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Analysis of the Effectiveness of Below the Line Campaigns for Prevention of Non-Communicable Disease in Banda Aceh City

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Abstract

All community health centers (Puskesmas) within the working area of the Banda Aceh City Health Office have implemented non-communicable disease (NCD) prevention efforts, including bottom-line campaign strategies such as banners, posters, brochures, and leaflets. However, based on surveillance data, the incidence of NCDs continues to rise. According to the Banda Aceh City health profile, in the context of minimum service standard indicators for NCD services—specifically hypertension and type 2 diabetes mellitus—there were 13,077 recorded cases of hypertension in 2021, increasing to 19,394 cases in 2022. Similarly, the number of individuals with type 2 diabetes mellitus rose from 9,573 in 2021 to 12,653 in 2022. This study aims to

identify the factors influencing the effectiveness of bottom-line campaigns for NCD prevention in Banda Aceh City. This research employed a quantitative survey method supported by qualitative data, analyzed using Partial Least Squares–Structural Equation Modeling (PLS-SEM). The study population comprised all residents of Banda Aceh City, totaling 262,960 individuals. The sample included individuals aged 15 years and older who accessed general polyclinic services at three selected Puskesmas in Banda Aceh and had seen or received information on NCD prevention through bottom-line campaign media. Data collection was conducted using a questionnaire. The results indicate that accessibility, target audience characteristics, and media content significantly influence the effectiveness of bottom-line NCD prevention campaigns in Banda Aceh City. The study concludes that the effectiveness of bottom-line NCD prevention campaigns in Banda Aceh City is determined by media accessibility, audience characteristics, and the content of the campaign materials.

Keywords: Campaign effectiveness, Grassroots campaign, non-communicable diseases, Media accessibility, SmartPLS

Introduction: Providing quality services to the community is one of the government's responsibilities. One of the healthcare service facilities is the Community Health Center (Puskesmas), which implements both public health and primary personal healthcare efforts, with a greater emphasis on promotive and preventive measures to achieve the highest possible health standards for the population in its service area. One of these efforts is health campaigns, which are organized communication activities aimed at creating a specific impact on a large portion of the target audience in a sustained manner. The long-term success of such programs does not depend solely on medical factors but also on the participation and understanding of the community regarding these efforts (Gustian et al., 2024).

The campaign to prevent non-communicable diseases (NCDs) is one of the health campaign types currently being promoted in response to changes in public lifestyles. The impact of NCDs on economic, social, and community sustainability aspects is complex and multidimensional. The high cost of healthcare, increased work absenteeism, and reduced productivity due to illness can significantly burden the economy. Furthermore, the high rate of morbidity can drain healthcare resources. This situation demands the implementation of measurable preventive measures. Educating the public on healthy lifestyle behaviors becomes a fundamental proactive strategy.

Non-communicable diseases (NCDs) cause approximately 41 million deaths annually, accounting for 74% of all deaths worldwide. Around 17 million people die before the age of 70 due to NCDs, and 86% of these premature deaths occur in low- and middle-income countries. Cardiovascular diseases are the leading cause of NCD-related deaths, with around 17.9 million deaths annually, followed by cancer (9.3 million), chronic respiratory diseases (4.1 million), and diabetes (2 million, including deaths from chronic kidney disease due to diabetes). These four diseases account for approximately 80% of premature NCD-related deaths (Ministry of Health RI, 2023).

The mission of the Directorate for the Prevention and Control of Non-Communicable Diseases (P2PTM) at the Indonesian Ministry of Health is to protect the public from NCD risks and to improve public health status, survival rates, and quality of life. This is pursued through enhanced prevention and control efforts, reduction of shared risk factors, and the decrease of illness, disability, and death rates from NCDs, along with lowering the socio-economic burden resulting from these diseases (Ministry of Health RI, 2023).

In the province of Aceh, the prevalence of NCDs among individuals aged 15 years and above, based on diagnoses by doctors from the 2023 Indonesian Health Survey (SKI), was: hypertension (7.9%), diabetes mellitus (2.2%), asthma (1.0%), cancer (0.7%), heart disease (0.77%), stroke (8.8%), and chronic kidney disease (0.2%).

According to the Aceh Province Health Profile, the number of hypertension patients receiving minimum service was 504,915 in 2022, which dropped to 343,260 in 2023. Meanwhile, diabetes mellitus patients receiving minimum service totaled 109,466 in 2022 and 108,305 in 2023.

As stipulated in Minister of Health Regulation No. 71 of 2015 on the Control of Non-Communicable Diseases, health promotion is the initial step in addressing NCDs. Preliminary surveys indicate that all Puskesmas in the Banda Aceh City Health Office's service area have conducted various campaign efforts for NCD prevention

as a form of health promotion. These campaigns were also carried out at Posyandu (integrated service posts), Posbindu PTM (Integrated Development Posts for NCDs), and in public spaces.

In practice, NCD prevention campaigns in Banda Aceh use a grassroots (below-the-line) strategy involving media such as banners, posters, brochures, and leaflets. These campaigns target the general population aged 15 years and above, especially those aged 40 and older as the highest-risk group. However, based on surveillance data from the Banda Aceh City Health Office, the incidence of NCDs continues to rise.

According to Banda Aceh City's health profile in 2021 and 2022, the top five NCDs are as follows: Hypertension cases increased from 13,077 in 2021 to 19,394 in 2022; type 2 diabetes mellitus rose from 9,573 to 12,653; obesity surged from 9,441 to 26,005; coronary heart disease increased from 2,252 to 2,516; and refractive disorders remained at 2,836 in both years.

Below-the-line (BTL) campaigns are marketing strategies that use more direct, specific, and personal communication methods to reach targeted audiences. Unlike above-the-line (ATL) campaigns, which are mass-oriented and use large-scale media such as television, radio, print ads, or social media, BTL campaigns focus on direct interaction and activities targeting specific segments using personal media such as posters, brochures, leaflets, and banners.

