

Enhancing caregivers' knowledge through targeted health promotion: A study at TPA Adzkie Padang

Annisa Lidra Maribeth ^{a,1}, Ghaniyyatul Khudri ^{b,2,*}, Rialta Hamda ^{c,3}, Kurnia Maidarmi Handayani ^{d,4}, Widia Sari ^{e,5}

^a Departement of Public Health, Universitas Baiturrahmah, Aie Pacah, Kec. Koto Tengah, Kota Padang, Sumatera Barat, Indonesia

^b Departement of Histology and Immunology, Universitas Baiturrahmah, Koto Tengah, Kota Padang, Sumatera Barat, Indonesia

^c Department of Anesthesiology and Intensive Therapy, Universitas Baiturrahmah, Koto Tengah, Kota Padang, Sumatera Barat, Indonesia

^d Departement of Biochemistry and Nutrition, Universitas Baiturrahmah, Koto Tengah, Kota Padang, Sumatera Barat, Indonesia

^e Departement of Anatomy, Physiology, and Radiology, Universitas Baiturrahmah, Koto Tengah, Kota Padang, Sumatera Barat, Indonesia

¹ annisalidramaribeth@fk.unbrah.ac.id; ² ghaniyyatul_khudri@fk.unbrah.ac.id; ³ rialtahamda@staff.unbrah.ac.id;

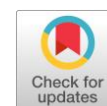
⁴ kurnia_maidarmi@fk.unbrah.ac.id; ⁵ widia_sari@fk.unbrah.ac.id

* Corresponding Author

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ABSTRACT

This study aimed to evaluate the effectiveness of health promotion activities for caregivers at the childcare center (TPA) Adzkie Padang. Health promotion sessions on PHBS (Clean and Healthy Living Behavior) and several health conditions including Chickenpox, Measles, Miliaria, and Diaper Dermatitis (CACAMINDER) were conducted. Participant knowledge levels were assessed using a questionnaire administered both before (pre-test) and after (post-test) the educational intervention. The distribution of knowledge levels and the scores from the pre-test and post-test were analyzed. Pre-test results indicated that 60% of participants had good knowledge, 40% had sufficient knowledge, and none had poor knowledge. Post-test results showed improvement, with 80% of participants demonstrating good knowledge and 20% having sufficient knowledge. No participants scored in the poor knowledge category. The maximum score increased from 11 to 12, while the minimum score remained constant at 8. The mean score also increased from 9 to 10. In conclusion, the health promotion activities significantly enhanced caregivers' knowledge of PHBS and various health conditions, as evidenced by improved post-test scores. These findings emphasize the importance of ongoing health education to empower caregivers with the knowledge necessary to promote and maintain toddler health.



KEYWORDS

Caregiver education
Childcare center
Health promotion
Knowledge assessment
PHBS



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1. Introduction

Childcare centers (Taman Penitipan Anak, TPA) serve as temporary care facilities that take on broad responsibilities when parents are at work [1]. These responsibilities include child socialization, behavior development, education, health, play activities, leisure activities, and social services for parents, such as child and family consultations when additional services are needed [2]. The primary aim of TPA is to provide care for children aged 0-6 years who are left by their parents due to work or other commitments. These centers strive to fulfill children's rights to grow and develop, receive protection and affection, and participate in their social environment.

Promotive efforts through health promotion activities aim to raise community awareness and change behaviors related to health, thereby fostering the adoption of healthy living practices. This is particularly crucial given the low implementation of Clean and Healthy Living Behavior (PHBS) in daily life. Effective PHBS practices can prevent diseases, improve living environments, and enhance overall health quality [3]. The recommended PHBS indicators by the Indonesian Ministry of Health include exclusive breastfeeding, health-assisted childbirth, monthly child weighing, using clean water, proper handwashing, clean and

healthy latrine use, mosquito larvae eradication, proper waste management, daily fruit and vegetable consumption, regular physical activity, and not smoking indoors [4].

