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Correlating Self-Efficacy for Teaching Personal and Social Development With Other Aspects of Physical Educators' Self-Efficacy

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Abstract

Research indicates physical education can foster personal and social development. However, few studies have examined teacher beliefs about delivering this aspect of the curriculum. To move research and practice forward, it is important to understand educators' self-efficacy beliefs. Therefore, the purpose of this study was to examine the relationships between physical education teachers' self-efficacy for teaching personal and social development, and other aspects of teachers' self-efficacy. Participants were 116 (73 women, 43 men) practicing, licensed physical education teachers who completed the Exemplary Physical Education Curriculum Self-Efficacy Survey and the General Education Efficacy Survey. Pearson correlations indicate significant ($p < 0.001$) positive relationships ($r > 0.30$) between participants' self-efficacy for teaching personal and social development and other aspects of physical education as well as general teacher efficacy. Findings support the relevance of self-efficacy for teaching personal and social development in physical

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education. Implications for practice and professional development are discussed as well as the need for continued research.

The literature calls for better understanding physical education teachers' effectiveness in promoting student learning outcomes (Hastie, 2017; McKenzie & Lounsbery, 2013). This involves supporting students' cognitive, psychomotor, and affective development (SHAPE America, 2013). However, research and professional development in physical education have focused primarily on psychomotor and physical activity outcomes due partly to public health concerns such as childhood obesity and physical activity (Amis et al., 2012; Hastie, 2017; McKenzie & Lounsbery, 2013; Wright & Walsh, 2015). While the importance of psychomotor and physical activity outcomes is clear, an unintended consequence has been the continued neglect of equally important affective learning outcomes related to personal and social development (Amis et al., 2012; Hastie, 2017; Hellison, 2011; Jacobs & Wright, 2014; Wright & Walsh, 2015). To effectively deliver high-quality physical education and promote physical literacy as defined in the United States content standards (SHAPE America, 2013), physical educators must be adept at teaching to all learning domains. As illustrated by Wright and Irwin (2018) in a comparative case study, it stands to reason that a teacher who is less effective in addressing their students' personal and social development will probably be less effective in addressing other aspects of the curriculum due to lower levels of motivation and engagement as well as more frequent behavioral problems. Therefore, to better support teacher effectiveness, the delivery of quality physical education, and the well-rounded development of students, researchers must better understand teacher effectiveness as it relates to personal and social development. This topic constitutes a weak link in our understanding of teacher effectiveness and must be addressed to identify best practice and inform teacher training and professional development.

The national physical education content standards address personal and social learning outcomes such as responsibility, respect, self-expression, and social interaction (SHAPE America, 2013). Because such outcomes are historically ill-defined and assigned secondary importance, our ability to describe teacher effectiveness in

this area is lacking (Hastie, 2017; Jacobs & Wright, 2014; Wright & Walsh, 2015). However, by virtue of their inclusion in the national content standards, these learning outcomes merit equal attention within the physical education curriculum. They also provide a strong link to cross-curricular educational initiatives such as social and emotional learning (SEL) in K–12 schooling (Jacobs & Wright, 2014). According to the Collaborative for Academic, Social, and Emotional Learning (2019), SEL is the process through which children understand and manage emotions, set and achieve positive goals, feel and show empathy for others, establish and maintain positive relationships, and make responsible decisions. Extensive research has demonstrated that students who have greater SEL competencies are more likely to engage in school and achieve academically, while they are less likely to have conduct problems and struggle with mental health issues such as depression (Durlak et al., 2011; Taylor et al., 2017). The state of Illinois, where this study was conducted, is one of many states that has adopted K–12 SEL standards related to self-awareness, self-management, social awareness, relationship skills, and responsible decision-making (Illinois State Board of Education, n.d.). Because physical education is social, dynamic, and interactive, it is an ideal space in the curriculum to develop such competencies (Hellison, 2011). In this light, understanding and better supporting teacher effectiveness related to personal and social learning outcomes is important not only to delivering quality physical education but also to advocating for the relevance of physical education in the well-rounded development of K–12 students (Jacobs & Wright, 2014).

