

The Impact of Psychological Capital on Prosocial Behaviour: A Systemic Review

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Abstract

To systematically evaluate the impact of psychological capital on individual prosocial behaviour. Methodology: Literature searches were conducted in the Scopus, APA PsycInfo, and PubMed databases for studies on the relationship between psychological capital and prosocial behaviour. Selected articles underwent quality assessment, and relevant data were extracted for a comprehensive review of the influence of psychological capital on prosocial behaviour. Results: A total of 6 studies were included, involving 41 independent effect sizes and 3203 participants. Findings that women exhibit higher levels of empathy and perspective taking than men, and they have higher levels of prosocial. Psychological capital positively predicts prosocial behaviour, and yoga and meditation can enhance psychological capital. Conclusion: Psychological capital can positively predict prosocial behaviour. Yoga and meditation can promote individuals' positive psychological capital.

Keywords: Psychological Capital, Prosocial Behaviour, Altruistic Behaviour, Systematic Review

Introduction

Psychological capital is a collective of individual positive psychological resources and energies. Luthans (2007a, 2007b) defines psychological capital as the combination of four factors: self-efficacy, hope, optimism, and resilience. Myers (2012) suggests that optimistic individuals possess higher levels of self-efficacy, which facilitates prosocial behaviour. Individuals with high levels of resilience strive to maintain a positive and optimistic emotional state, which in turn stimulates altruistic motives (Fontes et al., 2022). In recent years, empirical studies have further revealed that psychological capital can positively predict individuals' prosocial behaviour (Dagar, Pandey & Navare, 2022; Shao & Hu, 2018; Naik et al., 2017; Wang, 2017).

Prosocial behaviour refers to actions undertaken by individuals, regardless of the motive, that benefit others or society as a whole (Wispe, 1972). Prosocial behaviour is also considered a social conduct that fosters positive reciprocity, unity, and enhances the quality of

interpersonal or social relationships, thereby safeguarding the identity, creativity, and initiative of the relevant individuals or groups (Roche et al., 2022). While prosocial behaviour typically manifests as a singular, unified dimension, some studies indicate the existence of different types. These types are distinguished based on their underlying motives and include Proactive, Reactive, and Altruistic behaviours (Dunfield, 2014). Although some scholars advocate for the differentiation between altruism and prosocial behaviour, the majority of current research still regards altruism as a form of prosocial behaviour or sees them as related (Pfattheicher, Nielsen & Thielmann, 2022). Many studies tend to describe prosocial and altruistic behaviours as "positive" social behaviours towards one or more other individuals, with these actions being depicted as promoting or intended to promote the well-being of others (Schroeder & Graziano, 2015; Staub, 2013; Wispe, 1972).

Nowadays, numerous empirical studies and systematic reviews have focused on individual positive psychological capital and individual prosocial behaviour (Nolzen, 2018; Çavuş & Gökçen, 2015; Newman et al., 2014; Penner et al., 2005), and have proposed solutions for enhancing individual psychological capital or promoting the generation of prosocial behaviour (Curotto et al., 2022; Hafenbrack, 2020; Lupşa et al., 2020). However, research on the relationship between psychological capital and prosocial behaviour, and how increasing positive psychological capital can promote individual prosocial behaviour, remains insufficient. Therefore, the research questions of this study are: 1. If psychological capital can influence individual prosocial behaviour? 2. Is there a way to increase individual's psychological capital?

This study adopts a systematic review approach to systematically summarize the research on the impact of psychological capital on prosocial behaviour, analyse the pathways through which psychological capital influences individual prosocial behaviour, and summarize methods for enhancing psychological capital to promote individual prosocial behaviour.

Methodology

Research Design

Current research has demonstrated that positive psychological capital can foster individual prosocial behaviour. This design, interpretation, drafting, and revision of the study follow the guidelines of *The Preferred Reporting Items for Systematic Reviews and Meta-Analyses* (PRISMA). The conceptual framework of the study is illustrated in Figure 1.

