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Kathy Chase Young
Early Education Dream Center, LLC

Jeffrey L. Leffler
Mississippi State University - Meridian

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Will Personal Engagement in Play Affect the Perceived Stress of Early Educators?

About the Author(s)

Dr. Kathy Chase Young is a nearly 30-year veteran early educator with great diversity of experiences. As a childcare director, she has led programs in under-resourced areas, as well as those in higher levels of socio-economic status. She has served as administrator and classroom teacher of programs serving infants through preschoolers, and after-school programs as well.

Dr. Jeffrey L. Leffler has been involved with early childhood education for over 20 years. He is currently an assistant professor of Elementary Education and graduate coordinator for the Meridian Division of Education at Mississippi State University. He has served in a variety of roles throughout his career including as a preschool teacher, elementary teacher, children's pastor, early learning program director, private school principal, and coordinator of statewide professional development and technical assistance initiatives.

Keywords

Play, early childhood education, stress, wellness

Cover Page Footnote

The authors would like to thank the study participants from both CMCC and TWP for participating in the study and sharing their perceptions.



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Kathy Chase Young, Early Education Dream Center, LLC
Jeffrey L. Leffler, Mississippi State University – Meridian

Abstract

Studies over many years have indicated that early educators are exposed to high levels of stress-related to low pay, lack of benefits, high-stakes responsibilities, low levels of support, and inattention to basic personal care needs. At the same time, the effective early educator has been identified as a primary factor in providing quality early childhood care and education experiences. An additional factor contributing to positive outcomes for your children is a play-based early childhood environment. The current study investigated whether playful activities would also benefit early educators by relieving perceived stress levels. An action study was conducted to determine if early educators' play-based intervention and intentional playfulness influenced perceived stress and well-being. Findings from the study suggest that intentional playfulness by early educators produced a reduction in perceived stress. The discussion of the findings includes suggestions for future studies and practical implications for improving conditions in the field.

Introduction

Those who teach and provide care for children from birth through age five generally work long hours in high-stress situations and find the tasks associated with early childhood to be physically demanding. Research over many decades has defined the following struggles for early educators: low pay, lack of benefits, high responsibility, and lack of time for planning (Hall-Kenyon, Bullough, MacKay, & Marshall, 2014). In addition, early childhood teachers often have little or no time to care for basic personal needs, such as things as simple as restroom or lunch breaks, and more pervasive issues such as lack of paid sick leave. Early educators with higher levels of education and experience tend to be better able to negotiate the stress levels. However,

it is well known that neglecting personal care (healthy diet, exercise, recreation) is a pronounced issue and should be addressed (Csaszar & Buchanan, 2015).

Some stressors that early educators face may be rectified with focused efforts and funding support, but many are associated with the nature of early education (Decker & Decker, 2001). With that in mind, it is necessary to provide a lifeline of intervention to teachers and childcare providers to promote their physical and emotional health. Besides increasing educational levels and providing environmental support, what can be done to shore up this most vital resource, our people?

Evidence-based practice in early education heavily promotes play as primary to the learning environment (Decker & Decker, 2001). Children who are offered carefully planned, developmentally supportive play environments learn authentically and develop cognitive, social-emotional, and motor skills necessary for healthy growth. These play-based learning experiences are foundational to the necessary skills as children enter kindergarten or primary school and continue to provide benefits into adulthood.

The current study investigated the benefits of play for adults, specifically how play affects the stress levels of early education professionals. Two groups of teachers will take Sheldon Cohen's Perceived Stress Scale – 10 Item (Conser, 2008) at the onset of the study and four weeks later at the end. One group of teachers will receive the intervention of a staff development about play for adults, accompanied by invitation to participate in this study. Participants will agree to engage in play activities three times per week. Each session of self-selected play should last at least fifteen minutes. At the end of the four weeks, their stress levels will once again be scored to see if the intervention of personal play made any impact. Our question was, "Will personal engagement in play affect the perceived stress of early education professionals?"

