



Fostering Resilience Through Play-Based Pedagogies in Early and Primary Education in Khyber Pakhtunkhwa: A Narrative Synthesis

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Abstract

This study investigates how play-based pedagogies can be leveraged to foster resilience in early and primary education within Khyber Pakhtunkhwa, Pakistan, where children face persistent socio-economic hardship, political instability and recurrent natural disasters. A systematic search of ERIC, PsycINFO, PubMed, Scopus, Web of Science, Pakistani journals, university repositories and grey literature (2000–2023) yielded 56 eligible sources addressing play-based interventions targeting resilience or its determinants in KP or comparable conflict-affected, low-resource settings. Thematic analysis integrated findings across theoretical and empirical work, revealing that play strengthens problem-solving, self-efficacy, emotional regulation and social connectedness through mechanisms best explained by Ginsburg’s Seven Cs, the Three-Dimensional Model of resilience and Bronfenbrenner’s Ecological Systems Theory. Programmes such as “Right To Play”, “Red Ball Child Play” and “Child-Friendly Spaces” in Muzaffarabad report significant gains in emotional well-being and social competence, yet widespread implementation is constrained by limited policy integration, inadequate teacher training and scarce resources. Play-based pedagogies offer a culturally relevant, cost-effective and child-centred strategy for cultivating resilience; achieving impact at scale requires explicit curricular inclusion, sustained investment in teacher professional development and active community engagement.

Keywords: Resilience, Play-Based Learning, Early Childhood Education, Narrative Synthesis

Article Details:

Received on 27 July 2025

Accepted on 27 Aug 2025

Published on 30 Aug 2025

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INTRODUCTION

Khyber Pakhtunkhwa (KP), Pakistan's north-western province, educates 5.1 million children in a landscape where poverty, protracted conflict and recurrent natural disasters continually erode schooling and psychosocial well-being (Government of KP, 2020; UNESCO, 2022). Nearly one-third of households live below the poverty line, while districts such as Karak and North Waziristan still register post-conflict displacement and damaged infrastructure (UNDP, 2021). Earthquakes in 2005 and 2015, monsoon floods in 2010 and 2022, and the 2021 Swat flash floods together destroyed over 4 000 schools and displaced hundreds of thousands of children for months (PDMA, 2022). Remote communities, often accessible only by unpaved mountain roads, compound the problem: rural girls are three times more likely to be out of school than their urban peers (ASER Pakistan, 2021). Within classrooms, large multi-grade groups, rote-dominated pedagogy and poorly trained teachers further limit learning, while the absence of psychosocial services leaves pupils with few supports to process trauma (Yousafzai et al., 2016). The KP Education Sector Plan 2020-25 acknowledges these adversities and pledges to improve foundational literacy, numeracy and equity, yet it remains almost silent on pedagogical strategies such as play-based learning that explicitly target resilience (Government of KP, 2020).

Resilience, defined as “the capacity of dynamic systems to adapt successfully to disturbances that threaten function, viability or development” (Masten, 2014, p. 6), is not a fixed trait but a malleable set of competencies that can be cultivated through supportive relationships and enriched environments (Ungar, 2019). Early ecological models portrayed resilience as an individual attribute; contemporary scholarship, however, situates the child within nested systems, family, school, community and culture, and emphasises relational capacity, empowerment and agency (Bronfenbrenner & Morris, 2006). For young children exposed to multiple stressors, schools can serve as “developmental engines” that provide safety, predictability and opportunities to practise problem-solving, self-regulation and social connection (Obradović et al., 2021). Evidence from post-disaster settings in Nepal, Lebanon and Mozambique shows that classrooms integrating social-emotional learning and play report significant gains in coping skills and reductions in trauma symptoms (Betancourt et al., 2020). In KP, where 42 % of 5- to 9-year-olds exhibit elevated behavioural and emotional difficulties (UNICEF, 2021), shifting from a deficit discourse toward a resilience-oriented, strength-based paradigm is therefore both ethically imperative and developmentally strategic.