The evaluation of PHBS at TPA Adzkie is critical to ensure the childcare center fulfills its role as a safe and nurturing environment for children. While TPA Adzkie serves as a temporary care facility, it is imperative to assess how effectively PHBS practices, such as proper hygiene, clean water use, and waste management, are integrated into daily routines. This evaluation is essential to identify strengths and areas for improvement, ensuring that the center aligns with public health standards and supports the well-being of children under its care [5]. By emphasizing PHBS evaluation, TPA Adzkie can not only prevent disease transmission but also establish a strong foundation for healthy habits that children and caregivers can sustain beyond the childcare setting.

Inadequate PHBS can lead to various health issues such as nutritional absorption problems, mental and emotional disturbances, obesity, and metabolic syndrome. Conversely, proper PHBS practices prevent infectious diseases, support productivity, optimize child growth and development, and maintain environmental cleanliness and beauty [6], [7]. Chickenpox, Measles, Miliaria, and Diaper Dermatitis (CACAMINDER), are highly contagious but can be anticipated through proper preventive measures. Epidemiologically, in 2019, 85.58% of global measles cases occurred in children under the age of five [8]. Data from Indonesia indicate a decreasing trend in measles incidence from 2011 to 2017; however, this trend reversed with an increase in cases from 2015 to 2017 [9]. The incidence of measles has further escalated during the COVID-19 pandemic, primarily due to reduced vaccination coverage [10].

This study aims to evaluate the effectiveness of health promotion activities for caregivers at TPA Adzkie Padang. These activities included educational sessions on PHBS and several child health conditions, such as Chickenpox, Measles, Miliaria, and Diaper Dermatitis (CACAMINDER). The impact of these sessions on caregivers' knowledge was assessed through pre- and post-intervention questionnaires, providing insights into the significance of ongoing health education in empowering caregivers to promote and maintain toddler health.

2. Method

The health promotion activity was conducted at TPA Adzkie Padang, located in Kuranji, Padang. The target audience for this health promotion included educators and children within the TPA Adzkie Padang community. The health promotion team consisted of medical students and lecturers from the Faculty of Medicine, Universitas Baiturrahmah. This initiative was undertaken due to concerns about the lack of knowledge among educators regarding skin diseases in toddlers. The goal was to reduce the incidence of Chickenpox, Measles, Miliaria crystallina, and Diaper Dermatitis by providing information on PHBS to prevent these skin diseases [11].

The health promotion activities included several key components, such as educational sessions and direct interviews. The team conducted educational sessions on PHBS to prevent skin diseases in toddlers, focusing on Chickenpox, Measles, Miliaria crystallina, and Diaper Dermatitis. Direct interviews were conducted to gather information about childcare practices and focused on identifying gaps in knowledge and practices related to child health and development of children at TPA Adzkie.

The socialization method was used to deliver educational content about PHBS to prevent skin diseases in toddlers. The sessions were interactive and aimed at enhancing the knowledge and awareness of the educators. This comprehensive approach aimed to improve the overall health and well-being of the children at TPA Adzkie by addressing both preventive and monitoring aspects of child healthcare. The combination of education, screening, and direct engagement ensured a holistic understanding and improvement of childcare practices in the facility.

The health promotion activities included several key components, such as educational sessions and direct interviews, as illustrated in the flowchart below (Fig. 1).

2.1. Educational Sessions

The team conducted socialization methods to effectively disseminate educational content about PHBS aimed at preventing skin diseases in toddlers. This method involved a series of interactive educational sessions designed to enhance the knowledge and awareness of the educators at TPA Adzkie Padang. The sessions included presentations, discussions, and hands-on activities. Visual aids, such as posters and brochures, were used to illustrate key points about PHBS practices, including proper hygiene, the

importance of clean environments, and the specific measures to prevent skin diseases like Chickenpox, Measles, Miliaria crystallina, and Diaper Dermatitis.

The sessions were structured to be highly interactive, to ensure engagement and retention of information. Educators were encouraged to participate actively by asking questions, sharing their experiences, and practicing the recommended behaviors through role-playing and demonstrations. This interactive approach facilitated a deeper understanding and allowed the educators to internalize the practices more effectively. Additionally, pre- and post-session evaluations were conducted to measure the increase in knowledge and awareness. Participants completed questionnaires before and after the sessions to assess their understanding of PHBS and skin disease prevention. The results demonstrated a significant improvement in knowledge, indicating the effectiveness of the socialization method in achieving educational goals. Overall, the socialization method proved to be a powerful tool in promoting PHBS among educators, thereby contributing to better health outcomes for the toddlers under their care.

