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The relationship between academic psychological capital and academic coping stress among university students

La relación entre el capital psicológico académico y el afrontamiento de estrés académico en estudiantes universitarios

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Abstract:

Antecedents: University students confront academic stress in pursuing their academic goals, which may negatively affect their mental wellbeing. Consequently, it is relevant that students develop coping stress strategies to face students' daily stress in their academic life. Previous organisational research has proposed that the positive core construct of psychological capital (PsyCap) positively relates to effective coping strategies. This positive core construct has been identified in academic settings, and it has been called Academic PsyCap. However, the relationship between Academic PsyCap and Coping academic stress has not been deeply studied. Objectives: The primary purpose of this research is to explore if the Academic PsyCap is positively related to Academic coping stress strategies in university students. Methods: An exploratory study with a cross-sectional design was conducted to explore the relationship between the variable of interest in a sample of 102 Chilean university students from public and private institutions. Results: The results of the research showed a positive and significant relationship between Academic PsyCap and Coping academic stress. Furthermore, differences were identified between students from public and private universities and students with aboriginal and non-aboriginal heritage. These results are promising to effectively help university students to face academic stress based on Academic PsyCap.
Keywords: academic PsyCap; academic coping stress; university students.

Resumen:

Antecedentes: Los estudiantes universitarios en la búsqueda de cumplir con sus metas académicas enfrentan el estrés académico que puede tener consecuencias negativas en su salud mental. En consecuencia, es relevante que los estudiantes logren desarrollar estrategias para enfrentar al estrés cotidiano asociado a su vida académica. Investigaciones en el campo de psicología organizacional con orientación positiva (POB) han propuesto que Capital Psicológico (PsyCap) es un constructo central positive que tiene una relación positiva con estrategias efectivas de afrontamiento de estrés. Este constructo central positive ha sido identificado También en el contexto académico, y se ha denominado como PsyCap Académico. Sin embargo, la relación entre PsyCap Académico y el afrontamiento del estrés académico no ha sido lo suficientemente estudiada. Objetivos: El propósito principal de esta investigación es explorar si PsyCap Académico esta positivamente relacionado con estrategias de afrontamiento de estrés académico en estudiantes universitarios. Método: Se realizo una investigación de tipo exploratoria con un diseño cross-sectional para explorar la relación entre las variables de interés en una muestra de 102 estudiantes universitarios Chilenos de instituciones públicas y privadas. Resultados: Los resultados de esta investigación muestran una relación positiva y significativa entre el PsyCap Académico y estrategias de afrontamiento de estrés académico. Adicionalmente, se encontraron diferencias entre estudiantes de universidades públicas y privadas, y entre estudiantes con ascendencia indígena y quienes no tienen esta ascendencia. Los resultados son promisorios para ayudar de forma efectiva a estudiantes universitarios a enfrentar el estrés académico por medio del PsyCap Académico.
Palabras clave: PsyCap académico; estrés de afrontamiento académico; estudiantes universitarios.

Introducción

Coping Academic Stress

The development of university life is generally associated with significant and desirable academic outcomes, including academic success and student well-being (Saklofske et al., 2012). However, achieving university responsibilities is also related to academic stress due to the study requirements and challenging goals (de la Fuente et al., 2020). Research has stated that academic stress has undesirable consequences for university students, including unhappiness, cheating behaviors, indulgence, reduced academic performance, and disengagement from academic life (Crego et al., 2016; Pope, 2001). According to American Psychological Association (2019), stress has become the most severe academic barrier among university students worldwide. Indeed, the prevalence of academic stress in Chilean university students is around 54 percent (Universidad Católica de Temuco, 2019).

Moreover, it is necessary to bear in mind that the current situation associated with COVID-19 has caused a considerable challenge to education systems worldwide. For example, closures of learning institutions have impacted 94 percent of the world's student population, with a more dramatic 99 percent in low and lower-middle-income countries such as Latin America (United Nations, 2020). As a result, undergraduate students might be concerned about understanding the effect of COVID-19 on their academic progress (Groucher & Locke, 2020). This unprecedented situation has negatively and deeply impacted university students' mental wellbeing (Prasath et al., 2021). Therefore, although academic distress has been an issue for university students before this pandemic, COVID-19 has exacerbated this phenomenon. Consequently, they face an uncertain scenario and need to bolster their resources to effectively cope with the challenge associated with both university life and pandemic time.

A rich amount of research focused on coping with academic stress in university students (de la Fuente et al., 2020; Joseph et al., 2021; Väisänen et al., 2018). Coping is referred to efforts to manage issues, challenges, or problems regardless of the effort's success (Folkman, 1984). Coping with academic stress relates to the student's emotions, academic abilities, cognition, and experience (Arsenio & Loria, 2014). Research suggests that coping with academic stress has a relevant role in students' ability to manage academic events and perform at university (Shokri et al., 2007; Singh & Upadhyay, 2010; Struthers et al., 2000). While the educational system and environmental conditions are not under the students' control, their Coping Academic Stress abilities are relevant to face stressful situations (Yuan et al., 2017).

Research has distinguished between the approach to coping with academic stress and avoidance stress coping strategies (Gustems & Calderon, 2013). First, students who engage in an approach to coping with academic stress focus on the problem at hand and make a personal effort (cognitive and behavioural) to control or eliminate potential threats that may or may not be effective (Rabenu et al., 2017). Research explains that problem-focused coping helps reduce psychological or behavioral issues (Folkman, 2008). This strategy is also known as an adaptative coping strategy (Prasath et al., 2021). Students have information about what

they can do and mobilize actions with the primary objective to modify their challenging situations (Rabenu et al., 2017). Seeking social support has been identified, such as an effective coping with academic stress strategy (Devonport & Lane, 2006). Social support refers to support received, including informative, emotional, or instrumental (Kim et al., 2010). Furthermore, it includes the sources of support (e.g., family, classmates, or friends) that enhance student's self-esteem or provide stress-related interpersonal aid (Dummont & Provost, 1999). Finally, coping planning has been described as a helpful stress coping strategy (Crego et al., 2016). Coping planning refers to making a particular plan to overcome anticipated issues that may hinder students from enacting their intentions (Norman & Conner, 2017). These strategies are positively centered and protect individuals from the adverse effects of stress (Rabenu et al., 2017).

