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The Impact of Self-leadership on Psychological Capital and its influence on fitness instructors' Performance

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Master's in Human Resources Management and Organizational Consulting

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Abstract

With an increased interest in fitness and overall physical health, gyms and fitness academies search for possible ways to stand out in face of competition. Despite that, very few have opted to focus on organizational behaviours. From this, our study focused on the presence of PsyCap in fitness instructors and how (1) self-leadership, when present, may or not be linked to PsyCap, and (2) if PsyCap may or may not impact their performance. A questionnaire survey ($n = 42$), distributed to fitness instructors that currently living in Portugal, to measure PsyCap was used and cross examined with data previously gathered regarding their self-leadership and performance. From the subsequent analysis, the relationship between self-leadership and PsyCap was indeed positive, while the impact of PsyCap on performance was not proven. The practical implications of this study, self-leadership can be an important factor when evaluating fitness instructors, especially if PsyCap is the target, also when trying to distinguish from the competition, gyms should invest in retaining human capital of interest as it can be a differentiative ingredient when it comes to success.

Key words: Fitness, fitness professionals, gyms, self-leadership, psychological capital

JEL Classification System codes:

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Resumo

Com o aumento de interesse em fitness e saúde física, ginásios e academias de fitness procuram pelas possíveis formas de se destacar em relação à competição. Apesar disso, poucas foram as que optaram por se focar no comportamento organizacional. Por este motivo, o nosso estudo focou-se na presença do PsyCap nos instrutores de fitness e como (1) auto liderança, quando presente, está ou não ligada ao PsyCap, e (2) se o PsyCap consegue impactar a sua performance. Um questionário ($n = 42$) foi distribuído por instrutores de fitness, atuais residentes em Portugal, para medir o seu PsyCap e mais tarde examinado com dados previamente recolhidos com informação sobre a sua auto liderança e performance. Através da análise provámos que a relação entre a auto liderança e o PsyCap é positiva, no entanto não conseguimos confirmar o impacto do PsyCap na performance. A partir deste estudo, os ginásios e as academias de fitness poderão ter mais atenção à auto liderança quando avaliam os seus instrutores, particularmente se o seu objetivo é investir em PsyCap. Se o seu objetivo for distinguir-se da concorrência, os ginásios poderão focar-se no investimento e retenção do capital humano, sendo que este pode ser o fator diferenciador para o sucesso

Palavras-chave: Fitness, instrutores de fitness, ginásios, auto liderança, capital psicológico

Códigos do Sistema de Classificações JEL:

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Contents

Acknowledgement.....	iii
Abstract	v
Resumo.....	vii
Introduction	1
Literature Review	3
2.1. Psychological Capital	3
2.2. Self-leadership.....	6
Method	9
3.1. Participants	9
3.2. Procedures	11
3.3. Measures/Constructs	12
3.4. Data Analysis	12
Results	13
4.1. Measurement Model.....	13
4.2.1. Items' Distributional Properties	13
4.3. Simple Linear Regression	15
Discussion	19
Limitations and Further Research	21
Conclusion.....	21
References	23

Introduction

Currently, fitness/sport organizations find themselves in an ever-growing array of competitors in a big market, lifestyle, and health. For this reason, it is critical for gyms to be on the leading edge of innovation and quality, since those will be the factors that retain and potentially increase the customers. One of the ways to contribute to that success is by investing on the quality of staff, the personnel trainers and fitness instructors, since these are the ones that will interact the most with costumers and achieve fidelity. Gyms and Fitness Centres need this quality of service and avail the potential of their staff, to stay afloat in a competitive and growing market.

Even though some studies have been conducted targeting gyms and fitness academies (Andreasson & Johansson, 2014; Dabija et al., 2015; Stern, 2008), fewer have been written bridging one of the main sources of income of gyms, fitness instructors, with variables that allow the gyms to increase their rentability (Koustelios et al., 2003; Prochnow et al., 2020). While some light has been shed to this topic, more information can be gathered regarding the current state of this subgroup in the Health and Sports category (Ku & Hsieh, 2020).

Fitness instructors face daily an array of challenges, such as different customers (e.g. Individuals with different personalities, capable of doing certain exercises, number of customers per fitness class, different levels of motivation), composition of the fitness team (different co-workers throughout the day, inequal personalities, reputation, tactics), motivation and pace (adjusting to the mood of the class, pacing with regards to the customers' needs), (Ku & Hsieh, 2020).

While some studies have been conducted to study the impact of leadership strategies on gyms or fitness centres (Andreasson & Johansson, 2014; Robertson, 2019), we didn't find any evidence of self-leadership being studied in fitness instructors in concrete. On the other hand, we only found a study with Psychological Capital (PsyCap) as a construct in fitness instructors (Qu, 2020).

Another variable that may have relevance in the context of fitness instructors is self-leadership, since when observed in individuals, may lead them to create strategies to better optimize the performance inputted on low motivational tasks, and the ability to influence themselves by finding and exploiting the intrinsic motivational capabilities of a task (Manz, 1986), in other words fitness instructors could possibly use these strategies to optimize their performance by reducing the low motivator factors of their tasks.

Regarding Psychological Capital, its literature has mainly been focused on the current years within the organizational aspect (Kotzé, 2018; Luthans et al., 2013; Luthans, Youssef, et al., 2007; Nordin et al., 2019) with just few studies shedding a light on sports (Bhat, 2017; Qu,

2020). From the literature, we can identify many practical implications for its development, such as an increase job satisfaction and performance, for instance, an individual with higher levels of PsyCap has more affinity to show a better performance, since it contains more and higher positive psychological constructs (Luthans, Avolio, et al., 2007). Following this thought, a gym of fitness academy might benefit greatly by developing and nurturing a culture that allows positive Psychological Capital in its employees. As such, we focus on identifying bridges between Self-Leadership, Psychological Capital, and Performance.

Moreover, with the present study being conducted during the Covid-19 Pandemic, it is also worth to note the need for the gyms and fitness academies to improve and change how they operate regarding healthcare and technology, retaining clients and their professional and soft skills (Moustakas et al., 2020). For this reason, PsyCap gains relevance, since it can allow the individual to change accordingly to the situation at hand through a positive mindset and even in dire situations, see the good side of things (Luthans, Youssef, et al., 2007).

