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RESEARCH ARTICLE

Health Promotion Strategies for ARI Prevention in Children Aged 0-5: Case Study in Lasusua, Kolaka Utara

Rabiyatul Asgar[1*], Muhammad Syafar[3], Indra Fajarwati Ibnu[3]

[1]Master's Program in Public Health Sciences, Faculty of Public Health, Hasanuddin University, Indoneisa
[2, 3]Faculty of Public Health, Hasanuddin University, Indoneisa

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***Corresponding Author:**

rabiyatulasgar28@gmail.com

ABSTRACT

This study examines health promotion strategies for the prevention of Acute Respiratory Infections (ARI) in UPTD PKM Lasusua. The findings reveal that health promotion efforts remain suboptimal, with insufficient public education and communication. Advocacy initiatives lack consistency and effectiveness, emphasizing the need for stronger cross-sectoral collaboration. Efforts to create supportive environments face challenges due to resource constraints and inadequate coordination, while community empowerment is hindered by low awareness and participation. To address these issues, it is recommended that UPTD PKM Lasusua enhance its health promotion programs through improved education, communication, and community mobilization. Strengthened advocacy with local governments and stakeholders is essential to secure policy support and resources. Improved internal coordination and collaboration with external partners are necessary to create supportive environments. Additionally, intensified community empowerment through health cadre training and public engagement is crucial for achieving sustainable ARI prevention. These strategies aim to improve health outcomes in the region effectively.

INTRODUCTION

Acute Respiratory Infections (ARI) are among the most prevalent infectious diseases worldwide, significantly impacting public health systems. ARI involves acute inflammation of the respiratory tract, ranging from the nasal passages to the alveoli, and includes accessory structures such as the sinuses and pleura (Putra & Wulandari, 2019; Irianto, 2015). The condition is caused by various pathogens, predominantly viruses and bacteria, and may occur with or without parenchymal involvement.

The World Health Organization (WHO, 2007) identifies ARI as a leading cause of morbidity and mortality, accounting for approximately four million deaths annually, 98% of which are attributed to lower respiratory tract infections. It ranks as the third leading cause of death globally, with mortality rates significantly higher in low- and middle-income countries. ARI is primarily transmitted through airborne particles, with viruses responsible for nearly 90% of cases, while bacterial infections contribute to the remainder (Tandi et al., 2018).

Symptoms of ARI range from mild manifestations, such as cough and sore throat, to severe conditions, including dyspnea and pneumonia, which pose life-threatening risks to vulnerable groups such as children under five, the elderly, and immunocompromised individuals. According to WHO (2024), ARI accounts for nearly 20% of global deaths among children under five years old.

In Indonesia, ARI represents a significant public health concern, particularly among children. The 2018 Basic Health Research (Riskesdas) reported an ARI prevalence of 20.06% among children, with the highest incidence observed in the 1–4 year age group (Kementerian Kesehatan Republik Indonesia, 2018). Kolaka Utara Regency in Southeast Sulawesi Province has been identified as a high-risk area, reporting 13,241 cases in 2019, representing a substantial increase from the previous year (Kementerian Kesehatan RI, 2019).

Efforts to mitigate ARI include government initiatives such as the Healthy Indonesia Program with a Family Approach (Program Indonesia Sehat dengan Pendekatan Keluarga, PIS-PK). These initiatives aim to enhance public awareness through health education, advocacy, community empowerment, and cross-sector collaboration (Márquez-Serrano et al., 2012) (Prasetyo, 2019). Such strategies address modifiable risk factors, including poor environmental conditions, smoking, and the use of non-eco-friendly fuels (Sari et al., 2023).

This study highlights the critical role of health promotion in preventing ARI among children, with a focus on the Lasusua Public Health Center in Kolaka Utara Regency. Through targeted educational interventions, this research aims to improve public awareness and reduce ARI incidence in high-risk communities.

LITERATURE REVIEW

2.1 Health Promotion: Concept and Implementation

Health promotion represents a substantial shift from traditional health education toward a broader, integrative approach that combines education, policy, and organizational strategies. This transformation was marked in 1984 when the World Health Organization (WHO) restructured its Division of Health Education into the Division on Health Promotion and Education, emphasizing systemic approaches to public health (Mubaraq, 2011). In Indonesia, this concept was adopted in 2000 when the Ministry of Health transformed the Public Health Education Center into the Directorate of Health Promotion, which later became the Center for Health Promotion. These changes aimed to strengthen community-level health promotion efforts through collaborative and empowering initiatives (Mubaraq, 2011).

