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Prevention and counter measure of iron deficiency anemia social campaign design for teen girls

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Abstract: Anemia is a condition in which the body lacks red blood cells. This condition can affect anyone, however women are more vulnerable to experience it. The period of growth requires an adequate intake of iron for physical development, especially when experiencing puberty teenage girls experience menarche which increases the body's intake of iron. One in three young women in Indonesia is prone to anemia. Unfortunately, although the results of the questionnaire stated that many people already knew the term, there were still many young women who only knew the symptoms. Therefore, young women who do not know the dangers and effects of anemia consider it trivial and do not prevent anemia. This can be ascertained through the program that has been held by the government. The results of the program stated that only 2% of young women who received blood tablets consume them. "Sekar" is a social campaign focused on the prevention of anemia. It is designed to communicate in a way that resonates with the needs and interest of teen girls. To do so, the campaign talks about achievement and the future. Visually, the campaign shows the potential of teen girls as a seed that will bloom, where anemia is a limit to productivity in achieving a bright future.

Keywords: campaign; anemia; teen girls; potential; future

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1. Introduction

Anemia is a condition in which the number of red blood cells is lower than normal. The most common type of anemia is caused by iron deficiency. One in three teen girls in Indonesia suffers from anemia, this is due to rapid growth at puberty and menstruation. Unhealthy eating habits also contribute to anemia (Dinkes Tangerang Selatan, 2020; Suryani, 2015).

Most people consider anemia as a trivial matter. This is due to the lack of information and education on symptoms, effects, and treatment of anemia. Anemia has the potential to obstruct daily activities of adolescents, especially those who attend school. The symptoms can reduce concentration, lack of productivity, and decreased immunity which makes them more susceptible to infection (Widiaputri, 2018; Cindy, 2020; Wibawa, 2019).

According to a survey conducted by Nutrition International, 68% of young women are aware of anemia but with a lack of knowledge of the causes and implications they tend to ignore it. The government distributes blood-supplement tablets, however the success of the program is measured by the percentage of recipients which does not ensure its consumption. Thus, the program has not been effective in preventing or overcoming anemia (Nurgroho, 2017).

Teen girls should know how to overcome anemia by having balanced meals that consists of foods rich in iron. However, teens have yet to consume foods that are nutritionally balanced, so 63% ends up with iron deficiency anemia. The government's effort to reduce the risk of anemia has not been successful due to the lack of information delivered and ineffective persuasion. Therefore, a social campaign for anemia prevention and countermeasure will be carried out so that teen girls will have enough knowledge and desire to overcome anemia (Sartika, 2019; Nurgroho, 2017).

2. Review of literature

2.1 Anemia

Anemia is a condition when the number of red blood cells in the body is lower than normal. Hemoglobin is a component in red blood cells that binds oxygen to deliver it throughout the body. If someone suffers from anemia, there can be a lack of oxygen in the tissues of the brain and body (Ministry of Health of the Republic of Indonesia, 2016). Biologically, women are more prone to suffer from anemia because they have lower hemoglobin levels than men. Women also need more iron intake because of menstruation and the possibility of blood loss during childbirth.

2.2 Campaign

A campaign is a series of planned communications to achieve specific results in a limited period of time. A campaign is carried out to change or strengthen a value. The campaign combines stories, structures and sequences designed to achieve maximum impact. The campaign always has a clear source, and the nature of its idea is open as a space for dialogue (Venus, 2019).

2.2 Campaign Strategy

Dentsu developed a new target model of consumption behaviour called AISAS. AISAS is not required to follow a linear path, so some steps can be skipped or repeated. The following are components of AISAS;

- Attention, consumers see or become aware of a product / service / advertisement.
- Interest, consumers are interested in products / services / advertisements.
- Search, consumers find more information about products / services / advertisements through websites, social media or by directly asking questions and then make an assessment of the information that has been obtained.
- Action, consumers buy or interact with products / services.
- Share, consumers talk about products / services either directly or through various platforms.

3. Design method

Previous studies in making design intervention and campaign used Human-Centered Design (Selamet, 2020), design thinking and more. For this project, Landa's design method was used. There are several stages in designing a campaign namely: overview, strategy, ideas, design, production, and implementation. Based on these stages, the author designed the campaign design process as follows (Landa, 2010):

1. Overview

The first stage involves data collection and conducting research. At this stage, the topic, actual condition, and problems are known. Interviews with a general practitioner and graphic designer is conducted, a questionnaire is distributed to middle and high school students, and existing campaigns on anemia that have been held previously are studied.