To achieve it, this study focuses in identifying the presence of PsyCap in fitness instructors to find uncharted ways to improve their performance and increase the quality of gyms and fitness academies' services. Furthermore, we also look at self-leadership as a possible factor to better Psychological Capital in fitness instructors that currently live in Portugal.

Literature Review

In the current times, within the context of gyms and fitness academies, fitness instructors find themselves with the necessity to maintain a high and constant performance throughout the day due to high workloads (Prochnow et al., 2020). As previously noted in the introduction, both PsyCap and self-leadership might be interesting topics to be explored by gyms and academies in a Human Resources perspective as they can represent a key factor to stand out from the competition.

Although many studies have been done when approaching performance through the lenses of optimism, resilience, self-efficacy or hope individually, they fail to see full picture. One of the main strengths of PsyCap is its ability to be trained and developed (Luthans, Youssef, et al., 2007). This opens new doors when it comes to investment in human capital, and with the gap in literature regarding fitness, it can build the road to gyms and fitness academies to further explore this concept.

By identifying the importance of education and career development in fitness instructors (Ku & Hsieh, 2020) brings us to researching this topic. Self-leadership representing an interesting factor that, by using self-efficacy as mediator (component of PsyCap) it can lead to career success as well as performance (Megheirkouni, 2018). While self-leadership hasn't been a common topic studied in conjunction with fitness instructors, on the other hand, it is studied in the context of organizations and its following impacts (Kotzé, 2018; Müller et al., 2010; Pearce, 2007; Stewart et al., 2011).

2.1. Psychological Capital

While many positive psychology subjects can be classified as variables that are inherited to the individual, and with some challenge to change, PsyCap is a Positive Organizational Behaviour complex construct that can be developed and changed (Luthans, Avolio, et al., 2007). It is found within the Positive Organizational Behaviour, since it is a positive psychology that has a positive effect on the environment of an organization, in addition, it also allows the construct (PsyCap) to be managed and developed through led or self-development (Luthans, 2002).

When high values of PsyCap are found, desirable work environment attitudes are found, such as job overall satisfaction, commitment to the company and psychological well-being, shedding a light on a correlation between such constructs. Undesirable attitudes are also found to have a negative relationship with PsyCap such as turnover intention and anxiety. Providing a look on a possible positive utility for PsyCap on organizations (Avey et al., 2011). Since Psychological Capital is a composite construct, that can be described as the positive

psychological state of an individual when present 4 distinct components, hope, resilience, efficacy, and optimism, note that these components can all be developed and improved. It is also expected of this construct, that it will show better results in performance, than hope, efficacy, resilience and optimism by themselves (Luthans, Avolio, et al., 2007).

One of its key factors, and what makes PsyCap so appealing to companies is its simplicity on how to develop among employees. By being a construct that is easy and rapid to apply, it represents an attractive proposition to invest in, furthermore having another upside of it being spreadable, in other words, it can pass on from employee to employee, increasing its degree of effectiveness (Luthans & Youssef-Morgan, 2017).

From its multidimensionality, we start with self-efficacy in the workplace, as defined by Stajkovic and Luthans (1998b), as “one’s conviction (or confidence) about his or her abilities to mobilize the motivation, cognitive resources, and courses of action needed to successfully execute a specific task within a given context” (p.66). It plays a major role in the realization of one’s self capabilities, allowing for two different individuals, or the same person at different time stamps, with the same set of skills are able to perform utterly different based on their own beliefs of efficacy (Bandura, 1997). Furthermore, for an individual to perform a task successfully, it must combine both the skill and the correct mindset and the same can be said for the improvisation of the same.

Hope it is defined by Snyder, Irving and Anderson (1991) as “a positive motivational state that is based on an interactively derived sense of successful (1) agency (goal- directed energy) and (2) pathways (planning to meet goals)” (p. 287). One of the traits of hope is the ability to generate willpower to surpass obstacles or achieve goals (Luthans, Avolio, et al., 2007). It serves as a concept that regulates the individual’s expectancies towards the future, also, when higher values of hope are identified, the same individual demonstrates evidence of being confident of his own ability to control the occurrences in their lives and believe they possess the ability to solve problems on their own accord (Snyder, 1991), so hope can be described as an important component that serves to nourish both physical and mental health.

Thirdly, optimism can be characterized as the trait that generates positive expectations regarding the future, and it can improve the pursuit of goals, or cope with less positive information. On the other hand, pessimistic individuals are retarded by self-doubt (Carver, 2002). The construct is also synonym of the general belief that positive outcomes will result, if justified by a likelihood of the individual’s success (Scioli et al., 1997). While hope and optimism sometimes are incorrectly seen as the same concept, they specially distinguish apart from each other in the regard of health issues, while optimism helps overcome minor hassles,

when faced with tragedies, hope is the component that helps with the coping and the assessment of the situation (Scioli et al., 1997).

Lastly, resilience as defined by Luthans (2002a), is “the capacity to rebound or bounce back from adversity, conflict, failure, or even positive events, progress, and increased responsibility” (p. 702). Resilient individuals are keener to accepting reality as it is and are more likely to improve and develop in face of challenges (Coutu, 2002). Resilience, found in a community, organization, region or at the individual level, translates to the ability to endure, absorb and prepare from a challenge or obstacle, and its measurement may vary on the its form to quantify based on the cluster of people being studied (Carlson et al., 2012).

Additionally, developing an exercise plan and maintaining a healthy lifestyle is also linked with high levels of PsyCap, the frequency of doing exercises and the time spent doing exercises being the main factors to improve it (Fan, 2020; Zhang, 2020). Also worth to note, that specifically, dance fitness training has been proven to promote a healthy space for psychological capital to nurture in comparison with other sports/exercises (Qu, 2020). While the previous argument can be made, most of the literature regarding the interactions between PsyCap and self-leadership is not the “antecedent/outcome type”, with the relationship being more towards on both variables impacting one another (Kwon & Park, 2020), while one studies the impact of PsyCap on the relationship between self-leadership and other variables (Harunavamwe et al., 2020), the other focuses on the same interaction of our study (Kotzé, 2018). While the previous hypothesis focused on how the construct self-leadership impacted PsyCap, the following was generated by wondering what would be the impact of the later the fitness employee’s performance. At the current moment, some literature has been written on PsyCap (Gu, 2016; Luthans & Youssef, 2007; Nordin et al., 2019; Scioli et al., 1997) recognizing its usage in the current times as way to improve the current status quo in lifestyle and organizational environment, with some authors focusing on the upsides of this construct related with fitness and its respective employees (Qu, 2020). Within the current study, our objective is to find similar results when applied to fitness instructors.