On the other hand, avoidance students focus on emotions and make similar efforts to avoid thinking about stressors and undesirable consequences (Moos & Holahan, 2003). Research has established that avoidance stress coping strategies might lead students to high levels of substance abuse (Sun et al., 2011), higher levels of stress (Polman et al., 2010), health-damaging behaviors (Tavolacci et al., 2013), withdrawal from university (Sevinç & Gizir, 2014), and increasing suicidal ideation (Zhang et al., 2012). Therefore, in the light of the evidence, it is relevant that universities consider which kind of strategies their students are using: approach coping with academic stress or avoidance stress coping strategies. The consequences for them would be oppositive.

The literature has pointed out that while some individuals can effectively use approaches to coping with academic stress, some individuals cannot curb the emotional impact of stressors and tend to use avoidance stress coping strategies (Youssef & Luthans, 2007). Furthermore, research has suggested that the difference between these two types of individuals is mainly based on the first individuals demonstrating higher levels of positive personal resources, such as hope, efficacy, resilience, and optimism (Riolli et al., 2012). In particular, the literature has suggested that coping with stress strategies positively correlates with the core construct of psychological capital (Rabenu et al., 2017).

Psychological Capital

Traditionally, as a discipline, psychology has focused on what is wrong with people, organizations, and societies and largely neglected to examine what is functional or what is *right* with them (Seligman, 2002). However, since this century, research in psychology has turned to positive human features and strengths (Wehmeyer, 2013). This change has been led by positive psychology theorists and researchers (Reichard et al., 2014). The primary aim of positive psychology is to provide comprehensive and balanced scientific knowledge to build, flourish, and enhance individuals, families, and organizations (Seligman & Csikszentmihalyi, 2000). The positive psychology movement influences different fields, including organizational research.

Positive organizational behavior (POB) emerged from positive psychology to address human strengths and resources at the individual level of study and improve an employees' performance within the organizational context (Luthans, 2002a). The following five definitional criteria were established by Luthans (2002b) to further distinguish POB from other positively oriented paradigms (e.g., positive psychology). 1) grounded in theory and practical research; 2) have valid measurement; 3) be relatively unique to organizational behavior research; 4) be related to work-related outcomes (e.g., performance); and 5) be "state-like" and therefore open to development.

Since the introduction of POB, several positive psychological resources have been studied and empirically tested for inclusion in POB research (Luthans et al., 2006). To date, the positive psychological resources assessed as best meeting the POB criteria are hope, efficacy, resilience, and optimism (acronym HERO) Luthans, Youssef, & Avolio, 2007). The positive psychological resources of HERO have been studied individually for their POB potentially (Youssef & Luthans, 2007). More importantly, substantially extensive research has focused on the higher-core construct compromising these positive psychological resources, known as psychological capital or PsyCap (Luthans, Youssef, & Avolio, 2007).

PsyCap is defined as an

> individual's positive psychological state of development and is characterized by: (1) having confidence (self-efficacy) to take on and put in the necessary effort to succeed at challenging tasks; (2) making a positive attribution (optimism) about succeeding now and in the future; (3) persevering towards goals and, when necessary, redirecting paths to a goal (hope) in order to succeed; and (4) when beset by problems and adversity, sustaining and bouncing back and even beyond (resiliency) to attain success. (Luthans, Youssef, & Avolio, 2007, p. 3).

PsyCap is a higher construct derived from a group of motivational and behavioral propensities associated with hope, efficacy, resilience, and optimism (Luthans,Avolio, Avey, & Norman, 2007). Therefore, PsyCap is not merely a summation of its resources but rather a higher-order core construct that integrates its four psychological resources. PsyCap synergically combines the coping mechanisms that hope, efficacy, resilience, and optimism have in common (Avey, Reichard, Luthans & Mhatre, 2011).

With particular reference to the labor context, a growing body of research has supported a positive relationship between PsyCap and desirable work-related outcomes, including job performance (Avey, Reichard, Luthans & Mhatre, 2011), job satisfaction (Larson & Luthans, 2006), organizational commitment (Peterson et al., 2011), organizational citizenship behavior (Avey et al., 2010), leadership (Youssef-Morgan & Luthans, 2013) and employee mental health (Youssef-Morgan & Luthans, 2015). Moreover, research has established a negative relationship between PsyCap and undesirable work-related outcomes, including the intention to quit (Olaniyan & Hystad, 2016), cynicism (Avey et al., 2010), and employee mental health issues such as job stress (Roberts et al., 2011).

Research has flagged that PsyCap leads individuals to develop strength and resources (Luthans, Avolio, Avey, & Norman, 2007). Furthermore, PsyCap is positively related to building effective coping stress strategies (Burns et al., 2017; Rabenu et al., 2017). Based on these

results in workplace settings, it makes sense that PsyCap would be related to individual academic outcomes (Luthans et al., 2014). Indeed, PsyCap is a novel discussion in the academic setting, and previous results have identified that universities and their students can benefit from academic PsyCap (Adil et al., 2020). Therefore, university students with high Academic PsyCap levels may develop effective strategies to cope with academic stress.