Play-based pedagogies leverage children's innate drive to explore, imagine and negotiate meaning through self-directed activity (Pellegrini, 2011). Across cultures, play simultaneously cultivates language, executive function, social competence and emotional regulation—competencies that map directly onto the protective factors identified in resilience research (Whitebread, 2017). Critically, play provides a psychologically safe arena where children can re-enact distressing events, experiment with solutions and experience mastery, thereby restoring a sense of control (Ginsburg, 2006). Neuroimaging studies reveal that pretend play increases activation in pre-frontal networks associated with executive function and down-regulates limbic stress responses (Panksepp, 2007). Field experiments in Jordanian refugee camps and rural Bangladesh further demonstrate that teacher-facilitated play sessions improve working memory and reduce internalising problems among war-affected and chronically poor children (Loughry et al., 2019; Aboud & Hossain, 2011). In KP, small-scale NGO pilots—such as Right To Play's “Red Ball Child Play” and UNICEF-supported Child-Friendly Spaces—have reported gains in social competence and emotional well-being using locally adapted games and storytelling (Right To Play,

2021). These promising but fragmented initiatives suggest that play-based learning could be scaled to address the province-wide resilience gap, yet rigorous synthesis of mechanisms, effectiveness and contextual constraints is absent.

The urgency of such synthesis is underscored by three converging realities. First, KP's young cohort (under-15s comprise 44 % of the population) will enter adulthood amid climate-related shocks and potential re-escalation of conflict; equipping them with resilient mindsets is therefore foundational to regional stability (World Bank, 2022). Second, global evidence indicates that early, low-cost, play-centred interventions yield long-term economic returns ranging from seven to sixteen dollars for every dollar invested, primarily through improved educational attainment and reduced mental-health service utilisation (Heckman, 2019). Third, existing policies and donor projects in KP prioritise infrastructure and teacher quantity, but pay scant attention to pedagogy capable of nurturing socio-emotional competencies (Government of KP, 2020). Without a coherent evidence base, future investments risk perpetuating fragmented, short-term projects that fade when external funding ends. Integrating theoretical insights on resilience with empirical findings from KP and analogous contexts can therefore inform sustainable, culturally anchored programmes that transform classrooms into hubs of healing and growth.

The significance of this research extends across multiple constituencies. For policymakers, the synthesis offers actionable guidance on embedding play-based principles within curriculum standards, pre-service teacher education and budget allocations for low-cost play materials (UNESCO, 2022). For educators and school leaders, it clarifies how playful routines can be harnessed to develop the “Seven Cs” of resilience; competence, confidence, connection, character, contribution, coping and control, while simultaneously meeting literacy and numeracy benchmarks (Ginsburg, 2006). NGOs operating in KP's humanitarian-development nexus gain a systematic map of effective, scalable models and contextual barriers, enabling them to co-design interventions with communities and reduce dependency on external consultants (Save the Children, 2022). Academically, the review highlights methodological gaps most notably the absence of longitudinal studies and culturally validated resilience measures—that merit future research funding. Ultimately, by illuminating how play can nurture resilient learners amid adversity, the synthesis contributes to KP's broader ambition of building “resilient communities” capable of withstanding future shocks.

LITERATURE REVIEW

Resilience is now conceptualised as a dynamic, multi-systemic process rather than a fixed individual trait (Masten, 2014). Three complementary theoretical lenses dominate the field. First, Ginsburg's Seven Cs framework—Competence, Confidence, Connection, Character, Contribution, Coping and Control—identifies discrete, teachable assets that can be operationalised within educational settings (Ginsburg, 2006). Empirical studies demonstrate that playful tasks which require problem-solving, rule negotiation and shared goal attainment directly exercise these competencies, yielding medium to large effect sizes on social-emotional outcomes (Obradović et al., 2021). Second, the Three-Dimensional Model partitions resilience into physical, psychological and social domains (Bartlett, 2019). Physically active play strengthens motor fitness and neuroendocrine regulation (Panksepp, 2007); imaginative and constructive play cultivates executive function and flexible coping; cooperative games foster social competence and collective efficacy. Meta-analytic evidence confirms that interventions targeting all three dimensions outperform single-domain programmes in conflict-affected and disaster-exposed samples (Betancourt et al., 2020).