The interview with the general practitioner is held to ensure the writer's understanding of anemia and to find out more about its current condition. From the interview it is known that adolescent girls are more prone to anemia. This is due to their eating habits which do not contain iron rich nutrients and their frequent choice to consume drinks that contains tannin which inhibits the production of red blood cells. During puberty they also undergo menstruation which is a factor that affects anemia.

A survey was conducted for women in the age of 10-23 to find out the standard of knowledge they have about anemia. The age range starts from adolescent girls who have reach the age of puberty up to those who are in university. The purpose is to know the current understanding of anemia in girls who have just begun puberty and are still in middle school and high school, and to know what was learnt and experienced by those who have finished their studies. Results of the survey stated that most of the respondents know the symptoms of anemia but do not understand its prevention and treatment, so the action taken is not enough to avoid it. Currently

there is not enough information about anemia provided in medias used by adolescent girls. 79.2% of the respondents have heard of anemia however there is only a small percentage of those who know its prevention (29.2%), cure (24.5%), and side effects (17.9%) which causes a lack of urgency in preventing anemia. 68.4% of respondents mistook the symptoms and side effects of anemia. In the survey respondents are asked whether they are anemic. Most of the respondents who answered that they were not anemic stated that they do not experience the symptoms of anemia, however the symptoms they are aware of are only a few. They also can not confirm that they are not anemic because they did not undergo any medical checkups. Most of the respondents who were not anemic also stated that they have not seen information about anemia both on social media or school and several other media.

A book titled 'Buku pedoman pencegahan dan penanggulangan anemia pada remaja putri dan wanita usia subur (WUS)' that was published by the Ministry of Health Indonesia is also used as a reference in deciding the target audience of the campaign. From the results of the research and data the audience of the campaign is determined to be women in the age of 10 to 24. The age of 10 to 18 being the primary target as girls who enter puberty will experience rapid growth which requires more nutritional intake. Apart from that, they often aim to lose weight and experience menstruation which doubles their required iron intake. The age of 19 to 24 as the secondary target as belong to the age group whose health condition and nutrition is a concern.

Existing studies are conducted as reference and to compare the design and flow of previous campaigns. One of the campaigns is 'Indonesia Bebas Anemia' which is a campaign for women in the age range of 21-35 years. The campaign used a variety of media to reach its target audience and the delivery of the message is relevant to the activities of the intended audience. The campaign provides several events according to the target's needs. The location is also easy for the target reach, thus the campaign is easily accessed. However, the campaign depends on its sponsor thus it is more focused on introducing products and sales so the audience may forget about the main message which is preventing anemia because they are more focused on the product.

The second existing study is a campaign called 'Sehat berprestasi tanpa anemia' which is targeted towards adolescent girls who are in school. The campaign requires the help of others that are around the targeted audience which includes teachers and health workers thus the audience will have a higher chance of following through the campaign because of continuous support. The visuals used are not consistent, so there is no unity and it is not very suitable for the audience. There is also no media used as a reminder for the audience.

To create a suitable design, an interview with a graphic designer who is focused on campaign design is conducted. The campaign should focus on its engagement with

the audience thus communication is a key factor. The main message must consist of one single message to avoid any double meanings, it is very important to have a continuous message that keeps reenforcing the knowledge towards the audience;

2. Strategy

This stage is used to examine, assess, find, and plan the big idea of the campaign. The data that has been obtained from the overview is analysed so that it can be visualized and applied to the campaign media.

From the results of the overview, it is determined that the campaign will focus on its engagement with its audience. The campaign will follow AISAS which will create stages and connect each part of the campaign. Considering the segmentation of the audience, a mix of online and offline media will be used. The online media will begin the campaign and collate the offline media, while the offline media will be placed in locations frequently visited by the audience such as schools. The media will be designed to capture the interest of the audience so it will keep them active and engaged through out the campaign;

3. Ideas

The big idea is formulated using the results of research, analysis, interpretation, inference, and reflective, and creative thinking that has been processed in previous stages

The brainstorming process of creating a big idea includes creating mind maps. Three mind maps are made with ‘anemia’, ‘campaign’, and ‘adolescent girls’ as the centre. Common words and ideas are listed and compiled before selecting words that would represent the campaign. From there further exploration is done to find definitions and words that are related and associated to the keywords that would create the big idea, concept, tone of voice, and mood board;

