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- The effect of Psychological Capital on reducing Self Handicapping by enhancing self-esteem among Jordanian university students

أثر رأس المال النفسي في خفض الإعاقة الذاتية من خلال تعزيز تقدير الذات لدى طلبة الجامعات الأردنية

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الملخّص

الملخص: في سياق الإعدادات التعليمية، هناك حاجة إلى مزيد من التحقيق في قدرة PsyCap على تعديل احترام الذات والحد من سلوكيات الإعاقة الذاتية، على الرغم من حقيقة أن فوائدها قد ثبتت بالفعل. شملت الدراسة 456 طالبًا تم اختيارهم طبقيًا من خمس كليات في الفترة 2023-2024. تم جمع بيانات تقييم PsyCap باستخدام عناصر 10 من المكون الذات لتقدير روزنبرج ومقياس أعنصر 25 من المكون الذاتية الإعاقة ومقياس CPC-12R باستخدام SMARTPLS4 وSEM-PLS، وجدت الدراسة روابط قوية بين PsyCap واحترام الذات والإعاقة الذاتية. وجد عندما الذاتية الإعاقة انخفض. الذاتية الإعاقة مع 0.23- بنسبة أوارتباط الذات احترام مع 0.69 بنسبة أارتباط PSYCap كان لدى المرء احترام ذاتي مرتفع. لقد عملت المستويات الأعلى من احترام الذات (-0.48) كوسيط للتأثير غير المباشر الذي كان لـ PsyCap على الإعاقة الذاتية، مما يعني أن تعزيز PsyCap قد يقلل بشكل غير مباشر من حالات الإعاقة الذاتية من خلال زيادة مستويات احترام الذات. كما توضح النتائج أن الموارد النفسية الإيجابية لديها القدرة على تعزيز التطور الأكاديمي والشخصي بشكل كبير لدى الطلاب.

ABSTRACT

Abstract: Within the context of educational settings, the ability of PsyCap to adjust self-esteem and minimize self-handicapping behaviors needs to be further investigated, despite the fact that its benefits have already been shown. The study involved 456 stratified-selected students from -five colleges in 2023–2024. PsyCap evaluation data was collected using the CPC-12R, 25-item Self Handicapping Scale (SHS), and 10-item Rosenberg Self-Esteem Scale. Using SMARTPLS4 and PLS-SEM, the study found strong links between PsyCap, self-esteem, and self-handicapping. PSYCap found a -correlation of 0.69 with self-esteem and a correlation of -0.23 with self-handicapping. Self handicapping was lowered when one had high self-esteem. Higher levels of self-esteem (-0.48) served as a mediator for the indirect impact that PsyCap had on self-handicapping, which means that enhancing PsyCap may indirectly lessen instances of self-handicapping by increasing levels of self-esteem. the results also demonstrate that positive psychological resources have the potential to greatly foster academic and personal development in students.

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The effect of Psychological Capital on reducing Self-Handicapping through the - mediation of Self-esteem among Jordanian university students

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Abstract: Within the context of educational settings, the ability of PsyCap to adjust self-esteem and minimize self-handicapping behaviors needs to be further investigated, despite the fact that its benefits have already been shown. This study aims to analyze the effect of psychological capital on reducing self- Handicapping through the mediation of Self-esteem among Jordanian university students. The study involved 456 stratified-selected students from five colleges in 2022–2023. PsyCap evaluation data was collected using the12-item CPC-12R, 25-item Self-Handicapping Scale (SHS), and 10-item Rosenberg Self-Esteem Scale. The study employed Partial Least Squares Structural Equation Modeling (PLS-SEM) using SmartPLS 4 software as an analytical approach to examine complex relationships among the study variables. The findings revealed strong links between PsyCap, self-esteem, and self-handicapping. PSYCap found a correlation of 0.69 with self-esteem and a correlation of -0.23 with self-handicapping. Self-handicapping was lowered when one had high self-esteem. Higher levels of self-esteem (-0.48) served as a mediator for the indirect impact that PsyCap had on self-handicapping, which means that enhancing PsyCap may indirectly lessen instances of self-handicapping by increasing levels of self-esteem. The results also demonstrate that positive psychological resources have the potential to greatly foster academic and personal development in students. The study recommends to integrate Psychological Capital (PsyCap) development into educational institutions programs, focusing on attributes like hope, resilience, self-efficacy, and optimism to reduce self-handicapping behaviors. Additionally, interventions aimed at boosting self-esteem should be prioritized, as self-esteem mediates the relationship between PsyCap and self-handicapping.

Keywords: Psychological Capital; Self-Handicapping; Self-Esteem, Jordanian university students.

أثر رأس المال النفسي في خفض الإعاقة الذاتية من خلال وساطة تقدير الذات لدى طلبة الجامعات الأردنية

الملخص باللغة العربية

في سياق البيئات التعليمية، لا تزال قدرة رأس المال النفسي على تعديل تقدير الذات والحد من السلوكيات المعوقة بحاجة إلى مزيد من البحث، على الرغم من ثبوت فوائده. تهدف هذه الدراسة إلى تحليل أثر رأس المال النفسي في خفض الإعاقة الذاتية من خلال وساطة تقدير الذات لدى طلبة الجامعات الأردنية. شملت الدراسة 456 طالبًا وطالبة تم اختيارهم طبقيًا من خمس

جامعات في الفترة 2022-2023. جُمعت بيانات تقييم رأس المال النفسي باستخدام مقياس CPC-12R المكون من 12 فقرة، ومقياس الإعاقة الذاتية (SHS) المكون من 25 فقرة، ومقياس روزنبرغ لتقدير الذات المكون من 10 فقرات. "استخدمت الدراسة نمذجة المعادلات الهيكلية بطريقة المربعات الصغرى الجزئية (PLS-SEM) باستخدام برنامج SmartPLS 4 كمنهج تحليلي لفحص العلاقات المعقدة بين متغيرات الدراسة. كشفت النتائج عن وجود روابط قوية بين رأس المال النفسي وتقدير الذات والإعاقة الذاتية، حيث وجد ارتباط بين رأس المال النفسي وتقدير الذات بلغ 0.69 وارتباطًا قدره -0.23 مع الإعاقة الذاتية. كما وجد ان الإعاقة الذاتية انخفضت عندما كان لدى الشخص تقدير ذات مرتفع. كما وجد ان مستويات تقدير الذات المرتفعة (-0.48) قد عملت كوسيط للتأثير غير المباشر لرأس المال النفسي على الإعاقة الذاتية، مما يعني أن تعزيز رأس المال النفسي قد يقلل بشكل غير مباشر من حالات الإعاقة الذاتية من خلال زيادة مستويات تقدير الذات. تُظهر النتائج أيضًا أن الموارد النفسية الإيجابية لديها القدرة على تعزيز التطور الأكاديمي والشخصي بشكل كبير لدى الطلاب. توصي الدراسة بدمج تنمية رأس المال النفسي في برامج المؤسسات التعليمية، مع التركيز على سمات مثل الأمل والمرونة والكفاءة الذاتية والتفاؤل للحد من سلوكيات الإعاقة الذاتية. بالإضافة إلى ذلك، يجب إعطاء الأولوية للتدخلات التي تهدف إلى تعزيز تقدير الذات، حيث أن تقدير الذات يتوسط العلاقة بين رأس المال النفسي والإعاقة الذاتية.

