Russian and Indian preschool educators' beliefs about play activities: a comprehensive study

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In this study, preschool teachers' beliefs regarding play in preschool children in its various forms (role-play, rough-and-tumble play, digital play), and the process of its development in groups of children based on samples of Russian and Indian educators were examined. From Russia, 3,013 respondents (all women), aged 18–77 (M = 41.57; SD = 10.02) took part in the study, and 116 respondents (10.34% men), aged 23–50 (M = 36; SD = 9) from India also participated. An original questionnaire aimed at assessing attitudes toward different types of play in preschool educators was used. This instrument consisted of various sections which focused on the understanding of play and its place in the everyday routine of the child group, role-play patterns characteristics (i.e., preferred plots, play materials, course of the play), rough-and-tumble play practice, attitudes toward digital play, and educators' play competence (self-assessment regarding difficulties with joining the play, suggesting a plot or materials for play, etc.). Our main finding was that although the vast majority of educators in both cultures recognize the value of play for child development, this belief does not find practical expression in the daily life of the child group. Our data showed that Indian educators are more likely to be mediators of children's experience in play, while their Russian counterparts are more likely to be engaged in the role-play with the children. The content characteristics of play among children in Russia and India were also described. There are differences in attitudes toward digital play: more experienced teachers have a more positive attitude toward the activities of children with digital devices, they see opportunities for the development of a child in digital play. At the same time, teachers in whose groups children enter into digital play not only have a positive attitude toward this type of play but also evaluate themselves more positively in the process of playing with children.

KEYWORDS

preschool teachers, pedagogical beliefs, role-play, rough-and-tumble play, digital play

1. Introduction

1.1. Play context in modern preschool children

Play is the most important activity for preschool children since it contributes to the child's development and allows them to acquire the skills necessary for later life. Play has a key importance for the development of voluntary behavior, creative imagination, self-awareness, and communication of preschoolers, it develops interpersonal relationships (Vygotsky, 1966; Elkonin,

1980; Karabon, 2017; Lillard, 2017). The development of a child and new qualities of their psyche takes place within this play activity. Nonetheless, play can also be considered as an environment for the development of a child's social and emotional competence, since, one way or another, play interaction involves communication with peers. Numerous approaches to understanding play and its typology (Hughes, 2006; Lillard et al., 2013; Smirnova, 2014) emphasize a great number of possibilities that it provides for the child, for example, adaptation to the surrounding reality, creating something new through creativity, working through negative experiences and fears, self-expression, exploring the properties of objects and experiment, development of physical skills and understanding of one's own abilities, an opportunity to try themselves in different roles, imitate adults and gain new experiences, and the opportunity to compete or adapt to peers and overcome an egocentric position (Howes, 2011). During play, the child keeps in mind the rules of the plot and, in accordance with these rules, suppresses unconscious impulses, and switches between the real and the imaginary world. Consequently, in the process of playing interaction with other children, self-regulation and subordination of motives develop (White et al., 2021; Colliver et al., 2022). The emotional side of the child's personality is also given an impetus for development in play, because a child may transfer their personality conflicts to a plot and gets the opportunity to understand and express the emotions in a socially acceptable way (Kidby et al., 2023). Therefore, play was traditionally considered as an essential part of the child developmental context, however, some factors are also to be controlled, e.g., family and educational context, as well as the digitalization and the role of the adult in this process.

The process of digitalization in education, as well as the experience of interacting with smart electronic devices, leads to changes in the developmental outcomes, since the time that could be dedicated to the play with peers, and therefore, for communication, obtaining new interaction experience through roles, is replaced by interaction with smart electronic devices. Even when it comes to the joint activities of children with an electronic device, digital play does not provide comparable interaction between children, since, as a rule, the features of digital content, for example, for a tablet, are such that children cannot play simultaneously, which suggests that one is playing while the other is watching. Accordingly, children can compete with each other for a digital device, and this implies a rather limited repertoire of behavioral responses that this type of play activity provides (Lawrence, 2017; Schriever et al., 2020; Marklund, 2022).

The context of the global COVID-19 pandemic only reinforced the aspect of the ambiguous impact of a child's communication with electronic devices (Baranova et al., 2020; Leonova, 2020; Kanashov and Trusova, 2021) on communication with peers and the development of play activities. Social isolation minimized the possibility of interaction with peers, since in many countries kindergartens were closed or their work was limited. Consequently, screen time for children inevitably increased, since it is at home that children get the opportunity to be left to themselves and use smart electronic devices or watch TV without restrictions.

Excessive experience of interaction with smart electronic devices is partially leveled by communication with peers in kindergarten, however, in this case, the characteristics of this communication are also questionable, since the kindergarten has its own daily routine and curriculum plans, which partly regulates this communication, and hence the time for children's spontaneous free play in its various forms becomes more and more limited. However, it is noted that children at

play are both individually and collectively oriented, which means that play provides an opportunity not only to show but also to form value orientations in children in the process of negotiations in the play and conflict of positions (Pálmadóttir and Johansson, 2015). Indeed, the content of children's interactions during play are influenced by the child's communication with the educator, so preschool teacher's efficacy should also be considered (Shim and Lim, 2017) since children engage with pedagogic culture patterns to tune their socio-emotional regulation (Arnott, 2018).

1.2. Role of the adult in children play within preschool educational settings

An important emphasis in assessing the process of children's play refers to the initiative and independence of the child in the play, to what extent the adult controls the game, or vice versa, and stimulates and supports the activity of children. There are different approaches to understanding the role of play in the process of learning and development, and hence the role of an adult in the play. For example, the degree of involvement of an adult in general terms can be described as child-led, adult-led, and free play (Veresov et al., 2021); this means that intervention in the play process may be absent, partial, or the adult may be fully involved in such interaction. Different forms of involvement of an adult in play affect the development of the child in different ways, in particular their executive functions (Loizou, 2017; McCabe, 2017; Veresov et al., 2021).

However, the question remains about the role of an adult in the play, since the degree of their participation in the process of play will be reflected in the degree of activity of the child, the freedom of expression of the child's emotions and states, and the ability to play out individual scenarios. An adult can limit socially condemned scenarios, and in addition children's initiative can also be suppressed when it comes to potentially dangerous actions. These two factors together can be expressed as play fully directed by an adult, which in a sense is the opposite of a situation where an adult acts as a mediator and mediates the child's experience, creating the conditions and environment for the disclosure of children's activity and initiative. However, there are various forms of participation of the teacher in children's play: through guided participation, help with materials, initial setup of the game activity, questions to the children, as a partner in the activity, or the educator documenting the play (Devi et al., 2020). Furthermore, the possibility of teachers' involvement in the play is also linked with the indoor and outdoor environment in preschool educational settings (Karabon, 2017; Miranda et al., 2017; Sakellariou and Banou, 2022). The design of the material educational environment of a kindergarten can provide various manifestations of children's creativity, and hence various types of games, including risky play (Cetken-Aktas and Sevimli-Celik, 2021), but this fact does not mean the creation of an absolutely safe environment, since such patterns of behavior may arise regardless of the availability of specific items (Stephenson, 2003).

1.3. Pedagogical beliefs and attitudes as a predictor of real pedagogical practices

Pedagogical beliefs are associated with appropriate teaching practice in the classroom, a statement that holds true for educators at

all levels of education. There are several approaches to considering the types of pedagogical docteines, but the most common is the division into student-centered and teacher-centered (Weimer, 2002). Also accepted is the approach of separating pedagogical principles into skill-based, rule-based, or function-based (Johnson, 1992).

Numerous studies have shown that both personal characteristics (e.g., age, educational level, and teaching experience; Li et al., 2020) and specific beliefs about teaching in general or a particular phenomenon of this process influence how teachers perform their tasks in daily work. Furthermore, there is also an influence of external tasks from stakeholders, which can influence the coherence of personal epistemology and pedagogical practice (Hallett, 2010).

The connection between pedagogical beliefs and practice has been shown in different cultural contexts and for different areas of the curriculum. For example, in language teaching, the belief that grammar is secondary to personal expression had the effect of superficial grammar teaching (Watson, 2015). One's interest in mathematics, among other factors, was shown to be associated with the importance of mathematics in the preschool classroom (Anders and Rossbach, 2015), as well as self-experience in learning mathematics (Lavidas et al., 2023). Perceptions about the role of their subject in the curriculum were also explored in pre-service PE teachers (González-Calvo et al., 2020), where, among other things, the role of one's own experience was emphasized. A separate body of research is devoted to pedagogical beliefs and practices for introducing ICT into the educational process (e.g., Liu et al., 2017; Mertala, 2017; Choi et al., 2023).