Measuring the effectiveness of health campaigns is a crucial process for evaluating whether the program has achieved its intended goals. The long-term sustainability of health programs depends not only on medical aspects but also on public participation and understanding. The study by Dwi Vilasari et al. (2024) on the role of health promotion in increasing public awareness of NCDs emphasizes the importance of maintaining momentum in implementing health promotion programs. Practical recommendations include improving access to health campaign services, optimizing the use of information technology in campaigns, and actively involving the community in planning and implementing programs.

Based on the above explanation, the author considers it necessary to conduct an analysis of the effectiveness of grassroots campaigns for non-communicable disease prevention programs in Banda Aceh City.

RESULTS

Table 1. Frequency Distribution of Respondents' Characteristics

Characteristics	Frequency (f)	Percentage (%)
Gender		
Man	66	33.0
Woman	134	67.0
Age		
15-39 years	91	45.5
40-59 years	85	42.5
>60 years	24	12.0
Education		
Master's Degree	10	5.0
Bachelor's Degree	78	31.5
Diploma Three	29	14.5

Senior High School	83	41.5
Junior High School	15	7.5
Monthly income		
More than Rp. 3,685,000	63	31.5
Less than Rp. 3,685,000	137	68.5
Total	**200**	**100**

Table 1 shows that for the gender characteristic, there is a significant difference where the number of female respondents was higher, totaling 134 people (67%), compared to male respondents, totaling 66 people (33%). Based on age groups, respondents aged 15–39 years amounted to 91 people (45.5%), those aged 40–59 years totaled 85 people (42.5%), and those over 60 years old were 24 people (12%).

In terms of education, respondents with a senior high school (SMA) education were the most dominant, totaling 83 people (41.5%), followed by those with a bachelor's degree or equivalent (S1) with 63 people (31.5%), a diploma (D3) with 29 people (14.5%), junior high school (SMP) with 15 people (7.5%), and a master's degree (S2) with 10 people (5.0%). Based on income, respondents with a monthly income of less than Rp. 3,685,000 dominated, totaling 137 people (68.5%), compared to respondents earning more than Rp. 3,685,000, totaling 63 people (31.5%)

Table 2. Frequency Distribution of the Measurement Results of Research Variables

Category	**Frequency (f)**	**Percentage (%)**
Accessibility		
Very Good	61	30.5
Good	115	57.5
Fair	20	10.0
Poor	4	2.0
Very Poor	0	0
Target Characteristics		
Very Relevant	66	33.0
Relevant	118	59.0
Less Relevant	16	8.0

Not Relevant	0	0.0
Very Irrelevant	0	0.0
Media Content		
Very Good	122	61.0
Good	60	30.0
Fair	14	7.0
Poor	3	1.5
Very Poor	1	0.5
Campaign Effectiveness		
Very Effective		
Effective	78	39.0
Less Effective	111	55.5
Ineffective	11	5.5
Very Ineffective	0	0.0
	0	0.0
Total	**200**	**100**

Based on Table 2, the measurement results of the variable *accessibility of grassroots campaign media*, using indicators such as media availability, ease of access, accommodation availability, affordability, and information accessibility, show that the highest category is *good*, accounting for 57.5%, while the lowest is *poor*, at 2%.

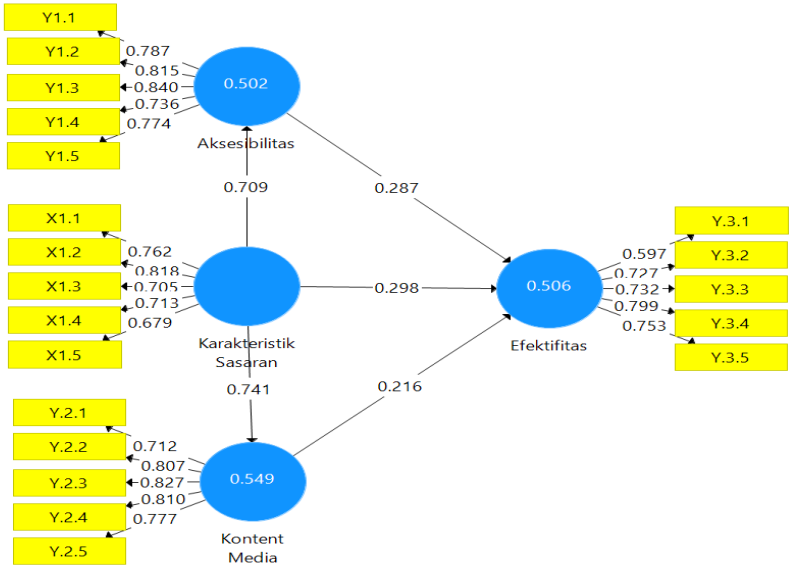
For the variable *respondent characteristics*, which includes indicators such as demographics, knowledge, economic status, socio-cultural background, and psychological factors, the highest category is *relevant*, at 59%, and the lowest is *less relevant*, at 8%.

For the *media content* variable, with indicators including attention-grabbing, interest-generating, desire-stimulating, decision-encouraging, and action-inducing, the highest category is *very good*, at 61%, and the lowest is *very poor*, at 0.5%.

Regarding the *effectiveness of grassroots campaign media*, assessed through indicators such as media productivity, campaign media efficiency, respondent satisfaction with the media used, media adaptability, and campaign program sustainability, the highest category is *effective*, at 55.5%, and the lowest is *less effective*, at 5.5%.

