

Development and Validation of a Short Video Series on Heart-Healthy Dietary Pattern Education for Patients with Post-Myocardial Infarction

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ABSTRACT

BACKGROUND: Adherence to heart-healthy dietary recommendations is essential for secondary prevention following myocardial infarction (MI). However, many patients experience difficulties understanding and applying dietary advice in their daily lives. This study aimed to develop and validate a short video series on heart-healthy dietary education for patients with post-myocardial infarction.

MATERIALS AND METHODS: A Design and Development Research (DDR) approach guided by the Analysis, Design, Development, Implementation, and Evaluation (ADDIE) instructional design model was employed. Evidence-based dietary recommendations were first identified through a review of five clinical practice guidelines and translated into a short video series consisting of nine educational topics. Content validity was evaluated by seven experts using the Content Validity Index (CVI), while face validity was assessed among 11 post-myocardial infarction patients using the Face Validity Index (FVI).

RESULT: The developed short video series demonstrated excellent content validity, with I-CVI values ranging from 0.86 to 1.00 and S-CVI/Ave values ranging from 0.95 to 1.00. Excellent face validity was also achieved, with S-FVI/Ave values ranging from 0.98 to 1.00 across the nine educational topics.

CONCLUSION: The developed short video series is an evidence-based, culturally appropriate, and user-friendly educational resource for patients with post-myocardial infarction. The videos have the potential to complement routine dietary counselling by improving patients' understanding and application of heart-healthy dietary recommendations, thereby supporting secondary prevention of cardiovascular disease.

Keywords: post-myocardial infarction; heart-healthy diet; video-based education; secondary prevention; ADDIE model

INTRODUCTION

Cardiovascular disease (CVD) remains the leading cause of morbidity and mortality worldwide, accounting for approximately one-third of all global deaths. In Malaysia, CVD is also the leading cause of mortality, contributing to 16.1% of all certified deaths in 2022 compared with 13.7% in 2021 [15]. Despite advances in medical treatment, myocardial infarction (MI) continues to contribute substantially to premature mortality and long-term disability. Patients who survive an MI remain at high risk of recurrent cardiovascular events due to persistent

modifiable risk factors, including hypertension, diabetes mellitus, dyslipidaemia, obesity, and unhealthy lifestyle behaviours [21]. Consequently, secondary prevention has become an essential component of post-MI management, with lifestyle modification, particularly adherence to a heart-healthy dietary pattern, playing a central role in reducing recurrent cardiovascular events and improving long-term health outcomes [14]. Evidence-based dietary guidelines consistently recommend increased consumption of fruits and vegetables, whole grains, legumes, healthy protein sources, and unsaturated fats while limiting sodium, added sugars, saturated fats, and ultra-processed foods to reduce cardiovascular risk [7,11]. These food-based dietary pattern recommendations are increasingly emphasised because they are more practical and easier for patients to implement than nutrient-focused advice. However, many post-myocardial infarction (post-MI) patients experience difficulties adhering to these recommendations. Poor nutrition literacy, limited understanding of dietary advice, and inadequate confidence in making appropriate food choices are common barriers to successful dietary modification [22]. Previous studies have reported that patients frequently recognise obesity and smoking as major cardiovascular risk factors while underestimating the importance of diet in preventing recurrent myocardial infarction, suggesting inadequate nutrition literacy [4].

