

Lights, Camera, Nutrition! Can Videos Improve Dietary Knowledge for Future Brides & Grooms?

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Abstract

Preconception nutritional preparedness is crucial to support a healthy pregnancy and prevent fetal growth disorders. In Indonesia, many prospective couples lack adequate understanding of this, making audiovisual-based nutrition education a promising approach; however, its effectiveness still requires further evaluation. This community service aimed to improve nutritional knowledge of prospective brides and grooms through a Communication, Information, and Education (CIE) approach using audiovisual media. The intervention was conducted at the Office of Religious Affairs (KUA) in Sukajadi Subdistrict, Bandung City, involving 74 prospective couples selected through accidental sampling. A 9-minute video containing information on nutritional needs, preconception issues, and recommended intake served as the educational tool. Evaluation used a one-group pretest-posttest design with a validated and reliable questionnaire. The analysis showed a significant increase in knowledge scores after the intervention (N-Gain = 0.44; moderate category). These results suggest that audiovisual-based CIE effectively enhances understanding of preconception nutrition in an engaging and accessible manner. However, the lack of a control group limits the interpretation of the findings. This activity supports audiovisual media as an alternative strategy for preconception nutrition education to enhance readiness for marriage and pregnancy.

Keywords

Audiovisual Media; Communication, Education; Nutrition Knowledge; Preconception Nutrition



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1. INTRODUCTION

The preconception period represents a critical window of opportunity to improve reproductive health outcomes and break the intergenerational cycle of malnutrition. In Indonesia, where nutritional challenges among women of reproductive age remain prevalent, addressing premarital health knowledge has become an urgent priority. National data paint a concerning picture: 32% of women aged 15-24 suffer from anemia (Ministry of Health RI, 2023), while 17.3% experience chronic energy deficiency (SSGI, 2022). Concurrently, rising rates of overweight and obesity among this demographic have increased risks of gestational diabetes and other pregnancy complications (Weir et al., 2024). These nutritional issues stem partly from significant knowledge gaps - studies in Bandung reveal over 60% of prospective couples lack understanding of basic preconception care, including essential micronutrients like folic acid and iron (Prianti & Afiyanti., 2021; Krisdayani et al., 2023).

Current premarital education programs through the Office of Religious Affairs (KUA), while strategically positioned to address these gaps, face substantial limitations. Our preliminary survey at KUA Sukajadi found only 23% of participants understood balanced nutrition concepts for preconception, with most rating the existing print-based materials as unengaging and ineffective. This aligns with broader educational challenges identified by Patata (2023), who noted that the static nature of current KUA educational approaches fails to stimulate participant interest or knowledge retention.

Both theory and evidence support the potential of audiovisual media to transform this educational landscape. Grounded in Mayer's (2002) multimedia learning principles, which demonstrate enhanced comprehension through dual-channel (visual+auditory) information processing, video-based interventions have shown particular promise in health education contexts. Studies in similar settings have documented knowledge improvements of 36% when using video compared to traditional methods (Hayatiningrum et al., 2023). Despite this evidence, such approaches remain underutilized in KUA programs due to resource constraints and policy gaps.

This community service initiative, therefore, aimed to evaluate the effectiveness of a specially designed 9-minute educational video in improving preconception nutrition knowledge among prospective couples at KUA Sukajadi. We hypothesized that the audiovisual intervention would produce significant knowledge gains ($N\text{-Gain} \geq 0.3$), particularly in micronutrient understanding, while demonstrating the feasibility

of integrating multimedia tools into existing premarital education frameworks. The findings are relevant to Indonesia's National Strategy for Stunting Prevention (2024-2025), which identifies preconception education as a key intervention for addressing the country's persistent malnutrition challenges. This study contributes to broader efforts to transform premarital education into an effective platform for improving reproductive health outcomes by bridging the gap between evidence-based educational methods and community-level implementation.

