



# The Effect of Social Media on Eating Behaviour in Children

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The purpose of this thesis was to find how social media affects eating behaviour in children. Hence, the aim was to understand the possible effects of social media on eating behaviour in children (6-17 years) and the research question was 'how does social media affect eating behaviour in children?' The applied writing method of this thesis was a literature review. Three (3) electronic online databases were selected which was provided to the students of Laurea University of Applied Sciences such as CINAHL, Sage premier, PubMed and some articles were also from Google Scholar which were all free of charges. Five (5) scientific research articles were selected using different search databases using qualitative analysis method. These articles were relevant to the thesis topic and research question, all of which were published between the year 2010- 2019.

Social media provides a platform for communication, interaction, sharing ideas and information through videos, images, messages building a virtual networking community. Facebook, Twitter, Snapchat, Instagram are few of the social media sites that are commonly used by the younger population. The influence of social media on individuals and the norm for beauty standard has led to the development of dieting resulting in changes in eating behaviour.

An introduction to social media, eating behaviour and eating disorder are mentioned in the theoretical background. The findings of this study indicate that there is a relationship between exposure to all forms of social media and body image concerns, mostly in girls. The number of friends and time spent on these networking sites also determined the increase in internalization, dieting behaviour and body surveillance. Images and messages encouraging eating disorders (ED) were also shared, however, there were also users who discouraged such behaviours and their messages were shared more than those encouraging eating disorders.

There is, in fact, a correlation between social media and eating behaviour, however, the studies were done focusing mainly on Facebook, Internet exposure and Television. A study on such correlation should also be done with other social networking sites such as Instagram or Snapchat which are more visually dominant. The authors also recommend further studies to be conducted on younger children both female and male.

Keywords: Social media, eating behaviour, eating disorder, Obesity, Anorexia, Bulimia, Binge eating disorder.

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## 1 Introduction

Eating behaviour is a broad term that encompasses food choices and motives, feeding practices, dieting and eating-related problems such as obesity, eating disorders and feeding disorders' (Gellman & Turner, 2013). With growing technology, life has become easier and better for all people. The advancement in technology day by day and excessive use of social media has both positive and negative effects. Social media has become famous nowadays and no one can stay away from it. All around the world in every 60 seconds 156 million emails are sent, 3.8 million search requests are made from Google and 2 million minutes of calls are made via Skype. The study has shown that 70% of 12-15-year old children have a profile on social media, while the OECD (Organisation for Economic Co-operation and Development) reported in 2015 has shown that 94.8% of 15-year-old children in the UK used social media. (House of Commons, 2019.)

The network of interaction between homeostatic process; neural reward system and child motor, sensory and socio-emotional capacity plays an important role in the evolution of feeding in humans. Other factors such as food environment, parenting and social influences also have an impact on the development of eating behaviour. (Gahagan, 2012.) The influence of social media on individuals and the norm for beauty standard has led to the development of dieting resulting in changes in eating behaviour. Any extreme changes in the eating pattern are considered an eating disorder. (Rodham, 2010 p 140 & 145.) However, most of the articles have found that eating behaviour in children depends on parental care. There are correlations between parent and child for snack intake, eating motivations and body dissatisfaction, indicating an important role for modelling and thus declares food as a tool for controlling the behaviour of children. Studies show that controlling children's behaviour results in a higher level of body dissatisfaction while positive parental role model is a better method for improving a child's diet than attempts at dietary control. (Brown & Ogden, 2004.)

'Eating disorders are serious conditions related to persistent eating behaviours that negatively impact health, emotions and ability to function in important areas of life' (Mayo Clinic, 2018). Eating disorders are often assumed as problems that children chose to suffer from. It is seen as a person undergoing a strict diet to lose weight. However, people are not aware that it is a serious mental illness that may lead to death. Eating disorders are on the rise and it is assumed that there are approximately 70 million people who suffer from some sort of eating disorders. It is more common in female, men however, do not open about their disorder due to the perception that eating disorder is a female illness. These sufferers are often in denial of their condition and do not seek treatment. The earlier the illness is detected and treated there is a higher chance of recovery. (Farrar, 2014.)

The rise of social media, westernization and cultural aspect has affected the perception of ideal body image. Celebrities have an influence on the general population especially teenagers

and young adolescents. These young masses follow their fashion, beauty and social media, trying to look like their favourite celebrity. The idea of having a slim body results in extreme diets which may further lead to eating disorders. There were very few reports of eating disorders in India before 2000, however, India has seen an increase in eating disorders in the last 15 years. Dr Rajesh Sagar, a psychiatrist in India, states that ‘with the invasion of Western television, and super slim models, young girls begin to idolize that look and it has been changing the culture of expectations of women’s body shape and size.’ (Lyons, 2017.)

