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## THE ROLE OF MEDIA SOCIALIZATION AGENTS IN INCREASING OBESITY HEALTH LITERACY AMONG MALAYSIAN YOUTH

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### Abstract

Obesity is a global emerging issue. In Malaysia, there has been a significant increase in such cases in the past few years. It is a big challenge for authorities to find out the effectiveness of newspaper as a medium for disseminating obesity information among Malaysian youth. This study aimed to examine the influences and effectiveness of newspaper in conveying health literacy of obesity among Malaysian youth. It focused on their awareness level and perception towards obesity. In this study, 300 Malaysian youth aged 18-25 participated in a survey. It was found that the newspaper-oriented respondents have higher awareness of obesity than the non-newspaper oriented respondents. However, the awareness among the overall respondents is still mainly average. The results also indicate that newspaper is still resourceful in disseminating health information. It is significantly positively related to the youth health literacy.

**Keywords:** *Media, socializing agent, obesity, health literacy, Malaysia*

## PERANAN AGEN SOSIALISASI MEDIA UNTUK MENINGKATKAN KEFAHAMAN LITERASI KESIHATAN OBESITI DALAM KALANGAN BELIA MALAYSIA

### Abstrak

*Masalah* berlebihan berat badan dan *obesiti* kian hangat dibincangkan di peringkat *global*. Malaysia juga tidak terlepas daripada isu ini apabila mencatatkan peningkatan setiap tahun melibatkan bilangan rakyat Malaysia yang mengalami obesiti. Kajian ini adalah bertujuan untuk mengetahui pengaruh dan keberkesanan media terutamanya akhbar tempatan dalam menyampai literasi kesihatan tentang obesiti dalam kalangan remaja dengan menganalisis tahap kesedaran dan persepsi remaja Malaysia tentang obesiti. Kajian kuantitatif yang menggunakan soal selidik ini melibatkan 300 responden yang berumur 18-25 tahun. Hasil dapatan menunjukkan bahawa tahap kesedaran tentang obesiti dalam kalangan responden yang membaca akhbar adalah tinggi berbanding mereka yang tidak membaca akhbar. Walau bagaimanapun, tahap kesedaran dalam kalangan responden tentang obesiti adalah masih sederhana. Hasil kajian juga menunjukkan bahawa akhbar tempatan masih merupakan wadah penting dalam menyebarkan maklumat kesihatan dan media tradisional ini sememangnya memainkan peranan yang positif dan signifikan dalam konteks literasi kesihatan remaja.

**Kata kunci:** *Media, agen sosialisasi, obesiti, literasi kesihatan, Malaysia*

## INTRODUCTION

Overweight and obesity as the fifth leading risk for global death causes at least 2.8 million adults die each year. It was also reported that 65 per cent of the world's population live in countries where this risk kills more people than underweight does. In 2015, Malaysia was listed as the Asian country of having the highest obesity rate which exceeded 45 per cent (World Health Organization, 2015). In fact, National Health and Morbidity survey 2015 revealed that there was a sharp rise from the 4.4 per cent of Malaysians classified obese 10 years ago, in 1996 where 30 per cent of Malaysian adults above the age of 18 were overweight (with a body mass index of 25 and above) and another 17.7 per cent were obese (with a BMI of 30 and above). Hence, it is important for to create awareness among the people in order to lower the obesity rate. One way to make this possible is by disseminating the message to the public through media. As a main channel of effective media, newspaper has been utilized by the government to educate the people.

Overweight and obesity are defined as abnormal or excessive fat accumulation may impair health while overweight as a BMI greater than or equal to  $25\text{kg/m}^2$  and obesity as a BMI greater than or equal to  $30\text{kg/m}^2$  (World Health Organization, 2015). According to Kimani (2010), the measured using body mass index (BMI), which defined as weight in kilograms divided by height in meter squared; as both weight and height? Besides, obesity is a systematic disease that predisposes to a variety of co-morbidities (Pischon et al., 2007); and classified as broadly and loosely as weight significantly in excess of what the health-care industry deems normal (Philipson & Posner, 2008).

