



Development Of a Peer Empowerment Program Model For Improving Adolescent Healthy Lifestyle Motivation in Hinterland Areas

Septi Maisyaroh Ulina Panggabean^{1*}, Netty Herawaty Purba², Aufa Nabilla³

¹⁻³Bachelor of Midwifery, Universitas Awal Bros, Batam, Indonesia,

Septi.panggabean190989@gmail.com¹, nettyoerba21@gmail.com²

Korespondensi Penulis: Septi.panggabean190989@gmail.com*

Abstract. A healthy lifestyle is an important issue that needs to be instilled early in life, especially during adolescence. Adolescents living in hinterland areas often face greater challenges in accessing adequate health information and facilities. Therefore, efforts to promote healthy lifestyles among adolescents, especially in hinterland areas, are very important to prevent health problems and improve quality of life. One potentially effective approach to improve the motivation and healthy lifestyle behavior of adolescents in hinterland areas is the Peer Empowerment program. This program utilizes the strong influence of peers in motivating and encouraging positive behavior change among adolescents. This research will use the research and development (R&D) method with an experimental approach. The results of this study are useful for providing recommendations for effective health promotion methods for healthy lifestyle changes in adolescents.

Keywords: Empowerment programme, Peers, Healthy lifestyle enhancement, Adolescents, Hinterland

1. INTRODUCTION

This research focuses on developing an innovative peer empowerment intervention strategy designed to enhance adolescent healthy lifestyle motivation in hinterland regions. The program is grounded in Pender's Health Promotion Model, which emphasizes the critical role of interpersonal influences and individual perceptions in driving positive health behaviors.

The study aims to address the unique challenges faced by adolescents in hinterland areas, where access to health education and resources may be limited. By leveraging peer-to-peer education and support, the model seeks to create a sustainable approach to promoting health awareness and motivating lifestyle changes among young populations.

2. LITERATURE REVIEW

Adolescence is a transitional and critical period from childhood to adulthood that involves significant physical, psychological and social changes. During this phase, adolescents face various challenges and pressures in shaping healthy behaviours and lifestyles that will impact long-term health. Healthy lifestyle is an important issue that needs to be instilled early on, especially during adolescence. Adolescents living in hinterland areas often face greater challenges in accessing adequate health information and facilities. Remote geographical conditions, limited resources, and lack of health education can hinder the motivation and adoption of healthy lifestyles among adolescents in these areas.

Unhealthy lifestyles during adolescence, such as poor diet, physical inactivity, smoking, and alcohol consumption, can increase the risk of health problems such as obesity, diabetes, cardiovascular disease, and cancer. In addition, mental health problems such as depression, anxiety, and risky behaviours are also common in adolescents. Therefore, promoting healthy lifestyles among adolescents, especially in hinterland areas, is crucial to prevent health problems and improve quality of life.

One potentially effective approach to improving the motivation and healthy lifestyle behaviours of adolescents in hinterland areas is the Peer Empowerment programme. This programme harnesses the powerful influence of peers in motivating and encouraging positive behaviour change among adolescents. By engaging adolescents as agents of change, the programme can create a supportive environment and facilitate the adoption of healthy lifestyles in a sustainable manner.

The Health Promotion Model (HPM) developed by Nola J. Pender provides a comprehensive framework for promoting healthy behaviours. The model focuses on cognitive-perceptual factors and behaviour modification in improving individual health. By integrating the Peer Empowerment program into HPM, it is expected to have a positive impact on the motivation and healthy lifestyle behaviour of adolescents in the hinterland area.

The HPM-based Peer Empowerment programme can involve adolescents as agents of change in promoting healthy lifestyles among their peers. They will be equipped with relevant knowledge and skills to educate, support and motivate their peers to adopt healthy behaviours such as a balanced diet, regular physical activity, avoiding smoking and alcohol, and managing stress positively.

By actively involving adolescents in the program, it is expected to increase their self-confidence, sense of responsibility, and leadership skills. In addition, the program also aims to create a more conducive environment for adolescents in hinterland areas to adopt healthy lifestyles, with social support and positive norms from peers.

Through the integration of the Peer Empowerment program with HPM, it is expected to increase the motivation and healthy lifestyle behaviors of adolescents in hinterland areas effectively and sustainably. This approach not only provides health education, but also utilizes group dynamics and peer influence to create an environment that supports positive behavior change.

This research is very important to improve the motivation and healthy lifestyle behavior of adolescents in hinterland areas who are often marginalized and receive less attention in terms of health promotion. Remote geographical conditions, limited resources, and lack of health

education are major challenges that can hinder the adoption of healthy lifestyles among adolescents in these areas.

