Research Article

THE EFFECTIVENESS OF USING DIGITAL WEIGHT LOSS APPLICATIONS TO PROMOTE HEALTHY LIVING

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Abstract

The aim of this research was to use the effectiveness of using digital weight loss applications to promote healthy living. The tool used in the research was Line the use of health promotion media by popular social media integration such as Line and health care and weight control program. The samples were Naresuan University students who were overweight with the excess of standard BMI 30 people. In addition, it took 12 weeks to do the experiment. research tools: The questionnaire developed by the researcher with reliability of.92 was used to collect data. The data were then analyzed in terms of mean, standard deviation, one – way Anova, and LSD testing method**.** The assigned statistical significant level in this research was .05 It was an indication of health care of Naresuan University students for weight control by the overall exercise behavior for research and practice. Due to the follow-up, the result found that all 30 people of the samples were found to be successful in health care and weight loss. Furthermore, weight control program was the Aerobic exercise and Cardio program showed 4.5% in weight loss. Consequently, the satisfaction evaluation result showed that the samples of health promotion and weight loss group had the mean at the high level ($\overline{X}$ = 4.87, SD = 0.21).

Keywords: Health Promotion Media, Line, Weight Control

Introduction

Social media, Line, Facebook, Messenger, and Instagram are the new social media which are used every day by millions of people across the world. The impressive growth in social media seems to be fascinating and intriguing as well. When you consider the multitude of applications, these tools have unleashed their potential to influence population health.

Health promotion is more applicable today than ever in displaying public health problems. The health scheme is arranged at particular crossroads as the world is confronting a ‘triple burden of diseases’ created by the incomplete agenda of communicable diseases, newly emerging and re-emerging diseases as well as the remarkable rise of non-communicable chronic diseases. The factors which encourage evolution and improvement in today's world such as globalization of trade, urbanization, ease of global travel, advanced

technologies, etc., represent a double-edged sword as they lead to positive health consequences on one hand. Additionally, it also advances the susceptibility to poor health while it leads to inactive lifestyles and unhealthy dietary arrangements. There is a benefit together with boost in unhealthy dietary habits and decrease in physical activity aiding to enhance in biological risk factors which consecutively induces to advance in non-communicable diseases (Kumar & Preetha, 2012).

Globally, the use of the communication technologies such as mobile phones and internet continues. Such technologies are providing new ways to communicate, share information, and continue to develop in ways are almost inconceivable. As Arps (2014) state, "new devices, which until their improvement we did not realize we needed, will continue to be constructed". In response to greater use and intimacy, health services are progressively employing technology to personally communicate with consumers and to distribute information although a lack of literature on the use of such technologies in health promotion displays that technology-based approaches are still in their inception (Gold, Lim, Hellard & Arps, 2014). Anticipate that they will soon incline general practice. "As the use of newer communication technologies continues to rapidly increase, health promotion will unavoidably expand out from the 'old' media (TV, radio, billboards) and into the 'new' (mobile telephones, social networking sites)" (Gold et al., 2014)

Using Health Promotion Media and Weight Control because it is crucial for adolescents to build healthy habits that they can maintain through adulthood to be aware of symptoms of health problems. Health promotion is also important to help diminish the high social and economic costs that are correlated with the many health issues affecting adolescents (Bailey et al., 2013).

However, the Role of Social Network Technologies in Online Health Promotion: A Narrative Review of Theoretical and Empirical Factors Influencing Intervention Effectiveness (Balatsoukas et al., 2015). Social network technologies have turned into part of health education and wider health promotion, either by idea or coincidence. Social support, peer pressure, and information sharing in online communities may influence health performances. If there are effective and constant effects, then social network technologies could raise the capability and ability of many public health operations. Social media alone, however, may be inadequate to advocate health. Moreover, there may be unexpected and likely destructive conclusions of erroneous or confusing health knowledge. Given these ambiguities, there is a requirement to comprehend and incorporate the clue base for the use of online social networking as part of health promoting interferences to educate future research and practice.

Digitized health promotion media is a subdivision of digital health technologies. As defined in further detail below, it involves a range of digital devices, tools, and platforms. Some of these methods are deliberately attempted by people who are engrossed in developing their health and fitness.

In this research, the effectiveness of using digital weight loss applications to promote healthy living we proposed to determine the result of using health promotion media and weight control of social media for health communication on health effects, behavior change and health equity by overviewing.

Methods

The use of technology-based health promotion addresses among youth has been especially advocated due to technology's reach and popularity with this age group and is seen as a 'new channel' for behavior change. While such evidence alone indicates the internet's popularity among youth, it is likely that its use has increased considerably over the past few years as social networking sites have become more prominent, and schools increasingly require students to bring internet-enabled devices to class.