Figure 1

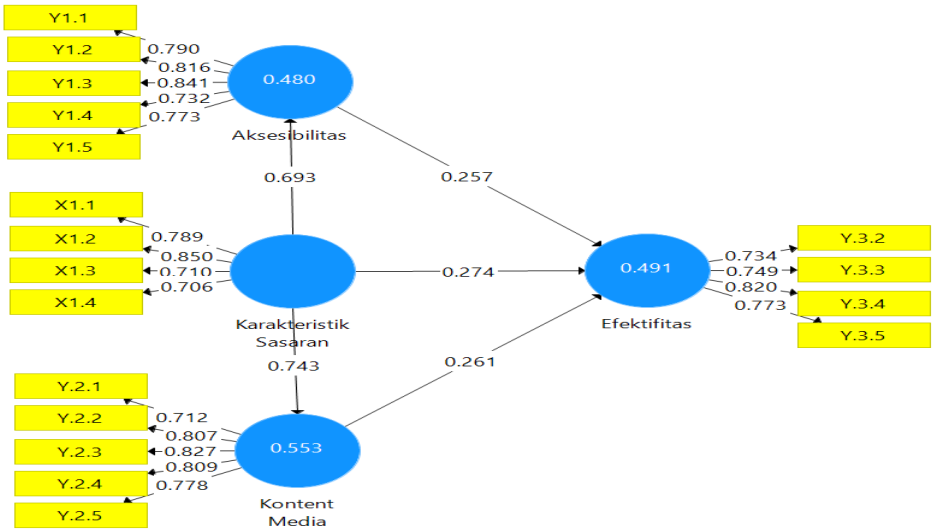
Outer Model of the Preliminary Test of the Relationship Between Indicator Variables and Latent Variables



Based on Figure 1, in the outer model of the preliminary test, there are indicator loading factor values below 0.7, which must be excluded from subsequent calculations. These indicators are the *psychological* indicator (X1.5) under the *target characteristics* variable, with a loading factor of 0.679, and the *productivity* indicator (Y3.1) under the *effectiveness* variable, with a loading factor of 0.597.

Figure 2

Final Outer Model of the Relationship Between Indicator Variables and Latent Variables



Based on Figure 2, it can be observed that the outer loadings of all indicators in the final test exhibit values above 0.7. This indicates that all indicators have a sufficiently significant contribution to the measured construct.

Variable	Cronbach's Alpha	rho_A	Composite Reliability	Average Variance Extracted (AVE)
Accessibility	0.850	0.854	0.893	0.626

Effectiveness	0.774	0.788	0.853	0.592
Target Characteristics	o.763	0.772	0.850	0.587
Media Content	0.846	0.850	0.891	0.620

Based on Table 4.3, all research variables have Cronbach's Alpha values greater than 0.7, indicating that each construct demonstrates good internal reliability. The Composite Reliability values are also all above 0.7, suggesting that the constructs are consistently reliable.

Moreover, the validity test using the Average Variance Extracted (AVE) shows that all variables have AVE values exceeding 0.5. This indicates that each construct possesses adequate convergent validity, meaning it can explain more than 50% of the variance in its associated indicators. Therefore, the measurement instruments used in this study meet the required standards for both validity and reliability.

Table 4 R Square Values

Variable	R Square	Adjusted R Square
Accessibility	0.480	0.478
Effectiveness	0.491	0.483
Media Content	0.553	0.550

Based on the data presented in Table 4, it can be observed that the R Square value for the accessibility variable is 0.480. This indicates that 48.0% of the variance in accessibility can be explained by the constructs within the model, while the remaining 52.0% is explained by other variables outside the model. The effectiveness variable has an R Square value of 0.491, suggesting that 49.1% of the variance in campaign effectiveness is accounted for by the model constructs, whereas 50.9% is influenced by external factors not included in the model.

The media content variable shows an R Square value of 0.553, indicating that 55.3% of the variance in media content is explained by the variables in the model. This is the highest R Square value among the three variables, signifying that the constructs in the model are most effective in explaining media content compared to accessibility and effectiveness.

Table 5 F Square Values

Variable	Accessibility	Effectiveness	Target Characteristics	Media Content
Accessibility		0.066		
Effectiveness				
Target Characteristics	o.924	0.051		1.235
Media Content		0.059		

The f-square (f^2) value in the PLS-SEM model is used to evaluate the effect size of an independent variable on a dependent variable. Based on the results presented in Table 5.

Accessibility to campaign effectiveness has an f-square (f^2) value of 0.066, indicating a small effect size. This suggests that easier access to campaign information slightly improves its effectiveness. Although the effect is

small, it remains relevant within the context of health promotion.

Target characteristics on accessibility show an f^2 value of 0.924, which falls into the large effect category. This means that differences in characteristics such as age, education level, or social status play a significant role in determining how respondents access campaign-related information.

Target characteristics on campaign effectiveness have an f^2 value of 0.051, indicating a small effect size. This shows that while differences in characteristics do influence perceptions or evaluations of campaign success, the impact is limited.

Target characteristics on media content show an f^2 value of 1.235, which represents a very large effect. This means that the media content used in the campaign is heavily influenced by the characteristics of the audience. Therefore, audience segmentation becomes crucial in crafting effective campaign messages.

Media content on campaign effectiveness has an f^2 value of 0.059, which also falls into the small effect category. This indicates that although the content of the campaign message is important, its direct influence on perceived effectiveness is not dominant unless supported by other factors such as accessibility and audience relevance.

Overall, the variable of target characteristics exerts a large influence on both accessibility and media content, indicating that differences in audience characteristics play an important role in shaping perceptions of information access and campaign content. The effects of accessibility, target characteristics, and media content on campaign effectiveness are small, yet statistically meaningful within the PLS-SEM framework.

This analysis reveals that campaign effectiveness is more strongly influenced indirectly through variables mediated by the characteristics of the respondents. The target characteristics variable plays a very important role in shaping perceptions of the campaign, particularly in terms of information access and content reception. Although variables such as accessibility and media content have only a small direct impact on effectiveness, they remain essential components in designing an effective campaign communication strategy.

