

## **Development of Healthy Diet Guidebook to Promote Healthy Lifestyle**

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**Abstract:** This decade, the community has been experiencing a revolution in which the problem of malnutrition has been turned into a society that is experiencing food shortages leading to serious health problems. On the other end, the growing problem of obesity is increasing and spreading to people around the world as a result of the transformation and change that is being made by society. This is due to the lack of knowledge about nutrition in the community especially among adolescents. Lack of exposure to nutritional care will take this problem further. The purpose of developing the guidebook healthy diet style is to provide guidance on maintaining a healthy diet and maintaining proper nutrition in daily life. Individuals also have the opportunity to come up with a daily diet plan. The methodology chosen in the development of this guidebook is to use the ADDIE model. The guidebook has been validated by 5 experts using the questionnaire form to evaluate in terms of content, presentation, design and clarity of content. Data processing is done using Microsoft excel software by assessing the frequency and percentage. The results showed an agreement percentage among the experts on the evaluated items was 98%. This indicates that the guidebook developed is suitable for use as a guide. The development of this guidebook was expected to increase knowledge and provide guidance to the community on healthy diet.

**Keywords:** Development, Guidebook, Healthy, Diet

### **1. Introduction**

Healthy eating and lifestyle are an individual practice that will have a great impact on the body, family and the surrounding community. The growing problem of obesity is increasing and spreading to people around the world as a result of the transformation and change that is being made by society itself which is very modern and global (Marlina et al, 2016). According to Abdullah and Kamaruddin (2017). The issue of Body Mass Index (BMI) is getting stronger and is becoming a hot topic over time.

This is not the case for adults only but also for students or adolescents who are pursuing education at the school or university level. According to Nugroho, Mulyadi and Masi (2016) Individual lifestyle changes are occurring due to high calorie and are not balanced by what activities are done to eliminate the accumulated calories in the body. Obesity problem is increasingly worrying many people where this will have a lot of impact especially in everyday life.

Most adolescents are unaware of the disadvantages and benefits they will experience by ignoring their weight care. The physical activity they often neglect is an antidote for them to overcome and avoid mental and physical health problems. The relationship between physical activity and health has been proven by previous studies. However, the involvement of adolescents and students is still low (Aziz, 2018).

According to Aziz (2018), the lack of physical activity organized in universities also affects the involvement of adults and their health. Adolescents who emphasize nutrition, lifestyle and indirect physical activity will have a healthy body and normal BMI. According to Rahim (2014), communication and guidance on health play an important role in determining an individual's health.

### 1.1 Problem Statement

Overweight is a problem that is at a critical stage in Malaysia (Abdullah et al, 2017). Particularly among the community of students who is less concerned with being properly nourished. According to Habut et al (2015), most adolescents or students experience a sudden increase in body weight due to the imbalance between food intake and caloric value. This issue is important to the attention of all communities, especially to catering students at UTHM who are involved in food production and are exposed to a wide variety of foods. Therefore, researchers want to develop a guidebook that emphasizes healthy diet to guide catering students at UTHM. The objective of this study to identify specifically the following:

- i. To develop a guidebook that emphasizes healthy diet style.
- ii. Review the suitability of a healthy diet style in terms of content, presentation, design and clarity of the developed guidebook.

### 1.2 Body Mass Index

According to Abdullah (2017), the distribution of individuals with normal weight decreases with increasing age. He said it is not impossible that individuals who are overweight will become obese as they grow older. This is because there is a positive relationship between weight and age. There is also a link between increasing age and lifestyle of the individual. It's getting older, they are less likely to engage in sports, spending more time on social media and internet facilities that strongly encourage one to avoid outside activities (Abdullah, 2017). Other articles also suggest that overweight adolescents prefer indoor activities such as watching television, playing computer games and sleeping for long periods (Habut, 2015). As a result, BMI increases due to limitation of physical activities.

