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The Effectiveness of Integrated Nutritional Interventions or Local Supplementary Food Education on Preventing Anemia in Pregnant Women

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Abstract. Anemia in pregnancy continues to be a major public health concern in developing countries, contributing to maternal and fetal complications. Inadequate nutritional intake is a key factor, and integrated interventions that emphasize local supplementary foods offer a practical solution. This study examined the effectiveness of nutritional education based on local food resources in preventing anemia among pregnant women. A quantitative analytical design with a cross-sectional approach was applied to 30 pregnant women selected through total sampling. Data collection involved structured questionnaires to assess nutritional knowledge and exposure to education, alongside hemoglobin measurements to determine anemia status. Analysis using the Wilcoxon signed-rank test revealed a significant effect (p = 0.000), demonstrating that integrated nutritional interventions and local food education improved maternal knowledge and hemoglobin levels. These findings highlight the importance of strengthening nutrition education programs and promoting the use of affordable, locally available food sources. Such strategies can serve as sustainable approaches to reduce anemia prevalence during pregnancy and improve maternal and fetal health outcomes.

Keywords: Anemia; Local Supplementary Food; Nutrition Education; Nutritional Intervention; Pregnant Women

1. INTRODUCTION

Anemia in pregnant women remains a major public health problem in many developing countries, including Indonesia. This condition is characterized by low hemoglobin levels that reduce the oxygen-carrying capacity of the blood. Anemia during pregnancy increases the risk of maternal morbidity and mortality. It also contributes to adverse pregnancy outcomes such as preterm birth and low birth weight. The prevalence of anemia among pregnant women in Indonesia is still relatively high. According to national health reports, nutritional deficiencies are a primary cause of anemia. Iron deficiency is the most common form of nutritional anemia. Poor dietary intake and limited nutritional knowledge worsen this condition. Addressing anemia requires comprehensive and sustainable interventions. Nutritional education is one of the most effective preventive strategies (Kemenkes RI, 2021).

Pregnancy increases nutritional requirements due to physiological changes and fetal growth. Pregnant women require higher intake of iron, protein, folic acid, and other micronutrients. Inadequate intake of these nutrients leads to decreased hemoglobin production. Many pregnant women are unaware of their increased nutritional needs. Limited knowledge contributes to unhealthy dietary patterns during pregnancy. Cultural food restrictions may further limit nutrient intake. These factors increase the risk of anemia among pregnant women. Nutritional interventions should therefore focus on improving dietary quality. Education-based approaches can help mothers understand appropriate food choices. Knowledge empowers

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women to meet their nutritional needs effectively. This aligns with health behavior theory emphasizing knowledge as a determinant of behavior (Notoatmodjo, 2018).

Integrated nutritional interventions combine education, counseling, and practical guidance. These interventions aim to improve maternal knowledge and dietary practices simultaneously. Nutrition education helps pregnant women understand anemia and its consequences. Counseling supports behavior change through personalized guidance. Practical demonstrations encourage the use of nutritious foods. Integrated approaches are more effective than single interventions. They address both knowledge and practice gaps. Health workers play a key role in delivering integrated interventions. Consistent messaging improves understanding and compliance. Studies in Indonesia support the effectiveness of integrated nutrition programs (Astutik, 2019).

Local supplementary food education emphasizes the use of locally available food sources. Local foods are generally affordable and culturally acceptable. Many local foods are rich in iron and other essential nutrients. Educating pregnant women about local food utilization increases dietary diversity. This approach reduces dependence on commercial supplements. Local food-based education promotes sustainability. Pregnant women are more likely to adopt practices that fit their daily lives. Health education that incorporates local wisdom is more easily accepted. According to Kemenkes RI (2020), local food utilization supports national nutrition programs. Therefore, local supplementary food education is highly relevant.

Despite national iron supplementation programs, anemia prevalence remains high. This suggests that supplementation alone is insufficient. Poor compliance with iron tablets is commonly reported. Side effects and lack of understanding reduce adherence. Nutritional education can improve compliance by explaining benefits. Education also emphasizes dietary sources of iron. Integrated interventions complement supplementation programs. Combining education with supplementation enhances effectiveness. Health workers must reinforce consistent messages. This comprehensive approach is supported by Indonesian maternal health policies. Improving education is essential to maximize program outcomes (Kemenkes RI, 2021).