In Malaysia, chronic, non-communicable disease (NCDs) including cardiovascular disease, diabetes, cancer and respiratory disease accounted for 67per cent of the total deaths in 2008. Overweight and obesity are the major metabolic risk factors of NCDs which occupy a total of 52.5 per cent on males and 56.6 per cent on females (World Health Organization, 2015). Although this trend could increase the prevalence of NDCs rates and eventually result crisis, there has been lack of awareness of obesity among Malaysians. In addition, external and internal parties exhibit poor management on this matter. Therefore, the collective failure to manage it optimally is also a

concern.

Actions dealing with the situation such as evidence-based public health interventions, developments of policy and changing on unhealthy diet, physical inactivity and prevention of obesity have been limited. The development of strategies and approaches for behavior-change communication needs further support especially from the private sector. This is to monitor and evaluate periodically on the effectiveness of the integrated NCD prevention and of NCDs case management (World Health Organization, 2010).

On top of it, the behavior of youth change according to global trends, it is not easy to understand them and deliver the right message to them at the right time and place. So, this is a big challenge to Malaysia government in order to reach them and change their mindset to become highly aware about obesity.

These challenges construct the need of more research to get to know the perception and habit of contemporary youth. Also, newspapers are believed to be far more effective than television at conveying detailed information and policy issues (Norris, 2000). In addition, many people still prefer the feel and touch of the tangible and portable newspapers delivered to their doorstep every day (Ariffin et al., 2009). As in Malaysia, the circulation of newspaper had an overall increase from year 2005 to year 2010, with a grand total from 3,672,492 circulations (year 2005) to 4,150,194 circulations (year 2010). The raise included West Malaysia and East Malaysia as well as 3 main languages of newspapers. These explain that the importance of newspaper is as prior as other media which are electronic and new media ("The ABC Report ", 2010).

Research topic of obesity management for instance the enhancement of medication or the changing lifestyle advice seem more interesting for others researchers but there are not many studies about the youth's level of understanding and recognition towards the message and effectiveness of media use. Also, the researchers found that only few studies focus on obesity education on youth even though they have the unhealthy eating habits and a sedentary lifestyle which easily contribute to obesity (Mazlina & Nor Zalina, 2014 ; Teoh & Woo, 2000).

Youth vary quite considerably and United Nations defines youth as all individuals aged between 15 and 24 (Bennell, 2007 ; UNESCO, 2011). Youth, as the starting age of becoming independence is easily influenced by the sources of message. Therefore this age group was selected to be the targeting population of the present study which aimed to investigate their awareness toward the message from newspaper regarding obesity.

### ***Research Questions***

1. What is the level of awareness of Malaysian youth towards obesity?
2. What is the difference in the level of awareness towards obesity between newspaper-oriented Malaysian youth and non-newspaper oriented Malaysian youth in getting obesity information?

## **LITERATURE REVIEW**

### ***Newspapers and Health Literacy***

A growing body of proof shows that news coverage has contributed to remarkable changes in health policy (Niederdeppe et al., 2007). In publishing health-based information, newspapers essentially take on the role of “health educator”. They serve as an important source of information for their readers which includes general public (Bello, 2014 ; Meissner et al., as cited in Stryker et al., 2006.), patients (Yanovitzky et al., as cited in Stryker et al., 2006), doctors and the medical community (Gutman ; Okeefe ; Phillips et al. ; Ward et al., as cited in Stryker et al., 2006), as well as policymakers and funders (Corbett & Mori ; Rogers et al. ; Yanovitzky et al., as cited in Stryker et al., 2006). In other words, they act as a promoter of health priorities for the community.

Teens rarely read newspapers (Woodard, as cited in Niederdeppe et al., 2007). News coverage could have effect on norms about smoking, for instance parent who are readers change their own smoking habits or enact rules prohibiting smoking in their home. Besides that, news coverage may promote tougher tobacco control policies, including restrictions in youth access to cigarettes, smoke-free restaurants, or prohibitions of cigarette advertising. Each of these changes could contribute to a climate less supportive of youth tobacco use and lead to reduced smoking

among teens (Niederdeppe et al., 2007).