4. Design

The concept is designed through three stages of visual processes, namely thumbnail sketches, roughs, and, comprehensives. Concepts are designed in the form of manual or digital sketches. The campaign design will be divided into several stages, namely determining strategy, copywriting, and design;

5. Production

Implementing design solutions in various forms depending on the type of application and whether the media is printed, screen-based, or environmental. At this stage a design with a variety of media will be produced according to the needs;

6. Implementation

At the last stage the design that has been visualized and applied to the media is used to hold a campaign. This stage involves the of the campaign to determine its effectiveness.

4. Design process

4.1 Overview

This stage consists of data collection and research on anemia and its condition among teen girls. The project objectives are determined as designing a social campaign to prevent and manage iron deficiency anemia for teen girls so that they can broaden their horizons about the effects and dangers of anemia. The aim is to move young women to be more active in preventing anemia. The results of the research can be translated into social backgrounds containing social conditions, target behaviors, new behaviors, and new trends:

- Social background

  One in three young women is prone to anemia and 23% are anemic. Snacks available in school environments do not contain enough nutrition for body development and blood loss during menstruation. This is one of the factors that makes teen girls more vulnerable to anemia. The government provides blood-supplement tablets in schools and health centers to prevent anemia, but the number who consume them is only 2%.
- Target behaviour

  Teen girls are not aware of their nutrition intake in the school environment. Coffee or tea is the prefered beverage, however it can act as an obstruction to creating red blood cells because it contains caffeine and tannins. Teen girls consider anemia trivial because they feel healthy and safe from diseases. Many do not take blood-supplement tablets because they do not know how to overcome the side effects.
- New behaviour

  Teenagers tend to gather in malls or cafes with friends. The existence of a health-based application makes it easy for everyone to communicate directly with doctors. Globalization promotes trends from abroad including habits such as fashion and diets that affects nutritional intake. Information about anemia can be searched easily on the internet. The government runs a blood-supplementing tablet program.
- New trend

  Information can easily be distributed but it can be a hoax. Ordering food and the many promotions become a major factor in food consumption among adolescents. Teenagers can show off activities through social media with photos or text.

4.2 Strategy

This phase is used to formulate the big idea by using the results that have been analysed from the previous stage. The main message of the campaign is so teen girls would consider preventing anemia as the first step to achieving their desired future. The results will be used to determine the competitive frame, communication objectives, social products, and promises / social benefits.

- Competitive frame

New communication where the message is conveyed as a figure that has the same position as teen girls. New preposition which invites students to interact with each other as an action to prevent anemia.

- Communication objective

Reminds the dangers that can be caused by anemia (reminding). Introduces iron supplements in detail to persuade its consumption (stimulate trial). Creates a habit to consume iron supplements and choose food and beverage with better nutritional values (promote new habit).

- Communication technique

Prompting audience to have direct participation in campaign activities (participation). Communicating as someone in the same position so that the urgency of the campaign is conveyed (integrative). Using messages that is relatable to daily life and the future in order to have an emotional appeal (icing technique).

- Social product

Creating a new ideas and insight about anemia which is actually a condition that may turn into significant consequence such as diseases / infection and decreased productivity (social idea). Teen girls are accustomed to consume iron supplements and become more active in preventing anemia (social practice). Merchandise are distributed so that there is always a constant reminder of the campaign message (tangible product).

- Psychological response

Understand, evaluate, plan, choose, and think about their daily activities without forgetting the factors that can contribute to anemia (cognition). Triggers the feelings of the target by using the campaign message (affection).

To prepare the objective of the message, the facet model of effects is used. The following is a diagram of the facet model of effects of this campaign.

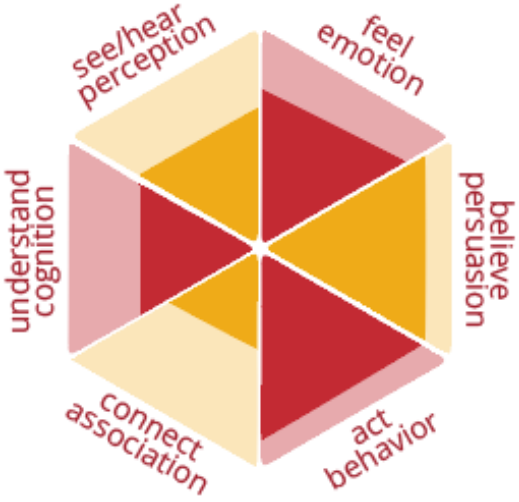

Figure 1 The facet model of effects. The following shows each of the aspect from six categories of target behaviour towards the campaign.