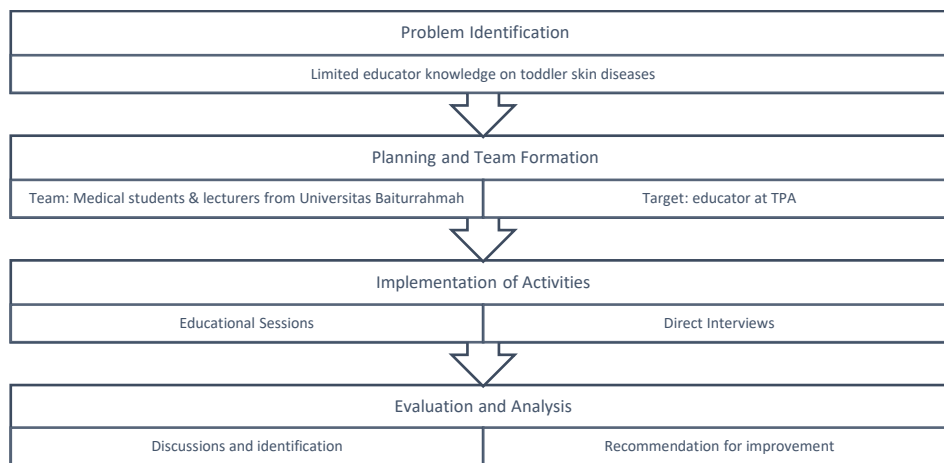


Fig. 1. Flowchart: Health Promotion Methodology at TPA Adzkia Padang

2.2. Direct Interview

Direct interviews were conducted to gather detailed information about childcare practices at TPA Adzkia Padang, with a focus on identifying gaps in knowledge and practices related to child health and development. These interviews aimed to provide a comprehensive understanding of the current childcare methods and highlight areas needing improvement. The interview process involved structured and semi-structured questions, allowing for both quantitative and qualitative data collection.

Educators and caregivers were asked about their daily routines, health and hygiene practices, and their approaches to managing common childhood illnesses. Specific topics such as hygiene practices included questions about handwashing, diaper-changing routines, and cleaning procedures to prevent the spread of infections [12], [13]. Health monitoring on how often they check for symptoms of illness, methods of temperature taking, and their response to signs of common childhood diseases. Parental involvement in the childcare process and training and knowledge caregivers' knowledge about specific health conditions such as Chickenpox, Measles, Miliaria crystallina, and Diaper Dermatitis, and their familiarity with PHBS guidelines.

By conducting these interviews, the research team could identify specific knowledge gaps and practical challenges faced by the caregivers. For instance, some caregivers might have been unaware of the proper techniques for preventing the spread of infectious diseases or the importance of regular developmental screenings.

3. Results and Discussion

3.1. Education Sessions

The activity commenced with administering a pre-test to the educators regarding PHBS and the skin diseases CACAMINDER. This pre-test aimed to assess the educators' baseline knowledge before the educational session (Fig. 2).



Fig. 2. Administration of Pre-Test to Educators at TPA Adzkie Padan

The subsequent phase involved educating the educators on the importance of PHBS in daily life to prevent skin diseases in toddlers, specifically focusing on CACAMINDER. The educational content was delivered using a presentation supplemented by visual aids, followed by a discussion session and feedback from the supervising lecturer [14]. The educators at TPA Adzkie demonstrated a high level of engagement throughout the training process (Fig. 3), which was evident from the active participation in discussion sessions. This active involvement aligns with findings from studies that emphasize the value of interactive and participatory teaching methods in enhancing learning outcomes. For instance, research indicates that engaging educators through discussions and feedback sessions significantly improves their understanding and retention of key concepts [15].