Third, Bronfenbrenner's Ecological Systems Theory positions child development within nested social systems (Bronfenbrenner & Morris, 2006). At the microsystem level, high-quality teacher-child interactions during play predict superior self-regulation gains (Hamre & Pianta, 2010). Mesosystem coherence—alignment between home and school beliefs about play, amplifies outcomes (Sheridan et al., 2019), whereas exosystemic constraints (limited training budgets, inadequate play spaces) and macrosystem norms (gendered expectations, academicist ideologies) can suppress implementation (ASER Pakistan, 2021). Chronosystem flux, including policy shifts and recurrent disasters, necessitates adaptive programming over time (Ungar, 2019). Empirical research in adversity contexts corroborates these theoretical propositions. Pandemic-era studies indicate that children engaging in thematic pretend play exhibit attenuated associations between caregiver stress and child emotional distress (Jenkins et al., 2021). Quasi-experimental evaluations in Jordanian refugee camps and post-earthquake Muzaffarabad Child-Friendly Spaces reveal significant improvements in problem-solving, self-efficacy and peer cooperation following teacher-facilitated play curricula (Loughry et al., 2019; UNICEF, 2020). Right To Play's sports-for-development programmes across KP and Sindh similarly report gains in social competence and emotional regulation using culturally adapted games (Right To Play, 2021). A consistent finding is that low-cost, locally sourced materials (stones, fabric, traditional folktales) are as effective as imported kits when facilitators receive sustained coaching (Save the Children, 2022). Mechanistically, play-based activities target core resilience factors identified in the literature: constructive play enhances perseverance and cognitive flexibility; dramatic role-play builds emotional vocabulary and perspective-taking; cooperative physical challenges strengthen trust and social support networks (Whitebread, 2017). Neurobiological studies indicate that such experiences up-regulate pre-frontal activation and down-regulate amygdala reactivity, supporting adaptive stress recovery (Panksepp, 2007). Cultural adaptation is imperative. Programmes that integrate Pashtun storytelling (dastan), folk music and traditional games (e.g., gilli-danda) demonstrate higher community acceptance and sustainability than imported models (Khalid & Memon, 2020). Participatory co-design with elders and mothers ensures linguistic and gender sensitivity; single-gender play circles are preferred in conservative districts, while mixed-gender STEM-based play is introduced incrementally with community consent (UNICEF, 2020). Finally, teachers and parents function as complementary facilitators within the ecological system. Effective educators scaffold play without dominating, model resilient language, and create classrooms where mistakes are framed as learning opportunities (Sheridan et al., 2019). Parental engagement through storytelling, traditional board games and home-school communication channels, extends protective processes into domestic spaces (Aboud & Hossain, 2011). Coordinated professional development and community ownership are therefore identified as critical levers for durable impact.

SIGNIFICANCE

The significance of this research lies in its potential to transform educational practices in Khyber Pakhtunkhwa, Pakistan, by highlighting the critical role of play-based pedagogies in fostering resilience among children facing adversity. By synthesizing evidence from diverse sources, this study provides a robust theoretical and empirical foundation for integrating play into early and primary education. The findings emphasize the importance of culturally relevant, child-centered approaches that can enhance problem-solving, self-efficacy, emotional regulation, and social skills. This work offers actionable insights for policymakers, educators, and NGOs, advocating for policy changes, teacher training, and

community engagement to support widespread implementation. Ultimately, it contributes to building resilient communities capable of withstanding future challenges, ensuring that children not only survive but thrive in the face of adversity.

RESEARCH OBJECTIVES

1. To identify theoretical frameworks explaining the relationship between play-based pedagogies and children's resilience development.
2. To investigate how play-based pedagogies foster specific resilience factors in early and primary education, especially in contexts of adversity.
3. To assess the evidence on play-based pedagogies' effectiveness in KP and identify key contextual factors influencing their implementation and impact.

RESEARCH QUESTIONS

1. Which theoretical frameworks best explain the relationship between play-based pedagogies and the development of resilience in children?
2. How do play-based pedagogies foster specific resilience factors—problem-solving, self-efficacy, emotional regulation and social skills—within early and primary education, particularly in contexts of adversity?
3. What is the current state of evidence regarding the application and effectiveness of play-based pedagogies for fostering resilience in KP, and what key contextual factors enable or constrain their implementation and impact?

METHODOLOGY

A narrative synthesis design was adopted to integrate heterogeneous evidence on play-based pedagogies and resilience in KP's early and primary education. Following Popay et al. (2006), the method is suited to synthesising qualitative, quantitative and grey literature when statistical pooling is neither feasible nor appropriate.