Furthermore, dietary counselling provided during routine clinical care is frequently constrained by limited consultation time, heavy patient workload, and poor retention of information following hospital discharge [10,13]. These challenges reduce patients' ability to translate dietary recommendations into practical daily behaviours that support secondary prevention. Conventional patient education materials, including printed pamphlets and brief verbal counselling, often emphasise nutrient-based recommendations that require patients to interpret complex nutritional concepts and food labels [16]. In contrast, recent cardiovascular guidelines have shifted towards promoting overall heart-healthy dietary patterns because food-based recommendations are generally easier for patients to understand and implement in everyday life [11]. Nevertheless, existing educational materials are frequently limited in their ability to provide engaging, practical, and culturally relevant dietary guidance for Malaysian patients with post-MI. Therefore, educational resources should translate evidence-based dietary recommendations into practical and patient-centred messages that facilitate behaviour change and improve dietary adherence. Video-based education has emerged as an effective approach for delivering health information because it combines visual and auditory learning, enhances patient engagement, and allows repeated access to educational content at the learner's own pace [8]. Short educational videos are particularly advantageous because they minimise cognitive overload while maintaining learners' attention and improving knowledge retention. Previous studies have shown that video-based education can improve patients' understanding, self-efficacy, and adoption of healthier behaviours, particularly when multimedia principles are incorporated into instructional design [6,9].

Despite the increasing use of digital health education, there is still a lack of locally relevant and culturally appropriate video-based resources on heart-healthy dietary patterns for post-myocardial infarction patients in Malaysia especially in Bahasa Melayu. Existing educational materials are often generic and not adapted to Malaysian dietary practices, making it difficult for patients to relate the recommendations to their daily food choices. This highlights the need for an educational resource that presents evidence-based dietary recommendations in a practical, engaging, and patient-friendly format.

Therefore, this study aimed to develop and validate a short video series on heart-healthy dietary education for patients with post-myocardial infarction. Evidence-based dietary recommendations were first identified from current clinical practice guidelines and translated into a culturally appropriate short video series comprising nine educational topics. The developed videos were then evaluated for content validity and face validity to determine their suitability as an educational resource to complement routine dietary counselling and support secondary prevention following myocardial infarction.

MATERIALS AND METHODS

Study Design and Setting

This study employed a Design and Development Research (DDR) methodology guided by the Analysis, Design, Development, Implementation, and Evaluation (ADDIE) instructional design model to develop and validate a

short video series on heart-healthy dietary education for patients with post-myocardial infarction. The ADDIE model was selected because it provides a systematic and learner-centred framework for developing educational materials through sequential phases of analysis, design, development, implementation, and evaluation [19]. This approach ensures that educational resources are developed based on identified learning needs, designed using evidence-based instructional principles, and evaluated to determine their quality and suitability for the intended users. The study consisted of five phases: (I) content analysis of evidence-based dietary recommendations, (II) design of the short video series, (III) development of the short video series, (IV) implementation of the videos, and (V) evaluation of the developed videos.

Study Participants and Sampling

Two groups of participants were involved in this study: expert panels and post-myocardial infarction (post-MI) patients. Purposive sampling was used to recruit the expert panels based on their professional expertise in cardiology, dietetics, cardiovascular nursing, and nutrition education. Seven experts participated in the content validation process, meeting the recommended minimum of six to ten experts for content validation [23]. Convenience sampling was used to recruit post-MI patients through social media to evaluate the face validity of the developed videos. Eligible participants were adults diagnosed with post-myocardial infarction, able to understand and communicate in the Malay language, and able to watch the educational videos independently. Individuals with cognitive, visual, hearing, or communication impairments that could affect completion of the assessment were excluded. A total of 11 post-MI patients who fulfilled the inclusion criteria participated in the study.

Data Collection Tool and Technique

Phase I: Content Analysis

The first phase involved identifying evidence-based heart-healthy dietary recommendations for secondary prevention of cardiovascular disease. A structured literature search was conducted in PubMed, Scopus, Web of Science, and Cochrane. Clinical practice guidelines published within the last 10 years were screened according to predefined inclusion and exclusion criteria. Dietary recommendations extracted from the included guidelines were synthesised into common dietary domains, which formed the scientific basis for developing the educational videos.

Phase II: Design of the Short Video Series

The short video series was designed using selected principles of the Cognitive Theory of Multimedia Learning (CTML) to improve clarity, reduce cognitive load and improve patient understanding. Storyboards and script outlines were prepared to organise the sequence of narration, visuals elements, and key learning messages. The design incorporated key CTML principles, including coherence, signalling, segmenting, modality, redundancy reduction, contiguity, and personalization. The videos were designed using simple language, culturally appropriate food examples, and clear visual cues to enhance patient understanding.