At the moment, performance is the variable more researched in regards to potential outcomes of PsyCap, being performance associated with multiple facets such as creativity, amount of sales, quality of service and more (Avey et al., 2011). The relationship between these two factors is established by the ability of each PsyCap component (hope, resilience, self-efficacy, and optimism) to contribute as motivation to perform a certain task. In this study, Performance is understood as the amount of effort and quality is put on the task by the fitness instructor.

Individuals that present higher levels of PsyCap tend to have increased performance, by applying more effort, with even a study linking physical performance, such as doing push-ups with higher levels of self-efficacy (Ismail, 2018). By having more faith on what they are invested in (hope), in the positive expectations of the results (optimism), and the ability to face adversity and continue onwards (resilience). With this, we can expect PsyCap to have an overall positive relationship with performance by increasing the motivation of the user even when faced against adversities (Luthans, Avolio, et al., 2007). Following this though, there is multiple evidence that PsyCap can have an important role in predicting employee performance, by have a solid positive relationship with desirable outcomes in a company, it further underlines its importance in HR (Avey et al., 2011).

Furthermore, performance, especially regarding physical performance, can be impacted by self-efficacy, allowing to open a discussion on how a positive and healthy mind can raise greatly the performance of an individual (Ismail, 2018; Kane et al., 1996). To support this claim, we can find multiple studies focused on establishing these bridges between psychological characteristics and physical achievements and performance-based feats (Gould et al., 2002), for instance high levels of hope have been studied to impact enormously on physical achievements, with even having a positive outcome regarding the amount of time an athlete can practice, and individual connected to sports are more susceptible to have higher levels of hope in comparison to their counterparts (Curry et al., 1997). In the context of fitness instructors, the topic of PsyCap is not a variable highly supported by literature together with performance even though it can be quite interesting to explore, as it is deeply connected to what is searched in high value instructors. Following this, the competitiveness of a company, in this context a gym or fitness academy is determined by the performance of its employees, furthermore the development of the psychological capital of the employees tends to have a positive impact regarding happiness on the employer (Qu, 2020). This will also impact the perceived quality of the fitness centre to the customer since the fitness instructors will be the “face” of the business (Ku & Hsieh, 2020).

2.2. Self-leadership

Self-leadership is conceptualized as a comprehensive self-influence perspective that concerns leading oneself toward performance of naturally motivating tasks as well as managing oneself to do work that must be done but is not naturally motivating (Manz, 1986). This construct represents one of the youngest areas of the leadership study, where individuals create their direction and motivation to perform, therefore being perceived as a construct for individuals and organizations linked to sports with great interest (Megheirkouni, 2018).

Leadership, and by association the development of itself, has been growing its relevance and impact recently, with organizations moving more to an approach to business where they do not solely put all the responsibility in leader in a top-down manner (Pearce, 2007). When studying jobs impacted by their need to self-regulate themselves, self-leadership is a construct that has been revealing a positive impact. Self-Leadership can be described as a certain behaviour an individual adopts in junction with cognitive strategies as a way to positively impact its personal performance (Neck & Houghton, 2006). Although we can find a lot of literature regarding the concept itself, not a lot of studying has been done focusing on its antecedents and outcomes (Kotzé, 2018).

Self-Leadership is a construct that when present, a team or individuals can judge the situation at hand, decide whether or not they should act according to their standards, observe the following actions as a way to encourage the expected behaviour and then assess how the behaviour impacted the situation (Stewart et al., 2011). In sum, self-leadership can be characterized by the ability to lead oneself. The general consensus is that it has an overall positive impact on the individual's life, since it allows for a better regulation of one's actions, leading to a positive impact on the individual's personal life and on the company (Stewart et al., 2011).

The construct contains 3 spheres of self-influence. The strategies focused on behaviour (self-goal setting, self-observation, self-punishment, and self-rewarding), the nature-based strategies who are linked to boosting motivation and lastly cognitive thought pattern strategies (picturing success in a performance, self-talk and judging one's beliefs and assumptions (Krampitz et al., 2021). Furthermore, this mental imaging and increased confidence is positively related with the performance of oneself (Harari et al., 2021).

Applying though-out strategies focusing on improving self-leadership has been proven effective when using constructive tactics, natural reward strategies, effective behaviour strategies and by strategies that improve well-being, fitness and physical vitality (Harari et al., 2021; Müller et al., 2010). The latter is the one we should direct our attention, since it is directly connected to our target of study, fitness instructors. Self-leadership is also able to fill gaps on individuals who had previously weak mentoring, by creating self-management tactics, the target can better its attitudinal outcomes in counteract the effects made by previously bad training and mentoring (Murphy & Ensher, 2001). These tactics may be used more than one at the time, since each single strategy is not enough to form a leader in our current day and age, we can use certain perks of each model as a way to better adapt to the situation at hand (Pearce, 2007).

Self-Self-Another positive note generated from self-leadership it's the multitude of predictable outcomes/performance mechanisms associated with how it impacts positively performance at an individual, team and organizational level. From the research on self-leadership, the following model is followed, by applying the strategies previously mentioned on the individual, outcomes such as self-efficacy, job satisfaction, commitment and independence result, deeply impacting the overall performance (Megheirkouni, 2018; Neck & Houghton, 2006). This information can be especially useful when applied to jobs where self-management and initiative are valuable traits (Murphy & Ensher, 2001).

At the current time, self-leadership has not found its footing regarding the fitness, with few studies being performed on physical vitality, physical fitness and sports organizations (Bum, 2018; Megheirkouni, 2018; Müller et al., 2010; Pearce, 2007). Following (Kotzé, 2018), its model purposes that self-leadership is related with higher psychological functioning such as self-efficacy, resilience and optimism, so by this train of thought it is possible for self-leadership have a positive impact on PsyCap.