Searching Strategy

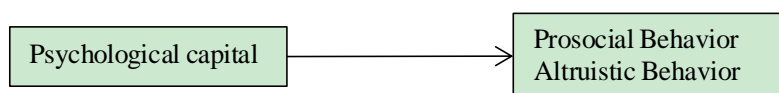


Figure 1 Conceptual Framework of the Study

English databases SCOPUS, APA PSYCINFO, and PUBMED were searched to retrieve relevant full-text articles. The search keywords included: Psychological Capital, Prosocial behaviour, Altruistic behaviour. Advanced search techniques were employed to combine search terms for title, abstract, and keyword searches. The search terms were combined as follows:

psychological capital + terms related to prosocial behaviour, and the search language was English. The search logic is detailed in Table 1.

Table 1
Searching Keywords and Searching Logic

Database	Key words used
SCOPUS	#1“psychological capital” [Title/Abstract/Key Words]
APA PsycInfo	#2"prosocial behavior" [Title/Abstract/Key Words]
PubMed	#3"altruistic behavior" [Title/Abstract/Key Words]
	#4"prosocial"[Title/Abstract/Key Words]
	#5"altruistic"[Title/Abstract/Key Words]
	#6 #1AND#2
	#7 #1AND#3
	#8 #1AND#4
	#9 #1AND#5

Inclusion and Exclusion Criteria

Inclusion criteria: 1. Articles published in English; 2. Full-text articles; 3. Variables must include "psychological capital" and "prosocial behaviour" or related to prosocial behaviour; 4. Clear reporting of measurement tools, with complete data reporting; 5. Outcome variables must be related to prosocial behaviour, and studies with multiple outcome measures are also included.

Exclusion criteria: 1. Conference papers, abstracts, or other non-full-text articles; 2. Articles published in languages other than English; 3. Predictor variables are not psychological capital or outcome variables are not related to prosocial behaviour.

Table 2
Inclusion and Exclusion Criteria

Criterion	Eligibility	Exclusion
Language	English	Non English
Variable	Psychological Capital prosocial behavior altruistic behavior	Dependent variable is not prosocial or prosocial related
Literature type	full report	Non-full-text report
	explicitly stating the measurement tools used	The outcome variable is not 'prosocial behavior' or 'altruistic behavior' or 'prosocial related'
	complete data reporting	

Article Screening

Initially, all retrieved articles were imported into reference management software, and duplicates were removed using a combination of software functionality and manual checks to exclude duplicate search articles and remove duplicate publications. Subsequently, articles were screened based on language, and titles and abstracts were screened according to inclusion and exclusion criteria to further eliminate duplicate articles appearing in different databases. Full-text reading screening was then conducted to further check the completeness

of article data and measurement tools, and articles that did not meet the inclusion criteria regarding variables were excluded, determining whether the literature entered the data extraction stage. The article screening process is illustrated in Figure 2.

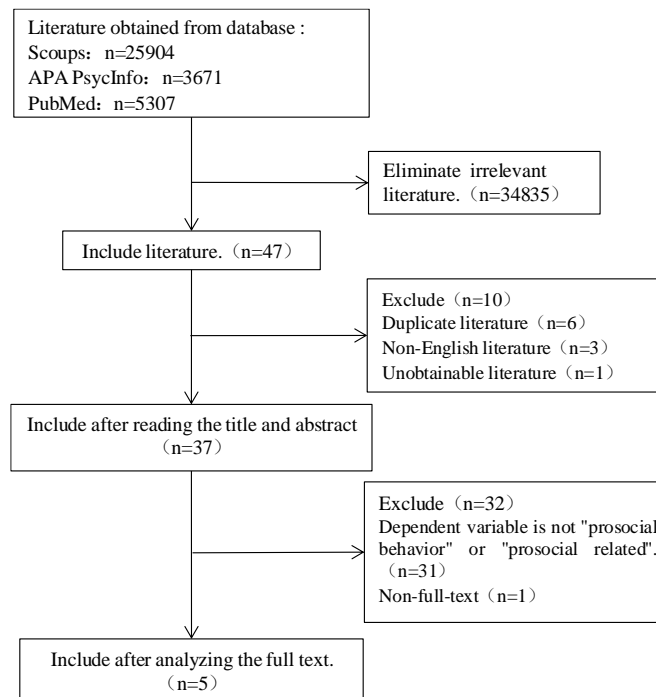


Figure 2: Literature Screening Process

Data Extraction

According to the analysis plan, data extraction was performed for each included article, including information such as study time, location, subjects, sample size, research objectives, research methods, main results, and measurement tools. The information of the included articles for analysis is shown in Table 3.