Newspapers, an important source that helps inform and shape public debate regarding health issues such as tobacco control (Holder et al.; Blake et al.; Durrant et al., as cited in Buller et al., 2011). Newspaper reports in a literate society provide a valuable lens for examining public information and potential shared knowledge and opinions (Campbell et al., 2009). McDonnell et al. (2008) study result found that framing health research to be interesting and “newsworthy” requires both scientific and communication expertise. For instance, newspaper cancer coverage could be strengthened through more dialogue between journalists and health practitioners.

The lack of attention to health problem prevention in newspapers seems to a universal issue. There are studies which demonstrated that newspaper coverage of preventive health behaviors is low in general (Caburnay et al., as cited in Stryker et al., 2006). This could be due to stories about cancer prevention, survivorship, and end-of-life care do not conform to journalists' concepts of newsworthiness which also include the need for novelty and drama (Gans; Nelkin; Tuchman, as cited in Stryker et al., 2006). News coverage of obesity health information may be found in Malaysia's newspaper. Both tabloids and broadsheets offer sections on health, dieting, healthy eating and fitness. The Sun publishes the Fit Squad, and the Daily Mail Good Health section frequently offers exercise tips and offers quick and easy ways to ‘swap’ calories (Boyce, 2006).

In The World Health Organization (WHO) Health Promotion Glossary, health literacy is defined as “the cognitive and social skills which determine the motivation and ability of individuals to gain access to, understand, and use information in ways that promote and maintain good health. Similar definition has been used by Nielsen-Bohlman et al (2004) where they defined health literacy, as a degree to which individuals have the capacity to obtain, process, and understand basic information and services needed to make appropriate decisions about health.

Health literacy approach is an important factor to ensure social benefits of public health, this includes the improvement of equality in accessing health information and services to public health (Lurie & Parker, 2007). It is playing an important role in health promotion and chronic

disease self-management. Moreover, it is also an important mediator of health outcomes (Berkman et al., 2011). People with low health literacy are found to be less healthy and also to be less capable to face with chronic diseases, to have less knowledge about health, and to face obstacles in reading and understanding information on medicine packages or hospital forms (Davis et al., 2006; Peterson et al., 2011; Rothman et al., 2009). The investigation of health information seeking behavior among Malaysians provides a better understanding on the level of knowledge, attitudes and practices among respondent particularly patients with chronic diseases (Mohammad Rezal Hamzah et al., 2015).

Low health literacy skills have been found a relationship with poor health and also low educational level. People with lower educational level were found to work on lower health literacy skills compared to people with higher educational level (Lee et al., 2010). On contrary, people with high health literacy are working better to prevent and manage disease relative than people with limited health literacy (Berkman et al., 2011).

It is assumed that being health literate enables patients to engage in health self-care. This means that patients with higher health literacy may feel more confident about their ability to accomplish self-care behaviours (Hou, 2014). When patients act or perform self-care activities on how to manage their diseases based on their behaviours and abilities will be referred as self-efficacy. Self-efficacy derived from Bandura's social cognitive theory, provides a link between self-perceptions and individual actions (Bandura, 1977). It is increasingly important in health care (Marks et al., 2005).

### ***Media Literacy and Health Promotion***

A number of organizations that try to deal with obesity rates have turned to mass media campaigns (Evans, as cited in O'Neal, 2010). Specifically, these campaigns have been implemented to promote physical activity and healthy diet among target audience (Kaiser Foundation, as cited in O'Neal, 2010). In some situation, multiple methods are utilized. They include media, which a way that can reach all segments of the population. The mass media utilized

include television, newspapers, magazines (or other printed material) and internet to distribute the messages. Mass media has become a major tool in health promotion and disease prevention due to its wide reach, appeal and cost-effectiveness (Randolph & Viswanath, as cited in O'Neal, 2010).

The most popular channel of obesity information is television-commercial followed radio advertisement and newspaper (O'Neal, 2010). Informative advertisements about a particular health topic may be printed in newspapers or magazines (Wootan et. al., as cited in O'Neal, 2010), pamphlets or brochures (Wilson, as cited in O'Neal, 2010), billboards or interactive media (USDHHS, as cited in O'Neal, 2010).

