NUTRITIONAL EDUCATION EFFECTS THROUGH INSTAGRAM ON ENERGY INFLUENCE AND YOUTH NUTRITION STATUS

Thresia Dewi KB[a], Agustian Ipa, Ayu Wirdani
Nutrition Department, Health Polytechnic of Ministry of Health in Makassar
[a] Corresponding author: thresiadewi72@gmail.com

ABSTRACT

Lifestyle changes in adolescents cause changes in food choices so that it will have an impact on nutritional status. Breakfast is one effort in tackling nutritional problems in adolescents. Knowledge of nutritious food obtains by providing nutrition education to teenagers through Instagram media. This study aims to determine the effect of nutritional education through Instagram media on the energy intake and nutritional status of adolescents at Angkasa SMA Maros Regency. The research design was Quasi-Experimental with one-group pre-post test design. The sample was students of class XI Science and Social Sciences with 46 people chosen randomly. Nutrition education provides through Instagram. Energy intake for breakfast is obtained through a 1x24 hour recall and then processed using a computer. Nutritional status obtained through anthropometric measurements, namely weight and height. Data were analysed using the Chi-Square test. The results showed that there was no influence between nutritional education through Instagram media on nutritional intake and nutritional status of adolescents. However, there was a decrease in energy intake with enough categories before and after nutrition education was given as much as 19.6% and an increase in nutritional status with standard categories before and after nutrition education was as much as 2.2%.

Keywords: Nutrition Education, Instagram, Energy Intake, Youth, Nutritional Status

INTRODUCTION

Lifestyle changes in adolescents cause changes in choosing the food they eat so that their nutritional needs are not sufficient or even excessive (Multiple nutritional problems). If their food intake does not balance according to what they need for growth and other activities, there will be growth barriers that will later have an impact on nutritional status (Sutriani et al. 2013).

This dual nutrition problem is quite high in Indonesia, especially in South Sulawesi Province. Data on Riskesdas in South Sulawesi in 2013 was above the national figure of 11.2% of adolescents aged 16-18 years classified as malnourished (1.7% very thin and 9.5% skinny) and 6.6% of adolescents aged 16-18 years classified as overnutrition (4.9% fat and 1.7% obese).

Breakfast is an effort to overcome the problem of multiple nutrition in adolescents. Nutritious intake and adopting a healthy diet should support proper nutrition. Knowledge of one is obtained through education using social media, like Instagram, which can access via the internet. The results of research conducted by the Ministry of Communication and Information in tracking users of online activities in 2014, concluded that of the 98% of teens surveyed knew about the internet and 79.5% of them were internet users (Panji A, 2014).

Puwanto's research (2015) states that social media can be used as a media for public health education so that this Instagram is expected to be a media for nutrition counselling that can be used by teenagers as a communication tool and to share nutritional information that can improve nutrition knowledge. Instagram is the 6th most popular after Facebook, We Chat, Twitter, WhatsApp and Skype (Kemp S, 2015).

The results of Winata's study (2015) illustrated the proportion of students who ate breakfast less that is 64.5%. This study shows that there are still fewer teenagers who know the importance of breakfast. Therefore, this Instagram is used as a medium to provide education on breakfast to teenagers, so that teenagers are expected to know and want to do the importance of breakfast.

METHOD

This research design is Quasi-Experimental with one-group pre-post test design. This research conduct from April to July 2017. The population in this study were all students in Angkasa High School in Maros Regency totalling 214 people. The sample was students of class XI Science and Social Sciences with 46 people chosen randomly.

Data collection was carried out at the beginning of the activity (pretest) and the end of the event (posttest) obtained through interviews using questionnaires, energy intake obtained with 24-hour recall using 24-hour form recall, and nutritional status obtained by measuring body weight

and height using digital scales with accuracy of 0.1 gram and Microtoise with accuracy of 0.1 cm. Nutrition education material about the importance of breakfast delivered through Instagram. Breakfast material will be uploaded four times a week for two weeks every Monday, Wednesday, Friday and Sunday at 9.am except for the first time posting will be done twice.

Processing data is inputted into a computer and analysed using univariate analysis. This analysis was conducted to examine one influential variable. The effect of nutrition education through Instagram media on energy intake and nutritional status of adolescents in Angkasa High School in Maros Regency analysed by chi-square.

RESEARCH

The results showed that in general (69.6%) the sample was female, the majority (65.2%) of the sample was 16 years old with the work of sample fathers generally (41.3%) private employees and the general sample mothers (78.3 %) housewife. The sampling intensity in opening Instagram is ten times (26.1%), as presented in table 1.

Table 1. Sample Characteristics

Sample Characteristics	n[1]	%
Sex		
Female	32	69,6
Age		
16	30	65,2
17	15	32,6
18	1	2,2
Father's job		
Private employees	19	41,3
Mother's job		
Housewife	36	78,3
Frequency uses Instagram 10x	12	26,1%

n[1] = 46

The results showed that samples with less energy intake at pretest and remained less at posttest were 16 people (34.8%). Samples that had less energy intake at the time of the pretest and became sufficient at the time of posttest were three people (6.5%). While the sample with enough energy intake at the pretest and changed to less when posttest was 12 people (26.1%). Samples with sufficient energy intake at the time of the pretest and adequate energy intake at the time of posttest were 15 people (32.6%) presented in table 2.

