



## Leading an excellent preschool: What is the role of self-efficacy?

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### Abstract

Little is known about perceived self-efficacy of preschool teachers, their perceptions of preschool excellence, or the relations between the two. There were three purposes for this research: defining the professional self-efficacy of preschool teachers (PTSE); defining preschool teachers' perception of preschool excellence (PTPPE); and investigating the relationship between the two.

Scales for PTPSE and PTPPE were developed especially for this study. Preschool teachers (N = 202) participated during the 2013 school year. Structural Equation Modeling was performed to test the fit between the research model and the obtained data.

PTPSE scale ( $\alpha = 0.91$ ) was comprised of three subscales: pedagogy ( $\alpha = 0.84$ ), organization ( $\alpha = 0.85$ ) and staff ( $\alpha = 0.72$ ). The PTPPE scale ( $\alpha = 0.92$ ) is also composed of three subscales: organization and pedagogy ( $\alpha = 0.88$ ), staff ( $\alpha = 0.84$ ) and parents ( $\alpha = 0.83$ ). The goodness of fit measures were RMSEA = 0.045, CFI = 0.97, NFI = 0.89,  $df = 173$ ,  $\chi^2 = 242.94$ ,  $p = .000$ , showing GFI = 1.4 (< 3) as a good fit. Understanding self-efficacy of preschool teachers, preschool excellence and the relations between them could assist

policymakers with decisions concerning continuing professional development (in service training) of preschool teachers.

*Keywords: preschool, preschool teachers, self-efficacy, preschool excellence*

### Theoretical Background

Very few studies – if any – have dealt with the issue the characteristics or definitions of excellent preschools and self-efficacy of preschool teachers. The attempt to connect between the two is a new approach.

### Excellent Schools – Terminology and Definitions

One of the most notable characteristics of excellent schools, in general, is the existence of a clearly established, underlying mission, which motivates all of the school's activities and decisions. Typically, the mission is related to the pursuit of academic excellence, the need to adapt to students' cognitive development, and the promotion of social equality (Lipsitz & West, 2006). Prior studies have proposed seven major factors that contribute to school excellence (Author 1 & Author 2, 2008; Author 1, 2012): the

principal's leadership, the organizational structure and the annual pedagogical plan, strong academic achievements, the school's pedagogical staff, a diverse student body, quality of life at school, and a positive relationship with students' parents.

In regard to academic achievements in excellent schools, the curriculum planning, the teaching, and the evaluation are all performed at the highest standards, and each student is expected to meet the required standards. Self-evaluation processes are also employed (Hoy & Sweetland, 2001). It has been shown that schools defined as excellent allow the members of their teaching faculties to plan, choose, and participate in their own course of professional development as well as in the students' academic development. Teachers are given ample opportunity to collaborate with colleagues, expand their professional knowledge, and improve their teaching skills. In addition, they partake in decision making on matters pertaining to the curriculum and to teaching methodologies.

### Preschool and Preschool Teachers in Israel

In Israel, the term preschool teacher refers to all educators who teach children of ages 3-6. Preschool and kindergarten attendance for these age groups is mandated by law. Only in 2015 was the Free Compulsory Education Law for ages 3-4 enacted, which requires all children from age 3 to attend a preschool, which can belong either to the municipal or regional authority, or a private preschool licensed by the local authority. Until 2015, attending a preschool framework was mandatory only from the age of five. Preschool and kindergarten teachers' practices as related to children's pedagogy, health, and safety are supervised by the Ministry of Education.

Preschool teachers in effect manage their preschool; they have to be certified teachers, with a B.Ed. degree in order to be assigned as the head teacher of a preschool. Preschools in Israel are characterized by an internal hierarchical structure, whereby teacher assistants, inclusion teachers, psychologists, PTA members, and teachers of extracurricular disciplines (e.g., teachers of art, movement, and music) all report to the head preschool teacher (Frish, 2012).

The preschool teachers are responsible for providing a safe and developmentally appropriate preschool program, in accordance with all relevant legislation, policies, and regulations. Thus, the nature of a preschool's day-to-day activities allows the head teacher a fair degree of autonomy, although in general, the educational program is dictated by the Ministry of Education. The head teacher determines the daily schedule, as well as the specific teaching contents, values, and teaching methods (Shkedi & Nisan, 2006).

