

INPLASY PROTOCOL

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Corresponding author:
Luhong Ma

maluhong1992@gmail.com

Author Affiliation:
Universiti Putra Malaysia.

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The influence of self-efficacy on burnout and professional development of physical education teachers in the digital age: a systematic review

Ma, LH¹.

Review question / Objective: a. Is there a significant correlation between self-efficacy, burnout, adaptability, administrative support, and professional development of effective physical education teachers in a digital context?
b. Is there a positive relationship between burnout and professional development mediated by self-efficacy?
c. Is there a positive relationship between adaptability and professional development mediated by self-efficacy?
d. Is there a positive relationship between administrative support and professional development mediated by self-efficacy?
e. Is there a change in the relationship between burnout, adaptability, administrative support, and professional development mediated by self-efficacy?

Eligibility criteria: 1. Screening physical education teachers for professional development
2. The relationship between self-efficacy in professional development
3. the relationship between self-efficacy in burnout

INPLASY registration number: This protocol was registered with the International Platform of Registered Systematic Review and Meta-Analysis Protocols (INPLASY) on 08 June 2023 and was last updated on 08 June 2023 (registration number INPLASY202360026).

INTRODUCTION

Review question / Objective: a. Is there a significant correlation between self-efficacy, burnout, adaptability, administrative support, and professional development of effective physical education teachers in a digital context?

b. Is there a positive relationship between burnout and professional development mediated by self-efficacy?
c. Is there a positive relationship between adaptability and professional development mediated by self-efficacy?

d. Is there a positive relationship between administrative support and professional development mediated by self-efficacy?

e. Is there a change in the relationship between burnout, adaptability, administrative support, and professional development mediated by self-efficacy?

Rationale: Professional development is the main line of this study and the TPD theoretical framework is the main popular framework of the teaching profession. In the TPD theory of OBL, administrative support is used as one of the environment and existing context, and adaptability is in line with the environment and intrinsic factors of teacher change. Self-efficacy is an important influencing factor in identifying TPD strategies to overtake OBL. In addition, the theoretical framework of burnout is more established, and the same JD-R theoretical model was applied to the variables in this study. As employees need personal needs (self-efficacy, adaptability) and job resources (administrative support, performance, etc.). Secondly, self-efficacy perception theory is a known mediating variable theory (Wang et al., 2015; Wang et al., 2020). There is literature suggesting that self-efficacy mediates effects between career adaptability and professional development (McLennan et al., 2017). Also, it was confirmed that self-efficacy was used as a mediating variable in the study of burnout (Wang et al., 2015). In sport research, self-efficacy also frequently appears as a mediating variable (Wang et al., 2020). Based on these theories, this study will integrate a conceptual framework (Figure 4) and examine the relationships among its variables to further serve as a cornerstone for future professional development, reduce teacher burnout, and improve professional development.

Condition being studied: In summary of the relevant studies, (Liu, 2022) The study of the relationship between burnout and administrative support was studied using self-efficacy as a mediating condition, but it is a mixed study. There was a negative correlation between teacher burnout and professional adaptability (Doganülkü &

Kirdök, 2021). During COVID-19, a researcher published an opinion confirming the moderating effect of adaptability and burnout on changes in online teachers' self-efficacy (Ma et al., 2021). Self-efficacy has been shown to be a mediator of burnout, and adaptability.(McLennan et al., 2017). First, the researchers used quantitative research to show that self-efficacy and teachers' personal perseverance was correlated with performance levels, and also found that teacher burnout was associated with personal family factors and predicted future influences, indicating that administrative support, work motivation, and organizational culture could be validated with them for analysis (Fabelico & Afalla, 2020). Second, self-efficacy was negatively related to burnout (Bottiani et al., 2019; Fathi J, 2021; Zee & Koomen, 2016). Symptoms of burnout are influenced by the extent to which teachers experience professional growth, self-efficacy, and the environment of perceived success in professional development, which decreases (Bümen, 2010). Finally, teachers' professional development efforts had a positive effect on self-efficacy. Teachers' acquisition of new knowledge was positively related to self-efficacy in general, but the literature did not examine whether they could be inversely studied (Yoo, 2016). There was no simultaneous study found to examine the mediating role of self-efficacy in teacher burnout and professional development; therefore, the gap in this study is also the effect of self-efficacy on teacher burnout, adaptability, and administrative support on teacher professional development.