The Ottawa Charter (1986) defines health promotion as a process that enables individuals and communities to take control of their health and improve it (Middleton et al., 2016). This definition highlights the importance of empowering individuals to identify aspirations, meet needs, and adapt or modify their environments to support health and well-being. Green and Kreuter (2005) describe health promotion as a combination of educational, policy-based, and organizational interventions designed to facilitate behavior change and create environments conducive to improved health outcomes. Similarly, Pender et al. (2015) state that health promotion is motivated by the desire to enhance well-being and actualize human health potential. Collectively, these perspectives underscore that health promotion extends beyond education, incorporating public policies and systemic support to achieve sustainable health outcomes.

Health promotion consists of three core components: health education, health protection, and disease prevention. Health education involves carefully designed learning experiences to influence voluntary behaviors that enhance individual and community health. Health protection aims to mitigate environmental risks through preventive measures, such as controlling infections and reducing exposure to harmful substances. Disease prevention focuses on systematically reducing the incidence and impact of illnesses through sustained actions. Together, these elements form an integrated framework for effective health promotion efforts.

2.2 Strategies for Health Promotion in Preventing ARI

Health promotion strategies are vital for preventing Acute Respiratory Infections (ARI), particularly within community settings. The Ministry of Health of Indonesia highlights four principal strategies: empowerment, conducive environments, advocacy, and partnerships. These strategies align with national policies, including Ministerial Decrees No. 1193/Menkes/SK/X/2004 and No. 1114/Menkes/SK/VII/2005, which emphasize the importance of promotive and preventive efforts in primary healthcare (Camalia et al., n.d.). Empowerment is a key strategy that focuses on equipping individuals, families, and communities with the knowledge, motivation, and skills to improve their health. This approach fosters self-reliance and active participation in disease prevention and health improvement initiatives. Effective empowerment requires an understanding of local sociocultural dynamics to ensure that interventions resonate with the community.

Creating conducive environments is another critical strategy for promoting healthy behaviors. This approach seeks to influence physical and social environments to encourage individuals and communities to adopt health-promoting actions. For example, involving family members and

community leaders helps establish support systems that reinforce positive health practices and motivate behavioral change. Advocacy is a strategic effort to garner support from policymakers, community leaders, and private organizations. This process aims to influence decisions and secure commitments that enable the adoption of health-promoting policies, such as creating smoke-free zones or implementing public health campaigns. Advocacy addresses systemic barriers and ensures that resources and policies align with public health objectives.

Partnerships enhance the impact of health promotion by fostering collaboration among healthcare providers and diverse stakeholders. Partnerships with professional organizations, religious leaders, non-governmental entities, and media outlets facilitate comprehensive health promotion efforts. Successful partnerships require adherence to principles of equality, transparency, and mutual benefit to ensure sustainable collaboration. Integrating these strategies into primary healthcare services provides an effective framework for ARI prevention. By focusing on community engagement, preventive measures, and collaborative approaches, these strategies address the root causes of ARI and promote sustainable improvements in public health outcomes.

2.3 Health Promotion Strategies and ARI Prevention

Health promotion, as defined by the Ottawa Charter (World Health Organization [WHO], 1986), encompasses various strategies aimed at enabling communities to gain greater control over and improve their health. In the context of Acute Respiratory Infection (ARI) prevention, these strategies typically include advocacy, community development, and empowerment (Nutbeam et al., 2020).

Advocacy in health promotion involves efforts to secure support from decision-makers and influence policies that positively impact health outcomes. Studies by Suyanto et al. (2019) and Kurniawan et al. (2020) highlight that effective advocacy can lead to increased resource allocation and policy changes that support ARI prevention programs. However, implementing advocacy strategies in rural areas faces challenges, such as limited access to policymakers and competing health priorities (Patton & Stewart, 2017). Community development focuses on creating physical and social environments that support health. In the context of ARI prevention, this often includes improving sanitation, reducing indoor air pollution, and increasing access to healthcare services. A systematic review by Chen et al. (2022) found that community development initiatives significantly reduced ARI incidence in rural areas, particularly when they addressed multiple environmental risk factors simultaneously.