It has been shown that the quality of the interaction with the children, which includes the language used and the general pedagogical practices employed, has a major impact on the children's general development (Meisels, 2006). Therefore, the head teacher's role in determining the relationship between children's behavioral problems and the overall emotional climate in the classroom is crucial (Friedman-Krauss, Raver, Morris, & Jones, 2014).

### Professional Self-efficacy and Teacher Self-efficacy

The concept of self-efficacy has been termed "professional self-efficacy" when applied to the context of organizational psychology, and is defined as the belief in one's ability to control events and behaviors affecting professional activities and life (Cherniss, 1993). The literature addresses two aspects of this concept: self-efficacy of the profession and self-efficacy of the professional (Guskey & Passaro, 1994). Self-efficacy of the profession refers to the beliefs pertinent to the specific professional discipline, i.e., belief that the profession can influence others. Thus, for example, educators believe that education or teaching can influence students. Self-efficacy of the professional refers to the belief in one's ability to successfully perform the tasks of one's profession. Thus, individual teachers perceive themselves as "good professionals" when they believe in their individual ability to make a difference and influence their students' future. Both aspects together comprise the notion of professional self-efficacy (Guskey & Passaro, 1994).

For the most part, researchers who have examined the professional self-efficacy of teachers have based their definitions of professional self-efficacy on the concept proposed in Bandura's theory (1977). According to Bandura, teachers' professional self-efficacy is defined as teachers' perception of their ability to influence students' performance (Hipp, 1997; Hoover-Dempsey, Bassler, & Brissie, 1987), along with the belief that the teaching skills they use are in fact effective (Hoover-Dempsey et al., 1987). In recent years, the concept of teachers' professional self-efficacy has been identified as one of the most significant factors to affect the teaching occupation, as it influences not only the teachers' abilities, motivations, and satisfaction levels, but also students' achievements (Nir & Kranot, 2006). The definitions of teacher self-efficacy can be categorized according to whether teachers' efforts and skills are considered the primary contributing factor or merely one of the factors contributing to students' success (Freidman & Kass, 2002). Thus, in the former case, the focus is the belief that students' improved performance and progress are a direct result of the teacher's personal skills and efforts (Faiza, Downer, & Pianta, 2012). Hence, this approach fails to take into account influences from outside the classroom, such as the students' home environment. Accordingly, this approach also draws an implicit distinction between the task of teaching and the interpersonal exchange that teaching entails (mutual relationships with students). In this case, teachers' sense of self-efficacy comprises three components: teaching tasks, organizational tasks, and relationships (Hoover-Dempsey, Bassler, & Brissie, 1992). According to the second approach to the definition self-efficacy in education, teachers' believe in their ability to improve student performance despite the existence of factors beyond the classroom, such as students' innate abilities or family background and environment. Teachers who define professional self-efficacy according this approach tend to work harder (than teachers whose self-efficacy definition coincides with the former approach) to overcome obstacles, and are able to maintain a balanced degree of effort over a long period of time (Bandura, 1977, 1986).

Friedman and Kass (2002) extended the definition of teachers' self-efficacy beyond the realm of the classroom, by referring to the organizational sphere. They identified professional self-

efficacy in the field of education as teachers' belief not only in their ability to perform the traditional teaching tasks (e.g., engaging in personalized, mindful, and flexible teaching; teaching in a manner that is interesting and beneficial; and controlling students' discipline and behavior), but also to influence important decisions at school, and to maintain their status and image as leaders in the eyes of the students.