Table 3
Data Extraction of Included Studies

Reference	Title and Journal	Study design, Setting and Country	Main aim	Participants	Type of PSY-CAP measure	Type of DV measure	DAM	Type of scales	Findings
Zhang, S., Fu, Y., N., Liu, Q., Turel, O., & He, Q. (2022)	Psychological capital mediates the influence of meaning in life on prosocial behavior of university students: A longitudinal study Children and Youth Services Review	longitudinally tested; Universities; Sichuan,China	examine the association between meaning in life and prosocial behavior; examine a key mediation mechanism between meaning in life and prosocial behavior	N= 913 (Mage= 19.63, SD= 1.04) Males = 234 Females = 642 37 participants did not report on gender.	The four dimensions of the concept of psychological capital: hope, resilience, optimism, and efficacy Self-report	Six types of prosocial behaviors: altruistic, compliant, emotional, dire, public, and anonymous Self-report	Bootstrap method to test the mediation effect of the Psy Cap	Psy-Cap:The Positive Psychological Capital Questionnaire (PPQ) (Zhang et al, 2010a, 2010b) Prosocial Behavior-Chinese version of The Prosocial Tendencies Measure (PTM) (Carlo & Randall, 2002)	PsyCap mediated the relationship between meaning in life and prosocial behavior mainly through the optimism and self-efficacy facets of PsyCap. After including the four dimensions of PsyCap, the association between meaning in life and prosocial behavior became non-significance ($\beta = 0.012, p = 0.769$) The mediating roles of optimism indirect effect = 0.036; 95% CI [0.007-0.071] The mediating roles self-efficacy indirect effect = 0.044; 95% CI [0.013-0.080]
Yang, Y., Yang, Z., & Qu, W. (2022)	Childhood maltreatment and prosocial behavior: Roles of social support and psychological capital Social Behavior and Personality: an international journal	Cross-sectional study High school Changsha Hunan, China	examine the association between Childhood Maltreatment and Prosocial Behavior examine a key mediation mechanism between Childhood Maltreatment and prosocial behavior	N=581(Mage= 16.20, SD = 1.56) Males=221 Females=360	Four dimensions of Psy-Cap: self-efficacy, optimism, hope, and resilience Self-report	six dimensions of Prosocial Behavior: public, emotional, dire, altruistic, compliant, and anonymous. Self-report	Bootstrapping procedure to examine the mediating effect.	Psy-Cap.The Positive Psychological Capital Questionnaire (Luthans et al., 2007, Zhang et al, 2010) Prosocial Behavior: The Prosocial Tendencies Measure (Carlo & Randall, 2002).	Social support and psychological capital mediated the relationship between childhood maltreatment and prosocial behavior in parallel. The sequential pathway from childhood maltreatment to prosocial behavior through social support and psychological capital was significant, indirect effect = -0.09, 95% CI [-0.12 to -0.06]. Thus, childhood maltreatment was also serially related to lower social support, $\beta = -0.37, p < .001$, lower psychological capital, $\beta = .47, p < .001$, and fewer prosocial behaviors, $\beta = -.51, p < .001$. The residual direct pathway from childhood maltreatment to prosocial behavior was significant, $\beta = -.11, p < .001$.