While more research on teaching personal and social development in physical education is needed, promising practices have already been identified. For example, Hellison's (2011) Teaching Personal and Social Responsibility (TPSR) model has been recognized for decades as an exemplary approach to promoting affective development in physical education and youth sport programs (Metzler, 2000; Petitpas et al., 2005). The TPSR model has moved the field forward in terms of articulating specific responsibility-based goals and learning outcomes including

- respecting the rights and feelings of others (e.g., controlling one's temper, including others, resolving conflict peacefully),

- self-motivation (e.g., participating, persisting, giving best effort),
- self-direction (e.g., setting goals, making choices, working independently), and
- caring (e.g., helping, encouraging, and leading others).

Hellison (2011) advocated for a student-centered approach to teaching that gives students authentic opportunities to practice these skills in physical education. By explicitly addressing such skills, giving students opportunities to practice them, and promoting their transfer to other settings (e.g., home, classroom, community), Hellison's model mirrors the theory of action guiding effective SEL interventions (Jacobs & Wright, 2014; Taylor et al., 2017). Dozens of studies and evaluations have been conducted on TPSR-inspired programs around the world. Reviews of literature (Baptista et al., 2020; Pozo et al., 2018) have indicated that when teachers implement the model and associated teaching strategies effectively, students report higher levels of enjoyment, engagement, and motivation. Moreover, students typically demonstrate more responsible and prosocial behaviors in the program and often report transferring learning from the program to other settings.

The TPSR literature provides insights on the types of teaching behavior that gives rise to greater levels of personal and social development. Systematic observation studies have indicated that teacher effectiveness in promoting personal and social skills is positively and significantly correlated to student enactment of such skills (Escartí et al., 2016; Escartí et al., 2015). Specifically, these studies have referred to a set of nine strategies from the Tool for Assessing Responsibility-Based Education (TARE; Wright & Craig, 2011). The strategies align with the TPSR model but can be generalized to serve as indicators of teacher effectiveness in promoting affective goals in physical education (Wright & Irwin, 2018) and the broader construct of SEL (Gordon et al., 2016). The nine strategies are modeling respect, setting clear expectations, ensuring opportunities for success, assigning management tasks, giving students choices and voices in the program, fostering social interaction, providing leadership opportunities, involving students in assessment, and promoting

transfer to other settings. Table 1 provides several examples of how these TARE teaching strategies can be effectively applied in practice.

Table 1
TARE Teaching Strategies With Examples of Effective Practice

Teaching strategy	Examples of effective practice
Modeling respect	Teacher knows student names and uses them; makes eye contact and listens to students; recognizes students as individuals
Setting expectations	Teacher makes plans for each lesson clear; is explicit and consistent about behavioral norms; manages class so all students understand what they should be doing
Providing opportunities for success	Teacher makes sure all students have the opportunity to experience success; differentiates instruction; individualizes tasks; focuses on personal best, improvement, and effort
Fostering social interaction	Teacher creates structures for meaningful student–student interaction; lets students work together in groups; challenges students to solve problems and give each other feedback
Assigning management tasks	Teacher asks students to help take attendance, keep records, or organize equipment and materials; gives students real responsibilities as timekeepers, referees, etc.

Table 1 (cont.)

Teaching strategy	Examples of effective practice
Promoting leadership	Teacher invites students to lead the class in a warm-up; assigns team captains or student leaders at stations; pairs up students to take turns as peer-coaches
Giving choices and voices	Teacher allows class to vote on what unit will be covered next; lets individuals choose which activity or intensity level to work at; invites students' opinions and suggestions
Involving students in assessment	Teacher lets students conduct self- and peer-assessments of performance objectives; allows students to give each other feedback and have some input on how they will be assessed
Addressing transfer of life skills	Teacher talks explicitly about life skill transfer; makes sure students understand the life skills and can articulate ways to transfer them to other settings; challenges students to do so

Comparative case studies have indicated teachers who implement strategies from the TARE seem to be more effective teachers overall (Wright & Craig, 2011; Wright & Irwin, 2018). Furthermore, action research studies have demonstrated that professional development for physical educators can increase their confidence and ability to teach personal and social skills (Coulson et al., 2012; Gray et al., 2019; Hemphill et al., 2013; Pascual et al., 2011). Across these studies, findings indicate that teachers' confidence and ability to teach personal and social development relates to their overall

teaching effectiveness. The construct of self-efficacy (Bandura, 1997) and associated measures could be useful in understanding such relationships; however, no published studies to date have explored this connection.