2. METHODS

The community service activity in the form of premarital nutrition education through audiovisual media was carried out using the Asset-Based Community Development (ABCD) approach. This approach aimed to strengthen local capacities in supporting improved nutrition literacy among prospective brides and grooms. The activity took place at the Office of Religious Affairs (KUA), utilizing the Premarital Guidance (Bimwin) session as a strategic moment to deliver educational content through video presentations. The intervention was conducted over one month, from February 11 to March 12, 2025, assisted by two enumerators during implementation. The stages of the ABCD method implementation were explained in detail as follows:

a. Discovery (Asset Identification)

At the initial stage, the implementing team conducted observations and communicated with KUA officials to identify available assets that could be utilized during the activity. The identified assets included: Prospective brides and grooms attend a regular Bimwin schedule before marriage; A meeting room adequate for video screenings; Supporting facilities such as a projector and sound system; Counselors or speakers from KUA and the Community Health Center (Puskesmas) who routinely facilitated Bimwin activities. In addition, an initial identification of the prospective couples' nutrition and reproductive health knowledge was conducted through informal Q&A sessions and a brief questionnaire as a pretest. This helped assess their level of understanding before the education session began.

b. Dream (Shared Planning)

After mapping the local potential, the team held participatory discussions with KUA representatives and Puskesmas staff regarding the importance of nutrition education before marriage. The discussions aimed to: Agree on the implementation schedule that would not disrupt the existing Bimwin flow; Identify relevant local nutrition issues, such as anemia among adolescent girls, stunting, and the importance of iron supplements (TTD); Design short, interactive, easy-to-

understand video-based educational content that suits the target audience's characteristics.

c. Design (Action Plan)

The team developed a concrete action plan, which included: Producing and editing educational videos covering basic nutrition, the importance of nutrition before and during pregnancy, and the prevention of anemia and stunting; Developing evaluation tools in the form of pretests and posttests to measure knowledge improvement; Preparing leaflets or summary materials as supporting printed media. All materials were validated by nutrition experts and tailored to the local context.

d. Delivery (Implementation)

The activity was implemented during the scheduled Bimwin sessions at KUA. The implementation flow was as follows: Prospective couples filled out the pretest to assess initial knowledge; A 9–10 minute educational video was played, integrated into the reproductive health material session; The team facilitated an interactive discussion along with the counselor or health officer; Educational leaflets summarizing the video content and balanced nutrition tips were distributed; Participants completed the posttest as an evaluation of their understanding; Participant enthusiasm was relatively high, as the video medium was engaging, easy to understand, and different from the usual counseling methods.



Figure 1. Premarital Nutrition Education Intervention Using Audiovisual Media

e. Destiny (Sustainability)

To ensure the sustainability of the program, the team: Handed the educational video file in digital format to KUA to be reused in future Bimwin sessions; Conducted follow-up coordination with the Community Health Center and the

District Health Office to integrate the educational content into reproductive health programs for adolescents and prospective couples; The video material should be uploaded to digital platforms (such as YouTube or KUA's social media) to provide broader public access.

3. FINDINGS AND DISCUSSION

Premarital nutrition education using audiovisual media, conducted at the Office of Religious Affairs (KUA) in Sukajadi Subdistrict, aimed to evaluate changes in preconception nutrition knowledge among prospective couples by comparing their pretest and posttest scores. During the counseling sessions, participants received information regarding the importance of meeting nutritional needs before pregnancy to support a healthy gestation and reduce the risk of pregnancy-related complications (Tambunan et al., 2024).



Figure 2. Premarital Nutrition Education Intervention Using Audiovisual Media

We measured the impact of the audiovisual intervention using bivariate analysis. The comparison of knowledge scores before and after the intervention is summarized in Table 1.

