

# **Psychological Capital and Professional Identity: A Study of Professional Business Students**

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*This research article reports the results and findings of an online survey questionnaire administered to 593 Masters of Business Administration (MBA) students using the MCPIS-9 and PCQ-12 instruments that measure Professional Identity (ProfId) and Psychological Capital (PsyCap), respectively. The results indicated a strong sense of ProfId ( $M = 4.2/5.0$ ,  $SD = 0.66$ ,  $N = 593$ ), and a significant and positive relationship ( $p < .01$ ,  $\Delta R^2_{adj} = .25$ ,  $N = 593$ ) between PsyCap and ProfId. The results of this study represent a fruitful, albeit initial, foray into the ProfId and PsyCap of professional business students. The implications of these results inform and equip program stakeholders to devise curricular and pedagogical approaches to support students' sense of self in their career trajectory.*

*Keywords: professional identity, psychological capital, MBA students, imposterism*

## **INTRODUCTION**

Success for students in professional business programs is precipitated by many factors and circumstances, including a student's mental and emotional state. The University serves a critical role in preparing students for their professional careers. In the interest of equipping graduate-level professional business students for career success and satisfaction, this study seeks to determine the presence of and relationships among psychological factors related to desirable career outcomes, namely, Professional Identity and Psychological Capital.

Professional Identity (ProfId) is an established psychological construct that describes a person's sense of inclusion and belonging in a distinguishable career field associated with many positive outcomes (Adams et al., 2006; Sabanciogullari & Dogan, 2015). The importance of ProfId is prominent in professional degree programs (predominantly healthcare) and is an important indicator of career success and satisfaction (Goradia & Bugarcic, 2019; Johnston & Bilton, 2020; Worthington et al., 2013). Recognizing and developing a strong sense of ProfId among graduate students pursuing professional business degrees seems within reason yet there is an apparent lack of research literature for this particular group. Realizing that

psychological traits vary by profession (Adams et al., 2006) and echoing past research assertions of its relevance among professional students (Trede et al., 2012), this study novelly investigates the presence and degree of ProfId among Master of Business Administration (MBA) business students:

***Research Question 1. What is the strength of Professional Identity among professional business students?***

Psychological Capital (PsyCap) is another established psychological construct describing a person's general state of hope, confidence, resilience, and optimism (F. Luthans et al., 2007; F. Luthans & Avolio, 2014; F. Luthans et al., 2015) that develops over time and circumstance (F. Luthans & Youssef-Morgan, 2017). PsyCap is associated with a positive workplace (F. Luthans et al., 2007; F. Luthans & Youssef-Morgan, 2017) and academic outcomes (B. Luthans et al., 2012; Sweet et al., 2019). Extant research of PsyCap in conjunction with ProfId is common among studies of Chinese healthcare workers and higher education professionals (Hao et al., 2020; He et al., 2021; Qiu et al., 2019; Ren et al., 2020; Wang & Yin 2020). The paucity of research on the relationship of PsyCap and ProfId among professional business students informed the next question of this study:

***Research Question 2. What is the relationship between Psychological Capital and Professional Identity among professional business students?***

Literature in Professional Identity, Psychological Capital, and their intersection is reviewed in the subsequent section in support of this study's two research questions. The research method is presented, followed by reporting and discussion of the results, which were affirmative for both research questions. This study concludes by identifying study limitations, areas for future research, and contributions to the literature.

## **RESEARCH BACKGROUND**

### **Professional Identity**

While nebulous and elusive of a standardized definition (Beijaard et al., 2004; Clarke et al., 2013; Johnston & Bilton, 2020; Trede et al., 2012), Professional Identity (ProfId) is comprised of the knowledge, skills, values, beliefs, and attitudes shared among a particular professional group and related to professional responsibility (Adams et al., 2006; Crossley & Vivekananda-Schmidt, 2009; Johnston & Bilton, 2020; Worthington et al., 2013). ProfId is dynamic, evolutionary over a lifetime, represents an aspirant state, and spans contexts of development, socialization, education, formation, learning, and identity (Beijaard et al., 2004; Brownell & Tanner, 2012; Cook et al., 2003; De Weerd et al., 2006; Deppoliti, 2008; Kogan, 2000; Plack, 2006). From their systematic review, Beijaard et al. (2004) developed a framework of ProfId as an ongoing process that implies person and context, consists of sub-identities and agency, and spans public-private and individual-collective continua.