Phase III: Development of the Short Video Series

Phase III involved developing the short video series based on the completed storyboards and script outlines. Educational content derived from the evidence synthesis was translated into engaging audiovisual materials using culturally appropriate visuals, animations, and narration. The videos were produced in Bahasa Malaysia to improve accessibility for the target population. The final video series consisted of nine educational topics, with each topic comprising three to four short videos of approximately one to two minutes in duration to maintain viewer engagement and facilitate learning. A combination of narration, text, graphics, and animations was incorporated to communicate the dietary recommendations in a simple and practical manner.

Phase IV: Implementation of the Short Video Series

During the implementation phase, the completed short video series was distributed to the selected expert panels and post-myocardial infarction patients for evaluation. Participants received the educational videos together with

the participant information sheet, informed consent form, sociodemographic questionnaire, and the relevant evaluation instruments through Google Forms. They were instructed to watch all videos before completing the assigned questionnaires. This phase ensured that all participants were adequately exposed to the educational materials prior to the assessment of content and face validity.

Phase V: Evaluation of the Short Video Series

The final phase evaluated the quality of the developed short video series through content validity and face validity. Content validity was evaluated by expert panels using the Content and Scientific Accuracy domains adapted from Silveira De Castro et al. (2007) [18]. Face validity was assessed among post-myocardial infarction patients using the same instrument, focusing on literary presentation, illustrations, material sufficiency, understandability, and quality of information.

Statistical Analysis

Descriptive statistics were used to analyse the sociodemographic characteristics of the expert panels and post-myocardial infarction (post-MI) patients using IBM SPSS Statistics version 30. The findings were presented as frequencies and percentages.

Content validity was evaluated using the Item-level Content Validity Index (I-CVI), Scale-level Content Validity Index based on the Average method (S-CVI/Ave), and Universal Agreement (S-CVI/UA). A minimum I-CVI value of 0.83 was considered acceptable for content validity [23]. The definitions and formulas of the CVI indices are presented in **Table 1**.

Face validity was analysed using the Item-level Face Validity Index (I-FVI), Scale-level Face Validity Index based on the Average method (S-FVI/Ave), and Universal Agreement (S-FVI/UA). An S-FVI/Ave value of at least 0.80 indicated acceptable face validity [24]. The definitions and formulas of the FVI indices are presented in **Table 2**.

Ethical Consideration

Ethical approval was obtained from the Faculty Ethics Review Committee (FERC), Faculty of Health Sciences, Universiti Teknologi MARA (UiTM) (Reference No.: FERC/FSK/MR/2026/00122). Written informed consent was obtained from all participants before data collection.

Table 1 The definition and formula of I-CVI, S-CVI/Ave, and S-CVI/UA

The CVI indices	Definition	Formula
I-CVI (item-level content validity index)	The proportion of raters giving an item a clarity and comprehension rating of 3 or 4	$I-CVI = (\text{Agreed item/number of experts})$
S-CVI/ Ave (scale-level content validity index based on the average method)	The average of the I-CVI scores for all items on the scale, or the average of the proportion relevance judged by all experts. The proportion relevant is the average of the relevance ratings by individual experts.	$S-CVI/Ave = (\text{sum of I-CVI scores})/ (\text{number of items})$ $S-CVI/Ave = (\text{sum of proportion relevance rating})/ (\text{number of experts})$
S-CVI/UA (scale-level content validity index based on the universal agreement method)	The proportion of items on the scale that achieve a relevance scale of 3 or 4 by all experts. The universal agreement (UA) score is given as 1 when the item achieves 100% experts in agreement otherwise, the UA score is given as 0	$S-CVI/UA = (\text{sum of UA scores})/ (\text{number of items})$

