


RESEARCH ARTICLE

Exploring the impact of play-based learning on teacher satisfaction, stress, and learners' collaboration

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ABSTRACT

This study investigated the effects of play-based learning on teacher satisfaction, stress levels, and collaborative learning among primary education learners. Employing a descriptive survey design, the study sampled 200 early childhood education practitioners in Ilorin South Local Government Area, Kwara State, Nigeria, selected through simple random sampling. Data were collected using a validated instrument—the "Questionnaire on Play-Based Learning, Teacher Satisfaction, Stress, and Student Collaboration in the Classroom" (QPBLTSSSC), with a reliability coefficient of .81. Descriptive statistics were used to analyze responses related to play-based learning's impact on teachers' job satisfaction, stress reduction, collaborative learning, and child development. The findings revealed that play-based learning significantly enhanced teacher satisfaction and reduced stress by promoting enjoyment, fulfilment, and a relaxed teaching atmosphere. It also fostered collaborative learning by improving teamwork, peer interaction, and inclusive learning environments. Moreover, play-based pedagogy significantly contributed to children's cognitive, language, problem-solving, motor, and socio-emotional development. These outcomes underscore the critical value of integrating play-based methods into early childhood curricula. The study recommends professional development programs that emphasize both guided and free play strategies, as well as public awareness of home-based play practices and stress-reduction training for educators, to support holistic child development and teacher well-being.

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INTRODUCTION

Play-based learning is widely acknowledged as a cornerstone of early childhood education, which provides children with opportunities for socialization, imaginative thinking, and self-discovery that promote holistic development (Vân, 2022z. Although play has been known to be beneficial for learning on a theoretical level, there remains uncertainty when it comes to play-based instruction (Pisman & Luczynski, 2020). Early years practitioners are challenged when integrating play-based learning into classroom lessons to meet academic standards (Khalil et al., 2022). Current research indicates that

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play is crucial for promoting early cognitive and social abilities, especially considering the increased emphasis on achieving academic goals through teacher-directed programs (Taylor & Boyer, 2019; Blucher et al., 2018; Schmitt et al., 2018).

Children's development in various domains is aided by play, especially in cognition, academic performance, social ability, and emotional skills (Hughes, 2021). Also, children can develop their problem-solving skills and broaden their perspectives through play-based learning (Hedges, 2018). In addition, it fosters creativity and adaptability, makes learning enjoyable, and sustains children's internal motivation, thus enabling them to use newly acquired abilities in various contexts (Kinkead-Clark, 2019; Yuan & Bowen, 2018). Hence, it is central in early childhood curricula because it enhances instructive and enjoyable results (Lee, 2019). According to Vãn (2022), children who learn through play find learning more meaningful in early life. Thus, they display positive attitudes towards academic learning. Not only does play-based education help children develop their social skills, self-control, and self-esteem, but it also enables sound discipline and understanding of the emotions of others (Monkevičienė et al., 2017).

Young children have the legitimate right to access play opportunities, but may not always have access to them (Sinha, 2017). Due to the greater emphasis on academic achievement and getting ready for school, play activities have become sidelined in ECCE spaces. According to Alam (2022), play-based learning ought to be fundamental in early childhood learning environments because it is the most appropriate mode of learning that fosters young children's general growth. As a teaching strategy, implementing play-based learning and its impact on practitioners and their learners in early childhood learning environments remains relatively sidelined in current literature (Edwards, 2016; 2017; Wong et al., 2011). Hence, international research seeks more investigative studies on early childhood educators' play pedagogies. Consequently, this study sought to address the urgent issues concerning practitioners' job satisfaction, stress levels, and student collaboration by examining the impact of play-based learning in early childhood classrooms.

Guided by relevant research questions, this paper sheds light on the relationship between play-based education and its effects on teacher satisfaction, stress reduction, and the promotion of collaborative learning among both practitioners and learners. Hence, this research envisions contributing to the body of knowledge in early childhood education by offering insights regarding strategies to apply play-based approaches to improve teaching practice, promote the well-being of practitioners, and foster a more stimulating and collaborative learning environment for young learners.