الكلمات المفتاحية: رأس المال النفسي؛ الإعاقة الذاتية؛ تقدير الذات، طلبة الجامعات الأردنية.

Introduction

Building on Fred Luthans' pioneering work on organizational PsyCap, which has been linked to academic performance, engagement, and motivation, this study proposes that enhancing PsyCap can play a crucial role in reducing self-handicapping by boosting students' self-esteem. Self-handicapping, defined as the intentional creation of obstacles to performance to protect self-esteem in the face of potential failure, is a maladaptive strategy commonly observed among students (Lotar, 2005). While this behavior may temporarily shield self-esteem, it ultimately undermines academic and psychological performance. Self-handicapping manifests in various forms, such as procrastination, lack of effort, or even deliberate sabotage of one's work, all of which detract from a student's ability to achieve their full potential. The core drivers of this counterproductive technique are low self-esteem and a fear of unfavorable judgment, making it a critical focus for intervention (Gadbois & Sturgeon, 2011; Stewart & De George-Walker, 2014).

PsyCap's components—hope, self-efficacy, optimism, and resilience—each contribute uniquely to enhancing self-esteem and reducing self-handicapping behaviors. Hope, defined as the perceived capability to derive pathways to desired goals and motivate oneself via agency thinking, empowers students to set and achieve academic goals (Snyder et al., 2002). Self-efficacy, the belief in one's capabilities to organize and execute courses of action required to manage prospective situations, directly influences students' motivation and performance (Bandura, 1997). Optimism, the generalized expectancy that good things will

happen, fosters resilience and persistence in the face of academic challenges (Carver & Scheier, 2014). Resilience, the capacity to recover from difficulties and persist in pursuing academic objectives, empowers students to overcome failures and persevere towards their educational aspirations (Masten & Reed, 2002).

The considerable research conducted by Fred Luthans has thoroughly documented the beneficial effects of PsyCap on a range of organizational outcomes. Furthermore, the significance of PsyCap in academic settings is widely acknowledged. PsyCap has been shown to be related to better performance, increased involvement, and motivation, and is accordingly a key feature of academic success (Luthans et al., 2007). Building up PsyCap, instead, can facilitate a deeper sense of self-worth and confidence, which are important to overcoming fear of failure and reducing reliance on self-defeating behaviors.

Self-handicapping poses a significant barrier to academic success in educational contexts. This behavior not only interferes with academic excellence but also affects the mental health of students. Self-handicapping is primarily a consequence of low self-esteem, an unease of being judged negatively and an absence of trust in one's capacity. Gadbois and Sturgeon (2011) articulate that addressing these foundational problems may in fact be critical for helping students become more successful with more positive behaviors and for ultimately being able to achieve their academic goals. Stewart and De George-Walker (2014) also recommend programs designed to address self-esteem and a diminished fear of judgment.

Nevertheless, educational psychology must explore the complex relationship between psychological capital (PsyCap) and self-esteem to reduce self-handicapping behaviors among students. This study aims to investigate how PsyCap—which encompasses hope, self-efficacy, optimism, and resilience—affects self-esteem and mitigates self-handicapping among Jordanian university students (Luthans et al., 2007).

Review of existing literature

psychological capital

There are four specific psychological traits that make up Psychological Capital (PsyCap) - hope, self-efficacy, optimism, and resilience. These characteristics have a considerable impact on an individual's self-view and objectives (Luthans et al.,2007). Higher levels of self-confidence are associated with better grades and higher levels of achievement on measures of standardized achievement. The third pillar of PsyCap is resilience, which means the ability to be able to deal with and recover from adversities and psychological stressors (Masten, 2001). Hope is the perceived efficacy that a behavior will lead to a particular outcome or outcomes (Snyder et al., 2002), whereas self-efficacy is a construct based on social cognitive theory (Bandura, 1982) and refers to beliefs in one's capabilities to organize and execute the courses of action required to achieve specific results. Optimism works as a motivational force directing us to carry on even in the face of obstacles, where people believe and stay learning that theses bad times are temporary and can be overcome (Carver et al., 2010). This approach helps students to regard the academic barrier as something conquerable (Icekson et al., 2020).

Nevertheless, Performance, stress, engagement, and motivation are linked to Academic PsyCap, indicating its predictive relevance for academic results. PsyCap promotes academic performance by developing a positive mindset and self-confidence, which stimulates proactive behavior and the development of methods to overcome academic challenges (Geremias et al., 2020; Carmona, 2019). The synergy of PsyCap's components boosts academic performance (Luthans et al., 2007). PsyCap improves grades, well-being, engagement, and adjustment, according to empirical research.

While PsyCap appears consistently linked with academic success, the literature tends to emphasize its positive dimensions without sufficiently examining the contexts where PsyCap may not yield the expected benefits—such as under conditions of chronic stress, poverty, or limited institutional support. Furthermore, most studies treat the PsyCap components as universally beneficial, yet cultural and socioeconomic factors could moderate these effects and warrant further exploration.

Self-Handicapping

Self-handicapping is a psychological approach used to defend or improve one's self-image in others' views (Lotar, 2005). It entails deliberately creating impediments to one's progress to justify failures or successes (Lotar, 2005; Want & Kleitman, 2006). Self-handicapping might momentarily increase self-esteem by explaining underperformance (Ferradás et al., 2018), but it can damage self-concept and self-efficacy over time. Self-handicapping can impair adaptation, coping, and study habits. Self-handicapping has also been connected to reduced achievement among high-achieving students, showing that giftedness and intelligence perceptions may impact avoidance-oriented behaviour. . Studies have also examined how cultural, gender, and educational paradigms affect talented students' self-handicapping (Freeman, 2004; Thompson & Richardson, 2001).