Professional training and experience also influence pedagogical attitudes and practices. For example, a study by Walsh and Fallon (2021) showed how, after training in playful learning, student teachers became more accepting and conscious of the value of play in the classroom, in addition to the value of any manifestation of the play. As we understand, this difference in perception may be related to the actual positioning in the play, which is one of the questions of our study. In turn, the different positions of the teacher in the play do not equally contribute to the understanding of the process that unfolds in children during this play (Devi et al., 2020).

1.4. Cultural context of children play

Despite the fact that the value of play as the leading activity of the child is recognized by the professional community, the actual pedagogical practice has various forms, which in one way or another are connected with the pedagogical attitudes and beliefs of the educators about certain phenomena of child development and the process of education, which, consequently, are in turn associated with the cultural context. The cultural context concerns the practices of play and the provision of a play environment for the child by adults, not only in the kindergarten but also in the context of the family. The adult can also be considered not only within the antagonic role of the 'director or mediator' of the play but also as a partner for play, however, this requires sufficient knowledge of how to initiate play in a non-directive manner, or create conditions for development through play (Al-Qinneh and Abu-Ayyash, 2022).

The systems of preschool education in Russia and India have both common features and differences. Preschool education in both countries is aimed at children of approximately the same age (from 3

to 6–7 years old) and is represented by both public and private institutions. At the same time, private kindergartens are not so common due to the high cost of such services. In Russia, the activities of kindergartens are regulated by federal educational standards implemented within the framework of individual programs of preschool education. Therefore, the curriculum sufficiently substantiates the ideas of the domestic psychological approach of cultural-historical psychology, which declares the key role of play in preschool age. Indeed, the age-related developmental processes are reflected in the recommendations for exercises for particular mental functions and social skills development (Veraksa et al., 2010).

In turn, in India, there are no strict norms of preschool education that are accepted throughout the whole country, so, in kindergartens, there can be different situations regarding the schedule of the day for children and their preparation for school. Apart from differences in schedules, there are inconsistencies in the importance given to play-based learning in India.

To give a wider context, in India although preschools are recommended for 2 years, more than half of the child population aged between 4 and 5 years does not attend (Ghosh and Dey, 2020). Parents can send their children to private schools (unregulated and with no strict norms on the syllabus), public schools, and anganwadis (community day care centers providing education and care). Since Indian education is academically competitive, parents often send their children to private centers that have a limited focus on play. In a study by Hegde and Cassidy (2009), interviews with teachers revealed the pressure experienced to meet academic goals instead of overall development, irrespective of their personal teaching philosophy. Endorsing academic goals over play is reiterated by parents and institutions as well (Hegde and Cassidy, 2009; Chopra, 2016).

In addition, turning to the cultural-historical theory, it is assumed that play is a cultural phenomenon and children play at what they observe in their environment (Elkonin, 1980; Karabon, 2017). Traditional themes of play, such as family, work, and fairy-tale plots, are mediated in one way or another by the context of a child's daily life in a given cultural context. The play reflects the broad context of relations in this sense, since its nature is social, and its content and specific play actions correlate with the logic of relations between people and social meaning. It is this, as we said earlier, that makes it possible for the child to acquire a new structure of motives, in particular, to be and behave like an adult (Venger, 1978).

Herein, meaning-making in play can also be based on the availability of resources. In. the Indian context, an online report by Chowdhury (2017) notes that anganwadis or community day care centers teach kindergartners balance and orientation by walking on rope, body awareness with the help of a mirror, and colors and shapes with flowers, leaves, and vegetables. Given that community kindergartens have limited funds, children gain an understanding of social reality, play, and values by engaging with artifacts in their immediate environment.

1.5. Different types of play and their place in preschool children development and educational settings

Play activity is important for the development of the main psychological qualities in preschool childhood: voluntary behavior,

creative imagination, self-awareness, etc. Play represents the context of communication among preschoolers, it develops interpersonal relationships and children's communication skills. However, there is less and less time for children to play in the daily routine of preschool educational institutions, since preparation for school and the development of relevant skills are the priority in the curricula (as, for example, physical development, communicative skills, speech, aesthetic development, etc., which are described in Federal Standard for Preschool Education in Russia) (Smirnova, 2013). Therefore, despite the declared high value of this process, the daily routine of preschool groups is different. One of the goals of our study is to track the presence or absence of such a contradiction.

In our work, we will focus on three types of play, as, in our opinion, the most contrasting forms of children's interaction, however, emphasizing that these types (role-play, rough-and-tumble play, digital play) are only a part of the whole variety of children's play activities at preschool age (Besio et al., 2016).

Role-playing as an activity implies that the child takes on a role, and the plot is often taken from everyday life, books, and cartoons (Cohen and Bamberger, 2021; Kelly-Williams, 2021). The play is a free activity and, in fact, the main form of manifestation of the independence of children in preschool age, the unique possibility for the development of voluntary behavior. The role-playing game provides an opportunity for spontaneous and active testing of oneself and the subject of the game, and provides a field for improvisation. It is thanks to this form of activity that the child not only gets acquainted with the surrounding reality but also through an imaginary situation gets acquainted with a variety of roles. However, the role of an adult in this process has both benefits and disadvantages (Veresov and Barrs, 2016; Veresov et al., 2021), as mentioned earlier.

Rough-and-tumble play is a type of play where children can imitate a fight, it also often occurs as part of a role-play or outdoor play. In one way or another, this form of play provides opportunities for the physical development of the child, since here they can gain new experience in mastering physical skills, and stimulate not only mental processes but also the musculoskeletal system. Thus, it was proven to have a positive influence on cognitive and social development (Lindsey, 2014; DiCarlo et al., 2015). Rational and competent use of contact play and outdoor games will allow the teacher to solve the set goals and objectives for creating optimal physical activity for children, fill the need for regular physical education, develop positive emotions and friendliness, and increase the level of wilfulness of actions. However, this type of play carries a risk of injury, which in turn may lead teachers to stop such play because they fear for the safety of children (Storli and Sandseter, 2015; Cetken-Aktas and Sevimli-Celik, 2021). Some colleagues argue that pedagogical attitudes toward risky play influence the extent of permissive behavior of preschool teachers regarding this type of play (Sandseter, 2014). Furthermore, cultural aspects also occur (Little et al., 2012; Sandseter, 2014; van Rooijen et al., 2019). Preschool educators emphasize that risky play is characterized not only by its speed, rough playing, and harmful tools but also by the possibility of loss or losing (van Rooijen et al., 2019). This is the reason why many preschool teachers prefer to limit it, although this type of play promotes child emotional development and self-confidence (Sandseter et al., 2017).

Digital play, as a natural part of the daily life of children in the modern world, is also beginning to take its place in preschool educational settings. The variety of digital devices makes it possible to identify at least such forms of digital games as task, exploratory, construction, and pretense (Lawrence, 2017). For children, communication with digital devices, with or without the participation of peers/adults, is a natural environment, although the impact of such activities is still controversial, in addition, preschool teachers differ in their judgments regarding the practical implementation of technology in the play process (Marsh et al., 2016; Fleer, 2020; Marklund, 2022). The impact of digital media and digital play on cognitive development depends on the child's age, content, and social context. If we see predominantly negative effects in toddlers, then in preschool age there is no such unequivocal opinion, as there are studies that emphasize the benefits of digital play for particular mental functions (Anderson et al., 2017). In addition, digital interactive games can be an aid to working with children with different developmental disabilities (Kokol et al., 2020).

Although digital play actually represents a different level of activity and also depends on a particular electronic device used by children, this type of play can also promote the development of communication and collaboration, since digital play may also be represented by situations where two children are playing together with one electronic device, or when one of them is playing while the other observes, so there may be also a competition between them in order to decide who is playing next, for example. However, a positive attitude of preschool teachers toward digital play does not mean that online play opportunities are sufficiently provided (Hatzigianni and Kalaitzidis, 2018; Kelly et al., 2022). We believe it is necessary to confirm whether in our sample these attitudes are positive and how this type of play is related to traditional role-play.