Although there isn't a solid theoretical framework that supports the construct of self-leadership with Psychological Capital, there is strong evidence that self-leadership is associated with positive psychological traits (e.g., self-efficacy and optimism)(Megheirkouni, 2018). For instance, self-leadership has shown to be positively associated with psychological empowerment and self-efficacy (Neck & Houghton, 2006). And there has been recent findings where self-leadership has a positive influence on PsyCap (Kotzé, 2018).

2.3 Research hypotheses

The influence of self-leadership on PsyCap's precedent self-efficacy, is positively affected by it, as individuals that develop self-leadership present higher positive values of self-efficacy in contrast to those who don't (Neck et al., 1999). Also, through mental imagery of performance, constructive self-talk and correction of current dysfunctional beliefs, all characteristics of self-leadership, can foster self-efficacy (Stewart et al., 2011). So, by building on the previous status and complementing with the already performed study of PsyCap and self-leadership from (Kotzé, 2018), the following hypothesis is presented:

Hypothesis 1: There is a direct relationship between self-leadership and PsyCap.

According to related studies, both PsyCap, and performance are relevant, at an individual level, with fitness instructors. for this reason, we expect a positive relationship between these two elements. Thus, the following hypothesis is proposed:

Hypothesis 2: PsyCap will be positively related to employee performance.

Method

3.1. Participants

The participants in this study were 42 fitness instructors living in Portugal, from which 5 did not fully answered the study ending up with 37 complete answers, with 48.65% being females. Most of the participants completed their bachelor's degree (33.3%), 23.8% finished a Master's, 19% haven't finished their college education. Regarding their marital status, the largest portion is composed by married instructors (57.1%), 28.6% were single, and a single individual is divorced from the sample (Table 3.1).

The male sample, when it comes to seniority, as a fitness instructor has a $M = 15.3$ ($SD = 8.52$) years, and years as part of Manz National Team $M = 9.58$ and $SD = 8.52$ and most of them being in Lisbon (36.8%) followed closely by Porto (31.6%). From the female participants as a fitness instructor $M = 12.8$ ($SD = 4.74$) years, and as a member of Manz National Team $M = 7.44$ ($SD = 4.36$) years, and mostly living in Lisbon (33.3%) with Porto being the second most frequent city of residence (22.2%) (Table 3.2).

Table 3.1 - Participants' sociodemographic characteristics per sex

	Female	Male	Overall
	(n = 18)	(n = 19)	(n = 42)
Age			
Mean (SD)	35.0 (4.49)	37.4 (7.96)	36.2 (6.53)
Median [Min, Max]	35.5 [27.0, 44.0]	37.0 [27.0, 55.0]	36.0 [27.0, 55.0]
Missing	0 (0%)	0 (0%)	5 (11.9%)
Academic Level			
Highschool	1 (5.6%)	2 (10.5%)	3 (7.1%)
Unfinished College Education	3 (16.7%)	5 (26.3%)	8 (19.0%)
Professional Course	1 (5.6%)	0 (0%)	1 (2.4%)
Bachelor's Degree	10 (55.6%)	4 (21.1%)	14 (33.3%)
MBA	0 (0%)	1 (5.3%)	1 (2.4%)
Master's Degree	3 (16.7%)	7 (36.8%)	10 (23.8%)
Missing	0 (0%)	0 (0%)	5 (11.9%)
Marital Status			
Married	12 (66.7%)	12 (63.2%)	24 (57.1%)
Divorced	0 (0%)	1 (5.3%)	1 (2.4%)
Single		6 (31.6%)	12 (28.6%)
Missing	0 (0%)	0 (0%)	5 (11.9%)
Sex	Relative frequency (%)		
Female	48.65		
Male	51.35		

Table 3.2 - Participants' sociodemographic characteristics per gender

	Female	Male
	(n = 18)	(n = 19)
How long have you been as a fitness instructor		
Mean (SD)	12.8 (4.74)	15.3 (8.52)
Median [Min, Max]	13.5 [5.00, 22.0]	14.0 [4.00, 35.0]
How long have you been part of the Manz National Team		
Mean (SD)	7.44 (4.36)	9.58 (6.32)
Median [Min, Max]	7.00 [2.00, 17.0]	10.0 [1.00, 22.0]
Administrative Region		
Aveiro	1 (5.6%)	1 (5.3%)
Braga	3 (16.7%)	1 (5.3%)
Évora	1 (5.6%)	2 (10.5%)
Faro	1 (5.6%)	0 (0%)
Leiria	1 (5.6%)	0 (0%)
Lisboa	6 (33.3%)	7 (36.8%)
Porto	4 (22.2%)	6 (31.6%)
Setúbal	1 (5.6%)	1 (5.3%)
Viseu	0 (0%)	1 (5.3%)

3.2. Procedures

The participants of this study were approached via e-mail supplied from Manz Produções Lda. when the online survey was sent. All the participants were members of the Manz National Team and residents in Portugal. The questions of the survey related with PsyCap were adapted from English to Portuguese to better suit the population. The survey included questions related to sociodemographic characteristics, psychometric instruments and an end message informing the possibility of receiving an individual report with their descriptive statistics (of the measured constructs) in comparison with other participants. The participants were invited to complete the survey voluntarily. Afterwards, data previously obtained from Manz Produções Lda. regarding self-leadership, performance and other indicators was used to analyse with the survey data.

3.3. Measures/Constructs

For the first survey, CPC-12 was used as the tool to measure Psychological Capital and its components, hope, resilience, self-efficacy, and optimism. As an alternative to the original Psychological Capital Questionnaire, it has been studied to be successful in areas that do not possess work related connotations such as sports and education, which fall in our study (Timo et al., 2016). Furthermore, the tool is composed by 3 items for each component, resulting in 12 statements throughout the survey.

To measure the degree of hope, the subjects of the survey had to answer statements such as “If I should myself in a jam, I could think of many ways to get out of it.”. For optimism, “I am looking forward to the life ahead of me.”. For the level of resilience in the respondents one of the statements used was “Sometimes I make myself do things whether I want to or not.”. Finally, for self-efficacy “I am confident that I could deal efficiently with unexpected events.”. The previous statements were taken out of the model CPC-12 (Timo et al., 2016). All items used were measured using an ordinal 6-point response format ranging from 1 = “strongly disagree” to 6 = “strongly agree”.