Mitigating Teachers' Stress and Promoting Job Satisfaction through Play-based Learning

Play-based learning offers a dynamic teaching approach that reduces practitioners' stress and increases work satisfaction while encouraging learner involvement (Yin et al., 2021). This implies that practitioners can desist from the demands of traditional instructional approaches to establish a more comfortable and pleasant classroom environment by facilitating creative and participatory play activities (Ucus & Acar, 2017; Nuttall et al., 2015). Moreover, play's inherent autonomy and self-direction enable practitioners to customize activities depending on each learner's needs, which decreases feelings of overload and burnout (Yin et al., 2021). The integration of play and literacy into full-day school settings was investigated by Pyle et al. (2017), who found that practitioners' perspectives on the value of play in literacy development varied. Some practitioners separated play from learning, while others skillfully combined the two. Their study exposed the difficulties practitioners encounter when implementing play-based learning programs into practice, thus causing practitioners to become stressed (Pyle et al., 2017). Fortunately, educators' feelings of purpose and

dedication to their work were strengthened when learners actively participated in enjoyable learning opportunities (Nuttall et al., 2015).

Tekman and Yeniasir (2023) examined how play-based learning environments influence third-grade children's writing, speaking, listening, and reading abilities. Their results revealed that interactive games and play-based learning environments improved learners' language skills while lowering practitioners' stress and anxiety levels at ECCE centers. In this regard, Frydman and Pitre (2018) examined the problem of occupational stress in practitioners by highlighting the significance of relevant interventions to reduce stress in the educational environment. They also exposed the drawbacks of more general stress theories by promoting interventions targeting contextual elements like instructional design and classroom management. In other words, applying well-structured instructional design coupled with classroom management techniques like play-based learning can significantly improve practitioners' job satisfaction. This is possible since it encourages a sense of fulfillment and achievement in supporting children's holistic development (Ucus & Acar, 2017).

Furthermore, researchers discovered that early childhood practitioners displayed low levels of self-efficacy when implementing play-based learning techniques (Oppermann et al., 2019; Frydman & Pitre, 2018; Gerde et al., 2017). Even with continuous professional development, a significant number of elementary practitioners persistently complained that they were not getting the specific training they needed to plan and conduct play-based learning activities in line with learning objectives to improve learners' academic skills development (Kinhead-Clark, 2019; Taylor & Boyer, 2019; Yuan & Bowen, 2018). The difficulties encountered by elementary school practitioners concerning integrating play-based learning strategies into the curriculum required clarity. Yin's (2021) investigation into the difficulties of integrating play into preschool curricula revealed that practitioners struggled to strike a balance between the academic goals of the school and the use of play; balancing the two resulted in practitioners' stress.

Additionally, Alam (2022), who conducted a qualitative study on early childhood practitioners' views on play in the environment, investigated kindergarten conversations regarding play in the ECCE classroom. The results demonstrated that while play-based learning is not always considered developmentally appropriate, most elementary practitioners value it. This implied that, though many practitioners believed play was necessary, they were pressured to satisfy all teaching obligations and prescribed Departmental policy requirements. This meant that the academic demands of early childhood education had increased, and practitioners were under pressure to prepare learners for standardized testing (Taylor & Boyer, 2019). This clash between academic preparedness and play-centered pedagogy often confuses and stresses practitioners. Lamentably, some preschool practitioners contend that play-based activities in early childhood centers are to blame for the academic under-preparedness of learners.

Promoting Collaborative Learning through Play

One of the most essential strategies for successful functioning in the 21st century is the ability to collaborate. Many people still live differently in cooperative and communal settings, a transition from earlier times (Ansari & Khan, 2020). Collaboration is one skill that suggests competence in working in groups to accomplish shared objectives, resolve conflicts, and forge social ties (Van Leeuwen & Janssen, 2019; Le et al., 2018). Research propounds that learners benefit from applying collaborative skills to answer probing questions, substantiate answers, and enhance analytical abilities (Hsu et al., 2018; Dobber et al., 2017). In addition, collaboration enhances social interaction, cooperation, support, openness, confidence, problem-solving, responsibility, diversity, and conflict resolution, which are essential components of facilitating successful teamwork (Ansari & Khan, 2020). In order to

develop holistically, early childhood practitioners are advised to teach their learners collaborative skills.