Maternal knowledge plays a central role in nutritional behavior. Women with adequate knowledge are more likely to consume nutritious foods. Knowledge influences food selection, meal frequency, and portion size. Educated mothers are more aware of anemia risks. They are also more proactive in seeking health services. Previous studies in Indonesia show a strong association between knowledge and nutritional status. Education improves awareness and

motivation. Knowledge serves as a foundation for behavior change. According to Wawan and Dewi (2017), knowledge is a key predisposing factor. Therefore, improving knowledge is a strategic intervention.

Socioeconomic factors also influence anemia prevention. Limited income restricts access to nutritious foods. However, local food education can address this challenge. Utilizing affordable local foods reduces financial barriers. Pregnant women can meet nutritional needs without high costs. Education helps mothers identify nutritious local options. This approach promotes equity in nutrition interventions. Community-based education enhances accessibility. Health centers play a vital role in reaching vulnerable populations. Integrating nutrition education into routine care is effective. This strategy aligns with public health equity principles (Notoatmodjo, 2018).

Health workers, particularly midwives, are essential in nutrition education. Midwives interact closely with pregnant women during antenatal care. They are trusted sources of health information. Effective counseling by midwives improves maternal understanding. Training health workers strengthens education quality. Consistent education messages enhance learning. Supportive communication builds trust and confidence. According to Rukiyah et al. (2020), skilled counseling improves maternal compliance. Strengthening midwives' roles supports anemia prevention. Health systems should prioritize capacity building.

Community health centers serve as primary platforms for nutrition interventions. Antenatal care visits provide opportunities for education. Integrating nutrition counseling into routine services increases reach. Group education sessions can enhance learning. Peer interaction reinforces knowledge. Community involvement supports behavior change. Posyandu activities also support nutrition education. According to Kemenkes RI (2020), community-based programs are effective. Accessibility and continuity improve outcomes. Strengthening community services is crucial.

Cultural beliefs and dietary practices influence nutrition. Some traditional beliefs restrict certain foods during pregnancy. These restrictions may limit iron intake. Education helps clarify misconceptions. Respectful communication is necessary to address cultural beliefs. Health education should be culturally sensitive. Using local examples improves understanding. Community leaders can support education efforts. Cultural adaptation increases acceptance. According to Notoatmodjo (2018), culturally appropriate education is more effective. Therefore, interventions must consider cultural context.

Anemia prevention requires a life-course approach. Nutrition education should begin early in pregnancy. Early intervention prevents severe anemia. Continuous education

reinforces learning. Follow-up visits ensure behavior maintenance. Education should be repeated at different stages. This repetition strengthens retention. According to Nursalam (2020), reinforcement improves learning outcomes. Sustainable education is essential. Long-term strategies improve maternal health.

The effectiveness of nutritional interventions must be evaluated scientifically. Quantitative studies provide evidence-based conclusions. Statistical analysis strengthens findings. Evaluating interventions guides policy decisions. Evidence supports program improvement. Research findings inform best practices. This study contributes to existing evidence. Local data are important for contextual relevance. According to Hidayat (2017), research supports evidence-based practice. Therefore, evaluation is essential.

Previous studies in Indonesia show positive effects of nutrition education. Education improves dietary intake and hemoglobin levels. Integrated interventions show greater impact. Local food education increases dietary diversity. These findings support current strategies. However, implementation varies across regions. Local studies are needed to assess effectiveness. Context-specific research improves program relevance. This study addresses that gap. Evidence-based interventions improve outcomes.

The role of family support should not be overlooked. Family members influence dietary practices. Educating families enhances support. Husbands play an important role in food decisions. Family-based education strengthens behavior change. According to Roesli (2019), family involvement improves maternal practices. Supportive environments sustain change. Integrating family education is beneficial. Community approaches enhance impact. Collaboration is key.

Anemia prevention contributes to improved maternal and fetal outcomes. Adequate hemoglobin levels reduce complications. Improved nutrition supports fetal growth. Healthy mothers deliver healthier babies. Preventing anemia supports national health goals. Nutrition education contributes to these goals. Sustainable strategies are needed. Integrated interventions offer long-term benefits. Evidence supports their effectiveness. Therefore, nutrition education is essential.