Figure 3 Inner Model Test Results

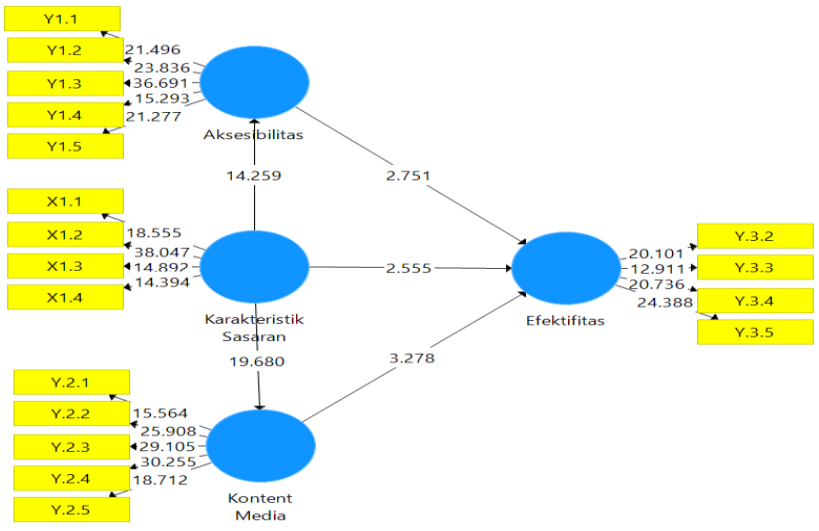


Figure 3 illustrates that the target characteristics variable influences both the accessibility and media content variables, and is closely related to the effectiveness of the grassroots campaign for non-communicable disease (NCD) prevention in Banda Aceh. The research findings indicate that the variable with the most substantial influence on the effectiveness of the grassroots NCD prevention campaign in Banda Aceh is media content, with a t-value of 3.278. All t-values of the variables in this model are greater than 1.96, indicating that the relationships between the

latent variables are statistically significant.The estimated output for structural model testing can be observed through the Path Coefficients values presented in Table 6.

Table 6 Path Coefficients of the Inner Model

	Original Sample (O)	Sample Mean (M)	Standard Deviation (STDEV)	T Statistics (|O/STDEV|)	P Values
Accessibility -> Effectiveness	0.257	0.255	0.093	2.751	0.006
Target Characteristics -> Accessibility	0.693	0.696	0.049	14.259	0.000
Target Characteristics -> Effectiveness	0.274	0.282	0.107	2.555	0.011
Target Characteristics -> Media Content	0.743	0.742	0.038	19.680	0.000
Media Content -> Effectiveness	0.261	0.255	0.080	3.278	0.001

Table 6 presents the results of hypothesis testing on the effects of campaign media accessibility, target characteristics, and media content on the effectiveness of grassroots campaigns for non-communicable disease (NCD) prevention in Banda Aceh. The significance of the relationships between latent variables is assessed based on the criteria of t-values > 1.96 and p-values < 0.0

First, the effect of campaign media accessibility on campaign effectiveness yields values of *(t = 2.751; p = 0.006)*, indicating a statistically significant relationship. This means that the ease of access to campaign media is significantly associated with the perceived effectiveness of the grassroots campaign

Second, the relationship between target characteristics and campaign media accessibility shows *(t = 14.259; p = 0.000)*, which also indicates a strong and significant association. This suggests that differences in respondents' characteristics (e.g., age, education, socio-economic status) significantly influence their level of access to campaign media.

Third, the effect of target characteristics on campaign effectiveness results in *(t = 2.555; p = 0.011)*, reflecting a significant but moderate association. This implies that individual differences also play a role in how campaign effectiveness is perceived.

Fourth, the influence of target characteristics on media content has the highest values *(t = 19.680; p = 0.000)*, indicating a very strong and significant relationship. This highlights the importance of tailoring campaign content to the audience's demographic and psychographic characteristics.

Fifth, the relationship between media content and campaign effectiveness yields *(t = 3.278; p = 0.001)*, demonstrating a significant positive effect. This implies that the quality and relevance of the media content used in the campaign significantly contribute to its perceived effectiveness.

Based on these results, it can be concluded that media accessibility, target characteristics, and media content all have statistically significant influences on the effectiveness of grassroots campaigns for NCD prevention in Banda Aceh.

Table 7. Model Fit Test Results

	Saturated Model	Estimated Model
SRMR	0.079	0.080

The table shows that the SRMR value for the saturated model is 0.079, and for the estimated model is 0.080. Both values fall within the acceptable threshold range of 0.05 to 0.08, indicating a good level of model fit between the estimated model and the fully specified model. The lower the SRMR value, the better the model fit. In this case, the relatively low SRMR values suggest that the estimated model has a good fit with the observed data, supporting the overall adequacy of the model structure

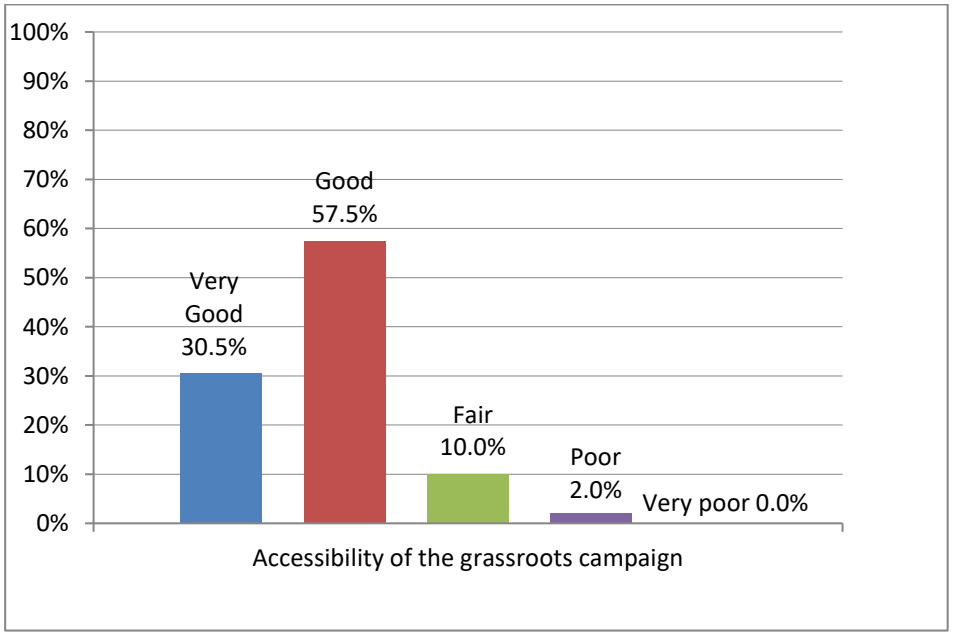
DISCUSSION

Univariate Analysis

Accessibility of Grassroots Campaign Media

The research findings indicate a positive assessment from respondents regarding the accessibility of the grassroots health campaign. This suggests that the disseminated campaign media has largely met public needs in terms of ease of access, as illustrated in Figure 4.