Review of Literature

Early education professionals work in a variety of settings. Various settings exist for early education professionals, from family-home childcare programs to public schools. The first commonality is that each works to teach children prior to entry into primary school. Unfortunately, teachers within these early years, typically from birth until age five, also have high-stress levels in common. Though research has confirmed for decades that high-quality early

education is most dependent on the capacity of the teacher (Corr, Davis, Cook, Waters, & LaMontagne, 2014), these professionals experience "enormous stress" (Hall-Kenyon et al., 2014). Stressors indicated across the literature include difficult working conditions, physical challenges, low pay, high responsibility, lack of benefits, and undervaluation by society. Stress is an exchange or relationship between a person and his or her environment that is considered to stretch or exceed that individual's resources and potentially endanger his or her well-being (Csaszar & Buchanan, 2015). Early educators under stress are less likely to be effective, physically healthy, and enjoy positive relationships with family and coworkers (Csaszar & Buchanan, 2015). Considering that many of the stressors cannot be eliminated by teachers in early education settings, it is vital to examine possible ways of coping with the stress. "Low wages alone do not make the work in early childhood challenging and ultimately exhausting, a finding that suggests the need for additional research related to the wider quality of life issues" (Hall-Kenyon et al., 2014). In a study of early Canadian educators, researchers determined that perceived stress may be reduced by "lessening feelings of exhaustion and frustration" and increasing coping skills (Wagner et al., 2013).

Lazarus and Folkman's Transactional Model

Lazarus and Folkman's Transactional Model of Stress and Coping Theory was developed in 1966 in order to describe the way individuals perceive and manage stress ("Stress and coping," 2017). An event or stimulus might be considered stressful by one person, while someone else might not be remotely bothered by the same event. This observation shows that there is not an objective study of stress, since stress is a subjective matter. Lazarus and Folkman (1987), thus, began to study the way that various events, or stressors, impact people. As a person has a transaction (interaction) with the stimulus event, the person assesses his resources to cope with the stimulus. Stress is felt when there is an imbalance between the demands one feels and the resources to manage the event (Scott, 2012). "The level of stress experienced in the form of thoughts, feelings, emotions, and behaviours, as a result of external stressors, depends on appraisals of the situation which involves a judgement about whether internal or external demands exceed resources and ability to cope when demands exceed resources" (Lazarus & Folkman, 1984; "Stress and coping," 2017, para. 3). The Transactional Model provides a framework to identify various aspects of stress reactions. During the period of Primary

Appraisal, a person interprets an event or potential stressor as positive, dangerous (challenging, threatening, harmful), or irrelevant (Kivak, 2017). The next period of assessment within the Transactional Model is coping, which is a way of overcoming the effect of the stressor. Coping may be problem-focused, or it may be emotion-focused. Either or both mechanisms may be employed. Additionally, the Transactional Model identifies a period of reappraisal, in which more information or evaluation may mitigate the amount of stress felt, or intensify the reaction, based on the nature of the information (Kivak, 2017). In order to reduce the imbalance between demands and resources, an individual may develop problem and emotion-based coping skills, learning new ways to evaluate or reframe stressors, and build resources, such as support systems, better health practices, or increased education regarding common stressors ("Stress and coping," 2017).