### Preschool Teachers' Self-Efficacy

Certain factors have been associated with (head) preschool teachers' self-efficacy. The first and most significant is their perception of staff collaboration and of their own decision-making influence. Preschool teachers who work in schools that encourage teacher collaboration have many opportunities to talk with colleagues and evaluate each other's teaching practices, which in turn increases their sense of self-efficacy (Guo, Justice, Sawyer & Tompkins, 2011). Another factor that contributes to preschool teachers' sense of self-efficacy is the extent to which preschool students' engage in classroom activities. A significant interaction between children's engagement in classroom activities and teachers' perceptions of collaboration predicted teachers' reported self-efficacy. Specifically, a higher level of children's engagement was associated with a higher level of teacher self-efficacy. Thus, higher level of children's engagement was associated with a higher level of teacher self-efficacy when teachers worked in preschool with high levels of staff collaboration (Guo et al., 2011). Also the effectiveness of the teaching was found to be related to preschool teachers' sense of self-efficacy, meaning that higher levels of self-efficacy were found to have a positive effect on the quality of students' achievements (Goddard & Goddard, 2001). Work experience was found to decrease levels of preschool teachers' self-efficacy (Guo, Piasta, Justice, & Kaderavek, 2010).

### The Aims of the Present Study

As it appears that no previous study has focused directly on defining what constitutes an excellent preschool, the first purpose of this study was to arrive at a suitable definition. Furthermore, as there is no evidence in the literature of any examination of the relationship between preschool teachers' views regarding excellent preschools and their perceived self-efficacy, the second purpose of this study was to investigate the relationship between these two variables.

The research model of this study is shown in Figure 1. Given the paucity of literature on this relationship, the seven hypotheses presented in Figure 1 are exploratory. However, the few studies that have shown various connections between background variables and teachers' perceived self-efficacy were consulted when establishing the working hypotheses shown in Figure 1 (Bandura, 1997; Nir & Kranot, 2006).

## Methodology and Methods

### Sample

The study population comprised 202 (head) preschool teachers from 202 public preschools. Private preschools were excluded from the study. Of the entire sample, 55 preschools were for 3-year-old children, 52 preschools were for 4-year-olds, and 52 were for 5-year-olds. Furthermore, as some public preschools combine two age groups, 21 additional participating preschools were for children

of ages 3-4 or 4-5 (In Israel, preschool attendance is mandatory from age three). The study population did not include preschool teachers working in special education.

### Participants' characteristics.

The majority of preschool teachers ( $n = 201$ ; 99.5%) were women and only one preschool teacher (0.5%) was a man. Twenty nine teachers (14.4%) were 30-years-old or younger; 61 teachers (30.2%) were between the ages of 31 and 40 years, while the majority of the teachers ( $n = 96$ ; 47.5%) were between the ages of 41 and 55, and only 15 teachers (7.4%) were over 55 years old. A total of 26 teachers (12.9%) were childless; 21 (10.4%) had one child; 51 (25.2%) had two children; 69 (34.2%) had three children; 31 (15.3%) had four children; and 3 (1.4%) had five children or more. One teacher did not provide information on this background variable. A small percentage of the teachers (9.9%) were single; 174 (86.1%) were married; 7 (3.5%) were divorced; and one (5%) was a widow. Most teachers had earned college degrees: 156 teachers (77.2%) had an undergraduate degree (either B.Ed. or B.A.); 38 teachers (18.8%) had a graduate degree (either M.Ed. or M.A.); one teacher (0.5%) had a PhD; and seven (3.4%) had obtained only a teaching certificate. Three teachers did not provide information on this item. Thirty one (15.3%) teachers earned wages far below the Israel's average monthly salary; 30 (14.9%) teachers earned a monthly salary that was only slightly lower than the national average; 50 (24.8%) teachers earned an average salary; 66 (32.7%) earned wages slightly higher the average salary; and 23 (11.4%) earned wages that were much higher than the average salary (in 2012 the average salary in Israel was NIS 7,012 for a woman and NIS 10,411 for a man). Thirty-nine teachers (19.3%) had 1-3 years of experience; 32 (15.8%) had 4-7 years of experience; 43 (21.3%) had 8-14 years of experience; and 88 (43.6%) had more than 15 years of experience. One hundred and sixteen (57.4%) head preschool teachers had 1-3 staff members; 70 (34.7%) head preschool teachers had a staff of 4-6; 12 (5.9%) head preschool teachers had a staff of 7-9; and 4 (2%) head preschool teachers had more than ten staff members. One hundred and sixty two teachers (80.2%) taught in a secular preschool and 40 (19.8%) taught in a religious preschool. Twenty-three (11.4%) of the preschools were located in the northern part of Israel; 46 (22.8%) of the preschools were located in the central part of the country; and 133 (65.8%) of the preschools were located in the southern part of the country.

