

THE EFFECTIVENESS OF SEGAK-JomFitKedah TRIM & FIT (SJTF) PROGRAMME IN SIK DISTRICT KEDAH : A PILOT INTERVENTION STUDY

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Introduction

Prevalence rate for overweight and obese group among school students increased from 0.6% in 2020 to 7.63% in 2022 based on school health data for Sik District. Sik District, being the largest district and located in remote areas in Kedah with the least population density, has a higher prevalence and greater odds of obesity (1). This project was the first intervention programme on weight management among school students that has been conducted in Kedah. It was carried out as a collaborative work between Sik District Education Office and Sik District Health Office.

Objective

The objective of this study was to measure the effectiveness of the intervention program by determining the percentage of participants able to lose at least 5% of their initial body weight following a 3-months programme.

Methodology

A cross-sectional study involved 31 participants (aged 13-17 years old) from 10 secondary schools was conducted between August and October 2022. The participants were students with obesity problem, who did not have chronic health problems and who were committed with the programme. The intervention activities included a focus group discussion, health talks, food preparation, and exercise demonstrations, along with the participant checklist (Figure 1). Anthropometric measurements which included the weight (kilogram), height (meter) and BMI (kilogram/meter²) measurements were carried out monthly by trained staff nurses using the Seca 803 Digital Body Weight Scale, which was calibrated regularly according to schedule. A descriptive analysis was conducted, and the body mass index (BMI) pre and post intervention were measured and tested via the Wilcoxon Signed Rank Test.

SENARAI SEMAK PROGRAM 'CABARAN JomFitKedah'
PEJABAT PENDIDIKAN DAERAH SIK DENGAN KERJASAMA PEJABAT KESIHATAN DAERAH SIK
TAHUN 2022

NAMA PESERTA : _____ BULAN : _____
SEKOLAH : _____ UMUR : _____

Bil	SASARAN	MINGGU						
		Hari	1	2	3	4	5	6
1	Hanya minum air kosong sahaja 6-8 gelas							
2	Hadkan makanan manis							
3	Makan 2 sajian buah-buahan setiap hari							
4	Makan 3 sajian sayur-sayuran setiap hari							
5	Hadkan makanan bergoreng							
6	Hadkan makanan bersantan							
7	Hadkan makanan segera							
8	Hadkan makanan ringan							
9	Berjalan 30 minit seharian							
10	Melakukan senaman bebanan (squat/lunge/ plank/ abs crunch)							
11	Naik turun tangga 10 minit sehari							
12	Naik turun tangga 20 minit sehari							

Nota : Tandakan jika pelajar berjaya melakukan sasaran.

Pengesahan Guru

Tandatangan Guru & Cop

Figure 1: Daily diet and activities checklist

Results

Table 1 shows that majority of participants in the SJTF intervention programme were aged 13-15 years old (58%). 74.2% of participants were male and mostly were from the Malay ethnicity (96.8%).

Table 1: Demographic characteristics of SJTF intervention program participants

Variables	SJTF participants (n=31)	
	Frequency (n)	Percentage (%)
Age (years)		
13-15	18	58.0
16-17	13	42.0
Gender		
Male	23	74.2
Female	8	25.8
Ethnicity		
Malay	30	96.8
Chinese	0	0.0
Indian	0	0.0
Others	1	3.2

Table 2 shows that 71.0% of participants achieved a weight reduction from their initial body weight, with 19.4% of participants able to achieve the program's objective of losing at least 5% of their initial body weight. However, 3.2% had static body weight and 25.8% had increased body weight.

Table 2: Body weight status after SJTF intervention program

Variables	3 months after SJTF	
	Frequency (n=31)	Percentage (%)
Decreased body weight (total)	22	71.0
- Decreased weight <5%	16	51.6
- Decreased body weight ≥5%	6	19.4
Static body weight	1	3.2
Increased body weight	8	25.8

Table 3 shows that among those who lost body weight, a significant difference was observed between the measured median BMI during pre-intervention and post-intervention BMI (median: 37.2;interquartile range: 10.8) versus 35.9 (10.7); p value = 0.001).

Table 3: The body weight status after SJTF intervention program and the pre and post BMI differences

Category	n	%	BMI (Median (IQR))		*p-value
			Pre-intervention	Post-intervention	
Decreased body weight	22	71.0	37.2 (10.8)	35.9 (10.7)	<0.001
Static or increased body weight	9	29.0	37.0 (7.8)	37.9 (7.6)	0.012

*p-value based on Wilcoxon Signed Rank Test

Discussion

This study shows 71% participants able to lose their weight. However, the percentage of reduction of at least 5% was small as this pilot project was only done for a 3 months. A 52-weeks intervention programme will produced a greater weight loss and other clinical benefits than a 12-weeks programme which is more cost-effective in the long term (3).

Nine adolescents had static or increased body weight because the intervention programme did not measure the actual knowledge, attitude and practice of the adolescents towards effectively reducing their weight.

The commitment to lose weight is undoubtedly influenced by family. The choice of cooking methods, the quality of food, and the quantity of food provided at home also play a role. Thus, parental awareness and support are equally important to ensure the success of the SJTF intervention program. However, parental involvement in this pilot program was relatively limited.

Conclusion

This study may have positive outcome in reducing the obesity among adolescent. The initiatives to combat obesity should start at a young age for generational impact. Collaboration between the Sik District Health Office and the Sik District Education Office has provided a good platform to overcome obesity among schoolchildren.

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