Table 2 The definition and formula of I-FVI, S-FVI/Ave, and S-FVI/UA

The CVI indices	Definition	Formula
I-FVI (item-level face validity index)	The proportion of raters giving an item a clarity and comprehension rating of 3 or 4	$I-FVI = (\text{Agreed item/number of rater})$
S-FVI/Ave (scale-level face validity index based on the average method)	The average of the I-FVI scores for all the items on the scale, or the average of proportion clarity and comprehension, was judged by all raters. The proportion, clarity, and comprehension are the average of ratings by individual raters.	$S-FVI/Ave = (\text{sum of I-FVI scores}) / (\text{number of items})$ $S-FVI/Ave = ((\text{sum of proportion clarity and comprehension rating}) / (\text{number of rater}))$
S-FVI/UA (scale-level face validity index based on the universal agreement method)	The proportion of items on the scale that achieve a clarity and comprehension scale of 3 or 4 by all raters. The universal agreement (UA) score is given as 1 when the item achieved 100% raters in agreement; otherwise, the UA score is given as 0.	$S-FVI/UA = (\text{sum of UA scores}) / (\text{number of items})$

RESULTS

Identification of Evidence-Based Heart-Healthy Dietary Pattern Recommendations

Following the application of the predefined inclusion and exclusion criteria, five clinical practice guidelines were included in the final evidence synthesis. The included clinical practice guidelines were published by the American Heart Association (AHA), American College of Cardiology (ACC/AHA), European Society of Cardiology (ESC), Ministry of Health Malaysia (MOH), and Taiwan Society of Cardiology. These guidelines addressed primary prevention, secondary prevention, or both, and consistently promoted heart-healthy dietary patterns to reduce cardiovascular risk. The findings formed the evidence base for developing the educational content of the short video series.

Design and Development of the Short Video Series

The short video series was designed and developed using the ADDIE instructional design model and selected principles of the Cognitive Theory of Multimedia Learning (CTML) to promote learner engagement and improve comprehension. The educational content was developed based on the evidence synthesis from the included clinical practice guidelines and focused on practical heart-healthy dietary recommendations for post-myocardial infarction patients.

The completed educational resource consisted of nine educational topics, each presented through three to four short videos of approximately one to two minutes in duration. The videos were produced in Bahasa Malaysia and incorporated culturally relevant food examples, simple language, narration, animations, and visual illustrations to facilitate learning. An overview of the educational topics and learning objectives is presented in **Table 3**.

Table 3 Topics and Learning Objectives of Short Video Series

Unit	Topics	Key Learning Focus
1	“Pengambilan Tenaga dan Pengekalan Berat Badan Sihat”	Healthy weight maintenance through balanced energy intake and physical activity.
2	“Pengambilan Buah-buahan dan Sayur-Sayuran yang Mencukupi”	Adequate fruit and vegetable intake for cardiovascular health.
3	“Bijirin Penuh sebagai Pilihan yang Lebih Sihat”	Selection of whole grains over refined grains.
4	“Pemilihan Sumber Protein yang Sihat”	Selection of healthier protein sources and appropriate portions.
5	“Lemak Sihat dan Pengurangan Lemak yang Memudaratkan”	Increased intake of healthy fats and reduced intake of saturated and trans fats.

6	“Pengambilan Garam yang Terkawal”	Identification and reduction of high-sodium foods.
7	“Pengambilan Gula Tambahan yang Terkawal”	Identification and reduction of added sugars.
8	“Pengurangan Pengambilan Makanan Ultra-proses dan Makanan Segera”	Reduction of ultra-processed and fast foods in favour of minimally processed options.
9	“Alkohol dan Risiko Penyakit Jantung”	Understanding cardiovascular risks associated with alcohol and strategies to reduce intake.

Evaluation of Content and Face Validity

Characteristics of Expert Panels

Seven experts participated in the content validation process. The majority were female (57.1%) and from the field of dietetics (57.1%), followed by cardiology (28.6%) and cardiovascular nursing (14.3%). Most experts held a bachelor's degree (42.9%), while two possessed a Doctor of Philosophy (PhD). The expert panel included lecturers, dietitians, cardiologists, and a cardiovascular nurse, with professional experience ranging from 10 to 26 years. The characteristics of the expert panels are summarised in **Table 4**.

