



The Effect of Nutrition Counseling Intervention on Attitudes About Nutrition

Cindy Feriska Saputri*, Linda Riski Sefrina, Millyantri Elvandari

Universitas Singaperbangsa Karawang, Indonesia

*Email: saputricindy17@gmail.com

ABSTRACT

Soccer is the most popular sport in the world. In Indonesia, this sport has a high enthusiasm. The importance of providing nutrition education through nutrition counseling can directly impact the health and performance of athletes. If knowledge and attitudes towards nutrition are inadequate and understanding the nutritional role of various types of food is not appropriate, this can cause health and fitness problems. This study aimed to determine the effect of providing nutritional counseling on attitudes about nutrition in SSB Kancil Mas athletes. This research is experimental with a one-group pre- and post-test design conducted at SSB Kancil Mas Karawang. Respondents of this study amounted to 15 people. The respondents in this study were selected using a purposive random sampling technique, and data analysis was conducted using the Wilcoxon Test. The results showed a significant difference in attitude values before and after providing nutritional counseling ($p < 0.05$). Providing nutritional counseling improves attitudes about nutrition in SSB Kancil Mas Karawang athletes.

Keywords: nutrition counseling, attitudes, athletes, soccer

INTRODUCTION

Football is the most popular sport globally and has extraordinary appeal in Indonesia. The public's enthusiasm for this sport is very high, regardless of gender or age. Starting from children to adults, both men and women love football. This popularity is reflected in the existence of various football clubs throughout Indonesia. In this game, scoring a goal against the opponent's goal is the main goal that requires high coordination and skill between the feet and the ball. The players must play deftly, concentrate, and have good speed and precision. The quality of players relies not only on individual abilities but also on team cohesiveness. Therefore, football is a sport that builds teamwork and fosters a spirit of togetherness. (Permatasari et al., 2022).

An athlete must have strong physical, psychological, technical, and tactical abilities. An athlete's achievement is influenced by two factors, namely internal factors and external factors. Internal factors, such as motivation, confidence, and talent, are essential in providing strong encouragement from within the athlete. This factor is a strong basis for an athlete to stay focused and consistently achieve goals. Meanwhile, external factors such as the role of a competent and supportive coach, research results, adequate facilities, and the fulfillment of proper nutritional needs

help improve the quality of training and athlete performance. The interaction between these factors forms a supportive environment so athletes can optimize their potential and succeed in competitions. (Dieny et al., 2021). Adolescent athletes who undergo high-intensity training need a balanced nutritional intake to support growth and development. People with greater nutritional needs are undergoing extreme diets, experiencing eating disorders, and taking supplements that are claimed to improve sports performance. (Carl et al., 2017).

The relationship between nutritional knowledge, attitudes, and eating behaviors directly impacts the health and performance of athletes. A positive attitude towards nutrition motivates athletes to consistently implement and maintain healthy eating habits. (Hasanpouri et al., 2023). One must combine better knowledge, attitudes, and behaviors to develop sound and correct eating habits. A diet with balanced nutrition plays a vital role in determining an athlete's physical fitness level. However, many athletes still eat unhealthy foods despite being given special dietary guidelines before the games. This condition is feared to have an impact on athletes' physical fitness, which has the potential to reduce performance when competing. (Nabila et al., 2024).

Increased knowledge, attitudes, and actions must work together to form good and correct eating habits. Attitudes and actions in choosing food are influenced by athletes' nutritional knowledge level, which can impact the athlete's diet and physical condition. Impaired health and fitness can result from a lack of nutritional knowledge and a misperception of the nutritional role of different types of food. (Sa'adah et al., 2023). Nutrition counseling is an effective way to improve athletes' knowledge, attitudes, and abilities in meeting nutritional needs. (Sofiani, 2020).

Nutrition counseling is a two-way communication process between nutritionists and clients or patients. The goal is to increase knowledge, form positive attitudes, and encourage behavior change to help clients or patients solve the nutritional problems they face (Ministry of Health of the Republic of Indonesia, 2021). Effective nutrition counseling can help athletes choose nutritious foods and snacks and stay hydrated. (Lee & Lim, 2019).

The implementation of nutrition counseling requires several essential components, namely, counselors, methods, materials, media, place, time, and frequency of implementation. (Aliyah & Khasanah, 2023). Media use in nutritional counseling is essential to help clients understand the information provided. The media acts as a means of communication that supports the delivery of messages from the informant to the recipient and facilitates feedback from the recipient of the message to the informant. (Mahdiah, 2023). One of the efforts to increase the effectiveness of counseling is through interactive media. This medium combines elements of text, images, sound, and animation to make it more engaging. Interactive media also allows users to control the learning process as needed. Well-designed media can increase user trust, thus supporting material delivery faster and more efficiently. (Saputri et al., 2023).