Self-efficacy is a highly relevant construct that has been underutilized in studying teacher effectiveness in physical education (Martin et al., 2008). According to Bandura (1997), self-efficacy is the perception of one's ability to perform a task successfully. Focusing on tasks specific to teaching, teacher efficacy has been defined as "the extent to which the teacher believes he or she has the capacity to affect student performance" (Berman et al., 1977, p. 137), or as "teachers' belief or conviction that they can influence how well students learn, even those who may be difficult or unmotivated" (Guskey & Passaro, 1994, p. 628). Research has shown that teachers' effectiveness is predicted by their self-efficacy (Bandura, 1990; Ross, 1994). Several studies have connected classroom teachers' self-efficacy to more effective teaching behaviors and student outcomes (Anderson et al., 1988; Ashton & Webb, 1986; Midgley et al., 1989; Ross, 1992). Teacher efficacy also appears to influence students' attitude and affective growth (Tschannen-Moran et al., 1998). This is supported by a literature review in which Ross (1994) analyzed 88 studies focusing on antecedents and consequences of teacher efficacy. Related to consequences of teacher efficacy, Ross (1994) found that higher teacher efficacy was associated with the teachers' use of more challenging pedagogy, implementation of innovative programs, and integration of more developmental classroom management practices. These factors were associated with enhanced student mastery of cognitive and affective goals. This supports the notion that general teacher efficacy may correspond with self-efficacy for teaching personal and social development.

As explained, some research in physical education has suggested that a teacher's effectiveness in promoting personal and social development may be related to positive student outcomes and other aspects of teacher effectiveness (Escartí et al., 2016; Escartí et al., 2015; Wright & Craig, 2011; Wright & Irwin, 2018). Research in this area has been limited by the ill-defined nature of affective learning outcomes and a corresponding vague understanding of teacher effectiveness in this domain. To move this literature forward, we

employ the construct of self-efficacy (Bandura, 1997) as it pertains to teachers' perceptions of their ability to perform specific tasks (i.e., to teach specified personal and social skills). A more precise articulation and measurement of self-efficacy for teaching personal and social development in physical education will make it possible to assess the relationships between this variable and self-efficacy for teaching other aspects of the physical education curriculum as well as general teacher efficacy (i.e., tasks that are not subject matter specific). Generalizable knowledge of these relationships could inform practice, future research, as well as preservice and in-service teacher training. Therefore, the purpose of this study was to examine the relationships between physical education teachers' self-efficacy for teaching personal and social development, and other aspects of teacher self-efficacy.

Method

Setting and Participants

This study was conducted in Illinois, where the physical education curriculum includes the same personal and social skills noted in the national standards (SHAPE America, 2013). As noted, Illinois has also adopted SEL standards. Data were collected at a state-level conference for health, physical education, recreation, and dance professionals. Approximately 2,000 (from an estimated 10,000) in-service K–12 physical education teachers from across the state attend the conference. According to conference organizers, attendees work at all grade levels (K–12) in urban, suburban, and rural school districts across the state. This study involved an active consent process and was approved by the Institutional Review Board at Northern Illinois University.

Data were gathered from a sample of 116 (73 women, 43 men) practicing, licensed physical education teachers. In terms of educational background, at the time of this study, 56% of the participants had a master's degree and 42% had a bachelor's degree only (2% of participants did not report educational level). The racial/ethnic background of the participants was 80% Caucasian, 6% African American, 6% Hispanic, 2% Caucasian, 2% Asian American, and 4% Not Reported. The average age of the participants was 40.1 years (SD = 10.3), with a range of 23 to 62 years. The participants average

years of teaching experience was 13.6 (*SD* = 9.7), with a range of 1 to 39 years.