The following table displays the purpose and message of each step of the campaign:

Table 1 AISAS Purpose, Message and Media.

phase	**purpose**	**message**	**media**
Attention	Drawing the attention of teenage girls towards the campaign with a message that is associated with daily life.	Reintroducing anemia teen girls by making a connection between anemia and their potential.	Wall sticker, social media (Instagram post and story)
Interest	Piquing the interest of teenage girls to find out more about anemia.	Conveying the dangers and side effects of anemia. Giving an introduction about the prevention and control of anemia.	Poster, merchandise (pin, t-shirt), social media (Instagram post and story)
Search	Inviting teen girls to discover more information regarding anemia. Deliver content and important points of anemia.	Giving out information regarding the main purpose and message of the campaign. Provide complete information about anemia.	Website, social media (Instagram post)
Action	Creating a habit of consuming iron supplements and consuming iron rich foods.	How to prevent anemia and how to incorporate those ways in daily life.	Monitor card, interactive media, merchandise (pouch, post it, pen, tote bag), social media (Instagram post)
Share	Invites teen girls to share their experiences in following campaign activities.	Continuation for preventing anemia after the campaign is over.	Social media (Instagram filter, post and gif)

4.3. Ideas

In designing a social campaign, the results of the overview are then processed into three mind maps namely anemia, teen girls, and campaign design. The purpose of making a mind map is to broaden insight and to determine the keywords that will be used to develop a big idea, concept, tone of voice, and mood board.

Based on the mind map that has been made, two keywords are determined which are achievement and future. These words were chosen because they are words that are often heard and resonates with teen girls who are still in school. In this context, anemia is seen as a limit to productivity in achieving a bright future. The keywords are then combined to create a big idea which is small steps towards triumph. The purpose of the big idea is to convey encouragement to teen girls so they will act to achieve their goals. It depicts preventing anemia as a step towards a better future free of limitations.

To support the big idea, a few common words are taken from the previous mind map being; empowerment, support, and growth which represents the future potential of teen girls. An

analogy is made to symbolise potential that will bloom in the future. Flowers will be analogous to potential, where the seeds will be the starting point. As of now, seeds represents the potential of teen girls. In taking care of the seed they will create habits so that they will be able to become flowers in the future. Therefore, the concept of the campaign is visualising the prevention of anemia by viewing potential as flowers. Whereas the tone of voice of the campaign is fun and spirited.

4.3. Design

To create a consistent design, the following guidelines are used in the campaign:

- Color

  Following the tone of voice, the red color is chosen from its connotations which include passion, energy, enthusiasm, and excitement and the yellow color which has a vibrant and fun impression. A lighter tint of red is used to give a softer and more feminine impression to match the target of teen girls.



Figure 2 Color pallete.

- Font

  The visual design uses sans serif font to give a casual image to reduce the serious impression of the topic. Watermelon font is used for the headline because it represents the tone of voice with its bold and rounded details, textured stroke, and its irregular placement of the alphabet.



Figure 3 Watermelon font.

- Copywriting

To create copywriting that supports both the purpose and concept of the campaign, the vocabulary chosen should communicate the intention of the campaign but also use words

that are related to flowers. “Tanam kebiasaan, tumbuh keberhasilan” is the tagline of the campaign, in English it means creating habits leading to success. To incorporate the concept, words such as “tanam” and “tumbuh” is used as it is associated with flowers. The hashtag of the campaign “#ambisibebaslimitasi” means that there will be no more limit to their ambition. “Ambisi” symbolizes the potential teen girls can achieve in the future, and anemia is represented by “limitasi”.

- Visual assets

To illustrate potential, four flowers are chosen as a visual asset according to their meaning.



Figure 4 Flower visual asset. The chosen flowers are sunflower, hibiscus, tulip, orchid with the meaning strength and intellegence, glory, prosperity and enthusiasm respectively.

Following the strategy to communicate as an equal, illustration of characters that represent teen girls are made. Indonesia has a population with a wide variety of race, ethnicity and religion. Therefore, characters will be visualised by four of the most commonly found race. However, there will not be four specific characters, rather having characteristics of the four races as a guide.