METHODS

Participant or population: University Physical Education Teachers.

Intervention: Self-efficacy.

Comparator: Burnout and Professional Development in the Digital Age.

Study designs to be included: Descriptive statistics such as maximum, minimum, mean, and percentage were used to describe physical education teachers' burnout, adjustment, administrative support, and professional development. In addition, correlational tests were used to determine if there was a strong relationship between professional development and burnout, adaptability, and administrative support among physical education teachers. Factor analysis was used to reduce the dimensionality of the data and extract valid factors, and then multiple regression linear analysis was used to further identify the relationship between.

Eligibility criteria: 1. Screening physical education teachers for professional development 2. The relationship between self-efficacy in professional development 3. the relationship between self-efficacy in burnout.

Information sources: PubMed, China Knowledge Network, web of Science, University Library of Botra, Malaysia, Google Scholar, Scopus.

Main outcome(s): 30/09/2022 Defined the topic. 30/11/2022 Defined the topic proposal first time. 25/03/2023 Finished the first three chapters. 30/06/2023 Finish the proposal defence. 30/09/2023 Complete data collection. 31/12/2023 Finish the thesis.

Quality assessment / Risk of bias analysis: Methodological quality will be used for the AMSTAR scale and the reporting quality PRISMA 2020 scale. Us PRISMA 2020.

Strategy of data synthesis: Use SPSS 26.0 or mate view for statistical analysis of data.

Subgroup analysis: Professional development is the main line of this study and the TPD theoretical framework is the main popular framework of the teaching profession. In the TPD theory of OBL, administrative support is used as one of the environment and existing context, and adaptability is in line with the environment and intrinsic factors of teacher change.

Self-efficacy is an important influencing factor in identifying TPD strategies to overtake OBL. In addition, the theoretical framework of burnout is more established, and the same JD-R theoretical model was applied to the variables in this study. As employees need personal needs (self-efficacy, adaptability) and job resources (administrative support, performance, etc.). Secondly, self-efficacy perception theory is a known mediating variable theory (Wang et al., 2015; Wang et al., 2020). There is literature suggesting that self-efficacy mediates effects between career adaptability and professional development (McLennan et al., 2017). Also, it was confirmed that self-efficacy was used as a mediating variable in the study of burnout (Wang et al., 2015). In sport research, self-efficacy also frequently appears as a mediating variable (Wang et al., 2020). Based on these theories, this study will integrate a conceptual framework (Figure 4) and examine the relationships among its variables to further serve as a cornerstone for future professional development, reduce teacher burnout, and improve professional development.

Sensitivity analysis: Before data extraction and quality evaluation, training and pre-evaluation of the use of the AMSTAR scale and PRISMA scale were conducted to discuss the problems and disagreements encountered during data extraction and evaluation. If the included literature belonged to the relevant analysis category and not to the trial (intervention) category, the AMSTAR 2 and PRISMA entries about the trial (intervention) were not considered in the evaluation process. For example, entries involving elements of PICO (P is the study population; I is the intervention; C is the control condition; O is the outcome indicator) were evaluated in the meta-analysis of the relevant analysis category only for elements of PO. The formal literature data extraction and quality evaluation process was done independently by the second and third authors of this paper and cross-checked, discussed together, or discussed and agreed with the first author.

Country(ies) involved: China.

Keywords: Physical education teacher self-efficacy; physical education teacher professional development; physical education teacher burnout; digital physical education teacher professional development.

Contributions of each author:

Author 1 - Luhong Ma.

Conflicts of interest: In research projects on teacher education in Norway, Germany, Chile, Cuba, Finland and the USA, professional development was shown to be the most essential component (Brevik et al., 2019). Zawacki-Richter(2021) has stated that in the digital age, teacher professional development, and corresponding organization are prerequisites for higher education. According to China's latest education policy, promoting innovation in education and teaching and combining information technology and intelligent technology with education and teaching are the practical directions and teaching goals to be realized in the current few years (Office, 2021).