Moritz Lazarus' Recreation and Relaxation Theory

Moritz Lazarus was a German poet in the 1800s who studied play and theorized that play is the opposite of work, and that people can become rejuvenated or "re-created" following physical or emotional exhaustion by engaging in play (Benson & Haith, 2009). His Recreation and Relaxation theory is considered a classical theory of play, characterized by the suggestion that play actually renews one's energy (Verenikina et al., 2003). Though some have interpreted this to mean that as the opposite of work, play cannot produce developmental advances and learning (Saracho & Spodek, 1995), this is not the assertion of this research project. Extending this theory beyond the applications of play as a tool for learning, research suggests that play can help people relax and reenergize (Gordon, 2014; Henricks, 2008; Kadlec, 2009; Keller, 2015) and is a "type of casual leisure" (Wright, 2016, p. 89). Elements of this classical theory can be seen in current practice regarding play for children and adults, and reflect play as a prescription for the imbalance of demands and resources discussed in the previous theoretical base. "When anxiety is relieved and inner harmony is restored, the child becomes ready to cope with events" (Play Wales, 2014, p. 3). "Playfulness in adults has shown to promote work place satisfaction as well as work productivity" (Staempfli, 2007 p. 395). Applying this theory to early educators who experience chronic stress, engaging in playful activity for recreation and relaxation should result in renewed energy, and a greater sense of emotional well-being.

Playfulness and Stress

According to research, playfulness may be the answer to reducing this perceived stress. A study of young adult students from three mid-western universities sought to discover the answers to two primary questions. They first wanted to determine a relationship between perceived stress and playfulness, and secondly, to see if coping styles differed across levels of playfulness (Magnuson & Barnett, 2013). From their research, the authors concluded that playful individuals experience lower levels of perceived stress and can better cope with the stress they perceive. Conversely, those who did not play or were not playful experienced higher levels of perceived stress. Their findings additionally suggested that those with higher levels of playfulness also had higher levels of resilience (Magnuson & Barnett, 2013), which is an essential trait for sustaining the well-being of those professionals working in early education settings (Csaszar & Buchanan, 2015).

Characteristics of play

Play is exciting, fun (Henricks, 2008), satisfies and sustains (Henricks, 2015). It serves a vital role in human development (Magnuson & Barnett, 2013) is associated with creativity (Pellegrini, 2014), and is characterized by positive mood (Pellegrini, 2014; West et al., 2016). In reference to empirical research to determine the parts of the brain which contribute to desires for social play, Vanderschuren (2010) states “Play is fun, and there are pathways in the brain that make it so,” (p. 332). “Nothing lights up the brain like play” (Brown, May 2008, time 10:31). Play is not stressful (Pellegrini, 2014), but is described as freeing, pleasurable, creative, exciting, and deeply satisfying (Play Wales, 2014). According to Verenkina et al. (2003), play is relatively risk free, and does not require a goal. Play refers to behavior, however, playfulness as a characteristic or personality trait refers to a predisposition to frame a situation with humor, novelty, amusement, or entertainment (Magnuson & Barnett, 2013). People who possess higher degrees of playfulness approach stressful influences differently, and report lower levels of stress (Magnuson & Barnett, 2013).

Description of population

Finding a diverse group of early education professionals and paraprofessionals was of great interest to this study. The first population we approached was the staff at a private Methodist early education center located in central Mississippi (CMCC). The director of that

program has been an active participant in professional organizations and is a strong advocate for protecting children's play. The teachers and assistants at CMCC represent diversity in age, race, and educational levels, but they have one thing in common; they are proponents of play-based learning for children. Therefore, it was determined that a second, similar population would be helpful as a control group. For this purpose, an early education program was selected in a nearby Methodist church (TWP). Located only thirteen miles away, this center also has a somewhat diverse staff in age, race, and educational levels. This school is also led by a professionally involved director who advocates for play-based learning. Both early education programs are adequately licensed early education facilities. All staff members of both schools are women.