Empowerment strategies aim to enhance the capacity of individuals and communities to take health-related actions. In ARI prevention, this frequently involves health education and skill-building activities. A meta-analysis by Lopez and Garcia (2023) demonstrates that community empowerment programs can lead to improved knowledge, attitudes, and practices related to ARI prevention, particularly among caregivers of young children. These strategies, when effectively integrated, provide a comprehensive approach to reducing the burden of ARI, emphasizing the importance of collaboration and tailored interventions to address the unique needs of communities.

2.3 Frameworks for Health Promotion and ARI Prevention

To achieve the vision and mission of health promotion effectively and efficiently, strategic approaches are essential. These approaches are built on four primary strategies: advocacy, conducive environments, empowerment, and partnerships. Advocacy involves planned efforts to secure commitment and support from stakeholders, including informal and formal community leaders (Martin, 2010). Conducive environments focus on creating social and physical settings that encourage individuals, families, and communities to adopt healthier behaviors and prevent diseases (Chrifou et al., 2024). Empowerment aims to enhance knowledge, motivation, and capabilities among individuals and communities, enabling them to actively participate in health-related initiatives. Partnerships foster collaboration between healthcare providers and various stakeholders to implement empowerment, advocacy, and environmental strategies comprehensively. Integrating these four strategies establishes a strong foundation for effective health promotion in ARI prevention among children (Sowarka & Coenen, 2020).

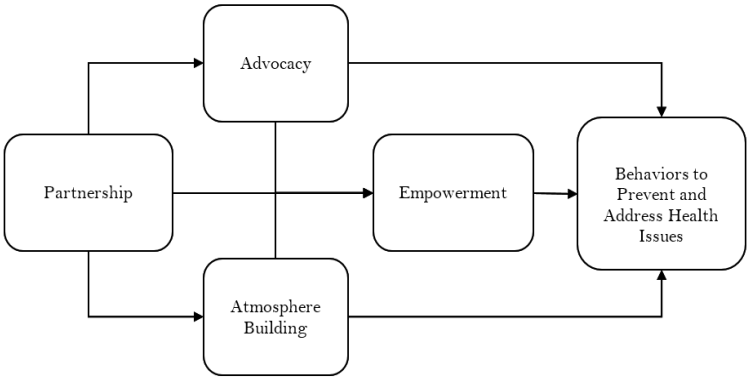

Figure 1 Theoretical Framework of Health Promotion Strategies (Source: Kemenkes, 2011)

Building on this theoretical framework, the conceptual framework for health promotion outlines its preventive role across five levels, applicable both before and during illness. Health promotion envisions empowering communities to improve their physical, mental, social, and spiritual well-being, enabling them to contribute productively to various aspects of life (Şimşek, 2013). This vision aligns with its mission to advocate, bridge, and enable health improvements. The core strategies—advocacy, empowerment, and conducive environments—are vital for reducing ARI transmission and ensuring healthier communities. Advocacy promotes policies and funding for ARI prevention, including vaccination programs and hygiene campaigns. Empowerment equips families with the knowledge and skills needed to prevent ARI, such as maintaining hygiene and securing timely vaccinations. Creating conducive environments ensures access to clean water, proper sanitation, and reduced air pollution. Together, these strategies form a comprehensive approach to achieving optimal health outcomes for children and families.

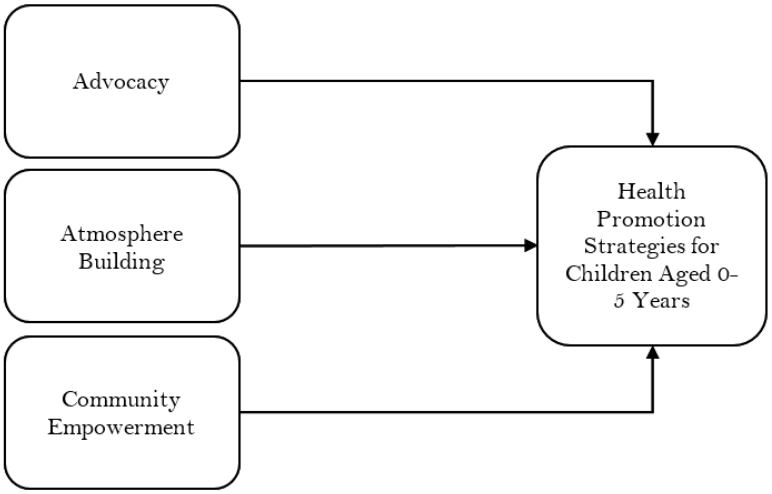

Figure 2 Conceptual Framework for ARI Prevention Based on Health Promotion Strategies (Source: Kemenkes, 2011)