Much of the literature treats self-handicapping as a maladaptive behavior in a relatively linear way. However, less attention is given to the underlying motivations beyond fear of failure, such as social pressure, institutional mistrust, or perfectionism. Moreover, the causal link between self-handicapping and academic failure needs clarification, as it might be bidirectional or moderated by other traits like resilience or grit.

Self-Esteem

Self esteem was long considered crucial to understanding human behavior, implicated in everything from teenage pregnancy to violent crime. Modern research suggests that negative beliefs, not direct unpleasant experiences, are linked to low self-esteem (Baumeister et al., 2003). However, longitudinal research shows that self-esteem affects health, behavior, and legal transgressions beyond subjective experiences like life satisfaction (Diener & Diener, 1995) and emotional states (Furr & Funder, 1998; Murrell, Meeks, & Walker, 1991). This work shows that self-esteem affects both personal views and observable actions and interactions, confirming its importance in both areas of life.

The literature often conceptualizes self-esteem as a stable, internal trait, yet recent psychological models emphasize its fluidity and dependence on context. There is a need for more nuanced approaches that account for self-esteem variability across different life domains (e.g., academic, social, familial) and how this affects specific behaviors like self-handicapping or resilience.

Self-Handicapping and Psychological Capital

Adil et al. (2020) examined how academic psychological capital (PsyCap) and flow affect academic achievement and self-handicapping in 300 university undergraduates, where the study indicated that academic PsyCap improves students' GPAs by minimizing self-handicapping and improving flow experiences. Adil et al. (2021a) and (2021b) examined the mediating influence of self-handicapping activities in the link between academic PsyCap and academic achievement. Both studies found that academic PsyCap reduces self-handicapping, boosting GPAs. Self-efficacy and resilience in academic procrastination were explored, where the study reveals that self-efficacy and resilience can greatly minimize academic procrastination and improve academic performance Soltani et al. (2016), These findings highlight an important mediational pathway, yet they risk oversimplifying the relationship by

not accounting for external factors such as institutional environment, mental health, or family expectations. Additionally, most data are cross-sectional or correlational, which limits the ability to establish causality.

Self-handicapping and Self-Esteem

Mannahan (2023) examines the idea that people may create barriers to safeguard their self-esteem from failure.This habit allows people to blame external circumstances for failures rather than their own shortcomings. Kong (2020) examines how motivating factors and self-esteem affect self-handicapping among Hong Kong university students. Self-esteem and self-handicapping have a non-linear relationship, mediated by intrinsic and amotivation, indicating the complicated interaction between motivation types and self-esteem in academic settings. Bae et al. (2022) identify Korean college students' self-esteem, stability, and internalized shame profiles and their self-handicapping actions and revealed three distinct profiles, stressing the need for specific educational interventions to combat self-handicapping. in addition, Jumareng & Setiawan (2021) indicate that self-esteem and adversity quotient positively correlate with achievement goals, but self-handicapping negatively correlates, suggesting complex implications for physical education programs.Mohebi et al. (2017) examine how fear of unfavorable assessment mediates self-handicapping and unstable self-esteem in adolescent girls.

This body of research provides useful cross-cultural insights but suffers from fragmented theoretical integration. The complex relationships among self-esteem, self-handicapping, and contextual factors like culture, gender, or social capital are often treated in isolation rather than being analyzed in a comprehensive model. Future studies should consider a more systems-level perspective.

psychological capital And Self-Esteem

Varga et al. (2020) evaluated Roma university students from poor backgrounds and the significance of equality, equity, inclusion, empowerment, resilience, and intersectionality in their academic success. Their examination of 27 life-path interviews showed that family, educators, and positive psychological capital like drive and goal orientation help overcome educational challenges.Hong et al. (2020) examine how the Big Five personality traits influence the creativity of college students, finding that they have a moderating effect. Psychological capital and self-esteem have a positive impact on students' creativity, particularly among individuals with low levels of neuroticism and high levels of openness, extroversion, and conscientiousness. Hameed and colleagues (2022) found that Quetta public university instructors' self-esteem, psychological capital, social capital, and work satisfaction were positively correlated. This study also found that social capital affects psychological capital, self-esteem, and job happiness.

The literature suggests a positive relationship between psychological capital and self-esteem in various educational and professional contexts, especially in environments characterized by social or institutional challenges. However, most studies rely on correlational designs, which limits their ability to establish clear causal relationships between variables. In addition, although some studies address contextual factors such as familial or institutional support, they do not provide a systematic analysis of how these factors influence the nature of the relationship between psychological capital and self-esteem.

The mediation of self-esteem

Extensive research in psychology and academia has focused on the mediation of self-esteem. Yu et al. (2023) found that collective self-esteem had a role in the relationship between school culture and academic burnout among medical students. Facilitating the regulation of psychological capital. Karchner and Schwinger (2021) found that self-

handicapping, effort management, and test anxiety have an impact on the self-esteem and academic achievement of youngsters.These negative effects were found to be influenced by low self-esteem. In their study, Ghaffari & Abbaszadeh (2020) found that fluctuations in self-esteem among female university students played a moderating role in the relationship between early maladaptive schemas and self-handicapping. Yang et al. (2023) found that trait anxiety played a role in connecting unpleasant life experiences to negative psychological effects, including sorrow, among college students. Additionally, self-esteem had a moderating effect on this relationship. These findings indicate that self-esteem plays a role in connecting psychological resilience and academic success under different circumstances.

Although mediation models involving self-esteem are well-established, the dynamic interplay between trait and state self-esteem is underexplored. Furthermore, the directionality in mediation is often assumed rather than tested longitudinally. There is a methodological gap in using robust longitudinal or experimental designs to confirm self-esteem's mediating role across varied academic and emotional outcomes.

Hypotheses development and the conceptual framework

A thorough conceptual framework exploring the interactions of the psychological capital, self-handicapping and self-esteem is presented in Figure 1. Thus, the current study developed the following hypotheses based on the synthesis of findings from the literature.

Direct Effect Hypotheses

(H1): PsyCap is hypothesized to directly reduce Self-Handicapping. This hypothesis is supported by Adil et al. (2020), who demonstrated that PsyCap positively impacts students' grade point averages (GPAs) by reducing self-handicapping behaviors and enhancing flow experiences, subsequently improving performance. Further confirmation comes from Adil et al. (2021a) and Adil et al. (2021b), which underscored that PsyCap directly bolsters performance by mitigating self-handicapping behaviors.