Instrumentation

Data were gathered using the Exemplary Physical Education Curriculum Self-Efficacy Survey (EPEC; Martin et al., 2008) and the General Education Efficacy Survey (Bandura, 2006). The EPEC was constructed to assess physical education teachers' self-efficacy beliefs regarding their ability to teach various aspects of physical education curriculum. The instrument comprises 35 items rated on an 11-point Likert scale ranging from 0 (*not at all confident*) to 10 (*extremely confident*). The 35 items of the survey represent the learning objective components of physical fitness (4), personal and social development (8), motor skills (20), and physical activity and fitness knowledge (3). A consistent stem that prompts participants to rate their confidence is followed by a list of discrete topic areas such as "aerobic fitness" to reflect the physical fitness subscale or "constructive competition" to reflect the personal and social development subscale. This survey has satisfactory levels of content validity, convergent validity, and internal consistency (Martin et al., 2008). While the EPEC survey was developed to assess a particular state-level curriculum, the content foci it references aligns with national curriculum standards and the State of Illinois standards at the time of this study.

The General Education Efficacy Survey was developed by Bandura (2006) to assess teacher efficacy across seven areas that affect teacher behavior and subsequent student learning. The 30 items on the survey are rated on a Likert scale ranging from 0 (*nothing*) to 10 (*a great deal*). The seven subscales addressed by these items relate to efficacy to influence school decision making (2), obtain school resources (1), instructional efficacy (9), disciplinary efficacy (3), parental (3) and community (4) involvement, and create a positive school climate (8). A sample item from this survey is "How much can you do to get students to trust teachers?" This item comes from the school climate subscale. This instrument has satisfactory levels of construct validity and internal consistency (Bandura, 2006).

Data Collection

Participants completed a paper version of the survey at a table in the center of the conference convention hall. Paul Wright verbally

recruited participants as they passed in front of the table (i.e., asked if they would be willing to participate in a research study on teaching personal and social skills in physical education). For those who were interested, the nature of the study, inclusion criteria (i.e., licensed and currently teaching physical education in Illinois), and consent process were explained. Those who were eligible and willing to participate completed the survey at the table anonymously (i.e., no name or identifying information beyond demographics) and deposited the completed survey in a slot on a large box. The box further protected participant identity because Wright could not see which participant had deposited a given survey. As anticipated, the sample exceeded 100 and represented geographic regions across the state. This further ensured anonymity. Most participants completed the survey in 5 min or less. After data collection was complete, surveys were assigned an identifying number for record keeping and data management.

Data Analysis

To ensure each self-efficacy scale being correlated had an acceptable degree of internal consistency, we calculated Cronbach's coefficient alpha (Cronbach, 1951) for each scale except for the school resources subscale of the General Education Efficacy Survey, which consisted of a single item. To examine the relationships between teachers' self-efficacy for teaching personal and social development, their self-efficacy beliefs about other aspects of physical education content, and their general teacher self-efficacy, we calculated Pearson correlation coefficients. We divided each total subscale score by the number of scale items to convert each participant's total score to a scale score. Descriptive statistics were reported for these scale scores.

Results

Table 2 summarizes the descriptive statistics and alpha coefficients for the General Education Efficacy Survey and EPEC scale scores, respectively. The only alpha coefficient from the General Education Efficacy Survey that was initially unacceptable (below .70) was for the disciplinary subscale. This coefficient was initially .60, but after removal of a specific item, which dealt with discipline outside the classroom, unlike the items that dealt with classroom

Table 2
Descriptive Statistics for General Education Efficacy Survey and EPEC Self-Efficacy Survey Scales

Variable	*N*	*M*	*SD*	Min	*Mdn*	Max	Coeff-α
General education efficacy							
Total self-efficacy (30)	111	6.3	1.0	3.3	6.2	8.4	.89
Disciplinary [a] (2)	116	8.6	1.1	6.0	9.0	10	.72
School resources (1)	116	6.6	2.6	0.0	7.0	10	-
Positive school climate (8)	114	6.5	1.4	3.3	6.6	10	.79
Instructional (9)	115	6.2	1.2	2.9	6.2	9.1	.80
Parental involvement (3)	115	6.1	1.8	2.0	6.0	10	.74
Decision-making (2)	116	6.0	2.2	0.5	6.5	10	.82
Community involvement (4)	113	5.0	2.0	0.0	5.0	9.5	.77
EPEC self-efficacy							
Motor skills (20)	115	9.1	0.8	5.9	9.4	10	.96
Personal & social (8)	114	9.0	0.9	5.8	9.3	10	.83
Physical activity & fitness knowledge (3)	115	8.9	0.9	6.3	9.0	10	.46
Physical fitness (4)	115	8.5	1.2	4.8	8.5	10	.79

[a] The third item in the disciplinary subscale (Prevent problem behavior on school grounds) was dropped to improve coefficient alpha of the subscale.

discipline, the coefficient increased to .72. Alpha coefficients for the EPEC subscales were acceptable, except for the physical activity and fitness knowledge scale (.46). We determined that this coefficient could not be increased by the removal of any single item.