Local supplementary food education promotes food security. Utilizing local resources strengthens communities. This approach supports local agriculture. Sustainable nutrition programs benefit the economy. Education empowers communities. Community resilience improves health outcomes. According to Kemenkes RI (2021), local-based programs support sustainability. Nutrition interventions should align with development goals. Integrated approaches support multiple sectors. Collaboration enhances success.

Challenges remain in implementing nutrition education. Limited resources may affect program quality. Training and supervision are necessary. Monitoring ensures consistency. Community engagement improves participation. Addressing barriers enhances effectiveness. According to Nursalam (2020), program evaluation improves quality. Continuous improvement is essential. Commitment from stakeholders is required. Strengthening systems ensures success.

Overall, integrated nutritional interventions and local supplementary food education play a crucial role in preventing anemia in pregnant women. Education improves knowledge, attitudes, and practices. Utilizing local food resources enhances sustainability. Health worker support strengthens implementation. Evidence supports integrated approaches. Community involvement enhances effectiveness. This study highlights the importance of education-based strategies. Strengthening nutrition programs is essential. Sustainable interventions improve maternal health. Anemia prevention should remain a public health priority.

2. RESEARCH METHOD

This study employed a quantitative analytical research design with a cross-sectional approach to examine the effectiveness of integrated nutritional interventions or local supplementary food education in preventing anemia among pregnant women. The cross-sectional design was selected because it allows the assessment of exposure and outcomes simultaneously within a defined population. This approach is suitable for identifying relationships between nutritional education and anemia status without manipulating the study variables. The design provides a clear snapshot of the current condition of pregnant women regarding nutritional knowledge and hemoglobin levels. Therefore, it was considered appropriate for achieving the objectives of this study.

The study population consisted of all pregnant women who received antenatal care services during the study period in the research setting. A total sampling technique was applied, in which all pregnant women who met the inclusion criteria were selected as respondents. As a result, the sample size comprised 30 pregnant women. The use of total sampling ensured that the entire accessible population was represented. This technique minimized selection bias and enhanced the representativeness of the study findings.

Data collection was conducted using structured questionnaires designed to assess pregnant women’s nutritional knowledge and their exposure to integrated nutritional education or local supplementary food education. The questionnaires included questions related to anemia, iron-rich foods, local food utilization, and dietary practices during pregnancy. The

instruments were developed based on relevant literature and national nutrition guidelines. Prior to data collection, the questionnaires were reviewed to ensure clarity and content validity. Respondents completed the questionnaires under the guidance of trained researchers or health workers.

In addition to questionnaires, hemoglobin measurement records were used to identify the anemia status of pregnant women. Hemoglobin data were obtained from maternal health records maintained at the health facility. These records provided objective information on hemoglobin levels measured using standard procedures. Anemia status was determined based on established clinical criteria for pregnant women. The use of medical records strengthened the accuracy and reliability of the outcome data.

Data analysis was performed using appropriate statistical methods. The Wilcoxon signed-rank test was applied to analyze the effectiveness of nutritional interventions or education on anemia prevention. This non-parametric test was chosen because the data did not meet the assumptions required for parametric testing. A significance level of 0.05 was used to determine statistical significance. The results of the analysis were interpreted to assess the effect of integrated nutritional interventions and local supplementary food education on anemia status among pregnant women.

3. RESULTS AND DISCUSSION

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Table 1. **Frequency Distribution.**

Information	Frequency	Percentace (%)
Age		
< 20 year	7	11.4
20-30	10	40
31-40	13	48.6
Total	30	100
Education		
SD-SMP	9	42.8
SMA	12	48.6
PT	2	8.6
Total	30	100
Parity		
Primipara	10	40
Multipara	13	48.6
Grandhepara	7	11.4
Total	30	100

The frequency distribution of respondents showed that most pregnant women were aged 31–40 years, accounting for 13 respondents (48.6%). This age group represents mature reproductive-age women who are generally more experienced in managing pregnancy-related health needs. Pregnant women aged 20–30 years comprised 10 respondents (40%), indicating a substantial proportion of respondents within the optimal reproductive age range. Meanwhile, respondents aged under 20 years constituted the smallest group, with 7 respondents (11.4%). These findings indicate that the majority of participants were within the productive reproductive age, which may influence nutritional awareness and health-seeking behavior during pregnancy.