Fig. 3. Educational sessions (presentations and discussions)

3.2. Questionnaire Results

Following the educational session, a post-test was administered to assess the effectiveness of the intervention in enhancing the educators' knowledge. This method is supported by previous studies that utilize pre- and post-tests as reliable tools for evaluating the impact of educational programs, showing a notable increase in knowledge levels [16], Table 1 are the results of the pre-test and post-test.

Table 1. Frequency Distribution Based on Participant Knowledge Levels

Variable	Questionnaire Results	
	Pre-Test n (%)	Post-Test n (%)
Good	3 (60%)	4 (80%)
Fair	2 (40)	1 (20)
Poor	0 (20)	0 (0)
Total	5 (100)	5 (100)

The data presented demonstrates a significant improvement in participants' knowledge levels following an educational intervention. Before the session, the pre-test results indicated that 60% of participants had a "Good" knowledge level regarding PHBS and CACAMINDER, while 40% were

categorized as "Fair," with none falling into the "Poor" category. This baseline assessment highlighted a foundational understanding among most participants but also revealed areas for improvement [17]. These findings suggest that such educational activities can substantially contribute to the professional development of educators, ultimately improving their ability to apply new knowledge in their daily practices [18].

Post-intervention results showed a marked enhancement, with 80% of participants achieving a "Good" knowledge level—an increase of 20%. The "Fair" category decreased to 20%, and there remained no participants with "Poor" knowledge. These findings indicate the effectiveness of the educational content in increasing awareness and understanding. The use of active learning strategies, such as structured teaching programs and interactive sessions, likely played a critical role in this improvement by making the content accessible and engaging can enhance their utility, and ensure that the content is broadly accessible to all audience members [19].

This aligns with studies on healthcare workers, where similar structured educational programs significantly enhanced knowledge retention and application. In the context of child caregiving, such interventions can address specific gaps in areas like hygiene practices and child nutrition, equipping caregivers with the practical skills to improve care quality and promote children's health and well-being. These results underscore the importance of tailored, active learning methods in achieving meaningful educational outcomes [20].

Table 2. Comparison of Pre-test and Post-test Results

Variable	Questionnaire Results	
	Pre-Test <i>n</i> (%)	Post-Test <i>n</i> (%)
Maximum Score	11	12
Minimum Score	8	8
Mean Score	9.5	10
Number of Respondents	5	5

The intervention led to a notable improvement in participant performance, as reflected in the maximum score increasing from 11 to a perfect 12, with some participants answering all questions correctly post-intervention. While the minimum score remained constant at 8, the mean score rose modestly from 9.5 to 10, indicating a general enhancement in knowledge across the group. This improvement highlights the effectiveness of brief, structured question-and-answer sessions in positively influencing audience behaviors, such as feedback-seeking, and increasing satisfaction with the feedback process.

Structured strategies like interactive and feedback loops are well-documented for fostering active participation and promoting learner engagement. These methods enable participants to clarify doubts, apply concepts in real time, and enhance their understanding, ultimately improving knowledge retention and practical application [21]. Research by Klein et al. (2023), supports this approach, demonstrating that active lecture strategies provide a structured environment for audience interaction, encouraging clarification and constructive feedback. This reinforces comprehension and fosters a more effective and engaging learning experience, highlighting the value of interactive teaching strategies in enhancing knowledge retention and engagement to achieve meaningful and lasting outcomes. [15], [22].

3.3. Implications of Findings

The findings highlight the critical role of structured educational interventions in enhancing caregivers' understanding of PHBS and preventing skin diseases such as CACAMINDER. The marked improvement in participants' knowledge, as demonstrated by the increase in "Good" knowledge levels and the rise in the maximum score, underscores the effectiveness of targeted health promotion activities in addressing knowledge gaps. These results are particularly significant in childcare settings, where caregivers are not only responsible for the well-being of children but also serve as role models in adopting and enforcing health-promoting behaviors [23].

This understanding helps caregivers implement these behaviors effectively. Participation is key to sustaining health promotion efforts, as it centers people in actions and decision-making, ensuring interventions are collaborative. At TPA Adzkie, educators' active engagement during discussions and

feedback sessions exemplified this approach, fostering ownership and accountability. This method enhances knowledge retention and empowers caregivers to actively promote health within the childcare setting and beyond [24].