Television has the potential to transmit the health message or government discourse to public. An obese individual will be viewed as a disgusting object in the television show. In addition, obesity is associated with self-control for an individual in the television discourses. The focus on how an individual control their weight and his or her experience of weight loss. Nevertheless, not much of attention is placed on social and political context related to obesity. For example, in a television show, *Diet Doctors* (4 July 2007), the doctors examined the body parts of a participants and explained how the effects of diet for particular body parts instead of stated out the social reasons behind obesity (Inthorn & Boyce, 2010).

However, general campaigns targeting on parents so they can educate their children about health behaviors and to change family practices and behaviors (Evans, as cited in O'Neal, 2010), were found most successful (Evans ; Christoffel ; Necheles ; Becker, as cited in O'Neal, 2010).

Radio is also being used as one of the main media in preventing obesity. In the BBC radio WM station (July 2009), they had launched a "Flab to Fab" week with Department of Health of England. The concept of "Flab to Fab" was initially for morning show but at the end it was extended to whole station due to information sufficiency with statistics provided by COI (Central Office of Information) from England ("Flab to Fab Week", 2009).

Modern technology like internet offers a platform for obese community to provide mutual support and motivations. It is a successful concept because millions of users are using social

networking sites and they share a common interest. This group of people can served as motivation group for weight loss management (Svensson & Lagerros, 2010). According to Yetman and Sciammana (n.d.), the Pew Internet & American Life Project had shown that around 73 per cents of American adults are using internet in which 80 per cents of the internet users are using this tool to search for health information with the popular topics like diet and fitness. According to (USDHHS, as cited in O'Neal, 2010), people with the greatest health burdens are the one who have the least access to information.

Each type of media has its disadvantages. Although mass media campaigns enable health related messages to be distributed to large audiences, they can also cause confusion. Printed material may be difficult for some readers to comprehend, especially if it is targeting on young children (Wilson, as cited in O'Neal, 2007). Exposure to such messages is generally passive, as a result of an incidental effect of routine use of media (Wakefield et. al., 2010).

### ***Health Behaviour among Youth***

Socialization is a process of owing, adopting and initiating the newborn, stage by stage in the family, community and society. Agents of socialization help the process of learning which includes the parents (family), school, peer groups and media. Parents (family) are always the strongest socialization agents of young people (Chan et al., as cited in Chan & Tsang, 2011). Family members and government publicity always subject to important roles in the establishment of subjective norms for healthy eating and health campaigns. They are responsible to communicate the benefits of healthy eating to the society (Chan & Tsang, 2011).

Peers are more influential to youth than at any other time in life. The quality of the relationship between adolescents and their friends, play important roles in assisting or impeding their current and future functioning. Peer influences have a significant role during adolescence, a time when new identities, friendships, and peer group affiliations are solidified and parental influences are gradually diminishing (Simon & Farhan, 2010). Also, the credibility perceptions might increase due to the content that is perceived to be recommended by others, such as the peer



reviews of products and services in a (Flanagin & Metzger, 2007).

Other than parents, schools and peer groups, media are also considered as an important socialization agents. Studies found that health information from mass media is positively related to respondent's perception which can enhance individuals' health literacy. Health information can be found in different media channels and the growth of Internet provides opportunities for improving public health. Chan and Tsang (2011) and Paek et al.(2010) stated that mass media like newspaper, television programmes and magazines were also as influential as personal resources like family members and teachers (Chan & Tsang, 2011).

Behavior or attitude change is often a goal of health campaigns (Kreps & Maibach, as cited in O'Neal, 2010). This is done through encouragement of certain healthy practices or dissuasion of unhealthy behaviours (Randolph & Viswanath, as cited in O'Neal, 2010). With the goal of reducing the number of overweight and obese children in the United States, numerous campaigns that aimed at promoting nutrition and physical activity have been developed and implemented (CDC, 2008).

Information dissemination can be done in two ways: 1) developers may desire to increase the amount of information available about a topic or 2) reframe a message to make it more appealing to an audience. Although the goal of a campaign is to change the behaviour of a target audience, it may extend its influence on secondary audiences such as school, policymakers, politicians and manufacturers (Hornik & Kelley, as cited in O'Neal, 2007). This includes parents too, who are considered as a powerful social influence (Evans, as cited in O'Neal, 2007) their children when it comes to their thoughts and actions about nutrition and physical activity (Demattia & Denny, as cited in O'Neal, 2007).