Table 1. Nutrition Intake Before and After Nutrition Education

Nutrition intake - pretest	Nutrition intake - posttest			
	Less		Sufficient	
	n	%	n	**%**
Less	16	34,8	3	6,5
Sufficient	12	26,1	15	32,6

n[1] = 46

The results showed that the samples with normal nutritional status at pretest and remained normal at posttest were 23 people (50%). Samples with abnormal nutritional status at pretest and regularly changing at posttest were one person (2.2%), and the samples who had abnormal nutritional status at pretest and nutritional status remained abnormal at posttest as many as 22 people (47.8 %) presented in table 3.

Tabel 2. Nutritional Status Before and After Nutrition Education

Nutritional status - pretest	Nutritional status - posttest			
	Normal		Malnutrition	
	n	%	n	%
Normal	23	50	0	0
Malnutrition	1	2,2	22	47,8

n[1] = 46

The results showed that most samples (47.8%) had less responses, with less intake. The Chi-square test results below show that the calculated value is higher than the graph value (0.4> 0.05), meaning that there is no effect between nutrition education through the media Instagram on adolescent energy intake presented in table 04.

Table 3. Effect of Nutrition Education on Energy Intake

Postingan Instagram	Nutrition intake - posttest				*P*
	Less		Sufficient		
	n	%	n	%	
Baik	6	13	2	4,3	0,4
Kurang	22	47,8	16	34,8	

n[1] = 46

The results showed that the sample that had a lack of response but had a healthy nutritional status was the same as the number of samples that had less response with abnormal nutritional status as much as 41.3%. The Chi-square test results below show that the calculated value is higher than the graph value (0.7> 0.05), meaning that there is no influence between nutrition education through Instagram media on the nutritional status of adolescents presented in table 5.

Tabel 4. Effect Of Nutritional Education On Nutritional Status

Instagram Posting	Nutritional status - posttest				*P*
	Normal		Tidak normal		
	n	%	n	%	
Good	5	10,9	3	6,5	0,7
Less	19	41,3	19	41,3	

$n^1 = 46$

DISCUSSION

The results showed that samples with less energy intake at pretest and remained less at posttest were 34.8% and samples that had sufficient energy intake at the pretest and had enough energy intake at posttest were 32.6%. This situation is due to energy intake influenced by the closest factor is the existing infection, but not realised by the sample. Also, there is no availability of household food, peer influence, food products that advertise in excess and environmental sanitation which indirectly affects a person's health which in turn can affect the condition of his nutritional status. But this research is not in line with the study by Widyarsana et al. (2014) about energy intake in students of Budi Luhur Kembang Mertha Middle School, Dumoga Timur District, Bolaang Mongondow Regency. In the study found a deficient level of energy intake or deficit as many as five respondents (3.6%) and respondents who had sufficient levels of energy intake there were 81 respondents (58.7%) and more energy intake there were 46 respondents (33.3%).

The results showed that samples that had normal nutritional status at pretest and nutritional status remained normal at posttest as much as 50% and samples that had abnormal nutritional status at the time of pretest and nutritional status remained abnormal at posttest as much as 47.8%. It is because adolescence is a period of growth and process of human maturity; at this time, some changes are unique and sustainable. Physical changes because the growth that occurs will affect the health and nutritional status. The imbalance between intake of needs or adequacy can lead to nutritional problems, both in the form of overnutrition and malnutrition. The results of these studies are not in line with the research conducted by Rinanti (2014), which states that 48.4% of students at SMP 1 Muhammadiyah Kartasura have good nutritional status.

The results showed that the calculated value is higher than the graph value (0.4> 0.05), which means that there is no influence between nutrition education through the media on adolescent energy intake. It is because knowledge of nutrition is an indirect factor in consumption. Where the existence of proper knowledge about nutrition is not necessarily able to improve its energy intake because there are still many other factors that can affect intake in addition to nutritional knowledge such as erroneous understanding of food, pocket money, and the presence of excessive food advertisements. The results of this study are in line with the research of Mulyadi et al. (2013), which states that it is not the relationship of nutritional knowledge to energy intake in adolescents.

On the other hand, this research is not in line with the study conducted by Robert et al. (2013) which states that there is an influence between balanced food counselling on significant energy intake p = 0.009. It is because high attitudes and actions do not necessarily follow high nutrition knowledge. In adolescents, environment and lifestyle can influence adolescent attitudes and actions in determining diet. Teenagers are still very easily influenced, especially by peers. Adolescence is a period of searching for identity and is easily influenced by the environment. Environmental factors also affect a person acting with the existence of advertisements and peer relations, especially teenagers, tend to pay less attention to their nutrient consumption because of the busyness at school — also, those who play more roles, such as peers and big pocket money to get food.