### Instruments

Two instruments were used in this study: (a) the Preschool Teachers' Perceptions of Self-efficacy Scale (PTPSES), and (b) the Preschool Teachers' Perceptions of Preschool Excellence Scale (PTPPES). Both scales were originally developed in Israel. Given that attitudes are culture based (Hamilton, 2011; Shlomo, Layzer, & Cohen, 2006), these scales were considered best suited to the Israeli culture, and to the Israeli preschool culture, in particular.

### Preschool teachers' perceptions of self-efficacy scale.

Preschool teachers' perceptions of self-efficacy were measured using the PTPSES (Seroussi, 2013). This is an anonymous questionnaire and the measure consists of 23 items, assessed along a 5-point Likert-like scale, ranging from "never" (= 1) to "always" (= 5). Teachers were asked to state the way they felt or

thought about their abilities, over the past three months of their work at the preschool. The PTPSES scale included three subscales: pedagogy (PD), organization (OR), and staff (ST). Reliability for the full scale was .91 Cronbach's alpha, and .84, .85, and .72 Cronbach's alpha, for the subscales, respectively.

The following are examples of items included in this questionnaire. On the topic of pedagogy: "I know all the pedagogical and personal needs of preschool children"; "I know how to establish clear and defined boundaries for children and how to keep them from transgressing these limits". On the topic of organization: "I operate according to a written structured work program"; "I am able to achieve all the goals I take upon myself as presented in the annual work program". On the topic of staff: "All members of the preschool staff are aware of my educational programs, agree with them, and support them".

#### **Preschool teachers' perceptions of preschool excellence scale.**

Preschool teachers' perceptions of preschool excellence were measured using the PTPPES (Seroussi, 2013). This is an anonymous questionnaire and the measure consists of 23 items, assessed along a 5-point Likert-like scale, ranging from "never" (= 1) to "always" (= 5). The PTPPES scale includes three subscales: Organizational-Pedagogical Excellence, Culture and Staff Excellence, and Parental Excellence. Reliability for the full scale was .92 Cronbach's alpha, and .88, .84, and .83 Cronbach's alpha, for the subscales, respectively.

The following are examples of items included in the questionnaire. On the topic of organizational-pedagogical excellence (OPE): "I use an effective mechanism to control and monitor implementation of decisions"; "My preschool operates according to well-defined objectives". On the topic of culture and staff excellence (CSE): "My preschool staff members respect each other"; "In my preschool, we emphasize the teaching of values such as tolerance, patience, and love towards others". On the topic of parental excellence (PE): "All parents are informed about the academic curriculum"; "All parents feel that their children are safe".

#### **Data Collection and Analysis**

With permission from the Israeli Ministry of Education, a research assistant administered the surveys within a single academic year (2012-2013) in preschools located in three main educational districts in the country. In this particular system, schools' socioeconomic status (SES) is represented on a ten-level scale, where "1" indicates a high SES. Preschools included in the current sample represented the entire range of SES. The questionnaires were distributed during preschool teachers' regional meetings and were collected on the spot. The purpose of the research was explained, and confidentiality was ensured.

Exploratory Factor Analysis (EFA) was conducted using Mplus 7.3. After conducting EFA, both confirmatory factor analysis (CFA) and structural equation modeling (SEM) were conducted, using Mplus 7.2. These methods are powerful statistical tools for examining the relationships between latent constructs, and for testing a priori hypotheses regarding relationships between observed and latent variables. This methodology takes a confirmatory

approach to the analysis of data (Byrne, 2001; Jackson, Gillaspay, & Purc-Stephenson, 2009). Given that CFA is part of the larger family of SEM, it usually plays an essential role in evaluating the measurement model before a structural analysis is conducted. Structural analysis is then used for specifying and estimating models of linear relationships between both observed and latent variables (Jackson et al., 2009; MacCallum & Austin, 2000). When conducting SEM, the analysis produces an estimated population covariance matrix, based on the model specified. A key function of SEM is to assess whether the model produces an estimated matrix consistent with the sample matrix (Tabachnick & Fidell, 2007). This consistency is investigated through various measurement indices of Goodness of Fit. If the Goodness of Fit is adequate, it supports the plausibility of the model specified. Different measures of fit are available and are assessed through various indices, such as Comparative Fit Index (CFI), Incremental Fit Index (IFI), Tucker Lewis Index (TLI), and Root Mean Square Error of Approximation (RMSEA), as well as chi-square-test statistics. For the CFI, IFI, and TLI indices, values greater than .90 are typically considered acceptable, whereas values greater than .95 indicate a good fit to the data. For well-specified models, a RMSEA of .06 or less indicates a good fit (Byrne, 2001).

