

Documents

Shukri, N.A.M.^{a b}, Norman, M.F.H.^a, Rostam, M.A.^{a b}, Hamid, M.R.A.^c, Seman, M.S.A.^d, Romli, R.N.^e

DEVELOPMENT AND EVALUATION OF EDUCATIONAL VIDEO ON HEALTHY MATERNAL DIET TO PREVENT CHILD STUNTING

(2024) *Journal of Sustainability Science and Management*, 19 (10), pp. 59-71.

DOI: 10.46754/jssm.2024.10.006

^a Department of Nutrition Sciences, Kulliyah of Allied Health Sciences, International Islamic University Malaysia, Pahang, Kuantan, 25200, Malaysia

^b Food Security & Public Health Nutrition Research Group (FOSTER), Kulliyah of Allied Health Sciences, International Islamic University Malaysia, Pahang, Kuantan, 25200, Malaysia

^c Centre for Dietetics Studies, Faculty of Health Sciences, Universiti Teknologi MARA, Selangor, Puncak Alam, 42300, Malaysia

^d Department of Information Systems, Kulliyah of Information and Communication Technology, International Islamic University Malaysia, Selangor, Gombak, 53100, Malaysia

^e Faculty of Computing, College of Computing & Applied Sciences, Universiti Malaysia Pahang Al-Sultan Abdullah, Pahang, Pekan, 26600, Malaysia

Abstract

This study aimed to develop an animated educational video on healthy dietary intake during pregnancy to prevent child stunting and evaluate its suitability, understandability, and actionability. An animated video draft on recommended maternal total energy, carbohydrate, protein, and fat intakes during pregnancy was developed based on a review of available guidelines. The video content and features were evaluated by six field experts and 33 reproductive-aged women (target viewers). The evaluation was conducted using the Suitability Assessment of Materials and Patient Education Materials Assessment Tool for Audiovisual Materials tools. The video was suitable for use, with an 85% score indicating superior content. It has acceptable levels of understandability (83%) and actionability (72%), as evaluated by experts. The improved video received better ratings of understandability (97%) and actionability (98%) from the intended viewers. The newly developed animated video on healthy maternal nutrition during pregnancy has demonstrated its acceptability among the target viewers. The video has desirable levels of suitability, understandability, and actionability and thus has the potential as a nutrition education tool to impart knowledge and increase the understanding of mothers regarding healthy dietary intakes during pregnancy to prevent further cases of child stunting in Malaysia. © UMT Press

Author Keywords

animated video; Child stunting; maternal nutrition; nutrition education; pregnancy

Funding details

SRCG20-005-0005

Funding details

This research has been funded by the IIUM-UIMP-UITM Sustainable Research Collaboration Grant 2020 (SRCG20-005-0005).

References

- Ab Hamid, M. R., Mohd Yusof, N. D., Buhari, S. S.
Understandability, actionability and suitability of educational videos on dietary management for hypertension
(2022) *Health Education Journal*, 81 (2), pp. 238-247.
- Ankalaki, S., Biradar, V. G., Hukkeri, G. S.
A deep learning approach for malnutrition detection
(2024) *International Journal of Online and Biomedical Engineering*, 20, pp. 116-138.
Naik P, K. K (06)
- Azam, I., Hamirudin, A., Harith, S., Aris, M., Aziz, K., Rashid, N.
Development, validation and acceptability of a newly developed nutrition resource kit for at-risk and malnourished elderly in health clinics setting
(2022) *Malaysian Journal of Medicine and Health Sciences*, 18 (5), pp. 93-103.

