



The Effectiveness of Peer Educators on the Level of Knowledge about Reproductive Health at Akelamo Community Health Center, Tidore

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Abstract: *Reproductive health is an important aspect in improving the quality of life of the community, but the level of knowledge about reproductive health is still relatively low due to cultural factors, social norms, and limitations of the educational methods used. This study aims to analyze the effectiveness of the peer educator method in increasing the level of reproductive health knowledge of the community in the Akelamo Community Health Center, Tidore. This study used a pre-experimental design with a one-group pretest-posttest approach. The study sample consisted of 24 respondents selected using a total sampling technique. The intervention was carried out through reproductive health education using the peer educator method in small groups. Measurements of knowledge levels were carried out before and after the intervention using a standardized questionnaire. Data analysis used the Wilcoxon test with a significance level of $p < 0.05$. The results showed an increase in the average knowledge score from 56.3 before the intervention to 78.5 after the intervention. Statistical tests showed a significant difference between the levels of knowledge before and after the intervention ($p = 0.001$). These results indicate that the peer educator method is effective in increasing public reproductive health knowledge.*

Keywords: Community Health; Knowledge Improvement; Peer Educator Method; Pre-Experimental Design; Reproductive Health.

1. INTRODUCTION

Reproductive health is an essential component of human health, encompassing physical, mental, and social conditions related to the reproductive system, functions, and processes. Understanding reproductive health encompasses not only biological aspects but also knowledge of healthy lifestyle behaviors, disease prevention, and individual responsibility for one's own health (Aisyaroh, 2019). Good knowledge enables individuals to recognize the signs and symptoms of reproductive health disorders early. This understanding also helps individuals make informed decisions regarding reproductive health care and protection. Lack of knowledge can lead to errors in maintaining reproductive organ hygiene and increase the risk of disease. This situation demonstrates the need for serious attention to reproductive health in efforts to improve public health (Haniah et al., 2023).

Low levels of knowledge about reproductive health remain a complex problem in various regions. Cultural factors and social norms often limit openness in discussing reproductive health topics. Many people consider reproductive health issues to be private and taboo to discuss openly. This situation makes individuals reluctant to seek accurate and reliable information. The information obtained often comes from inaccurate sources and is not based on medical science. This situation has the potential to lead to misunderstandings that can lead to inappropriate health behaviors (Agma, 2025).

Primary health care plays a crucial role in increasing public knowledge through promotive and preventive activities. Community health centers, as first-level health care facilities, are at the forefront of health education. One of their primary duties is to provide health education tailored to the needs of the community within their jurisdiction. Reproductive health education is part of this service because it directly impacts the community's quality of life. (Calundu, 2025) . A good educational program is expected to increase public understanding and awareness of the importance of maintaining reproductive health. However, the effectiveness of an educational program is greatly influenced by the delivery method used (Wahyudi & Raharjo, 2024) .

The health education methods currently implemented in community health centers (Puskesmas) largely still use a conventional approach. Material is often delivered through one-way lectures by health workers. In practice, this method does not provide enough space for active community participation (Mujahid et al., 2025) . The target audience tends to be passive and simply receive information without in-depth discussion. This can lead to inadequate understanding of the material. Communication barriers also arise when the topics discussed relate to sensitive reproductive health (Jawhari & Yusuf, 2024) .

The limitations of conventional methods drive the need for more innovative and participatory approaches to health education. One emerging approach in public health education is the peer educator method (Abeng et al., 2025) . Peer educators are individuals from their peer group who have received training on specific health topics. Similarities in age , social background, and environment create an emotional closeness between the peer educator and the target audience. This equal relationship facilitates communication and information exchange. The information conveyed becomes more relevant and easier for the target audience to understand (Fanaqi et al., 2020) .

The peer educator approach has the advantage of creating a more open and interactive learning environment. The target audience tends to feel more comfortable asking questions and expressing opinions when interacting with peers. Discussions are not one-way but involve the active participation of all group members (Indri, 2024) . Reproductive health material can be presented using simple language and relevant to everyday life. This process helps gradually increase understanding. This approach can also foster mutual support in maintaining reproductive health (Susilowati & Maryam, 2023) .

