

Effectiveness of Brainstorming-Based Health Education in Improving Mothers' Knowledge on the Prevention of Verbal Violence In Children

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Abstract: Child verbal violence is a pervasive yet frequently normalized form of child maltreatment that can impair children's emotional, psychological, and social development. Despite the growing emphasis on positive parenting, preventive education within community health services is still predominantly delivered through passive lecture-based methods with limited participant engagement. This study examined the effectiveness of brainstorming-based health education as an interactive community intervention to improve mothers' knowledge regarding the prevention of verbal violence against children. A quasi-experimental one-group pretest–posttest study was conducted among 30 mothers attending a Posyandu (Integrated Health Service Post) in Tanon District, Sragen, Indonesia, recruited using total sampling. Maternal knowledge was measured using a researcher-developed 12-item questionnaire with good internal reliability (Cronbach's $\alpha = 0.887$). The intervention involved a participatory brainstorming session focused on recognizing verbal violence, understanding its impacts on child development, and identifying positive parenting strategies for prevention. Following the intervention, the mean knowledge score increased significantly from 5.93 to 8.30 ($p < 0.001$). These findings demonstrate that brainstorming-based health education is an effective and feasible strategy for strengthening maternal knowledge in community maternal–child health settings. Integrating participatory educational approaches into routine Posyandu services may enhance parental awareness, promote non-violent parenting practices, and contribute to broader child protection initiatives, particularly in low-resource community contexts.

Keywords: brainstorming-based education, child verbal violence, maternal knowledge, positive parenting, community health education.

Resumo: A violência verbal contra crianças é uma forma generalizada, porém frequentemente normalizada, de maus-tratos infantis que pode prejudicar o desenvolvimento emocional, psicológico e social das crianças. Apesar da crescente ênfase na parentalidade positiva, a educação preventiva nos serviços de saúde comunitários ainda é predominantemente ministrada por meio de métodos passivos baseados em palestras, com pouca participação dos indivíduos. Este estudo examinou a eficácia da educação em saúde baseada em brainstorming como uma intervenção comunitária interativa para melhorar o conhecimento das mães sobre a prevenção da violência verbal contra crianças. Um estudo quase-experimental com pré-teste e pós-teste em um único grupo foi conduzido com 30 mães que frequentavam um Posyandu (Posto de Serviço Integrado de Saúde) no distrito de Tanon, Sragen, Indonésia, recrutadas por amostragem total. O conhecimento materno foi mensurado por meio de um questionário de 12 itens desenvolvido pelos pesquisadores, com boa consistência interna (α de Cronbach = 0,887). A intervenção consistiu em uma sessão participativa de brainstorming focada no reconhecimento da violência verbal, na compreensão de seus impactos no desenvolvimento infantil e na identificação de estratégias de parentalidade positiva para a prevenção. Após a intervenção, a pontuação média de conhecimento aumentou significativamente de 5,93 para 8,30 ($p < 0,001$). Esses resultados demonstram que a educação em saúde baseada em brainstorming é uma estratégia eficaz e viável para fortalecer o conhecimento materno em contextos comunitários de saúde materno-infantil. A integração de abordagens educacionais participativas aos serviços de rotina dos Posyandu pode aumentar a conscientização dos pais, promover práticas parentais não violentas e contribuir para iniciativas mais amplas de proteção à criança, particularmente em contextos comunitários de poucos recursos.

Palavras-chave: educação baseada em brainstorming, violência verbal infantil, conhecimento materno, parentalidade positiva, educação em saúde comunitária.

1. Introduction

Child maltreatment represents one of the most critical public health challenges worldwide, with far-reaching impacts on children's physical, mental, and social functioning. According to the World Health Organization, a substantial proportion of children globally are subjected to some form of violence annually, encompassing physical, psychological, and verbal forms of abuse. The consequences of such early adversity frequently persist into

adulthood, manifesting as impaired mental health, disrupted social functioning, and maladaptive behavioral patterns [1].

Verbal violence — encompassing verbal abuse and psychological aggression — involves harmful forms of communication directed toward children, including yelling, belittling, humiliating, threatening, or employing degrading language. Unlike physical harm, verbal violence leaves no visible marks, yet its impact on children's psychological and emotional

development can be profound. Research consistently indicates that prolonged exposure to verbal violence during formative years elevates the likelihood of developing anxiety disorders, depressive symptoms, diminished self-worth, and conduct-related difficulties in later life [2].