- Brame, C. J.
Effective educational videos: Principles and guidelines for maximising student learning from video content
(2016) *CBE Life Sciences Education*, 15 (4), pp. 1-6.
- Brown, T., Goldman, S. N., Persell, S. D., Lee, J. Y., Doan, C. T., Stephens, Q., Baker, D. W., Cameron, K. A.
Development and evaluation of a patient education video promoting pneumococcal vaccination
(2017) *Patient Education and Counseling*, 100 (5), pp. 1024-1027.
- Cloninger, C. R., Cloninger, K. M.
People create health: Effective health promotion is a creative process
(2015) *International Journal of Person Centered Medicine*, 3 (2), pp. 114-122.
- Cortés-Albornoz, M. C., García-Guáqueta, D. P., Velez-van-Meerbeke, A., Talero-Gutiérrez, C.
Maternal nutrition and neurodevelopment: A scoping review
(2021) *Nutrients*, 13 (10), pp. 3530-3548.
- Dahodwala, M., Geransar, R., Babion, J., de Grood, J., Sargious, P.
The impact of the use of video-based educational interventions on patient outcomes in hospital settings: A scoping review
(2018) *Patient Education and Counseling*, 101 (12), pp. 2116-2124.
- Doak, C. C., Doak, L. G., Root, J. H.
Teaching patients with low literacy skills
(1996) *American Journal of Nursing*, 96 (12), pp. 16-28.
- Dzara, K., Chen, D. T., Haidet, P., Murray, H., Tackett, S., Chisolm, M. S.
The effective use of videos in medical education
(2020) *Academic Medicine: Journal of the Association of American Medical Colleges*, 95 (6), pp. 970-980.
- (2023) *Asia and the Pacific - regional overview of food security and nutrition 2023*,
FAO eBooks
- Geraghty, A. A., O'Brien, E. C., Alberdi, G., Horan, M. K., Donnelly, J., Larkin, E., Segurado, R., McAuliffe, F. M.
Maternal protein intake during pregnancy is associated with child growth up to 5 years of age, but not through insulin-like growth factor-1: Findings from the ROLO study
(2018) *British Journal of Nutrition*, 120 (11), pp. 1252-1261.
- Godana Boynito, W., Tessema, G. Y., Temesgen, K., de Henauw, S., Abbeddou, S.
Acceptability and feasibility of video-based health education for maternal and infant health in Dirashe District, South Ethiopia: A qualitative study
(2023) *PLOS Global Public Health*, 3 (6), p. e0000821.
- Guo, P. J., Kim, J., Rubin, R.
How video production affects student engagement: An empirical study of MOOC videos
(2014) *Proceedings of the first ACM Conference on Learning @ Scale Conference (L@S '14)*, pp. 41-50.
Association for Computing Machinery, New York
- (2023) *Technical Report National Health and Morbidity Survey (NHMS) 2022: Maternal and Child Health, Malaysia*,
Ministry of Health Malaysia