(H2): It is posited that PsyCap directly enhances Self-Esteem. Although the reviewed literature does not provide a direct link between PsyCap and an increase in self-esteem, the overall beneficial effects of PsyCap on positive psychological outcomes imply such a relationship. This hypothesis draws on the broader positive impact of PsyCap on well-being and performance, suggesting a direct enhancement of Self-Esteem. This is supported by (Avey etbal., 2011) as well as Luthans et al. (2007) who emphasize that PsyCap enhances psychological well-being, confidence, and satisfaction—all foundational for high self-esteem.

(H3): Self-Esteem directly lowers Self-Handicapping. Mannahan (2023) shows how self-handicapping tactics shield self-esteem against prospective failures, suggesting that better self-esteem may reduce the need for them.

Indirect Effect Hypotheses

(H4): PsyCap indirectly reduces Self-Handicapping by boosting Self-Esteem. The literature does not directly address this indirect pathway, but PsyCap's relationship to self-esteem and self-handicapping suggests that it may indirectly reduce self-handicapping by boosting self-esteem..

.**Total Effect Hypotheses**

(H5): The aggregate influence of Psychological Capital (PsyCap)—encompassing both direct and mediated pathways—on Self-Handicapping is significantly intermediated by Self-Esteem. Although explicit studies detailing this mediated relationship are not cited in the reviewed data, the implication is that PsyCap and self-esteem are

significantly interrelated with outcomes, including self-handicapping. This hypothesis posits a complex interplay where PsyCap influences self-handicapping both directly and indirectly through Self-Esteem, suggesting a mediated relationship.

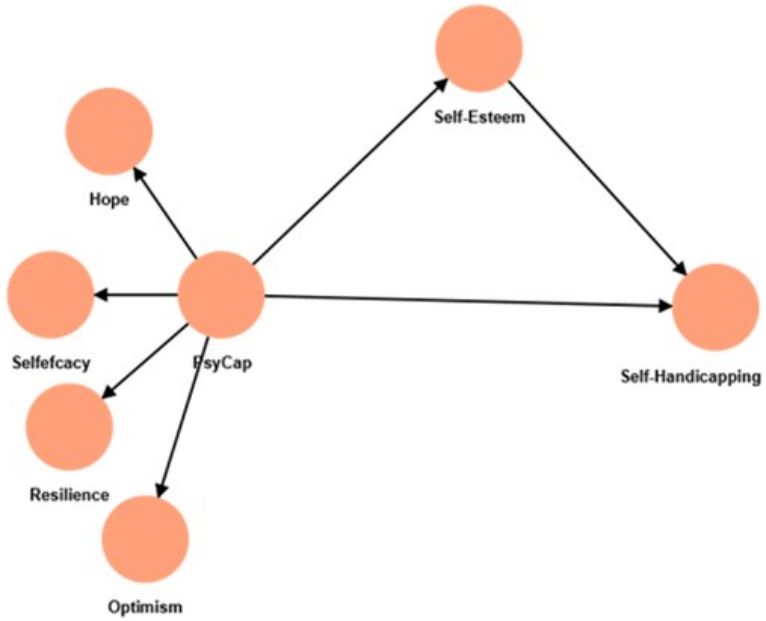

Figure 1: conceptual framework of the study. Developed by researcher

Method

Sample

The current study began in the academic year 2022-2023. It examines how Psychological Capital can reduce Self-Handicapping by improving self-esteem in university students in three public and two private universities. The study was applied on University of Science and Technology, Al-Balqa' Applied University, Yarmouk University, Jerash university and Ajloun University. Based on the most recent reports from the Ministry of Education and Higher Education (MOHE, 2021), the total number of students registered in Jordanian governmental and private universities for the second semester of the academic year 2020/2021 is 317,967. This implies that in order to achieve a confidence level of 95% and ensure that the actual value falls within ±5% of the measured or surveyed value, at least 384 measurements or surveys are required. "The study employed Partial Least Squares Structural Equation Modeling (PLS-SEM) using SmartPLS 4 software as an analytical approach to examine complex relationships among the study variables. For sampling, the rule-of-thumb for PLS-SEM suggests that there should be at least 10 respondents per item to ensure both statistical power and model reliability (Kock & Hadaya, 2018). Given that the present study includes 47-items, a sample of 470 is required. Such an adjustment ensures that our PLS-SEM analysis is backed in a robust manner, thereby enhancing the reliability and validity of our evaluations. However, the total number of valid cases for this study, following data collection, is 456 participants from the five universities, obtained through the use of stratified sampling technique.

Instruments

Data was collected through a questionnaire including information on the participants' demographic profiles and three scales. A modified version of the CPC-12R was adopted to measure PsyCap, which assessed hope, self-efficacy, optimism, and resilience. Each construct was measured using three items, employing a Likert scale ranging from 1 to 6. The Likert scale was borrowed from previous studies conducted by Dudasova et al. (2021b) and Kacmar et al. (2022). For the measurement of Self-Handicapping, the 25-item Self-Handicapping Scale was adopted from Jones and Rhodewalt in 1982. The SHS incorporates a six-point response format. For the measurement of self-esteem, the 10-item Rosenberg Self-Esteem Scale was used. The response format is four points. The questionnaire also includes the demographic characteristics of gender, stream, and the study level. The analysis was conducted using SmartPLS 4, employing the PLS-SEM technique as recommended by Ringle et al. (2015).. The study included both first and second order CFA, a comprehensive examination of the reliability and validity of the instruments, as well as the test of the model's fit and route analysis. The PL-SEM is a suitable tool for complex models, small samples and, is suitable for exploratory purposes (Hair et al. (2019).

Results

Demographic characteristics

Table 1 shows the demographic information of the participants broken down by gender, academic major, and degree of education.

Table 1: Demographic characteristics

	Value Label	N	
Gender	Male	251	55.04%
	Female	205	44.96%
	Total	456	100%
Stream	Art	237	51.97%
	Scientific	219	48.03%
	Total	456	100%
Study Level	1st year	144	31.58%
	2nd year	94	20.61%
	3rd year	105	23.03%
	4th year	61	13.38%
	Graduates	52	11.40%
	Total	456	100%

Based on the data in the table (1), it can be observed that there is a little more male than female gender distribution among the 456 participants; specifically, 251 (55.04%) are

male and 205 (44.96%) are female. 237 students (51.97%) enrolled in the Arts stream and 219 students (48.03%) in the Scientific stream. This indicates that the sample is academically varied. Among the various study levels, 144 students (31.58%) are first-years, suggesting that this demographic may have been easier to reach or more receptive to participation. 20.61% in their second year, 23.10% in their third, 13.38% in their fourth, and 11.40% in their final year. This declining ranking may be due to students' decreasing availability or interest in participating in studies as they approach the end of their degree programs, or it may be a natural attrition rate as students go through their academic careers.