### *Professional Identity Findings in Healthcare*

ProfId is a central factor in medical and health-related educational research, recognized as an important attribute for professional students, and related to predictor and outcome variables. Researchers noted that ProfId formation is pervasive in formal education standards across healthcare disciplines (Mylrea et al., 2017) and asserted that it impacts healthcare clinical outcomes (Matthews et al., 2019).

Adams et al. (2006) studied 1,254 health and social care students. They found significant predictors of ProfId were gender, profession, previous in-discipline work experience, understanding of team working, knowledge of profession, and cognitive flexibility. Furthermore, they developed the nine-item Macleod Clark Professional Identity Scale (MCPIS-9), rooted in Social Identity Theory and adapted from Brown et al.'s (1986) work on group identification among factory workers. The MCPIS-9 is a commonly used instrument featuring self-report, 5-point agreement Likert scale items, and ranges in scores from nine to 45,

respectively, related to the strength of ProfId (Chik et al., 2012; Johnston & Bilton, 2020; Mylrea et al., 2017; Poudel et al., 2018; Worthington et al., 2013).

A study of 102 Australian paramedic students using the MCPIS-9 did not find statistical differences between ProfId and demographic and background factors; however, the results revealed a direct relationship to a student's progress in a program (Johnston & Bilton, 2020). A study of 529 Australian undergraduate nursing students reported statistically significant and higher MCPIS-9 scores among females with previous nursing-related vocational training who reported nursing as their first choice or engaged in nursing-related paid work (Worthington et al., 2013). A survey of 799 Nepalese nursing students discovered that 92.5% intended to migrate from the country upon successful program completion and that intention was significantly and indirectly related to ProfId; lower levels associated to migrate (Poudel et al., 2018). Interview data of these students revealed feelings of pride are interwoven with the concepts of ProfId.

Intending to promote gender diversity in the nursing profession in developing countries, a study of 117 Malaysian nursing students (81% female) found no statistical differences in ProfId by gender despite common professional stereotypes (Chik et al., 2012). A mixed-methods systematic review of original research ( $N = 13$  studies) found three categories (personal background, academic preparedness, and student ability and readiness self-perception) were important to identify at-risk health science students and concluded this knowledge is an enabler for educational interventions to improve student retention (Goradia & Bugarcic, 2019). Drawing from self-determination theory, a study of 327 Australian pharmacy students supported a direct relationship between student motivation with ProfId (Mylrea et al., 2017). A study of 102 Australian paramedic students using the MCPIS-9 found that ProfId strengthened throughout the program (Johnston & Bilton, 2020).

Recognizing systematic tension between doctors and nurses, a study of 316 Dutch medical students' reported changes to their professional identities after a specific experience (nursing attachment/rotation). The resulting indications of identity dissonance underpin recommendations of the immersive pedagogical experience (Helmich et al., 2010). Goradia and Bugarcic (2019) identified personal circumstances (including financial situation, social support, personal commitments, work schedule, time management skills, attendance data, and study strategies) in addition to academic preparedness (various examination and course performance data, assessment, and course details) and student perception (including self-efficacy, self-confidence, motivation, long term goals, social identity, personal feelings, attitudes, study approach, academic aptitude, and personal expectations).

Pedagogical interventions geared toward student success and retention found in healthcare education literature included tutorials, academic counseling, study skill assistance, personal solutions, study aid modules, course topic workshops, welcome programs, social events, and mentoring programs (Goradia & Bugarcic, 2019).

### *Professional Identity in Higher Education*

Research addressing ProfId focused on professional student development, primarily in the healthcare education discipline; however, Beijaard et al. (2004) identified that research on teachers' ProfId is a separate and distinct research area. Clarke et al. (2013) reviewed ProfId research among higher education faculty. They found a lack of research among professions and asserted existing studies are an insightful starting point in higher education. Mathany et al. (2017) conducted a focus group study with 19 participants to ascertain barriers to ProfId in the Scholarship of Teaching and Learning community and concluded these inform the development of formal programming and informal mentoring to bolster the development of ProfId.