Providing nutrition counseling can be an effective solution for SSB Kancil Mas athletes to increase a positive attitude towards the importance of nutrition. Thus, this study aims to analyze the effect of providing nutrition counseling on attitudes about nutrition in SSB Kancil Mas athletes.

METHOD

This research is experimental with a one-group pre- and post-test design conducted at SSB Kancil Mas Karawang. The respondents of this study were 15 people. A purposive random sampling technique selected research respondents with inclusion criteria, including SSB Kancil Mas Karawang athletes born in 2010, who were willing to participate in a series of studies until completion.

Nutrition counseling combines lecture, discussion, question-and-answer methods, and a 1x meeting with SSB Kancil Mas Karawang athletes. The media used to help the counseling process is interactive web media. Nutrition counseling is carried out online through the Google Meet application for 30 minutes. The material presented included balanced nutrition for athletes and eating arrangements before, during, and after the match.

In this study, attitudes about athlete nutrition can be calculated based on attitude questionnaire scores. The data taken were pre-test and post-test attitude scores through Google Forms. The questionnaire has as many as 10 questions. Each question in the questionnaire with a positive answer is given a score of 1 (one), and each question with a negative answer is given a 0 (zero). The highest total is 10 and the lowest is 0.

Data analysis using SPSS statistical software version 25. The normality test using Shapiro-Wilk showed that the variables in this study were not normally distributed. The Wilcoxon test was used to determine the significance of differences in attitudes before and after nutritional counseling. The significance level was determined using $\alpha=0.05$. If the value of $p<\alpha$, then the tested variable has a significant difference.

RESULTS AND DISCUSSION

The study's results on the effect of nutrition counseling on attitudes about nutrition in SSB Kancil Mas Karawang athletes are generally presented in Table 1.

Table 1. Differences in Attitudes About Nutrition Before and After Nutrition Counseling

Variable	Mean \pm SD	Min-Max	p-value
Pre-test	7 \pm 1	5-9	0,035
Post-test	8 \pm 1	6-9	

Attitudes about nutrition in SSB Kancil Mas athletes generally showed a significant improvement after receiving an intervention in nutritional counseling. Their average attitude score increased by 1 point after counseling compared to before counseling, from 7 \pm 1 at the pre-test to 8 \pm 1 at the post-test. Based on the results of statistical tests, the difference in attitude values between before and after counseling was shown to be significant with a value of $p = 0.035$ ($p < 0.05$), which

indicates a substantial influence of nutrition counseling interventions on changes in athletes' nutritional attitudes. These findings reinforce that providing nutrition counseling can increase athletes' awareness and understanding of the importance of nutrition in supporting their performance and overall health.

Attitude can be interpreted as a person's internal response to a particular object or stimulus that reflects relevant points of view and emotions, such as good-bad, happy-dislike, agree-disagree, etc.) (Raniwati et al., 2022). Attitude is critical because it can affect an individual's desire and ability to maintain health and meet their nutritional needs independently. Individuals with a positive attitude towards nutrition tend to be more open to receiving and applying information in their daily lives. Attitude is not only an expression of a specific motive, but also describes a person's readiness or intention to act in a particular situation (Notoatmodjo, 2010). According to the Theory of Planned Behavior, attitudes towards a behavior are one of the main factors determining a person's intention to carry out the behavior. The more positive an individual's attitude towards an action, such as eating a balanced, nutritious diet, the more likely the action will be realized (Ajzen, 2020).

The results of this study are in line with previous research, which shows that nutrition education through nutrition counseling can have a significant impact on attitude change. Research conducted by Syofyana (2021), An athlete at the Regional Technical Implementation Unit (UPTD) of Sports Talent of West Sumatra Province showed that nutrition education through nutrition counseling significantly affected attitude change ($p=0.000$). By the results of Efendi's (2023) research, There was a significant difference in knowledge ($p=0.001$) and attitudes ($p=0.000$) before and after nutritional counseling, which showed a positive influence. Both studies show that educational approaches such as nutrition counseling effectively increase understanding and positive attitudes towards nutrition. This strengthens the evidence that interpersonal and participatory nutrition interventions can form better attitudes regarding the importance of nutritional intake in supporting optimal athlete performance.