<p>Dagar, C., Pandey, A., & Navate, A. (2022). Examining the role of subjective vitality, self-transcendence, and psychological capital. <i>Journal of Business Ethics</i></p>	<p>Study1: Cross-sectional study Business schools, India Study2: longitudinal randomized controlled experiment design University, India</p>	<p>examine the impact of SV and ST on altruistic behavior mediated by PsyCap Study1: N=343 (Male=222, Female=121) Study2: N=109 (Male=66, Female=43)</p>	<p>Study1: Measuring five dimensions of psychological capital in MBA students Self report</p>	<p>Study1: Measuring helping behavior and helping intentions Self report</p>	<p>Study1: structural equation modeling to test the mediation hypotheses Mis-constructed bootstrapped test (Luthans et al. 2007a) at 5000 replications Study2: One-way repeated measures ANOVA was used to examine the changes in SV, ST, PsyCap and altruism.</p>	<p>Study1: PsyCap played a mediating role in SV to altruism (F4) ($\beta = 3.08, p < 0.01$) - SV on altruism via PsyCap (effect = 0.19, 95% CI [0.06-0.37]), and ST on altruism via PsyCap (effect = 0.12, 95% CI [0.03-0.22]) were significant Study2: Similar effect was seen on altruism self-report (F1, 56 = 8.307, $p = 0.004$, $\eta^2 = 0.08$) and other report (F1, 56 = 27.458, $p < 0.001$, $\eta^2 = 0.31$). Amount of change in PsyCap and altruistic behavior was significantly more in the experimental group in comparison to the control group.</p>
<p>Martínez-Orgueta, E., Tomé, J., M., Obitero, A. (2023). A psychometric study of the Behavioral Sciences</p>	<p>Cross-sectional study High school, Valencia, Spain</p>	<p>General aim to evaluate the psychometric properties in its Spanish adaptation To verify its unidimensionality, reliability, and gender-related differential item functioning. To collect evidence of its nomological validity</p>	<p>Measures the four subdimensions of psychological capital in the context of self-efficacy, hope, and resilience, optimism, and self-report</p>	<p>Measures 4 dimensions of psychological capital in the context of self-efficacy, hope, and resilience, optimism, and self-report</p>	<p>Pearson's correlation to test the nomological validity of the psychological capital subdimensions and the total score of Prosocial Behavior Scale (PBS) (Caprara et al. 1993)</p>	<p>Sub-dimension with the lowest relationship with prosocial behavior was resilience Only optimism and self-efficacy showed statistically significant coefficients. Studies that included psychological capital as a global dimension also reported a positive effect on prosocial behavior</p>
<p>Zeng, L., Feng, F., Ma, N., Li, X., & Wang, J. (2023). Psychological capital and organizational citizenship behavior among nurses during the COVID-19 epidemic: mediations of organizational commitment BMC nursing</p>	<p>Cross-sectional survey Hospital, Chengdu, Sichuan, China</p>	<p>Examine the association between nurses' psychological capital, organizational commitment, and organizational citizenship behavior during the COVID-19 epidemic. N=746 (Male=30, 99SD=11.97) Male=35, Female=711</p>	<p>4 dimensions of PsyCap: self-efficacy, hope, resiliency and optimism Self report</p>	<p>4 dimensions of organizational citizenship behavior: self-development, responsibility, consciousness, actively solving, helping colleagues, and organizational identity Self report</p>	<p>Pearson correlation analysis was used to determine whether there was a correlation between nurses' psychological capital, OCQ-Organizational Commitment Questionnaire (C-OCQ) (Chang et al. 2008)</p>	<p>Psychological capital had a significant direct effect on organizational citizenship behavior ($\beta = 0.624, p = 0.003$) and organizational citizenship behavior ($\beta = 0.339, p = 0.001$) The indirect effect of psychological capital on organizational citizenship behavior was 0.146 ($p = 0.001$)</p>

Characteristics of included literature

Five papers meeting the criteria were included, encompassing six studies and involving 3203 samples. The majority of the samples were students, but in one study which examining the relationship between psychological capital and citizenship behaviour, researchers surveyed 746 nurses from Chengdu, China. The purposes and research designs of these studies varied. Most studies employed a cross-sectional research design, while one study on the relationship between meaning in life and prosocial behaviour utilized a longitudinal research design. Among the six studies included, five used self-report scales to measure the relationships and levels of variables, while one conducted a longitudinal experiment with randomized control and experimental groups involving 109 graduate students from India. A commonality among the studies included in the analysis was the predominant use of Luthans et al.'s (2007) PCQ-24 and PCQ-12 as measurement instrument for psychological capital.

The cross-sectional studies included in the analysis all involved one-time data collection and were analyzed using SPSS. Shuyue Zhang et al. (2022) surveyed freshmen from the same university in June (T1), September (T2), and December (T3) on the themes of "sense of life meaning" and "prosocial behavior," with psychological capital as the mediating variable in the relationship between sense of life meaning and prosocial behavior. Chirag Dagar et al. (2020) divided students participating in the experiment into a control group (n=53) and an experimental group (n=56) to measure the effects of yoga and meditation on promoting individuals' positive psychological capital. Data on psychological capital scales and altruistic behavior scales were collected from both the experimental and control groups' participants at pre-course (T1), post-course after 8 weeks (T2), and at a 4-month follow-up post-course (T3).