### ***Youth and Health Care Consumer Socialization***

According to Colby et al. (2009), their investigation on communication strategy preference, revealed that their first preference to receive health information is through newspaper, followed by

internet and medical providers. Significant relation was found between the age and the sources that the respondents sought health related information. Younger adults in the study (18-34 years) were fonder in looking for health information from employers, fitness centers and the Internet than the older adults (55+ years) and middle adults (35-54 years). These two groups are more likely to look for health information from medical providers and newspaper (Colby et al., 2009). Internet was the most preferable method of receiving health-related information. Taking age group into consideration, the percentage of young adults that prefer using the internet is higher than the older adults (Colby et al., 2009). According to the National Telecommunications and Information Administration as cited in Colby et al. (2009), majority of the young people are utilizing the Internet and most have searched online for health-related information.

Colby et al. (2009) concluded that it is efficient to convey the health-related information through internet but there are still parts of the surveyed population that still prefer to read newspaper. As their findings shows that communication strategy preferences may vary across, it will be more effective when a campaign includes communication through newspaper, mailing and websites (Colby et al., 2009).

In the lives of contemporary youth, mass mediated messages have been considered as a socializing agent which is as important as parents and schools (Comstock; Strasburger & Wilson, as cited in Chan & Fang, 2007). Youngsters' belief, attitudes and behaviors can always influenced by the media contents and the contexts of media usage (Roberts & Foehr, as cited in Chan & Fang, 2007). A research done by Chan and Fang (2007) towards the youth population in Hong Kong, shows that internet has become the most significant media among the youth. As a result, there is a trend that traditional media started to converge with the internet to maintain their presence among youth people. Examples like some Chinese newspaper will post a part or all of their news contents on their websites so that people can sometimes read them online for free (Chan & Fang, 2007). Newspapers articles, televisions and radio programs are obtainable on the internet as this platform allows the combination of the functions of the traditional media. The internet has transformed into a multimedia platform which explains the phenomena of why youth spent a lot of time on the internet (Chan & Fang, 2007)

Chan and Fang (2007) and Wartella et al. (2016) studies also stated that most of the respondents search information and obtain health education using their preferable media, Internet rather than magazines, newspapers and other traditional media. The internet won by a huge vote because of its informative nature, up-to-date information on any topics and time saving solution. However, in the research, newspapers and television were still the preferred media when the youth search for news and currents event and this proved that the news function of traditional media are still prominent and important at least for now (Chan & Fang, 2007).

According to the Canadian Newspaper Association, 2006 as cited in Loan (2011), the time that youth spent on surfing internet is more than the time that they spent on television, radio, magazines and newspapers. The report shows that youth spent 3.5 hours surfing internet but only spent 0.7 hours reading newspaper per day. However, in a study done by Loan (2011), which intended to find out the preferences of the net generation college students in print and electronic media activities and how they distribute their time among the activities, the results indicated that reading was defeated by watching television and listening music. This proves that reading habit can survive under the presence of media mix and the unique and indispensable position of reading will continue be maintained alongside with the electronic media (Loan, 2011). Meanwhile, on time allocation, reading surpasses watching television and music as well the time spent on reading includes time spends on books, magazines, newspapers, etc. (Loan, 2011)

Teens are unique, digital natives, multitasks that everyone normally perceive them as but in fact, they are actually also the TV viewers and newspaper readers (“How Teens Use Media”, 2009; Pervez & Hussain, 2015). The report also reveals that the U.S. teens for example would not even recognize newspapers but in the reality, more than a quarter of U.S. teens said that they read a daily newspaper and more than a third said that they read newspapers on Sunday.

## **METHODOLOGY**

A survey was with a sample size of 300 respondents who are aged 15 to 24 years old. Researchers used proportionate stratified sampling in this research in order to get the sample. The numbers of respondents from different regions are decided using proportionate stratified sampling

based on the proportionate statistic provided by Department of Statistic, Malaysia. In this research, researchers have divided respondents into five subgroups based on the five different regions of Malaysia and each subgroup is divided by percentage. The proportions are 14.4 percent (43) respondents from Eastern Peninsular Malaysia, 21.5 percent (65) from Northern Peninsular Malaysia and 14.72 percent (44) from Southern Peninsular Malaysia, 29.01 percent (87) from Central Peninsular Malaysia and, 20.37 percent (61) from East Malaysia.