3. METHODOLOGY

This study employed a qualitative approach with a phenomenological design, chosen to facilitate an in-depth exploration of the experiences and perceptions of stakeholders regarding the implementation of health promotion strategies for the prevention of Acute Respiratory Infections (ARI) in children aged 0–5 years. The research was conducted in Kelurahan Lasusua, Kecamatan Lasusua, Kabupaten Kolaka Utara, located in Southeast Sulawesi Province. Data collection took place over three months, from January to March 2023.

Informants were selected using purposive sampling, ensuring their direct involvement in implementing health promotion strategies for ARI prevention in the study area. The informants included healthcare professionals, community leaders, and community members, as detailed in Table 1. The selection criteria aimed to capture diverse perspectives on the implementation process, emphasizing the roles of healthcare providers, community influencers, and households.

Table 1. Characteristics of Informants

No	Initials	Gender	Age (Years)	Occupation
1	BW	Female	42	Head of Lasusua Health Center
2	Mus	Female	39	Health Promotion Staff
3	Mel	Female	43	Midwife at Lasusua Health Center
4	BJH	Male	48	Community Leader
5	Has	Female	37	Homemaker
6	Kan	Female	32	Homemaker
7	Sar	Female	36	Entrepreneur
8	Su	Female	28	Homemaker
9	Hus	Female	30	Homemaker
10	Sal	Female	41	Homemaker
11	Mon	Female	32	Homemaker
12	Sat	Female	31	Entrepreneur
13	Yus	Female	29	Entrepreneur
14	Me	Female	28	Entrepreneur
15	Sul	Female	33	Homemaker
16	Has	Female	29	Homemaker
17	Man	Female	28	Homemaker
18	Bos	Female	30	Homemaker
19	Sar	Female	40	Homemaker
20	Har	Female	34	Entrepreneur
21	Ni	Female	37	Entrepreneur
22	Er	Female	32	Entrepreneur

Source: Primary Data (2024)

Data collection utilized three main methods. First, in-depth interviews were conducted with key informants to gather detailed insights into their experiences and perceptions. Second, direct observations were carried out to monitor health promotion activities in the study area, focusing on their delivery and community engagement. Third, document analysis involved examining relevant materials related to ARI prevention programs, including policies, guidelines, and reports, to provide contextual understanding and triangulation.

The primary research instrument was the researcher, supported by semi-structured interview guides, observation sheets, and document review checklists. These tools facilitated the systematic collection of qualitative data. Data analysis began with transcribing interview recordings into written text without altering their meaning. This process included capturing contextual details such as the setting, informants' expressions, and overall interview atmosphere. The transcripts were then thoroughly reviewed and analyzed to identify key themes and patterns. The analysis aimed to interpret the data holistically, reflecting the collective meaning of the information gathered.

This structured methodological approach ensured the credibility and depth of the findings, offering valuable insights into the implementation of health promotion strategies for ARI prevention in the targeted community.

4. RESULTS

This study explored health promotion strategies, advocacy, community empowerment, and environmental management for the prevention of Acute Respiratory Infections (ARI) in Lasusua. Data were gathered from 21 informants, including healthcare providers, community leaders, and parents of children affected by ARI. The findings highlight the efforts and challenges in implementing ARI prevention programs in the region.

Health Promotion in Preventing ARI

The health promotion strategies implemented at Lasusua Health Center focus on direct counseling, media dissemination, and community engagement. Counseling sessions at *posyandu* and home visits are key components of the program, allowing healthcare workers to interact directly with parents. These sessions emphasize preventive measures such as maintaining a clean environment, exclusive breastfeeding, vaccination, and early detection of ARI symptoms. One informant explained:

"*We conduct direct counseling sessions at posyandu, perform home visits, and share information through WhatsApp*…" (BW, 42 years old).