While many strategies for improving learners' collaborative skills in elementary schools have been touted, play-based learning emerged as the most effective since it fosters better social, engaging, and interpersonal experiences and engenders deep learning (Danniels & Pyle, 2022). Liu et al. (2015) assert that play-based pedagogy is one of the teaching and learning techniques that help learners become collaboratively minded to build their leadership and critical-thinking abilities. Through fostering active engagement, interaction, and teamwork, play-based learning promotes collaborative teaching-learning. Practitioners who include play in their lessons frequently observe increased learner collaboration in group projects, problem-solving success, and transparent negotiating (Arends et al., 2017). Similarly, peer cooperation, empathy, and social skills development are fostered by cooperative play experiences, which pave the way for future successful group projects (Liu et al., 2015).

With the acquisition of collaborative abilities, learners can complete increased volumes of work, engender a higher degree of zeal and dedication, and generate innovative ideas through brainstorming (Le et al., 2018). When learners in the early grades collaborate, they recognize the value of different viewpoints articulated by their teammates, manage conflicts, and demonstrate reliability and trust (Van Leeuwen & Janssen, 2019). However, for early-grade learners to successfully acquire collaborative skills, practitioners must support the development of these abilities (Taylor & Boyer, 2019). Practitioners need to foster collaborative abilities in their early years learners by teaching them how to work to avoid submitting incomplete assignments or experiencing fatigue while completing group projects. In order to accomplish this, practitioners must communicate instructions in a clear, unambiguous, and understandable manner, especially concerning the goals of the lesson and content knowledge, while considering the strengths and weaknesses of each pupil (Liu et al., 2015).

Play-based Learning and Child Development

Play-based pedagogy is a complete motivational approach that significantly influences children's growth and well-being in their initial years of life (Pyle et al., 2023; Pyle et al., 2020). This suggests that a play-based approach to education is crucial for children's holistic development. Play helps young children develop holistically by giving them the tools to solve problems, communicate and interact with others, form connections and bonds with peers and adults, develop both gross and fine motor abilities, and learn the self-regulation skills necessary for growth and learning (Cheung, 2018; Wang et al., 2017). To prepare a young child for the rigors of everyday life, holistic development encompasses all facets, such as moral values, discipline, affection, and physical, cognitive, psychological, social, and linguistic growth (Lunga et al., 2022; Widodo, 2019).

The researchers of this paper believed in the play-based approach because it has significant benefits for promoting learning in early years' education. Playing with peers or adults develops children's vital life skills like socializing and problem-solving, which help them prepare for day-to-day routines and future adult responsibilities (Pyle et al., 2023; Kilinc et al., 2015). Also, children's moral development is enhanced during play activities because they understand other people's emotions, rules, opinions, and positive values. Additionally, they learn healthy coping mechanisms to handle grief, disappointment, and rage. Play activities like cutting, pasting, coloring (for fine motor skills), climbing, running, and skipping (for general motor abilities) develop motor skills that strengthen them to participate in daily activities (Lunga et al., 2022; Van As & Excell, 2018). Play activities that foster children's critical, imaginative, problem-solving, rational, and reasoning abilities also help them improve their intellectual capacity. Playing in groups teaches children how to cooperate, share information, work in teams, and engage socially and emotionally with others. (Pyle et al., 2020). Since language and speech are critical for a child's growth, play activities promote the acquisition of

language skills such as vocabulary, sentence construction, spelling, obeying directions, and communicating (Soma & Kwaku Kissiedu, 2023). Lungu and Matafwali (2020) claim that play-based early childhood programs are the main drivers of long-term academic gains because they allow children to express their creativity while building their physical, cognitive, emotional, and dexterity capabilities. Hence, the benefits of play cascade into interaction and engagement with the world.

Although play-based pedagogy has received much support, not all children benefit. Families and communities do not necessarily organize play activities for children, especially in impoverished rural localities. On the other hand, some children have the resources at their disposal and live in relative opulence, but play opportunities are limited as parents are preoccupied with work interests (Pyle et al., 2023; Lunga et al., 2022). These children are raised in a way that engenders stress and boredom, which could limit their holistic development (Yamada-Rice, 2017). According to Keung and Cheung (2019), schools should implement a play-based pedagogy to support children's holistic development since playful learning enhances physical, cognitive, and socio-emotional outcomes necessary for literacy, numeracy, communication, and academic achievement.