Academic PsyCap

Academic PsyCap "is uniquely positioned at the intersection between student and institution. It can positively impact student performance" (Sweet & Swayze, 2020, p. 3). Previous research has explored the relationship between HERO components and desirable student academic outcomes. First, hope is conceptualized as a positive motivational state based on an interactively resulting sense of successful agency and pathways (Snyder et al., 1991). Research has shown that students with high hopes will likely continue and finalize their studies (Snyder et al., 2002). Second, efficacy is defined as "one's conviction about his or her abilities to mobilize the motivation, cognitive resources of courses of action needed to successfully execute a specific task within a given context" (Stajkovic & Luthans, 1998, p. 66). Research has established a positive relationship between efficacy and academic performance (Richardson et al., 2012). Third, resilience refers to the individual capacity to hold on and bounce back (even beyond) to success in adverse situations (Luthans & Youssef-Morgan, 2017). Research has established that resilient students showed good problem-solving abilities (Wasonga et al., 2003). Finally, optimism is a cognitive, emotional, and motivational stance toward future situations, with positive feelings of confidence (Peterson & Seligman, 2004). Research suggests that optimistic students are likely to have a high academic performance (Solberg et al., 2009).

As reviewed, research has demonstrated that each of the positive psychological resources of Academic PsyCap is positively related to positive student academic outcomes. Nevertheless, the literature has suggested that the core construct of Academic PsyCap is a better predictor of desirable outcomes than the four psychological resources that compromise it (Dawkins et al., 2013). Consequently, while hope, efficacy, resilience, and optimism are independently relevant in predicting desirable student outcomes by combining them, these four positive psychological resources into Academic PsyCap create a synergistic effect with better results for individuals. Although PsyCap has received considerable attention in organizational research and human resources management, it is possible to relate it conceptually with desirable academic outcomes. However, the role of positive psychological resources in educational settings has been less broadly studied (Saklofske et al., 2012).

Some initial research has pointed out some relevant insights when PsyCap is applied to an academic setting. Indeed, research has proposed that the Academic PsyCap is a central construct that enhances students' resources (Luthans et al., 2014). Furthermore, the Academic PsyCap is positively related to cognitive judgments of experiences and their processes, understanding, and positive thoughts that lead students to mental health and effective coping with academic stress. For example, a significant positive relationship was proposed between

Academic PsyCap and academic performance (Luthans et al., 2012; Sweet & Swayze, 2020). Furthermore, it has been suggested that the Academic PsyCap might enhance students' potentiality, keeping their academic objectives and increasing academic satisfaction (Nafees & Jahan, 2017). Finally, Black et al. (2020) proposed that the Academic PsyCap might help to increase students' persistence in their online studies. However, it was explained that Academic PsyCap research is still in its infancy and requires more attention. Therefore, this study aims to establish 1) the relationship between the Academic PsyCap and Academic Stress Coping among Chilean university students.

There is consistent support explaining a positive relationship between PsyCap and desirable outcomes. It is also clear that much of the published PsyCap research has been conducted by the founding PsyCap team (e.g., Luthans, Avolio, Avey, and Youssef). Furthermore, according to Van Zyl and Rothmann (2019), the majority of PsyCap research has been developed in the United States (53%) and Europe (34%). Therefore, PsyCap research in different cultural settings, including Latin American countries, is scarce and needs more attention. Cultural background is a significant factor in PsyCap research that deserves more academic attention (Luthans & Youssef-Morgan, 2017). Considering cultural differences, it might be relevant to developing PsyCap research worldwide (Dollwet & Reichard, 2014), including individuals with aboriginal heritage.

According to the last census in Chile, 2,185,792 individuals declared to have aboriginal heritage, corresponding to 12.8% of the national population, representing a 2% increment from the last census in 2013 (Instituto Nacional de Estadisticas, 2018). One-third of the youngest with aboriginal heritage attends tertiary education in Chile (Ministerio de Desarrollo Social, 2017). During the last three decades, enrolment in Chilean universities has increased sixfold (Segovia & Flanagan-Bórquez, 2020). However, few studies focus on these students (Blanco et al., 2010). Therefore, to cover this gap in the literature, this study also aims to compare students with aboriginal heritage and students without this heritage in the measures of Academic PsyCap and Academic Stress Coping.

Furthermore, a comparison of students' measures in Academic PsyCap and Academic Stress Coping between the public and private universities will be tested. Notwithstanding that both private and public universities aim to provide higher levels of education for their students, they have differences between them (Naidu & Derani, 2016). In Chile, these differences are observed in their financing system, resources, facilities, properties, legal composition, goods and products, and research involvement (Parada, 2010). Furthermore, according to Gajardo (2005), public and private universities have high variations in quality and equity between them. These differences affect student perceptions and outcomes (Wang et al., 2020), including perceived stress and Academic Stress Coping (Al-Shagga et al., 2015). However, research about these differences in the Chilean context is still in its infancy and requires more attention. Thus, this study aims to fill this gap in the literature. It is expected that the results of this study might increase academic knowledge about the relationship between Academic PsyCap and Academic Stress Coping.

Method

Sample and procedure

An exploratory study with a cross-sectional design was conducted to establish the relationship between Academic PsyCap and Coping with Academic Stress among Chilean university students. This design is handy for conducting exploratory research and providing initial evidence about a topic of interest that deserves attention (Spector, 2019). Furthermore, a self-report survey was chosen as an appropriate methodology for this study (Liamputtong, 2017). Self-report surveys help identify and describe participants' psychological features from their perspectives, including subjective experiences, such as the variables involved in this study (Paulhus & Vazire, 2007). An online survey was the data collection mode chosen in this research. Online surveys are gaining popularity in academia due to their low cost, easy distribution of multiple measures, quick data gathering, and an additional level of anonymity for participants (Das et al., 2018).