1.6. Current study

The purpose of the study was to identify beliefs about play in terms of its most common types, as well as the developmental potential in the daily life of a child from the point of view of preschool teachers. Based on the objectives of our study, a number of research questions and tasks were put forward. (1) To consider pedagogical attitudes regarding play, its place in the life of a preschool child, and corresponding pedagogical practice. To assess the differences in the play attitudes of teachers at the level of beliefs, practices, and observations. (2) To study the influence of factors of professional experience on educators' play beliefs. Do more experienced educators feel more confident while rough-and-tumble play takes place? Do younger colleagues feel more confident and creative participating in the role-play with the children? Do they evaluate digital play as more enriching compared to the more experienced educators? (3) To compare the ideas of preschool teachers about children's play in Russia and India. (4) To distinguish preschool teachers' attitudes toward role-play, rough-and-tumble, and digital play. To consider how these types of play are present in the children's group routine and whether there is a difference between their declared value for child development and actual presence.

2. Materials and methods

2.1. Participants

The Russian sample consisted of 3,013 respondents (all women), aged 18–77 ($M = 41.57$; $SD = 10.02$). A third of the respondents have

been working in the field of preschool education for more than 20 years, and more than half of the sample for more than 6 years. In addition to pedagogical education, 36.6% of educators have additional (other) education and/or work experience in areas that differ from early childhood education. A specialist degree was the highest education qualification level for 48% of the sample, while 31% had a diploma of secondary vocational education, 18% a bachelor's degree, 1% a master's degree, and a high school diploma (lower or secondary education) or doctoral degree comprised less than 1% each.

The Indian sample consisted of 116 respondents (10.34% men), aged 23–50 ($M = 36$; SD $= 9$). Here, 12.07% of the respondents have been working in the field of preschool education for more than 20 years, and 62.07% of educators have additional (other) education and/or work experience in areas that differ from early childhood education. A master's degree was the highest education qualification level for 29% of the sample, while 10% had a diploma of secondary vocational education, 35% a bachelor's degree, a high school diploma (lower (11%) or secondary (8%) education), or postgraduate education (7%).

The participants were recruited in the kindergartens which are associated with the universities that conducted the present study and in professional conferences dedicated to preschool childhood psychology and education.

2.2. Instrument

A comprehensive questionnaire was designed for the purpose of the present study, it was piloted with this sample. This instrument aimed at educators' beliefs about play consisted of various sections, including understanding of play and it's place in the everyday routine of the child group, role-play patterns characteristics (i.e., plots, play materials, course of the play), rough-and-tumble play practice, and educators' play competence. The questionnaire included both multiple-choice items (e.g., 'Which of the following plots are most frequent in children's role-play in your class?') and Likert-scale ones (e.g., 'It is easy for me to know what children would be interested in playing'), and also open questions (e.g., 'How much time (in %) do you allow for play in your kindergarten class on a regular day?'). The vast majority of the items represent single item levels and do not represent multiple scales.

While designing the questionnaire, we built it on previous work on play and its features, so we summarized some of the topics raised in the questionnaire. Duration was mentioned as one of the markers of highly developed role-play (Elkonin, 1980). A study by Logue and Harvey (2009) has identified gender differences in plot types. We included a number of questions about the materials children use to play, as multifunctional objects may indicate a more creative process of developing a plot (Ryabkova, 2018). Teachers' attitudes toward rough-and-tumble play, regardless of its' benefits for physical development, are also ambiguous (Storli and Sandseter, 2015). Finally, teachers' beliefs about digital play within the educational settings influence the play environment as well, since these beliefs mediate the corresponding practice (Sandberg et al., 2012).

This questionnaire was designed to investigate key aspects of the play activities of modern children in different countries. Most of the questions are about play and its particular kinds: role-play, digital games, and rough-and-tumble play. Role-play comprises games in which there is a plot and children play as characters in it. The plot often draws on everyday life, books, and cartoons. Some questions devoted to role-play are aimed to clarify the frequency and duration of play, and what objects and plot themes children use (including gender differences in preferred plot types). Also, some questions devoted to role-play were designed to test the hypothesis that children who initiate joint play may have certain specific skills and personal features. Questions aimed at assessing the play-related competence of kindergarten teachers are also included. The next part of the questionnaire is about teachers' practices in relation to rough-and-tumble play. Rough-and-tumble play simulates a fight or combat, and refers to vigorous behaviors such as wrestling, grappling, kicking, and tumbling. Such games are competitive and involve a potential risk of injury. The next part is devoted to digital games (playing on mobile devices and personal computers) and the use of digital content in kindergartens. These questions are aimed at clarifying teachers' beliefs and attitudes regarding digital games, as well as identifying existing practices and specifics of the use of digital games in kindergarten classes.

General demographic information on the professional experience and education level was also collected.

3. Results

3.1. Educators' beliefs about play

3.1.1. Understanding of the play and it's place in the everyday routine of the child group

Russian educators highly appreciate the importance of play in the development of preschoolers, and play occupies a large place in the child group's way of life. Thus, the vast majority of educators (91.5%) adhere to the idea that learning takes place in play, so play should be integrated into the educational process and daily routine of children. At the same time, according to the answers, only 26.6% of educators devote more than 75% of the time during a typical day to play. The largest contingent, 39.2% of respondents, answered that 50-75% of the time is devoted to the play, while 34.2% of teachers, i.e., a third of the sample, devote less than 50% of their time to the play during a typical day. Therefore, it can be assumed that the unequivocally declared importance of play for teaching preschoolers is not always reflected in the daily routine and organization of the educational process. It is also interesting that 40% of educators are guided in their attitude to the play by personal experience, but the attitudes and beliefs of colleagues very rarely influence them (1%). The development of attitudes toward play for more than half of the educators (59%) occurs in the process of their professional training.

By analogy with the Russian sample, the majority of Indian preschool teachers believe that learning takes place in play (81%). At the same time, only 10.3% of educators devote 75% or more of the time to play in the daily schedule of children; the main part of the sample (69.1%) devote only 50% or less time to play during a typical day. Therefore, for this sample, the assertion that the declared value of play is not fully reflected in the daily routine of children and real pedagogical practice is also true. In this sample, 44.8% of educators explain their attitude to play arising from their own experience, while almost the same number, 43.1% from pedagogical education and training.

In both samples we observed general positive attitudes toward the place of play in the learning process; teachers talked about the need to integrate play into the process of children's daily learning activities. We considered it necessary to get closer to understanding the nature of this process, and thus found a significant statistical relationship ($\chi^2 = 208$, $p < 0.001$), indicating that pedagogical education and one's own children's experience are associated with ideas that learning should take place within the play interaction. Furthermore, educators who noted that 50–75% of the time is devoted to play daily were more likely to indicate that learning should occur during the play, and these variables are also related ($\chi^2 = 35.8$, $p < 0.001$). However, this aspect seems to include digital play as well, since there are statistically significant differences among teachers in whose group children use and do not use digital devices ($t = -2.09$, $p < 0.04$), i.e., in those groups where digital devices are allowed, educators devote more time to play activities.

3.1.2. Attitudes toward digital play in preschool children

For a more accurate understanding of attitudes toward digital play, we compared the beliefs of teachers in whose groups children play with digital devices while in a group with those whose do not. Predictably, those teachers in whose groups children play with digital devices have a more positive attitude toward digital play. They are more likely to believe that digital play is a new form that can complement traditional games ($t = -7.62$, $p < 0.001$) and enrich them with modern ideas ($t = -9.06$, $p < 0.001$), that digital play allows children to acquire relevant skills and abilities for life ($t = -9.57$, $p < 0.001$), and that it introduces children to science ($t = -10.29$, $p < 0.001$). These teachers are more likely to believe that children need to engage with digital devices on their own to gain experience without the participation of adults ($t = -9.65$, $p < 0.001$), they spend more lessons using digital content ($t = -12.13$, $p < 0.001$), but at the same time, they generally feel more confident in the traditional play process too. These teachers feel themselves more confident than their colleagues: they know a lot of games and teach them to children ($t = -2.46$, $p < 0.01$), it is easy for them to choose interesting games for children ($t = -2.82$, $p < 0.005$), although they feel constrained during active role-playing with children ($t = -2.94$, $p < 0.003$).

3.1.3. Role-play characteristics

According to the observations of Russian educators, most often a role-playing game begins at the initiative of a particular child (64%), but different children can initiate the play, it depends on the situation (65%). At the same time, the initiators of the play most often know how to negotiate (100%), distribute roles (83.4%), and help other children to fulfill them (69.7%), they also tend to know various games (73.5%). Almost half (48%) of educators answered that children with visible difficulties in behavioral self-regulation fail to initiate games, and this is consistent with the answer given that one of the main qualities of the initiators of the games is the ability to negotiate. However, more than half (52%) of respondents do not observe such a relationship. The course of the game, according to the observations of teachers, can be determined by various factors. Most often, the course of the game can be suggested by any of the playing children (100.00%) or there is a leader in the game and they determine the course of the play (88.30%). The development of the play also largely depends on the available attributes (79.30%). Therefore, based on the results

obtained, it can be said that the initiative of an individual child is important in the origin and development of play, and this child, probably, in order for their initiative to be supported by other children, must have certain qualities and skills.