Knowledge-sharing positively influences the quality of care, as evidenced by the educators' improved understanding of PHBS and its application [25]. Providing easy access to hygiene and health education is a simple yet highly effective tool for preventing and controlling hygiene-related health problems, particularly in childcare settings. Educating caregivers on essential hygiene practices, such as proper handwashing, waste management, and diaper hygiene, is both cost-effective and impactful in reducing the risk of common health issues like Miliaria and Diaper Dermatitis. By equipping caregivers with the necessary knowledge and skills, the likelihood of skin-related conditions can be significantly reduced [26]. This underscores the importance of combining knowledge with practice in toddler care, as better understanding and implementation of hygiene practices directly contribute to improved health, disease prevention, and a safer, healthier environment for children under their care.

The findings of this study underscore the scalability and adaptability of hygiene and health education interventions [27]. Despite the relatively small sample size, the observed improvement suggests that similar programs, if implemented on a larger scale, could lead to significant and widespread improvements in health outcomes across childcare facilities. The modest increase in the mean score, coupled with the unchanged minimum score, highlights a crucial point: more individualized follow-up sessions or alternative teaching methods are necessary to elevate the baseline knowledge of all participants. Addressing this gap may require integrating practical demonstrations, interactive workshops, or periodic refresher courses to reinforce learning and ensure the sustainability of behavioral changes over time.

Moreover, these results emphasize the critical importance of ongoing monitoring and evaluation of PHBS practices. Regular assessments are essential not only to identify persistent gaps in knowledge but also to tailor educational content to address specific needs, ensuring that interventions remain relevant and impactful. Furthermore, they allow for the measurement of the sustainability of behavioral changes, ensuring that health promotion efforts are consistently effective. In settings such as TPA Adzkie, continuous evaluation ensures that hygiene and health education programs remain responsive to emerging challenges and adapt to the evolving needs of the childcare environment.

4. Conclusion

The educational activities conducted significantly boosted the knowledge of the participants regarding PHBS and the prevention of Chickenpox, Measles, Miliaria, and Diaper Dermatitis among toddlers. The positive shift in knowledge levels, as reflected in the pre-test and post-test comparisons, underscores the value of such educational interventions in improving health awareness and practices among educators. This enhancement in knowledge is crucial for fostering a healthier environment for the children at TPA Adzkie, ultimately aiding in the prevention of common skin diseases and promoting overall well-being.