Written informed consent was obtained from the study participants, informing them about the research objectives. It was established that participation in the study was voluntary and did not imply academic credits or any incentive to participants. Furthermore, participants were not asked to provide any personal or identifying information, such as names or email addresses, were requested from participants. Finally, participants were informed that they could withdraw from the research at any stage. As a result, a sample compromised by 102 Chilean university students was achieved using convenience sampling. This technique is the most used sampling in social sciences; members of the target population (e.g., Chilean university students) that meet practical criteria (e.g. availability) are included to achieve the research aims (Burton et al., 2018).

Measures

Academic PsyCap

Academic PsyCap was measured using an adaptation of the original Psychological Capital Questionnaire - Short Version, PCQ-12 (Avey et al., 2011b) to the academic context developed by (Carmona-Halty et al., 2019) in a Spanish language version. The questionnaire consists of twelve items. Each item is rated using a 6-point Likert scale (1= strongly disagree, 6 = strongly agree). The original structure of the scale is integrated by four factors: hope (four items), efficacy (three items), resilience (three items), and optimism (two items). The average of the 12 items determined an overall Academic PsyCap score.

Coping Academic Stress

Coping academic stress was measured using the coping scale of academic stress questionnaire (Escala de Afrontamiento del Cuestionario de Estrés académico, A-CEA), developed by Cabanach et al. (2010). Twenty-three items integrate the scale. Each item is

rated using a 5-point Likert scale (1= never, 5 = always). Three factors integrate the scale: positive revaluation (9 items) is based on problem-focused coping, seeking social support (7 items), and planning (7 items).

Sociodemographic

Demographic information about gender, age, aboriginal heritage, children, high school background, type of university, study field, and the number of semesters completed was asked. High school background was categorized as public education (free fees) or private education (payment of fees).

Results

A sample compromised by 102 Chilean university students (88.2% public universities, 11.8% private universities) was achieved, aged between 18 and 57 (M = 21.21; SD = 4.80) with a M = 3.97 (SD = 2.35) of semesters coursed. A detailed breakdown of sample demographics is presented in Table 1. It is relevant to mention that 4 participants were excluded from the total sample due to their delivered incomplete scales.

Table 1. *Sociodemographic Characteristics of Participants at Baseline.*

Baseline characteristic	Public University		Private University		Full Sample	
	n	%	*n*	%	*n*	%
Gender						
Female	67	74.4	3	25	70	68.6
Male	23	25.6	9	75	32	31.4
Aboriginal Heritage						
Yes	25	27.8	2	16.7	27	26.5
No	65	72.2	10	83.3	75	73.5
Child care responsability						
Yes	8	8.9	0	0	8	7.8
No	82	91.1	12	100	94	92.2
High school background						
Public	36	40	1	8.3	37	36.3
Private	54	60	11	91.7	65	63.7
Field of Study						
Humanities	68	75.6	6	50	74	72.4
Engineering & Mathematics	10	11.1	5	41.7	15	14.7
Health	12	13.3	1	8.3	13	12.7

As can be seen in Table 1, female participants mainly constituted the sample (69%). Most participants did not have childcare responsibilities (92.2%). Furthermore, a large fraction of the participants reported having no aboriginal heritage (74%). However, the sample was reasonably balanced across high school backgrounds between private and public education. Finally, humanities students mainly integrated the sample (72.4%).

Before further analysis, the internal consistency of the scales chosen was calculated. The most common measure used to assess internal consistency is Cronbach's alpha, which explains how closely related a set of items is as a group (Cortina, 1993). Thus, reliability tests were conducted to measure the internal consistency of the research instruments, Academic PsyCap and Coping with Academic Stress. The scales displayed excellent values for Cronbach's alpha (Nunnally, 1978), ranging α = .95 and α = .94 respectively. After that, the data analysis was conducted to resolve the study's aim.

Mann-Whitney U test analyses

Independent sample t-tests were attempted to test for statistically significant differences in mean scores for each variable between students with non-aboriginal heritage and those with it and students from public and private universities. However, based on the unequal sample sizes between the interest groups, the Mann-Whitney U test was performed to compare whether there is a difference in the variable of interest. Analyses revealed no significant differences between students who declared an aboriginal and non-aboriginal heritage in Coping with Academic Stress scores. Moreover, it revealed no significant differences between students from private and public universities in their Academic PsyCap levels.

However, as presented in Table 2 and Figure 1, analyses revealed significant differences between students who declared an aboriginal and non-aboriginal heritage in their Academic PsyCap levels, in which scores of students with non-aboriginal heritage (Mdn = 55.01) were higher than students with aboriginal heritage (Mdn = 41.76). A Mann-Whitney U test indicates that this difference was statistically significant, U ($N_{non\text{-}aboriginal}$= 75, $N_{aboriginal}$ = 27) = 1275.500, z = 1.996, p = <.05. This difference has a moderate Hedge's effect size (Hedges, 1981).

Table 2. *Mann-Whitney Test A-PsyCap for students with aboriginal heritage and no aboriginal heritage.*

	Aboriginal Heritage (n = 27)	No Aboriginal Heritage (n = 75)			
	Mdn	Mdn	U	p	g
A-PCQ	55.01	41.76	1275.500	.046	0.468

