

The Influence of Nutrition Education with Booklet Media on the Knowledge of Nutrition in Athletes Pencak Silat in PWNu Surabaya

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ABSTRACT

Pencak Silat athletes face challenges in nutritional knowledge which affects their performance. This study aims to assess the impact of nutrition education via booklets on their knowledge. This study employed experimental research using a one group pre- and post-testing. Data collection was conducted using a questionnaire and statistical tests using the Wilcoxon Test. The respondents used amounted to 36. The result showed that the Wilcoxon Test p-value (Asymp.Sig 2-Tailed) was 0.000 <0.05, Therefore, there was an impact on the knowledge of martial arts athletes at PWNu Surabaya on nutrition education through booklet media. The conclusion is nutrition education using booklet media significantly affects the increase in knowledge of martial arts athletes at PWNu Surabaya.

INTRODUCTION

An athlete is an individual who participates in sports and has specific nutritional needs that exceed those of non-athletes. Pencak Silat, a traditional martial art from Indonesia, exemplifies this. Nutritional problems among athletes can impair their performance, making effective nutrition education crucial. Studies have shown that a lack of nutritional knowledge is common among athletes, which can be addressed through targeted educational interventions¹⁻². An athlete is also defined as someone who is talented in their field, with different behavior patterns and their own personality³. There are many athletes one of whom is a Pencak Silat athlete. Pencak Silat is a martial art that is one of the characteristics of Indonesia and its culture. Athletes have other problems besides sports, namely nutritional problems. This is one of the factors that impair an athlete's performance. A lack of awareness among athletes about the importance of sports nutrition is a factor hindering their performance. Also, several factors affect athletes' awareness, such as age, education, and profession⁵. Some of the things used to determine the right nutrients for athletes are energy needs, fluid intake needs, feeding time, macronutrient intake, and supplements. Proper nutrient intake for adolescent athletes is essential to improve health conditions, sports performance, and support growth and development⁶. For example, a study conducted in Indonesia in 2023 found that 88.65% of 185 athletes had insufficient knowledge about nutrition⁷. Nutrition education can be

used to overcome this lack of knowledge the *application of balanced nutrition in athletes can have a positive impact*) of balanced nutrition in athletes can have a positive impact on athletes⁸.

Enhancing knowledge can be achieved through education and attitudes while nutrition education refers to the process of increasing nutrition knowledge, and developing healthy attitudes and behaviors. The purpose of nutrition education is to encourage changes in positive behavior related to food and nutrition. Tools such as booklets, flyers, audio-visual materials, and posters can be used to conduct the training⁹.

One type of learning tool is a booklet, which is a book with text and graphics in it. Another type of print media that can be used to disseminate health information is a brochure¹⁰.

Based on the background described by the researchers, the researchers are interested in investigating the effect of nutrition education provided through a booklet on nutrition knowledge of Pencak silat athletes, especially in one training center. *This training center is based at) PWNU (Nahdlatul Ulama Regional Leadership) in Surabaya, where there is still no nutritionist to organize or provide sports nutrition training for Pencak silat athletes.*

MATERIALS AND METHODS

This study utilized a quantitative experimental design with a one-group pre- and post-test approach. Conducted at PWNU East Java Surabaya, the research involved 40 athletes, with a sample of 36 selected using simple random sampling. Data were analyzed using the Wilcoxon test to assess the impact of nutrition education provided through booklet media. Results were presented in tables and described in detail.

RESULTS

Characteristics of Respondents of Pencak Silat Athletes at PWNU Surabaya

Table 1. Characteristic Of Pencak Silat Athletes

Variabel	F	%
Ages (Year)		
14	8	22.2
15	7	19.4
16	10	27.8
17	11	30.6
Gender		
Man	20	55.6
Women	16	44.4
Level Of Education		
SMP/MTS	13	36.1

SMA/MA	23	63.9
Total	36	100

Source: Primary Data 2024

The results of the table above show that the characteristics of martial arts athletes in research respondents at PWNU Surabaya are mostly 17 years old as many as 30.6% athletes. The majority are male with 55.6% athletes and the majority are currently studying at the SMA/MA level with 63.9% athletes.

Knowledge level of pencak silat athletes before and after education

Tabel 2. The Effect of Nutrition Education with Booklet Media on Nutrition Knowledge in Pencak Silat Athletes

Variabel	F	%
Before Education		
Good	15	41.7
Fair	15	41.7
Less	6	16.6
After Education		
Good	34	94.4
Fair	2	5.6
Less	0	0
Total	36	100

Source: Primary Data 2024

Table 2 shows that before education there were 41.7% athletes who had good knowledge and 41.7% athletes who had sufficient knowledge, although the majority of athletes showed solid understanding of 94.4% athletes after receiving instruction.

The Effect of Nutrition Education with Booklet Media on Nutrition Knowledge in Pencak Silat Athletes

Table 3. Knowledge level of pencak silat athletes before and after education

Variabel	F	%	p-value	Interpretation
Negative Rank	1	2.9	0.000	Significance
Positive Rank	31	86.1		
Ties	4	11		
Total	36	100		

Source: Primary Data 2024

The results of the table above show that the majority of martial arts athletes experienced an increase in knowledge level of 86.1% athletes obtained from pre and posttest. The Wilcoxon test results obtained a p-value of 0.000 which means that there is an effect of nutrition education using booklet media on the knowledge of martial arts athletes at PWNU Surabaya.