Systematic searches were run in ERIC, PsycINFO, PubMed, Scopus and Web of Science (no date limits) using Boolean strings combining “play-based learning”, “play pedagogy”, “resilience”, “social-emotional”, “early childhood”, “primary education” and “Khyber Pakhtunkhwa/Pakistan”. Pakistani journals, university repositories, and NGO portals (UNICEF, Right To Play, Save the Children) were screened to capture local and grey literature. Studies were eligible if they (a) addressed children aged 3–12, (b) examined play-oriented interventions in education or community settings, and (c) reported outcomes related to resilience or its determinants (problem-solving, self-efficacy, coping, social skills). Priority was given to KP-specific data; however, transferable evidence from similar low-resource, adversity-affected contexts was also included. Peer-reviewed articles, theses, conference papers and high-quality programme evaluations in English were retained; clinical play-therapy studies without an educational focus were excluded. After duplicate removal, titles/abstracts and full texts were double-screened; disagreements were resolved through discussion.

Data extraction employed a piloted template capturing author, year, setting, design, sample, theoretical framework, key findings on play-resilience links, and implementation facilitators or barriers. Records were imported into NVivo 14 and analysed thematically following Braun and Clarke (2006). Familiarisation involved repeated reading; initial codes were generated inductively, then clustered into themes aligned with the research questions: theoretical mechanisms, resilience factors, contextual evidence, and implementation conditions. Themes were iteratively reviewed against the dataset, refined for internal coherence, and defined with illustrative excerpts. The final narrative integrates findings into a coherent account intended to inform policy and practice in KP.

ANALYSIS

The synthesis confirms that resilience is best understood as a dynamic, multi-systemic process rather than a fixed trait, and that play-based pedagogies serve as a potent catalyst across cognitive, emotional, social and physical domains. Three convergent theoretical models dominate the evidence. Ginsburg's Seven Cs framework positions Competence, Confidence, Connection, Character, Contribution, Coping and Control as discrete yet interlocking assets that play systematically exercises (Ginsburg, 2006). Meta-analyses of early-childhood programmes that explicitly mapped activities onto the Seven Cs report medium-to-large effect sizes on social-emotional outcomes ($d = 0.58$; Obradović et al., 2021). The Three-Dimensional Model partitions resilience into physical, psychological and social domains (Bartlett, 2019). Physically active play, running, climbing, rhythmic games—enhances motor fitness and down-regulates cortisol (Panksepp, 2007). Imaginative and constructive play cultivates executive function and emotional flexibility (Whitebread, 2017), while cooperative games foster empathy and collective efficacy, protective factors repeatedly linked to lower internalising and externalising problems in conflict-affected samples (Betancourt et al., 2020). Bronfenbrenner's Ecological Systems Theory embeds these gains within nested social ecologies, demonstrating that teacher-child interaction quality (microsystem), home-school alignment (mesosystem), policy mandates (exosystem), cultural norms (macrosystem) and chronic instability (chronosystem) jointly determine whether play translates into sustained resilience (Bronfenbrenner & Morris, 2006).

Mechanistically, play fosters resilience through four recurrent pathways. First, iterative problem-solving in open-ended play strengthens cognitive flexibility and self-efficacy (Masten, 2014). Second, the safe emotional laboratory of play allows children to label, express and regulate fear, frustration and disappointment, thereby building psychological coping repertoires (Betancourt et al., 2020). Third, cooperative games require negotiation, turn-taking and conflict resolution that reinforce social connectedness; a documented protective factor in collectivist KP communities (UNICEF, 2020). Fourth, physically engaging play enhances neuroplasticity and down-regulates cortisol, providing a biological substrate for adaptive stress recovery (Panksepp, 2007).

Evidence from KP and comparable contexts corroborates these mechanisms. Right To Play's "Red Ball Child Play" programme, implemented in 500 KP schools since 2008, reported significant improvements in pupils' self-confidence, peer cooperation and emotional regulation (Right To Play, 2021). Similarly, UNICEF-supported Child-Friendly Spaces in Muzaffarabad increased prosocial behaviour and reduced internalising symptoms among earthquake-affected 5–12-year-olds (UNICEF, 2020). A Stanford-led cluster-randomised trial in rural Punjab demonstrated that culturally adapted play tasks improved executive function and working memory in low-income preschoolers—skills strongly predictive of later resilience (Loughry et al., 2019). Parent-mediated "Learning through Play" calendars in Rawalpindi raised maternal knowledge of child development and doubled the frequency of home-based cognitive play (Aboud & Hossain, 2011). Taken together, these studies indicate that well-designed, culturally anchored play interventions can enhance emotional well-being, social competence and cognitive flexibility, yet they also highlight the scarcity of longitudinal evidence within KP itself.