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Declarations

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References

- [1] Z. Yasin and D. I. Puspitasari, "The Importance of Childcare for Working Women Among Mothers, Lecturers and Employees of the Faculty of Health Sciences," *J. ABDIRAJA*, vol. 3, no. 2, pp. 23–27, 2020, doi: [10.24929/adr.v3i2.756](https://doi.org/10.24929/adr.v3i2.756).
- [2] R. Pranawati, N. Naswardi, and S. D. Zulkarnaen, "The fulfillment of standards on child cares (Taman Penitipan Anak (TPA) and Taman Anak Sejahtera (TAS)) for the quality improvement of alternative care with the child protection perspective," *J. Soc. Stud.*, vol. 17, no. 1, pp. 95–116, 2021, doi: [10.21831/jss.v17i1.39521](https://doi.org/10.21831/jss.v17i1.39521).
- [3] A. S. Nasution, "PHBS Education in Household Settings to Improve Healthy Behavior," *J. Abdidas*, vol. 1, no. 2, pp. 28–32, 2020, doi: [10.31004/abdidas.v1i2.9](https://doi.org/10.31004/abdidas.v1i2.9).
- [4] Indah Sulistyowati, "Implementation Of Clean and Healthy Living Behavior (PHBS) In Household Arrangement," *Indones. J. Glob. Heal. Res.*, vol. 2, no. 4, pp. 461–466, 2019. [Online]. Available at: <https://jurnal.globalhealthsciencegroup.com/index.php/IJGHR/article/view/1201>.
- [5] CDC, "How To Clean and Disinfect Early Care and Education Settings," *Water, Sanitation, and Environmentally Related Hygiene (WASH)*, 2024. [Online]. Available at: <https://www.cdc.gov/hygiene/about/how-to-clean-and-disinfect-early-care-and-education-settings.html>.
- [6] A. D. A.-G. Wicaksana, A. S. Yeni, D. Pratiwi, and S. N. Roza, "Introduction to Clean and Healthy Living Behavior (PHBS) to School-Age Children in the Work Area of the Pauh Angit Hulu Village Health Center," *JCS - J. Compr. Sci.*, vol. 1, no. 2, pp. 113–118, 2022, doi: [10.36418/jcs.v1i2.20](https://doi.org/10.36418/jcs.v1i2.20).
- [7] H. Harisnal and D. Ediana, "Determinants of Measles Incidence in Toddlers in Bukittinggi City," *J. Endur.*, vol. 4, p. 162, Mar. 2019, doi: [10.22216/jen.v4i1.3326](https://doi.org/10.22216/jen.v4i1.3326).
- [8] R. Wang, W. Jing, M. Liu, and J. Liu, "Trends of the Global, Regional, and National Incidence of Measles, Vaccine Coverage, and Risk Factors in 204 Countries From 1990 to 2019.," *Front. Med.*, vol. 8, p. 798031, 2021, doi: [10.3389/fmed.2021.798031](https://doi.org/10.3389/fmed.2021.798031).
- [9] Kemenkes RI, "Ministry of Health of the Republic of Indonesia. The situation of measles and rubella in Indonesia," 2018. [Online]. Available at : <https://www.kemkes.go.id/id/kemenkes-waspadai-dinamika-campak-nasional-dan-global>.
- [10] L. Zeffira, E. Yulfienti, V. Yulika, K. M. Handayani, and G. Khudri, "Profile Of Childhood Measles Patients At Rsi Siti Rahmah Padang 2020-2022," vol. 2, no. 2, pp. 47–51, 2024, doi: [10.61942/msj.v2i2.171](https://doi.org/10.61942/msj.v2i2.171).
- [11] M. U. Basra and F. Elytha, "Factors Associated with the Incidence of Measles in Children in Padang City," *J Endur Kaji Ilm Probl Kesehat.*, vol. 6, no. 2, pp. 300–8, 2021, doi: [10.22216/jen.v6i2.191](https://doi.org/10.22216/jen.v6i2.191).
- [12] L. K. Tantum *et al.*, "Barriers and Opportunities for Sustainable Hand Hygiene Interventions in Rural Liberian Hospitals," *International Journal of Environmental Research and Public Health*, vol. 18, no. 16. 2021, doi: [10.3390/ijerph18168588](https://doi.org/10.3390/ijerph18168588).
- [13] R. Triyana, M. Susanti, Y. Handayani, P. Adelin, Y. Siana, and K. Malik, "Education on Hand Washing and Coughing Etiquette for Students of SDIT Permataku Dadok Tunggul Hitam Padang," *J. Kreat. Pengabd. Kpd. Masy.*, vol. 5, no. 7, pp. 2138–2151, 2022, doi: [10.33024/jkpm.v5i7.6916](https://doi.org/10.33024/jkpm.v5i7.6916).
- [14] C. G. Thomas, "Guidelines for Successful Lecturing BT - Research Methodology and Scientific Writing," C. G. Thomas, Ed. Cham: Springer International Publishing, 2021, pp. 523–541, doi: [10.1007/978-3-030-64865-7_21](https://doi.org/10.1007/978-3-030-64865-7_21).
- [15] K. Klein *et al.*, "Evaluating Active Lecture and Traditional Lecture in Higher Education," *J. Empower. Teach. Excell.*, vol. 7, no. 2, 2023. [Online]. Available at : <https://digitalcommons.usu.edu/jete/vol7/iss2/6/>.
- [16] T. G. Malik and R. Alam, "Comparative Analysis Between Pre-test/Post-test Model and Post-test-only Model in Achieving the Learning Outcomes," *Pakistan J. Ophthalmol.*, vol. 35, no. 1, pp. 4–8, 2019, doi: [10.36351/pjo.v35i1.855](https://doi.org/10.36351/pjo.v35i1.855).
- [17] A. Latimier, A. Riegert, H. Peyre, S. T. Ly, R. Casati, and F. Ramus, "Does pre-testing promote better retention than post-testing?," *NPJ Sci. Learn.*, vol. 4, p. 15, 2019, doi: [10.1038/s41539-019-0053-1](https://doi.org/10.1038/s41539-019-0053-1).
- [18] J. Ambon, A. Komariah, B. Alias, and A. N. Mansor, "The impact of continuous professional development on teaching quality: a systematic review," *Int. J. Eval. Res. Educ.*, vol. 13, no. 6, pp. 3838–47, 2024, doi: [10.11591/ijere.v13i6.30427](https://doi.org/10.11591/ijere.v13i6.30427).