Development in children occurs top-down. This implies that to integrate the next developmental stage and enable one to become increasingly capable as one matures, the fundamental sensory skills (sight, hearing, tactile, smell, and taste) must be mastered (Baker & Ryan, 2021). A young child's brain responds to a sensory stimulus by sending information to the brain via sensory pathways, which interact at different levels to help the child make sense of the world. Play-based pedagogy is often considered the most effective method for teaching in the early years since children (0-9 years) are most responsive to stimuli while playing and exploring (Hedges & Cooper, 2018).

The following questions guide this research: How does play-based learning influence school teachers' job satisfaction? What reasons can be given for it to reduce the stress levels of ECCE practitioners? How does play-based education contribute to promoting collaborative learning among learners? What aspects of child development are significantly enhanced through this approach?

METHOD

This study employed a descriptive survey method to investigate the impact of play-based learning methods on ECCE practitioners' job satisfaction, stress levels, and collaborative learning in elementary schools within the Ilorin South Local Government Area of Kwara State, Nigeria. This descriptive survey method allows for the comprehensive analysis of attitudes, opinions, behaviors, and characteristics within a sample relative to a population (Braun & Clarke, 2019). The research process also focused on administering and analyzing questionnaire responses of ECD practitioners, which were necessary for investigating the effects of play-based learning methods.

This study's population comprised early learning school practitioners within the Ilorin South Local Government Area of Kwara State. A total of 200 practitioners were selected using a simple random sampling technique, which ensured that each practitioner had an equal chance of being selected for participation in the study.

A self-developed questionnaire titled *Questionnaire on Play-Based Learning, Teacher Satisfaction, Stress, and Student Collaboration in the Classroom* (QPBLTSSSC) was utilized for data collection. It consisted of two sections: Section A required demographic information such as school type and gender, while Section B centered on play-based learning, teacher satisfaction, stress, and learner collaboration in ECCE classrooms. The questionnaire instrument was validated by three experts from the Faculty of Education, University of Ilorin. Additionally, the reliability was established by administering 20 copies of the questionnaire to 'respondents' who were not part of the study,

resulting in a reliability index of 0.81. This high-reliability index indicated the consistency standards of the questionnaire in measuring the variables.

The questionnaire was distributed manually and through Google Forms to ensure accessibility and convenience for respondents, who were provided with clear instructions for completing the questionnaire. Data collection took place over a specified period to allow time for well-thought-out responses. The collected data were analyzed using descriptive statistics, including central tendency (mean), frequency, and percentage measures. Descriptive statistical analysis allowed for the summarising and interpretation of collected data, which provided valuable insights into the impact of play-based learning methods on practitioner satisfaction, practitioners' stress levels, and learner collaboration in the classroom.

RESULT

Table 1. Demographic distribution of respondents based on gender, grade, and teaching experience

<i>Variable</i>	<i>Frequency</i>	<i>Percentage</i>
Gender		
Male	97	48.5
Female	103	51.5
Total	200	100.0
Grade		
Pre-school	66	33.0
Lower Basic	42	21.0
Middle Basic	57	28.5
Upper Basic	35	17.5
Total	200	100.0
Teaching experience		
0 – 5 years	99	49.5
6 – 10 years	44	22.0
11 – 15 years	23	11.5
16 years and above	34	17.0
Total	200	100.0

As illustrated in Table 1 above, the demographic distribution of respondents reveals a balanced gender representation with 97 male respondents (48.5%) and 103 female respondents (51.5%). This parity in gender distribution underscored the inclusivity of the study across both male and female practitioners. Also, the grade distribution analysis indicated a diverse representation, with Preschool practitioners forming the most significant cohort at 33.0%, Middle Basic at 28.5%, Lower Basic at 21.0%, and Upper Basic at 17.5%. This variation represented a broad spectrum of grade levels covered within the study, capturing perspectives from a cross-section of early childhood and primary education practitioners. Further, the data relating to teaching experience revealed a dominance of practitioners with 0-5 years of experience, which constituted 49.5% of the sample, followed by those with 6-10 years (22.0%), 11-15 years (11.5%), and 16 years and above (17.0%). This distribution revealed the dominance of relatively novice practitioners within the sample, indicating a significant proportion of individuals who recently entered the teaching profession. In sum, the demographic profile of respondents provided valuable insights into the sample composition, reflecting a diverse representation across gender, grade levels, and teaching experience.