Of the 26 teachers and assistants at CMCC, 11 reported their race as "white or Caucasian," 12 reported "black or African/American," and one reported "Asian/Pacific Islander." Two participants in this group did not report race. At TWP, 17 reported their race as "white or Caucasian," and one reported "black or African/American." At CMCC, there is an age range from "under 25" to "over 65," with most staff members in the "35-44" range. At TWP, the age range is from 26 through "over 65," with most respondents in the range of "55-64" years. The educational levels of staff members at CCMC range from high school diplomas to bachelor's degrees. Six teachers had completed senior college; all degrees were either in early childhood education or related fields of study. These have been in early education from four months to 23 years, with 10 of them reporting ten or more years in the field—the staff members at TWP range from high school diplomas to master's degrees. Thirteen of the 18 participants have bachelor's degrees or higher. Eight of these degrees are in early education or related fields of study. The newest staff member reported time in this profession as one month. The veteran staff member reported 40 years of service, one of 11 with ten years or more in early education.

Procedure

The Perceived Stress Scale-10 item (Conser, 2008) has been used in several studies in recent years. It has been proven a reliable measure of self-reported stress among individuals across many fields of study. In addition to the questions and Likert scale response format, a scoring guide and permission for educational use were included. We replicated the scale in our files to fit on one page. On the opposite side, we created a demographic information survey and a brief description of the project, including a statement of consent. We asked for each participant's

name, age, gender, race/ethnicity, educational degrees or certifications earned, and the amount of time working in the current position. Additionally, we asked for the name of that position, the amount of time spent in the early education profession, and the number of hours worked each week.

We planned with the center directors regarding participation in the program. The CMCC would be the test group, and TWP would be the control group. We emailed a copy of the measure to the director of TWP with a request to distribute it to staff members. Each participant was to read the project description, complete the survey, and return the completed form to the director, who collected the forms in a large envelope. After one month, they were to complete the same forms and follow the same procedures. With the director of CCMC, we arranged a staff development meeting to last 45 minutes. At the beginning of the meeting, the forms were distributed along with envelopes to contain each response. Due to the public nature of the meeting, we desired to reduce the likelihood that staff members would see one another's responses. The envelopes were collected and placed in a large envelope and labeled.

Following this survey completion, we conducted a presentation outlining the main points of the literature. The three topics covered emphasized what research says about stress (and stressors) in the early education profession, what research shows about play for children, and what limited research indicates about the play (and playfulness) for adults. We focused on research and did not allude to any hypothesis regarding my question. The presentation was interactive and included brief "play breaks" of one minute or less as demonstrations of how adults can play. The play was defined using the following characteristics: spontaneous, active process, creative, self-selected, somewhat exploratory, often physical, and intrinsically motivated.

At the end of the presentation, we invited the staff members to continue participation in the project by committing to engage in personal play for fifteen minutes each session, three times per week for four weeks. This personal play was outside the parameters of play facilitators or play-partners for students during work hours. In addition, a one-page journal was provided for each educator to record their play sessions. Participants were thanked in advance for their assistance with answering this question and were told that a small token of appreciation would be arranged with their director, such as having lunch delivered upon completion of the project.

Throughout the four weeks, we sent email messages copied by the director of the test group and distributed them into teacher boxes. These were intended to remind the staff members of the project and encourage them to continue until the project's end.

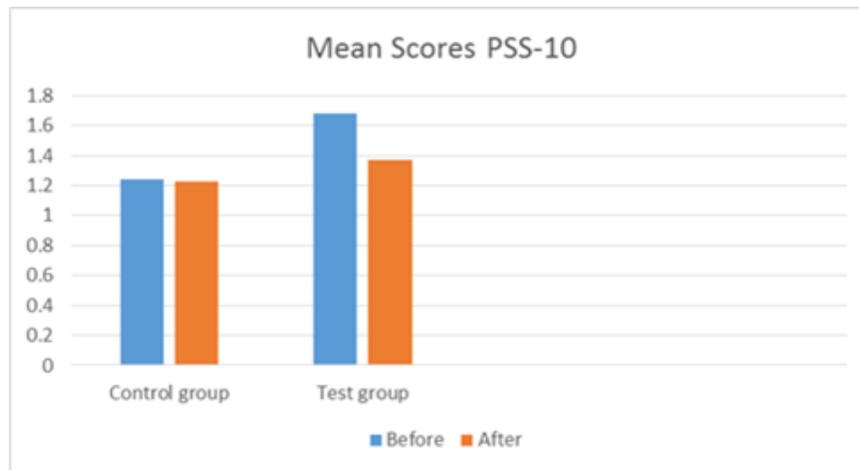
At the end of the month, this test group of staff members at the CMCC would again complete the measure and return their play journals to me. We planned to visit the school to collect these and to ask to interview a sampling of the participants in small groups.