Table 1. Analysis of the Impact of Premarital Nutrition Education Using Audiovisual Media

Variable	n	Before		After		α (Mean \pm SD)	P-value	N-Gain (%)
		Min – Max	Mean \pm SD	Min – Max	Mean \pm SD			
Knowledge	77	10 – 23	16,47 \pm 2,941	13 – 25	19,81 \pm 8,521	3,34 \pm 5,58	0,001	44,31

The analysis results indicated that audiovisual education significantly improved participants' knowledge, with an average score increase of 3.34 points ($p = 0.001$) and an N-Gain score of 44.31%, which was categorized as moderately effective. This improvement was likely attributable to the multimedia-based design of the educational content. According to Mayer's theory (2021), integrating visual and

auditory elements enhances information processing and retention. These findings are consistent with previous studies by Adawiyah et al. (2023) and Handayani et al. (2021), which reported that audiovisual media by simultaneously stimulating multiple senses outperformed conventional methods such as lectures or printed materials in improving information retention and participant engagement (Rahmawati et al., 2022).

Despite these promising results, the study had several limitations. The quasi-experimental design without a control group limited the ability to attribute the observed improvements solely to the intervention, as the influence of external factors could not be ruled out (Nurhayati et al., 2022; Prasetyo et al., 2021). Moreover, the study was conducted at a single KUA location, which constrained the generalizability of the findings (Fitriani et al., 2024). Data collection was carried out immediately after the intervention, providing no information on the sustainability of knowledge gains or their translation into actual nutritional behaviors. Therefore, follow-up evaluations are needed at three and six months post-intervention (Amoore et al., 2023). In addition, potential bias may have occurred if participants completed the questionnaires in a rush or with assistance from their partners, which may have affected the validity of the responses.

Based on these findings, audiovisual media are recommended as a valuable educational strategy for premarital counseling. To enhance learning outcomes, educational sessions should ideally be conducted in rooms separate from administrative activities and arranged to promote optimal participant engagement (Ministry of Health of the Republic of Indonesia, 2023).

4. CONCLUSION

Premarital nutrition education through audiovisual media significantly improved prospective couples' knowledge of preconception nutrition. This medium was classified as moderately effective based on the N-Gain analysis, with the integration of visual and auditory elements serving as key supporting factors. However, the implementation conditions also influenced its effectiveness. Moving forward, the program is recommended to be implemented sustainably, with improvements in the technical aspects of its delivery. Future studies should involve more diverse locations to enhance representativeness, include control or comparison groups, and conduct follow-up evaluations at three and six months post-intervention to assess the sustainability of behavioral and nutritional status changes.

REFERENCES

- Adawiyah, E. R. (2019). Efektivitas Pendidikan Gizi Melalui Media Video dalam Meningkatkan Pengetahuan Gizi Anak Usia Dini. *Edusentris*, 4(1), 14-26. <https://ejournal.upi.edu/index.php/edusentris/article/view/73842>
- Amoore, B. Y., Gaa, P. K., Amalba, A., & Mogre, V. (2023). Nutrition education intervention improves medical students' dietary habits and their competency and self-efficacy in providing nutrition care: A pre, post and follow-up quasi-experimental study. *Frontiers in nutrition*, 10, 1063316. <https://doi.org/10.3389/fnut.2023.1063316>
- Hamida, W. O., Natsir, N. A., Hardiansyah, M. R., & Mursalin, E. (2024). Penerapan Media Audio Visual untuk Meningkatkan Minat dan Hasil Belajar Siswa pada Materi Pokok Energi dalam Kehidupan. *Al-Alam: Islamic Natural Science Education Journal*, 3(1), 17–26. <https://doi.org/10.33477/al-alam.v3i1.4942>
- Handayani, G. L., Dewi, V., Elrifda, S., Rihiantoro, T., Rusdi, M., & Haryanto, H. (2021). Development of Educational Media in Assessing the Growth and Development of Toddlers. *International Journal of Science Annals*, 4(2), 9. <https://doi.org/10.26697/ijsa.2021.2.2>
- Hastjarjo, T. D. (2019). Rancangan eksperimen-kuasi. *Buletin psikologi*, 27(2), 187-203.
- Hayatiningrum, R. I. Z., Cahyati, Y., & Februanti, S. (2023). The Effect of Health Education Through Animated Video Media and Leaflets About Breastfeeding Techniques on the Level of Knowledge and Skills of Breastfeeding Mothers. *International Journal of Advancement in Life Sciences Research*, 6(3), 38-46. I: <https://doi.org/10.31632/ijalsr.2023.v06i03.004>
- Long, C., Beres, L. K., Wu, A. W., & Giladi, A. M. (2022). Patient-level barriers and facilitators to completion of patient-reported outcomes measures. *Quality of life research : an international journal of quality of life aspects of treatment, care and rehabilitation*, 31(6), 1711–1718. <https://doi.org/10.1007/s11136-021-02999-8>
- Kementerian Kesehatan Republik Indonesia. (2022). *Buku pedoman akreditasi rumah sakit* (edisi terbaru). Jakarta: Kementerian Kesehatan RI.
- Kementerian Kesehatan RI. 2018. *Hasil Riset Kesehatan Dasar (Riskesdas) 2018*. Jakarta: Badan Penelitian dan Pengembangan Kesehatan Kementerian RI.
- Kim, Y. R., Chung, S. W., Kim, M. J., Choi, W. M., Choi, J., Lee, D., ... & Shim, J. H. (2024). Limited generalizability of retrospective single-center cohort study in comparison to multicenter cohort study on Prognosis of hepatocellular carcinoma. *Journal of Hepatocellular Carcinoma*, 1235-1249. <https://doi.org/10.2147/JHC.S456093>