The results showed that the calculated value is higher than the graph value (0.7> 0.05), which means there is no influence between nutritional education

through the media Instagram on the nutritional status of adolescents. It is because knowledge has an indirect impact on nutritional status, but knowledge of nutrition is the main problem of nutritional problems. While the direct causes of nutritional problems are nutrition and infectious diseases. Among the direct reasons and central issues, there are indirect causes, namely food supplies at home, child and maternal care and health services. The main problem apart from knowledge also consists of education, poverty and skills where the root of the problem is the direct economic crisis (Supariasa, 2012).

This study is in line with the research of Elnovriza et al. (2009), which states that there is no significant relationship between knowledge of nutrition and nutritional status in students. Also, the vulnerable time between nutritional education provided through the media Instagram and the determination of nutritional status at the time of the posttest lasted a short time so that it was unable to change the attitudes and behaviour of the teenager which would later affect the intake and then affect his nutritional status.

CONCLUSION

1. There was a decrease in energy intake with enough categories before and after being given nutrition education 19.6%
2. An increase in nutritional status with standard categories before and after nutrition education provided as much as 2.2%
3. There is no influence between nutrition education through Instagram media on adolescent energy intake (0.4> 0.05).
4. There is no influence between nutrition education through Instagram media on the nutritional status of adolescents (0.7> 0.05).

SUGGESTION

Suggestions for further researchers are that new research needed by extending the research period so that the research sample can change attitudes and behaviours regarding breakfast habits and add variables that affect the energy intake and nutritional status of adolescents.

REFERENCES

Elnovriza D, Bachtiar H, Yenrina. (2009). Hubungan Pengetahuan dan asupan Zat Gizi dengan Status Gizi Mahasiswa Asrama Universitas Andalas. Jurnal Kesehatan Masyarakat. Volume 4 (1).

Hasanudin. (2014). Internet adalah Candu: Pengguna Internet Indonesia. Http://alvarastrategic.com/internet-adalah-candu-fenomena-pengguna-internet-indonesia/ (diakses, 13 Mei 2014)

Kementerian Kesehatan R.I. 2013. Pokok-pokok Hasil Riskesdas Provinsi Sulawesi Selatan Tahun 2013. Jakarta: Depkes R.I.

Kemp S. (2015). Digital Social and Mobile in apac in 2015.. http://wearesocial.com/sg/special-report/digital-social-mobile-in-apac-in-2015 (diakses 11 Maret 2015).

Mulyadi CK, Fransisca, Pramudya KM, Kevin, Lenardi M, Sukmaniah S. (2013). Hubungan Antropometri, Aktivitas Fisik, dan Pengetahuan gizi dengan Asupan Energi dan Komposisi makronutrien pada Remaja. Volume 1 (2).

Panji A. (2014). Hasil Survei Pemakaian Internet Remaja Indonesia. http://tekno.kompas.com/read/2014/02/19/1623250/Hasil.Survai.Pemakaian.Internet.Remaja (diakses, Rabu 19 Februari 2014)

Purwanto JE. (2015). Pemanfaatan media sosial sebagai media edukasi kesehatan bagi masyarakat berperilaku merokok. Prosiding Nasional APIKES-AKBID Citra Medika Surakarta. Surakarta; APIKES Citra Medika Surakarta

Rinanti OS. (2014). Hubungan Asupan Zat Gizi Makro dan Pengetahuan Gizi Seimbang dengan Status Gizi Siswa-Siswi di SMP Muhammadiyah 1 Surakarta. Karya Tulis Ilmiah. Fakultas Ilmu Kesehatan Universitas Muhammadiyah Surakarta.

Robert D, Posangi I, (2013). Penyuluhan Makanan Seimbang Terhadap Asupan Zat Gizi, Status Gizi dan Prestasi Belajar Siswa Sekolah Menengah Kejuruan Negeri Sangkub Kabupaten Boolang Mongondow Utara. GIZIDO. Volume 5 (2).

Supariasa. (2012). Penilaian Status Gizi. Jakarta. Penerbit Buku Kedokteran EGC.

Sutriani A, Ngadiarti I. (2013). Hubungan Antara Asupan Energi, Protein, Lemak, Karbohidrat, Serat dengan Kejadian Gizi lebih pada Anak Remaja Usia 13-18 Tahun di Pulau Jawa (Analisis Data Sekunder Riskesdas 2010). Nutrire Diaita. Volume 5 (2).

Widyarsana AGC, Nancy S.H Molanda, Shirley Kawengian, Ricky C Sondakh (2014). Hubungan Antara Asupan Energi dengan Status Gizi pada Pelajar Sekolah Menengah Pertama Budi Luhur Kembang Mertha Kecamatan Dumonga Timur Kabupaten Bolaang Mongondow Tahun 2014. Fakultas Kesehatan Masyarakat Universitas Sam Ratulangi.

Winata HY. (2015). Hubungan Perilaku Sarapan Pagi Dengan Konsentrasi belajar Mahasiswa Tahun Ketiga Program Studi Ilmu Keperawatan Universitas Muhammadiyah Yogyakarta. Fakultas Kedokteran dan Ilmu Kesehatan. Universitas Muhammadiyah Yogyakarta.