By involving adolescents as agents of change through the Peer Empowerment program, it is expected to create a supportive environment and facilitate the adoption of healthy lifestyles in a sustainable manner. This approach leverages the strong influence of peers in motivating and encouraging positive behavior change among adolescents.

In addition, by integrating the Peer Empowerment program into the Health Promotion Model (HPM), this study can make theoretical and practical contributions to adolescent health promotion efforts in hinterland areas. HPM provides a comprehensive framework for promoting healthy behaviors by focusing on cognitive-perceptual factors and behavior modification[5]. Integration with the Peer Empowerment program is expected to increase the effectiveness of this model in the context of adolescents in hinterland areas.

This study can also provide valuable information and recommendations for policy makers and health practitioners in designing and implementing contextualized and targeted healthy lifestyle promotion programs for adolescents in hinterland areas. Thus, this study contributes to efforts to prevent health problems and promote healthy lifestyles in adolescents.

3. METHODS

This research will use the research and development (R&D) method with an experimental approach. The research and development model that will be used is the ADDIE model (Analysis, Design, Development, Implementation, and Evaluation) which is one of the models often used in program or intervention development.

The sample to be used is adolescents aged 11 to 17 years in the hinterland area with a minimum of 20 people who have commitment and availability to participate in the program which will be implemented for 8 weeks.

4. RESULTS

This research design is a one group pre -post test design where to see how peer counselors can improve the knowledge and attitudes of adolescents. before and after the test. Counseling was provided to encourage healthy lifestyles in adolescents. For the selection of previous counselors, they must be peers, have an interest in the counseling profession, and socialize well. The adolescent group received materials on communication, nutrition counseling techniques, and healthy lifestyles. Counselors were asked to conduct counseling simulations after two training meetings. Counseling was conducted in two meetings for the intervention

group, and the materials were adjusted to the counseling materials. A pocket book was used as media. The place and time were determined after the counselor and subject reached an agreement.

Batu Besar is a neighborhood in Nongsa sub-district, Batam City, Riau Islands, Indonesia. The area of this village is 96.68 km², with a total population in 2020 of 29,198 people and a density of 302 people/km². This village, which is located on the north side of Batam Island, is one of the villages located not far from the shoreline or commonly referred to as the coast.

Coastal areas are transitional areas between terrestrial and marine ecosystems. Coastal waters are the sea adjacent to the land which includes marine waters measured from the coastline, waters connecting beaches and islands, estuaries, bays, shallow waters, brackish swamps and lagoons, while the beach is a geographical form consisting of sand and is found in coastal areas of the sea. Some aspects of health that are a problem in coastal areas are environmental health, lifestyle, infant and toddler health and maternity health and family planning. Based on this, the location of this research was carried out at Posyandu Nusaindah 26 Village Panglong Batu Besar, Nongsa sub-district which is one of the working areas of the Kp.Jabi health center.

Sample distribution based on Lifestyle Behavior

Table 1.*Sample distribution based on Adolescent Lifestyle Behavior Panglong Village*

Lifestyle Behavior	Number of samples	
	n	%
Lifestyle Behavior		
Unhealthy	6	30
Healthy	14	70

Source : Primary Data, 2024

Based on table 1 of the results of the Adolescent Lifestyle Behavior screening for 20 adolescents, it shows that 14 adolescents have a healthy lifestyle, namely 70% and 30% of adolescents have an unhealthy lifestyle. Based on the results of the pre-intervention analysis, it can be seen that the obstacles faced by adolescents in the hinterland area in implementing a healthy lifestyle are due to the lack of situational support for a healthy lifestyle in their environment.

Sample Distribution Based on General Characteristics**Table 2. Sample Distribution Based on Respondents' General Characteristics**

General Characteristics	Number of samples	
	n	%
Education		
SD	5	25
SMP	15	75
Gender		
Woman	13	65
Man	7	35
Age (Years)		
11	1	5
12	5	25
13	5	25
14	7	35
15	2	10

Source : Primary Data, 2024

Based on table 2, it shows that of the 20 samples, 5 (25%) of the sample are elementary school educated and 15 (75%), of which 13 (65%) are female and the other 7 (35%) are male. Based on the age of the sample, the most is 14 years old, which is 7 (35%) and the least is 11 years old, which is 1 (5%) sample.

Sample Distribution Based on T-Test Results**Table 3. Average Score of Healthy Lifestyle Behavior Pre and Post-test
In the adolescent group**

Test	n	M (Std-D)	t	df	Sig (2-tailed)
Pre-Test	20	94.25(3.78)	-6.996	19	0.000*

The results of the Paired test of the T-Test sample showed that there was a difference in the pretest and post test scores in the adolescents who were intervened. The average increase in scores in the group was 22 points, with the results of the statistical test obtaining a value of $p = 0.000$ ($p > 0.000$) where there was a significant difference in healthy lifestyle behavior in adolescents.