## 2 Background

The key words of this thesis are social media (SM), eating behaviour (EB), eating disorders (ED), anorexia nervosa (AN), Bulimia (BN), Binge eating disorder (BED) which are described briefly below. We have focused on our literature review on 6-17 years old children. The characteristics of eating disorders among children are eating less amount of food than their body needs, fear of gaining weight, eating too much and feels that they are gaining weight and starts fasting or doing excessive exercise, eating a large amount of food even though they are not feeling hungry. (Engel, no date.)

### 2.1 Social Media

Social media is electronic communication, communicates personal information among with friends and families through videos, photos, messages, shares ideas and information and then builds a virtual network and community. It also promotes and advertises products and services and share common interests with different people building a network for career opportunities as well. There are many social interfaces such as Facebook, Twitter, WhatsApp, Instagram, YouTube, LinkedIn, Wikipedia which can be accessed through mobile phones, laptops, iPad etcetera. Any individual can have an account in these platforms and can use it easily. (Kenton, 2018.) Social media connects children and builds virtual network and communities based on their shared interests such as having same hobbies can have one community or interests in games, music, same-sex attraction, same interests in the different field create virtual network and communities to share their interests (Buckingham, 2008). The study has shown that the average 8-10 years old children spend about 8 hours a day while children and teenagers spend more than 11 hours a day using different types of social media (Hogan & Strasburger, 2013).

Social media can influence children in various aspects of eating disorders like individual factor, family factor, cultural factor. Study in individual factor has shown that young children have low self-esteem and self-doubt. They may not know the best weight range for themselves. In the

family factor, a parent tries to cope with an eating disorder, communication may become tense and explosive with their children. The cultural factor is like the message on magazine covers, in movies, on TV, and on billboards is “thin is beautiful.” So, it is not unusual for a young child to wish to be thin and to decide to lose weight. Initially, friends and family may encourage and support dieting, but it can lead to a serious eating disorder in a young child with other risk factors. (Manley, 2012.)

Television, a traditional media in comparison to online social media like Facebook, the Internet, Twitter, Instagram, is still very popular across the population. Since the launch of online social media in television like YouTube, Internet, Netflix, streaming videos like Amazon videos and online apps, it has gained popularity in the younger population. Online users can use social media to share digital videos clips of their favourite fellow fan’s programme broadcasted in television and can post online comments in the social media which can have interactions within the virtual community in real time. So, television has effectively acted as online social media nowadays. (Fossen & Schweidel, 2017.)

Social media has become one of the platforms for the children to communicate, share photos and videos, share information, ideas. Social media has many positive and negative effects on children’s life. The positive effects of social media on children’s lives are developing social skills, increasing social connections with the people from all around the world, reading and writing skills, sharing creative works with friends and other people, assessing online health information and able to get counselling support, advice from the people who are suffering from mental health problems. On the other hand, the negative effects of social media on children are distorted body image, cyberbullied, increase in obesity, getting a negative source of information from strangers, getting low grades. Social media and the internet are a source of gathering important information, advice and support for children with mental health illness. In the UK the young children spend too much time using social media such as Facebook, Snapchat, YouTube, Instagram. In the UK 37.3% of 15-year-old use excessive internet, 27.6% were 6 years old or younger when they first used the internet. In 2014 the percentage of smartphone users were 56% at the age of 9-16 years. 2.8 % used the internet when they were teenagers and over 99 % of the children have used the internet in the UK. (Frith, 2017.)

Cyberbullying is very common all around the world, especially in young children. According to Merriam-Webster dictionary, cyberbullying is defined as the ‘electronic communication posting mean messages, threatening and to harm another person.’ In 2009 the Finnish study surveyed 5,516 adolescents. The study found 10% of boys and 11% of girls were the victims of cyberbullying while 10% of boys and 9% of girls had been bullied and 10% boys and 16% of girls had witnessed cyberbullying. In 2014 South Korea surveyed 4,531 young children aged 11-14 years. The study found 9.7% of young children were involved in cyberbullying. (Pellissier, 2018.)