Figure 5 Teen girls illustration. Teen girls will be illustrated in their uniforms as media will mostly be used for students in school.

- Visual identity

Sekar means “flower” however it is also an abbreviation of “semangat kalahkan anemia remaja” which means the spirit to overcome anemia in teens. The red circle at the center of the logogram stands for the scientific symbol of hemoglobin. The five

petals surrounding the center are five symptoms of anemia called 5L; lemah, lesu, letih, lelah and lalai.

Figure 6 Campaign logo consisting of logogram and logotype.

The following are the media used in each stage of the campaign:

- Attention

In the early stages of the campaign a wall sticker will be pasted onto school walls to get the attention of the students in the campaign. This is done using illustrations of teen girls with copywriting in the form of a question. The QR code on the stickers is expected to direct students to the Instagram stories that illustrate the seeds (potential) which will develop without of anemia. Students who open the Instagram story will find more about the campaign through its posts.

The design for the wall stickers is intended to attract attention in schools towards the online media. Other than that, this sticker is also one of the initial media that gives exposure to the campaign directly to the target. The purpose of the question is to direct the students to the call to action where they find out the answer by scanning the QR code which will lead them to the Instagram story. The purpose of having the Instagram stories is to explain the meaning of the illustrations on the wall stickers. The story tells students that in themselves there is potential that cannot be seen. This is visualized by having seeds behind the objects that the students hold.



Figure 7 Attention media consists of wall stickers, Instagram stories and posts.

• Interest

The previous stage was more focused on the introduction of the campaign, at the interest stage a seminar would be held to re-introduce anemia to inform how to prevent and deal with anemia. The seminar will discuss anemia as a limitation in achieving a better future. This stage will begin by putting up posters about the seminars in schools and by using Instagram story ads to promote the seminar. Merchandise such as t-shirts and acrylic pins will also be distributed during the seminar period to students that participates in the activities.



Figure 8 Interest media consists of A3 poster, acrylic pins, t-shirt, Instagram story ads and posts.

• Search

The search phase is used to prepare and provide information about the campaign and its contents. The content of the campaign will be taken from a book published by the Ministry of Health on the prevention of anemia in Indonesia, entitled Handbook for Prevention of Anemia in Teens and Women. Students will be directed to the website at the seminar and a link will be posted on the campaign's Instagram account profile.



Figure 9 Search media consists of a two-page website and Instagram posts.

- Action

Interactive media at the action stage is another wall sticker where students can give their opinions or aspirations of their future, dreams, or achievements that they want to reach. The wall sticker is different from the attention stage, it will be an illustration of empty vases where students can paste post-it notes of flowers. The purpose of this is to keep the target engaged with the campaign and understand the connection between anemia and their future achievements.

The campaign will also distribute blood-supplement tablets as an effort to prevent and overcome anemia, to monitor the regular consumption students will be given a blood-supplement tablet monitor card as a reminder to take it every week. Merchandise such as pouches, tote bags and pens are given out as supporting media for the blood-supplement tablets.



Figure 10 Action media consists of wall sticker, post-its, tote bag, pouch, monitor card, pen and Instagram posts.

- Share

The share stage will begin with an Instagram post about the Instagram story competition which uses the Instagram filter prepared by the campaign. In addition, students can also use the Instagram gif as an Instagram story decoration. The purpose of the Instagram filter is so that students who take part in the campaign can expand the awareness of students from other schools regarding the campaign.



Figure 11 Share media consists of Instagram filter, post and gifs.

5. Conclusion

One in three young women in Indonesia is anemic. The government has attempted to prevent this by distributing blood-supplement tablets, however this effort was ineffective because after re-evaluation it is known that more than 98% of adolescents who receive it do not consume it. This matter is due to a lack of knowledge and understanding of the dangers and effects of anemia. Therefore, a social campaign is needed as means to invite and inform the adolescents about how to prevent and treat anemia.

Designing a social campaign for preventing and countermeasure of anemia for teen girls is conveyed by the approach where the campaign is on the same position as teen girls. Therefore, the campaign discussed the correlation between the dangers of anemia with achievements with the big idea small steps towards triumph. It is hoped that the campaign can provide information and invites teen girls to prevent anemia so that their future is filled with achievements without the effects of anemia.

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