The participants ranked each of the 12 statements regarding their level of agreement. Afterwards the answers will be converted into number which will be input in the software to calculate the average of the 3 items of each group, allowing us to create a singular variable to each component. The focus of this study was the variable “PsyCap”, which was generated by the arithmetic mean of the CPC-12 items. The self-leadership was assessed using the ASLQ-9 (Abbreviated Self-Leadership Questionnaire) comprising 9 items answered using an ordinal response scale from 1 — “Strongly disagree” to 5 — “Strongly agree” (Houghton, Dawley, & DiLiello, 2012). The ASLQ-9 defines self-leadership as three first-order factors: behavioural awareness and volition, task motivation, and constructive cognition. Each of the dimensions is measured using three-items.

Performance on the other hand, was measured in a bootcamp that makes the participants participate in a series of exercises through extended periods of time to evaluate technique, resistance, and physical prowess. This combination is later compacted in a value in a 1-10 scale (10 being the highest value).

3.4. Data Analysis

To conduct the statistical analysis the program *R* (R Core Team, 2021) through the integrated development environment, *RStudio* (RStudio Team, 2021) was used. The *skimr* package (McNamara et al., 2018) was used to produce the descriptive statistics. The skewness (*sk*) using

“sample” method (i.e., sample skewness of the distribution) and the kurtosis (ku) using “sample excess” method (i.e., sample kurtosis of the distribution with a value of 3 being subtracted) were calculated using the *PerformanceAnalytics* package (Peterson & Carl, 2020). The coefficient of variation (CV) was estimated with the *sjstats* package (Lüdecke, 2019), and the standard error of the mean (SEM) was calculated with the *plotrix* package (Lemon, 2006). The mode was computed by the *modeest* package (Poncet, 2019). This approach is like the one used in other studies to investigate items’ distributional properties (Sinval et al. 2020, Sinval, Miller, & Marôco, 2021).

To assess the evidence of reliability of the first-order factors, estimates of internal consistency were used: the $\alpha_{ordinal}$ (Peters, 2018). Values of $\alpha_{ordinal} \geq 7$ are considered indicative of acceptable reliability evidence.

The simple linear regressions were conducted using the *stats* package (R Core Team, 2021).

Results

4.1. Measurement Model

4.2.1. Items’ Distributional Properties

The distributional properties of the CPC-12 are presented in the following table. Various summary measures, a histogram, kurtosis (Ku), and skewness (Sk) for each of items are presented. The psychometric sensitivity and distributional properties of the items were analysed with this information. Values of $|Ku| < 7$ and $|Sk| < 3$ were indicative of absence of severe violations of the univariate normality that would recommend against the use of structural equation modelling (Finney & DiStefano, 2013; Marôco, 2021). Table 4.1 presents items’ distributional properties

Table 4.1 – Items’ distributional properties ($N = 42$)

Item	$N_{missing}$	M	SD	Min	P_{25}	Mdn	P_{75}	Max	Histogram	SEM	CV	$Mode$	sk	ku
CPC-12														
Item 1	7	5.43	0.74	3.00	5.00	6.00	6.00	6.00		0.12	0.14	6.00	-1.42	2.08
Item 2	7	4.66	0.94	2.00	4.00	5.00	5.00	6.00		0.16	0.20	4.00	-0.39	0.48
Item 3	7	5.06	0.76	3.00	5.00	5.00	6.00	6.00		0.13	0.15	5.00	-0.54	0.13

Item	<i>N_{missing}</i>	<i>M</i>	<i>SD</i>	<i>Min</i>	<i>P₂₅</i>	<i>Mdn</i>	<i>P₇₅</i>	<i>Max</i>	Histogram	<i>SEM</i>	<i>CV</i>	<i>Mode</i>	<i>sk</i>	<i>ku</i>
CPC-12														
Item 4	7	5.37	0.73	3.00	5.00	5.00	6.00	6.00		0.12	0.14	6.00	-1.25	1.83
Item 5	7	5.51	0.61	4.00	5.00	6.00	6.00	6.00		0.10	0.11	6.00	-0.91	-0.15
Item 6	7	5.60	0.74	3.00	5.00	6.00	6.00	6.00		0.12	0.13	6.00	-2.10	3.95
Item 7	7	4.91	0.82	3.00	4.00	5.00	5.50	6.00		0.14	0.17	5.00	-0.19	-0.70
Item 8	7	5.20	0.63	4.00	5.00	5.00	6.00	6.00		0.11	0.12	5.00	-0.19	-0.47
Item 9	7	4.34	1.21	2.00	3.00	4.00	5.00	6.00		0.20	0.28	5.00	-0.20	-0.98
Item 10	7	5.00	0.69	4.00	5.00	5.00	5.00	6.00		0.12	0.14	5.00	0.00	-0.75
Item 11	7	5.60	0.50	5.00	5.00	6.00	6.00	6.00		0.08	0.09	6.00	-0.45	-1.93
Item 12	7	5.03	0.89	3.00	5.00	5.00	6.00	6.00		0.15	0.18	5.00	-0.89	0.34
ASLQ-9														
Item 1	7	4.17	0.51	3.00	4.00	4.00	4.00	5.00		0.09	0.12	4.00	0.29	0.53
Item 2	7	4.17	0.62	3.00	4.00	4.00	5.00	5.00		0.10	0.15	4.00	-0.12	-0.33
Item 3	7	4.20	0.83	2.00	4.00	4.00	5.00	5.00		0.14	0.20	5.00	-0.76	-0.22
Item 4	7	4.26	0.74	2.00	4.00	4.00	5.00	5.00		0.13	0.17	4.00	-0.96	1.11
Item 5	7	4.17	0.71	3.00	4.00	4.00	5.00	5.00		0.12	0.17	4.00	-0.27	-0.89
Item 6	7	3.03	1.27	1.00	2.00	3.00	4.00	5.00		0.21	0.42	3.00	0.04	-0.78
Item 7	7	4.09	1.12	1.00	4.00	4.00	5.00	5.00		0.19	0.27	5.00	-1.57	1.88
Item 8	7	4.14	0.73	2.00	4.00	4.00	5.00	5.00		0.12	0.18	4.00	-0.74	0.82
Item 9	7	3.91	0.82	2.00	3.50	4.00	4.00	5.00		0.14	0.21	4.00	-0.54	0.08
Aggregated measures														
Performance	5	7.83	1.61	3.00	6.67	8.33	9.00	10.00		0.27	0.21	8.50	-0.84	0.83