Research Question One: *How does play-based learning impact job satisfaction in primary school practitioners?*

Table 2. Mean and Standard deviation showing the impact of play-based learning on primary school teachers' job satisfaction

S/N	ITEM	SA	A	D	SD	Mean	SD
1.	I feel more satisfied with my job when implementing play-based learning activities in the classroom.	106 (53.0%)	89 (44.5%)	5 (2.5%)	0 (0.0%)	3.51	0.55
2.	Play-based learning positively influences my overall job- satisfaction.	74 (37.0%)	115 (57.5%)	9 (4.5%)	2 (1.0%)	3.31	0.60
3.	I find greater fulfilment in teaching when utilising play-based learning approaches.	79 (39.5%)	107 (53.5%)	10 (5.0%)	4 (2.0%)	3.31	0.66
4.	Play-based learning enhances my enthusiasm for teaching.	70 (35.0%)	108 (54.0%)	17 (8.5%)	5 (2.5%)	3.22	0.70
5.	Play-based activities increase my enjoyment of teaching.	96 (48.0%)	97 (48.5%)	7 (3.5%)	0 (0.0%)	3.45	0.56
Average Mean						3.36	

Table 1 above presents the Mean and Standard Deviation illustrating the impact of play-based learning on basic school practitioners' job satisfaction. Items with mean values exceeding 2.5 indicate a significant influence. Item 1: *I feel more satisfied with my job when implementing play-based learning activities in the classroom*, attaining a mean score of 3.51. This was followed by Item 5: *Play-based activities increase my enjoyment of teaching*, with a mean of 3.45, and then by Item 2: *Play-based learning positively influences my overall job satisfaction*, with a mean of 3.31. Additionally, Items 3 and 4: *I find greater fulfillment in teaching when utilizing play-based learning approaches*, and *play-based learning enhances my enthusiasm for teaching*; respectively, both received mean scores of 3.22. Collectively, these findings underscore the substantial impact of play-based learning on primary school practitioners' job satisfaction. With an average mean of 3.36, surpassing the weighted mean of 2.5, this evidence proves that play-based learning significantly enhances primary school practitioners' job satisfaction.

Research Question Two: How can play-based teaching and learning reduce the stress levels of primary school practitioners?

Table 3. Mean and Standard deviation showing the potential impact of play-based teaching and learning in reducing stress levels of basic school practitioners

S/N	ITEM	SA	A	D	SD	Mean	SD
1.	Implementing play-based learning reduces my stress levels during teaching hours.	67 (33.5%)	99 (49.5%)	32 (16.0%)	2 (1.0%)	3.16	0.72
2.	Play-based teaching-learning helps me manage stress effectively.	58 (29.0%)	116 (58.0%)	24 (12.0%)	2 (1.0%)	3.15	0.67
3.	I feel more relaxed and at ease when using play-based approaches in the classroom.	60 (30.0%)	120 (60.0%)	18 (9.0%)	2 (1.0%)	3.19	0.63
4.	Play-based activities decrease my overall stress.	64 (32.0%)	101 (50.5%)	33 (16.5%)	2 (1.0%)	3.14	0.71
5.	I experience less burnout when incorporating the play-based learning method.	53 (26.5%)	105 (52.5%)	35 (17.5%)	7 (3.5%)	3.02	0.76
6.	I feel more energised and less fatigued when implementing play-based learning.	71 (35.5%)	106 (53.0%)	17 (8.5%)	6 (3.0%)	3.21	0.72
Average Mean						3.15	

The above tabulation of the Mean and Standard Deviation provides evidence of the potential impact of play-based teaching and learning on reducing stress levels among basic school practitioners. Items with mean values exceeding 2.5 indicated a significant influence on stress reduction. Specifically,

Item 6, *I feel more energized and less exhausted when implementing play-based learning*, stands out with a mean score of 3.21. Following closely is Item 3: *I feel more relaxed and at ease when using play-based approaches in the classroom*, with a mean of 3.19. Item 2, *Play-based teaching and learning helps me manage stress effectively*, attained a mean of 3.15, while Item 1, *Implementing play-based learning reduces my stress levels during teaching hours*, received a mean score of 3.16. Item 4: *Play-based activities decrease my overall stress as a teacher*, garnering a mean score of 3.14, while Item 5: *I experience less burnout when incorporating play-based learning methods*, received a mean score of 3.02. These findings collectively underscore the significant potential of play-based teaching and learning to reduce stress levels among basic school practitioners. With an average mean of 3.15, surpassing the weighted mean of 2.5, it was evident that play-based teaching and learning played a pivotal role in alleviating stress among ECCE practitioners.