**The University & Professional Identification.** Johnston and Bilton (2020) asserted the critical role of universities in developing ProfId via curriculum. Worthington et al. (2013) acknowledged that professional self-identification is related to a successful transition from student to professional and found higher MCPIS-9 scores to slightly increase student retention.

Trede et al. (2012) asserted that a requirement of higher education programs is "...to produce graduates who display mastery of theoretical ideas, competence in applying theory in complex workplace settings, and professional dispositions that foster ethical and reflective professional practices" (p. 365) and that the

university facilitates ProfId development through student engagement: “Professional identity development requires students’ active engagement and agency in conjunction with appropriate support and mentorship from academics” (p. 378).

#### *Professional Identity Review, in Summary*

Lacking an understanding of ProfId is prohibitive to devising approaches and developing curricula to reap the positive benefits of strong levels (Mylrea et al., 2017). Despite the rich tradition of ProfId literature in healthcare, there are underserved areas; Johnston and Bilton (2020) noted the paucity of this research in the paramedic profession. Higher education studies focus on ProfId among teachers yet call for studies in other professional areas and theoretical connections (Beijaard et al., 2004). ProfId varies by profession and is relevant among professional students (Adams et al., 2006; Trede et al., 2012). A logical starting point is to detect the levels of ProfId in presumably under-investigated and new areas.

**Research Question 1:** *What is the strength of professional identity among professional business students?*

#### **Psychological Capital**

Psychological Capital (PsyCap) originated from the positive psychology movement, highlighted by Martin Seligman in his 1998 Presidential Address to the American Psychological Association. In his address, he made a case for psychology to re-focus on the positive and “... the understanding and building of the most positive qualities of an individual: optimism, courage, work ethic, future-mindedness, interpersonal skill, the capacity for pleasure and insight, and social responsibility” (Fowler et al., 1999, p. 559). PsyCap is a general positive psychological state comprised of hope, efficacy, resilience, and optimism as related to ongoing and sustained success despite adversity (Youssef & F. Luthans, 2007). The four components of PsyCap are standalone factors yet combine as a univariate construct (F. Luthans & Avolio, 2014). PsyCap is defined as:

...an individual’s positive psychological state of development and is characterized by (1) having confidence (self-efficacy) to take on and put in the necessary effort to succeed at challenging tasks; (2) making a positive attribution (optimism) about succeeding now and in the future; (3) persevering toward goals and, when necessary, redirecting paths to goals (hope) in order to succeed; and (4) when beset by problems and adversity, sustaining and bouncing back and even beyond (resiliency) to attain success. (F. Luthans et al., 2015, p. 2)

PsyCap is often studied in conjunction with positive outcomes and performance indicators (e.g., job satisfaction) across varied populations, including students (Datu et al., 2018), educational staff (Williams et al., 2015), and executives (Ryan et al., 2009). An important and distinguishing characteristic of PsyCap is that it lies in the continuum between a temporary state and a permanent trait; it can be developed or changed (F. Luthans & Youssef-Morgan, 2017).

#### *Psychological Capital & Workplace Performance*

Extensive research of PsyCap in workplace settings found positive associations with numerous subjective and objective job performance indicators across industries, job positions, and countries.

A study of 144 employees across all levels of a midsized insurance services firm and 115 engineers and technicians at a high-tech manufacturing firm investigated PsyCap and job performance based on performance evaluations, managerial ratings, and job satisfaction. The study found PsyCap was statistically significant and positively related to both job performance ( $p < .01$ ) and job satisfaction ( $p < .01$ ) (F. Luthans et al., 2007).

Avey et al. (2011) also studied engineers ( $N = 106$ ) but at a large aerospace firm. Their study investigated the relationship between PsyCap of leaders and their followers’ PsyCap that influenced performance, as measured by the generation and quantity of original solutions to problems. The results

supported that the follower's PsyCap was positively related to performance related to original problem solutions ( $\beta = .32, p < .01$ ) as well as being positively related to the number of original problem solutions ( $\beta = .24, p < .05$ ).