As for the choice of plots for playing, teachers observe plots about a family much more often than other options (100%). Approximately half as often, but still often, children play about work (44.3%), life events (39.60%), and fairy tales (45.50%).

Boys most often play military, heroic stories, stories from computer games, and adventures. Girls prefer family plots, or, less often, fairy tales, plots about school, work, or life events. Girls rarely choose military or heroic subjects. At the same time, boys can quite often play home and school plots, and also about work. Compared to girls, the topics preferred by boys are relatively evenly distributed (a little bit of everything). The results obtained on gender differences in preferred game plots are consistent with previously obtained data (Børve and Børve, 2017).

Children most often use sets for different professions for their play (doctor, shopkeeper, etc. - 100.00%), modern dolls (42.30%), cars, planes, ships (56.80%), and LEGO materials (52.00%) Among the least used– props are traditional dolls (4.60%), monofunctional objects (for example, a children's shovel, a sand mold, etc.) (5.90%), waste (secondary) material (for example, cardboard sleeves, plastic bottles, and caps, etc.) (5.50%), and digital devices (1.10%). Probably, the typical equipment of Russian kindergartens also plays a role here – those items that are most often available are most often used. Here it should be taken into account that traditional dolls, polyfunctional objects, and waste materials are not so common in kindergartens.

In the Indian educational context, role-play normally occurs both spontaneously (47.4%) and on the initiative of individual children (52.6%), while different children can act as initiators of the game (75%). The most characteristic qualities in descending order of importance for such children are creativity (55.17%), helping others with mastering roles (43.97%), leadership skills (37.07%), recognition of them as leaders by other children (28.45%), ability to manage their behavior (26.72%), game planning (24.14%), distribution of roles for other children (23.28%), knowledge of different games (23.28%), ability to negotiate (17.24%), and emotionality (16.38%). Indian educators (54.3%), as well as their Russian colleagues, believe that children with behavioral difficulties (with manifestations of aggression, screaming, and behavior that does not correspond to the context) cannot initiate play.

The course of the game can develop in different ways. Preschool educators from India noted the possibility that plot twist is suggested by a leader among children (34.48%), by any of the children playing (46.55%), or by adults (27.59%). Although children discuss the plot (43.97%), at the same time, sometimes a plot twist is determined by the available objects (42.24%).

Among the most prevalent plots of children's play, the themes of family (62.93%), school (51.72%), adventures (36.21%), and fairy tale plots (34.48%) stand out. At the same time, boys often act out stories about adventures (51.72%), heroes (37.93%), as well as stories taken from digital games (29.31%). Girls more often choose stories about family (68.1%), fairy tales (62.93%), or school (42.24%).

In their games, children often use sets of different professions (59.48%), cars, airplanes, and boats (38.79%), building blocks (38.76%), modern dolls (29.31%), costumes and their elements (25.86%), polyfunctional objects (20.69%), traditional dolls (16.38%),

TABLE 1 Russian and Indian preschool educators' beliefs about play (% of the national samples).

Item	Russian teachers	Indian teachers
Learning takes place in the play	91.5	81
Time devoted to the play during a typical day		
>75%	26.6	10.3
50-75%	39.2	20.6
<50%	34.2	69.1
Factors that influence these attitudes		
Personal experience	40	44.8
Professional training	59	43.1
Colleagues' attitudes	1	12.1

TABLE 2 Items most frequently used for play (% of the national samples).

Item	Russian teachers	Indian teachers
Sets for different professions	100	59.48
Modern dolls	42.3	29.31
Cars, planes, ships	56.8	38.79
Lego materials	52	13.79
Traditional dolls	4.6	16.38
Monofunctional objects	5.9	8.62
Waste	5.5	16.38
Digital devices	1.1	9.48

waste (secondary) material (16.38%), LEGO (13.79%), digital devices (9.48%), and monofunctional objects (8.62%).

3.1.4. Contact and rough-and-tumble play practice

For Russian educators, it does not matter where the contact play started - indoors or outdoors - 35% of teachers will stop it immediately, and the rest will most likely do so a little later when they consider it to have become unsafe. At the same time, they tend to talk about safety, and methods that are aimed at calming children and redirecting their attention. According to 72% of respondents boys play such games more often; as in the case of role-playing games, it is the games of boys that are most often stopped by the teacher.

Unlike their Russian colleagues, educators from India prefer to make sure that this rough-and-tumble play remains in a playful context, and only stop it if it turns into real aggression (62.9% classroom, 58.6% outdoor context). Nevertheless, a significant number of teachers still immediately stop such a game (32.8% classroom, 36.2% outdoor context). Roughly half (51.3%) of respondents answered that boys play such games more often.

3.1.5. Play competence of the educator

The role of an adult in the play, according to the answers of the educators in Russia, varies (the answers are comparable in percentage

terms). While 42% of educators are ready to join the game, 31% do not interact with children. Between these poles are options for the relative interaction of the teacher with the children. Therefore, in most situations, the educator observes the game and is ready to help with the plot or materials. A quarter of educators periodically observe the children's play, and another third do not just observe but ask questions and, apparently, is nearby.

Russian educators do not note difficulties in playing with children: it is easy for them to engage in play activity, they know many games and understand which games will be interesting for children. They rarely have difficulty coming up with plots or playing roles in a game. Educators often noted that they are ready to join the game as participants (74.70%), willingly ask questions, discuss their play, or construct plot with children (58.30%), but most often they observe what is happening in the game in order to offer children ideas/materials for game development (100.00%).

In the case of Indian educators, there is a more active position as a mediator of children's experiences. In particular, 31.9% come up to the playing children to ask something about the play and/or to comment on it, and 49.14% watch what happens in the role-play and try to offer children ideas or materials that could contribute to its development. The educators also expressed willingness to ask questions and discuss the plot (12.93%) and join the play (23.28%). However, 27.59% do not interfere and make interventions only in case of dangerous situations (Tables 1–3).

3.2. Comparison of the educators' beliefs

3.2.1. The impact of culture (country of residence)

The impact of culture (country of residence) revealed itself in a number of significant differences regarding the play competence of educators and their attitudes toward digital play and rough-and-tumble play practice (see Table 4).

According to the results obtained, preschool teachers from India are significantly more likely to believe that during the play they have difficulty inventing a plot, and taking a role in the play is accompanied by a state of inconvenience and tension for them, which is also expressed in the fact that while playing with children they sometimes get bored.

Russian educators take a significantly more protectionist position regarding rough-and-tumble play practice. They are significantly more likely to use hugs to comfort their children and also talk to them about safety. At the same time, educators from India are significantly more likely to watch the play until someone gets hurt.

Russian teachers also take a significantly more loyal position regarding digital play. They believe that it can enrich traditional play comparably and that children should be able to engage in digital play on their own.

3.2.2. The impact of professional experience level

For the level of professional experience (in years, for the entire sample as a whole, splitting by median), significant differences were also found (Table 5).

More experienced teachers feel significantly more comfortable in the process of playing with children: they know a lot of games, and it is easy for them to understand the interests of children in the

process of playing, while less experienced colleagues, on the contrary, feel constrained in the process of playing and get bored with the play.

Rough-and-tumble play practice reveals a significant difference only for the use of such a tool as a conversation with parents, where less experienced educators turn to this strategy more often.

More experienced teachers showed a more loyal attitude toward digital play in children. Although experienced educators understand that digital play will not replace traditional, they note that it can enrich the process with modern skills that will be useful for children in the future, in addition, the possibility of developing reading and counting skills in the digital game is emphasized.

3.2.3. The impact of age

For the age of teachers (in years, for the entire sample as a whole, splitting by median), significant differences were also found (Table 6). In general, the data are similar to those obtained for comparing groups in terms of the level of professional experience, however, there are a number of differences.

Teachers of the older group assess themselves as significantly more competent in matters of the play. In addition, in matters of rough-and-tumble play practice, the older group of teachers issues a warning to children significantly more often than younger colleagues, and they, in turn, more often use the strategy of talking with parents to stop such practices. Finally, teachers from the older group are more positive about digital games and note their ability to enrich the traditional games, and the possibility of teaching children new skills in this way, in particular, reading and counting, for subsequent successful study.

Educators also believe that children need to independently engage with digital devices, including in kindergarten, but at the same time, they believe that digital play does not replace traditional.