## 2.2 Eating Behaviour

Eating is something all living beings need in their life. We cannot survive without food and therefore it is a fundamental importance for health not only to give us energy but also getting the right combination of healthy food is to give the required nutrients for the body to function well. If the body lacks nutrients, our immune system might be weakened unable to fight any infectious diseases. So healthy food always plays an important role in maintaining and preventing diseases. (Rodham, 2010 p127.) Grimme and Steinle (2010) explain eating behaviour as ‘a complex interplay of physiological, psychological, social and genetic factors that influence meal timing, quality of food intake, food preference, and food selection.’ Eating behaviour is strongly influenced by social networking like television, smartphones, iPad etc. Television food advertisement has easily attracted unhealthy dietary practices i.e. fast food, less nutrient food, high calories food and sweet beverages among children (Higgs & Thomas, 2015).

Children spending more time on television have a high possibility of an increase in overweight and obesity. Children’s food preferences and consumptions are influenced by food advertisement on social media. This kind of advertisement may affect children who are likely to contribute to poor diets, obesity, overweight and health problems. Children may suffer from severe health problems such as sleep apnoea, hypertension, gastroesophageal reflux disease, Type 2 diabetes, cardiovascular disease due to overweight and obesity. The percentage of obesity of 6-11 years old children in the united states was increased from 7% in 1980 and 18% in 2010. In 2000 the death percentage was 15.2% due to poor diet and less engaged in physical activity. (Jeffries, Noar & Thayer, 2015.) According to WHO 2010, the number of obesity sufferer were 200 million male and 300 million female adults and over 40 million children under the age of 5 all around the world. In Peru 8.2% of children under 5 years old and 24.4 % between 5 and 9 are overweight and obesity. In Lima (The capital city of Peru) 13.1% of children under 5 years and 36.2% between age 5 and 9 are overweight and obesity. (Busse & Diaz. 2014.)

## 2.3 Eating Disorder

Eating disorder is a mental disorder in which individuals show signs of irregular eating patterns, severe anxiety or concern about their body weight and shape. They may eat very less or excess amount of food, vomit it or eat nothing at all or exercise obsessively which ultimately can lead to life-threatening situations. It is not gender oriented and therefore can affect both male and female though it is more dominant in female especially young girls or women. It can develop at any stage of life but most commonly it starts in the early teenage years. Eating disorders may be accompanied by depression or other mental issues. Individuals diagnosed with eating disorders often feel isolated, anxious and avoid or consume selected foods. They punish themselves if they eat more than they should or foods that they should not be eating. (Ekern, 2018.)



Social media has also influenced children's body dissatisfaction, change eating patterns and poor self-concept. Social media plays a significant role in children's daily life. In this age especially, girls are worried about their body shape and face. Body dissatisfaction has negatively affected the quality of young children's life. Children begin to compare themselves with their peer, famous models and begin to feel incompetent about their own body image. Spending everyday life in social media makes children and teenagers care more about getting likes and comments in photos and videos from peers and other people about their own body image. Negative comments from others strongly affect the emotional and mental well-being of children and teenagers. Different types of an eating disorder may develop in children such as anorexia nervosa, bulimia nervosa and binge eating disorders. Those who are struggling with an eating disorder may have a high level of anxiety, stress, depression and sleeping disorder. (Gleissner, 2017.) Excessive use of social media users has negative effects on their health and they might suffer from mental illness such as schizophrenia. Dieting behaviour is one of the major risk factors for developing eating disorders among all ages. (Freeman, 2014.) The study has found that 34% of American boys and 43.5% of girls at the age of 9-14 have developed eating disorder (Treasure, 2016).

## 2.4 Types of Eating Disorders

According to the International Statistical Classification of Diseases and Related Health Problems 10<sup>th</sup> Revision (ICD-10) there are eight types of eating disorders, however, the three most common types are explained briefly below (ICD-10).

### 2.4.1 Anorexia Nervosa

Anorexia nervosa is an earliest psychiatric disorder and it is characterized by a fear of gaining weight, reduction of food intake and self-evaluation of body image which leads to extreme dieting to lose weight. It is very common in girls than in boys. The study has shown Anorexia nervosa may develop from age 7 and then constantly increasing from age 10 among children. The frequency of Anorexia nervosa is 0.3-0.5% among children. (Lewis & Nicholls, 2016.)