## **FINDINGS AND DISCUSSION**

### ***Newspaper and Non–newspaper oriented***

Most of the respondents were from tertiary educated and have the ability and knowledge to read newspapers when they look for obesity information. Researchers found that the numbers of newspaper-oriented (have been seeing obesity information) respondents are more than the non-newspaper oriented (have not been seeing obesity information through newspaper) respondents when it comes to getting obesity information. Findings indicated that 80 per cent (240) respondents are aware and have seen obesity information through newspaper before. The rest of respondents have not seen any information about obesity in newspaper before. This finding contradicts with Woodard's study (as cited in Niederdeppe et al., 2007) that mentioned teens rarely read newspapers but it matches Nielson's survey report which stated that in real life, many teens actually read newspapers ("How Teens Use Media", 2009).

Among the newspaper-oriented respondents, 67 per cent (162) of them voted that they have seen information about the ways to prevent obesity in newspaper before. However, 55 per cent (132) respondents said that they have seen detailed information of obesity in newspaper. 35 per cent (84) respondents take note of news reporting on activities/ programs about obesity held by authorities. Interesting fact here, only 32 per cent (77) respondents have seen news about severity of obesity in global where else 2 per cent (6) respondents choose other information, including personal opinion, advertisement, consequences of obesity (effect), personal opinion, obesity model in fashion show.

### ***Power, Influence and Role of Media***

54 per cent (130) of the newspaper-oriented respondents cannot remember the content of obesity information in newspaper. This figure is slightly higher than the other group who remember the content which is around 46 per cent (110). The total number of newspaper-oriented respondents who remember the content of obesity information in newspaper is 110 respondents. Referring back to Matamoros et al. (2007), newspaper is a potential communication strategy and always publishes the health issues to viewers. This supports the fact that newspapers do convey much health information. However, in this research, the statistic finding shows that most viewers read through information only and did not really remember the content exactly. This has shown that the influence and characteristics of newspaper itself failed to attract the memory of the youth.

Although most of the newspaper-oriented respondents cannot remember the exact content, it is surprising that among those who remember, 84 per cent (93) respondents out of the 110 respondents will pay more attention on the obesity issue after they gain the information on newspapers. The remaining 15 per cent (17) respondents just read through and did not take further attention. This shows that newspapers do somehow play its role to certain degree where it succeed to convey the healthy message and help in changing the behavior of youth to at least take notice to obesity issue. This matches the study by Matamoros et al. (2007) where it is stated that newspaper is an effective source to convey the health message and from previous study, it showed that slightly more than one third of the newspaper health-related articles contained information that enable readers to pursue further action. According to Emma Mohammad et al. (2015), ability to access, understand and evaluate health information in the media does not guarantee that the information will influence the health behaviors of the readers.

### **Media as an Influence on Health Literacy**

As the findings come to this stage, the Modeling from Social Learning Theory is clearly portrayed in the process of receiving obesity information from newspaper among newspaper-oriented respondent which from the stage of attention, retention, reproduction to motivation.

Once, respondent who receive the message (attention) is measured by their memory

(retention) toward the obesity message, 80 per cent (240) respondents of overall respondents who attended the message have been found that almost half of the respondents which 46 per cent (110) respondents remembered the content of obesity. The respondents who do not remember the content of the information consist of 54 per cent (130) respondents. This can be concluded that even though the retention stage is not efficient throughout the process, it change at motivation stage and this has increase the effectiveness of Modeling of Social Learning Theory. The inefficiency of retention stage can be explained as Modeling is an indirect learning as delay matching in the process of performing certain behavior. Communications systems operate through two pathways. In the direct pathway, they promote changes by informing, enabling, motivating, and guiding participants (Bandura, 2001). Overall, the Modeling process is feasible in changing behavior of respondent from obesity health attitude toward its performance.