4. Discussion

The aim of our study was the comprehensive study of the attitudes of preschool teachers in Russia and India to traditional and digital play, as well as to study the influence of factors such as age, professional experience, and country of residence on this process. We also expected to describe the characteristics of teachers' attitudes toward different types of children's play (role-play, rough-and-tumble play, digital play). Play in its many forms at preschool age is not only the so-called leading activity in line with cultural-historical psychology, but also a nourishing environment for the development of communication and emotional sphere of the child, self-regulation, and academic skills (Johnson et al., 2005).

Our results demonstrated that both Indian and Russian educators note the high importance of play for the learning and development of a preschool child. However, in the real pedagogical process, free play is given little time. These data highlight the fact that reported beliefs and actual teaching practices differ. Our findings point out the social desirability of educators who believe in the value and importance of play for child development, but in reality, little time is spent on free play for children. We believe that the discrepancy between pedagogical beliefs and practice can be complex. Chan (2016) notes that the professional education of teachers and their attitudes toward teaching introspection contribute to this difference, but most importantly, teachers are under pressure from the curriculum and parental requirements, and expectations from the academic abilities of children. These discrepancies in beliefs and observations of children's activities allow us to discuss that play as it is and play forms of activity in the work of a preschool teacher are not the same thing. At the same time, these beliefs about the play are largely due to their own experience and pedagogical training. Educators describe similar patterns of different preferences in play plots for boys and girls, and our results are consistent with the previous research demonstrated that boys prefer superhero plots and girls are more likely to choose family plots (Logue and Harvey, 2009).

TABLE 3 Russian and Indian preschool educators' play competence (% of national samples).

Item	Russian teachers	Indian teachers
Ready to join the play	74.7	23.28
Ask questions about the play	58.3	12.93
Offer ideas or materials for play	100	49.14
Do not interfere	31	27.59

TABLE 4 Significant differences in Russian and Indian preschool educators' attitudes toward play.

Item	t	p
Play competence		
When I play with children, it is difficult for me to come up with an interesting plot twist	−3.3127	< 0.001
When I play with children, it is difficult for me to stay in my role, I feel stiff and tense	−4.0527	< 0.001
No matter how much I would like to play with children, I get bored quickly	−2.5948	0.010
Rough-and-tumble play practice		
I hug and comfort the children	3.7281	< 0.001
I talk to the children about safety	3.8034	< 0.001
I observe play uninterrupted until someone is hurt	−3.2425	0.001
Digital play attitudes		
Playing on digital devices can enrich traditional play with new ideas and creative opportunities relevant to the 21st century	2.9900	0.003
Children should be allowed to play on digital devices on their own because adults would only interfere with the learning process	1.9418	0.052

TABLE 5 Significant differences in educators' attitudes toward play according to professional experience level.

Item	t	p
Play competence		
I know a lot of games that I teach children	−6.2648	< 0.001
It is easy for me to know what children would be interested in playing	−2.8378	0.005
When I play with children, it is difficult for me to stay in my role, I feel stiff and tense	2.1677	0.030
No matter how much I would like to play with children, I get bored quickly	2.9128	0.004
Rough-and-tumble play practice		
I talk to the children's parents	4.1453	< 0.001
Digital play attitudes		
The developing potential of digital games is no substitute for a traditional play	−2.8232	0.005
Playing on digital devices can enrich traditional play with new ideas and creative opportunities relevant to the 21st century	−2.2540	0.024
Digital games allow children to get up-to-date modern skills that will be useful to them in life; for example, digital games increase computer skills	−4.0618	< 0.001
Digital games help develop reading and counting skills and introduce children to science	−4.5680	< 0.001
Do the children in your class play on digital devices during their day in kindergarten?	−4.1072	< 0.001

At the same time, they consistently note that children with behavioral difficulties cannot act as the initiators of the play. They note various qualities that are characteristic of children who involve their peers in the play, for example, the ability to negotiate, leadership qualities, creativity, and many others. Despite the fact that we obtained largely similar results for the Russian and Indian samples regarding the plots of role-playing games, for our future research it seems necessary to clarify the content of these role-play plots more precisely, since, as we said earlier, a play plot, for example, family plot, may be different in children of different cultures, since the environment where the child lives is different and has its own characteristics. In our study, there were no such precise questions, but we believe that clarification of the content of the role-play will further confirm the provisions of the cultural-historical theory that in a role-playing game the child gets the opportunity to express themself through the system of social relations.

Educators from Russia and India in our study take different positions in relation to play in general, as well as contact and rough-and-tumble play practice of children in kindergarten: for example, Russian teachers are more actively involved in play and it is easy for them, but their colleagues from India are more likely to take the position of a mediator of children's experience, thereby allowing the game to develop without adult intervention, but with support if necessary. The same is true for rough-and-tumble play, according to our data. Unlike Russian colleagues, Indian teachers make sure that rough-and-tumble play remains in the playful context and stop it only if it turns into aggression. Russian teachers, therefore, follow the concerns of parents, since they use more direct methods regarding this type of play: they talk about safety, redirect children's attention, and calm them. Our results confirmed that rough-and-tumble play is often suppressed in one form or another. Furthermore, we also see a difference between the pedagogical attitudes of teachers and the play activity in the daily routine of preschool children. The importance of movement for children and their physical development is left aside because there are fears for their safety. In fact, we can argue that part of the possibilities of the play, in particular, rough-and-tumble play, passes by the children and therefore they receive fewer incentives for

their development, physical and mental. Indeed, studies show that a lack of active play, in particular outdoor play, contributes to a negative emotional state (Rajabi et al., 2021), thus underscoring our assumptions that preschool children may lose developmental opportunities in the absence of rough-and-tumble play. Preschool teachers from India, in comparison with their colleagues from Russia, are significantly more inclined to believe that during the play they experience difficulties in inventing a plot, and taking a role in the game is accompanied by a state of inconvenience and tension for them, which was later expressed in the fact that playing with children bores them. In fact, the National Council of Education Research and Training (2019) stated that play-based pedagogy needs active involvement of both teachers and children, i.e.- teachers need to detect learning opportunities and make corresponding resources available (pp. 58). This results in play becoming a task, rather than an activity teachers can enjoy with the children. Russian teachers report having less difficulties in playing with children since they know many games that would be interesting for them and they note that they are ready to join the play and discuss it. It is noteworthy that these teachers were trained within their professional education programs, so this experience makes them feel themselves more confident while playing with preschool children (Loizou et al., 2022). The country of residence factor also causes significant differences in children's attitudes toward digital play; according to our data, Russian teachers are more loyal to this practice.

Furthermore, our data suggest that educators who use digital devices in classes with children are not so much supporters of digitalization, but generally look at play more holistically and evaluate themselves more positively in the process of traditional play also. Digital play, in the context of our study, turned out to be the type of play that received the most consistent answers, that is, in this case, there is no pronounced contradiction between the attitude toward digital play and real practice. However, we do note that more detailed questions regarding this type of play would help to more accurately describe this phenomenon in groups of preschool children, in particular, the ability to determine the quality and quantity of digital content consumed by children.

TABLE 6 Significant differences in educators' attitudes toward play in different age groups.

Item	t	p
Play competence		
I know a lot of games that I teach children	−4.4713	< 0.001
Rough-and-tumble play practice		
I make sure that the play space is safe. If this is not the case, I redirect play to a safe area	3.6391	< 0.001
I talk to the children's parents	4.0192	< 0.001
I give a warning and then stop the play	−3.0605	0.002
Digital play attitudes		
The developing potential of digital games is no substitute for a traditional play	−2.4602	0.014
Playing on digital devices can enrich traditional play with new ideas and creative opportunities relevant to the 21st century	−3.1585	0.002
Digital games allow children to get up-to-date modern skills that will be useful to them in life; for example, digital games increase computer skills	−3.4524	<0.001
Children should be allowed to play on digital devices on their own because adults would only interfere with the learning process	−2.7340	0.006
Digital games help develop reading and counting skills and introduce children to science	−5.2494	<0.001
Do the children in your class play on digital devices during their day in kindergarten?	−4.0744	<0.001

Our previous results suggest that preschool teachers in Russia are actively introducing various ICTs into the educational process (Veraksa et al., 2021), and attitudes toward digital play are generally more positive, as pedagogical attitudes toward digital devices are more positive among preschool teachers if there is a positive experience of use (Tsuei and Hsu, 2019). However, this is not always the case, since the active exploration of digital devices in the work of a preschool teacher can also be associated with a negative attitude toward digital play, where educators take a strong position that traditional play alone should be emplotyed in the pedagogical process (Aldhafeeri et al., 2016). At the same time, kindergarten teachers from Greece noted the possibilities of ICT as a means for children to play freely, complementing educational tasks, and developing technological competencies (Nikolopoulou and Gialamas, 2015), as did their colleagues from Brazil (Simões Gomes et al., 2018). Although ed-tech companies in India have attempted to fund classrooms in public as well as low-income schools, a lack of uniform digital literacy across preschool teachers has led to imbalanced experiences with ICTs consequently impacting attitudes toward digital play.