Measurement model

1- First order confirmatory facto analysis (CFA)

SMARTPLS 4 and PLS-SEM (Partial Least Squares Structural Equation Modeling) for first-order confirmatory factor analysis (CFA) reveal the relationship between observed items and their latent components.

Table 2: Outer loadings of items on constructs

Items -> Constructs	Outer loadings	Items -> Constructs	Outer loadings
H1 -> PsyCap	0.78	SE8 <- Self-Esteem	0.82
H1 <- Hope	0.77	SE9 <- Self-Esteem	0.69
H2 -> PsyCap	0.83	SEF1 <- Selfefcacy	0.83
H2 <- Hope	0.82	SEF1 -> PsyCap	0.83
H3 -> PsyCap	0.76	SEF2 -> PsyCap	0.76
H3 <- Hope	0.75	SEF2 <- Selfefcacy	0.76
O1 -> PsyCap	0.68	SEF3 -> PsyCap	0.71
O1 <- Optimism	0.79	SEF3 <- Selfefcacy	0.71
O2 <- Optimism	0.86	SH10 <- Self-Handicapping	0.76
O2 -> PsyCap	0.74	SH12 <- Self-Handicapping	0.63
O3 -> PsyCap	0.75	SH13 <- Self-Handicapping	0.7
O3 <- Optimism	0.87	SH14 <- Self-Handicapping	0.58
R1 <- Resilience	0.65	SH15 <- Self-Handicapping	0.53
R1 -> PsyCap	0.58	SH16 <- Self-Handicapping	0.61
R2 -> PsyCap	0.64	SH17 <- Self-Handicapping	0.53
R2 <- Resilience	0.72	SH2 <- Self-Handicapping	0.75
R3 <- Resilience	0.83	SH23 <- Self-Handicapping	0.58
R3 -> PsyCap	0.74	SH24 <- Self-Handicapping	0.58
SE1 <- Self-Esteem	0.77	SH25 <- Self-Handicapping	0.65
SE10 <- Self-Esteem	0.78	SH4 <- Self-Handicapping	0.68
SE2 <- Self-Esteem	0.72	SH5 <- Self-Handicapping	0.69
SE3 <- Self-Esteem	0.66	SH6 <- Self-Handicapping	0.68
SE5 <- Self-Esteem	0.6	SH7 <- Self-Handicapping	0.75
SE7 <- Self-Esteem	0.74		

After entering six structures with 47 elements, 12 items were deleted from the model as shown in Table 2 and Fig (2) due to loadings below 0.5. Removal occurs at loadings < 0.5. Hope, Optimism, and Self-Efficacy items have loadings from 0.68 to 0.83 in the Psychological Capital (PsyCap) construct, demonstrating their importance. Resilience items have a larger loading range of 0.58 to 0.74, with the lowest implying a weaker PsyCap representation but still considerable contribution. With item loadings from 0.6 to 0.82, self-esteem is well-represented, assuring its validity and reliability.