### **Preferred Media by Youth**

Six channels such as internet, television, radio, magazine, below the line media and other source are listed to find out the alternatives that the respondents use to obtain obesity information other than newspaper. Internet is the highest used medium to get the information which 73 per cent (218) respondents choose it. This is followed by television (63 per cent, 189 respondents), radio (32 per cent, 97 respondents), magazine (51 per cent, 154 respondents) and below the line media (12 per cent, 35 respondents) are also selected by respondents. This matches with the statement by National Telecommunications and Information Administration, 2002 as cited in Colby et al. (2009) where it states that majority of the youth surf Internet and most of the youth have searched online for health-related information and this proves that Internet is becoming a domain media for the youth.

However, this finding does contradict with a lot of researches which stated that the most important source or preference source of media in disseminating obesity health information is television (Chan & Fang, 2007; Inthorn & Boyce, 2010 & O' Neal, 2010). This can be explained with Uses and Gratification theory as Internet nowadays is actively used to satisfy many of the needs with its resourceful search engines (Cho et al., 2003). In contrast, flyer and brochure are the least chosen media by the respondents. This shows that this media are non-attractive to the youth.

Therefore, message conveyed through this channel will likely to reach them. This is similar to findings reported in previous study that showed brochures did not increase recipient's knowledge.

In addition, this method has the lowest reception rate (Fraser, 2002). Its ineffectiveness shows that there is a considerable variation in the ability of brochures to convey information but it all dependent on what distribution methods are used (Fraser, 2002). Findings also revealed that the respondents also being found collect obesity information from their peers, essay sample, school, SMS, parent, and also talk in hospitals. Some respondents have commented that they don't use other way except newspaper to get obesity information. Newspaper has the highest vote among the 240 newspaper-oriented respondents which consists of 33 per cent (80) respondents. Followed by television around 27 per cent (64) respondents choose it. On contrary, among the 60 non-newspaper oriented respondents; Internet has been the most voted source which consists of 32 per cent (19) respondents. Findings revealed that other than mass media, school has been the source that mostly non newspaper-oriented respondents choose which 20 per cent (12) respondents voted for it. Based on this, internet surely does play an important role for non-newspaper-oriented respondents seeing that internet being the most voted source among non-newspaper oriented respondents to get the most obesity information.

### **Media and Obesity Health Literacy**

Internet remains as the most frequent sources that youth referred to obesity health information especially among the non- newspaper oriented respondents. This can be explained by the research done by Canadian Newspaper Association (2011), as cited in Loan (2011), where it showed that youth spent more time surfing internet than they spent for other media like newspaper, radio and magazine. The previous study result is connected with this finding which non-newspaper oriented respondents mostly surf internet for obesity information. This has proven that those who search information online found the internet to be resourceful. But research by Rohaya et al (2013), revealed that a majority of their respondents did not actively seek online health information although they had access to the Internet at home or workplace. This indicates that the mainstream newspaper playing a significant role in seeking health related information in Malaysia.

As for the newspaper-oriented respondents, newspaper has been listed as the main source in obtaining obesity information. This shows that the role and importance of newspaper had been recognized in the perception of newspaper-oriented respondents. This finding has proven one of the findings stated in McDonnell et al. (2008) that newspaper has an essential role of "health educator" for readers and "health promoter" of health priorities for community.

One of the findings also shows that the newspaper-oriented respondents agree with obesity information given by newspaper is rich and it helps in increasing knowledge as compared to those non-newspaper oriented respondents which consist of 49 per cent (117) respondents and 40 per cent (24) respondents respectively. Also, the knowledge towards obesity has been examined by assessing their awareness towards the actual ideal BMI index where more newspaper oriented respondents answered correctly than non-newspaper oriented respondents. This finding matches with the past researchers' result. According to Fraile (2010), there is only one medium appears to have effects on knowledge which is newspaper. A study by Norris (2000) stated that newspaper are believed to be far more effective in conveying detailed information necessary to understand complex and detailed policy issues. And a study by Campbell et al. (2009) stated that newspaper reports in a literate society provide a valuable lens for examining public information and potential shared knowledge and opinions. All these past research do provide result that supports the researchers' findings.