- [19] L. A. Corwin, A. Prunuske, and S. B. Seidel, "Scientific Presenting: Using Evidence-Based Classroom Practices to Deliver Effective Conference Presentations.," *CBE Life Sci. Educ.*, vol. 17, no. 1, 2018, doi: [10.1187/cbe.17-07-0146](https://doi.org/10.1187/cbe.17-07-0146).
- [20] A. KK, "Quasi Experimental Study to Assess the Effectiveness of Structured Teaching Programme on Knowledge regarding Complementary Therapy among Health Workers," *Int. J. Sci. Res.*, vol. 12, no. 6, pp. 1159–1162, 2023, doi: [10.21275/sr23609214956](https://doi.org/10.21275/sr23609214956).
- [21] J. L. Gregory, "Lecture is not a Dirty Word, How to Use Active Lecture to Increase Student Engagement," *Int. J. High. Educ.*, vol. 2, no. 4, pp. 116–122, 2013, doi: [10.5430/ijhe.v2n4p116](https://doi.org/10.5430/ijhe.v2n4p116).
- [22] H. T. McGinness, P. H. Y. Caldwell, H. Gunasekera, and K. M. Scott, "An educational intervention to increase student engagement in feedback," *Med. Teach.*, vol. 42, no. 11, pp. 1289–1297, 2020, doi: [10.1080/0142159X.2020.1804055](https://doi.org/10.1080/0142159X.2020.1804055).
- [23] J. Musgrave and J. Payler, "Proposing a model for promoting Children's Health in Early Childhood Education and Care Settings," *Child. Soc.*, vol. 35, no. 5, pp. 766–783, 2021, doi: [10.1111/chso.12449](https://doi.org/10.1111/chso.12449).
- [24] R. S. Gupta, S. Shuman, E. M. Taveras, M. Kulldorff, and J. A. Finkelstein, "Opportunities for health promotion education in child care.," *Pediatrics*, vol. 116, no. 4, pp. e499-505, Oct. 2005, doi: [10.1542/peds.2005-0467](https://doi.org/10.1542/peds.2005-0467).
- [25] O. Portela Dos Santos *et al.*, "Effectiveness of Educational Interventions to Increase Skills in Evidence-Based Practice among Nurses: The EDITcare Systematic Review.," *Healthc. (Basel, Switzerland)*, vol. 10, no. 11, Nov. 2022, doi: [10.3390/healthcare10112204](https://doi.org/10.3390/healthcare10112204).
- [26] R. S. Haradhanalli, R. M. Prashanth, N. Kumari, I. Siddhareddy, P. D. P., and J. Surendran, "Personal hygiene practices and related skin diseases among primary school children of urban poor locality," *Int. J. Community Med. Public Heal.*, vol. 6, no. 6, p. 2526, 2019, doi: [10.18203/2394-6040.ijcmph20192316](https://doi.org/10.18203/2394-6040.ijcmph20192316).
- [27] K. Zamboni, J. Schellenberg, C. Hanson, A. P. Betran, and A. Dumont, "Assessing scalability of an intervention: Why, how and who?," *Health Policy Plan.*, vol. 34, no. 7, pp. 544–552, 2019, doi: [10.1093/heapol/czz068](https://doi.org/10.1093/heapol/czz068).