Figure 4. Frequency Distribution of Accessibility Assessment in the Grassroots Campaign



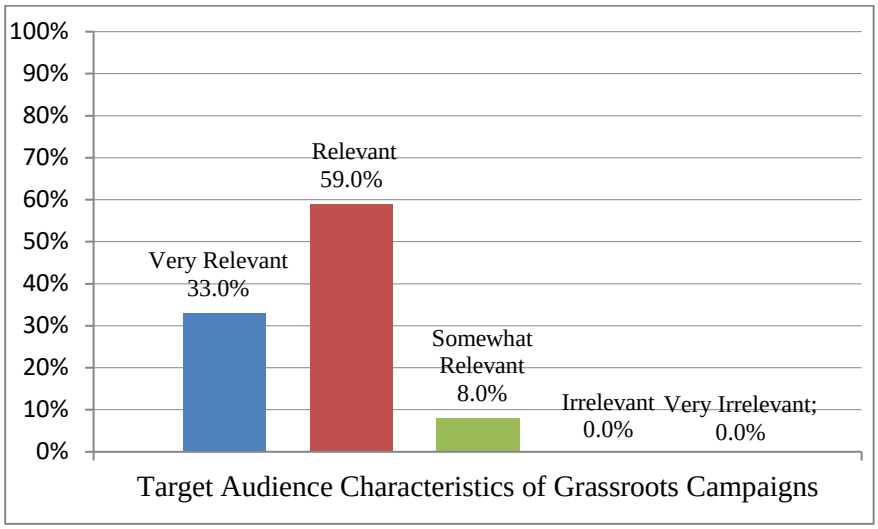
Nevertheless, 10.0% of respondents rated accessibility as “less favorable”, and 2.0% as “unfavorable”, indicating that a segment of the population still experiences difficulties in accessing the printed campaign materials. The study identified several contributing factors, including uneven distribution of media in strategic public locations and limited quantities of materials distributed.

Some respondents expressed a preference for campaign media that is easily obtainable and portable, such as leaflets and brochures placed in public spaces—village halls, markets, and other facilities—in large quantities and accessible without having to ask staff members. Additionally, respondents emphasized a desire for practical, concise information that is directly applicable to their daily lives, rather than theoretical explanations or lengthy texts.

Target Audience Characteristics in Grassroots Campaigns

The study results on the target audience characteristics variable of the grassroots campaign received positive responses, indicating that respondents perceived the media used as relevant to their needs and profiles as campaign targets, as illustrated in Figure 5.

Figure 5. Frequency Distribution Chart of the Target Audience Characteristics in the Grassroots Campaign



However, 8.0% of respondents rated the media used as less relevant to the characteristics of the target audience. This suggests that a small portion of the community still feels that the grassroots media does not fully reflect their specific needs. According to the researchers' findings, contributing factors include the media's limited reach to certain vulnerable groups such as adolescents, as well as a general style of information delivery that is insufficiently tailored to individual circumstances.

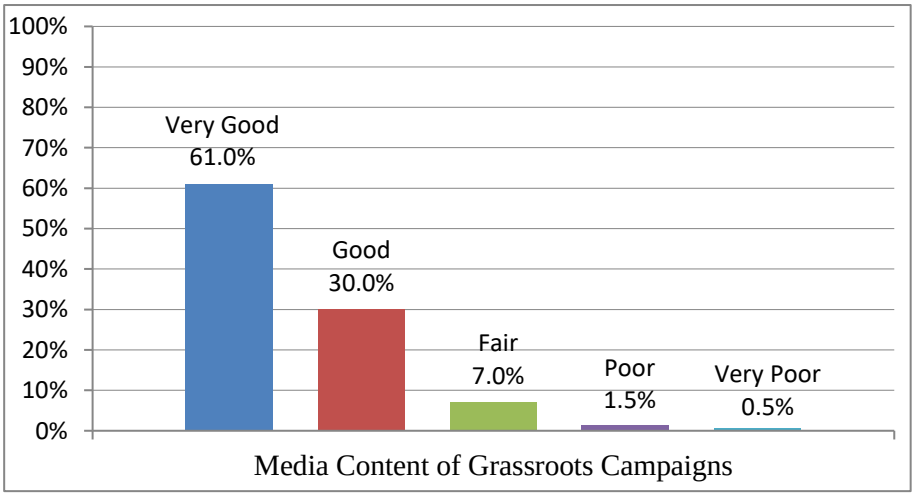
Some adolescent respondents stated that they liked the leaflets or posters because they were colorful and image-rich, but when seeking information about illnesses, they preferred to search the internet—particularly on platforms such as TikTok. This was echoed by a working female respondent who mentioned that information provided on available posters or leaflets often did not match the disease prevention topics she was interested in at that time. As a result, she found it easier to look up health information online through platforms like Facebook or TikTok, citing reasons such as instant access to the desired topic anytime and anywhere.

These findings indicate that, in order to improve the effectiveness of future campaigns, it is essential to enhance audience segmentation strategies in grassroots media messaging. This includes taking into account the public's level of knowledge, age, and local needs, as well as expanding the use of upper-level media such as social media platforms to better reach productive age groups.

Campaign Media Content

The research findings indicate that 91% of respondents gave a positive assessment of the content of the grassroots campaign media, as illustrated in Figure 6.