### 1.3 Body Weight Among Teenagers and Students.

According to Habut et al (2015), most adolescents experience a sudden increase in body weight due to the imbalance between their intake of calories and the value of calories burned so that the energy converts into fat. According to Kumar, Revannasiddaiah and Gopi (2014), he found that most students do not meet the dietary requirements of calorie and protein that suit their body. According to Putra and Rizqi (2018), she shows that there is a link between BMI and girls' activity. Research results suggest that adolescent girls need to take good care of their health and body by maintaining proper diet and active physical activity.

#### 1.4 Healthy Diet Style

A healthy diet will benefit the individual practitioner. A healthy eating style is important for everyone especially those around. Therefore, it is very important for all to understand about health aspects (Hassan, Yussoff & Alavi, 2012). In addition, a study by Salimin, Elumalai, Taff, Ahmad and Almigo (2015) said that healthy lifestyle programs have been successful in reducing weight due to active factors following a healthy lifestyle schedule. Healthy diet and health care should follow proper guidelines to give a positive effect on the body. The Malaysian Dietary Guideline provides 14 messages to promote and introduce an active lifestyle and healthy nutrition to the community.

#### 1.5 Food Pyramid

According to Kurnia (2015) Consuming foods from 5 food groups will provide all the nutrients that the body needs. The food in the food pyramid should be taken like that the food on the top level is taken in small quantities while the bottom is taken in large quantities. According to Kurnia (2015) Children can choose and recognize a variety of nutritious foods through the guidance of a food pyramid, and children can learn concepts and learn more about food substances.

#### 1.6 Types of Diet

Hou, Lee and Lewis (2014) prescribed diet regimen based on the basic "theory" of how food interacts with the body. A variety of popular diets that are able to lose weight such as paleo diet, Atkins diet, vegetarian diet and intermittent fasting diet.

#### 1.7 Design Guidebook Development Model

In order to achieve a set objective, the design of the manual development model is very useful because the design of the researcher can determine the process from start to finish with clear guidance. The design of the Model will also help in what to do, helping to test the usability of the guidebook that was developed to achieve the set objectives.

### 2. Methodology

Methodology is a method, rule, standard in the development of a comprehensive guidebook. Upon further investigation, it is found that the ADDIE model is suitable for use as a methodology in developing this guidebook. According to Carr-Chellman (2014), The ADDIE model is the main design model and is the source of the existence of other models. In addition, the ADDIE Model is ideal for the development of the guidebook because the ADDIE model will focus on planning and content. Thus, this model is suitable for comprehensive guidebook development.

#### 2.1 Phase 1: Analysis

This phase involved the process of identifying the problem that the solution is looking for. This study aims to ensure that the design of the book meets the requirements. The study was conducted through the process of reading related articles on this issue and conducting informal interviews with lecturers catering from University of Tun Hussein Onn Malaysia. Researchers have identified a problem that occurs among catering students, that is weight gain. As such, researchers have chosen to produce a healthy diet style guidebook for catering students.

## 2.2 Phase 2: Design

This phase is done by drafting the guidebook by following the ADDIE model. The researcher will outline the method to be used. This phase also describes the overall and structure to be used. The researcher creates the cover design and content according to the objectives set from the beginning. The researcher also references books and websites for information and content related to the book's title. This phase needs to be carefully planned to ensure that the arrangement of books is organized.

## 2.3 Phase 3: Development

This phase will focus on the development of the guidebook. This phase will use the media elements and applications selected to develop the actual guidebook. This phase is also carried out to ensure that a healthy diet style guidebook can be developed according to the right findings and information. This phase also emphasizes some important elements such as delivering a positive and user-friendly effect. The handbook should be easy to understand and feature in a book.

## 2.4 Phase 4: Implementation

This phase refers to the development of a guidebook that has been implemented according to the user's requirements. More implementation of books that are ready to use in real life. Expert verification will be done to view the guide in terms of design and content. Expert verification will be done by 5 experts to choose from, content evaluation, presentation, design and clarity to test the usability of the guidebook. Then the researcher will improve the guidebook according to the needs of the students and users.