Within family settings, verbal violence is frequently employed as a method of child discipline. Nevertheless, this approach can undermine children’s capacity for emotional self-regulation and healthy social adjustment. Building protective family environments through targeted preventive interventions is therefore essential to supporting optimal child development and reducing exposure to violence [3].

Mothers and fathers bear primary responsibility for nurturing children’s cognitive and emotional development. A foundational understanding of child growth and evidence-based parenting strategies is crucial if caregivers are to avoid harmful practices. Health promotion programs that bolster parental knowledge by raising awareness of the adverse effects of violence and introducing constructive parenting strategies can meaningfully contribute to child welfare [4].

Traditional parenting education is predominantly conveyed through didactic lectures or one-way information sessions, which often fail to sustain participant engagement or promote lasting knowledge acquisition. By contrast, interactive learning methodologies that incorporate active participation, dialogue, and peer exchange have demonstrated superior outcomes in terms of knowledge gain and behavioral change [5].

Brainstorming represents one such participatory learning approach. As a collaborative method, brainstorming invites participants to freely generate ideas, draw on lived experiences, and collectively explore solutions to shared problems. The technique fosters critical thinking and meaningful engagement, thereby strengthening educational outcomes (Wieland et al., 2022). Prior research has established that educational sessions incorporating brainstorming are associated with significant gains in knowledge and critical reasoning capacities among diverse participant groups [6].

Notwithstanding the demonstrated advantages of interactive pedagogical approaches, the majority of parenting education programs within community health platforms continue to rely on conventional lecture-based delivery. Scientific evidence examining the specific effectiveness of brainstorming-based health education in augmenting parental knowledge around verbal violence prevention remains sparse, particularly within community maternal and child health contexts. Against this backdrop, the present study aimed to determine whether brainstorming-based health education could significantly improve mothers’ knowledge regarding the prevention of verbal violence directed at children.

2. Material and methods

2.1 Study design and participants

This study employed a quasi-experimental design using a one-group pretest–posttest approach to evaluate the effectiveness of a brainstorming-based educational intervention. The study was conducted at an Integrated Health Service Post (Posyandu) located in Tanon District, Sragen Regency, Central Java, Indonesia. Posyandu serves as a community-based health service providing maternal and child health programs. The study population consisted of mothers with children attending the Posyandu. A total sampling technique was applied, and all eligible mothers present during the study period were invited to participate. Thirty mothers agreed to participate and were included in the study. Maternal knowledge regarding verbal violence prevention was measured using a structured questionnaire developed by the researchers. The questionnaire consisted of two sections: respondent characteristics (age, education, occupation) and knowledge about verbal violence prevention. The knowledge questionnaire contained 12 true–false statements related to: understanding verbal violence, impacts of verbal abuse on children and strategies to prevent verbal violence. The instrument underwent validity testing with a correlation value greater than 0.365 and demonstrated good reliability with a Cronbach’s alpha of 0.887.

This study received ethical approval from the Research Ethics Committee of the Faculty of Health Science, Universitas Kusuma Husada, Indonesia (No.1943/UKH.L.02/EC/III/2024). All participants provided informed consent before participating in the study.

2.2 Statistical analysis

Data were analyzed using SPSS software. Descriptive statistics were used to summarize respondent characteristics. Differences between pretest and posttest knowledge scores were analyzed using paired statistical tests. Statistical significance was determined at $p < 0.05$.

3. Results and discussion

3.1 Characteristics of Respondents

Most respondents were within the **20–35 years age group (96.7%)**, indicating that the majority were within the productive age range. Regarding educational background, most participants had completed senior **high school education (89,1%)**. In terms of occupation, the majority of respondents were **housewives (96.7%)**.

Table 1. Respondent characteristics based on age, education and occupation (n=30)

	Category	Frequency	Percentage (%)
Age	<20 years	1	3,3
	20-35 years	29	96,7
Education	Elementary school	1	3,3
	Junior high school	1	3,3
	Senior high school	27	89,1

Occupation	College	1	3,3
	Housewife	29	96,7
	Teacher	1	3,3

Source: Authors (2022)

3.2 Effect of Brainstorming on Maternal Knowledge

Table 2. Mother’s Knowledge before and after intervention (n=30)

Skor	min- max	mean	P value
Pretest	2 - 9	5.93	0,000
Posttest	5 - 12	8.30	

Source: Authors (2022)

As presented in Table 2, the mean pretest knowledge score was 5.93 (range: 2–9), which rose to a mean posttest score of 8.30 (range: 5–12) following the educational intervention. Statistical comparison of pretest and posttest scores confirmed a highly significant difference ($p < 0.001$), providing strong evidence that the brainstorming-based educational program was effective in advancing mothers’ understanding of verbal violence prevention strategies.