The data were initially screened for univariate and multivariate normality and outliers, using SPSS 21 and Mplus 7.2. The data set was missing data that were assumed to be randomly omitted. As some of the features in Mplus would not be available with missing data, analyses initially used an imputed data set.

## **Results**

### **Confirmatory Factor Analysis (CFA)**

#### *Preschool teachers' perceptions of self-efficacy scale (PTPSES).*

Results of the principal component analysis of the three constructs of the PTPSES are shown in Table 1. The total variance explained was 47.2% and factor extraction was based on the Kaiser-Guttman rule, which retains the principal component of eigenvalues equal to or greater than 1. This was to ensure that the factor extracted accounted for as much variance as the individual variable (Nunnally & Bernstein, 1994).

#### *Preschool teachers' perceptions of preschool excellence scale (PTPPES)*

Results of the principal component analysis of the two constructs of the PTPPES are shown in Table 2. The total variance explained is 43.7% and factor extraction was based on the Kaiser-Guttman rule (see explanation above).

### **Model Fit**

#### *Test of the proposed model*

Structural Equation Modeling was performed to test the fit between the research model (Figure 1) and the obtained data. This technique was chosen for its ability to examine a series of dependence relationships simultaneously, especially where there are direct and indirect effects among the constructs within the model (Hair, Black,

Babin, Anderson, & Tatham, 2006). In this study, AMOS 7.0 (Arbuckle, 2009) was used and the selected SEM estimation procedure was maximum likelihood estimation. In SEM, the sample size plays an influential role in the reliability of the results. Bollen (1989) recommended a minimum sample size of 100, while Anderson and Gerbing (1988) recommended 200. Another proposal was given by Hair et al. (2006) and indicated that any study with five or fewer constructs, each with more than three items, and with high item communality of .60 and higher, can be estimated adequately with a sample size of 150. In this study, the sample size was 202, which is considered adequate according to research-based recommendations.

In using SEM, it is a common practice to use a variety of indices to measure model fit (Kline, 2005). In addition to the ratio of the  $\chi^2$  statistic to its degree of freedom, with a value less than 5 indicating acceptable fit, researchers have recommended a handful of fit indices to assess model fit (e.g., Kline, 2005). These are the Goodness of Fit (GFI), Normed Fit Index (NFI), Standardized Root Mean Residual (SRMR), and the Comparative Fit Index (CFI).

The Goodness of Fit (GFI) of the proposed model (Figure 1) was satisfactory: RMSEA = 0.048, TLI = 0.95, CFI = 0.96, NFI = 0.89,  $df = 180$ ,  $\chi^2 = 263.6$ ,  $p = .000$ .  $\chi^2/df = 3$ . Nevertheless, to ensure better GFI, insignificant paths were removed. This included the processes of Model Modification (Joreskog, 1993). The model was tested after each removal of an insignificant path, starting with the least significant one. A final model is confirmed when it reaches a good GFI and its parameters have a significant meaning according to the theory (Joreskog, 1993). The GFIs of the final model were:

RMSEA = 0.045, TLI = 0.96, CFI = 0.97, NFI = 0.89,  $df = 173$ ,  $\chi^2 = 242.94$ ,  $p = .000$ .  $\chi^2/df = 3$ .