Figure 6. Frequency Distribution Chart of the Grassroots Campaign Media Content Assessment



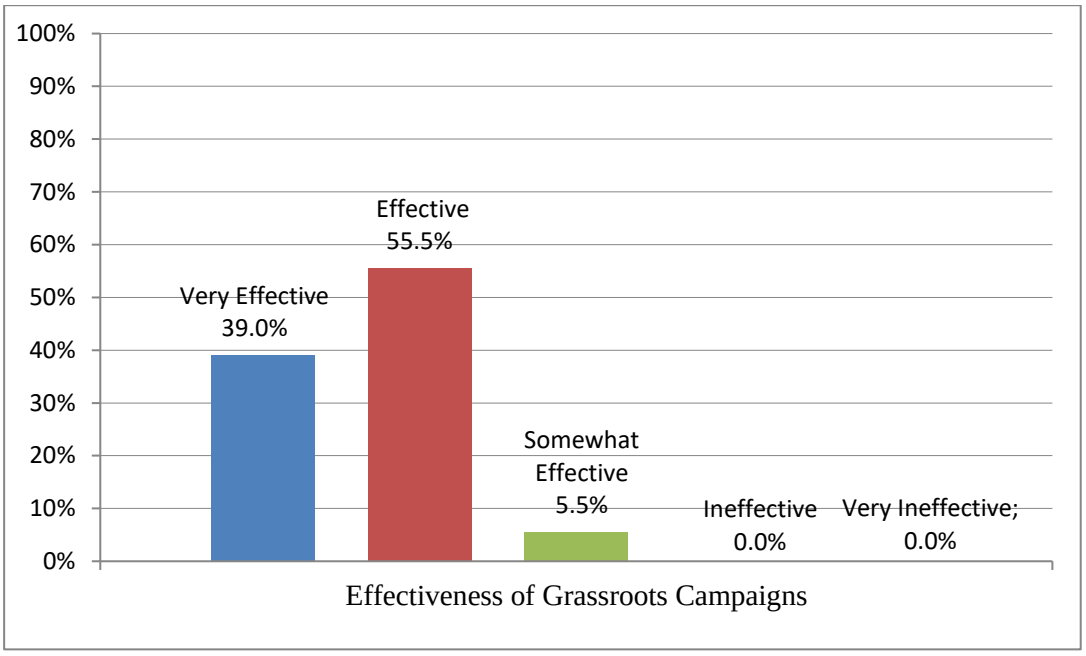
However, 7.0% of respondents rated the media content as less favorable, 1.5% rated it as poor, and 0.5% rated it as very poor. This suggests that there is still a portion of the community that feels the printed media content does not fully meet their needs

Several respondents expressed a preference for media content that is practical and applicable, concise, and easy to understand. They emphasized that messages should avoid complex medical terminology and should be directly relevant to everyday life. Other respondents preferred content with more images, bright colors, and large, bold fonts to enhance readability.

Effectiveness of Grassroots Campaigns for Non-Communicable Disease Prevention

Based on Figure 7, the effectiveness of grassroots campaign media in the prevention of non-communicable diseases received positive evaluations. This indicates that the message delivery strategies through grassroots media used during the campaign were effective.

Figure 7. Frequency Distribution Chart of Grassroots Campaign Effectiveness Assessmen



Nevertheless, 5.5% of respondents perceived the campaign media to be less effective. This serves as an indicator that there is still room for improvement.

Several respondents felt that the campaign would be more trustworthy if it involved community leaders or local health cadres. Others suggested the need for interactive components, such as opportunities for direct dialogue or Q&A sessions, instead of relying solely on one-way communication. According to the researchers' findings, most respondents expressed a desire for the campaign to be conducted not as a one-off event but as a regular and continuous activity.

Multivariate Analysis

The Relationship Between Indicators and the Accessibility Variable

Based on the results of the analysis, all indicator loading factor values for the accessibility variable were greater than 0.70. This indicates that all five indicators have a statistically significant influence on the latent variable of accessibility in grassroots media campaigns for the prevention of non-communicable diseases (NCDs).

Among these indicators, accommodation demonstrated the highest loading factor, with a value of 0.841, indicating that this is the strongest indicator in reflecting the ease with which the public can access grassroots

campaign media. This finding is supported by the study conducted by Rosidin, Nugroho, and Putri (2022) on the effectiveness of banner media in the CERDIK program in enhancing public knowledge of NCD prevention. In that study, strategically placed banners in locations easily accessible to the public were found to increase respondents' average knowledge scores by 23 points. This suggests that printed media, when readily accessible and located in strategic spots, significantly contributes to improving public awareness and knowledge of disease prevention.

Conversely, the cost affordability indicator showed the lowest loading factor, at 0.732, suggesting a relatively smaller contribution to the construct of accessibility compared to other indicators. This may be attributed to the fact that most of the campaigns are implemented by government agencies through basic service channels at no cost to the public. Grassroots campaigns are typically conducted through public facilities such as *Posyandu* (integrated service posts), *Puskesmas* (community health centers), or direct outreach programs, all of which do not impose financial burdens on the community. As a result, people do not consider cost a major issue when accessing campaign information. When the vast majority of respondents perceive that there are no costs involved—or that any costs are minimal—the response variability for this indicator becomes low, thereby reducing its discriminatory power in measuring the accessibility construct**.**

The Relationship Between Indicators and the Target Audience Characteristics Variable

In the measurement model (outer model), the knowledge indicator exhibited the highest loading factor on the target audience characteristics variable, with a value of 0.850. This indicates that among all indicators, knowledge is the strongest in reflecting the construct of target audience characteristics in non-communicable disease (NCD) prevention campaigns. This finding suggests that an individual's level of knowledge is the most decisive factor in defining an appropriate target audience for health campaigns. A high loading factor signifies that individuals with higher levels of knowledge are more prepared to receive, comprehend, and act upon the health messages conveyed in such campaigns. Thus, knowledge emerges as the most powerful indicator in shaping the ideal target segment.

This analytical result aligns with the study by Putri and Rahmawati (2019), which demonstrated that the success of health campaigns at the community level is significantly determined by the knowledge level of the target audience. Higher knowledge increases individual receptivity to campaign messages and enhances active participation in health promotion activities such as *posyandu* (integrated health services) and regular medical check-ups.

Furthermore, these findings are consistent with the research conducted by Sari et al. (2021), which focused on hypertension prevention programs at community health centers (*Puskesmas*). The study showed a significant relationship between knowledge levels and public participation in NCD control programs. This further reinforces that knowledge is the most influential indicator in defining the characteristics of the target population.

On the other hand, the sociocultural indicator had the lowest loading factor, at 0.706, indicating the weakest reflection of the latent variable compared to other indicators. This can be attributed to the abstract nature of sociocultural constructs—such as norms, values, traditions, and beliefs—which are often difficult to quantify objectively. As a result, its contribution to the target audience characteristics variable tends to be weaker than that of more tangible indicators such as knowledge or demographics.