Association Between Exposure and Outcome

The studies included in the analysis consistently showed a positive correlation between psychological capital and prosocial behaviour. Qu et al. (2022) confirmed a positive correlation between psychological capital and prosocial behaviour ($\beta = 0.60$, $p < 0.001$), with psychological capital explaining 52.94% of the variance in prosocial behaviour. This conclusion was supported by Dagar et al. (2019), who found a positive impact of PsyCap on altruism ($\beta = 0.37$, $SE = 0.04$, $p < 0.001$). PsyCap also acted as a mediator in the relationship between Subjective Vitality and altruism ($z = 3.06$, $p < 0.01$), as well as Self-transcendence and altruism ($z = 2.81$, $p < 0.01$).

The Impact of Psychological Capital on Prosocial Behavior Levels

Zhen et al. (2023) confirmed a positive correlation between psychological capital and organisational citizenship behaviour ($r = 0.636$, $p < 0.001$). Earlier studies supported the findings of Zhen (2023). Zhang et al. (2022) found in the four dimensions of Psy-Cap that optimism (95% confidence interval does not include zero; indirect effect = 0.036; 95% CI [0.007-0.071]) and self-efficacy (95% confidence interval does not include zero; indirect effect = 0.044; 95% CI [0.013-0.080]) mediated the impact of meaning in life on prosocial behaviour, indicating that in the four dimensions of psychological capital, optimism and self-efficacy are predictors of prosocial behaviour.

Gender Differences in Psychological Capital and Prosocial Behavior

Individual levels of prosociality and gender differences in psychological capital are evident. In a meta-analysis, Martínez et al. (2023) found that women exhibit slightly higher levels of prosociality compared to men, with women scoring higher in emotional support within the realm of prosocial behaviours. This conclusion is supported by a plethora of earlier studies (Kamas & Preston, 2021; Abdullahi & Kumar, 2016; Eagly, 2009). Kamas and Preston (2021) found that women have higher levels of empathy than men and validated empathy as a predictor of prosocial behaviour, thus concluding that women exhibit higher levels of prosociality than men. Abdullahi & Kumar (2016) found significant differences in perspective taking ($t = 2.04$, $p < 0.05$) and other oriented moral reasoning ($t = 2.01$, $p < 0.05$), with women significantly outperforming men in these aspects, leading to the conclusion that women exhibit higher levels of prosociality under the influence of these two factors.

Methods to Enhance Individual Psychological Capital Levels

In the 6 studies included in the analysis, Dagar et al. (2019) found in their research on yoga and meditation that yoga training and mindfulness meditation can enhance individual's psychological capital (ICC: $T1=0.86$, $T2=0.89$). Additionally, Dagar et al. (2019) also reported the promoting effect of altruism on psychological capital. This conclusion has also been confirmed in some studies on cancer patients (Han et al., 2023; McCall et al., 2015). Han et al. (2023) found in a controlled experiment with 84 Chinese lung cancer patients that patients receiving yoga intervention scored significantly higher in positive psychological capital ($P < .01$, Cohen's $d = 0.692$). McCall et al. (2015) found in a study of 12 Iranian cancer patients that the breathing techniques and meditation in yoga can enhance stress reduction and increase psychological resilience in patients.

Discussion

This study followed the PRISMA-Protocol to search and select English databases, identifying 6 studies exploring the influence of psychological capital on prosocial behavior. The study concluded that yoga and meditation can promote individuals' positive psychological capital. It was found that psychological capital can positively predict prosocial behavior, and enhancing psychological capital can promote individuals' prosocial behavior.

However, this study has limitations. Firstly, prosocial behavior includes Proactive, Reactive, and Altruistic aspects. Yet, most studies exploring the relationship between psychological capital and prosocial behavior rarely differentiate these three dimensions of prosocial behavior. Therefore, the studies included in the analysis only covered prosocial and altruistic behaviors. Secondly, there are rural-urban differences in prosocial behavior, with rural residents being more helpful (Stebila, 1987). However, most of the demographic differences in prosocial behavior focus on gender, and recent studies have paid little attention to the differences in prosocial levels brought about by rural-urban differences. Therefore, this study also failed to deduce the differences in prosocial behavior or psychological capital between urban and rural samples. This study suggests that future research should focus more on developing methods to promote individual psychological capital and explore rural-urban differences in prosocial behavior, as well as how to improve the level of prosocial behavior among urban populations.

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