In a study focused on entrepreneurs and stress, Baron et al. (2016) surveyed 160 United States-based business founders who had started their businesses in the prior six years. Utilizing the Psychological Capital Questionnaire-12 (PCQ-12) questionnaire, the 10-item Perceived Stress Scale (PSS; Cohen & Williamson, 1988), and the five-item Satisfaction with Life Scale (SWLS; Pavot & Diener, 1993), the relationship between PsyCap, Stress, and subjective well-being was analyzed. Results indicated that PsyCap was negatively associated with perceived stress ( $\beta = -.40, p < .01$ ) and positively associated with subjective well-being ( $\beta = .44, p < .01$ ).

Avey et al. (2010) investigated the relationship between PsyCap and job performance, as rated by managers and referral data, among tellers ( $N = 345$ ) at one of the five largest Australian banks. Study results indicated both a positive relationship between PsyCap and manager-rated performance ( $r = .34, p < .01$ ) as well as a positive relationship with referrals ( $r = .13, p < .01$ ).

A study of 456 Chinese workers employed in two different copper refining factories found that PsyCap was statistically significant and positively related to work performance considering the effect of worker tenure, education, gender, and age ( $\beta = .26, p < .001$ ) and explained 7% of the variance in performance above and beyond the other variables (F. Luthans et al., 2008).

#### *Psychological Capital & Student Performance*

B. Luthans et al. (2012) studied the impact of business students' PsyCap on their academic performance, modifying the PCQ-24 instrument from the employee to the student context (e.g., "...regarding my job" to "...regarding my schoolwork"). Survey results of 95 undergraduate students enrolled in business courses at a medium-sized Midwestern university revealed that PsyCap was positively related to the student's academic performance as measured by their official grade point averages (GPA) ( $r = .28, p < .01$ ) with PsyCap accounting for nearly 7% of the variance ( $R^2_{adj} = .069, p < .01$ ).

Martínez et al. (2019) analyzed results from surveys completed by 243 Portuguese and 389 Spanish public university students. The study used the PCQ-12 scale translated into Portuguese and Spanish and adapted items to the student context as in the prior studies. Results indicated a statistically significant positive correlation ( $p < .01$ ) between PsyCap and Academic Performance (Portuguese  $\beta = .21$ , Spanish  $\beta = .32$ ).

Sweet et al. (2019) investigated PsyCap with academic performance with GPA over two academic terms among 388 freshmen students at a liberal arts college in the Mid-Atlantic region of the United States. PsyCap was measured using the PCQ-24 adapted for the student context. Results indicated that PsyCap was not a significant related to first-term GPA ( $R^2_{adj} = .004, \Delta p = .079$ ); however, PsyCap was significantly related to second-term GPA ( $R^2_{adj} = .01, p < .01$ ).

#### *Psychological Capital Review, In Summary*

Extensive research supports significant and positive relationships among PsyCap and workplace and academic performance measures. In recognition of the state-like nature of PsyCap, Luthans et al. (2015) developed a PsyCap Intervention model. They asserted that short 2 to 3-hour sessions (called micro-interventions) are effective in improving PsyCap in both the workplace as well as the academic setting.

#### *Professional Identity & Psychological Capital*

ProfId and PsyCap are congruent in terms of the associated positive job and career outcomes. Both are desirable assets worth nurturing for anyone seeking career success and satisfaction. The association of these two theoretical constructs is prevalent in recent healthcare studies set in China. Both ProfId and PsyCap indirectly relate to burnout for Chinese nurses (Ren et al., 2020). PsyCap can favorably mediate between PsyCap and workplace violence among Chinese doctors (Qiu et al., 2019). Both constructs can mediate work-related stress and the well-being of intensive care unit Chinese nurses (Hao et al., 2020), and efforts to improve both can improve the recruitment and retention of male Chinese nurses (He et al., 2021). PsyCap

and ProfId favorably impact young Chinese teachers (Wang & Yin, 2020), are moderators that deter psychological distress among the new Chinese female content streamers (e.g., social media influencers) (Zheng & Johnson, 2021), and improve employability outcomes among young Ugandans (Ngoma, 2016).