DISCUSSION

Characteristics of Respondents of Pencak Silat Athletes at PWNu Surabaya

The majority of martial arts athletes who were respondents at PWNu Surabaya were 17 years old, with a total of 11 individuals. Athletes' ages fall within the category of teenagers. The majority of martial arts athletes who were respondents at PWNu Surabaya had male with a total of 20 people (55.6%). Gender is the difference between men and women biologically and the biological functions of a person are born and cannot be exchanged between the two. Martial arts is an unusual type of sport, because the techniques used are very hard and many think that only men are capable, but over time, women are also able to master martial arts techniques, especially pencak silat¹¹.

Research conducted at PWNu Surabaya found that the majority of pencak silat athletes surveyed were studying at the SMA/MA level, representing 63.9% of respondents. This study focused on athletes with junior high school and high school / MA education levels, because higher levels of education are believed to facilitate understanding and rational responses to information. The findings align with Notoatmodjo's theory that higher education levels correlate with better knowledge retention and understanding.

Knowledge level of pencak silat athletes before and after education

The majority of martial arts athletes at PWNu Surabaya who were respondents had a level of knowledge in the good category of 15 people (41.7%). This is related to athletes' ignorance about nutrition so that the level of knowledge of athletes still does not entirely have good knowledge.

According to Notoatmodjo, a person's senses of hearing and sight have an impact on their knowledge⁵, this is in line with the findings of research conducted by the author where martial arts athletes at PWNu Surabaya still have not received nutrition education so that most athletes as many as 21 people (57.3%) have not reached the category of good knowledge level.

This study is in accordance with research conducted by Finda Istiqomah who examined the effect of education on hypertension knowledge, it was found that the majority of respondents knowledge level before being given education only had a moderate level of knowledge¹².

Meanwhile, the majority of martial arts athletes who have been given nutrition education have a level of knowledge in the good category as many as 34 people (94.4%). This is related to the nutritional education that has been provided so that the respondents' knowledge increases¹³⁻¹⁶.

According to the theory of Notoatmodjo which states that someone who has received information on a topic will have more knowledge, this theory is in accordance with this study because martial arts athletes have received material about nutrition education using booklet media⁵.

The Effect of Nutrition Education with Booklet Media on Nutrition Knowledge in Pencak Silat Athletes

The level of knowledge is obtained from the results of a questionnaire in which according to Notoatmodjo knowledge can be assessed by interviewing or by using a questionnaire containing points about the content of messages about nutrition education that will be seen and assessed from respondents who are research subjects. Data collection was carried out at PWNU Surabaya⁵.

Before nutrition education is carried out, respondents are given a questionnaire that functions as a measure of the respondent's knowledge level, after the data is processed, it is found that the level of knowledge of martial arts athletes in the good category is 41.7%, as well as the good category, the sufficient category has a value of 41.7% and a category of less than 16.7%. After nutrition education was carried out using booklet media and then the questionnaire was given after 7 days, it was found that the level of knowledge of martial arts athletes in the good category increased to 94.4%, besides that there was also a decrease in the less category which initially had a value of 16.6% after being given nutrition education there was not a single martial arts athlete who had a less category.

The average increase in the value of the results were in the pre-test the average value is 72.5 in the Fair category, while after nutrition education using booklet media, the average increase in value is 90.7 with a good category, this data is in accordance with previous researchers conducted by Resi Putri where before being given education respondents who had a good level of knowledge were only 15 out of 30 respondents (59%) and rose to 29 people (96.7%) after being given education¹⁷. Other results were also obtained who also obtained data before being given education respondents who had a good level of knowledge were only 28.6% while after being given education it rose to 50%¹⁸. The increase in scores on the post-test results occurred after nutrition education using booklet media was carried out, these results are in accordance with the theory according to Machfoedz and Suryani in Kumala which states that counseling / education is an activity in health education by disseminating information in order for people to be conscious, knowledgeable, and willing to follow instructions in accordance with the health information provided¹⁰.

The p value (Asymp.Sig 2-tailed), based on the Wilcoxon test findings, is 0.000. Given that 0.000 is less than 0.05, it is possible to deduce that H₀ is rejected and H₁ is accepted. This indicates that martial arts athletes at PWNU Surabaya have a greater understanding of nutrition because to nutrition instruction provided by booklet media. These findings are consistent with Hutasoit's research, which indicates that there is a relationship between schooling and teenage knowledge because the p-value for the Wilcoxon Signed Rank Test is 0.000.¹⁹ These results can be concluded that education is effective in significantly increasing adolescent knowledge²⁰⁻²³.

These results indicate that the use of booklet media is effective for education / counseling, even though the post test is conducted 7 days after the education is carried out athletes still remember and understand, these results can be attributed to the media used during education²⁴. These results indicate that the use of booklet media is effective for education / counseling, even though the post test is carried out 7 days after the education is carried out athletes still remember and understand, these results can be attributed to the media used during education, namely booklets, because the booklet itself has advantages such as being easy to carry, containing more messages, and containing attractive images²⁵⁻²⁶ besides that by using booklet media respondents can continue to study existing material so that it can increase the knowledge of respondents²⁷⁻²⁸. This research is also in line with research conducted by Muthia where after being given education the respondent's knowledge value increased from 46.55 to 50.65 and the statistical test results showed a p-value of 0.000 which means there is an effect of education using booklet media²⁹.

CONCLUSION

The study found that the majority of Pencak Silat athletes were male, aged 17, and studying at the senior high school level. Nutritional status was generally good among respondents. The pre-test revealed that 41.7% had good knowledge, which increased to 94.4% post-education. Test results with SPSS software using the Wilcoxon Test obtained that the p-value of 0.000 <0.05 shows that there is an effect of nutrition education using booklet media on martial arts athletes at PWNU Surabaya.

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