So that it can be seen that the effectiveness of counseling on lifestyle behavior in adolescents is tested differently by the T-Test, where a value of $p=0.000$ is obtained with the conclusion that counseling is effective in increasing adolescent knowledge. This research is supported by research conducted by Nurhaedar Jafar, et al.[12].

5. DISCUSSION

Healthy Lifestyle Behavior Before and After Getting Peer Educator Intervention in the experimental group. The significant increase in clean and healthy living behavior in the experimental group in this study was influenced by the modification of education, namely health education provided by peer educators for 2 times in 1 month in Panglong village. These results are in line with research [11] stated that there was an influence of peer groups on clean and healthy living behavior in students.

Peer groups supporting clean and healthy living behaviors through peer support can significantly increase behavior change ($p < 0.05$). This refers to the theory of nursing [12] that health education by peers will provide stimulus so that it has an impact on affective responses stored in memory. The resulting feelings are likely to influence an individual's behavior about changing actions or maintaining previous actions. These feelings depend on positive and negative emotional reactions, if they are pleasant, joyful, and not confusing will be maintained [13]. But if the feeling is inversely proportional, it will be avoided. This statement is in accordance with the characteristics of peer educators, namely age. Almost the same age range will affect their knowledge and actions about clean and healthy living behaviors. And children with almost the same range will be easier to communicate and not awkward [14]. In this study, the characteristics in the age category were known that the majority of respondents were in the range of 11-15 years. Health Promotion Theory Model Pender N. J. [5] It also explains that interpersonal influences, namely peers and modeling, will predispose a person in carrying out someone's behavior. Individuals will engage in behaviors that elicit praise and social support for them so that they are not considered aliens and are required to act appropriately within their group.

Based on the results of the analysis of the research data, it can be seen that the relationship between peer support and Healthy Lifestyle Behavior in adolescents is very closely related. The peer support in question is peer support that is carried out specifically on healthy behavior support. Such support has a positive relationship with a person's healthy behavior. So it can be said that the higher the peer support that a person receives, the higher the level of healthy behavior.

6. CONCLUSION

The study reveals a significant correlation between peer educator intervention and improved healthy lifestyle behavior among adolescents. The research demonstrates that targeted health education delivered by peer educators can effectively stimulate behavioral

change, particularly among individuals within similar age ranges. The intervention's success is rooted in the powerful dynamics of peer support, which creates a supportive environment that encourages positive health behaviors.

The findings align with Pender's Health Promotion Model, highlighting the critical role of interpersonal influences in behavior modification. Peer support serves as a potent catalyst for behavioral transformation, with the potential to elicit social reinforcement and normalize healthy lifestyle choices. The study underscores that the proximity in age between peer educators and recipients facilitates more comfortable communication and knowledge transfer.

Critically, the research establishes a direct relationship between the quality and intensity of peer support and the adoption of healthy behaviors. As peer support increases, so does the likelihood of sustained healthy lifestyle practices. This suggests that well-designed peer education interventions can be a strategic approach to promoting health awareness and behavioral change among adolescents, particularly in community settings with limited healthcare resources.

LIMITATION

The research on the development of a peer empowerment program to enhance adolescent healthy lifestyle motivation in hinterland regions has several significant limitations. First, the study's geographical scope is restricted to specific hinterland areas, which may limit the generalizability of findings to other regional contexts. Secondly, the research relies heavily on the Health Promotion Model, potentially overlooking alternative theoretical frameworks that could provide additional insights into adolescent health behavior.

Methodological constraints include the potential sampling bias, as the study may not fully represent the diverse demographic characteristics of adolescent populations in hinterland areas. The research's reliance on self-reported data introduces the possibility of response bias, where participants might provide socially desirable answers rather than completely honest representations of their motivations and behaviors.

Time constraints of the study may prevent long-term tracking of behavioral changes, limiting the understanding of the program's sustained impact on adolescent healthy lifestyle choices. Additionally, the peer empowerment model's effectiveness might be influenced by contextual factors such as local cultural norms, socioeconomic conditions, and existing health infrastructure, which may not be comprehensively addressed in the research.

The intervention's measurement tools and assessment methods could have inherent limitations in capturing the nuanced aspects of motivation and behavioral change among

adolescents. Furthermore, the study may face challenges in establishing a robust control group or implementing a comprehensive comparative analysis to validate the model's effectiveness conclusively.

Lastly, resource limitations and potential implementation challenges in hinterland regions might impact the practical applicability and scalability of the proposed peer empowerment program, suggesting the need for further research and contextual adaptations.

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