The crossover literature as a whole supported the relationship between ProfId and PsyCap. The variety of reviewed studies does not include the context of professional business students nor provide a definitive nature of the relationship. Investigating this relationship in a new context is an appropriate next step:

**Research Question 2:** *What is the relationship between Psychological Capital and Professional Identity among professional business students?*

## RESEARCH METHOD

Based upon the review of research in the areas of ProfId and PsyCap and the need for measurement and analysis of these factors among professional business students, a cross-section online survey was created and administered to a cohort of online MBA students.

### Professional Identity (MCPIS-9)

ProfId is commonly measured with the nine five-point Likert items, univariate MCPIS-9 scale (Adams et al., 2006); results are reported as either summative or mean scores. Past studies reported Cronbach's  $\alpha$  coefficient, a measure of internal consistency, for the MCPIS-9 above the traditional .70 acceptance level:  $\alpha = .79$ ,  $N = 1,254$  (Adams et al., 2006);  $\alpha = .79$ ,  $N = 1,254$  (Chik et al., 2012);  $\alpha = .83$ ,  $N = 529$  (Worthington et al., 2013);  $\alpha = .85$ ,  $N = 799$  (Poudel et al., 2018); and  $\alpha = .84$ ,  $N = 102$  (Johnston & Bilton, 2020).

A systematic review of ProfId measures employed for student health professionals revealed that among eight distinct ProfId measures, the MCPIS-9 is a commonly accepted and valid instrument, concluding the need for further psychometric evaluation of all ProfId measures (Matthews et al., 2019). The online survey included the MCPIS-9 to measure ProfId and to further evaluate this measure.

### Psychological Capital (PCQ-12)

Psychological Capital is assessed using the Psychological Capital Questionnaire with 24 items (PCQ-24) (F. Luthans, Avolio et al., 2007) or the shortened twelve-item PCQ-12 (Avey et al., 2011). Both instruments capture the constructs of hope, efficacy, resilience, and optimism using a six-point Likert agreement scale, with mean scores being reported. The PCQ-12 assesses hope using four items, efficacy using three items, optimism using two items, and resilience using three items.

Wernsing (2014) tested PCQ-12 to test measurement invariance across twelve nations: The United States of America, the United Kingdom, Turkey, Sweden, South Africa, Poland, Mexico, Italy, Brazil, India, Germany, and China. This study's sample sizes ranged from 470 in Sweden to 15,202 in India. The resulting Cronbach's  $\alpha$  coefficient from these studies ranged from .89 to .91, indicating a high level of reliability. These findings are consistent with reliability measures using the PCS-24:  $\alpha > .70$ ,  $N = 106$  (Avey et al., 2011);  $\alpha = .87$ ,  $N = 160$  (Baron et al., 2014); and  $\alpha = 0.68$ ,  $N = 456$  (F. Luthans et al., 2008). This study employed the PCQ-12 scale in the online survey for the sake of brevity to promote completion among participants.

### Demographics and Controls

In addition to the items from the MCPIS-9 and PCQ-12, the research instrument included demographic control items to capture respondents' age, gender, employment status, experience, career field, and additional advanced degrees and certifications earned. These items are aligned with those included in previous ProfId research studies (Helmich et al., 2010; Johnson & Bilton, 2020; Mylrea et al., 2017).

### Sample Population & Survey Administration

The identified participant pool for this study were professional students enrolled in a primarily online Master of Business Administration (MBA) program at a southern, regional, public university in the United States. In total, 603 students enrolled in one of ten sections of the same introductory course in the program with the same instructor over three semesters (Summer 2021, Fall 2021, and Spring 2022) were offered extra credit to participate in the research study via an anonymous, online survey delivered via the Qualtrics platform. Of the invited students, 593 usable survey responses were returned, an effective response rate of 98.34%

As reported in *Table 1*, The majority of respondents were female (60.9%) between the ages of 25 and 34 (34.9%), working full-time in their field (69.1%), with between one and five years of work experience (35.4%), and did not possess an advanced degree or certification (69.3%).