Attitudes toward nutrition can significantly influence eating behaviors that impact athletic performance. The lack of a positive attitude towards nutrition illustrates the importance of increasing positive attitudes among athletes. The tendency to lack attitudes towards nutrition among athletes suggests that they may not prioritize nutrition as a key factor in their athletic performance. A positive attitude towards nutrition is essential for promoting healthy eating behaviors and adherence to proper nutrition guidelines. (Hasanpouri et al., 2023). In addition to internal factors, attitudes towards nutrition are influenced by various external factors, such as peer influence, family environment, and cultural background, which can also shape a person's attitude towards nutritional intake. (Zaman et al., 2021).

Nutrition counseling is a supportive process, characterized by a collaborative relationship between counselors and clients in determining food choices, setting priorities, formulating goals, and developing action plans related to food, nutritional needs, and physical activity. (Fiorini et al., 2023). The significant difference in results showed that nutritional counseling effectively improved attitudes

about nutrition in SSB Kancil Mas athletes. The concept of delivering interesting nutrition counseling material, namely using interactive web media, can help make it easier for athletes to understand the material provided. In addition, a question session was held on any material that was not clearly understood.

Interactive web media is designed to convey nutritional information in an engaging and easy-to-understand manner for athletes, especially SSB Kancil Mas athletes. This website presents nutritional materials based on three stages of match time, namely before, during, and after the match, each represented by a clickable navigation icon. The interactive web is a digital platform that allows users to interact directly with content through various features such as navigation buttons, quizzes, simulations, and dynamic multimedia, so that it can actively improve the learning experience (Goh & Sandars, 2020). This approach allows users to explore content independently and as needed, increasing engagement and understanding of nutrition materials. Attractive visuals and interactive learning flows help facilitate the process of internalizing information, especially for teenagers who tend to be responsive to technology-based media. Research by Chen (2017) shows that interactive web-based educational media can increase learning motivation and encourage positive health behavior changes.

This study has limitations on the relatively small number of samples and the implementation of the intervention, which is only carried out once. Hence, the findings are exploratory and cannot be generalized widely. Nevertheless, the results obtained still show a meaningful positive impact. For further research, it is recommended to involve more respondents, add control groups, and conduct ongoing counseling interventions to obtain a more comprehensive picture of changes in attitudes towards nutrition.

CONCLUSION

There was a significant difference in attitudes about nutrition before and after nutrition counseling, which showed an increase in the value of attitudes about nutrition. A positive attitude towards nutrition is essential to promote healthy eating behaviors and adherence to proper nutrition guidelines.

ACKNOWLEDGEMENT

The researcher would like to thank the Supervisor and Trainer of SSB Kancil Mas Karawang for permitting the researcher to conduct the research, and the SSB Students for their cooperation as a sample in this study.

REFERENCES

Ajzen, I. (2020). The theory of planned behavior: Frequently asked questions. *Human Behavior and Emerging Technologies*, 2(4), 314–324. <https://doi.org/10.1002/hbe2.195>