As Table 3 shows, we found positive correlations significant at the .001 alpha level between scores on the personal and social development scale and scales related to physical activity and fitness knowledge ($r = .47$) and motor skills ($r = .45$). We also found positive correlations significant at the .001 alpha level between scores on the personal and social development scale and the General Education Efficacy Survey total self-efficacy score ($r = .37$) and the subscales related to creating a positive school climate ($r = .37$) and instructional efficacy ($r = .31$).

Table 3
Pearson Correlation Between Personal and Social Development Scale and Other Scales

Scale	*N*	*r*	*p*
EPEC self-efficacy			
Physical activity & fitness knowledge	114	.47	< .001
Motor skills	114	.45	< .001
Physical fitness	114	.29	.002
General education efficacy			
Total self-efficacy	109	.37	< .001
School climate	112	.37	< .001
Instructional	113	.31	.001
Disciplinary [a]	114	.25	.007
Parental involvement	113	.26	.006
Decision-making	114	.16	.084
Community involvement	111	.09	.328
Resources	114	-.01	.879

[a] The third item in the disciplinary subscale (Prevent problem behavior on school grounds) was dropped to improve coefficient alpha of the subscale.

Discussion

The purpose of this study was to examine the relationships between physical education teachers' self-efficacy for teaching personal and social development, and other aspects of teacher efficacy. According to Cohen's (1992) guidelines for psychological variables, correlation coefficients ranging from .30 to .49 can be regarded as having medium strength (i.e., effect sizes). Regarding physical education content, self-efficacy beliefs related to personal and social development had significant correlations of medium strength with self-efficacy beliefs about teaching physical activity and fitness knowledge and motor skills. Regarding general teacher efficacy, beliefs related to personal and social development in physical education had significant correlations of medium strength with total self-efficacy and beliefs of teacher efficacy related to school climate and instructional delivery. Several other correlation coefficients were

close to cutoffs for medium strength and significance (i.e., physical fitness, $r = .29$, $p = .002$; discipline; $r = .25$, $p = .007$; and parental involvement, $r = .26$, $p = .006$). These relationships merit further exploration as well.

Although the scales used in this study have been employed to assess the impact of professional development interventions (Martin et al., 2008), the correlations among the scales have not been previously reported. This study moves the literature forward by demonstrating significant relationships among physical educators' perceptions of efficacy for various aspects of the physical education curriculum. Future research should extend on these findings to examine ways subject-specific teacher efficacy beliefs relate to teaching behaviors and student learning outcomes to provide a more comprehensive understanding of teacher effectiveness in physical education (Hastie, 2017; McKenzie & Lounsbery, 2013; Wright & Irwin, 2018).

Findings relating physical education teachers' self-efficacy for teaching personal and social development with general teacher efficacy are also informative. Consistent with the general education literature, our findings suggest teachers who have higher levels of teacher efficacy also feel more effective in supporting students' personal and social development (Ross, 2007; Tschannen-Moran et al., 1998). While the general teaching efficacy subscales used in this study address beliefs about efficacy in the school environment, previous research has indicated that teachers who feel more competent dealing with social and emotional aspects of their teaching also tend to feel more satisfied and competent with other aspects of their professional role within the school environment (Schonert-Reichl, 2017). However, studies on these topics have focused on classroom teachers (Durlak et al., 2011; Taylor et al., 2017). It is important that we also understand the relationships between such variables for physical education teachers, as they are uniquely positioned to promote SEL competencies and contribute to a positive school climate (Hellison, 2011; Jacobs & Wright, 2014; Wright et al., 2019).

