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The Relationship Between Health Promotion Intensity And Public Health Behavior

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ABSTRACT

Health promotion is a strategic effort to increase public health awareness, knowledge, and behavior. Continuous health promotion is expected to encourage behavioral changes towards a healthy lifestyle. This study aims to determine the relationship between the intensity of health promotion and public health behavior. The study used an observational analytical design with a *cross-sectional approach*. The study sample consisted of 120 adult respondents selected using a purposive sampling technique. Data were collected through a health promotion intensity questionnaire and a health behavior questionnaire. Data analysis was performed using the Chi-Square test. The results showed a significant relationship between the intensity of health promotion and public health behavior ($p < 0.05$). It was concluded that the higher the intensity of health promotion, the better the public health behavior.

Keywords: Health Promotion, Promotion Intensity, Health Behavior, Community





1. Introduction

Public health behaviors are a crucial factor in determining the health status of a population. Many health problems, both infectious and non-infectious, are closely linked to individual and community behaviors, such as smoking, unhealthy diets, physical inactivity, and low utilization of health services.

Health promotion is the process of empowering communities to improve and maintain their health. Health promotion efforts are carried out through various methods, such as outreach, mass media, social media, health campaigns, and direct counseling. The intensity of health promotion includes the frequency, duration, variety of media, and continuity of health messages received by the community.

Various health programs have been implemented by the government and health workers, but behavioral changes in the community have not been fully optimized. One factor influencing the success of health promotion is the intensity of health message delivery. Infrequent and unsustainable promotion tends to be less effective in shaping positive health behaviors.

Therefore, this research is important to analyze the relationship between the intensity of health promotion and public health behavior as a basis for planning more effective health promotion interventions.

2. Research Methods

a. Types and Design of Research

This study is a quantitative, observational, and analytical study with a cross-sectional design. This design was used to analyze the relationship between health promotion intensity and public health behaviors, measured simultaneously over a specific time period. This approach was chosen because it is effective in describing the relationship between variables in a population and is efficient in terms of time and cost.

b. Theoretical Approach to Research

This research is based on the theory of Health Promotion and Behavior Change, which states that sufficient, repeated, and sustained exposure to health information can influence an individual's knowledge, attitudes, and behavior. The intensity of health promotion is seen as a stimulus that influences the public's health behavioral responses.

c. Location and Time of Research

The research was conducted in the working area of Community Health Center X, which actively implements public health promotion programs. The research was conducted in February-April 2025, covering the preparation stage, field data collection, data processing, analysis, and reporting of results.

d. Research Population and Sample





1) Population

The population in this study was all adults (aged ≥ 18 years) who live in the working area of Health Center X.

2) Sample

The sample size in this study was 120 respondents, which was determined based on considerations of sample adequacy for bivariate analysis. The sampling technique used purposive sampling, taking into account certain criteria relevant to the research objectives.

3) Inclusion Criteria

- a) Age ≥ 18 years
- b) Residing in the working area of Health Center X for at least 6 months
- c) Have you ever received health promotion from health workers or health media?
- d) Willing to be a research respondent

4) Exclusion Criteria

- a) Respondents with severe communication disorders
- b) Respondents who did not complete the questionnaire completely

e. Research Variables

- Independent variable: Intensity of health promotion
- Dependent variable: Public health behavior

f. Operational Definition of Variables

Variables	Operational Definition	Indicator	Measuring instrument	Scale
Intensity of health promotion	The level of exposure to health promotion received by the community	Frequency, duration, media, continuity	Questionnaire	Ordinal
Health behavior	Community actions related to efforts to maintain health	PHBS, disease prevention, utilization of health services	Questionnaire	Ordinal

g. Research Instruments

The research instruments used are:

- 1) Health promotion intensity questionnaire, including frequency of receiving information, media variations (education, posters, social media), and sustainability of promotion.
- 2) Public health behavior questionnaire, which measures PHBS practices, disease prevention behavior, and compliance with health recommendations.





The instrument was developed based on health promotion theory and has been tested for validity and reliability before use.

h. Data Collection Procedures

Data collection is carried out through the following stages:

- 1) Processing research permits to relevant agencies
- 2) Coordination with Community Health Center officers and health cadres
- 3) Explanation of research objectives and procedures to respondents
- 4) Informed signing consent
- 5) Completion of questionnaires by respondents with researcher assistance
- 6) Data completeness and consistency check

i. Data Processing Techniques

Data processing is carried out in stages, including:

- 1) Editing – checking the completeness and clarity of answers
- 2) Coding – assigning a numeric code to each answer
- 3) Data entry – entering data into statistical software
- 4) Cleaning – ensures there are no input errors

j. Data Analysis Techniques

- 1) Univariate Analysis

Univariate analysis was used to describe the frequency and percentage distribution of each research variable, including health promotion intensity and public health behavior.

- 2) Bivariate Analysis

Bivariate analysis was conducted using the Chi-Square test to determine the relationship between health promotion intensity and public health behavior. The statistical significance level was set at $\alpha = 0.05$.