Table 0 Characteristics of Participants for Content Validation

Characteristics	Expert reviewers (N=7)	Percentages (%)
Age (years)		
35	1	14.3
39	3	42.9
42	1	14.3
44	1	14.3
49	1	14.3
Gender		
Male	3	42.9
Female	4	57.1
Field of Expertise		
Dietetics	4	57.1
Cardiovascular Nursing	1	14.3
Cardiology	2	28.6
Highest Education Level		
Advance diploma	1	14.3
Degree	3	42.9
Masters	1	14.3
PhD	2	28.6
Correct Position Designation		
Nurse	1	14.3
Lecturer	2	28.6
Dietitian	2	28.6
Cardiologist	2	28.6
Years of Professional Experience		
10-15	4	57.1
16-20	2	28.6
21-25	0	0
26-30	1	14.3

Content Validity

The Content Validity Index (CVI) results demonstrated excellent agreement among the expert panels across all nine educational topics. The Item-level Content Validity Index (I-CVI) ranged from 0.86 to 1.00, while the Scale-level Content Validity Index based on the Average method (S-CVI/Ave) ranged from 0.95 to 1.00. The Scale-level Content Validity Index based on Universal Agreement (S-CVI/UA) ranged from 0.67 to 1.00. Overall, the findings indicated that the educational content was relevant, appropriate, and scientifically accurate. Detailed CVI results are presented in **Table 5**.

Characteristics of Post-Myocardial Infarction Participants

A total of 11 post-myocardial infarction (post-MI) patients participated in the face validation. Most participants were male (63.6%) and aged between 50 and 59 years (36.4%). The majority preferred the Malay language (90.9%), which corresponded to the language used in the educational videos.

Face Validity

The developed short video series demonstrated excellent face validity across all nine educational topics. The Scale-level Face Validity Index based on the Average method (S-FVI/Ave) ranged from 0.98 to 1.00, while the Universal Agreement (S-FVI/UA) ranged from 0.79 to 1.00. These findings indicate that participants considered the videos clear, relevant, and appropriate for the target population. The detailed face validity results are summarised in **Table 6**.

Table 5 Content Validity Index by Expert Panel members (n=7)

Item	Num ber of Expe rts	Topic 1 I- CVI	Topic 2 I- CVI	Topic 3 I- CVI	Topic 4 I- CVI	Topic 5 I- CVI	Topic 6 I- CVI	Topic 7 I- CVI	Topic 8 I- CVI	Topic 9 I- CVI
The contents are in agreement with the current knowledge	7	1	1	1	1	1	1	1	1	1
Recommendations are necessary and are correctly approached	7	0.86	1	1	1	1	1	0.86	1	1
Objectives are evident	7	1	1	1	1	1	1	1	1	1
The recommendation about the desired behaviour is satisfactory	7	1	1	1	1	1	1	1	1	1
There is no unnecessary information	7	1	1	1	0.86	0.86	1	1	1	1
Important points are reviewed	7	1	0.86	1	1	0.86	1	0.86	1	1
	S- CVI/ AVE	0.98	0.98	1	0.98	0.95	1	0.95	1	1
	S- CVI/ UA	0.83	0.83	1	0.83	0.67	1	0.67	1	1

Table 6 Face validation by Users (n=11)