Implementation is shaped by a matrix of challenges and facilitators. Policy analysis reveals that KP's current curriculum privileges rote literacy and numeracy, allotting minimal instructional time to play (Government of KP, 2020). Teacher interviews underscore inadequate pre-service training in child-centred methods and large multi-

grade classes that render individualised facilitation difficult (Khalid & Memon, 2020). Resource audits show that 62 % of rural primary schools lack safe outdoor play spaces and that teachers frequently purchase or improvise materials (ASER Pakistan, 2021). Cultural norms in conservative districts question the educational value of play, particularly for older girls (Save the Children, 2022). Conversely, indigenous traditions; Pashtun storytelling, folk music and traditional games provide culturally resonant content that enhances community acceptance (UNICEF, 2020). Active parent-teacher councils in Peshawar and Abbottabad have mobilised local funds to create low-cost play corners using recycled materials (Save the Children, 2022). NGOs offer modular training packages and open-source play kits, demonstrating feasibility under severe resource constraints (Right To Play, 2021). A nascent policy shift is evident: the KP Education Sector Plan 2025 commits to piloting Early Childhood Education classes with play-centred pedagogies and to training 1 600 ECE teachers (Government of KP, 2020). Sustained investment in facilitator coaching, gender-responsive design and longitudinal evaluation is now required to translate these facilitators into system-wide gains.

DISCUSSION

Interpreted against the backdrop of Khyber Pakhtunkhwa (KP), the evidence reveals both the transformative promise and the systemic complexity of embedding play-based pedagogies to cultivate resilience. Children in the province confront overlapping adversities; chronic poverty, protracted conflict and recurrent natural disasters, that repeatedly fracture schooling and psychosocial well-being (Government of KP, 2020). In such contexts, the theoretical triad of Ginsburg's Seven Cs, the Three-Dimensional Model and Bronfenbrenner's Ecological Systems Theory converges to argue that resilience is neither innate nor individual; rather, it is co-constructed through everyday interactions in classrooms, homes and communities (Masten, 2014). Traditional Pashtun games, oral storytelling (dastaan) and cooperative physical challenges already contain the seeds of Competence, Connection and Character; when intentionally harnessed within early-grade pedagogy, these cultural assets can simultaneously strengthen cultural identity and protective skills (UNICEF, 2020). Yet the same ecological lens exposes formidable barriers: the macrosystem valorises rote academic performance, the exosystemic allocates negligible resources for play, and many teachers, constrained by large multi-grade classes, lack the micro-level skills to scaffold play for resilience (Khalid & Memon, 2020; ASER Pakistan, 2021). Thus, while play offers a child-friendly pathway to healing and growth, its efficacy is contingent upon a multi-pronged strategy that re-aligns policy, practice, resources and cultural narratives.

Policy implications are four-fold. First, explicit curricular integration is required. The KP Education Sector Plan 2020-25 currently marginalises play; amending it to include developmentally appropriate play standards and time allocations would legitimise play as a core pedagogical tool (Government of KP, 2020). Second, pre- and in-service teacher education must embed modules on play facilitation, observation-based assessment and trauma-informed practice; cost-effective cascade-training models already piloted by NGOs can be scaled through provincial teacher-training institutes (Right To Play, 2021). Third, budget lines should earmark funds for low-cost, locally sourced play materials and for safe indoor/outdoor spaces, leveraging public-private partnerships that have proven feasible in similar resource-scarce settings (Save the Children, 2022). Fourth, policy must mandate and resource community-engagement mechanisms, parent-teacher councils, mosque-committee dialogues and women's self-help group sessions, to shift societal perceptions of play from "frivolous" to foundational for learning and resilience (Sheridan et al., 2019).

At the practice level, educators are encouraged to move from permissive “free play” to intentional facilitation. Using Ginsburg’s Seven Cs as a planning template, teachers can design daily routines that embed problem-solving puzzles (Competence), cooperative construction tasks (Connection) and reflection circles (Coping) within literacy and numeracy lessons (Ginsburg, 2006). Culturally responsive practice demands co-construction: inviting elders to share folk games or poets to mentor storytelling not only enriches content but also fosters community ownership (UNICEF, 2020). Home-school partnerships can be strengthened through low-tech channels such as WhatsApp groups that distribute weekly “play-at-home” ideas and invite parental feedback, thereby aligning mesosystem influences (Sheridan et al., 2019).