Notes: * p < .05. *A-PCQ= Academic PsyCap.*

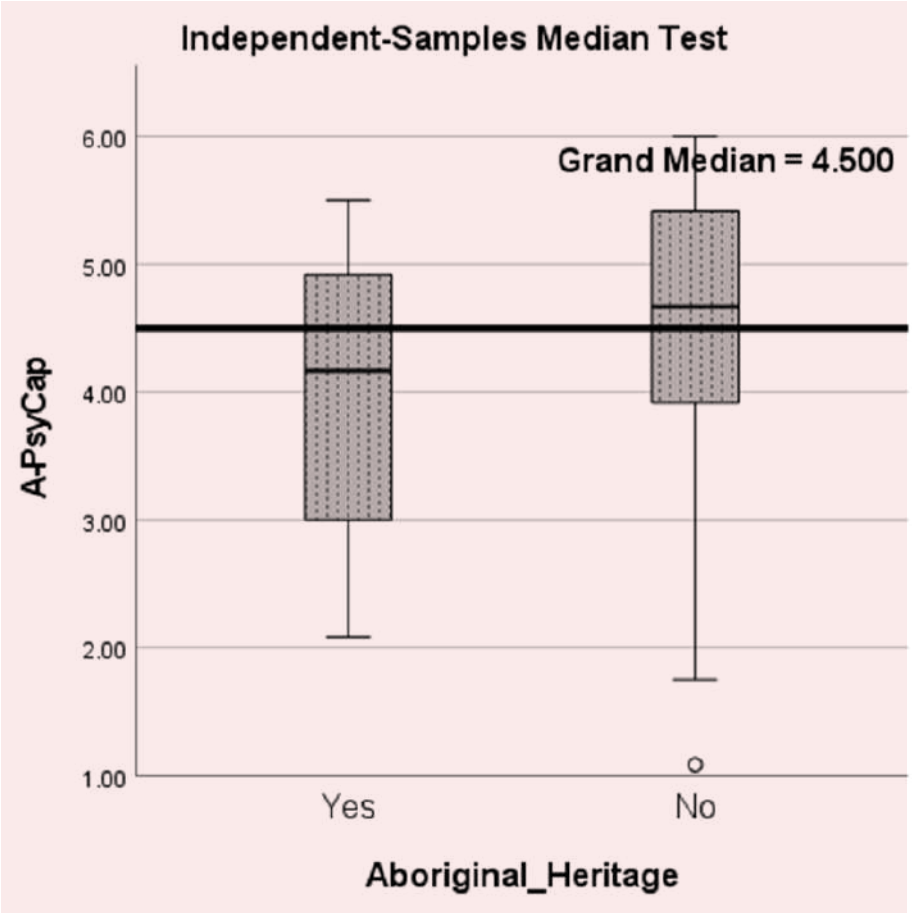

Figure 1. *Independent sample median test A-PsyCap for students with aboriginal and no aboriginal heritage.*

Finally, analyses revealed a significant difference between students from public and private universities in the mean scores of Coping Academic Stress. As presented in Table 3 and Figure 2, analyses revealed that students from private universities (Mdn = 70.79) were higher than those from public universities (Mdn = 48.93) in Coping Academic Stress scores. A Mann-Whitney U test indicates that this difference was statistically significant, U ($N_{private}$ = 12, N_{public} = 90) = 771.500, z = 2.405, p = <.05. This difference has a high Hedge's effect size (Hedges, 1981).

Table 3. *Mann-Whitney Test Coping Academic Stress for students from public and private universities.*

	Public Universities (n = 90)	Private Universities (n = 12)	U	p	g
	Mdn	Mdn			
CAS	48.93	70.79	771.500	.016	0.738

Notes: * p < .05. *CAS= Coping Academic Stress.*

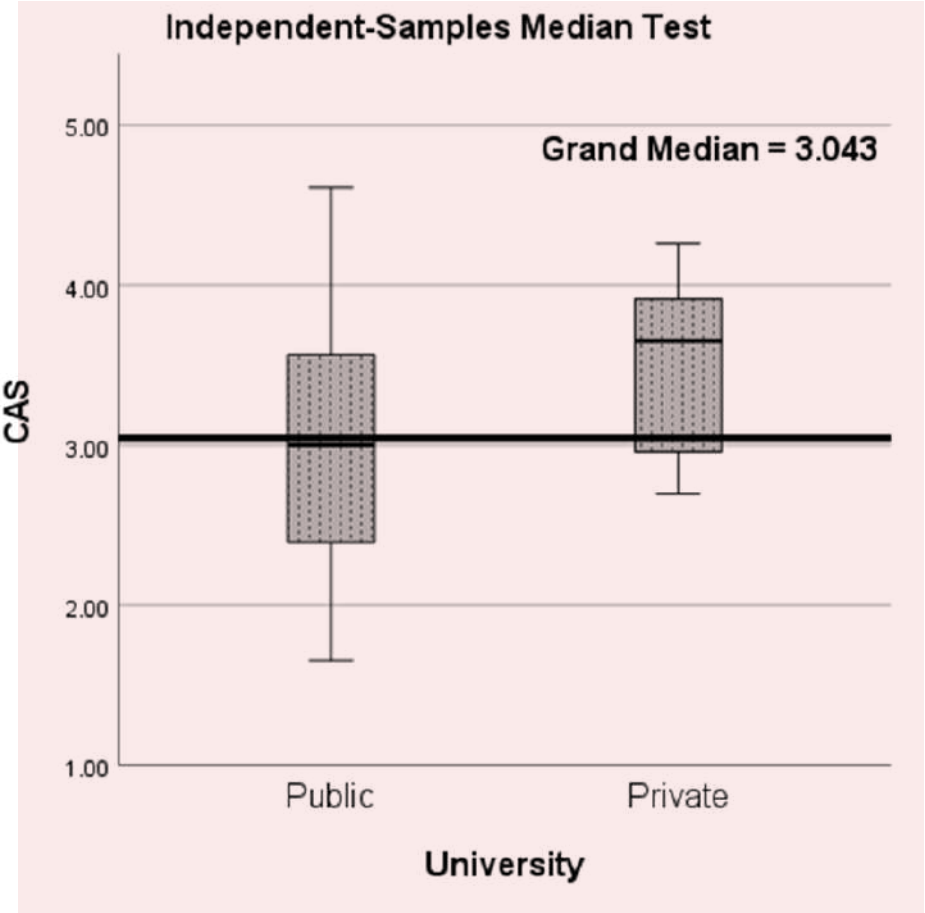

Figure 2. *Independent sample median test A-PsyCap for students from publica and private universities.*

Correlations Analyses

Correlation analyses were undertaken to evaluate the strength of relations between the variables involved in this study. Correlations were performed to address the relationship between age, semesters of study, Academic PsyCap and its resources, and Coping Academic Stress and its components. Means, standard deviation, and Pearson matrix correlation are presented in Table 4.