Item	<i>N_{missing}</i>	<i>M</i>	<i>SD</i>	<i>Min</i>	<i>P₂₅</i>	<i>Mdn</i>	<i>P₇₅</i>	<i>Max</i>	Histogram	<i>SEM</i>	<i>CV</i>	<i>Mode</i>	<i>sk</i>	<i>ku</i>
CPC-12														
PsyCap	7	5.14	0.39	4.33	4.88	5.08	5.33	5.92		0.07	0.08	5.08	0.22	-0.33
Self-Leadership	7	4.02	0.46	3.00	3.67	4.11	4.39	4.78		0.08	0.12	3.89	-0.28	-0.83

The obtained sample is too small to investigate the measurement model's dimensionality by means of a confirmatory factor analysis. Although the reliability was analysed. The model's first-order internal consistency estimates are presented in the following table. The CPC-12 internal consistency estimate was satisfactory ($\alpha_{ord} = 0.8$) as was the ALSQ-9 estimative ($\alpha_{ord} = 0.74$).

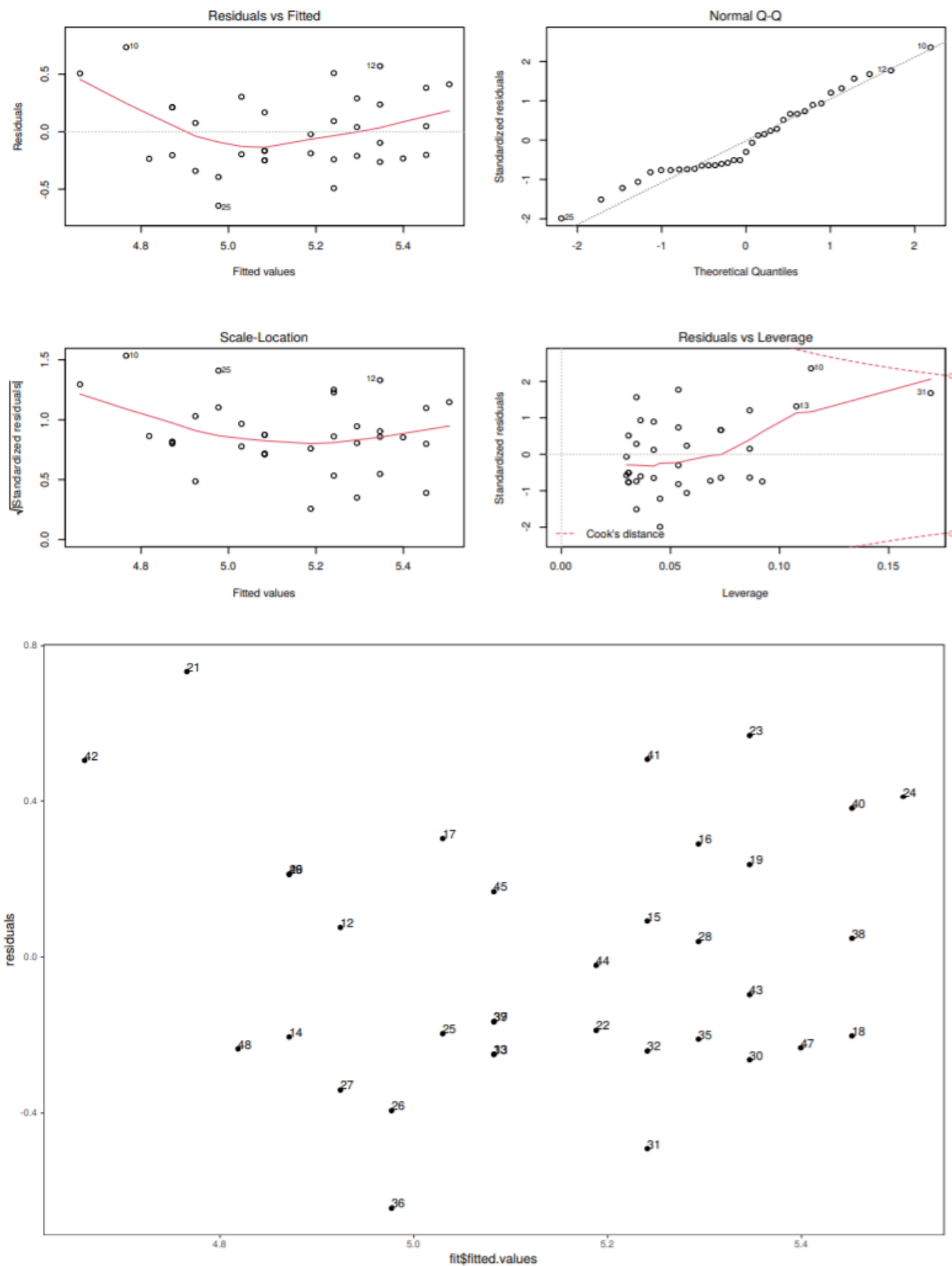
4.3. Simple Linear Regression

Since the sample is too small, it was not possible to create a structural model with latent variables. The twelve CPC-12 items, and the nine ASLQ-9 items were reduced to a composite score respectively. Such, approach was conducted due to the reasonable internal consistency estimates. *H1* and *H2* were tested with two simple linear regression models.

To test if self-leadership positively predicts PsyCap (*H1*). We fitted a linear model (estimated using OLS) to predict PsyCap with self-leadership. The model explains a statistically significant and substantial proportion of variance ($r^2 = .31$, $F_{(1; 33)} = 15.11$, $p < .001$, $r^2_a = .29$). The model's intercept, corresponding to self-leadership = 0, is at 3.24 (95% CI]2.23, 4.24[, $t_{(33)} = 6.55$, $p < .001$). The effect of self-leadership is statistically significant and positive ($b = 0.48$, 95% CI]0.23, 0.72[, $t_{(33)} = 3.89$, $p < .001$; $\beta = 0.56$, 95% CI]0.27, 0.85[).