Item	Num ber of Users	Topic 1 I-FVI	Topic 2 I-FVI	Topic 3 I-FVI	Topic 4 I-FVI	Topic 5 I-FVI	Topic 6 I-FVI	Topic 7 I-FVI	Topic 8 I-FVI	Topic 9 I-FVI
Literacy Presentation										
Language is neutral (no comparative adjectives, promotion, or false appeals)	11	1	1	0.91	1	1	1	1	1	1
Language is explanatory	11	1	1	1	1	1	1	1	1	1
Language is conversational and, in at least 50% of the material, written in the active voice	11	1	1	1	1	1	1	1	1	1
Material promotes and encourages treatment adherence following evaluation of the benefits and risks	11	1	0.91	1	1	1	1	1	1	1
Majority of the vocabulary is composed of common words	11	1	1	1	1	1	0.91	1	1	1
Context of each issue is communicated before the new information	11	1	1	1	1	1	1	1	1	1
Identification of headings and subheadings helps in the learning process	11	1	1	1	1	1	0.82	1	0.91	1
Vocabulary is composed of simple words	11	1	1	1	1	1	1	1	0.91	1
Language is adequate for outpatients	11	0.91	1	1	1	1	1	1	1	1
Ideas are concisely expressed	11	1	1	1	0.91	1	1	1	1	1
Text allows for interaction with verbal counselling	11	1	1	1	1	1	1	1	1	1
Text allows for interaction with logical linkage of the therapeutic plan	11	1	1	1	1	0.91	1	1	1	1
Planning and sequence of information is consistent, making it easier for the patient to predict its flow	11	0.91	0.91	1	1	0.91	1	0.91	1	1
Material is reader-friendly	11	1	1	0.91	1	1	1	0.91	1	1
Illustrations										
Illustrations are simple, appropriate and present an easily understandable outline	11	1	1	0.91	1	1	1	1	1	1
They are familiar to the readers	11	1	1	1	1	1	1	1	1	1
They are related to the text (express the desired purpose)	11	1	1	1	1	1	1	1	1	1
They are integrated with the text (easily located)	11	1	1	1	1	0.91	0.91	1	1	1

lists, tables, and graphs are self-explanatory	11	0.82	0.82	0.91	1	1	1	0.91	1	1
Material is sufficient, specific, and understandable										
Provides maximum benefit with minimization of complications	11	1	1	0.91	0.91	1	1	0.91	1	1
Enables the patient to determine whether he or she is facing a serious problem	11	1	1	1	1	0.91	1	1	0.82	1
Technical terminology is adequately defined	11	1	1	1	0.91	1	1	1	1	1
Headings and subheadings are clear and informative	11	1	1	0.91	0.91	1	1	1	1	1
Use of words or expressions with double meanings does not occur in the text	11	1	1	1	1	1	1	1	1	0.91
Content is written in a patient-centered style; that is, the patient is the focus of importance	11	1	1	1	1	1	1	1	1	1
Quality of information										
It is integrated to the local culture	11	0.73	1	1	1	0.91	1	0.82	0.82	0.91
Information is updated	11	1	1	0.91	1	1	1	1	1	1
It is adapted to the current culture	11	1	1	1	1	0.82	0.82	0.82	0.91	1
Material enables the patient to undertake the desired actions	11	1	1	0.82	0.91	1	1	0.91	0.91	1
Material helps patient to prevent potential problems	11	1	1	1	1	1	1	1	1	1
Material allows patient to achieve the maximum benefits possible	11	1	1	1	1	1	1	1	1	1
	S-FVI/AVE	0.98	0.98	0.98	1	0.99	0.98	0.99	0.99	1
	S-FVI/UA	0.84	0.84	0.79	0.95	0.84	0.84	0.84	0.89	1

DISCUSSION

The present study successfully developed and validated a short video series on heart-healthy dietary education for patients with post-myocardial infarction based on evidence synthesized from current clinical practice guidelines. The developed videos demonstrated excellent content validity and face validity indicating their suitability as an educational resource to complement routine dietary counselling for post-myocardial infarction patients. These findings suggest that integrating evidence-based dietary recommendations with a systematic instructional design approach can produce educational materials that are scientifically accurate, culturally appropriate, and easy for patients to understand and apply.

This study found that the five clinical practice guidelines shared similar recommendations for heart-healthy dietary pattern despite being developed by different organisations and countries. All guidelines encouraged

greater intake of fruits and vegetables, whole grains, healthy protein sources, and unsaturated fats while limiting sodium, added sugars, saturated fats, and ultra-processed foods. This consistent evidence provided a strong foundation for developing the short video series and supports the importance of promoting overall dietary patterns rather than focusing on individual nutrients for secondary prevention of cardiovascular disease. This may improve patients' ability to understand and apply dietary recommendations in their daily lives, particularly among individuals with limited nutrition literacy [3,17].