We also examined the role of factors of age and level of professional experience in relation to pedagogical attitudes toward play in preschool children. Similar results were obtained for these factors. More experienced teachers feel significantly more comfortable in the process of playing with children: they know a lot of games, and it is easy for them to understand the interests of children in the process of playing, while less experienced colleagues, on the contrary, feel constrained in the process of playing and get bored with the game. There are also differences in attitudes toward digital play, in particular, groups of teachers with extensive professional experience, as well as a group of older teachers, are more positive about digital games and their opportunities for the development of children and their individual skills. We believe that these results are mainly due to the fact that rich professional experience allows teachers to use digital devices and digital games as a means to achieve specific pedagogical goals. Experienced colleagues see the process as a whole and can adequately use new resources in accordance with the tasks of the age, as well as with the tasks of the next educational level. One way or another, digital devices at this stage of the development of society already occupy a significant place in the lives of children and their parents, so pedagogical attitudes are positive in this aspect, according to our results. In general, the problem of using digital devices in working with preschool children, as well as independent digital play of children at home and in an educational institution, has always been controversial, since there are concerns about the negative effect of digital technologies, in particular, on children's health (Agger and Shelton, 2007; Soldatova et al., 2020; Kalabina and Progackaya, 2021; Sobkin and Fedotova, 2021), however, both educators and parents note opportunities to develop certain skills in this way (Edwards, 2014; Hu et al., 2020). Regardless, the role of traditional play in a child's development is indeed changing (Karabanova, 2020), and some studies have noted a decrease in the amount of dramatic play in a child's daily routine (Ihmeideh, 2019). There are different positions of parents regarding the play of children, when some prefer to engage in play based on physical activity with children, while others, on the contrary, provide the child with digital devices and sometimes engage in digital play with them (Güneş, 2020).

The limitation of this study is mainly due to the unevenness of the samples since the number of cases for Russian teachers was significantly higher than for their Indian colleagues. This fact that the two samples are strongly unbalanced highlights that the data can be considered preliminary for a comprehensive understanding of the play of preschool children and its patterns in different cultures. We also believe it is necessary to conduct further research to better understand the features of digital play and the content used by preschool children. Furthermore, studying the content of role-playing games on the same popular topics in different cultures can be of particular interest in understanding the influence of environment and culture. We believe it is necessary to better understand the nature of play activity in the preschool classroom. Scholars emphasize that in the modern context, the discussion about classroom play and play-based learning continues, resulting in confusion between the categories of free play and guided play, and others (Bodrova et al.,

2023). As we noted earlier, the role of an adult and the degree of their involvement in the play can be different not only in a quantitative but also in a qualitative sense. In addition, play elements are often included in the activities of children in playful classroom experiences. However, in this case, it is also worth bearing in mind that the degree of educators' directedness can be different, so the time that allegedly refers to free play can be both truly free play and play in groups where the teacher gives instructions (Paulick, 2019), while the question of their involvement also remains. Since play, according to the cultural-historical approach, is a cultural phenomenon (Vygotsky, 1966), it seems important to us to continue this study from several positions. First of all, as far as play provides the transmission of cultural ideas and also provides the child with the creation of meaning through play and imitation (Nielsen, 2012). We believe that it is necessary to deepen the investigation into the nature of children's play interaction, select or create the necessary observation criteria, and compare them within different cultures. In addition, we believe that it is necessary to expand the juxtaposition of different cultures and have greater contrasting, thus highlighting the commonalities and differences in children's play in, for example, individualistic and collectivist cultures. Since the symbolic function of play (Elkonin, 1980; Bonilla-Sánchez et al., 2022) is a key indicator associated with other components of play activity, in the context of changing the role of play in children, we believe it is necessary to emphasize separately the need to determine the role of digital devices in this process from the standpoint of a means, natural or cultural.

Data availability statement

The raw data supporting the conclusions of this article will be made available by the authors, without undue reservation.

Ethics statement

The study and consent procedures were approved by the Ethics Committee of Faculty of Psychology at Lomonosov Moscow State University (the Approval No: 2021/72). The patients/participants provided their written informed consent to participate in this study.

Author contributions

Conflict of interest

Publisher's note

References

Agger, B., and Shelton, B. (2007). *Fast families, virtual children: a critical sociology of families and schooling*. Boulder, CO: Paradigm

Aldhafeeri, F., Palaiologou, I., and Folorunsho, A. (2016). Integration of digital technologies into play-based pedagogy in Kuwaiti early childhood education: teachers' views, attitudes and aptitudes. *Int. J. Early Years Educ.* 24, 342–360. doi: 10.1080/09669760.2016.1172477

Al-Qinneh, D., and Abu-Ayyash, E. A. (2022). The play-based behaviours of Emirati preschool children: Cultural perspective into early childhood education. *Child Care Pract.* 28, 394–410. doi: 10.1080/13575279.2020.1816531

Anders, Y., Rossbach, H.-G. (2015). Preschool teachers' sensitivity to mathematics in children's play: the influence of math-related school experiences, emotional attitudes, and pedagogical beliefs. *J. Res. Childhood Educ.* 29, 305–322. doi: 10.1080/02568543.2015.1040564

Anderson, D. R., and Subrahmanyam, K., and Cognitive Impacts of Digital Media Workgroup (2017). Digital screen media and cognitive development. *Pediatrics* 140, S57–S61. doi: 10.1542/peds.2016-1758C

Arnott, L. (2018). Children's negotiation tactics and socio-emotional self-regulation in child-led play experiences: the influence of the preschool pedagogic culture. *Early Child Dev. Care* 188, 951–965. doi: 10.1080/03004430.2018.1443919

Baranova, V. A., Dubovskaya, E. M., and Savina, O. O. (2020). Educational environment amid COVID-19 pandemic: new security challenges. *Natl. Psychol. J.* 13, 57–65. doi: 10.11621/npj.2020.0307

Besio, S., Bulgarelli, D., and Stancheva-Popkostadinova, V. (Eds.) (2016). *Play development in children with disabilities*. Walter de Gruyter GmbH & Co KG.

Bodrova, E., Leong, D. J., and Yudina, E. (2023). Play is a play, is a play, is a play… or is it? Challenges in designing, implementing and evaluating play-based interventions. *Front. Psychol.* 14:1034633. doi: 10.3389/fpsyg.2023.1034633

Bonilla-Sánchez, M. D. R., García-Flores, M. A., Méndez-Balbuena, I., Silva-González, J. G., and Ramírez-Arroyo, E. V. (2022). The benefits of role play in the development of drawing in preschool children. *Front. Psychol* 13:1010512. doi: 10.3389/fpsyg.2022.1010512

Børve, H. E., and Børve, E. (2017). Rooms with gender: physical environment and play culture in kindergarten. *Early Child Dev. Care* 187, 1069–1081. doi: 10.1080/03004430.2016.1223072

Cetken-Aktas, S., and Sevimli-Celik, S. (2021). Examining opportunities for risky play in preschool outdoor play areas. *Int. J. Play* 10, 285–301. doi: 10.1080/21594937.2021.1959227

Chan, W. L. (2016). The discrepancy between teachers' beliefs and practices: a study of kindergarten teachers in Hong Kong. *Teach. Dev.* 20, 417–433. doi: 10.1080/13664530.2016.1161658

Choi, S., Jang, Y., and Kim, H. (2023). Influence of pedagogical beliefs and perceived trust on teachers' acceptance of educational artificial intelligence tools. *Int. J. Hum. Comput. Interact.* 39, 910–922. doi: 10.1080/10447318.2022.2049145

Chopra, N. (2016). Quality early childhood education for disadvantaged children: an investigation in the MCD schools. *Int. J. Early Years Educ.* 24, 49–62. doi: 10.1080/09669760.2015.1096236

Chowdhury, S. R. (2017). Getting ready for school in Uttar Pradesh – with ropes, leaves and repurposed junk. Available at: https://scroll.in/ and https://scroll.in/article/843834/getting-ready-for-school-in-uttar-pradesh-with-ropes-leaves-and-repurposed-junk