The data would be scored by comparing the beginning and end responses of both groups individually and comparatively. The play journals served to validate the self-reported completion of the project.

Data Analysis

The data collected in this study are from the Perceived Stress Scale- 10 items (Conser, 2008), demographic information of the respondents, the content of the test group's play journals, and feedback from some of the project participants. The Perceived Stress Scale-10 item (PSS-10) (Conser, 2008) lists questions for respondents to consider and respond to using a Likert scale from zero to four points, with four being the highest levels of perceived stress. Of the items, six are scored with the response numbers, and four are scored with the opposite values on the scale. For example, a response of "one" of the four positively stated items would be counted as a score of "three." This scale was designed for use with populations who have a minimum educational level of junior high. The lowest educational level in this study was high school. This measure was administered pre-and post-tests with the control group (no intervention) and the test group. The average perceived stress levels of both groups were lower than anticipated based on current research. For the respondents in the control group, the mean score at the beginning was 1.24 and at the end of the project was 1.23. The mean score for the test group at the beginning of the study was 1.68. The end means the score was 1.37. See Figure 1.

Figure 1



Only respondents who completed the measure at the beginning and end are reported for the following comparison data. In the control group, 13 early educators participated in the pre- and post-tests. Of these, four indicated lower levels of perceived stress in their answers. Eight people indicated increased levels of perceived stress, while two reported similar levels of perceived stress, e.g., Table 5. The control group is part of a school that operates on a traditional school year schedule. It is possible that the changes in stress levels, both higher and lower, could be since the project was initiated within the first several weeks of school. Some could have been more stressed as school began, and others may have become stressed due to challenges associated with being in the classroom. At the bottom of her scale, One respondent wrote, "Please note these answers must be viewed considering the first three weeks of school. Come back in a few weeks, and the answers will be completely different." As she predicted, her perceived stress decreased by 52.61%, from a 2.11 raw score to a 1.00 raw score. It is also important to note that this measure was not asking questions specific to work stress. To be considered, personal stress levels are affected as work changes occur. At the beginning of school, they may have home and family demands which are in discord with the demands of teaching.

Table 5

Control Group Comparison Scores (PSS-10)

Teacher	Pre-test score	Post-test score	Percentage decrease
Teacher 1	2.11	1.00	52.61%
Teacher 2	1.33	0.89	33.08%
Teacher 3	1.44	1.00	30.56%
Teacher 4	1.22	1.11	09.02%
Teacher	Pre-test score	Post-test score	Percentage increase
Teacher 5	1.89	1.89	00.00%
Teacher 6	1.78	1.78	00.00%
Teacher 7	0.67	1.44	114.93%
Teacher 8	0.44	0.78	77.27%
Teacher 9	0.44	0.78	77.27%
Teacher 10	0.44	0.56	27.27%
Teacher 11	1.00	1.22	22.00%
Teacher 12	0.89	1.00	12.36%
Teacher 13	2.44	2.56	04.92%

Within the test group, 15 early educators participated in the pre-and post-surveys. Of these, 12 identified reduced levels of perceived stress. Two reported raised levels, and one remained the same, e.g., Table 6. Of these 15 respondents, 13 returned partially or fully completed play journals that demonstrated participation in the study. Two of these 13 reported perceived stress as higher by percentages of 18.03% and 33.83%. There is no indication why these teachers were differently affected than their counterparts. Perhaps adding the component of scheduled play negatively taxed their time. However, this is speculative. Upon examination of the play journals of these participants, it seems that each engaged in self-selected, enjoyable activities, such as skating, playing board games, and going on a walk. Both individuals reported

some spectator activities, which may be a sign that they did not fully understand the concept of play. Two respondents reported lowered levels of stress but did not return play journals. It is possible that these participated in the play yet did not log the experiences or were positively affected by their coworkers' experiences and the focus on the play during this time.