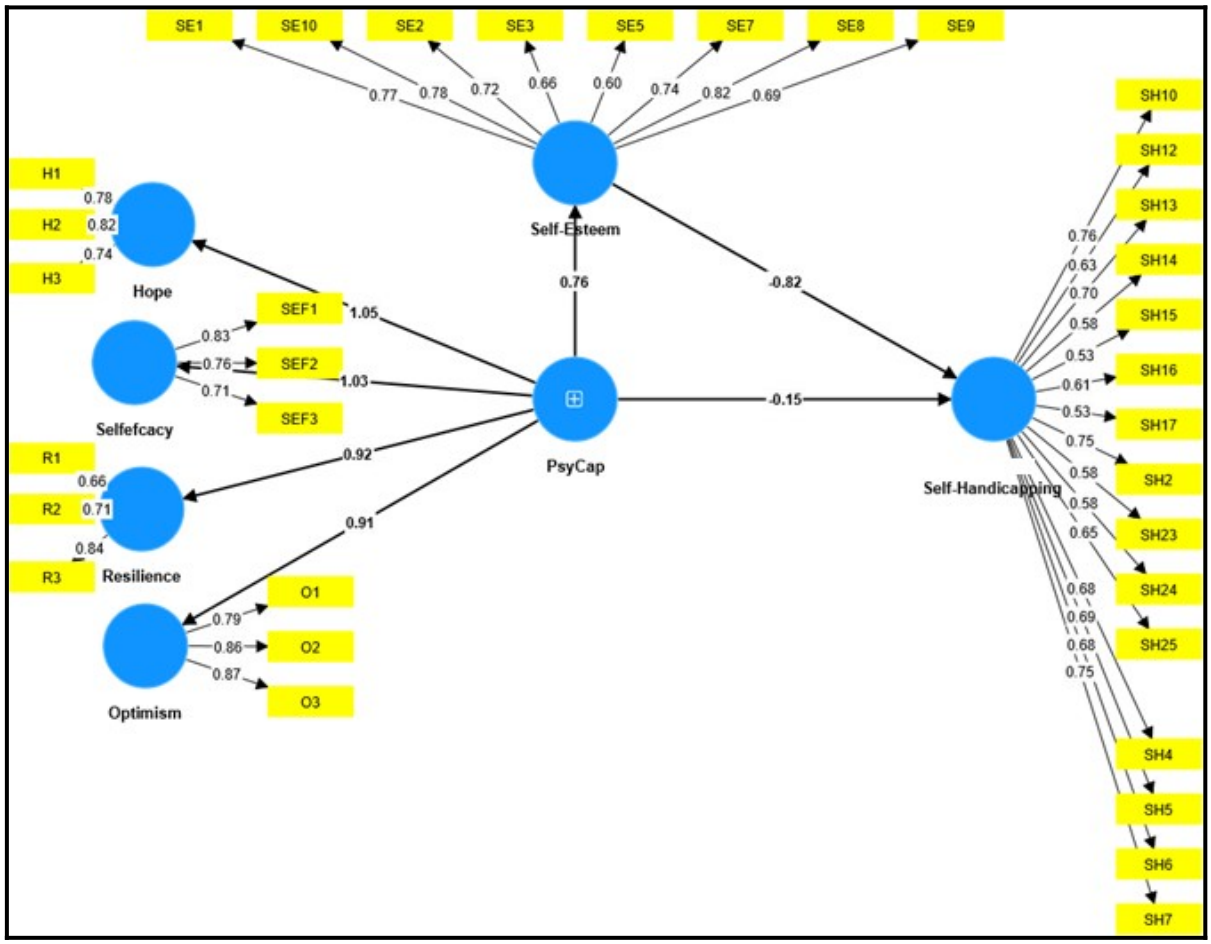

Figure 2: Graphical output: Output from Smartpls4

Collinearity = VIF

A VIF value of 1 indicates no association between a predictor and any other model predictor. VIF values between 1 and 5 indicate acceptable multicollinearity, while values above 5 or 10, more conservatively, 10 indicate serious multicollinearity that could jeopardize model validity (Fornell & Larcker, 1981). Reported VIF readings range from 1.48 to 3.4, all under the acceptable threshold (<5). This suggests that this dataset does not have multicollinearity and that each item gives unique and meaningful information about its construct without duplicating variance explained by other items in the model.

Constructs Reliability and Validity

Table 3: Constructs reliability and validity

	Cronbach's alpha	Composite reliability (rho_a)	Composite reliability (rho_c)	Average variance extracted (AVE)

Self-Handicapping	0.92	0.92	0.92	0.42
Hope	0.82	0.82	0.82	0.61
Optimism	0.88	0.88	0.88	0.71
Resilience	0.78	0.79	0.78	0.55
Self-Esteem	0.9	0.9	0.9	0.53
Selfefcacy	0.81	0.82	0.81	0.59

Cronbach's Alpha and composite reliability (rho_a and rho_c) values in table (3) range from 0.78 to 0.92. Rho_a and rho_c values concur, all above 0.7, proving the constructions' dependability. For validity, the Average Variance Extracted (AVE) measures vary from 0.42 to 0.71, demonstrating how much variance the constructs capture from their indicators. However, Self-Handicapping's AVE of 0.42, while slightly below the threshold, may still be considered acceptable under specific conditions—particularly when composite reliability (CR) exceeds 0.70, and other validity criteria such as discriminant validity and item loadings are met (Fornell & Larcker, 1981).

Discriminant validity - Heterotrait-monotrait ratio (HTMT)

Table 4: Discriminant validity - Heterotrait-monotrait ratio (HTMT)

	Self-Handicapping	Hope	Optimism	Resilience	Self-Esteem
Self-Handicapping					
Hope	0.45				
Optimism	0.40	0.50			
Resilience	0.35	0.45	0.40		
Self-Esteem	0.30	0.42	0.43	0.38	
Selfefcacy	0.33	0.41	0.48	0.39	0.44

The HTMT values in Table (4), all below 0.85, imply strong discriminant validity, suggesting that each concept captures distinct qualities not shared with others (Fornell & Larcker, 1981). Self-Handicapping interactions range from 0.30 to 0.50, while psychological constructs (Hope, Optimism, Resilience, Self-Esteem, and Self-Efficacy) range from 0.35 to 0.50. This suggests that these linked constructs are distinct enough to warrant their inclusion in the model. The division is crucial to clarify theory and effectively express complicated construct linkages without repeating. It also proves the model's intellectual and practical value

Model fit

Table 5: Model fit

	Saturated model	Estimated model
SRMR	0.08	0.08
d_ULS	6.57	6.93
d_G	n/a	n/a
Chi-square	n/a	∞

NFI	n/a	n/a

According to the metrics in table (5), the estimated model seems to have a satisfactory fit to the data, as evidenced by the SRMR value of 0.08 (Fornell & Larcker, 1981). The marginal increase in d_ULS from the saturated to the estimated model suggests that there is only a small difference in fit. In general, the given signs indicate that the model is well-suited to the observed data, although further assessment may be done if more fit indices were accessible.

2- Second order confirmatory factor analysis

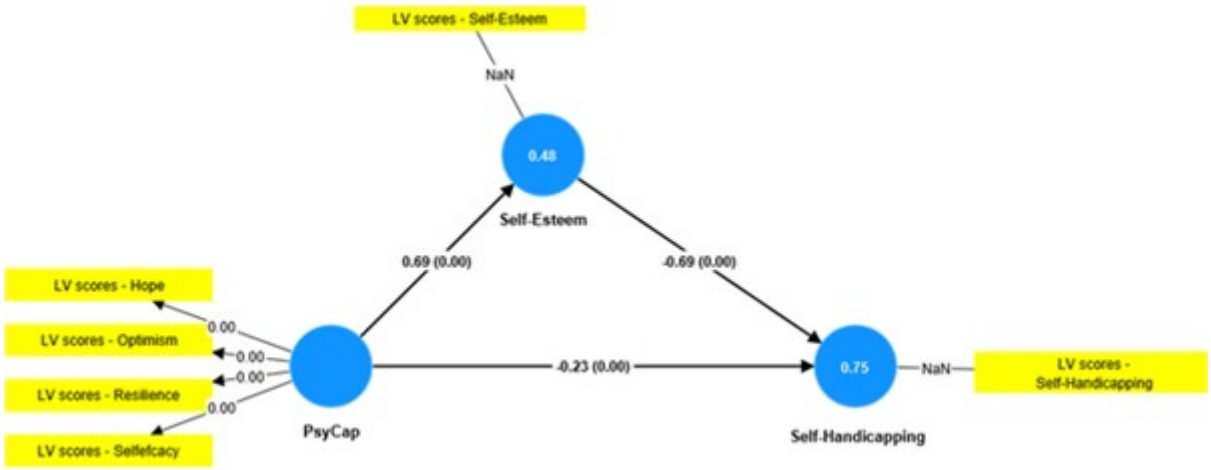

Figure 3: The computation of latent variable (LV) scores. Output from Smartpls4

Figure 3 depicts a confirmatory factor analysis (CFA) model of the second order. First-order constructs, which are immediately measured by a variety of things, are positioned as foundational indications for an overarching higher-order construct through the application of this advanced modeling technique. The robustness of the model is demonstrated by the fact that both the saturated and estimated models exhibit excellent alignment with the data that was obtained, as shown by the analysis of fit indices that are presented in Table 6.

Table (6): Model fit

	Saturated model	Estimated model
SRMR	0.06	0.06
d_ULS	0.07	0.07
d_G	0.04	0.04
Chi-square	124.13	124.13
NFI	0.94	0.94

The Coefficient of Determination (R^2)

Table (7): R square

	R-square	R-square adjusted
Self-Handicapping	0.75	0.75
Self-Esteem	0.48	0.48

As presented in table 7, the R^2 value of 0.75 for Self-Handicapping elucidates that three-quarters of the variance within this construct is accounted for by the model's independent variables. Meanwhile, the R^2 value of 0.48 for Self-Esteem clarifies that nearly half of its variance is similarly explained, denoting a substantial, if moderate, level of explanatory power.