The use of peer educators in reproductive health education has been implemented in various public health programs. This approach is considered effective in increasing knowledge and awareness of reproductive health issues. The learning process, which takes place within peer groups, allows for the exchange of experiences that enrich understanding. The goal of education is not only to receive information but also to learn from the experiences of their peers. Intensive interaction can reinforce the health messages conveyed. This makes peer educators a potential method for implementation in primary healthcare (Kamila et al., 2024) .

The Akelamo Community Health Center (Puskesmas) in Tidore has diverse communities in terms of education, social status, and culture. These differences influence how people receive and understand health information. Some people still have limited knowledge about reproductive health, including disease treatment and prevention. This limited understanding can impact unfavorable health behaviors. Educational efforts need to be tailored to local conditions and needs. An approach that involves active community participation is considered more appropriate (Sari et al., 2021) .

The implementation of the peer educator method at Akelamo Community Health Center is expected to increase the effectiveness of reproductive health education. Peer involvement in the delivery of information creates a more conducive learning environment. The target audience has the opportunity to discuss openly without feeling awkward. Information delivered by peer educators is more easily understood because it comes from individuals with whom they have a close social relationship. The informal communication process can clarify the material presented. This approach has the potential to increase community knowledge more evenly.

Although the peer educator approach has several advantages, its implementation requires scientific evaluation to determine its effectiveness. Systematic assessment is necessary to determine changes in community knowledge levels after receiving education. Data obtained from this research can provide an objective picture of the program's success. The results can also be used as a basis for developing and improving health education programs at community health centers. Based on these conditions, research on the effectiveness of peer educators on reproductive health knowledge levels at Akelamo Community Health Center, Tidore, is crucial. This research is expected to contribute to improving the quality of public health services and the development of public health science.

2. RESEARCH METHOD

This study used a pre-experimental design with a one-group pretest-posttest approach to assess the effectiveness of the peer educator method on reproductive health knowledge levels at the Akelamo Community Health Center in Tidore. The study population was all residents targeted for education within the Community Health Center's work area in November. A sample of 24 respondents was selected using total sampling, including all individuals who met the inclusion criteria: being of productive age, willing to participate in the education program, and able to understand the material presented. Respondents with cognitive impairments, absenteeism during the education program, or refusal to participate in the study were excluded from the sample.

The intervention, which involved reproductive health education through peer educators, was delivered face-to-face in small groups. Educational materials covered reproductive health concepts, healthy lifestyles, disease prevention, and individual responsibility for reproductive health. Peer educators were selected from peer groups who had received specific training in reproductive health topics, ensuring informal, interactive, and easy-to-understand communication. Prior to the intervention, a pretest using a validated questionnaire was administered to assess respondents' initial knowledge. Following the intervention, a posttest using the same questionnaire was administered to assess changes in knowledge.

Data analysis was performed using parametric statistical tests paired t-test if the data were normally distributed or Wilcoxon signed-rank test if the data were not normal, with a significance level of $p < 0.05$. In addition, descriptive data in the form of frequencies and percentages were used to describe the characteristics of respondents such as age, gender, and education level. The results of the study are expected to show a significant increase in the level of public knowledge about reproductive health after being provided with education through the peer educator method. The findings of this study can be a basis for the Akelamo Community Health Center in designing and developing more effective, interactive, and community participation-based health education strategies, so that the quality of public health services is optimally improved.

3. RESULTS AND DISCUSSION

Results

Table 1. Respondent Characteristics (n = 24)

| Variables | Category | Frequency (n) | Percentage (%) |
|-----------|----------------------------|---------------|----------------|
| Age | < 20 years | 4 | 16.7 |
| | 20 - 35 years | 14 | 58.3 |
| | > 35 years | 6 | 25.0 |
| Gender | Man | 9 | 37.5 |
| | Woman | 15 | 62.5 |
| Education | Elementary - Middle School | 6 | 25.0 |
| | SENIOR HIGH SCHOOL | 13 | 54.2 |
| | College | 5 | 20.8 |