#### *Variables that influenced preschool teachers' perceptions of self-efficacy (PTPSES)*

The resulting path coefficients of the proposed research model are shown in Figure 2. The results indicate that teachers' background variables, specifically the number of children at home, influenced their views on PTPSE in the domain of pedagogy [(number of children-  $\beta = 0.26$ ,  $p = 0.00$ ;  $n_2$  (Eta squared) = 0.114 (large effect size)]; in the domain of organization [(number of children-  $\beta = 0.20$ ,  $p = 0.01$ ;  $n_2$  (Eta squared) = 0.014 (small effect size)]; and in the domain of staff [(number of children-  $\beta = 0.28$ ,  $p = 0.00$ ;  $n_2$  (Eta squared) = 0.09 (medium effect size)]. Eta squared indicates the proportion of variance among preschool teachers' perceptions of self-efficacy (SE) in pedagogy accounted for by the number of children the teacher has at home. In other words, the teacher's own parenting experience, represented by the number of children at home, explained 11.4% of the observed variance in teachers' perceived SE in the domain of pedagogy, 1.4% of the observed variance in their perceived SE in the domain of organization, and 9% of the observed variance in their perceived SE in relation to staff. All three findings support hypothesis H1 (Figure 1). Teachers' perceived SE in the domains of pedagogy, organization, and staff was influenced by background variables.

Job variables, specifically the extent of experience as head preschool teacher, influenced preschool teachers' perceived SE in

the domain of pedagogy, as follows: [(experience as head preschool teacher,  $\beta = 0.15$ ,  $p = 0.05$ ;  $n_2$  (Eta squared) = 0.046 (small-medium effect size)]. In other words, 4.6% of observed variance in preschool teachers' perceived SE in the domain of pedagogy was explained by the extent of their experience as head preschool teacher, thus supporting hypothesis H2.

Organizational variables, specifically the number of staff members, influenced preschool teachers' perceived SE in the domains of both pedagogy and staff, thus: in the domain of pedagogy [(number of staff members  $\beta = 0.18$ ,  $p = 0.01$ ;  $n_2$  (Eta squared) = 0.09 (medium-large effect size)], and in the domain of organization [(number of staff members  $\beta = 0.18$ ,  $p = 0.01$ ;  $n_2$  (Eta squared) = 0.051 (large effect size)]. Accordingly, the number of staff members explained 9% of the variance observed in teachers' perceived SE in the pedagogy domain and 5.1% of the variance in teachers' perceived SE in the domain of organization, thus supporting hypothesis H3. No evidence was found in support of hypotheses H4, H5 or H6.

#### *Variables that influenced preschool teachers' perceptions of preschool excellence (PTPPES)*

Finally, preschool teachers' perceived SE in the three domains influenced their perception of preschool excellence. Perceived SE in pedagogy influenced their views of cultural and staff excellence [( $\beta = 0.35$ ,  $p = 0.000$ ;  $n_2$  (Eta squared) = 0.379 (large effect size)] and their views of parental excellence [( $\beta = 0.68$ ,  $p = 0.000$ ;  $n_2$  (Eta squared) = 0.449 (large effect size)]. Eta squared indicates that perceived SE in pedagogy explained 37.9% of the observed variance in preschool teachers' views on the excellence of the school's culture and staff and 44.9% of observed variance in teachers' views on parental excellence, thus supporting hypothesis H7.

Preschool teachers' perceived SE in the domain of organization influenced their views of the school's organizational-pedagogical excellence [( $\beta = 0.81$ ,  $p = 0.000$ ;  $n_2$  (Eta squared) = 0.515 (large effect size)]. Eta squared indicates that teachers' perceived SE in the domain of organization accounted for 51.5% of the observed variance in their views of the school's organizational-pedagogical excellence, thus fully supporting hypothesis H7.

Preschool teachers' perceived SE in the domain of staff influenced their views of the school's cultural and staff excellence [( $\beta = 0.44$ ,  $p = 0.000$ ;  $n_2$  (Eta squared) = 0.515 (large effect size)]. Eta squared indicates that teachers' perceived SE in the domain of staff accounted for 51.5% of observed variance in their views of the school's cultural and staff excellence, thus fully supporting hypothesis H7.

## Discussion

The primary purpose of this study was to define "excellent preschools". Furthermore, as there is no evidence in the literature of prior studies on the relationship between preschool teachers' perceptions of excellent preschools and their perceived self-efficacy, a second purpose emerged, namely, to investigate the relationship between these two variables. To this end, a theoretical model, which examined seven hypotheses -- most of them exploratory, was designed and tested.