Path coefficients through Bootstrapping

Direct effects

Table 8: Path coefficients of direct effects

	Original sample (O)	P values
PsyCap -> Self-Handicapping	-0.23	0
PsyCap -> Self-Esteem	0.69	0
Self-Esteem -> Self-Handicapping	-0.69	0

Table 8 shows substantial direct effects between Psychological Capital (PsyCap), Self-Esteem, and Self-Handicapping in the model using bootstrapping for statistical robustness. As PsyCap grows, Self-Handicapping declines, according to a statistically significant inverse connection with a negative path coefficient of -0.23 and a p-value of 0. The construct of PsyCap has a strong and positive impact on Self-Esteem, as evidenced by a path coefficient of 0.69 and a p-value of 0. The negative correlation between Self-Esteem and Self-Handicapping (-0.69 path coefficient) indicates that higher levels of Self-Esteem lead to lower levels of Self-Handicapping. These data indicate that enhancing PsyCap and Self-Esteem could potentially decrease student self-handicapping.

Indirect effect

Table 9: Indirect effect

	Original sample (O)	P values
PsyCap -> Self-Esteem -> Self-Handicapping	-0.48	0

Table 9 displays the findings of the bootstrapping statistical validation, which show that Psychological Capital (PsyCap) has a large indirect effect on Self-Handicapping through Self-Esteem (p=0), with a path coefficient of -0.48. As people' PsyCap rises, their Self-

Esteem is likely to rise, which in turn leads to lower levels of Self- Handicapping. This negative indirect impact shows that an increase in PsyCap contributes to a reduction in Self-Handicapping by favorably influencing Self-Esteem. With a p-value of 0, which is significantly lower than the usual significance levels, there is strong evidence that Self-Esteeem mediates this association.

Total effect (The aggregate effect)

Table 10: total effect

	Original sample (O)	P values
PsyCap -> Self-Handicapping	-0.48	0

Table 10 provides a robust estimate of the effect size and significance with a total effect coefficient of -0.48 with a p-value of 0 that indicates a substantial negative relationship, suggesting that an increase in Psychological Capital (PsyCap) is associated with a considerable decrease in Self-Handicapping. The statistical significance of the effect is confirmed by this strong link, which is further supported by a p-value of 0, indicating that the chance of this whole effect happening by chance is practically zero, which is significantly lower than the thresholds of statistical significance typically used. The data clearly shows that PsyCap has a significant impact on pupils' ability to avoid self-handicapping behaviors.

Indirect effect histogram

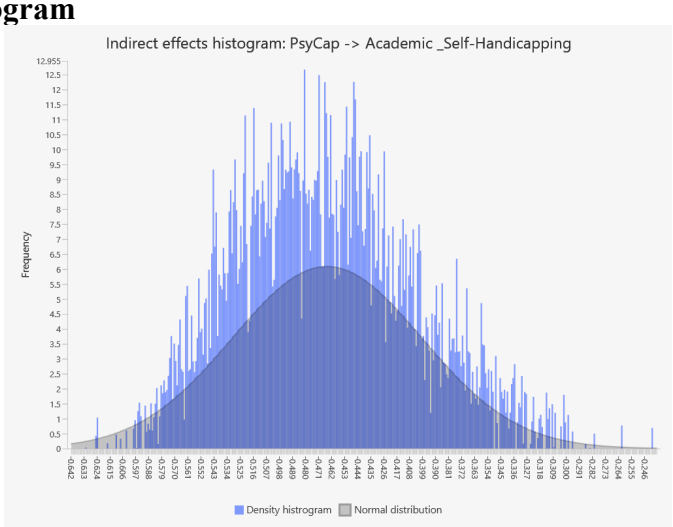

Figure 4: Indirect effect histogram: Output of Smartpls4

The distribution and range of the indirect impacts of Psychological Capital (PsyCap) on Self-Handicapping can be better understood with the help of Histogram 1, which is displayed below. The bell-shaped curve superimposed on the histogram indicates a distribution that is close to normalcy when effect sizes are plotted on the x-axis and

frequency on the y-axis. The histogram shows that PsyCap affects Self-Handicapping both positively and negativelym where data is around the middle peak, which is close to zero, showing that indirect effects are not significant. This graphical distribution shows how PsyCap indirectly affects actions by emphasizing the mediator. This data may help educators and psychologists evaluating student performance interventions because the histogram's symmetry and dispersion show PsyCap's indirect influence is minor.

Discussion

The current study examines the complex relationship between Psychological Capital (PsyCap), Self-Esteem, and Self-Handicapping to determine how PsyCap affects actions and results directly and indirectly. This study uses a comprehensive conceptual framework from psychology, educational philosophy, and behavioral science to illuminate complex relationships. Bootstrapping for statistical robustness demonstrated substantial relationships between Psychological Capital (PsyCap), Self-Esteem, and Self-Handicapping. It identified a -0.23 path coefficient between PsyCap and Self-Handicapping. This supports (H1) that PsyCap Reduces Self-Handicapping. Its path coefficient of 0.69 supports (H2) that PsyCap directly enhances self-esteem.

High Self-Esteem reduces Self-Handicapping (path coefficient of -0.69), supporting (H3) that it directly reduces it. The current study also found a significant indirect effect of PsyCap on Self-Handicapping mediated by Self-Esteem (path coefficient of -0.48), suggesting that PsyCap reduces Self-Handicapping indirectly by enhancing Self-Esteem, which supports (H4). The aggregate effect of Psychological Capital (PsyCap)—encompassing both direct and mediated pathways—on Self-Handicapping is significantly intermediated by Self-Esteem (path coefficient of -0.48), underscoring the potential benefits of enhancing PsyCap and Self-Esteem to mitigate Self- Handicapping behaviors in students.