Table 6

Test Group Comparison Scores

Teacher	Pre-test score	Post-test score	Percentage decrease
Teacher 1	2.00	0.78	61.00%
Teacher 2	1.60	0.89	44.38%
Teacher 3	1.78	1.22	31.46%
Teacher 4	1.89	1.33	29.63%
Teacher 5	0.89	0.63	29.21%
Teacher 6	1.44	1.11	22.92%
Teacher 7	2.00	1.56	22.00%
Teacher 8	2.22	1.78	19.82%
Teacher 9	1.33	1.11	16.54%
Teacher 10	1.67	1.44	13.77%
Teacher 11	1.78	1.22	12.36%
Teacher 12	2.13	2.00	06.10%
Teacher	Pre-test score	Post-test score	Percentage increase
Teacher 13	1.89	1.89	00.00%
Teacher 14	1.22	1.44	18.03%
Teacher 15	1.33	1.78	33.83%

Reading through play journals of the participants revealed variations in personal choices of play activities and somewhat of a difference in understanding or philosophy of what constitutes play. Early educators are accustomed to guiding children's play, but experiencing personal play may be new. It is important to note that only eight participants returned fully

completed play journals. One participant was missing one of the play sessions. The others were missing three, four, and seven written accounts of play. Some of the participants chose the same play activities for the entire twelve requested sessions. One individual recorded the exact activity throughout the whole month. Some tried an activity and returned to the same later in the week or month. One participant recorded several activities from her classroom, showing her play with children, but this did not demonstrate a complete understanding of personal engagement in play. Some entries reflected play activities with family members, which seemed optimistic. It was noteworthy that the participants wished to qualify those activities with the notes about family relationships. Perhaps the enjoyment was more remarkable because the play session was with family. Perhaps the educators felt more comfortable playing in conjunction with children or spouses.

Teacher	Complete or Incomplete Journal	Sample Entries
#1	Complete	"Played candy crush, fun on the beach with family, ropes course with family, gym with friends, dancing and singing, front porch swinging and watching the moon."
#2	Incomplete	"Playing with the dogs, coloring placemats, singing/dancing to the radio, walking in my neighborhood."
#3	Incomplete	"Line dancing, horseback riding, catch ball w/grandson, walking on the track."
#4	Complete	"Hopscotch w/chalk, bike ride, kickball, Zumba video, jumped on the trampoline, played the Wii, swim in a pool."
#5	Incomplete	"Coloring book, creative journaling, solitaire, word search"
#6	Incomplete	"Played cards, basketball, played Wii game, went to park w/niece."
#7	Complete	"Dance game, sewing class, watched The Voice, garage sale w/family, cousin's birthday dinner."
#8	Incomplete	"Played in the park, playing on my phone, walk near the water, playing games with my son, riding"

#9	Complete	"Hide and seek, danced to music, went on a bear hunt, tossing the ball, 'doggy, where is your bone'?"
#10	Complete	"Gym, walked, walk w/ hubby."
#11	No journal	
#12	No journal	
#13	Complete	"Basketball- 21, freeze tag, spades, biking, horseshoe, volleyball"
#14	Complete	"Basketball, swimming, danced, skating, rode the motorcycle, board games, shopping."
#15	Complete	"Went swimming, went on a walk, watched a soccer game, played on a swing set with daughter, played board game w/husband."