In today's information era, public mindsets are increasingly shifting toward more rational and knowledge-based perspectives. Consequently, the influence of traditional cultural values is gradually being overshadowed by the accessibility of modern health information. Additionally, in urban areas such as Banda Aceh, the high degree of sociocultural diversity may diminish the strength of this indicator in uniformly representing the entire respondent population.

Relationship Between Indicators and the Campaign Media Content Variable

The media content variable plays a crucial role in determining the success of message delivery. This variable consists of several indicators following the AIDDA approach, namely Attention, Interest, Desire, Decision, and Action. In the measurement model (outer model), the indicator of Desire showed the highest loading factor on the media content variable with a value of 0.827, meaning this indicator most strongly reflects the media content in the campaign compared to the other indicators.

According to Kotler and Keller (2016), desire is the emotional stage that serves as a turning point in the persuasion process. When content successfully evokes desire, the audience is not only interested but also begins to imagine the personal benefits of the conveyed message. In the context of health campaigns, this desire may manifest as motivation to live healthily, avoid diseases, or protect family members from the risk of non-communicable diseases.

A study by Lestari and Wahyuni (2020) found that campaign media featuring inspirational stories and visualizations of health benefits can increase public desire to take preventive actions, such as health check-ups or participating in posyandu activities. This reinforces that evoking desire is a critical point in the communication flow of campaigns.

The Desire indicator is the most dominant aspect in reflecting the effectiveness of media content because it transforms passive interest into active intention, touching the emotional and personal side of the audience, increasing the likelihood of decision-making and actual action, and acting as a bridge between cognitive and affective aspects in the persuasion process. One weakness of media content that only attracts attention or interest is its short-lived effect. However, when content succeeds in evoking desire, it generates a deeper and more enduring intention. This is supported by Fishbein and Ajzen (2010) in the Theory of Planned Behavior, which states that strong intentions or desires are the main predictors of behavior. Therefore, health campaign media content must be designed not only to convey information but also to evoke a strong desire within the audience to encourage them to take preventive action against non-communicable diseases.

The outer model results show that the Attention indicator has the lowest loading factor at 0.712, indicating that its reflection on the media content variable is relatively the smallest compared to other indicators. The factor of attracting attention heavily depends on individual preferences and socio-cultural contexts. What is considered attractive by one group may not be relevant to another group. Therefore, this indicator tends to be less consistent in representing the general perception of media content quality.

The study by Susanti, R., & Mulyana, D. (2020) concluded that the attention factor only provides a short-term effect and often fails to change perceptions if it is not followed by messages that touch emotional aspects or are relevant to the personal needs of the audience.

In the context of non-communicable disease prevention campaigns, media content aims to change behavior, not merely to be viewed. Attracting attention is only the initial step in the media communication process. Although important, attention is often temporary and does not always lead to deeper engagement. Therefore, content that merely attracts attention without providing educational value or evoking the desire to act is perceived as less effective by respondents.

Relationship Between Indicators and the Campaign Effectiveness Variable

Based on the outer model, for the variable of grassroots campaign effectiveness, the adaptability indicator showed the highest loading factor of 0.820 compared to the indicators of efficiency, satisfaction, and program sustainability. This indicates that the campaign's ability to be flexible and adjust is the key factor driving the overall effectiveness of the program.

Grassroots campaigns operate at the community level, where social, cultural, and geographical differences are highly diverse. The adaptability indicator reflects the campaign's capacity to tailor messages, methods, and strategies to local needs. In health program planning models, Green and Kreuter (2005) emphasize that health interventions must consider the social, cultural, and environmental contexts of the target population. This model underscores the importance of program fit with community characteristics to ensure effective acceptance and adoption.

Adaptive campaigns are better able to reach and influence communities. Adaptability allows the program to be adjusted to local languages, social norms, residents' schedules, and even modes of communication (e.g., through community leaders). This contextual and flexible approach strengthens community acceptance of the campaign content and forms the foundation for long-term program sustainability.

This finding aligns with research by Handayani and Saputra (2021), which concluded that programs able to adapt to local culture and field conditions are more successful in reaching their targets compared to uniform programs. Adaptability is regarded as a crucial element in enhancing community participation.

The analysis also shows that the efficiency indicator has the lowest loading factor for the grassroots campaign

effectiveness variable. This suggests that efficiency is less reflective of campaign effectiveness. According to Green and Kreuter (2005), effectiveness in the context of community campaigns cannot be measured solely by input-output ratios but rather by the ability to reach, mobilize, and be accepted by the community.

Efficiency is administrative and technical in nature, which may not be directly perceived or valued by the community as beneficiaries. Therefore, the community cannot easily assess or experience the benefits of cost or time efficiency, resulting in a low contribution score towards effectiveness. This is consistent with the study by Putra, B., and Lestari, D. (2019), which found that the success of community-based health promotion campaigns is highly determined by local involvement and adaptation, whereas efficiency contributes the least to program success.

Effect of Accessibility Variable on Campaign Effectiveness Variable

Based on the analysis results, the relationship between accessibility and campaign effectiveness yielded a T-statistic value of 2.751, with a p-value of 0.006 and a path coefficient (β) of 0.257. The T-statistic value of 2.751 exceeds the critical value of 1.96 at a 5% significance level, and the p-value is less than 0.05, indicating that the relationship between accessibility and grassroots campaign effectiveness is statistically significant. Therefore, the null hypothesis (H_o) is rejected, and the alternative hypothesis (H_1) is accepted.

The path coefficient of 0.257 suggests that the strength of the relationship between accessibility and campaign effectiveness falls within the weak to moderate category. This means that the higher an individual's level of accessibility to grassroots campaigns—considering the availability of campaign media, ease of accessing information, availability of accommodations, and affordability—the greater the effectiveness of the campaign in delivering non-communicable disease prevention messages.

According to Nutbeam's (2000) health literacy framework, access to health information is only the initial stage of a more complex process. Health literacy encompasses the ability to understand, evaluate, and apply the information. If the community has high access to information but lacks sufficient understanding or literacy capacity, the campaign's effectiveness will still not be optimally achieved.