Empirical evidence from Adil et al. (2020, 2021a, 2021b) and the current study's findings agree that PsyCap is crucial in minimizing self-handicapping. This research shows that PsyCap components—hope, efficacy, resilience, and optimism—improve academic achievement and self-esteem. Such connection shows that improving PsyCap directly addresses self-handicapping, providing an avenue for academic achievement interventions. Although less so, PsyCap's broad relationship with positive psychological outcomes supports the idea that it directly enhances self-esteem. This study demonstrates that PsyCap promotes self-esteem (path coefficient 0.69). This association supports theory and reveals PsyCap's revolutionary potential to boost student self-esteem.The current study supports Mannahan (2023) and previous research on the topic of self-esteem's role in reducing self-handicapping by proving its direct impact on behavior. The path coefficient of -0.69 shows that high self-esteem prevents self-handicapping. Student academic and psychological well-being depend on self-esteem. More crucially, this study confirms PsyCap's indirect influence on self-handicapping through Self-Esteem. This complex interaction shows that PsyCap boosts self-esteem and reduces self-handicapping. All PsyCap effects on academic outcomes, including Self-Esteem-mediated effects, are shown.

Understanding of how PsyCap, self-esteem, and self-handicapping interplay

It is beneficial to integrate empirical findings and theoretical ideas from a variety of studies in order to gain an understanding of the psychological foundations that drive Psychological Capital (PsyCap), Self-Handicapping, and Self-Esteem. (Luthans et al., 2007) Positive organizational behaviors, educational interventions, and supportive settings are the means by which the psychological capital (PsyCap) is developed. PsyCap contains hope, optimism, resilience, and self-efficacy. This type of capital functions as a buffer against

negative psychological states, strengthening individuals' faith in their talents and their perseverance in conquering problems. It also helps individuals feel more confident in their ability to succeed. This impact is based on Bandura's Self-Efficacy Theory, which proposes that a high belief in one's capabilities enhances task engagement and success, therefore diminishing tendencies toward self-defeating behaviors such as self-handicapping (Bandura, 1997). This theory is the foundation for this effect. Personal achievements, good comments, social support, and overcoming challenges boost self-esteem. Rosenberg (1979) found that educational environments that recognize students' achievements boost self-esteem. Luthans et al. (2007) found that high PsyCap reduces self-handicapping. Because high PsyCap people are more cheerful and resilient to adversity. good Psychology, which emphasizes the enriching power of good traits and emotions (Almeida, 2016), suggests that reducing self-handicapping improves self-assessment, performance, and personal growth. This supports Positive Psychology.

Additionally, PsyCap components, particularly self-efficacy, boost self-esteem. Because they boost self-confidence and positivity (Luthans et al., 2007). According to Taormina and Gao (2013), boosting one's self-esteem can help alleviate feelings of anxiety and depression, improve one's ability to manage stress, and promote psychological well-being. This finding lends credence to Maslow's belief that esteem is an essential component of psychological health. A further point to consider is that there are indirect impacts that are mediated by one's own self-esteem. As an illustration, PsyCap has a positive impact on one's self-esteem, which in turn leads to a reduction in incidences of self-handicapping among individuals. As a result of this mediation, a positive loop is created in which improved PsyCap and self-esteem contribute to positive behaviors and attitudes, which in turn further enhances both academic and personal success, which is in line with the extend-and-Build Theory Developed by Fredrickson (2001), which proposes that pleasant emotions extend cognitive arrays and stimulate experimental thoughts and activities.

As a result, this research confirms that PsyCap influences self-handicapping on both direct and indirect levels among Jordanian university students. The analyses show that PsyCap, including attributes such as hope, efficacy, resilience, and optimism, consistently reduces the rates of self-handicapping. These findings suggest a direct impact of PsyCap on reducing self-handicapping behaviors, thereby confirming Hypothesis 1 (H1). Similarly, the analyses reveal that PsyCap significantly enhances self-esteem, which in turn contributes to the direct reduction of self-handicapping, thereby confirming Hypothesis 2 (H2). The most significant insight drawn from this research is the mediating effect of self-esteem on the relationship between PsyCap and self-handicapping. In light of the results, this mechanism indicates that improving self-esteem can have a substantial positive impact on the long-term academic and psychological resilience of learners, especially by minimizing one of the key potential hindrances to their success.

Indeed, the effect of PsyCap on self-handicapping through the development of self-esteem underscores the importance of psychological assets in preventing undesirable behaviors in the context of higher education. These findings validate previous research highlighting the significance of PsyCap in reducing self-handicapping both directly and indirectly through its sub-dimensions. The effects of PsyCap, initially indicated in studies supporting increased academic success, have also been shown to improve self-esteem and reduce self-handicapping among Jordanian university students. By and large, this study reinforces the importance of PsyCap in fostering academic success and psychological well-being. It demonstrates that developing PsyCap attributes can lead to reduced self-handicapping and enhanced self-esteem, contributing to better academic outcomes and overall resilience among Jordanian university students.

Implications

The findings of this study have significant consequences for the design of psychological and educational treatments aimed to raise students's general well-being and academic performance. Underlining the need of Psychological Capital (PsyCap) as a required tool for students, the presented direct and indirect effects on self-handicapping behaviors highlight Encouragement of hope, resilience, self-efficacy, and optimism helps teachers and psychologists help to reduce self-handicapping behaviors—which are known to undermine academic performance. Moreover, studies showing therapies aimed to boost self-esteem show that PsyCap's advantages might be even more enhanced, therefore promoting a reinforcing cycle that enhances students' academic performance and resilience. This highlights the need of including PsyCap development into courses of education and supporting projects aiming at long-term psychological and academic achievement.

Limitations

This study presents interesting analysis, yet even with its significant worth some limitations have to be accepted. First of all, the fact that the study relies on self-reported data could include biases including social desirability or recollection bias, therefore undermining the validity of the findings. Moreover, the cross-sectional aspect of the research limits the possibility to deduce causality among PsyCap, self-esteem, and self-handicapping behavior. Improved understanding of the temporal dynamics of these interactions calls for longitudinal studies. Moreover, the fact that the study's sample consisted exclusively of Jordanian university students would limit the generalizability of the results to other cultural or educational environments.

Recommendations

To enhance students' academic and psychological well-being, educational institutions should integrate Psychological Capital (PsyCap) development into their programs, focusing on attributes like hope, resilience, self-efficacy, and optimism, which have been shown to reduce self-handicapping behaviors. Additionally, interventions aimed at boosting self-esteem should be prioritized, as self-esteem mediates the relationship between PsyCap and self-handicapping.

Future Studies

The integration of existing research with past body of knowledge demonstrates that both PsyCap and Self-Esteem facilitate academic approach in students. An integrative study allows the confirmation of previous conjecture and offers a number of new and potential research interventions. Evidence now demonstrates that an integrated, multi-faceted educational intervention to raise PsyCap and Self-Esteem could considerably reduce student self-handicapping.

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