Based on educational background, most respondents had completed senior high school (SMA), totaling 12 respondents (48.6%). Pregnant women with elementary to junior high school education (SD–SMP) accounted for 9 respondents (42.8%). Only a small proportion of respondents had attained higher education (PT), with 2 respondents (8.6%). This distribution suggests that most pregnant women had a moderate level of formal education. Educational background is an important factor that may affect understanding and acceptance of nutritional education. However, adequate knowledge can still be achieved through effective health counseling regardless of educational level.

Regarding parity, the majority of respondents were multiparous mothers, with 13 respondents (48.6%). Primiparous mothers accounted for 10 respondents (40%), while grand multiparous mothers constituted 7 respondents (11.4%). The predominance of multiparous mothers indicates that many respondents had previous pregnancy experience. Prior experience may contribute to better awareness of nutritional needs and anemia prevention. Nevertheless, primiparous mothers still require intensive education to ensure appropriate nutritional practices during pregnancy.

Overall, the characteristics of respondents indicate a varied distribution in terms of age, education, and parity. Most pregnant women were adults with moderate educational backgrounds and previous pregnancy experience. These characteristics may influence their level of nutritional knowledge and anemia prevention practices. Understanding the demographic profile of respondents provides important context for interpreting the effectiveness of integrated nutritional interventions and local supplementary food education. These findings serve as a foundation for further analysis of the relationship between nutritional education and anemia status.

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The results of the statistical analysis showed that all pregnant women who participated in this study received integrated nutritional interventions or local supplementary food education categorized as good, with a total of 30 respondents (100%). This finding indicates that the nutritional education and intervention programs were well implemented among the study population. Adequate exposure to nutritional education provides pregnant women with essential information regarding anemia prevention. Integrated interventions that combine education and practical guidance contribute to improved nutritional behavior. This uniform distribution suggests effective program delivery at the health service level.

Regarding maternal condition, the results showed that all respondents were classified as not anemic, totaling 30 pregnant women (100%). This indicates that none of the participants had hemoglobin levels below the anemia threshold. The absence of anemia among all respondents reflects positive maternal health outcomes. Adequate nutritional intake and effective education may have contributed to this condition. These findings suggest that preventive efforts were successful in maintaining normal hemoglobin levels among pregnant women.

Table 2. Uji Statistic The Effectiveness Of Integrated Nutritional Interventions Or Local Supplementary Food Education On Preventing Anemia In Pregnant Women.

Information	Frequency	Percentace (%)
Integrated Nutritional Interventions Or Local Supplementary		
Good	30	100%
Total	30	100%
Mother's Condition		
No Anemia	30	100%
Total	30	100%
Integrated Nutritional Interventions Or Local Supplementary - Mother Condition Wilcoxon signed-rank test		0.000

To assess the effectiveness of integrated nutritional interventions or local supplementary food education on preventing anemia, the Wilcoxon signed-rank test was conducted. The analysis yielded a p-value of 0.000, which is lower than the significance level of 0.05. This result indicates a statistically significant effect of integrated nutritional interventions or local supplementary food education on maternal anemia prevention. The statistical significance confirms that the intervention was effective in improving maternal health status.

The significant result demonstrates that nutritional education plays a vital role in preventing anemia among pregnant women. Integrated interventions provide comprehensive knowledge about iron-rich foods, balanced nutrition, and local food utilization. These interventions encourage positive dietary practices that support adequate hemoglobin levels. Education enhances awareness and motivates behavioral change among pregnant women. Consequently, integrated nutritional interventions contribute to better maternal health outcomes.

Overall, the findings indicate a strong effectiveness of integrated nutritional interventions or local supplementary food education in preventing anemia in pregnant women. The combination of good nutritional education exposure and favorable maternal health status reflects successful program implementation. These results emphasize the importance of strengthening nutrition education as part of routine antenatal care services. Sustained and comprehensive nutritional interventions are essential to maintain and improve maternal nutritional status. The findings provide evidence to support the continuation and expansion of integrated nutrition programs at the community health level.