In addition to direct counseling, social media platforms like WhatsApp have been used effectively to disseminate information. This approach aligns with findings by Johnson et al. (2020), who demonstrated the efficacy of social media in reaching wider audiences with health education in resource-limited settings. Educational materials, such as posters and leaflets, were also distributed to reinforce messages delivered during counseling.

However, some challenges were noted. Time constraints during *posyandu* sessions limited the depth of information provided. Healthcare workers struggled to balance the demands of routine care and health promotion activities. The World Health Organization (2019) emphasized the need for adaptive strategies to maximize efficiency in resource-constrained healthcare settings. Structured educational modules or supplementary materials may address this limitation, ensuring that critical information reaches all target groups.

Advocacy for ARI Prevention

Advocacy efforts at the health center involved engaging local leaders and attending coordination meetings to address ARI prevalence. Healthcare workers presented data on ARI cases to underscore the urgency of the issue and mobilize cross-sectoral support. One informant noted:

"*We attend monthly coordination meetings at the subdistrict office to discuss health issues, including ARI*…" (BW, 42 years old).

Despite these efforts, gaps in advocacy effectiveness were identified. For example, follow-up actions after discussions with stakeholders were limited, reducing the impact of advocacy activities. This finding aligns with Mansour et al. (2021), who reported that advocacy without structured follow-up often fails to translate into tangible outcomes. Enhanced training for healthcare workers in advocacy techniques, including evidence-based communication and stakeholder engagement, could improve the effectiveness of these efforts.

Community Empowerment

Community empowerment was a critical component of ARI prevention strategies. Health cadres received training to disseminate information about ARI prevention and facilitate early detection of symptoms. One staff member described the role of community involvement:

"*We ask the community to share their needs and challenges in preventing ARI during discussions*…" (Mus, 39 years old).

These initiatives reflect the principles of participatory health promotion, as outlined by Cornwall (2008). Training programs enhanced the capacity of health cadres to engage with the community, contributing to increased awareness and behavioral changes. Parents who participated in these programs reported a better understanding of ARI symptoms and prevention measures. One parent stated:

"*I learned how to identify ARI symptoms early and when to take my child to the health center*…" (Mel, 43 years old).

However, the study identified gaps in program reach and sustainability. Some parents reported limited access to health education, particularly in remote areas. This finding underscores the importance of frequent and inclusive community engagement to ensure that all residents benefit from health promotion initiatives.

Environmental Management

Efforts to manage environmental risks included clean-up drives, waste management campaigns, and educational outreach. These initiatives addressed key risk factors for ARI, such as dust and poor sanitation. One parent emphasized the importance of maintaining a clean environment:

"*I always clean the house daily to reduce dust*…" (Su, 28 years old).

However, inconsistent implementation of these programs limited their impact. Several parents noted that community-wide environmental improvements were necessary to achieve sustained reductions

in ARI cases. Research by Patel et al. (2018) supports the need for regular and collective action to enhance environmental health. Strengthened partnerships with community leaders and local organizations could improve the reach and sustainability of environmental management initiatives.

5. CONCLUSION

The findings of this study indicate that health promotion efforts for the prevention of Acute Respiratory Infections (ARI) have not been fully optimized in the operational area of UPTD PKM Lasusua. Public education and communication regarding ARI remain insufficient and require further enhancement. Advocacy efforts to support ARI prevention programs have not been conducted routinely or effectively, highlighting the need for stronger cross-sectoral collaboration and stakeholder engagement. Additionally, activities aimed at creating a supportive physical and social environment for ARI prevention face challenges due to resource limitations and inadequate coordination at the health center level. Community empowerment in ARI prevention programs also encounters obstacles, including low public awareness and participation, as well as difficulties in actively involving community members.

Based on the findings of this study, it is recommended that UPTD PKM Lasusua enhance its comprehensive health promotion efforts by focusing on education, communication, and community mobilization to improve public knowledge and awareness about ARI prevention in Kecamatan Lasusua. Furthermore, the health center should strengthen advocacy with local governments and cross-sectoral stakeholders to secure adequate policy support and resources for ARI prevention programs. Internal coordination and collaboration with external partners must also be optimized to establish a physical and social environment conducive to ARI prevention. Finally, community empowerment efforts should be intensified through the training of health cadres, mobilization of community groups, and active involvement of the public in ARI prevention programs. These measures are essential to addressing existing challenges and achieving sustainable improvements in ARI prevention in the region.

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