- Aliyah, F., & Khasanah, T. A. (2023). Hubungan Pelayanan Gizi, Kualitas Makanan, dan Konseling Terhadap Kepuasan Pasien di RSUD Balaraja. *Jurnal Kesehatan Indonesia*, XIII(2).
- Carl, R. L., Johnson, M. D., & Martin, T. J. (2017). Promoting Healthy Weight-Control Practices in Young Athletes COUNCIL ON SPORTS MEDICINE AND FITNESS. *American Academy of Pediatrics*, 140(3), 2–13.
<http://pediatrics.aappublications.org/content/pediatrics/140/3/e20171871.full.pdf>
- Chen, J., Lieffers, J., Bauman, A., Hanning, R., & Allman-Farinelli, M. (2017). Designing health apps to support dietetic professional practice and their patients: Qualitative results from an international survey. *JMIR MHealth and UHealth*, 5(3). <https://doi.org/10.2196/mhealth.6945>
- Dieny, F. F., Jauharany, F. F., Rahadiyanti, A., Fitranti, D. Y., Tsani, A. F. A., & Kurniawati, D. M. (2021). Program asuhan gizi olahraga (PAGO) atlet sepatu roda sebagai strategi memperbaiki profil status gizi, biokimia dan kualitas asupan. *Jurnal Keolahragaan*, 9(2), 148–158.
<https://doi.org/10.21831/jk.v9i2.34747>
- Efendi, R., Norhasanah, Solechah, S. A., & Suryani, N. (2023). Pengaruh Konseling Terhadap Peningkatan Pengetahuan dan Sikap Tentang Gizi dan Keamanan Pangan Pada Ibu Hamil. *Jurnal Kesehatan Reproduksi*, 14(1), 11–28.
- Fiorini, S., Neri, L. D. C. L., Guglielmetti, M., Pedrolini, E., Tagliabue, A., Quatromoni, P. A., & Ferraris, C. (2023). Nutritional counseling in athletes: a systematic review. *Frontiers in Nutrition*, 10(November). <https://doi.org/10.3389/fnut.2023.1250567>
- Goh, P.-S., & Sandars, J. (2020). A vision of the use of technology in medical education after the COVID-19 pandemic. *MedEdPublish*, 9, 49. <https://doi.org/10.15694/mep.2020.000049.1>
- Hasanpouri, A., Rahmani, B., Gharakhanlou, B. J., Solaimanian, S., Shahsavari, S., Rasouli, A., Abbasi, S., Ebrahimi-Kalan, A., Rouzitalab, T., Hoseinabadi, Z., & Shiri-Shahsavari, M. R. (2023). Nutritional knowledge, attitude, and practice of professional athletes in an Iranian population (a cross-sectional study). *BMC Sports Science, Medicine and Rehabilitation*, 15(1), 1–10. <https://doi.org/10.1186/s13102-023-00776-3>
- Kemenkes RI. (2021). Panduan Pendampingan Gizi Pada Atlet. In *Panduan Pendampingan Gizi Pada Atlet*.
- Lee, S., & Lim, H. (2019). Development of an Evidence-based Nutritional Intervention Protocol for Adolescent Athletes. *Journal of Exercise Nutrition & Biochemistry*, 23(3), 29–38.
<https://doi.org/10.20463/jenb.2019.0020>
- Mahdiah. (2023). *Pengantar Konseling Gizi dan Menyusui*.
- Nabila, A. A., Pratama, S. A., Dini, C. Y., Ismawati, R., & Wahjuni, E. S. (2024). Hubungan Pengetahuan, Sikap, dan Perilaku Gizi Seimbang dengan Tingkat Kebugaran pada Atlet Non-Elit Kategori Stop and Go Sport di UKM Olahraga UNESA. *Jurnal Gizi Dan Kesehatan*, 16(2), 181–191.
- Notoatmodjo, S. (2010). *Promosi Kesehatan dan Perilaku Kesehatan*. PT Rineka Cipta Ruhimat.

- Permatasari, P. I., Masrikhiyah, R., Ratnasari, D., Kesehatan, F. I., & Setiabudi, U. M. (2022). Hubungan Tingkat Pengetahuan Gizi terhadap Asupan Gizi , IMT , dan Frekuensi Minuman Isotonik pada Siswa SSB Dewatara. *Jurnal Pendidikan Tambusai*, 6, 14679–14688.
- Raniwati, L., Ernawati, Sari, I. N., Sari, D. E. A., & Astuti, H. (2022). Faktor-Faktor Yang Mempengaruhi Kinerja Kader Dalam Pelaksanaan Kegiatan Posyandu Di Wilayah Kerja Puskesmas Anak Air Kota Padang. *Jurnal Indonesia Kebidanan*, 6(2), 106–117.
- Sa'adah, U., Hardiansyah, A., & Darmuin, D. (2023). Hubungan Pengetahuan Gizi dan Asupan Zat Gizi Makro dengan Tingkat Kebugaran Jasmani Atlet Sepak Bola di SSB Ganesha Putra FC Purwodadi. *Jurnal Ilmu Gizi Indonesia (JIGZI)*, 4(1). <https://doi.org/10.57084/jigzi.v4i1.1026>
- Saputri, N. I., Ronitawati, P., Nadiyah, N., Nuzrina, R., & Dewanti, L. P. (2023). Pengaruh pemberian MI-Nut (Interactive Media on Nutrition) terhadap peningkatan pengetahuan dan sikap gizi pada siswa di SD Negeri Sudimara Tangerang. *Ilmu Gizi Indonesia*, 7(1), 1. <https://doi.org/10.35842/ilgi.v7i1.353>
- Sofiani, R. (2020). PENGARUH KONSELING GIZI TERHADAP ASUPAN ENERGI DAN ZAT GIZI MAKRO SERTA DAYA TAHAN JANTUNG PARU (VO2MAKS) ATLET CABANG LARI JARAK JAUH. In *Poltekkes Kemenkes Bandung*.
- Syofyana, R. (2021). *Pengaruh Edukasi Gizi Melalui Konseling Gizi Terhadap Perilaku Makan Pada Atlet di UPTD Kebakatan Olahraga Provinsi Sumatera Barat*. Universitas Andalas.
- Zaman, N. N. Z. K., Muhamad, A. S., & Jusoh, M. R. C. (2021). Knowledge, attitude, practice (KAP) and dietary intake of young university athletes following sports nutrition education. *Malaysian Journal of Nutrition*, 27(2), 189–200. <https://doi.org/10.31246/MJN-2020-0098>