- Islam Khan, A.
Effects of pre- and postnatal nutrition interventions on child growth and body composition: The MINIMat trial in rural Bangladesh
(2013) *Global Health Action*, 6, p. 22476.
- Jamil, N. A., Chau, S. H., Abdul Razak, N. I., Shamsul Kamar, I. I., Mohd-Said, S., Rani, H., Sameeha, M. J.
Development and evaluation of an integrated diabetes-periodontitis nutrition and health education module
(2021) *BMC Medical Education*, 21 (1), p. 278.
- Kayler, L. K., Keller, M. M., Crenesse-Cozien, N., Dolph, B., Cadzow, R., Feeley, T. H.
Development and preliminary evaluation of ilearnKAS: An animated video about kidney allocation to support transplant decision-making
(2019) *Clinical Transplantation*, 33 (8), p. e13638.
- Koss, T. S., Macci Bires, A., Cline, T. W., Mason, D. L.
Evaluation of an educational video: What to expect on the first day of chemotherapy
(2018) *Critical Care Nursing Quarterly*, 41 (2), pp. 142-160.
- Kusiar, Z.
(2011) *Pemakanan semasa hamil*,
(September 15). Ministry of Health Malaysia
- (2016) *National Plan of Action for Nutrition of Malaysia III 2016–2025*,
Ministry of Health Malaysia
- (2017) *Recommended nutrient intakes for Malaysia (RNI). A report of the technical working group on nutrition guidelines*,
Ministry of Health Malaysia
- (2020) *Malaysian dietary guidelines*,
Ministry of Health Malaysia
- (2020) *Perinatal care manual*,
(4th ed). Ministry of Health Malaysia
- Okuhara, T., Ishikawa, H., Okada, H., Kiuchi, T.
Readability, suitability and health content assessment of cancer screening announcements in municipal newspapers in Japan
(2015) *Asian Pacific Journal of Cancer Prevention*, 16 (15), pp. 6719-6727.
- Rubin, A. M.
The uses-and-gratifications perspective of media effects
(2009) *Media effects: Advances in theory and research*, pp. 165-184.
Bryant, J. & Oliver, M. B. (Eds), –). Taylor & Francis
- Sahoo, K., Sahoo, B., Choudhury, A. K., Sofi, N. Y., Kumar, R., Bhadoria, A. S.
Childhood obesity: Causes and consequences
(2015) *Journal of Family Medicine and Primary Care*, 4 (2), pp. 187-192.
- Saleh, A., Syahrul, S., Hadju, V., Andriani, I., Restika, I.
Role of maternal in preventing stunting: A systematic review
(2021) *Gaceta Sanitaria*, 35, pp. S576-S582.
- Shahriar, M. M., Iqbal, M. S., Mitra, S., Das, A. K.
A deep learning approach to predict malnutrition status of 0–59 months old children in Bangladesh
(2019) *IEEE International Conference on Industry 4.0, Artificial Intelligence, and Communications Technology (IAICT)*, pp. 145-149.
Bali

- Shoemaker, S., Wolf, M., Brach, C.
(2014) *PEMAT Tool for Audiovisual Materials (PEMAT-A/V)*,
Agency for Healthcare Research and Quality
- Silva, P.
Food and nutrition literacy: Exploring the divide between research and practice
(2023) *Foods*, 12 (14), p. 2751.
- Tuong, W., Larsen, E. R., Armstrong, A. W.
Videos to influence: A systematic review of effectiveness of video-based education in modifying health behaviors
(2014) *Journal of Behavioral Medicine*, 37 (2), pp. 218-233.
- Vaivada, T., Akseer, N., Akseer, S., Somaskandan, A., Stefopoulos, M., Bhutta, Z. A.
Stunting in childhood: An overview of global burden, trends, determinants, and drivers of decline
(2020) *American Journal of Clinical Nutrition*, 112, pp. 777S-791S.
(Suppl 2)
- Wong, J. E.
Stunting in children still a problem in Malaysia
(2019) *The Star*,
(August 9)
- Wong, S. T., Saddki, N., Mohamad, N., Roslan, N. S.
(2018) *Alat penilaian bahan pendidikan pesakit, PEMAT (M) dan panduan pengguna*,
Arifin. W. N USM-Pusat Pengajian Sains Pergigian
- (2015) *Stunting in a nutshell*,
World Health Organisation
- (2018) *Reducing stunting in children: Equity considerations for achieving the Global Nutrition Targets 2025*,
World Health Organisation
- (2021) *Nutrition counselling during pregnancy*,
(May 21). World Health Organisation
- Yusoff, M. S. B.
ABC of content validation and content validity index calculation
(2019) *Education in Medicine Journal*, 11, pp. 49-54.

Correspondence Address

Shukri N.A.M.; Department of Nutrition Sciences, Pahang, Malaysia; email: norazwani@iium.edu.my

Publisher: Universiti Malaysia Terengganu

ISSN: 18238556

Language of Original Document: English

Abbreviated Source Title: J. Sustainability Sci. Manage.
2-s2.0-85207878670

Document Type: Article

Publication Stage: Final

Source: Scopus