Additional data were retrieved from comments made in small-group follow-up discussions and written comments on the play journals. Those who responded in verbal or written comments indicated that the project was "fun." The specific comments made were:

- "Fun taking pictures"
- "Laughing and talking."
- "Fun working and laughing together."
- "Fun trying new things"
- "Focused play led to family fun."
- "Very fun"
- "Loving on my neighbors' dogs and seeing friends slows me down, but it's fun!"
- "Fun!" (This simple response is given six times)."

Other responses included the following evidence of enjoyment:

- "A lot of laughing"
- "The kids were excited."
- "Starting to enjoy this"
- "Relaxing"
- "Enjoyed the play."

There were only positive comments reported regarding the experience. This could have been because the respondents did not wish to comment on negative experiences or perceptions. Additionally, participants reported feeling less stressed, learning new things, and thinking that the project was helpful. One early educator stated that play had "cleared my mind" and "focused my mind." Another said, "As I have been more intentional, things do not seem to be spinning out of control." In an interview with the program director, she reported noticing a difference in the attitudes of her staff members. She recounted an incident with a teacher whose floors had been waxed, but the workers had not returned the furniture properly. Based on typical interactions with the teacher, as the director approached the classroom, she was anticipating having to resolve the teacher's frustration about the furniture. Instead, she met a smiling teacher who was excited about how pretty the floors were. When asked about the furniture being out of place, the teacher responded, "They got it mostly back in place." The director said she believed this was an effect of reduced stress and attributed it to engaging in play activities. One teacher said that she did not feel that the play experiences had any long-term effects, but she enjoyed them for the few minutes she spent each time.

Assumptions, limitations, and delimitations

An assumption that is made through this project connects what is known about the benefits of exercise on one's emotional well-being and extends it to activities of play, though not all playful undertakings offer physical activity, or a significant amount of movement to warrant the comparison between the two. Additionally, while the experimental group received specific encouragement in play, it is possible that the members of the control group also engaged in playful behavior, thus this study assumes that intentionality with play will potentially result in mitigation of stress effects. These assumptions might also serve as limitations. Other limitations of this study include the relatively small number of individuals participating, though, in both centers, the percentage of participation was roughly 50%. Additional limitations are that self-reporting of stress using only one measure does not result in the highest level of reliability and the conclusion that some participants were not completely clear on the parameters or nature of personal play. More preparation and training must be considered for subsequent research in this area. The final limitation is that administrators were included with the teachers due to their

interactions with children and parents. While not necessarily a negative aspect of the project, this factor must be considered in future project planning and specified more fully.

Conclusions and recommendations

The findings of this self-study action research project are thought-provoking and warrant additional, broader study. Though the project was brief and comprised of small populations, the reduction of perceived stress, the percentage of the reduction, and the feedback from participants in the test group suggest that engagement in personal play affects early educators' perceived stress. This reduction was relatively small in raw scores, mainly lower than anticipated beginning scores. However, these findings should be considered a foundation to further the study with populations at greater risk for stress, perhaps over longer.

Identifying any potential practice for reducing the stress of early educators is vital to this field of study. For example, suppose early educators who play do, in fact, experience lower perceived or actual stress levels. In that case, the prospects for research on the impact this has on the participant could identify improved wellness, longevity in the field, reduced burnout and termination, and a positive outlook.

Regarding the impact of this or related research on specific instructional growth, it is vital to consider the possibility that happier; healthier teachers are more effective and responsive. If research determines that engagement in personal play will reduce perceived stress, this should point us to improved instructional practices. This is based on the supposition that happy early educators are more energetic, patient, creative, engaged, and committed. It will be interesting to continue asking questions to learn if this is accurate. The potential impact on the field if early educators engage in activities that will reduce stress is improved outcomes for children. With a strong attachment to and consistency of caregiver or teacher being strong indicators of student success, the field of early childhood could benefit significantly from practices that reduce stress within the profession. This study probes a small aspect of what can be a world of new research into teacher wellness within early childhood years.

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