Social Media

According to Arps (2014), social networking is now a traditional part of the online environment, with young people being the most commonplace users of social networking sites on Line). The increasing use of social media and its reciprocal functionality has induced calls for its use in health promotion; as Gold et al. (2011) state, "...[social networking sites] provide a medium of enormous potential for health promotion both in terms of audience reach and interactive functions that could be exploited for intervention delivery". Moreover, Norman (2012) further advocates people to look at the use of social media beyond facilitating behavior change; "A closer look at the opportunities and challenges that social media presents for health promotion requires going beyond technology toward a rethinking of the social relationships it helps to facilitate". In contrast to other media forms (e.g. radio, print, and television), the interactive competences of social media are beneficial for health promotion in being able to work towards enhancing community action, developing personal skills, and constructing supportive environments. Other benefits of social media includes its ease of use, low cost and, as social media is all 'cloud based', reduced reliance on specific devices (Norman, 2012). Upon reviewing social media sites on sexual health promotion, Gold et al. (2011) found that the most popular pages were those that promoted interactivity by posting regular posts and conveying content designed for use on social media. However, despite the use of social media in health promotion being exalted for its interactivity, they also found that a lot of sites were 'static' and only extended information from their websites to social media pages. Unfortunately there is no published literature on the effect of social media interventions on health behavior, however Gold et al. (2012) provide valuable insight into how social media sites can encourage interactivity.

The samples were Naresuan University students who were overweight with the excess of standard BMI Overall 30 students individuals, 50% of the original sample were included (measurement at baseline and aminimum of 28 days), of whom 50% were female. The mean age was 20.3 ± (3.9), and 73.4% of the population studied was overweight or obese, based on BMI at baseline.30 unique individuals were included in the intervalanalysis (28 day, 56 day, 84day, or 12 week interval groups), 100% female with a mean age of 20.3 ± (3.9). Baseline demo graphics are shown for individuals included who had met inclusion criteria and who had recorded participation that spanned at least 12 week.

Study Design

The effectiveness of using digital weight loss applications to promote healthy living

1. 12 Weeks to Weight Loss Exercise Program Line

Program

a) Aerobic Exercise: Five times per week for 30 minutes and

b) Cardio Activity: Five times per week for 60 minutes - As I mentioned above, make sure it's something you actually like or, if like is too strong of a word, at least feel comfortable doing. This can be anything that involves some kind of continuous, rhythmic movement that gets your heart rate up. Walking Running Cycling Home workout videos or online fitness videos Cardio machines such as a treadmill, stationary bike, rowing machine or elliptical trainer Exergames Sports - basketball, handball, tennis, etc.

2. Inform the group that the controlled time is 12 weeks and follow up on the LINE which is generated to report weekly weighing.

3. Participants in health promotion and weight control activities must register a weight record.

Data analysis

Data was analyzed: Mean ($\bar{X}$), Standard Deviation (SD), one – way Anova, and LSD testing method The effectiveness of using digital weight loss applications to promote healthy living data were analyzed using descriptive statistics, mean and standard deviation, while content analysis was applied for qualitative Significant level of .05.

Assessments

Participants in the control group will only receive standard activity aerobic exercise intervention for weight loss. the effectiveness of using digital weight loss applications to promote healthy living.

As summarized in Table 1 Expected Initial Weight Control of Exercise Training Food and Activity Chart have examined the effectiveness of weight management applications, which makes the current status and trajectory of the field unclear for important stakeholders.

Table 1 Expected Initial Weight Control of Exercise Training Food and Activity Chart

Mon	Tue	Wed	Thu	Fri	Sat	Sun
Food Total Calories	Food Total Calories	Food Total Calories	Food Total Calories	Food Total Calories	Food Total Calories	Food Total Calories
Activity Total Minutes	Activity Total Minutes	Activity Total Minutes	Activity Total Minutes	Activity Total Minutes	Activity Total Minutes	Activity Total Minutes
Aerobic Exercise	Aerobic Exercise	Aerobic Exercise	Aerobic Exercise	Aerobic Exercise	Aerobic Exercise	Aerobic Exercise
Strength Exercise	Strength Exercise	Strength Exercise	Strength Exercise	Strength Exercise	Strength Exercise	Strength Exercise

Start of the Week	
Weight	Waist

End of the Week	
Weight	Waist

As summarized in Table 2 the primary outcome for this trial was weight. In the following sections, we collate the evidence from Exercise Training Food and Activity Chart such as BMI, body weight, and physical exercise to measure the effectiveness of the effectiveness of using digital weight loss applications to promote healthy living. The examined show a high heterogeneity in the interventions used for control groups. have attempted to replace or augment conventional means of weight management, and Baseline Characteristics of the Sample in the Analysis Age Height Weight Waist BMI.