This analysis is further supported by Rohmah and Nursalam's (2021) study, which highlighted that rural communities remain unaffected by electronic media-based health campaigns despite having access to such media, due to the absence of emotional and social engagement in the message delivery process.

Effect of Target Characteristics Variable on Accessibility

Based on the analysis results, the path coefficient between the target characteristics variable and accessibility to grassroots non-communicable disease prevention campaigns is 0.693, with a T-statistic value of 14.259 and a p-value of 0.000. The T-statistic exceeds the critical value at the 1% significance level ($T > 2.58$). Since the T-statistic of $14.259 > 1.96$, the null hypothesis (H_o) is rejected, and the alternative hypothesis (H_1) is accepted. The influence of target characteristics on the accessibility of grassroots campaigns is statistically significant at the 1% significance level ($p < 0.01$).

Moreover, the path coefficient of 0.693 indicates that the relationship is strong, meaning that the better the alignment or support of the target characteristics, the higher their accessibility to information from grassroots campaigns for non-communicable disease prevention. Thus, it can be concluded that target characteristics have a significant and strong influence on individuals' accessibility to non-communicable disease prevention campaigns implemented in Banda Aceh City.

Effect of Media Content Variable on Campaign Effectiveness

The hypothesis testing regarding the relationship between media content and grassroots campaign effectiveness shows statistically significant results. Based on the inner model analysis, the T-statistic value is 3.278, with a p-value of 0.001 and a path coefficient of 0.261.

The T-statistic value, which is greater than the critical value of 1.96 at a 5% significance level, indicates that the relationship between media content and campaign effectiveness is statistically significant. This is further supported by a p-value of 0.001, which is below the significance threshold of $p < 0.05$. Hence, the null hypothesis (H_o) is rejected, and the alternative hypothesis (H_1) is accepted.

The path coefficient of 0.261 suggests that the strength of the relationship between media content and campaign effectiveness falls within the weak to

moderate category. This means that the more relevant, engaging, and aligned the campaign media content is with the needs and characteristics of the target audience, the greater its ability to enhance the effectiveness of grassroots non-communicable disease prevention campaigns in the community. These findings underscore the importance of the quality and suitability of media content in supporting the success of non-communicable disease prevention messages delivered through grassroots campaigns.

Effect of Target Characteristics Variable on Media Content

Based on the analysis results, there is a significant influence of target characteristics on the media content of grassroots non-communicable disease prevention campaigns. The obtained t-statistic value is 19.680, which far exceeds the t-critical value at the 1% significance level (t-stat ≥ 2.58), indicating that this relationship is statistically significant. Furthermore, the p-value of 0.000 (< 0.05) strengthens the conclusion that target characteristics significantly affect the media content of grassroots campaigns.

The path coefficient of 0.743 shows that the influence of target characteristics on media content is positive and strong. This means that the more aligned the target characteristics are, the more relevant and effective the grassroots campaign media content delivered will be. This finding demonstrates that the success of a campaign is highly influenced by a good understanding of the target group's characteristics.

This aligns with Purwanti's (2021) study on the effectiveness of anti-smoking campaigns among adolescents, which found that campaigns not tailored to adolescent characteristics tend to fail in achieving their goals. Campaigns using visual approaches on social media, colloquial language, and influencer figures are more effective in influencing younger age groups compared to formal approaches.

Similarly, Dewi and Mustofa's (2019) research on immunization campaigns in rural areas showed that campaign success is strongly affected by the community's education level and understanding of health information. Communities with low education levels find it harder to comprehend health messages and tend to reject immunization due to a lack of understanding of its benefits.

Therefore, these analysis results reinforce the importance of audience segmentation and comprehensive mapping of target characteristics before designing health campaigns. When campaign media are tailored to the needs, preferences, and backgrounds of the target audience, non-communicable disease prevention messages are more easily accepted and understood, thus increasing the potential for behavioral change.

Effect of Target Characteristics Variable on Campaign Effectiveness

The analysis results show a significant influence of target characteristics on the effectiveness of grassroots non-communicable disease prevention campaigns. The t-statistic value of 2.555 indicates that it exceeds the threshold t-table value at the 5% significance level (≥1.96), so this influence is statistically significant. This is also supported by a p-value of 0.011, which is below the significance level $p < 0.05$, indicating the relationship is unlikely due to chance.

The path coefficient of 0.274 indicates that target characteristics have a positive effect on the effectiveness of grassroots campaigns, although the strength is moderate. In other words, the better the alignment of target characteristics, the more effective the grassroots campaign will be in delivering non-communicable disease prevention messages.

According to McGuire (1985), audience or target characteristics are a key component determining message effectiveness. Factors such as age, education, literacy level, and individual motivation significantly influence the extent to which a person can receive, understand, and respond to the conveyed information.

These findings underscore the importance of segmentation and understanding target characteristics in the planning and implementation of grassroots non-communicable disease prevention campaigns. Campaigns that appropriately consider the target profile tend to better capture attention and increase effectiveness with the aim of encouraging the desired behavioral change.

Model of Grassroots Campaign Effectiveness

Overall, the results of this study's analysis indicate that the effectiveness of grassroots campaigns for the prevention of non-communicable diseases is the outcome of a complex interaction between target characteristics, accessibility, and the media content of

the grassroots campaign. The interaction among these three factors produces a significant influence. These factors mutually reinforce each other in shaping campaign effectiveness.

CONCLUSION

Based on the research findings, the following conclusions can be drawn:

1. Accessibility of campaign media has a significant influence on the effectiveness of grassroots campaigns for the prevention of non-communicable diseases in Banda Aceh.
2. Target audience characteristics significantly influence the accessibility of grassroots campaign media for the prevention of non-communicable diseases in Banda Aceh.
3. Media content has a significant influence on the effectiveness of campaigns for the prevention of non-communicable diseases in Banda Aceh.
4. Target audience characteristics significantly influence the content of media campaigns for the prevention of non-communicable diseases in Banda Aceh.
5. Target audience characteristics significantly influence the effectiveness of grassroots campaigns for the prevention of non-communicable diseases in Banda Aceh.

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