The significant relationships between physical education teachers' self-efficacy for teaching personal and social development, and other indicators of teacher efficacy reinforce calls to foster teacher effectiveness in this area (Jacobs & Wright, 2014; Wright & Irwin, 2018). Regarding implications for teachers, we recommend they

invest time in developing and implementing specific teaching skills associated with personal and social learning outcomes for students. For example, the strategies associated with the TARE (Wright & Craig, 2011) have proven effective in practice and can be adapted to match the learning context and student needs. Action research projects (including detailed descriptions of implementation) have demonstrated that using these TARE strategies as a framework, physical education teachers can identify areas of relative strength and weakness in their practice to drive innovation and improvement (Coulson et al., 2012; Gray et al., 2019; Hemphill et al., 2013). In addition to the TARE strategies, teachers may consider looking to the extensive TPSR literature as a resource in developing their approach.

Regarding implications for those who deliver preservice teacher education and/or in-service professional development, we also recommend considering the TARE strategies as a framework. This approach proved effective in a study of coaches and youth workers in Belize who participated in approximately 30 hr of training based on the TPSR model. The TARE strategies were a substantial focus of the training, which contributed to a significant increase (pretest vs. posttest) on mean scores on the EPEC personal and social development self-efficacy subscale (Wright et al., 2018). This increase may have been related to the training being focused on a series of concrete teaching strategies; however, causality cannot be determined as this was not a controlled study. According to Bandura (1997), self-efficacy beliefs are tied to specific tasks and skills. Accordingly, clear operational definitions and multiple implementation examples were provided for each TARE strategy. Trainers gave participants opportunities to discuss, practice, and debrief on the skills as well. Through experiential learning, practice, feedback, debriefing, and peer-modeling, participants developed their understanding and confidence using these teaching skills (Wright et al., 2018). We propose that this training approach, centered on the TARE strategies, may be an effective method for preservice teacher preparation and in-service professional development for physical education. While the study in Belize (Wright et al., 2018) and action research studies (Coulson et al., 2012; Gray et al., 2019; Hemphill et al., 2013) have demonstrated the feasibility of this training approach, future studies should use experimental or quasi-experimental designs to assess the

effect of such training on teachers' perceptions of self-efficacy as well as their implementation of the TARE strategies. This line of research could then be extended to address the corresponding effect on students' personal and social learning outcomes (Escartí et al., 2015; Pascual et al., 2011; Wright & Irwin, 2018). Validated instruments aligned with the TPSR model and TARE frameworks are available to assess students' observed (Escartí et al., 2015) and self-reported (Li et al., 2008) responsibility in the program setting as well as self-reported transfer of learning (Wright et al., 2019).

Limitations in this study include the size and diversity of the sample. The sample reflects the physical education teacher population in Illinois who attend the state conference. There are imbalances on demographic factors (i.e., majority female and White) and results may not generalize to other regions. Moreover, teachers who attend such conferences may be more invested in professional development and have different patterns of self-efficacy beliefs. Future research should recruit a larger and more representative cross section of physical education teachers. With a larger and more diverse sample, analyses to assess the potential influence of participant characteristics could be better assessed. It should also be remembered that the internal consistency of the subscale regarding teachers' self-efficacy to teach physical activity and fitness knowledge was low and its correlation results should be interpreted with caution.

Despite these limitations, this study contributes to the literature on physical education teachers' self-efficacy beliefs and supports the premise that effectiveness in teaching personal and social development is an integrated part of overall teaching effectiveness (Wright & Irwin, 2018). Personal and social learning outcomes are as much a part of the physical education curriculum as psychomotor and physical activity outcomes (SHAPE America, 2013); however research and professional development on the former have lagged (Hastie, 2017; Wright & Walsh, 2015). This disparity must be brought into balance to truly promote well-rounded quality physical education (Amis et al., 2012; Wright & Walsh, 2015). While further research is required, the results of this study combined with those in previous research indicate that Hellison's (2011) TPSR model and/or selected and more generalizable teaching strategies reflected in the TARE (Wright & Craig, 2011) instrument may help physical education

teachers and those who train them to become more confident and skillful in teaching for personal and social development. In addition to informing future research, teaching practice, and teacher preparation, findings from this study can also be used to advocate for the linkages between physical education and broader SEL initiatives in K–12 schools (Gordon et al., 2016; Jacobs & Wright, 2014; Wright & Irwin, 2018).

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