Given that very few, if any, researchers have dealt with the definition of excellent preschools, it was quite a challenge to define this term. Exploratory Factor Analysis revealed three main domains that together comprise teachers' perceptions of preschools' excellence (PTPPE). The first pertains to excellence in organizational-pedagogical issues, such as operating according to well-defined objectives, updating the staff about new educational programs, and finding the balance between dealing with immediate demands and dealing with planned programs. Similar components were found at excellent schools (yet not in preschools) (Fisher, 2009). The second domain pertains to excellence concerning the preschool's culture and staff, e.g., reciprocal respect among staff members and emphasis on the development of values such as tolerance, patience, and love of others. Similar components regarding the staff were found in research about school excellence (Griffith, 2004), but as mentioned before, not in preschools. The third domain pertains to excellence concerning interactions with parents. This domain includes issues such as all parents of the preschool feel that their children are safe and the preschool teacher is attentive to the distress, complaints, and comments of parents.

An examination of the concept of PTPSE showed that that the preschool teachers base their sense of professional self-efficacy on their perceived performance of tasks related to pedagogy, the school as an organization, and the preschool's staff. As pedagogues and educators, preschool teachers have to know the pedagogical and personal needs of preschool children, identify individual problems and difficulties, and they must be able to address them before they escalate and impair the relationships among their students. Thus, they must also know how to promote children's development both socially and emotionally within the group framework and be able to maintain clear and defined boundaries for children, while ensuring that the children adhere to these limits consistently. At the same time, preschool teachers need to be able to adjust to any changes that the job demands or that are dictated by senior officials at the Ministry of Education. They must make sure that the staff fully cooperates in terms of pedagogical and organizational-operational processes. The work of preschool teachers requires high levels of professional self-efficacy, in order to successfully align their personal ideology with the organization's goals and the methods recommended for achieving these goals. Having autonomy at work also contributes to the feeling of professional competence (Brama & Friedman 2007).

Based on the results of this study, the following model is suggested as "The Prediction of Preschool Excellence Model" (PPE Model).

Background variables, job variables, and organizational variables predicted PTPSE (as shown in Figure 2). Yet it is important to emphasize a few of these predictions. It is interesting that the number of children the teacher has as a parent affected PTPSE predictions (in all three domains). Without the benefit of prior studies, this finding suggests that the personal home experience influences the work experience, so that the more experience the preschool teachers have at home with their own children, the more qualified they feel at work. This is of course a question to be further explored in future research.

This study found that background variables, such as work experience, predicted the levels of PTPSE, such that more experienced preschool

teachers demonstrated higher perceived self-efficacy in the pedagogical components. Interestingly, this finding contradicts that of another study, in which no relationship was detected between the number of years of teaching experience in preschools and perceived self-efficacy (Guo et al., 2010). This earlier finding is consistent with Bandura's (1997) assertion that self-efficacy beliefs tend to be established early in learning and that once set, they are stable and resistant to change, precluding some kind of shock that provokes a reassessment. However, Bandura (1997) also claimed that personal experience is a very important factor in determining self-efficacy. The fact that teachers acquire experience only after they start teaching could explain the finding in this study.

In this study, organizational variables included the number of staff members. Findings indicate that PTPSE in both the domain of pedagogy and staff could be predicted according to the number of staff members, such that the greater the number of staff members at the preschool, the higher the levels of PTPSE in both domains. This finding can be explained by the unique organizational structure of the preschool. Presumably, the head teacher in a preschool that has many staff members (such as assistant, school counselors, counselor, psychologist, etc.) exhibits strong management skills, and establishes, guides, and coordinates the teamwork. This is a very important factor in the overall organizational functioning and potential success of the preschool. This finding is reinforced by similar findings observed in relation to schoolteachers' sense of self-efficacy. Guo et al. (2011) found that the number of staff is important when teachers interact with colleagues, as teamwork helps foster teachers' sense of self-efficacy and professionalism. The most interesting finding in this research, which has not been tested before, was that PTPSE could predict PTPPE. All three domains of PTPSE predicted the three domains of PTPPE. Given that PTPPE has not yet been defined in the literature as a measurable term, this finding is unique.