Table 1 shows the characteristics of respondents in the Akelamo Community Health Center, Tidore. The majority of respondents were in the 20–35 age range (14 people (58.3%), while respondents aged <20 years were 4 people (16.7%) and >35 years were 6 people (25.0%). Based on gender, the majority of respondents were female (15 people (62.5 %)), while 9 were male (37.5%). In terms of education level, the majority of respondents had a high school education (13 people (54.2%), followed by elementary–junior high school education (6 people (25.0%) and college education (5 people (20.8%). These characteristics indicate that most respondents were of productive age with a secondary education background, which has the potential to influence their initial level of knowledge about reproductive health.

Table 2. Mean Reproductive Health Knowledge Score Before and After Peer Educator Intervention

| Measurement Time | Mean | Median | Elementary School | Min | Max |
|------------------------|------|--------|-------------------|-----|-----|
| Before intervention | 56.3 | 55.0 | 8.4 | 40 | 70 |
| After the intervention | 78.5 | 80.0 | 7.6 | 65 | 92 |

Table 2 shows the mean reproductive health knowledge scores of respondents before and after the peer educator intervention. Before the intervention, the mean knowledge score was 56.3, with a median of 55.0, a standard deviation of 8.4, and minimum and maximum scores of 40 and 70, respectively.

After the intervention, the mean knowledge score increased to 78.5 with a median of 80.0, a standard deviation of 7.6, and minimum and maximum values of 65 and 92, respectively. These results indicate an increase in reproductive health knowledge scores after being given education using the peer educator method.

Table 3. Distribution of Reproductive Health Knowledge Levels Before and After Intervention

| Level of Knowledge | Pretest n (%) | Posttest n (%) |
|--------------------|---------------|----------------|
| Low | 11 (45.8) | 2 (8.3) |
| Currently | 9 (37.5) | 7 (29.2) |
| Tall | 4 (16.7) | 15 (62.5) |

Table 3 shows the distribution of respondents' reproductive health knowledge levels before and after the intervention. In the pretest, the majority of respondents were in the low knowledge category, at 11 (45.8 %). After the intervention, the number of respondents with low knowledge decreased to 2 (8.3 %), while the high knowledge category increased significantly to 15 (62.5%). This change in distribution indicates that the peer educator method significantly improved respondents' knowledge levels.

Table 4. Statistical Test Results of the Influence of Peer Educators on the Level of Reproductive Health Knowledge

| Variables | Z / t count | p-value |
|--|-------------|---------|
| Reproductive Health Knowledge (Pretest–Posttest) | -3,284 | 0.001 |

Table 4 shows the results of statistical tests on the effect of the peer educator method on reproductive health knowledge levels. The Wilcoxon test yielded a Z value of -3.284 with a p-value of 0.001 ($p < 0.05$), indicating a significant difference between pre- and post-intervention knowledge levels. These results indicate that reproductive health education using the peer educator method is effective in increasing community knowledge levels in the Akelamo Community Health Center, Tidore.

Discussion

The results of the study showed that reproductive health education using the peer educator method significantly increased community knowledge in the Akelamo Community Health Center, Tidore. The increase in the mean knowledge score from 56.3 to 78.5, with a p-value of 0.001, indicates that the intervention significantly improved respondents' understanding. This

confirms that educational methods involving the active participation of the target audience are more effective than conventional, one-way approaches (Calundu, 2025) .

The low knowledge scores during the pretest reflect the community's initial limited understanding of reproductive health. This finding aligns with the opinion of (Aisyaroh, 2019) that reproductive health is not yet fully understood comprehensively by the public, particularly regarding disease prevention and reproductive organ care. Furthermore, this limited knowledge also potentially increases the risk of inappropriate health behaviors, as noted by (Haniah et al., 2023) .

Cultural factors and social norms also contributed to respondents' low levels of knowledge before the intervention. Many communities still consider reproductive health topics taboo to discuss openly, making individuals reluctant to seek information from reliable and credible sources. As a result, the information obtained is often inaccurate and not based on health science, which can lead to misunderstandings in daily health practices (Agma, 2025) .