Results showed that A-PCQ has positive and significant relations with its positive psychological resources: Hope, Efficacy, resilience, and Optimism. Furthermore, A-PCQ has a positive with CAS and its factors: Positive Revaluation, Seeking Social Support, and Planning. Similarly, each of the positive psychological resources of PsyCap has positive and significant relations with CAS and its factors.

Table 4. *Means, standard deviation, and Pearson correlation matrix.*

	M	SD	1	2	3	4	5	6	7	8	9	10	11
1 Age	21.21	4.80	1										
2 Semester	3.97	2.35	.36*	1									
3 A-PCQ	4.40	1.06	.16	.04	1								
4 Hope	4.45	1.21	.04	.04	.94*	1							
5 Efficacy	4.52	1.15	.04	.04	.90*	.82*	1						
6 Resilience	4.21	1.12	.04	.04	.86*	.73*	.68*	1					
7 Optimism	4.41	1.21	.03	.03	.88*	.81*	.72*	.74*	1				
8 CAS	3.05	.74	.09	.09	.76*	.73*	.70*	.63*	.70*	1			
9 Positive Revaluation	3.07	.82	.07	.07	.72*	.70*	.68*	.56*	.66*	.96*	1		
10 Seeking Social Support	3.08	.80	.16	.15	.67*	.66*	.60*	.53*	.62*	.94*	.89*	1	
11 Planning	2.98	.80	.05	.04	.70*	.64*	.61*	.63*	63*.	.87*	.72*	.71*	1

Note: * p<.01 level. *A-PCQ= Academic PsyCap; CAS= Coping Academic Stress.*

Linear Regression Analyses

After correlation analyses, a linear regression analysis was performed to establish the relationship between Academic PsyCap (predictor variable) and Coping with Academic Stress, CAS (outcome variable). Linear regression analysis is a valuable statistical technique widely used in social research to assess a complete model of the relationship between variables of interest (Angelini, 2019). This statistical technique estimates how much the outcome (e.g. Coping with Academic Stress) will change when the predictor variable (e.e. Academic PsyCap) changes; as the predictor variable increases, the outcome variable also increases (Montgomery et al., 2012). It is pertinent to clarify that no inferences about prediction over time can be made from this relationship. The analyses revealed that the Academic PsyCap result explains a significant amount of the variance in Coping with Academic Stress results, $F(1.10) = 143.062$, $p = .000$, $R^2_{adjusted} = .58$. A graphical representation is shown in Figure 3.

The figure shows a positive tendency for Academic PsyCap (A-PCQ-12) and Coping with Academic Stress (CAS) to rise above their means simultaneously. The trend line has a positive slope, which shows a positive relationship between Academic PsyCap and Coping with Academic Stress. The points in the graph are reasonably clustered on the trend line, reflecting a strong relationship between the variables of interest. Indeed, $R^2_{adjusted} = .58$ indicates that Academic PsyCap accounts for 58% of the variance in Coping with Academic Stress. That is, Academic PsyCap predicts coping strategies reasonably well in this sample.