**TABLE 1  
RESPONDENT DEMOGRAPHIC INFORMATION**

Demographic Variable	N (%)	Demographic Variable	N (%)
<u>Age</u>		<u>In-Career Work Experience</u>	
18-24	156 (26.3%)	Never worked	24 (4.0%)
25-34	207 (34.9%)	Less than 1 year	136 (22.9%)
35-44	138 (23.3%)	1 to 5 years	210 (35.4%)
45-54	81 (13.7%)	6 to 10 years	68 (11.5%)
55-64	10 (1.7%)	10 to 20 years	97 (16.4%)
65-74	1 (0.2%)	Greater than 20 years	49 (8.3%)
75-84, 85 and older, & Prefer not to answer	0 (0%)	Prefer not to answer	9 (1.5%)
<u>Gender</u>		<u>Field / MBA Concentration</u>	
Male	231 (39.0%)	Executive	82 (13.8%)
Female	361 (60.9%)	Accounting	24 (4.0%)
Non-binary	0 (0%)	Information Systems	46 (7.8%)
Prefer not to answer	1 (0.2%)	Sales & New Bus. Dev.	41 (6.9%)
<u>Employment</u>		Finance	63 (10.6%)
Full Time (40 + hours a week)	410 (69.1%)	Global Business	18 (3.0%)
Part time (up to 39 hours a week)	55 (9.3%)	Health Care Management	98 (16.5%)
Unemployed, looking for work	24 (4%)	HR Management	66 (11.1%)
Unemployed, not looking	1 (0.2%)	Project Management	100 (16.9%)
MBA Student only	82 (13.8%)	Masters in Prof. Studies	2 (0.3%)
Retired	1 (0.2%)	No Concentration	53 (8.9%)
Homemaker	4 (0.7%)	<u>Advanced Degree</u>	
Self-employed	12 (2.0%)	Yes	182 (30.7%)
Unable to work	1 (0.2%)	No	411 (69.3%)
Prefer not to answer	3 (0.5%)		

## RESULTS

Both research instruments included in the online survey satisfied internal reliability requirements. The Cronbach's  $\alpha$  coefficient for the MCPIS-9 and PCQ-12, respectively, were .83 and .88. These measures are sufficient and consistent with previous findings.

A standard multiple regression assessed the relationship between ProfId as the dependent variable and PsyCap as the independent variable. Covariates such as age, sex, employment status, relevant experience, concentration, and whether the student had previously obtained an advanced degree were also included. To aid in the interpretability of parameter estimates, independent variables were centered before inclusion in the analysis. The equation form of the model fit is

$$ProfId = \beta_0 + \beta_1 PsyCap + \beta_c Control + \epsilon, \quad (1)$$

where  $\beta_0$  represents the intercept,  $\beta_1$  represents the unique relationship between PsyCap and ProfId, and  $\beta_c$  represents a series of coefficients for the covariates. Model assumptions were checked graphically via residual and QQ Plots, and multicollinearity between variables were checked using the variance inflation factor (VIF). Analyses were performed using R version 4.2.3 (R Core Team, 2018), and the Type 1 error rate was fixed to  $\alpha = .05$  for all analyses. The VIF threshold for multicollinearity was set at 5. Within the original model, the work experience covariate was the only variable that exceeded this threshold and was subsequently removed. Graphical assessment of residuals showed no threats to model assumptions.

Table 2 shows the parameter estimates for the model shown in *Equation 1*. Additionally, means and standard deviations for the uncentered independent and dependent variables are provided, as well as Pearson correlation coefficients calculated between PsyCap and ProfId. It is clear that PsyCap is both statistically and practically significantly related to ProfId and explained a large portion of the variation in ProfId above and beyond the covariates of age, sex, concentration, employment, relevant experience, and whether or not the participant had an advanced degree ( $p < .01$ ,  $\Delta R^2_{adj} = .25$ ).