## 2.5 Phase 5: Evaluation

In this phase, the instrument chosen by the researcher was to use the expert evaluation form to ensure that the developed guidebook meets the needs of the researcher. The expert evaluation form was developed by the researcher and reviewed by the expert to obtain the rating of the selected respondents.

## 3. Results and Discussion

The results and discussion section presents data and analysis of the study. This section can be organized based on the stated objectives, the chronological timeline, different case groupings, different experimental configurations, or any logical order as deemed appropriate.

### 3.1 Results

Results can be presented in the form of tables, figures, charts, diagrams or other suitable formats. If required, raw data that is too lengthy to be put in this section can be moved to the appendix. The research selected 5 experts from the Faculty of Technical and Vocational Education (FPTV) who had expertise in module development as respondents. The selected experts review the entire guidebook developed and evaluate the questionnaire in terms of content, presentation, design and clarity of the guidebook. Data were analyzed for frequency and percentage values using Microsoft Excel software. The data collected is intended to obtain expert feedback on the guidelines for a healthy dietary guideline that has been developed. The five sections on the questionnaire form will be described in detail based on feedback from experts. Based on the questionnaire form that the researcher distributed to the expert for

feedback, respondents had to answer 20 types of the questionnaire on a five-point Likert scale. The scale used is shown in Table 1.

**Table 1: Likert Scale for Feedback of Questionnaire**

Score	1(STS)	2(TS)	3(TP)	4(S)	5(SS)
Level of agreement	Strongly Disagree	Disagree	Not Sure	Agree	Strongly Agree

An overview of all aspects of the guidebook including content, presentation, design and clarity needs to be done to obtain validity and to formulate a healthy diet style guide accordingly. Table 2 shows the overall analysis of the content, presentation, design and clarity of the guidebook. On average, the experts agreed and gave positive feedback on the content of the guidebook content by 96%. Of the guidebook presentation aspect, 96% of experts agreed and provided positive and constructive feedback to a healthy diet style guidebook. In the analysis of the guidebook design, it was seen that 100% of experts also agreed and provided positive feedback. The clarity analysis found that 100% of experts had agreed. In conclusion, the content, presentation, design and clarity of this guidebook are suitable for use as a guide to daily life in the maintenance of a healthy diet.

Table 2: Overall Average Analysis of Content, Presentation, Design, and Clarity of the Guidebook.

Respondents	Expert	
	Disagree	Agree
Content of Guidebook	4%	96%
Presentation of Guidebook	4%	96%
Design of Guidebook	0%	100%
Clarity of Guidebook	0%	100%
<b>Average</b>	<b>2%</b>	<b>98%</b>

### 3.2 Discussions

The findings of this study discussed in this chapter to explain and determine whether the results obtained meet the objectives of the study. Based on the percentage values it is found that the content of the guidebook developed is appropriate and the majority of respondents agree with the guidebook in terms of content. The analysis was done in the previous chapter which found that the percent value of the guidebook performance was 96%. Respondents provided positive feedback on the presentation as the majority of respondents also agreed with the book presentation. The book presentation is an important aspect to consider. The average percentage value obtained shows that the guidebook performance is at an appropriate level. The analysis found that the percentage value in terms of design was 100%. Book design is an important aspect and researchers are working to make the booklet interesting and useful. From the average value of the percentage obtained by the researcher, it was found that the respondents agreed with the design of the developed guidebook. The percentage value in terms of clarity gets a high percentage of 100%. The clarity of the guidebook emphasizes on the aspects of diagrams, graphics, short notes and several other aspects as described in chapter five of the expert feedback on the level of suitability of the guidebook. From the average percentage of respondents survey respondents agreed with the clarity of the development of the guidebook. This indicates that the development of the guidebook has achieved its intended objectives.

### 4. Conclusion

Overall, this guidebook of healthy diet style can be used as a guide for eating and health care in daily life. Additionally, the contents of the guidebook are a discussion with dietitians and have been evaluated by 5 experts who have supported the relevance of this guidebook. This guidebook also provides a simple and easy to follow guide to everyday life. From the point of view of the experts involved in this book, it is a great idea to develop.

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