The preschool in Israel, as in most Western developed countries, is an independent pedagogical unit, run by the head preschool teacher. Therefore, it can be likened to a "small" school, containing the elements of any other school. This research indicates that preschool excellence is based on organizational-pedagogical excellence, culture and staff excellence, and parental excellence. Similarly, three domains have been reported concerning school excellence (Author 1, 2010, 2012). In this sense, also the definition of preschool excellence identified in this research reflects the preschools' practice of functioning as an independent unit, similar to a school. Most of the recent studies on the role of the principal concur that the main function of the school principal is to provide the educational and pedagogical leadership that can improve the educational and learning experience of the entire student population (Author 1, 2010, 2012; Leithwood, Day, Sammons, Harris, & Hopkins, 2007; Walker, 2009). Given the analogy of the preschool as an autonomous small school, the same parallelism can be drawn between the role of the head preschool teacher and that of the school principal. Hence, the above-mentioned description can be applied to preschool head teachers as well. The responsibilities of the preschool teacher pertain to activities that take place on the school grounds and which involve other staff members as well. In this manner, the assistant, the counselor, the psychologist, and the

enrichment program teachers, each in their unique field, contribute to the preschool's excellence. Last – but not least, there is common agreement that parental involvement contributes significantly to what happens both on the school grounds (better grades, school climate, etc.) and beyond (improving the school's image in the community) (Addi-Racah & Ainhoren, 2009; Henderson & Mapp, 2002; Kochanet, Wraight, Wan, Nylen, & Rodriguez, 2011).

It can be claimed, therefore, that preschool teachers who believe they have high levels of self-efficacy also believe that they can navigate and direct the functioning of the preschool and lead it to excellence. Given the comparison drawn herein, it may be assumed that like school principals, preschool teachers too will choose to set ambitious goals, be committed to achieving them, and engage in difficult and challenging roles (Brama & Friedman, 2007). The preschool functions as an autonomous and independent organizational unit, managed by the primary preschool teacher and the supporting staff. As shown in the case of excellent schools (Author 1 & Author 2, 2008), when the adjunct staff supports the head preschool teacher and staff members' work is characterized by a high level of job satisfaction, this has a direct effect on the head (pre)school teacher's level of perceived self-efficacy and thus plays a role in leading the preschool towards excellence. In the same vein, it may be assumed that preschool teachers with lower levels of perceived self-efficacy would find it difficult to lead the organization to excellence.

The findings of this study add three main contributions to the existing pool of knowledge in the field of education. The first contribution is to provide a better understanding of the domains that constitute preschool teachers' professional self-efficacy. This enabled the preparation of the Preschool Teachers' Perception of Self-efficacy Scale (PTPSES), which prior to this study had never been used in Israel. The second contribution was to define what constitutes an excellent preschool. This definition includes the essential components of the preschool teacher's organizational and pedagogical roles. Such a definition has been absent from the international literature, let alone from the local professional literature. This state of affairs may be due to a misconception of the preschool as a small and supposedly insignificant organization. The third contribution, which combines the first two, was to identify the role of preschool teacher's self-efficacy in predicting their perceptions of excellent preschools. Despite the basic logic of such a predictive relationship, it has not been addressed in the literature. Therefore, the PPE model, as presented in Figure 3, is unique.

Understanding self-efficacy of preschool teachers, their perceptions of preschool excellence, and the relations between these factors may help policy makers as they weigh decisions concerning continuing professional development (in service training) of preschool teachers.

### Limitations

As the sample was relatively small, the results need to be replicated with larger samples. Therefore, the conclusions of this study are only partially applicable. Another limitation is that both the PTPSES and PTPPE were tested only in Israel and not in other environments. Although the components of both scales could be pertinent to all preschool teachers, the scales need to be tested in different cultures.

### Further Studies

To summarize, despite being a modest first step in examining factors related to preschool teachers' perceptions of self-efficacy and preschool excellence, these research findings are encouraging. Given that the PPE model explains only 42% of the predictors of PTPPE, a challenge for future research is to identify additional factors that might affect PTPPE, so as to gain a better understanding of the phenomenon of preschool excellence.

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