Cohen, E., and Bamberger, E. (2021). 'Stranger-danger'–Israeli children playing with the concept of 'Corona'and its' impact during the COVID-19 pandemic. *Int. J. Play* 10, 420–436. doi: 10.1080/21594937.2021.2005398

Colliver, Y., Brown, J., and Harrison, L. (2022). Toddlers' and preschoolers' free play predicts their self-regulation two years later: longitudinal evidence from a representative Australian sample. *Early Child Res. Q.* 59, 148–161. doi: 10.1016/j.ecresq.2021.11.011

Devi, A., Fleer, M., and Li, L. (2020). Preschool teachers' pedagogical positioning in relation to children's imaginative play. *Early Child Dev. Care*. 191, 2471–2483. doi: 10.1080/03004430.2020.1717479

DiCarlo, C. F., Baumgartner, J., Ota, C., and Jenkins, C. (2015). Preschool teachers' perceptions of rough and tumble play vs. aggression in preschool-aged boys. *Early Child Dev. Care* 185, 779–790. doi: 10.1080/03004430.2014.957692

Edwards, S. (2014). Towards contemporary play: Sociocultural theory and the digital-consumerist context. *J. Early Child. Res.* 12, 219–233. doi: 10.1177/1476718X14538596

Elkonin, D. B. (1980). *The psychology of play activity*. Madrid: Visor.

Fleer, M. (2020). Digital pop-ups: studying digital pop-ups and theorising digital pop-up pedagogies for preschools. *Eur. Early Child. Educ. Res. J.* 28, 214–230. doi: 10.1080/1350293X.2020.1735741

Ghosh, S., and Dey, S. (2020). Public or private? Determinants of parents' preschool choice in India. *Int. J. Child Care Educ Policy* 14, 1–16. doi: 10.1186/s40723-020-00068-0

González-Calvo, G., Gerdin, G., Philpot, R., and Hortigüela-Alcalá, D. (2020). Wanting to become PE teachers in Spain: connections between previous experiences and particular beliefs about school physical education and the development of professional teacher identities. *Sport Educ. Soc.* 26, 931–944. doi: 10.1080/13573322.2020.1812563

Güneş, G. (2020). Is the digitalization of play technological mutation or digital evolution? *Early Child Dev. Care*. 192, 638–652. doi: 10.1080/03004430.2020.1787402

Hallett, F. (2010). Do we practice what we preach? An examination of the pedagogical beliefs of teacher educators. *Teach. Higher Educ.* 15, 435–448. doi: 10.1080/13562517.2010.493347

Hatzigianni, M., and Kalaitzidis, I. (2018). Early childhood educators' attitudes and beliefs around the use of touchscreen technologies by children under three years of age. *Br. J. Educ. Technol.* 49, 883–895. doi: 10.1111/bjet.12649

Hegde, A. V., and Cassidy, D. J. (2009). Teachers' beliefs and practices regarding developmentally appropriate practices: a study conducted in India. *Early Child Dev. Care* 179, 837–847. doi: 10.1080/03004430701536491

Howes, C. (2011). "Social play of children with adults and peers" in *The Oxford handbook of the development of play*. ed. A. D. Pellegrini (New York, NY: Oxford University Press), 231–244.

Hu, B. Y., Johnson, G. K., Teo, T., and Wu, Z. (2020). Relationship between screen time and Chinese children's cognitive and social development. *J. Res. Child. Educ.* 34, 183–207. doi: 10.1080/02568543.2019.1702600

Hughes, B.. (2006). *Play types: speculations and possibilities*. London: The London Centre for Playwork Education

Ihmeideh, F. (2019). Getting parents involved in children's play: Qatari parents' perceptions of and engagement with their children's play. *Education* 47, 47–63. doi: 10.1080/03004279.2017.1399152

Johnson, K. E. (1992). The relationship between teachers' beliefs and practices during literacy instruction for non-native speakers of English. *J. Literacy Res.* 24, 83–108. doi: 10.1080/10862969209547763

Johnson, J. E., Christie, J. F., and Wardle, F. (2005). *Play, development and early education*. New York: Longman.

Kalabina, I. A., and Progackaya, T. K. (2021). Defining digital competence for older preschool children. *Psychol. State Art* 14, 169–185. doi: 10.11621/pir.2021.0411

Kanashov, A. E., and Trusova, A. V. (2021). The role of family relationships in Internet addiction in adolescents. *Natl. Psychol. J.* 2, 76–87. doi: 10.11621/npj.2021.0207

Karabanova, O. A. (2020). The risks of information socialization as a manifestation crisis of modern childhood. *Psikhologiya* 3, 04–22. doi: 10.11621/vsp.2020.03.01

Karabon, A. (2017). They're lovin' it: how preschool children mediated their funds of knowledge into dramatic play. *Early Child Dev. Care* 187, 896–909. doi: 10.1080/03004430.2016.1234467

Kelly, S. K., Sharpe, R. M., and Fotou, N. (2022). Early years and key stage 1 teachers' attitudes towards outdoor and online play. *Education* 3-13, 1–14. doi: 10.1080/03004279.2021.2025411

Kelly-Williams, S. (2021). Play in difficult circumstances in Jamaica. *Int. J. Play* 10, 361–364. doi: 10.1080/21594937.2021.2005403

Kidby, S., Neale, D., Wass, S., and Leong, V. (2023). Parent-infant affect synchrony during social and solo play. *Philos. Trans. R. Soc. Lond. Ser. B Biol. Sci.* 378:20210482. doi: 10.1098/rstb.2021.0482

Kokol, P., Vošner, H. B., Završnik, J., Vermeulen, J., Shohieb, S., and Peinemann, F. (2020). Serious game-based intervention for children with developmental disabilities. *Curr. Pediatr. Rev.* 16, 26–32. doi: 10.2174/1573396315666190808115238

Lavidas, K., Skopeliti, I., Zacharos, K., and Panagiotounakos, E.-P. (2023). Preservice preschool teachers' mathematics experience and math anxiety on their beliefs about and attitudes toward teaching mathematics. *J. Early Childhood Teach. Educ.* 44. doi: 10.1080/10901027.2023.2196943

Lawrence, S. M. (2017). Preschool children and iPads: observations of social interactions during digital play. *Early Educ. Dev.* 29, 207–228. doi: 10.1080/10409289.2017.1379303

Leonova, E. V. (2020). Parents and children in time of isolation: external and internal factors of mutual understanding. *Natl. Psychol. J.* 13, 48–56. doi: 10.11621/npj.2020.0306

Li, Z. Y., Yang, W., and Li, H. (2020). Teachers' pedagogical interactions as linked to personal beliefs and profiles: a mixed-methods study in Hong Kong kindergartens. *Int. J. Early Years Educ.* 28, 366–381. doi: 10.1080/09669760.2020.1778452

Lillard, A. S. (2017). Why do the children (pretend) play? *Trends Cogn. Sci.* 21, 826–834. doi: 10.1016/j.tics.2017.08.001

Lillard, A. S., Lerner, M. D., Hopkins, E. J., Dore, R. A., Smith, E. D., and Palmquist, C. M. (2013). The impact of pretend play on children's development: a review of the evidence. *Psychol. Bull.* 139, 1–34. doi: 10.1037/a0029321

Lindsey, E. W. (2014). Physical activity play and preschool children's peer acceptance: distinctions between rough-and-tumble and exercise play. *Early Educ. Dev.* 25, 277–294. doi: 10.1080/10409289.2014.890854

Little, H., Sandseter, E. B. H., and Wyver, S. (2012). Early childhood teachers' beliefs about children's risky play in Australia and Norway. *Contemp. Issues Early Child.* 13, 300–316. doi: 10.2304/ciec.2012.13.4.300

Liu, H., Lin, C.-H., and Zhang, D. (2017). Pedagogical beliefs and attitudes toward information and communication technology: a survey of teachers of English as a foreign language in China. *Comput. Assist. Lang. Learn.* 30, 745–765. doi: 10.1080/09588221.2017.1347572

Logue, M. E., and Harvey, H. (2009). Preschool teachers' views of active play. *J. Res. Child. Educ.* 24, 32–49. doi: 10.1080/02568540903439375

Loizou, E. (2017). Towards play pedagogy: supporting teacher play practices with a teacher guide about socio-dramatic and imaginative play. *Eur. Early Child. Educ. Res. J.* 25, 784–795. doi: 10.1080/1350293X.2017.1356574