Table 2 Baseline Characteristics of the Sample in the Analysis

	Line (n = 30) : Gender (m/f) : 9/21	
	Mean	**SEM**
Age	45	2.3
Height	165.3	1.8
Weight	90.0	3.2
Waist	98.0	2.4
BMI (kg/m^2)	33.3	1.3

Refers to Percentage of Total Body Weight SEM: Standard Error of the Mean; BMI: Body mass indes

The Result of Using Health Promotion Media and Weight Control demonstrated numerically greater reductions in fat mass and was statistically significant, the effectiveness of using digital weight loss applications to promote healthy living weeks 12 (Sig 0.000) (Table 1 Activity Chart). The effectiveness of using digital weight loss applications to promote healthy living, but this was statistically significant against the weight control only, at week 12 F 284.61, Sig 0.000), Before BMI Overweight (23-25) and the effectiveness of using digital weight loss applications to promote healthy living. After BMI 18.15-22.90 normal

Table 3 The Result of Using Health Promotion Media and Weight Control: Week 12

	Sum of Squares	**df**	**Mean Square**	**F**	**Sig.**
Between Groups	56.5368	4	14.1342	284.61	0.000
Within Groups	7.2008	145	0.0497		
Total	63.7376	149			
Critical Value (a=0.05) = F-table = 2.4341					

After the satisfaction evaluation result showed that the samples of health promotion and weight loss group had the mean at the high level, The different genders have not shown any differences in the satisfaction of the effectiveness of using digital weight loss applications to promote healthy living. While content analysis was applied for qualitative Significant Exercise Training Food and Activity have the satisfaction of the effectiveness of using digital weight loss applications to promote healthy living were significantly different at .05 level.

As summarized in Table 4, Table 5 the primary outcome for this trial was weight the effectiveness of using digital weight loss applications to promote healthy living.

Table 4 The Result of Using Health Promotion Media and Weight Control: Week 8

	Line (n = 30) : Gender (m/f) : 9/21	
	Mean	SEM
Weight	-3.4	0.7
Waist	-2.9	0.9
BMI (kg/m^2)	-1.1	0.5

Table 5 The Result of Using Health Promotion Media and Weight Control: Week 12

	Line (n = 30) : Gender (m/f) : 9/21	
	Mean	SEM
Weight	-4.8	1.1
Waist	-4.5	1.0
BMI (kg/m^2)	-1.5	0.4

Discussion

One of the central tenets of health promotion is to create a supportive environment, conducive to health behavior change. The intervention reported here was designed to provide dietary and physical activity instructions and social support within a dedicated social media Line group, creating a supportive environment for overweight and obese participants to manage their weight.

The overall objective of this study was to determine if a weight management program delivered via a dedicated social media group would augment beneficial changes in weight and other metabolic. BMI is a good way for most people to tell if they are at risk for health problems because of their weight. But this method is not perfect. For most people, a high BMI is a sign of too much body fat. BMI does not work as well for people who are very muscular or those who have little muscle. Muscles weigh more than fat. Because of this: A muscular person may have a high BMI but still have a healthy level of body fat. A frail, older, or inactive person may have a low BMI but still have too much body fat. Also, weight is only one measure of your health: If you are at a normal weight according to your BMI but do not exercise or eat nutritious foods, you may not be as healthy as you could be.

If you are a little overweight according to your BMI, you may still be healthy if you eat right and exercise regularly. BMI is just one way to tell if you are at a normal weight. Another way to find out if you are at a healthy weight is to measure the size of your waist, or your waist circumference. To do this, place a tape measure around your body at the top of your hipbone. This is usually at the level of your belly button. You have a higher risk for health problems if you are: A man with a waist larger than 40 inches and woman with a waist larger than 35 inches. The effectiveness of using digital weight loss applications to promote healthy living.

BMI Categories: Underweight	=	< 18.5
Normal weight	=	18.5–24.9
Overweight	=	25–29.9
Obesity	=	BMI of 30 or greater

Despite its widespread use in public health documents, the concept of healthy weight. Healthy weight is usually defined in adults as a range of body mass index – a reference point between underweight and overweight. The promotion of healthy weight usually relates to the prevention of underweight and overweight or obesity. However, this is a very narrow definition, as it signifies that weight alone defines health and suggests that any weight within this BMI range is associated with good health. In its broadest sense, a healthy weight could be delineated as a weight associated with a high level of physical, social and emotional health, which is linked with a low risk of future chronic illness and premature death. However, these outcomes can be difficult to measure and their relationship to weight varies greatly between individuals.