In knowing the credibility of newspapers perceived by the respondents, the percentage of newspaper-oriented respondents who agree that newspaper is more credible than parents, school and peer groups are higher than non-newspaper oriented respondents. The past researches stated that the most important socialization agents is parents, peer groups (Chan & Tsang, 2011), and media (Paek et al., 2010) respectively, the researchers' finding matches with one of the previous research, Kiouisis as cited in Cassidy (2007), that states newspapers have the highest credibility for news information.

In addition, majority of both groups of respondents agree with the statement that obesity information is placed correctly in newspaper where people will pay attention which consists of 46



per cent (111) of newspaper-oriented respondents and 37 per cent (22) of non-newspaper oriented respondents. As of the remaining respondents are found disagree with the above statement. This finding strengthen the important of the role of newspaper in Malaysia which as the obesity prevention and awareness topic is being reinforced due to its severity, the repeated cues of obesity issue effectively communicate the importance of each topic (McCombs, n.d.). When being tested for awareness towards symptoms, cause and consequences of obesity, the majority answers chosen by the respondents has shown that most of the youth only recognizes the options that are common and just touches on surface. For example, the respondents largely choose answers like uncontrolled large food portions, consume junk foods, lack of physical activity when asking for cause; answering a higher than normal body mass index (BMI), facing difficulties in doing daily activities and also lethargy when asking for symptoms and last but not least, selecting diabetes, cardiovascular diseases and high blood pressure which is the common known health problem caused by obesity.

Some in-depth option like early arrival of puberty for symptoms, ages causes obesity and obesity will cause cancers and type 2 diabetes is correct based on previous studies but there are seldom respondents who knew about it because these options are less related to obesity from the surface. This revealed that most awareness and knowledge of youth towards obesity is still preliminary and are not in-depth and this happened because the obesity information conveyed by the newspapers and other media are tend to be summarized easily to let the audience to understand and do not impose more in-depth information.

When comparing the awareness between newspaper-oriented respondents and non-newspaper oriented respondents from the overall view, it is obvious that the awareness towards obesity by the group of newspaper-oriented respondents is higher for three areas which are tested by the researchers which are symptoms, causes and health consequences of obesity. This shows that newspapers do play a significant role in raising the awareness of the respondents based on the fact that there are significant differences in awareness level between two groups.

Through the findings, the researchers also found that internet is the prime source that most

of the youth prefer to use in gaining obesity information when they are asked to choose only one among all the media. This finding does match with the study by previous researchers. Referring to the research done by Colby et al. (2009), Internet was the most preferable method in receiving health-related information. As for another research conducted by Chan and Fang in 2007, their result also shows the same where internet has transformed in to the most significant media among the youth in Hong Kong. 51 per cent (152) respondents chooses internet as the prime source to get obesity information and this makes internet the most potential medium in the future to convey the obesity information to the respondents. Newspaper still stands an important place as 23 per cent (70) respondents choose it as their prime source making newspaper the second high preference medium. Below the line medium becomes the less preference among the respondents as only 1 per cent (4) respondents choose it as their prime source.

The results of the researchers' findings matching with previous studies shows that it has comes to an era where Internet started to overtake the position of mainstream media among youth. This is due to interest has become more common and common especially in the environment where the youth live. All this might have motivated and caused youth to choose Internet as the prime media when they are searching for health information like obesity.

## **CONCLUSION**

The main objective of doing this research is to find out the effectiveness of newspaper and also to determine which channel is the most used and preferable media by the youth. As reported in the earlier sections, it is obvious that the majority of Malaysian youth still consume newspaper. Newspaper remains to be resourceful as they can get credible information that they need. Moreover, the awareness level of obesity information newspaper-oriented respondents is higher and better than those non- newspaper oriented respondents. This proves that newspapers play a key role to increase the respondents' awareness.

However, there are only minority of the youth that possess high awareness towards symptoms, causes and consequences of obesity while most of them are in the medium awareness

range and can only recognize the preliminary information that are related to obesity. This shows that there is still room of improvement for the relevant parties to convey message through channel that are frequently used by the youth. In this term, Internet has been proved and chosen as the most preferable media by the youth and it will have great potential in the future to replace the mainstream media now.

In a nutshell, newspaper role is still influencing for the youth and should be combined with other media such as internet, radio or any other media that youth prefer so that the combination of these media mix can help largely in conveying the message and raise the awareness of youth towards the issues such as the obesity.

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