Loizou, E., Trawick-Smith, J., Veraksa, N., Veraksa, A., Gavrilova, M., Bukhalenkova, D., et al. (2022). *Teacher education and play pedagogy: international perspectives*. Abingdon: Taylor & Francis Ltd

Marklund, L. (2022). Swedish preschool teachers' perceptions about digital play in a workplace-learning context. *Early years* 42, 167–181. doi: 10.1080/09575146.2019.1658065

Marsh, J., Plowman, L., Yamada-Rice, D., Bishop, J., and Scott, F. (2016). Digital play: a new classification. *Early Years* 36, 242–253. doi: 10.1080/09575146.2016.1167675

McCabe, U. (2017). The drama in sociodramatic play: implications for curriculum and pedagogy. *NJ* 41, 3–13. doi: 10.1080/14452294.2017.1329689

Mertala, P. (2017). Wag the dog–The nature and foundations of preschool educators' positive ICT pedagogical beliefs. *Comput. Hum. Behav.* 69, 197–206. doi: 10.1016/j.chb.2016.12.037

Miranda, N., Larrea, I., Muela, A., and Barandiaran, A. (2017). Preschool children's social play and involvement in the outdoor environment. *Early Educ. Dev.* 28, 525–540. doi: 10.1080/10409289.2016.1250550

National Council of Education Research and Training (2019) The preschool curriculum. India. Available at: http://www.ncert.nic.in/pdf_files/preschool_curriculum.pdf

Nielsen, M. (2012). Imitation, pretend play, and childhood: Essential elements in the evolution of human culture? *J. Compar. Psychol.* 126, 170–181. doi: 10.1037/a0025168

Nikolopoulou, K., and Gialamas, V. (2015). ICT and play in preschool: early childhood teachers' beliefs and confidence. *Int. J. Early Years Educ.* 23, 409–425. doi: 10.1080/09669760.2015.1078727

Pálmadóttir, H., and Johansson, E. M. (2015). Young children's communication and expression of values during play sessions in preschool. *Early Years* 35, 289–302. doi: 10.1080/09575146.2015.1048429

Paulick, J. H. (2019). Articulating high quality free choice time in head start preschools: a framework to support professional development and classroom observations. *Pract. Early Childhood Field* 22, 1–26.

Rajabi, M., Ali Afrooz, G., Qureshi, G., and Pombo, A. (2021). Children's indoor and outdoor play as potential correlates of mental health during the COVID-19 pandemic in Iran: a brief report on national survey. *Int. J. Play* 10, 437–447. doi: 10.1080/21594937.2021.2005404

Ryabkova, I. A. (2018). Особенности ролевого замещения в игре дошкольников с разными материалами [Features of role substitution in the play of preschoolers with different materials]. *Psychol. Pedagog. Res.* 10, 12–19. doi: 10.17759/psyedu.2018100302 (in Russian)

Sakellariou, M., and Banou, M. (2022). Play within outdoor preschool learning environments of Greece: a comparative study on current and prospective Kindergarten Educators. *Early Child Dev. Care* 192, 887–903. doi: 10.1080/03004430.2020.1813123

Sandberg, A., Lillvist, A., Sheridan, S., and Williams, P. (2012). Play competence as a window to preschool teachers' competence. *Int. J. Play* 1, 184–196.

Sandseter, E. B. H. (2014). Early childhood education and care practitioners' perceptions of children's risky play; examining the influence of personality and gender. *Early Child Dev. Care* 184, 434–449. doi: 10.1080/03004430.2013.794797

Sandseter, E. B. H., Little, H., Ball, D., Eager, D., and Brussoni, M. (2017). "Risk and safety in outdoor play" in *The SAGE handbook of outdoor play and learning*. eds. T. Waller, E. Ärlemalm-Hagsér, E. B. H. Sandseter, L. Lee-Hammond, K. Lekies and S. Wyver (London: Sage), 113–126.

Schriever, V., Simon, S., and Donnison, S. (2020). Guardians of play: Early childhood teachers' perceptions and actions to protect children's play from digital technologies. *Int. J. Early Years Educ.* 28, 351–365. doi: 10.1080/09669760.2020.1850431

Shim, S. Y., and Lim, S. A. (2017). The influence of Korean preschool teachers' work environments and self-efficacy on children's peer play interactions: the mediating effect of teacher–child interactions. *Early Child Dev. Care*. 189, 1749–1762. doi: 10.1080/03004430.2017.1411349

Simões Gomes, T. C., Pontual Falcão, T., de Azevedo, C., and Restelli Tedesco, P. (2018). Exploring an approach based on digital games for teaching programming concepts to young children. *Int. J. Child Comput. Interact*. 16, 77–84. doi: 10.1016/j.ijcci.2017.12.005

Smirnova, E. O. (2013). Play in a modern pre-school education [Elektronnyi resurs]. *Psychol. Sci. Educ*. 5, 92–98.

Smirnova, E. O. (2014). Typology of Games in Foreign and National Psychology [Elektronnyi resurs]. Sovremennaia zarubezhnaia psikhologiia. *J. Modern Foreign Psychol*. 3, 5–17.

Sobkin, V. S., and Fedotova, A. V. (2021). Adolescents on social media: aggression and cyberbullying. *Psychology* 14, 186–201. doi: 10.11621/pir.2021.0412

Soldatova, G. U., Rasskazova, E. I., and Chigarkova, S. V. (2020). Digital socialization of adolescents in the Russian Federation: parental mediation, online risks, and digital competence. *Psychology* 13, 191–206. doi: 10.11621/pir.2020.0413

Stephenson, A. (2003). Physical risk-taking: Dangerous or endangered? *Early Years* 23, 35–43. doi: 10.1080/0957514032000045573

Storli, R., and Sandseter, E. B. H. (2015). Preschool teachers' perceptions of children's rough-and-tumble play (R&T) in indoor and outdoor environments. *Early Child Dev. Care* 185, 1995–2009. doi: 10.1080/03004430.2015.1028394

Tsuei, M., and Hsu, Y. Y. (2019). Parents' acceptance of participation in the integration of technology into children's instruction. *Asia Pac. Educ. Res.* 28, 457–467. doi: 10.1007/s40299-019-00447-3

van Rooijen, M., Lensvelt-Mulders, G., Wyver, S., and Duyndam, J. (2019). Professional attitudes towards children's risk-taking in play: insights into influencing factors in Dutch contexts. *J. Advent. Educ. Outdoor Learn.* 20, 138–154. doi: 10.1080/14729679.2019.1568893

Venger, L. A. (1978). Play as a type of activity. *Voprosy Psihol* 3, 163–165.

Veraksa, A. N., Gavrilova, M. N., Chursina, A. V., and Fominykh, A. Y. (2021). Assessment of the experience of introducing ICT into the educational practice of preschool teachers. *Yaroslavl Pedagog. Bull.* 6, 186–195. doi: 10.20323/1813-145X-2021-6-123-186-195

Veraksa, N., Kovarova, T., and Vasilyeva, M. (Eds). (2010). *From birth to school. The main education program in preschool age*. Moscow: Mozaika-Sintez.

Veresov, N., and Barrs, M. (2016). The history of the reception of Vygotsky's paper on play in Russia and the west. *Int. Res. Early Childhood Educ.* 7, 26–37. doi: 10.4225/03/584e716cbdb75

Veresov, N., Veraksa, A., Gavrilova, M., and Sukhikh, V. (2021). Do children need adult support during sociodramatic play to develop executive functions? experimental evidence. *Front. Psychol.* 12:779023. doi: 10.3389/fpsyg.2021.779023

Vygotsky, L. S. (1966). Igra i ee rol' v psihicheskom razvitii rebenka. *Voprosy Psihol* 6, 62–75.

Walsh, G., and Fallon, J. (2021). 'What's all the fuss about play'? Expanding student teachers' beliefs and understandings of play as pedagogy in practice. *Early Years* 41, 396–413. doi: 10.1080/09575146.2019.1581731

Watson, A. (2015). The problem of grammar teaching: a case study of the relationship between a teacher's beliefs and pedagogical practice. *Lang. Educ.* 29, 332–346. doi: 10.1080/09500782.2015.1016955

Weimer, M. (2002). *Learner-centered teaching: Five key changes to practice*. San Francisco, CA: Jossey-Bass.

White, R. E., Thibodeau-Nielsen, R. B., Palermo, F., and Mikulski, A. M. (2021). Engagement in social pretend play predicts preschoolers' executive function gains across the school year. *Early Child Res. Q.* 56, 103–113. doi: 10.1016/j.ecresq.2021.03.005