & Balaguer, I. (2003). *Examination of the psychometric properties of the spanish version of the approach to coping in sport questionnaire*, 12(2), 197–212.

Kobasa, S. (1979a). *Stressful live events personality and health an inquiry in to hardiness*, 37(1), 1-11.

Krohne, H. (1996). *Individual Differences in Coping. Handbook of Coping Theory, Research, Applications* (pp. 381-40). John Wiley & Sons.

Lazarus, R., y Folkman, S. (1984). *Stress, Appraisal, and Coping*. Nueva York: Springer Publishing Company.

Meda-Lara, R.M., Yeo-Ayala, C., Juárez-Rodríguez, P., Palomera-Chávez, A y MorenoJiménez, B. (2021). *Adaptación del cuestionario de personalidad resistente en población mexicana*, 17(2), 1-24.

Nunnally, J.C. y Bernstein, I. H. (1994). *Psychometric Theory*. New York: Mc Graw Hill.

Piñeros, P. A. (2021). *Respuestas emocionales precompetitivas y competitivas de jugadores del FPC: estudio fenomenológico*. Tesis de Licenciatura Colombia: Pontificia Universidad Javeriana.

Ponce-Carbajal, N., López-Walle, J. M., Jaenes, J. C., Medina, M., Cocca, A. (2015). *Análisis factorial confirmatorio de segundo orden del Cuestionario de Personalidad Resistente en deportistas centroamericanos*. [Resumen]. XXIII Congreso Mexicano de Psicología. Cancún, México.

Ponce-Carbajal, N., Tristán, J. L., Sánchez, J. C. J., y Jiménez, N. C. (2017). *Contexto social y personalidad resistente en el deportista de Centroamérica*. *Revista de Psicología del Deporte*, 26(2), 91-97.

Ponce-Carbajal, N. (2021). *Contexto social y personalidad resistente en deportistas universitarios exitosos*. México: T&R Editorial.

Ponce, N. (2017). *Contexto social, personalidad resistente y dureza mental en deportistas centroamericanos y del caribe*. Tesis Doctoral México: Universidad Autónoma de Nuevo León.

Ponce-Carbajal, N., López-Walle, J. M., y Méndez, M. P. (2021a). *Personalidad resistente y burnout en deportistas de judo seleccionados nacionales*. Handbook T-X CIERMMI Women in Science, Humanities and Behavioral Sciences, ECORFAN: Queretaro, Mexico, 66-72.

Ponce-Carbajal, N., López-Walle, J. M., y Méndez, M. P. (2021b). *Personalidad resistente y estrategias de afrontamiento en deportistas mexicanos mundialistas y olímpicos en pandemia*, 5(9), 11-14.

Ponce-Carbajal, N., Tristán, J. L., Jaenes, J. C., Rodenas, L. T., y Peñaloza, R. (2020). *El impacto del contexto social sobre la personalidad resistente en deportistas universitarios de México*, 20(2), 201-217.

Ponce-Carbajal, N., López-Walle, J. M., Jaenes, J. C., Peñaloza, R. y Méndez, M. P. (2020). *Personalidad resistente y dureza mental en deportistas de élite en centroamerica y el Caribe*. Recuperado de <https://www.kobo.com/mx/es/ebook/psicologia-del-deporte-y-ciencias-aplicadas>.

Roth, S., y Cohen, L. (1986). *Approach, Avoidance, and Coping With Stress*, 41(7), 813-819.

Seale, H., Heywood, A. E., Leask, J., Sheel, M., Thomas, S., Durkheim, D. N., ... Kaur, R. (2020). *COVID-19 is rapidly changing: Examining public perceptions and behaviors in response to this evolving pandemic*, 15(6), 1-13.

Sepúlveda-Páez, G., Díaz-Karmelic, Y., y Ferrer-Urbina, R. (2019). *Ansiedad pre-competitiva y estrategias de afrontamiento deportivo, en disciplinas acuáticas individuales y colectivas en deportistas juveniles de alto nivel*, 14, 1-10.

Sarries, S. y Pinto, M. F. (2016). *Implicación parental y su relación con la motivación y las estrategias de afrontamiento en niños esquiadores de alto rendimiento*. VIII Congreso Internacional de Investigación y Práctica Profesional en Psicología XXIII Jornadas de Investigación XII Encuentro de Investigadores en Psicología del MERCOSUR. Facultad de Psicología - Universidad de Buenos Aires, Buenos Aires.

Xing, J., Sun, N., Xu, J., Geng, S., y Li, Y. (2020). *Study of the mental health status of medical personnel dealing with new coronavirus pneumonia*, 15(5), 1-10.