The implementation of the peer educator method has been proven to overcome these obstacles by creating a more open and non-judgmental educational environment. Equality between peer educators and the target audience encourages more effective two-way communication. Target audiences feel more comfortable asking questions and expressing their opinions, especially on sensitive topics like reproductive health, which have traditionally been difficult to discuss through conventional lecture methods (Mujahid et al., 2025) .

The success of the peer educator method is also inseparable from the similarities in age , social background, and living environment between the educator and the target audience. This similarity creates an emotional closeness that facilitates the transfer of knowledge. The information conveyed becomes more relevant to the respondents' lives and easier to understand because it uses simple, contextual language (Abeng et al., 2025) .

The increased distribution of high knowledge categories after the intervention indicates that the peer educator method not only increased knowledge scores quantitatively but also improved the quality of respondents' understanding. The peer group discussion process enabled the exchange of experiences, enriching insights and reinforcing health messages. This aligns with the opinion (Indri, 2024) that peer-based learning can gradually increase participants' active engagement and understanding.

In addition to enhancing individual understanding, the peer educator approach also contributes to building mutual support among group members. The social support formed during the educational process can encourage individuals to be more concerned about their own

and others' reproductive health. This is crucial for disease prevention and the development of sustainable healthy lifestyles (Susilowati & Maryam, 2023) .

The results of this study are consistent with previous research showing that the peer educator method is effective in increasing public knowledge and awareness of reproductive health issues. The learning process, which takes place within peer groups, allows for more intensive interaction, allowing health messages to be better received and internalized by the target audience (Kamila et al., 2024) .

In the context of primary healthcare, the implementation of the peer educator method has strategic implications. Community health centers, as the spearhead of healthcare services, face limited resources, so an approach involving active community participation can be an effective and sustainable solution. This approach also aligns with the principles of promotion and prevention, which are the primary focus of primary healthcare (Calundu, 2025) .

The diverse educational, social, and cultural characteristics of the community in the Akelamo Community Health Center's work area demand flexible and adaptive educational methods. The peer educator method is considered appropriate because it can adapt materials to the community's local needs and context. This supports the opinion (Sari et al., 2021) that the success of a health education program is greatly influenced by the appropriateness of the method to the target characteristics.

Overall, the results of this study confirm that the peer educator method is an effective approach in improving the level of reproductive health knowledge in the community. These findings provide empirical evidence to support the development of more participatory and community-based reproductive health education programs at the community health center level. Therefore, the implementation of the peer educator method is expected to contribute to the sustainable improvement of the quality of health services and public health (Wahyudi & Raharjo, 2024) .

4. CONCLUSION

This study concluded that the peer educator method proved effective in increasing community knowledge about reproductive health in the Akelamo Community Health Center, Tidore. The significant increase in the mean knowledge score between before and after the intervention indicates that the peer-based educational approach is able to address the community's low understanding of reproductive health. These findings confirm that participatory and contextual educational methods are more readily accepted by the community than conventional outreach methods, which tend to be one-way.

The success of the peer educator method is inseparable from the characteristics of the equal relationship between the peer educator and the target audience. Similarities in age, social background, and life experiences create an emotional closeness that facilitates communication and discussion, especially on reproductive health topics that are often considered sensitive. A more open and interactive educational environment allows the target audience to actively ask questions, share experiences, and deepen their understanding, so that the resulting increase in knowledge is not only quantitative but also qualitative.

Based on the research findings, Akelamo Community Health Center is recommended to adopt and develop the peer educator method as a key strategy in implementing reproductive health education. The community health center needs to conduct structured selection and training of peer educators to ensure the material delivered remains accurate and aligns with health principles. Furthermore, collaboration between health workers and peer educators needs to be strengthened to ensure the education program runs sustainably and reaches a wider audience.

Future research is expected to employ a more comprehensive design involving a control group and a larger sample size to increase the validity and generalizability of the results. Further research is also recommended to assess the long-term impact of the peer educator method on changes in reproductive health attitudes and behaviors, thereby providing a more comprehensive picture of this approach's contribution to sustainable public health improvement.

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