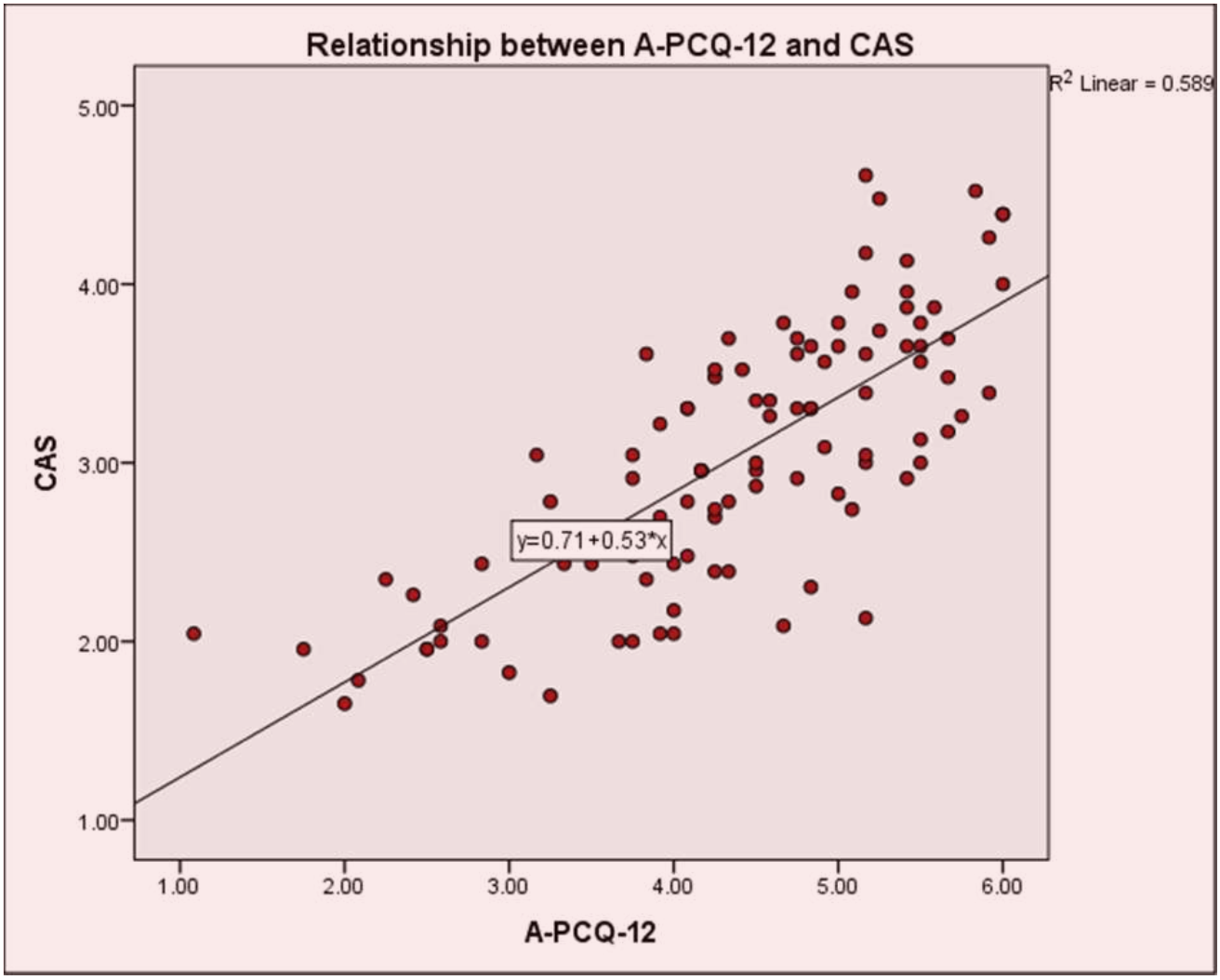

Figure 3. *Scatterplot Bivar Academic PsyCap (A-PCQ-12) and Coping Academic Stress (CAS).*

Discussion

Although positive psychology research has established that the core construct of PsyCap is positively related to stress coping strategies, this relationship has not been explored in depth in university students. Furthermore, research among university students to explore differences in individual outcomes between groups of interest is pretty scarce in Latin America and requires more attention. Therefore, this study was designed to fill these gaps in the literature by investigating the relationship between Academic PsyCap and Coping with Academic Stress in a sample of Chilean university students. This exploratory research has achieved some relevant findings.

First, as indicated in Table 2 and Figure 1, results indicate differences between students with aboriginal heritage and students without this heritage. Indeed, students with aboriginal heritage have significantly lower Academic PsyCap than their counterparts with no- aboriginal

heritage. Previous research has not explored this difference in detail. However, some relevant evidence has identified

that people with aboriginal heritage are much more likely to suffer psychological distress than non-aboriginal heritage individuals (Laurance & Kirmayer, 2009). Research has proposed an explanation for this difference because students with aboriginal heritage have fewer economic opportunities, culturally inappropriate treatment, and loss of identity and culture than their counterparts (Korff, 2021). Therefore, the antecedent variables observed in the differences detected in psychological distress might also impact Academic PsyCap. Further research is required to prove this explanation by testing these variables deeply by considering a broader sample of participants with aboriginal heritage. As mentioned earlier, few studies are focus on these students and their individual outcomes.

Second, as shown in Table 3 and Figure 2, results indicate differences between students from private and public universities. Students from public universities have worse indicators of Coping with Academic Stress than their counterparts. In other words, students from private universities have better strategies to cope with academic stress. Previous international research has suggested that students from public universities tend to have significantly higher levels of academic stress than students from private universities (Al-Shagga et al., 2015; Eva et al., 2015). Plausible explanations for this difference have been given, including that public universities have high levels of competence, which negatively impact students' strategies to cope with academic stress (Happell et al., 2013). Furthermore, it has been proposed that students from universities with high tuition fees, such as private universities, have lower academic stress indicators than students from public universities (Georgia Institute of Technology, 2017). Finally, it has been suggested that students from public universities are usually from lower socioeconomic families; thus, this condition adds extra stress to them (Rodríguez-Fernández et al., 2020).

According to the Chilean reality, the average cost of university fees as a proportion of household income exceeds 180% in the first decile of the poorest households, 72% in the second, close to 50% in deciles three and four and reaches 38.4% on the fifth (Pey et al., 2012). These factors explain the impossibility for those in the most vulnerable groups to cover household expenses and university fees. In an effort to remedy this deficiency, in 2016, the Chilean government enacted a free higher education for the poorest 50% of the Chilean population. 30 Chilean universities, including public and private, benefit from this program (Gobierno de Chile, 2016).

Notwithstanding, the tuition-free program has some restrictions, such as its extension and the possibility of studying outside their hometown. National literature explains that timely graduation dwindles as students' household income declines (Universidad de Chile, 2016). Furthermore, studying outside of the city of origin entails an extra issue for these students (Pareja et al., 2021). These situations might increase related academic stress. A better inclusion in the higher education system of students from poor contexts requires ensuring institutional conditions that promote significant equity for their effective participation in university life and their academic training (Universidad de Chile, 2022), including programs for coping with academic stress.

Previous local research has explored the prevalence of academic stress among Chilean university students (Barrera-Herrera et al., 2019; Reyes Molina et al., 2022). However, research focused on Coping with Academic Stress among Chilean university students is scarce and requires more attention (Fernandez et al., 2020). Moreover, studies to reflect the differences in Coping with Academic Stress between public and private university students are null. Indeed, in a systematic literature review developed by Martínez et al. (2021) focused on the mental health of university students in Chile, the authors reported 32 previous studies on the topic, without referencing the mentioned differences between public and private university students.

The local literature has highlighted the relevance of studies focused on Coping with Academic Stress because Chilean university students' mental health issues have increased during the last years (Carvacho et al., 2021). Therefore, further research may consider these explanations to comprehensively understand the difference between public and private university students in Coping with Academic Stress.