The present study’s findings confirm that brainstorming-based health education produced a meaningful and statistically significant improvement in mothers’ knowledge concerning verbal violence prevention. The elevation in mean knowledge scores — from 5.93 prior to the intervention to 8.30 afterward — reflects the capacity of structured participatory education to deepen participants’ comprehension of verbal abuse and its prevention. This outcome aligns with the broader body of evidence affirming that educational approaches which actively engage learners stimulate cognitive reflection, facilitate experiential learning, and ultimately produce more robust knowledge acquisition [6], [7], [8].

Participatory approaches to learning, such as brainstorming, cultivate an environment in which participants are encouraged to contribute insights, examine their own caregiving practices, and gain perspective from the experiences of fellow participants. This collaborative dynamic is well-documented as a driver of enhanced knowledge retention, increased motivation, and greater engagement with educational content, particularly when compared to passive instructional modalities [7], [9], [10]. An additional strength of brainstorming lies in its capacity to foster metacognitive awareness, enabling participants to assess their own understanding and devise more adaptive approaches to problem-solving [11].

The outcomes reported here resonate with a broader accumulation of evidence indicating that participatory educational models reliably enhance knowledge and promote awareness. Curricula that incorporate discussion, guided reflection, and collaborative peer learning consistently outperform passive instructional formats in terms of information retention [12], [13].

Group brainstorming activities, in particular, afford participants the opportunity to examine multiple perspectives and co-construct problem-solving strategies, a process that supports both deeper comprehension and sustained knowledge recall [11].

Strengthening what parents know about child development and positive caregiving constitutes a cornerstone of effective violence prevention. Caregivers who are well-informed about appropriate disciplinary boundaries and nurturing communication strategies are better positioned to engage constructively with their children and to avoid coercive or harmful practices. Evidence-based parenting programs have been shown to lower the incidence of child maltreatment and foster more harmonious family relationships [4], [14]. Greater parental awareness is furthermore linked to a reduction in the frequency with which verbal and emotional aggression is directed toward children [15], [16].

A notable characteristic of this study’s sample was the predominance of participants aged 20–35 years. This demographic is typically marked by heightened cognitive receptiveness and a greater capacity to assimilate and apply new educational content. Sociodemographic factors including age, educational attainment, and cognitive readiness have been identified as significant determinants of health education uptake and comprehension [5], [17]. In particular, individuals with higher levels of formal education tend to demonstrate stronger health literacy and are more inclined to adopt preventive health behaviors [10], [18].

The fact that most participants were full-time homemakers who maintain sustained daily contact with their children presents a favorable context for the practical application of the knowledge gained. Mothers who spend substantial time in the home environment are uniquely positioned to integrate positive communication strategies, provide emotional support, and implement non-punitive disciplinary methods in their interactions with their children. These competencies function as meaningful protective factors that reduce the likelihood of verbal and emotional maltreatment within the family [1], [19]. Research consistently demonstrates that children raised within emotionally supportive and non-violent family settings exhibit superior psychological outcomes and healthier social development compared to those reared under harsh parenting conditions [20], [21].

From a community health standpoint, investing in parental knowledge through structured educational programs embedded within local health services represents a pragmatic and scalable approach to child maltreatment prevention. Community-based facilities such as Posyandu offer accessible and trusted platforms for the delivery of parenting education, particularly in settings where specialized services may be limited. The integration of interactive methodologies such as brainstorming into routine health service activities has been recommended as a cost-effective strategy to advance child protection outcomes, especially in low- and middle-income country contexts [14]. Embedding such approaches within standard community health programming may

therefore amplify the overall impact of existing child safeguarding initiatives.

4. Conclusion

The findings of this study demonstrate that brainstorming-based health education is an effective approach for improving maternal knowledge regarding the prevention of verbal violence against children. The significant increase in post-intervention knowledge scores highlights the value of participatory and dialogue-centered educational methods in enhancing parental understanding of positive parenting and non-violent communication practices.

Integrating brainstorming-based educational strategies into routine community health services, particularly within Posyandu programs, may serve as a practical and sustainable approach to strengthening child protection efforts at the community level. Interactive learning methods encourage active participation, critical reflection, and shared problem-solving, which may contribute to greater parental awareness and healthier family interactions.

As a follow-up action, future programs should focus on the wider implementation of participatory parenting education across community health settings and evaluate its long-term impact on parenting behavior and child well-being. Further development of structured educational modules and collaboration with maternal and child health providers are also recommended to support the integration of violence prevention education into routine public health services.

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