Research Question Three: *To what extent does play-based education promote collaborative learning among practitioners and learners?*

Table 4. Mean and Standard deviation showing the extent of play-based education regarding the utilization of collaborative learning among practitioners and learners

S/N	ITEM	SA	A	D	SD	Mean	SD
1.	Collaborative learning is more prevalent among practitioners and learners when utilising play-based pedagogy.	81 (40.5%)	112 (56.0%)	7 (3.5%)	0 (0.0%)	3.37	0.55
2.	Play-based learning fosters a sense of teamwork and cooperation among practitioners and learners.	81 (40.5%)	110 (55.0%)	9 (4.5%)	0 (0.0%)	3.36	0.57
3.	I observe more significant peer interaction and collaboration during play-based learning sessions.	95 (47.0%)	91 (45.5%)	14 (7.0%)	0 (0.0%)	3.41	0.62
4.	Play-based education promotes a supportive and inclusive learning environment.	86 (43.0%)	107 (53.5%)	5 (2.5%)	2 (1.0%)	3.39	0.59
5.	Practitioners and learners work together more effectively in play-based learning scenarios.	91 (45.5%)	98 (49.0%)	9 (4.5%)	2 (1.05%)	3.39	0.62
Average Mean						3.38	

The data presented in Table 4 above offered insights into how play-based education promotes collaborative learning among practitioners and learners. Notably, Item 3 stood out with a mean score of 3.41, indicating a high level of peer interaction and collaboration observed during play-based learning sessions. This is followed closely by Item 5, highlighting the effective collaboration between practitioners and learners in such scenarios, with a mean score of 3.39. Item 4, which measured promoting a supportive and inclusive learning environment through play-based education, received a mean score of 3.39. In contrast, Item 1 and Item 2 both garnered mean scores above 3.3, thus emphasizing the prevalence of collaborative learning among practitioners and learners in play-based settings. These findings underscore the significant role of play-based education in promoting collaborative learning among practitioners and learners. With an average mean score of 3.38 across all items, surpassing the threshold of 2.5, it was evident that play-based education contributed immensely to collaborative learning. These results highlight the potential of play-based approaches to enhance peer interaction and teamwork and create a supportive and inclusive learning environment conducive to collaborative learning experiences.

Research Question Four: *What aspects of child development are most significantly enhanced through play-based learning?*

Table 5. Mean, Standard deviation, and rank showing aspects of child development most significantly enhanced through play-based learning

Item	Mean	SD	Rank
Play-based learning significantly enhances cognitive development in children.	3.45	.59	1 st
Children demonstrate noticeable improvements in problem-solving skills through play-based learning.	3.38	.63	3 rd
I observe greater social-emotional development in children who engage in play-based activities.	3.26	.66	5 th
Play-based learning promotes language and communication skills in children.	3.43	.63	2 nd
Play-based activities contribute to the development of fine motor skills in children.	3.22	.62	6 th
Play-based activities contribute to the development of gross motor skills in children.	3.33	.65	4 th
Average Mean	3.38		

Table 5 above indicates the mean rank order, indicating the aspects of child development most significantly enhanced through play-based learning. It was evident from the mean ranking that the aspect primarily enhanced was item 1, with play-based learning significantly enhancing cognitive development in children, evidenced by a mean of 3.45. Following closely was item 4, indicating that play-based learning promotes language and communication skills in children, with a mean of 3.43. In contrast, item 2 suggests that children demonstrate noticeable improvements in problem-solving skills through play-based learning, with a mean of 3.38. Item 6 indicates that play-based activities contributed to the development of gross motor skills in children, with a mean of 3.33. Item 3 revealed more excellent social-emotional development in children engaged in play-based activities, with a mean of 3.26. Lastly, item 5 further underscores play-based activities' contribution to the development of children's fine motor skills, with a mean of 3.22. These findings collectively indicate that the areas above development are significantly enhanced through play-based learning, as all items have mean scores above 2.5.