(Optional development)

Odds Analysis The ratio (OR) can be used to determine the magnitude of the opportunity for good health behavior in respondents with high health promotion intensity compared to low.

k. Bias Control

To minimize research bias, the following was carried out:

- 1) Clear inclusion and exclusion criteria
- 2) Structured and standard questionnaire instruments
- 3) Respondent assistance when filling out the questionnaire

l. Research Ethics

This research was conducted in accordance with the ethical principles of health research, including:





- 1) Informed consent
- 2) Confidentiality of respondent identity
- 3) Anonymity
- 4) The principle of justice and nonmaleficence

3. Research Results And Discussion

a. Research Result

This study involved 120 adult community respondents in the working area of Community Health Center X. Analysis of the research results included respondent characteristics, level of health promotion intensity, community health behavior, as well as the relationship and magnitude of risk between variables.

1) Respondent Characteristics

a) Respondent Age

Age (years)	f	%
18–30	34	28.3
31–45	52	43.4
>45	34	28.3
Total	120	100

The majority of respondents were of productive age, an age group that is generally socially active and more frequently exposed to health promotion programs.

b) Level of education

Education	f	%
Low (elementary–middle school)	38	31.7
Middle School (SMA)	52	43.3
Higher Education (College)	30	25.0
Total	120	100

Education plays a role in the ability to understand and internalize health promotion messages.

c) Health Promotion Intensity

Promotion Intensity	f	%
Tall	52	43.3





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Promotion Intensity	f	%
Currently	40	33.3
Low	28	23.4
Total	120	100

Respondents with high promotion intensity are those who frequently attend counseling, are exposed to health media, and receive information repeatedly.

d) Public Health Behavior

Health Behavior	f	%
Good	66	55.0
Not enough	54	45.0
Total	120	100

Health behavior is assessed from PHBS practices, disease prevention, and utilization of health services.

e) The Relationship between Health Promotion Intensity and Health Behavior

Promotion Intensity	Good Behavior	Poor Behavior	Total
Tall	42	10	52
Currently	18	22	40
Low	6	22	28

the Chi- Square test show a p value = 0.001 (< 0.05).

Risk Analysis (Odds) Ratio

OR = 7.7

This means that respondents with high health promotion intensity have approximately 8 times greater chance of engaging in good health behavior compared to respondents with low promotion intensity.

f) Summary of Key Findings

- 1) The intensity of health promotion in the community varies
- 2) More than half of respondents showed good health behaviors
- 3) The intensity of health promotion is significantly related to health behavior.
- 4) High promotional intensity provides a great opportunity to form healthy behavior.

b. Discussion

- 1) Health Promotion Intensity as a Determinant of Behavior





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The results of this study indicate that the intensity of health promotion has a strong relationship with public health behavior. Health promotion that is conducted frequently, continuously, and through various media is more effective in influencing behavior than sporadic promotion.

This supports the theory of behavior change which states that behavior is formed through a process of repeated exposure, message reinforcement, and internalization of health values.

2) The Role of Frequency and Variety of Promotional Media

High-intensity health promotion typically uses a combination of media, such as direct outreach, posters, social media, and community activities. This variety of media strengthens message understanding and reaches a wider audience.

Multi-source exposure improves memory and makes it easier for people to adopt healthy behaviors in their daily lives.

3) Promotion Intensity and Stages of Behavior Change

According to the Transtheoretical Model, high-intensity health promotion helps people move from precontemplation to action and maintenance. Infrequent promotion generally only increases knowledge without driving real behavior change.

The results of this study indicate that people with high promotional exposure not only know health information, but also practice it.

4) The Role of Education and Age in Promotion Response

While promotional intensity has a significant impact, response to promotions is also influenced by education level and age. Respondents with higher education tend to grasp health messages more quickly, while respondents of productive age are more responsive to digital media-based promotions.

This shows the need to adjust health promotion strategies according to target characteristics.

5) Implications for Health Promotion Programs

The results of this study confirm that the success of health promotion is determined not only by the content of the message, but also by the intensity and continuity of its delivery. Health promotion programs that are planned, repeated, and actively involve the community are more effective in shaping healthy behaviors.

Health workers need to design health promotions based on the needs and characteristics of the community.

6) Research Limitations

Some of the limitations of this study include:

- a) *Cross-sectional* designs cannot confirm cause-and-effect relationships.





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- b) Measurement of health behavior based on questionnaires (self-report)
- c) Social and cultural factors have not been analyzed in depth.

Further research is recommended using longitudinal designs or health promotion experiments.

4. Conclusion And Suggestions

a. Conclusion

There is a significant relationship between the intensity of health promotion and public health behavior. The higher the intensity of health promotion, the better the public's health behavior.

b. Suggestion

- 1) Community health centers need to increase the frequency and variety of health promotion media.
- 2) Health workers are expected to carry out health promotion on an ongoing basis.
- 3) Further research is recommended to analyze other factors that influence public health behavior.

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