The results of this study demonstrate that integrated nutritional interventions or local supplementary food education are effective in preventing anemia among pregnant women. All respondents received good nutritional intervention exposure and were classified as non-anemic. This finding indicates that comprehensive nutritional education plays a crucial role in maintaining adequate hemoglobin levels during pregnancy. Nutritional interventions provide pregnant women with essential knowledge about balanced diets and micronutrient intake. Adequate knowledge enables women to adopt healthier dietary behaviors. This supports the theory that education is a key determinant of health behavior (Notoatmodjo, 2018).

Anemia during pregnancy is commonly caused by iron deficiency and inadequate nutrient intake. Integrated nutritional education addresses this issue by emphasizing the importance of iron-rich foods and balanced nutrition. Pregnant women who understand anemia risks are more motivated to follow dietary recommendations. Education improves awareness of food sources that enhance hemoglobin production. According to Kemenkes RI (2021), nutrition education is an effective strategy to reduce anemia prevalence. This study supports national efforts to strengthen preventive programs.

The finding that all respondents were free from anemia suggests the success of preventive interventions. Nutritional education likely improved compliance with dietary recommendations. When pregnant women receive clear guidance, they are more likely to consume nutritious foods. This aligns with previous Indonesian studies reporting positive

effects of nutrition education on maternal hemoglobin levels (Astutik, 2019). Education-based interventions promote sustainable health behavior change. Therefore, integrated nutritional strategies are essential in maternal health services.

Local supplementary food education plays a significant role in supporting anemia prevention. Local foods are affordable, accessible, and culturally acceptable. Educating pregnant women about local iron-rich foods increases dietary diversity. This approach reduces reliance on external supplements. According to Kemenkes RI (2020), local food utilization supports food security and maternal nutrition. This study highlights the effectiveness of using local resources for health promotion.

Health workers, especially midwives, contribute significantly to the success of nutritional interventions. Midwives provide counseling during antenatal care visits. Their role as educators enhances maternal understanding and confidence. Effective communication strengthens compliance with nutritional advice. Studies in Indonesia emphasize the importance of skilled counseling in improving maternal nutrition (Rukiyah et al., 2020). Strengthening health worker capacity is therefore essential.

The use of integrated interventions ensures that both knowledge and practice are addressed. Education alone may not be sufficient without practical guidance. Integrated programs combine information, counseling, and monitoring. This comprehensive approach increases intervention effectiveness. According to Nursalam (2020), multifaceted interventions produce better outcomes. This study supports the value of integrated nutritional strategies. Maternal education level influences the effectiveness of nutritional interventions. Women with higher education may more easily understand health information. However, this study shows that good outcomes can also be achieved among women with moderate education. This suggests that well-designed education can overcome educational barriers. According to Wawan and Dewi (2017), effective communication enhances knowledge regardless of educational background. Tailored education is therefore crucial.

Parity may also influence maternal nutritional behavior. Multiparous women often have prior experience with pregnancy nutrition. Experience reinforces knowledge gained from education. However, primiparous women require more intensive counseling. Integrated interventions ensure that all women receive adequate guidance. This supports equitable health outcomes across parity groups. Family support enhances the effectiveness of nutritional education. Family members influence food preparation and consumption. Educating families creates a supportive environment for pregnant women. Studies show that family involvement

improves maternal dietary practices (Roesli, 2019). Integrating family education strengthens intervention impact.

Community-based health services provide an ideal platform for nutritional interventions. Antenatal care visits offer repeated opportunities for education. Community engagement increases participation and trust. According to Kemenkes RI (2021), community-based programs improve health outcomes. Strengthening community services enhances program sustainability. Cultural beliefs may affect dietary practices during pregnancy. Some traditional beliefs restrict certain foods. Nutrition education helps address misconceptions. Culturally sensitive education improves acceptance. According to Notoatmodjo (2018), culturally appropriate interventions are more effective. This study suggests education can modify harmful beliefs.

Compliance with iron supplementation remains a challenge. Nutritional education improves understanding of supplement benefits. Education reduces fear of side effects. Integrated interventions reinforce the importance of adherence. According to Prasetyono (2018), education improves compliance with supplementation programs. Combining education with supplementation is recommended. The statistical significance of the Wilcoxon test confirms the effectiveness of interventions. A p-value of 0.000 indicates strong evidence of effectiveness. This strengthens the validity of the findings. Statistical analysis supports evidence-based decision-making. Research-based interventions improve health program quality (Hidayat, 2017).

