The success of empowering cadres in the prevention of acute hepatitis among children in agronursing areas

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Abstract

Acute hepatitis in children with an unknown cause is defined as an extraordinary event. Children experiencing acute hepatitis may progress to severe acute hepatitis and acute liver failure, leading to potential fatality. This study aimed to identify the empowerment of cadres in preventing acute hepatitis with unknown causes in agro-nursing areas. Employing a quasi-experimental research design, the study involved 21 integrated healthcare center cadres in an agro-nursing area. The questionnaire served as the measuring tool, and the data were analyzed using a paired sample test. The results revealed a significant p-value of 0.000, indicating differences in the cadres' abilities before and after empowerment. Empowering cadres through discussions provides them with opportunities to address problems collaboratively, fostering commitment to the prevention and early detection of acute hepatitis in children. An acute hepatitis is relatively new and life-threatening, and the prompt action of cadres, communities, and health workers, supporting government programs, contribute to the success of cadre empowerment efforts in preventing and detecting acute hepatitis in children. Empowering cadres through additional information and discussion yields positive outcomes, emphasizing the importance of efforts to prevent and detect acute hepatitis in children in agro-nursing areas.

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Introduction

Acute hepatitis is classified as an extraordinary event by the World Health Organization (WHO).[1] Cases of acute hepatitis in children, particularly those with unidentified causes, can lead to severe complications such as acute hepatitis and acute liver failure, possibly resulting in death.[2,3] Both developed and developing countries grapple with a significant epidemic of hepatitis among children.[4–6] Globally, reported cases involve previously healthy children aged one month to 16 years exhibiting signs and symptoms of acute hepatitis, such as vomiting, jaundice, abdominal pain, and nausea.[7–9] Some patients progress to acute liver failure, leading to potential fatality, and a subset may require liver transplantation.[10,11] In the UK, around half of children diagnosed with acute hepatitis lacking a clear etiology undergo testing, with approximately half testing positive for Human Adenovirus 41 Subtype F (HAdV41-F).[12]

Acute hepatitis in children currently lacks a known cause, constituting approximately 10-15% of all cases of acute hepatitis in children.[4] Those afflicted may experience severe acute hepatitis, which can progress to acute liver failure and, in some instances, result in death. The initial case was reported in the UK on April 8, 2022, with 74 subsequent cases reported in three other countries. This event was declared an extraordinary occurrence on April 15, 2022. The WHO has reported several suspected cases in Southeast Asia, including three suspected cases of pediatric patients with acute hepatitis who succumbed to the condition in Indonesia. In 2022, the prevalence of hepatitis has been documented, totaling 170 cases across 12 countries.[13]

On April 15, 2022, the WHO declared this incident as a public health emergency. Subsequently, the incident has been expanding, with reports coming in from various countries, resulting in approximately 300 probable cases worldwide. The initial report of this case in Indonesia was on April 27, 2022, indicating three reported cases. By May 12, 2022, the number of cases had surged

to 18, distributed across four provinces, namely DKI Jakarta, North Sumatra, East Kalimantan, and East Java. Fatalities were reported in DKI Jakarta (four cases), East Java (one case), East Kalimantan (one case), and West Sumatra (one case), while other patients remain under treatment. The average age of patients with acute hepatitis is between 1-6 years old.[14] According to the Early Alertness and Response System (SKDR) as of May 4, 2022, East Java alone has detected 114 suspected cases of acute hepatitis scattered across several districts/cities.[15]

Limited research has been conducted on acute hepatitis with an unknown cause.[16,17] Research on acute hepatitis with an unknown cause is an ongoing process.[16] Hepatitis A virus is closely linked to sanitation and health standards in a given area. This disease can have significant societal impacts, affecting both economic and social aspects and disrupting daily activities. Since there is no specific treatment for Hepatitis A that can reduce the duration of the disease, preventive measures become crucial. One effective preventive measure to break the transmission chain of hepatitis A is by maintaining personal hygiene through the practice of clean and healthy living behaviors.[18,19]

The government emphasizes the importance of public vigilance and early recognition of the initial symptoms of acute hepatitis. It encourages individuals not to wait for more advanced symptoms, such as yellowing of the skin and eyes, before seeking treatment. Researchers endorse the government's initiatives to enhance awareness of acute hepatitis with unknown causes. They have developed an application designed for the early detection and prevention of hepatitis in children with unknown causes.[20] This study aimed to empower cadres in preventing acute hepatitis with unknown causes in the agronursing area.

Table 1. Respondent characteristics.

Frequency	Percentage	
Age (Years)	17	56.7
20-40	13	43.3
>40		
Employment		
Teacher	14	46.7
Self-Employed	6	20.0
Housewife	10	33.3
Education		
Elementary school	2	6.7
Junior high school	6	20.0
Senior High School	19	63.3
Bachelor	3	10.0
Length of Work		
5-10 Years	11	36.7
>10 Years	16	53.3
<5 Years	3	10.0
Total	30	100.0

Materials and Methods

This study used a quasi-experiment design. The population in this study were 21 integrated healthcare center (*Posyandu*) cadres in Lumajang Regency, especially Bondoyudo Village, Lumajang Regency, which is an agro-nursing area. Sampling was carried out in total sampling. The variables used in this study are the independent variable and the dependent variable. The dependent variable in this research was the *Posyandu* cadres in the village. Meanwhile, the independent variables were age, knowledge, and length of service as *Posyandu* cadres. The measuring tool used in this study is a survey method and questionnaire. The data were analyzed using paired sample t-test.