The short video series was developed using the ADDIE instructional design model, which provided a systematic framework for translating evidence-based dietary recommendations into educational materials suitable for post-myocardial infarction patients. The use of ADDIE ensured that the videos were developed through structured phases of analysis, design, development, implementation, and evaluation, resulting in educational materials that were evidence-based and tailored to patients' learning needs [2,12,19].

In addition, selected principles of the Cognitive Theory of Multimedia Learning (CTML) were incorporated to improve the clarity and effectiveness of the videos. The use of simple language, narration, animations, and culturally relevant Malaysian food examples helped present complex dietary information in a clear and engaging way. The short video format also allows patients to revisit the information at their own pace, reinforcing key dietary messages beyond routine counselling. These findings are consistent with previous studies showing that well-designed educational videos can improve patient engagement, knowledge retention, and self-management, particularly among individuals with chronic diseases [8].

The developed short video series demonstrated excellent content validity, with I-CVI values ranging from 0.86 to 1.00 and S-CVI/Ave values ranging from 0.95 to 1.00 across the nine educational topics. All I-CVI values exceeded the minimum acceptable value of 0.83, indicating strong agreement among the experts regarding the relevance, accuracy, clarity, and appropriateness of the educational content [23]. Most evaluation items achieved an I-CVI of 1.00, while the remaining items scored 0.86, suggesting that only minor improvements were required. These findings indicate that the developed videos provided evidence-based dietary recommendations that were scientifically appropriate and suitable for post-myocardial infarction patients. Similar findings have been reported in previous studies, supporting the use of the Content Validity Index (CVI) as a reliable method for validating health education materials [1,5].

Similarly, the developed videos achieved excellent face validity, with S-FVI/Ave values ranging from 0.98 to 1.00 across all nine topics. These findings indicate that the videos were perceived by post-myocardial infarction patients as clear, relevant, and appropriate for their educational needs. The use of simple language, visual illustrations, and culturally relevant examples may have contributed to the high level of acceptance among patients. Face validation is an important step in developing educational materials because it ensures that the information is suitable and understandable for the intended users before implementation. Consistent with previous validation studies, the high face validity scores suggest that the developed short video series is appropriate for use in patient education [20,24].

Strengths, Limitations, and Recommendations

A major strength of this study is the systematic development of the short video series using evidence synthesised from current clinical practice guidelines and the ADDIE instructional design model. The educational content was evidence-based and specifically developed for post-myocardial infarction patients using simple language, narration, animations, and culturally relevant Malaysian food examples to improve accessibility and patient engagement.

However, this study has several limitations. The short video series was developed only in Bahasa Malaysia, which may limit its accessibility among patients who primarily communicate in other languages. In addition, the study focused only on the validation of the developed videos and did not evaluate their effectiveness in improving dietary knowledge, behaviour change, clinical outcomes, or long-term adherence. Future studies should adapt and validate the videos in other languages, such as English, Mandarin, and Tamil, and evaluate their effectiveness in supporting long-term dietary behaviour change among post-myocardial infarction patients.

CONCLUSION

This study successfully developed and validated a short video series on heart-healthy dietary education for patients with post-myocardial infarction using a systematic Design and Development Research (DDR) approach guided by the ADDIE instructional design model. The educational content was developed based on evidence synthesised from current clinical practice guidelines and demonstrated excellent content validity, and face validity. These findings suggest that the developed short video series is an evidence-based, culturally appropriate, and user-friendly educational resource that can complement routine dietary counselling and support patients in adopting heart-healthy dietary practices for secondary prevention. Future studies should evaluate the effectiveness of the video series in improving dietary knowledge, behaviour, and long-term adherence among post-myocardial infarction patients.

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