**TABLE 2**  
**MULTIPLE REGRESSION OF PSYCHOLOGICAL CAPITAL**  
**ON PROFESSIONAL IDENTITY**

<i>Variable</i>	<i>ProfId</i>	<i>PsyCap</i>	<i>Coef<sup>c</sup></i>	<i>Std. Error</i>
Intercept			4.139**	0.108
Psychological Capital	0.52** <sup>a</sup>		0.488**	0.034
Means <sup>b</sup>	4.20	4.82		$R^2 = .35$
SDs	0.66	0.68		$R^2_{adj} = .32$
				$R = .60^{**}$

\* $p < 0.05$ , \*\* $p < 0.01$

<sup>a</sup>Pearson correlation coefficients.

<sup>b</sup>Means are provided for uncentered variables, while parameter estimates are calculated using centered variables.

<sup>c</sup>Coefficients are calculated after the inclusion of covariates (age, sex, employment status, relevant experience\*\*, concentration, and advanced degree).



## DISCUSSION

### Findings

Pursuant to student success in professional degree programs, this study questioned the strength of ProfId (*RQ#1*) and its relationship to PsyCap (*RQ#2*) among professional business students. Administering the MCPIS-9 instrument to 593 MBA students resulted in a mean score of 4.2 (out of 5) with a standard deviation of 0.66. This statistic indicates a relatively strong degree of ProfId among MBA students that they affirmatively identify with their professional discipline.

*Finding #1. MBA students possess a strong sense of Professional Identity.*

The mean score, apparently high, is not subject to a strict interpretation. Past literature neither reported MCPIS-9 results in a standardized manner nor indicated score ranges. The results and findings of this study first establish a baseline measure of ProfId for MBA students and advance the call for further reporting on ProfId measures (Matthews et al., 2019). In addition to establishing a baseline measure for future comparison, the results support the use of MCPIS-9 among professional business students, thereby extending its usage beyond healthcare and higher education professionals.

The relationship between ProfId and PsyCap (*RQ#2*) was assessed using a standard regression model in conjunction with participant demographic variables. The results indicate a positive and statistically significant relationship between PsyCap and ProfId among the respondent MBA students ( $p < .01$ ,  $\Delta R^2_{adj} = .25$ ,  $N = 593$ ).

*Finding #2. Psychological Capital and Professional Identity are positively related among MBA students.*

### Implications

The results of this study are relevant to ProfId and PsyCap academic literature and inform pedagogical approaches to improve student experiences. This study demonstrated the applicability of ProfId and the MCPIS-9 instrument for usage among professional business students. The results showed internal consistency for the scale items and, to the best of our knowledge, represented a new area of use for the scale. Secondly, this study demonstrated the juxtaposition of PsyCap with ProfId and reported a positive and statistically significant relationship. These two outcomes have implications for further theoretical development and applications in these areas.

The findings of this study inform professional degree program stakeholders. Firstly, a baseline measure of MBA student ProfId is reported in this study in the same manner that Johnston and Bilton (2020) advocated for paramedicine education programs. This is an important statistic for future comparisons and measuring the impacts of efforts to solidify MBA students' sense of belonging in their chosen career path and affect program measures such as student recruitment, retention, and performance. Furthermore, efforts to bolster ProfId may likewise be aimed at students' PsyCap since they are directly related. F. Luthans et al. (2007) advocated for short micro-interventions of a few hours that successfully improve PsyCap.

Based on the findings of this study, we present guidance to devise strategies that promote student success as a launch point into promising career trajectories. The first step is to promote awareness of the concept of ProfId among program stakeholders, including the students. As in this study, ascertaining a baseline level by using validated instruments like the MCPIS-9 is a logical starting point. We suggest integrating this instrument at entry and exit points in the program, for example, along with admission materials and readministering in final courses or stages of the program. We suggest monitoring the level of ProfId along with important program metrics such as attrition, enrollment, completion, and satisfaction. The concept of ProfId may also be introduced and promoted among students to equip them with strategies for self-driven development. Incorporating ProfId as a program or course learning goal (e.g., *Our students will develop a strong sense of professional identity*) further elevates the importance and program-wide ownership.

Beyond promoting awareness of ProfId, a subsequent step is to purposefully enact pedagogical interventions as informed by the literature and practice. Goradia and Bugarcic (2019) listed tutorials, academic counseling, study skill assistance, personal solutions, study aid modules, course topic workshops, welcome programs, social events, and mentoring programs.