Therefore, this study was designed to fill this gap in the literature by investigating the relationship between Academic PsyCap and Coping with Academic Stress in a sample of Chilean university students. As can see in Table 4, the general results explain that Academic PsyCap and its positive resources have positive and significant relationships with Coping with Academic Stress and its components. Furthermore, all the positive resources of Academic PsyCap: hope, resiliency efficacy, and optimism showed positive and significant relationships with all the Coping with Academic Stress measure components: Positive revaluation, seeking social support, and planning.

The core results from this exploratory study provide preliminary support that the Academic PsyCap is a statistically significant predictor of Coping with Academic Stress in a sample of Chilean university students (Figure 1). These results are consistent with previous research findings, which have suggested a positive relationship between Academic PsyCap and stress coping in undergraduate students (Ortega-Maldonado & Salanova, 2018), and other similar types of relationships, including PsyCap and college students' mental well-being (Selvaraj & Bhat, 2018), and Academic PsyCap and academic performance in university students (Luthans et al., 2012). Furthermore, earlier research has proposed that Academic PsyCap is positively related to student retention, grade performance, intellectual development, and student interaction (Sweet & Swayze, 2020).

Therefore, in light of the results, it is possible to assume that Academic PsyCap would serve as a personal resource for university students to enhance their stress coping in the academic sphere. Academic PsyCap is a cognitive resource that positively influences Coping with Academic Stress. In other words, university students with high Academic PsyCap levels protect individuals from the adverse effects of academic stress. Conversely, university students with high Academic PsyCap levels tend to experience the adverse effects of academic stress.

The evidence recommends that universities develop comprehensive interventions that address the environment, curriculum and students' mental health, prioritizing prevention through early

measures (Fernandez et al., 2016). However, in the mentioned systematic literature review developed by Martínez et al. (2021), the authors reported that no studies were found that evaluated mental health interventions in Chilean university students. The information about these initiatives is reported by Chilean universities (e.g., Universidad Central, 2022; Universidad de Chile, 2022; Universidad de Tarapacá, 2022) and it is available in the grey literature (e.g., Jiménez-Molina & Martínez, 2019); nevertheless, it is necessary to develop further research regarding these interventions to develop stress coping strategies to reduce academic stress among university students to advance in knowledge and its effectiveness (Martínez et al., 2021). Therefore, Academic PsyCap interventions are relevant for these purposes.

This study contributes to the literature on Academic PsyCap and Coping with Academic Stress in Chilean university students. However, the study's findings must be viewed in light of limitations, providing insights into future research directions. First, as with any empirical research that does not use an experimental research design, it is not possible to argue from the present findings that PsyCap is causally related to Coping with Academic Stress. As cross-sectional data were collected from a homogenous sample at one point in time, causal inferences based on correlations and regressions must be guarded (Jager et al., 2017). Secondly, there were relatively few participants in the current study, particularly men. Thirdly, there were relevant differences between the groups of interest, students with aboriginal and no aboriginal, and students from public and private universities. Future studies could test the same model by considering special attention to these limitations and including larger samples.

Finally, the study is a potential common method variance (CMV) bias. Research has proposed three main actions to reduce CMV. First, consider different participants for the predictor and outcome variables (Podsakoff et al., 2003). However, this procedure is not recommendable when the variables of interest capture individual psychological perceptions, such as those selected in this study. Second, minimizing the similarities between the measures of predictor and outcome variables by modifying the measures (Podsakoff et al., 2012). However, modifying the scale formats might alter its conceptual meaning. Finally, use a time interval between the measuring predictor and outcome variables to reduce the participant tendency to use previous answers to inform subsequent items (Podsakoff et al., 2013). However, this action might have collateral effects increasing research costs and increasing participant attrition. If it is impossible to control CMV, it should be considered a potential research limitation (Chang et al., 2010). Therefore, rather than attempting these solutions to reduce CMV bias, a practical extension for future research would be longitudinal research designs.

Notwithstanding these limitations, this exploratory research has provided significant results that may be considered for further research. These findings provide first-time evidence about a positive relationship between Academic PsyCap and Coping with Academic Stress in Chilean university students. Therefore, further research into specific interventions to improve Academic PsyCap is likely to have significant positive results in assisting university students in addressing their everyday stressors. One practical strength of this empirical evidence is that it supports that Academic PsyCap can be developed to design academic resources and positive psychology

interventions in university settings.

Based on these findings, further research should be conducted using controlled experimentation to isolate the measurable impact of Academic PsyCap on Coping with Academic Stress. The initial results from this novel research can also serve as a catalyst for universities to explore ways to include Academic PsyCap development in their undergraduate programs through micro-intervention. Previous research has demonstrated the effectiveness of PsyCap micro-intervention in the workplace context (Luthans et al., 2006), and it might be possible to move these experiences to the university context.

From a practical standpoint, universities need to take academic stress seriously because its negative consequences might worsen if it is not correctly handled. Consequently, Academic PsyCap should not be ignored as a potential factor in enhancing Coping with Academic Stress strategies. With particular emphasis on public institutions, universities should incorporate Academic PsyCap development into their good practices to support students in coping with their daily lives. Academic PsyCap could be implemented as a part of the curriculum or a particular unit. Finally, this intervention could be implemented by the whole population or by considering a type of student, such as aboriginal heritage students.

Conclusion

The relevance of this research is proving evidence of a positive relationship between Academic PsyCap and Coping with Academic Stress in a sample of Chilean university students. These results can lead to further research to explore this relationship deeply due to the potential benefits of Academic PsyCap on university students. Furthermore, the results explain that students from private universities have better indicators of Coping with Academic Stress than public university students. Moreover, students with aboriginal heritage have lower levels of Academic PsyCap than students with non-aboriginal aboriginal heritage. These differences need attention from university institutions to develop actions to reduce them.

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