Standardized parameters were obtained by fitting the model on a standardized version of the dataset. The $\epsilon i \sim N(0; \sigma)$ assumption seems to be achieved, since there are not severe normality violations in the residuals distribution, the variance seems constant, and independent.

Table 4.2 – Residual Distribution – H1

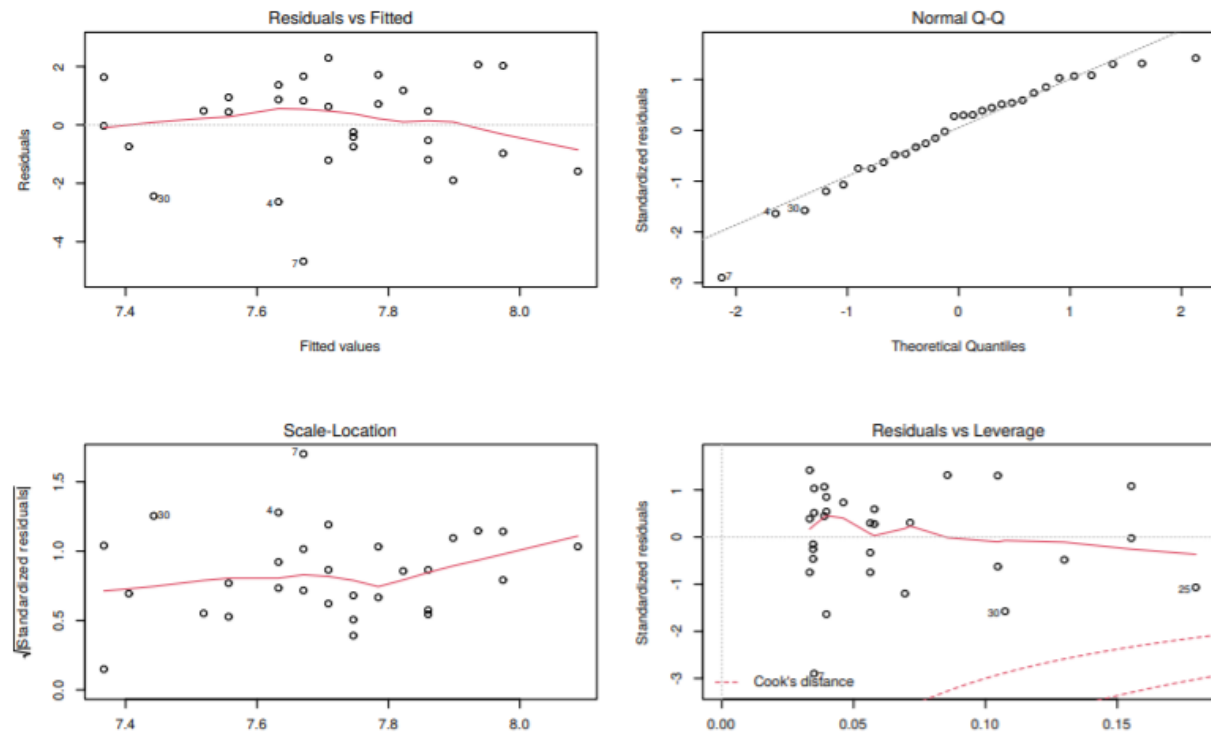


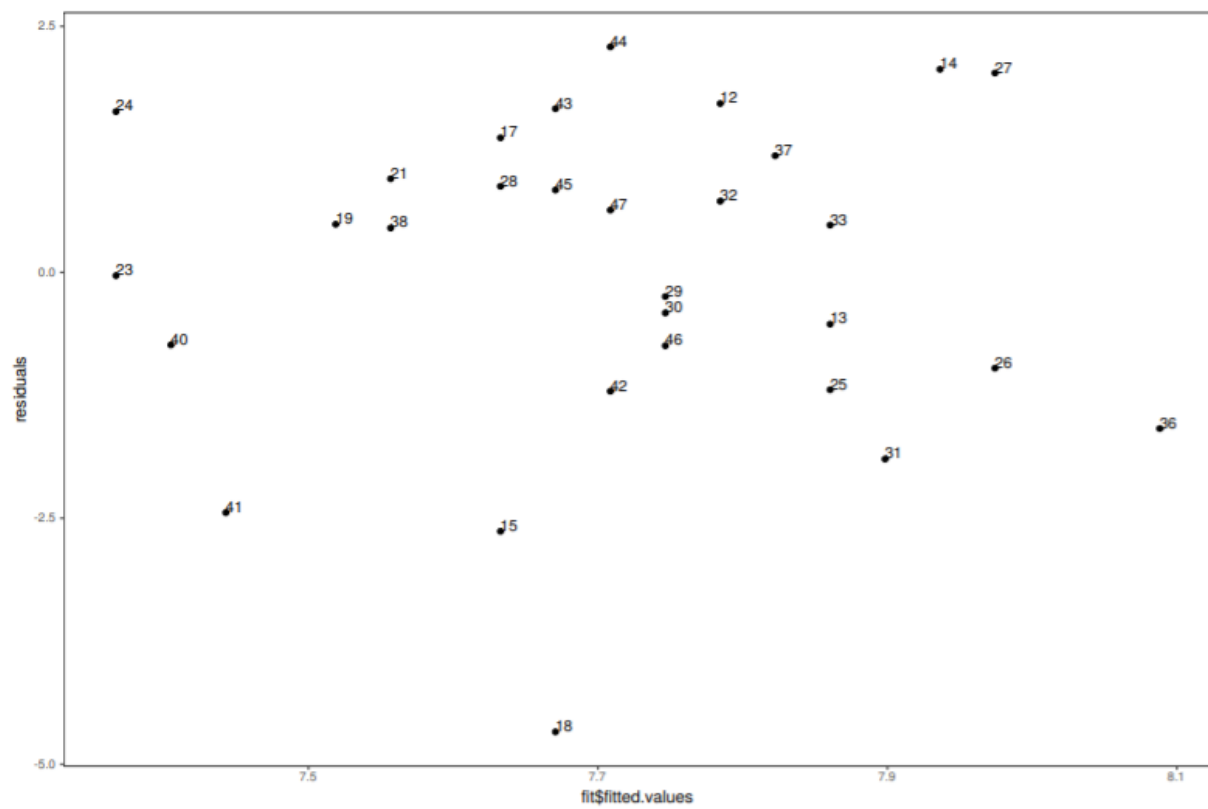
To test if PsyCap positively predicts performance ($H2$). We fitted a linear model (estimated using OLS) to predict performance with PsyCap. The model explains a statistically not significant and very weak proportion of variance ($r^2 = .01$, $F_{(1; 28)} = 0.36$, $p = .553$, $r^2_a = .02$).