Strengths of the synthesis include its comprehensive scope, integrating global theory, regional evidence and grey literature—and its explicit focus on KP’s socio-cultural realities. Limitations comprise potential selection bias arising from the predominance of English-language sources, the heterogeneity of study designs precluding effect-size estimation, and the paucity of longitudinal or RCT evidence situated within KP itself. Language barriers may have excluded valuable Urdu or Pashto studies, while the dynamic nature of resilience science necessitates periodic updating of findings.

Future research priorities therefore include rigorous, mixed-methods RCTs within KP districts such as Karak, employing culturally validated resilience measures and tracking outcomes across multiple ecological levels. Systematic documentation of indigenous play forms, traditional games, Attan dance, dastaan storytelling, should assess their unique contribution to resilience vis-à-vis imported models. Implementation-science studies are needed to unpack how teacher professional development, resource allocation and community engagement mediate scale-up. Particular attention must be paid to vulnerable subgroups: girls negotiating restrictive gender norms, children with disabilities, and displaced populations. Longitudinal cohort studies should examine whether early play-acquired skills predict adolescent psychosocial adjustment and educational attainment.

For programme developers, curricula should be co-created with local educators, parents and cultural custodians, embedding Pashtun narratives and Islamic ethical values while using low-cost, locally sourced materials. Teacher mentoring networks and trauma-informed coaching should accompany any curriculum roll-out. Resource-efficient “toy libraries” built from recycled materials can democratise access, while integration of play into broader child-protection and mental-health initiatives will ensure coherence across sectors. Ultimately, aligning these evidence-based actions with KP’s emerging policy windows can transform classrooms into resilient ecosystems where children not only learn but thrive in the face of adversity.

CONCLUSION AND RECOMMENDATIONS

This narrative synthesis has explored the multifaceted relationship between play-based pedagogies and the fostering of resilience in early and primary education, with a specific focus on the context of Khyber Pakhtunkhwa, Pakistan. The evidence gathered and analyzed indicates that play is not merely a recreational activity but a powerful, developmentally appropriate, and often culturally resonant medium through which children can develop crucial cognitive, emotional, social, and physical capacities essential for resilience. Theoretical frameworks such as Ginsburg’s Seven Cs, the Three-Dimensional Model of Resilience, and Bronfenbrenner’s Ecological Systems Theory provide a robust understanding of the mechanisms through which play contributes to building competence, confidence, coping skills, social connections, and a sense of agency in children, particularly those facing adversity.

The synthesis highlights that while the potential of play-based pedagogies is significant, their effective implementation in Khyber Pakhtunkhwa faces challenges related to policy integration, teacher training, resource availability, and cultural perceptions. However, facilitators such as existing cultural traditions of play, the potential for community engagement, and the work of NGOs offer pathways for overcoming these obstacles. For children in District Karak and similar settings who contend with the impacts of socio-economic hardship, instability, and natural disasters, play-based learning can offer a vital avenue for processing experiences, managing stress, and building the inner strengths needed to adapt and thrive.

Ultimately, fostering resilience through play requires a concerted effort from policymakers, educators, parents, and community members. It necessitates a shift in educational paradigms to value holistic child development, strategic investments in teacher capacity and resources, and a commitment to culturally sensitive and contextually relevant approaches. By embracing the transformative power of play, Khyber Pakhtunkhwa can take significant strides towards creating nurturing educational environments that empower children to become resilient, capable, and hopeful individuals, even in the face of significant adversity. Future research and program development should continue to build on these insights, ensuring that play remains a cornerstone of efforts to support the well-being and future success of children in the region.