Overall, the changes to weight circumference, BMI, waist, lean and fat mass measures observed in the present study in the Line group are very encouraging, particularly in light of the smaller than expected sample size of this study. While these changes were not significant in the present study for the compared to the Line group, they represent successful, practical outcomes. For example, a 5% reduction in total body weight significant changes to metabolic syndrome risk factors such as lipid profiles and fat mass in overweight/obese individuals. The 4.5% reduction in total body weight and the reductions in BMI, waist circumference, fat mass and energy intake that were noted together with the increases in lean mass and step count posted by the samples are thus very encouraging.

However, The Result of Using Health Promotion and Weight Control Media effects on health-care performance during the 12th week showed a significantly weight loss. For many individuals, particularly those in the obese category (BMI $>$ 30 kg/m2), weight loss requires continued effort, not only to maintain a relatively small amount of weight loss, but to persevere until a healthy weight is achieved. Evidence demonstrates behavioral strategies are effective in producing significant (all $p < .05$) weight loss without significant risk to obese older adults, but effectiveness evidence for surgical and pharmaceutical strategies for obese older adults is lacking, primarily because this group has not been targeted in trials or analyses did not isolate this group.

Research is needed to clarify these results, and to identify the particular features of social media that may be most beneficial for weight management programs, as well as the types of individuals most likely to benefit from this approach. Survey respondents were primarily male (91.4%) and female (93.8%) with mean age 37.3 years and mean body mass index 30.9. They used forums frequently, with 56.8% reading messages, 36.1% replying to messages, and 18.5% posting messages to start a discussion related to weight loss on a daily or more frequent basis. Major social support themes were encouragement and motivation, mentioned at least once by 87.6% of survey respondents, followed by information (58.5%) and shared experiences (42.5%). Subthemes included testimonies, recognition for success, accountability, friendly competition, and humor. Members valued convenience, anonymity, and the non-judgmental interactions as unique characteristics of Internet-mediated support.

Other factors may have influenced the outcomes of this intervention. Ambivalence towards health food choices and/or weight loss has been shown to result in poorer weight loss outcomes, such that an individual with a negative attitude towards the task or their ability to undertake it can undermine the execution of positive intentions.

The results of this study demonstrate the potential benefits of using social media tools to assist overweight and obese individuals with dietary and physical activity modifications for weight management. As mentioned above, a mean weight loss of 5% of total body weight can result in positive metabolic changes in overweight and obese individuals. In the current study, a mean weight loss of 4.5 % of initial body weight was noted in the Line in conjunction with positive changes in waist circumference. Research in this area is The Result of Using Health Promotion and Weight Control Media and the satisfaction evaluation of the samples who have used health promotion and weight control media has the mean at a high level ($\overline{X}$ = 4.87, SD = 0.34).

The Result of using digital weight loss applications to promote healthy living from 12 weeks (n = 30) and the effect Size = 84 day, among 30 participants at baseline, 91.5% were women, mean age = 23.5 years (SD = 13.5), mean BMI = 27.06-30 (7.55), mean baseline waist circumference=34.6-37 inches (5.77), After 12 weeks program, Line intervention group showed decreased body weight of -5.32 kg (95% CI: -8.36 to -2.29) compared to controls (P < 0.001). The absolute BMI net change was -0.95 (-1.48 to -0.42), with corresponding percent BMI net change being -2.44% (P < 0.001). Furthermore, central adiposity improved substantially, with a waist circumference net change of -1.54 inches (-2.39 to -0.69; P < 0.001). among morbidly obese (BMI > = 35-37) participants at start of study, the Line program decreased the likelihood of remaining morbidly obese by the end of the program by -13% (Relative Risk = 0.87, 95% CI: 0.76-0.99; P = 0.04). Additionally, Line participants notably lowered systolic blood pressure by -6.59 mm Hg (-12.7 to -0.48; P = 0.03). Multi-level models also revealed network effect of micro clinic social clusters to explain 26% of correlated BMI trajectories among intervention participants, versus just 13.1% among social clusters in controls.

Furthermore, the weight control program was the Aerobic exercise and Cardio program showed 4.5% in weight loss. Consequently, the satisfaction evaluation result showed that the samples of health promotion and weight loss group had the mean at the high level ($\overline{X}$ = 4.87, SD = 0.34).

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