## FUTURE RESEARCH & STUDY LIMITATIONS

As an application of the MCPIS-9 in a new context exploring the relationship with a heretofore-unrelated construct, this study lays the groundwork for subsequent research. The strength of students' PsyCap was not a central question to this study; however, results indicated a strong degree as measured by the PCQ-12;  $M = 4.82$  on a five-point scale,  $SD = .68$  ( $N = 593$ ). This is an area for future inquiry: to establish baseline metrics and approaches for professional student PsyCap, specifically monitoring changing PsyCap levels together with ProfId before and after pedagogical interventions.

The data of this study are self-report and represent students' perceptions of self. Corroborating self-reported perceptions with a performance indicator is a logical extension of this research. Students may have strong ProfId or PsyCap yet the extent to which these relate to student coursework performance, certification attainment, or career advancement is not included in the present study.

A measure of ProfId strength, the mean score of the MCPIS-9 instrument, was presented as a viable baseline measure; however, ProfId is evolutionary and develops over stages (Åkerlind, 2007). Additional data collected from students in an MBA program near the end of their program in the same manner as the research method in this study revealed levels of ProfId declined throughout the program ( $M = 3.57$ ,  $SD = 0.35$ ,  $N = 210$ ). These preliminary results set the stage for subsequent research inquiries addressing the nature of ProfId development from the rate of change and the extent to which interventions in a professional degree program positively affect a student's ProfId. These inquiries may include assessing the presence and strength of ProfId among working professionals and comparing that to their student counterparts.

Possessing a strong ProfId is a preferred psychological state (Beijaard et al., 2004) marked by success, achievement, and advancement in a profession as consistent with the community of professionals' valued behavior expectations (Paterson et al., 2002). Earning an MBA would seem to fall within that category yet a deterrent to ProfId may be the temporal psychological state of *Imposterism*. The terms Imposter Syndrome and Imposter Phenomena are popular in mainstream culture (e.g., BBC, 2018; Vogue, 2020) and refer to a psychological state of worry about being discovered as not as competent despite seemingly and generally accepted success and achievement (Chrousos, et al., 2020; Rakestraw, 2018; Wilkinson, 2020). Initial research of Imposter Phenomena focused on demographic characteristics (e.g., women in Clance, 1985 and Clance & Imes, 1978) and subsequently applied to professional settings (e.g., librarians in Wilkinson, 2020) with aims of further understanding the phenomena and offering interventions to alleviate it. This notion is gaining traction among students (Martinez & Forrey 2019; Rakestraw, 2017).

## CONCLUSION

This research article reports the results and findings of an online survey questionnaire administered to 593 Masters of Business Administration (MBA) students and included the MCPIS-9 and PCQ-12 research instruments that measure Professional Identity (ProfId) and Psychological Capital (PsyCap), respectively. The results of this study represent a fruitful, albeit initial, foray into the ProfId and PsyCap of professional business students.

Assessing the strength of ProfId is a fundamental step toward determining its role in student success in an MBA program. The results of this study indicated that MBA students possess a strong sense of ProfId, demonstrating the applicability of this instrument for this population. Secondly, the results of the study indicated that MBA students' PsyCap was statistically significant and positively related to their ProfId. The implications of these results promote further theoretical development among these constructs and research areas in addition to informing program stakeholders to devise curricular and pedagogical approaches to support students' sense of self in their career trajectory.

Ultimately this study seeks to understand and improve students' readiness for their professional careers. The results aim to inform program and curricular decisions in professional business programs by ascertaining the extent of Professional Identity and the relationship with Psychological Capital. Ascertaining levels of ProfId provide a baseline for future measurement and guidance for interjecting curricular and program mechanisms that maintain or improve levels for students. For example, Nadelson and Fannigan's (2014) positive findings among STEM students as learning assistants and Goradia and Bugarcic's (2019) connection to student attrition and retention. Elucidating the relationship between ProfId and PsyCap further enables program stakeholders to purposefully act as stewards of the content and tools to measure, support, encourage, and improve a career-positive mindset for their students.

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