The model's intercept, corresponding to $\text{PsyCap} = 0$, is at 10.06 (95% CI]2.02, 18.11[, $t_{(28)} = 2.56$, $p = .016$). The effect of PsyCap is statistically non-significant and negative ($b = -0.46$, 95% CI]-2.01, 1.10[, $t_{(28)} = -0.60$, $p = .553$; $\beta = -0.11$, 95% CI]-0.50, 0.27[).

Standardized parameters were obtained by fitting the model on a standardized version of the dataset. The $\epsilon_i \sim N(0; \sigma)$ assumption seems to be achieved, since there are not severe normality violations in the residuals distribution, the variance seems constant, and independent.

Table 4.5 -Residual Distribution – H2





Discussion

With fitness academies and gyms facing a fiercer competition by the day, instructors find themselves in the sensible position of improving and captivating audiences/customers or be forgotten with their organization, their performance and how they are perceived is essential. The primary purpose of this study was to find a links between self-leadership, the construct of PsyCap in fitness instructors, and their respective performance in a professional context. Within the context of group classes, self-leadership can play a major role in the overall physical condition of the instructor (Müller et al., 2010) and PsyCap impact the performance (Gu, 2016).

Regarding hypothesis 1, it was successfully tested, hereby the presence of self-leadership will positively predict PsyCap, these results may prove to be reasonable according to the relationships with the multiple dimensions that form it as previously discussed, which we hope it can be used to further improve the PsyCap by augmenting optimism and self-efficacy (Megheirkouni, 2018). Thus, gyms and fitness academies should implement self-leadership training programmes to impact PsyCap (Kotzé, 2018). Nonetheless, self-leadership is also known to have a positive influence on performance (Godwin et al., 1999), work engagement (Kotzé, 2018) and physical vitality (Müller et al., 2010). So, even though these results may influence the usage of self-leadership training for the improvement of PsyCap, the current study can also show the relevance of self-leadership when training fitness instructors. In a practical point of view, fitness instructors are individuals with jobs that require 30 minutes to 1 hour long physical challenges, during this period, if the fitness instructor can find motivation within himself and assessing the current situation they are in, they will be better suited to perform accordingly. From here, a topic to reflect would be the investment from gym managers, to develop this factor in fitness instructors, since it can impact positively their assets and distinguish themselves from the competition.

On the other hand, Hypothesis 2 wasn't successfully tested, meaning we could not prove a positive relationship between PsyCap, and performance in the fitness instructors found in the sample. A possible reason for such causation can be pointed to the subjectiveness of performance evaluation in different contexts, after all, the measurement itself can vary from stakeholder to stakeholder. Although the theory supports a healthy relation between the two, when approaching it from the fitness instructor perspective, it's possible the "bridge isn't there". The concept of performance changes depending on the job and more specifically in the tasks demanded, when analysing how fitness instructors are evaluated in the field of performance, this, in most cases, is linked to physical effort, so perhaps while PsyCap may be positively related to performance in most studies, physical performance in fitness instructors might be an

exception. Supporting the data found in our study, PsyCap may not be the ideal construct to invest as a form of improving the performance of fitness instructors, the components themselves may or not align with this conclusion, as possibly efficacy or hope can cause a positive impact.

Regardless of this information, one thing to note is the lack of study in this sector regarding PsyCap and other possible influencers. This may justify the lack of mental models implemented in the training of fitness instructors. Although these traits may also be developed by themselves, which would have the same results, but taking longer periods of time to achieve. There is clearly a need for research on the topic of mental models within the context of fitness training regarding both the sample sizing and other possible connections envisioning the need of more forms of training not focused on physical prowess.

Limitations and Further Research

Even though the current study might find its strengths being a niche sector being studied and a diverse sample, there is room for improvement. Firstly, the sample size, while the questionnaire was sent to over 46 individuals, and the response rate was over 90% (with some not completing the survey) the number of responses was preventive of creating using structural equation modelling (i.e., latent variables), leading to an unsatisfactory amount of data. By further studying this presented hypothesis within the fitness instructors' sector (perhaps exploring deeply into personal trainers) we contribute to the existing research in this topic. Another limitation is the fact that this study was only conducted in Portugal with fitness instructors that only operate in this country, and it may not reflect the findings in other countries.

For further research, a larger sample could be used, by including other countries that follow a similar structure as Portugal. We also invite other researcher to explore this sector as it is proven to suffer an increase in relevance in the following years, increasing its overall relevance. So, while our study may create interest in this field, we hope this study can be built upon and cease our limitations.

Conclusion

With fitness gaining more and more relevance since accessibility and awareness regarding health has steadily increase, an eye has been turned to the professionals spreading the culture a targeted investment in ways to increase performance and overall quality is to be expected.

The results of this study partially confirm the literature. While we could not prove the positive relationship between PsyCap, and performance, it was possible to find the prediction of PsyCap with self-leadership. The latter result may be valuable information as organizations or individuals that search achieving PsyCap as it can be an interesting construct to serve as a differentiative factor between its competitors. The construct could find itself being used/developed in more recent HR practices through workshops, training, shadowing, and other forms of development. Following this thought, self-leadership might serve as a starting point from which these agents can increase their self-discipline. This research tries to find relations between these constructs as form to possibly assist in the development of individuals, and by connection, organizations (in concrete fitness academies and gyms) on feasible practices to improve/optimize.

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