- Krisdayani, D. D., Agustina, A., & Hanifah, L. (2023). Hubungan Pola Makan, Pengetahuan Gizi Seimbang Dan Sosial Budaya Dengan Status Gizi Calon Pengantin. *Gizi Indonesia*, 46(1), 11-22.
<https://doi.org/10.36457/gizindo.v46i1.721>
- Mayer, R. E. (2002). Multimedia learning. In *Psychology of learning and motivation* (Vol. 41, pp. 85-139). Academic Press.
- Munira, S. L. (2023). Hasil Survei Status Gizi Indonesia (SSGI) 2022. Jakarta: Badan Kebijakan Pembangunan Kesehatan Kementerian Kesehatan RI, 77
- Nurhayati, Arifin, Z., & Damayanti, R. (2022). Penerapan Teori Bruner Untuk Meningkatkan Hasil Belajar Siswa Pada Pembelajaran Bilangan Pecahan di Kelas VII SMPI Nurul Hidayah Kuripan Kabupaten Probolinggo. *Jurnal Pendidikan Dan Konseling*, 4(5), 1–7.
<https://core.ac.uk/download/pdf/322599509.pdf>
- Priani, I. F., & Afiyanti, Y. (2021). *Preparing pregnancy through Preconception Education Training*. *Enfermería Clínica*, 29(S2), 304–309.
<https://doi.org/10.1016/j.enfcli.2019.04.140>
- Rahmawati, R., Dharmono, D., & Mahrudin, M. (2022). Validitas Buku Ilmiah Populer Etnobotani *Artocarpus altilis* (Sukun) di Desa Sabuhur Kecamatan Jorong. *Wahana-Bio: Jurnal Biologi dan Pembelajarannya*, 14(2), 137-148.
<https://dx.doi.org/10.20527/wb.v14i2.14472>
- Tambunan, H., Nurhidayati, N., Saleha, S., Miska, T., Khaira, N., & Fitria, Y. (2024). Penyuluhan Pentingnya Gizi Pra Nikah untuk Mempersiapkan Kehamilan Sehat di KUA Kecamatan Peusangan Kabupaten Bireuen. *Jurnal Kreativitas Pengabdian Kepada Masyarakat (PKM)*, 7(6), 2719-2727.
<https://doi.org/10.33024/jkpm.v7i6.14925>
- Weir, T. L., Majumder, M., & Glastras, S. J. (2024). A systematic review of the effects of maternal obesity on neonatal outcomes in women with gestational diabetes. *Obesity Reviews*, 25(7), e13747. <https://doi.org/10.1111/obr.13747>
- World Health Organization. (2019). Guidelines on physical activity, sedentary behaviour and sleep for children under 5 years of age. In *Guidelines on physical activity, sedentary behaviour and sleep for children under 5 years of age* (pp. 36-36).