DISCUSSION

This study discovered through data analysis that play-based learning positively impacts basic school practitioners' job satisfaction. This was evident as most participants agreed that they felt more satisfied with their job when implementing play-based learning activities because it increased their joy of teaching and job satisfaction, and provided greater fulfillment that enhanced their enthusiasm for teaching. This outcome substantiated the impact of play-based learning on basic school practitioners' job satisfaction. This finding was corroborated by Tekman and Yeniasır (2023), who advocate that play-based learning environments promote third-grade children's writing, speaking, listening, and reading abilities. Their results showed that interactive games and play-based learning environments improved learners' language skills while lowering practitioners' and learners' stress and anxiety levels. Moreover, practitioners' sense of purpose and commitment to work were revived when they observed learners actively participating and flourishing from engaging in play-learning opportunities (Nuttall et al., 2015).

Another study finding indicated the potential impact of play-based teaching and learning on reducing stress levels among primary school practitioners. This was evident in most primary school practitioner-respondents' information that revealed agreement in implementing play-based learning because it made them feel more energized, less weary, and more relaxed, helping them manage stress effectively. Similarly, most participants concluded they experience less burnout when incorporating play-based learning methods. Thus, the finding underscored the significance of play-based teaching-learning in reducing stress levels among ECE practitioners. This finding was supported by Frydman and Pitre (2018), who stated that some difficulties elementary school practitioners encounter regarding stress can be limited by incorporating play-based learning strategies.

Furthermore, it was discovered that play-based learning enhances inclusive learning through collaborative learning experiences. This was evident in the collected data that most participants preferred play-based learning because it enhanced peer interaction and collaboration between practitioners and learners while supporting an inclusive learning environment while supporting an inclusive learning environment by encouraging collaborative learning and cooperation among practitioners and learners. This finding was congruent with that of Danniels and Pyle (2022), who found that play-based learning was most effective because it promoted socializing and interpersonal experiences that produced deep learning. Moreover, Arends et al. (2017) assert that through active engagement, interaction, and teamwork, play-based learning promotes collaborative learning among learners and practitioners when working on group projects, solving problems, and negotiating conflicts (Liu et al., 2015).

Lastly, based on the data gathered from respondents (primary school practitioners), the study's results indicated that play-based learning enhanced cognitive development, promoted language and communication skills, improved problem-solving techniques, heightened the development of fine and gross motor skills, and contributed to the development of better social-emotional development. This outcome supports Sezgin and Demiriz's (2017) findings that play-based learning significantly influenced children's moral values, literacy expansion, and numerical skills. Alarmingly, Youmans et al. (2017) found that only 1% of the 89 kindergarten-age children they had engaged with indulged in play activities with their practitioners. Similarly, on a positive note, DeLuca et al. (2020) investigated the advantages of a play-based curriculum for developing social skills. They found that children's comprehension, communication, sharing, listening, and helping others all increased.

CONCLUSION

The findings revealed significant positives for practitioner satisfaction, stress reduction, and collaborative learning, while also demonstrating that play-based learning significantly enhanced children's cognitive development, language acquisition, problem-solving abilities, and socio-emotional development; these results collectively emphasize the critical importance of integrating play-based approaches into basic education curricula to enhance teacher well-being and foster environments conducive to holistic child development. To support this integration, it is recommended that teacher professional development programs be designed to include play instruction, free play, and guided play techniques. At the same time, public awareness campaigns should encourage home-based play practices to support child development and improve family coping mechanisms. Furthermore, practitioners should be supported with diverse stress management activities, such as mindfulness and time-management strategies, to overcome professional challenges, and they should be encouraged to allow for ample free, unstructured playtime where learners can independently explore and engage with their environment.

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Author contribution statement

All authors contributed to the study's design, data collection, analysis, and manuscript preparation.

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The data described in this article can be accessed by contacting the first author.

Declaration of interest statement

The authors declare no conflict of interest.

Additional information

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