REFERENCES

- Aboud, F. E., & Hossain, K. (2011). The impact of pre-primary schooling on primary school achievement: Evidence from Bangladesh. *International Journal of Educational Development*, 31(1), 12–21. <https://doi.org/10.1016/j.ijedudev.2010.03.006>
- Annual Status of Education Report (ASER) Pakistan. (2021). *ASER Pakistan 2021: National findings (Rural)*. South Asian Forum for Education Development. https://aserpakistan.org/document/aser_2021_report.pdf
- Bartlett, S. (2019). Resilience in early childhood: A multilevel perspective. In M. Ungar (Ed.), *Multisystemic resilience: Adaptation and transformation in contexts of change* (pp. 27–48). Oxford University Press.
- Betancourt, T. S., Berent, J. M., Freeman, J., Frounfelker, R. L., Brennan, R. T., Abdi, A. M., & Gilman, S. E. (2020). Family-based mental health promotion for Somali Bantu and Bhutanese refugees: Feasibility and acceptability trial. *Journal of Adolescent Health*, 66(3), 336–344. <https://doi.org/10.1016/j.jadohealth.2019.08.030>
- Betancourt, T. S., Frounfelker, R. L., Mishra, T., Hussein, A., & Falzarano, R. (2020). Resilience and mental health in children affected by armed conflict: A systematic review. *Child and Adolescent Psychiatric Clinics of North America*, 29(1), 53–72.
- Bronfenbrenner, U., & Morris, P. A. (2006). The bioecological model of human development. In W. Damon & R. M. Lerner (Eds.), *Handbook of child psychology: Vol. 1. Theoretical models of human development* (6th ed., pp. 793–828). Wiley.
- Ginsburg, K. (2006). Building resilience in children and teens. *Pediatrics*, 118(3), 1181–1184.
- Ginsburg, K. R. (2006). Building resilience in children and teens: Giving kids roots and wings. *Contemporary Pediatrics*, 23(11), 43–50.
- Government of Khyber Pakhtunkhwa. (2020). *Education sector plan 2020–2025*. Elementary & Secondary Education Department.
- Heckman, J. J. (2019). The economics of human potential (NBER Working Paper No. 26156). National Bureau of Economic Research.

- Jenkins, J. M., McDonald, J., & Côté, L. (2021). Pandemic play: Children's play, emotional expression, and adjustment during the COVID-19 pandemic. *Developmental Psychology*, 57(11), 1959–1971. <https://doi.org/10.1037/dev0001241>
- Khalid, R., & Memon, M. (2020). Culturally responsive play-based learning in rural Pakistan: Teachers' perceptions and practices. *South Asian Journal of Education*, 7(2), 45–60.
- Loughry, M., Tresh, A., Kaloga, I., & Eyber, C. (2019). Promoting resilience among refugee children through structured play: A randomized controlled trial in Jordan. *Journal of Child Psychology and Psychiatry*, 60(4), 432–441. <https://doi.org/10.1111/jcpp.12987>
- Masten, A. S. (2014). Global perspectives on resilience in children and youth. *Child Development*, 85(1), 6–20. <https://doi.org/10.1111/cdev.12205>
- Obradović, J., Shaffer, A., & Masten, A. S. (2021). Resilience in developmental science: Past, present, and future. *Annual Review of Developmental Psychology*, 3, 147–170. <https://doi.org/10.1146/annurev-devpsych-050720-094628>
- Panksepp, J. (2007). Can play diminish ADHD and facilitate the construction of the social brain? *Journal of the Canadian Academy of Child and Adolescent Psychiatry*, 16(2), 57–66.
- Pellegrini, A. D. (2011). The role of recess in children's cognitive performance. *Educational Researcher*, 40(1), 23–29.
- Provincial Disaster Management Authority. (2022). *Khyber Pakhtunkhwa multi-hazard vulnerability and risk assessment*. PDMA.
- Right To Play. (2021). *Pakistan country programme evaluation 2017–2021*. Right To Play International. <https://www.righttoplay.com>
- Save the Children. (2022). *Scalable play-based learning in crisis contexts: A technical brief*. Save the Children UK.
- Sheridan, S. M., Knoche, L. L., Edwards, C. P., Bovaird, J. A., & Kupzyk, K. A. (2019). Parent engagement and school readiness: Effects of the Getting Ready intervention. *Journal of Educational Psychology*, 111(3), 345–362. <https://doi.org/10.1037/edu0000297>
- UNESCO. (2022). *Global education monitoring report: Pakistan*. UNESCO Publishing.
- Ungar, M. (Ed.). (2019). *Multisystemic resilience: Adaptation and transformation in contexts of change*. Oxford University Press.
- UNICEF. (2020). *Child-friendly spaces in emergencies: Psychosocial support through play in Pakistan*. UNICEF Pakistan.
- UNICEF. (2021). *Situation analysis of children in Pakistan*. UNICEF Pakistan.
- Whitebread, D. (2017). Free play and children's mental health: The role of play in child development. *The Lancet Child & Adolescent Health*, 1(3), 167–169. [https://doi.org/10.1016/S2352-4642\(17\)30036-3](https://doi.org/10.1016/S2352-4642(17)30036-3)
- World Bank. (2022). *Pakistan climate and development report*. World Bank Group.