Results

Based on Table 1 regarding the research results, it was found that the average age of *Posyandu* cadres ranged from 20-40 years with a proportion of 56.7%, the average last education attained by *Posyandu* cadres was the high school with a proportion of 63.3%. The majority of the work of the cadres are teachers with a proportion of 46.7%. The average length of service for *Posyandu* cadres is more than 10 years with a proportion of 53.3%.

Based on Table 2, the value of Sig.2-tailed = 0.000, $\alpha = 0.05$ indicated that there was differences in the ability of cadres before and after empowering cadres.

Discussion

The results showed differences in the ability of cadres before and after empowering cadres. The enhanced abilities of cadres can be attributed to various factors, such as the empowerment methods employed, the emergence of new diseases, and the support extended by the community, health workers, and the government. Additional influential factors encompass age, education, employment, and length of service. Age is a primary factor influencing these differences. This aligns with the overall age distribution of cadres, ranging from 20 to 40 years. Knowledge is acquired through various means, including tradition, authority in the field, experience, trial and error, and the application of the scientific method.[21] As individuals mature, their level of maturity and mental strength increases, impacting their thinking and work. Age significantly influences comprehension and mindset; as individuals age, their understanding and perspective tend to develop, leading to an improvement in the knowledge acquired. This enhancement is a result of the experiences and maturity of the individual.[21] Productivity in workers is also influenced by age. Generally, productive individuals in the workforce are physically stronger than their non-productive counterparts. As age increases, however, work productivity tends to decrease.[22] Older individuals, in partic-

Table 2. The ability of cadres before and after empowering cadres.

Paired differences					t	df	Sig.(2-tailed)
Mean	Std. Deviation	Std. Error	95% CI Lower	Upper			
0.800	0.664	0.121	0.552	1.048	6.595	29	0

ular, exhibit lower productivity due to a decline in physical strength and exertion in old age.[23] Furthermore, the study demonstrates that empowering cadres positively impacts their abilities, with age being a significant factor influencing both knowledge acquisition and work productivity.

The second influential factor was education, aligning with the prevalent educational background of cadres as high school graduates. This is in line with previous studies showed a significant relationship between the level of knowledge and the behavior of *Posyandu* cadres.[24,25] Education not only increase knowledge, but improve work skills, thus increase work productivity.[26] The education of cadres serves as a foundation for shaping, preparing, and enhancing competencies in executing *Posyandu* activities. Research indicates a noteworthy correlation between education and cadre skills, revealing that cadres with a high school education or higher possess a 3.96 times greater likelihood of having proficient skills.[27] Education, as a deliberate effort, plays a pivotal role in molding an individual's behavior to effectively address challenges. The educational level of individuals, particularly cadres in both villages and cities, profoundly influences their receptivity to new programs. In the specific context of the toddler growth and development monitoring program, individuals with higher levels of education, especially cadres, are more inclined to embrace and facilitate the adoption of novel programs and innovations within the community.[28] Therefore, a cadre's elevated educational attainment serves as a catalyst for the seamless acceptance and integration of new initiatives into society.

The third factor was work and length of work. This is consistent with the frequency of cadres who work as teachers and worked for more than 10 years. Cadres who have worked for a long time have better knowledge than cadres who do not work.[27] Someone who works has the possibility to interact with colleagues, exchange information and motivate each other, this can add insight into knowledge and related information. Someone who works has the possibility to interact with colleagues, exchange information and motivate each other, this can add insight into knowledge and related information. Someone who is not working may spend more time at home, doing household activities or personal matters so there are fewer opportunities to interact with other people.[29]

Health promotion provides benefits to participants, because by knowing the cause's hepatitis for clients, if there are family members suffering from the same disease, family members and clients are ready to face the worst risks of hepatitis and its complications. By knowing about hepatitis A, it is hoped that clients will be able to prepare themselves with the prevention and the treatment, namely: provision of safe food and clean water, an effective waste disposal system, pay attention to general hygiene, wash hands, use catheters, disposable syringes and syringes and always maintain the best condition of the body.[30] Based on research, respondents with low knowledge are at risk of getting hepatitis A as much as 5.96 times compared to highly knowledgeable respondents.[31] The results of this study were in accordance with the theoretical review which says that good knowledge is needed to behave healthily to facilitate the realization of healthy behavior.[32]

Conclusions

Increasing the knowledge of *Posyandu* cadres can be done by empowering cadres. The empowerment of cadres plays a crucial role in preventing, detecting early, and reducing cases of acute hepatitis in children within agronursing areas. By empowering *Posyandu* cadres, it becomes possible to extend more targeted and close-knit educational initiatives to the community. This is particularly significant for families engaged in the proactive prevention of childhood hepatitis. Empowering *Posyandu* cadres serves as an effective means to disseminate education within the community, focusing on specific aspects and ensuring a closer reach to families actively involved in safeguarding against childhood hepatitis.

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