The absence of anemia among respondents reflects positive maternal health outcomes. Adequate hemoglobin levels reduce pregnancy complications. Preventing anemia contributes to safer pregnancies. This aligns with national maternal health goals. Nutrition education supports these objectives. Sustainability is a key advantage of local food-based education. Utilizing local foods reduces costs. Communities can maintain practices independently. Sustainable interventions ensure long-term impact. According to Kemenkes RI (2020), sustainability is essential for nutrition programs.

Despite positive results, continuous monitoring is necessary. Nutritional status can change over time. Regular evaluation ensures program effectiveness. Continuous education reinforces learning. According to Nursalam (2020), monitoring improves intervention quality. Future programs should strengthen integration across services. Collaboration between nutritionists, midwives, and community workers is essential. Integrated services improve coverage. Multisectoral collaboration enhances outcomes.

Research limitations include sample size and cross-sectional design. Larger studies may provide broader insights. Longitudinal studies could assess long-term effects. Nevertheless, this study provides valuable evidence. Overall, integrated nutritional interventions and local supplementary food education effectively prevent anemia in pregnant women. Education improves knowledge, behavior, and health outcomes. These findings support strengthening nutrition education programs. Integrated approaches should be prioritized in maternal health services.

4. CONCLUSION

This study concludes that integrated nutritional interventions or local supplementary food education are effective in preventing anemia among pregnant women. The statistical analysis showed a significant effect, indicating that nutrition education contributes positively to maternal health outcomes. Adequate exposure to nutritional education supports optimal hemoglobin levels during pregnancy.

The absence of anemia among all respondents reflects successful implementation of nutritional interventions. Education empowers pregnant women to make informed dietary choices. Utilizing local food resources enhances accessibility and sustainability of interventions.

Health workers play a critical role in delivering effective nutrition education. Their guidance strengthens maternal understanding and compliance. Integrated interventions ensure comprehensive support for pregnant women.

Local supplementary food education provides a cost-effective strategy for anemia prevention. Promoting local food utilization supports food security and community empowerment. Sustainable interventions improve long-term maternal health.

In conclusion, strengthening integrated nutritional education programs is essential to prevent anemia in pregnant women. Community health centers should prioritize nutrition education as part of routine antenatal care. Future research with larger samples is recommended to further support these findings.

REFERENCES

Astuti, S. (2018). Gizi seimbang dalam kehamilan. Erlangga.

Astutik, R. Y. (2019). Asuhan kebidanan pada ibu hamil. Pustaka Baru Press.

Hidayat, A. A. A. (2017). Metodologi penelitian keperawatan dan teknik analisis data. Salemba Medika.

Kementerian Kesehatan Republik Indonesia. (2020). Pedoman gizi ibu hamil. Kemenkes RI.

Kementerian Kesehatan Republik Indonesia. (2021). Profil kesehatan Indonesia. Kemenkes RI.

Kusmiran, E. (2018). Kesehatan reproduksi wanita. Salemba Medika.

Maryunani, A. (2017). Gizi dalam kesehatan reproduksi. Trans Info Media.

Notoatmodjo, S. (2018). Promosi kesehatan dan perilaku kesehatan. Rineka Cipta.

Nursalam. (2020). Metodologi penelitian ilmu keperawatan. Salemba Medika.

Prasetyono, D. S. (2018). ASI, gizi, dan kesehatan ibu hamil. Diva Press.

Prawirohardjo, S. (2016). Ilmu kebidanan. Bina Pustaka.

Roesli, U. (2019). Peran keluarga dalam kesehatan ibu dan anak. Pustaka Bunda.

Rukiyah, A. Y., Yulianti, L., & Maemunah. (2020). Asuhan kebidanan kehamilan. Trans Info Media.

Sulistyawati, A. (2017). Asuhan kebidanan antenatal. Salemba Medika.

Wawan, A., & Dewi, M. (2017). Teori dan pengukuran pengetahuan, sikap, dan perilaku manusia. Nuha Medika.