Anorexia nervosa is the highest cause of mortality in eating disorder. Individuals suffering from anorexia nervosa have body weight issues, they see themselves fat and start to diet to lose weight. They do not wish to stop their diet nor is it possible to finish it completely, losing a lot of weight which has a negative impact on their body. Gaining weight is their biggest fear and to maintain their weight they eat very less and exercise excessively. Anorexic people may also suffer from depression and they tend to avoid people. They also refuse to acknowledge their

problem and seek treatment. (Mieli, no date.) Out of 5590, 119 review studies followed up from 1-29 years has reported 47% of people are recovering from anorexia nervosa while 34% improved, 5% died and 21% developed a chronic eating disorder (Hay, Touyz & Sud, 2012). The symptoms of Anorexia nervosa are distorted body shape, restriction of food intake, excessive physical activity to lose weight, mood disorder and low calorie of food intake, dizziness, dry skin, constipation (Semeco, 2018).

#### 2.4.2 Bulimia Nervosa

Bulimia Nervosa is a serious, severe life threatening eating disorder characterized by excessive exercising to avoid weight gain and purging after eating. People with bulimia nervosa are more likely to eat a large amount of food in a short time. Sufferers often binge eat repeatedly and then force vomit or exercise excessively or use excessive amounts of laxatives or diuretics to compensate for overeating. Signs and symptoms of bulimia include fear of gaining weight, eating out of control, vomiting, fasting after overeating. It is more common among females. Bulimia develops in adolescence from the age of 14-22. Adolescents and young women are affected by 1% - 2%. Bulimia nervosa increases the risk of suicide in adolescents with 53% suicidal ideation, 26% make plans and 35% attempt suicide. (Watkins, no date.) Like anorexics, bulimics also fear to gain weight and are self-conscious of their body weight and shape. The cycle of bingeing and purging is carried out secretly and bulimics often feel shame and guilt for such behaviour. Gastrointestinal problems, severe dehydration and heart problems are the aftermaths of binge and purge cycle. They also show signs of dental erosion, cavities from excess vomiting. (Ekern, 2018.)

#### 2.4.3 Binge Eating Disorders

Binge eating disorder is the most common form of eating disorder among adolescents and is strongly connected with obesity and health-related problems. Children eating behaviour depends on parent feeding practices. Children with parents who are diagnosed with binge-eating disorder are at higher risk of developing this disorder. (Lydecker & Grilo, 2017.) Binge eating disorder, unlike anorexia and bulimia, has different characteristics. Individuals suffering from binge eating disorder do not have control over his/her eating pattern. They eat an excess amount of food and do not show behaviours like purging, fasting or exercising. Therefore, they are often obese and have a higher risk of developing other health problems such as cardiovascular diseases, hypertension. Binge eating disorder sufferers often feel shame, guilt and agony for such behaviour which may accelerate their current condition. (Ekern, 2018.) The study has reported that the percentage of suffers from binge eating disorder are between 0.7% - 4.0% of

the general population. Sign and symptoms of binge eating disorder include eating continuously even if they are full, experiencing a feeling of anxiety and stress, overeating. (Myers & Wiman, 2013.)

### 3 Purpose Aim and Research Question

The purpose of this literature review was to find how social media affects eating behaviour in children. Hence, the aim was to understand the possible effects of social media on eating behaviour in children. The research question was: 'how does social media affect eating behaviour in children?'

### 4 Methodology

#### 4.1 Literature Review

The method used for this study was a literature review. 'Literature review is the process of searching existing literature relating to research problem to develop theoretical and conceptual frameworks for a study and to integrate research findings with what the research says about them' (Kumar, 2019 p 58). A literature review is a comprehensive study and presentation of selective collection of the available literature which includes data, information and evidence written from a specific perspective, to fulfil the aims and views regarding the chosen topic (Hart,1998). The use of a literature review as a research method enables the author to review and explore published literature on the research topic and incorporate their findings in a gradual manner (Aveyard, 2010). When executing a literature review, it is essential that the purpose and aim of the study are identified beforehand and give a short description of finding keywords, concepts, developing ideas and reviewing evidence-based information (McCombes, 2019).

##### 4.1.1 Data Retrieval

The data for the thesis research was taken from literary websites provided by Laurea UAS such as Cumulative Index to Nursing and Allied Health Literature (CINAHL), PubMed, SAGE premier and Google scholar and scientific research articles that are evidence-based and cited. The limitations for data retrieval were set to guide us and narrow the search for data.

Social media platforms were already in existence since the early 1990s and it was only in the late 2000s that social media started to gain more popularity (McFadden, 2018). Therefore, articles were chosen which were published between the year 2010-2019 as it would be more

appropriate and up to date. The chosen articles were available in full text in English as it is the median language and the full-text articles provide better insight into the study conducted.

When retrieving data, certain issues were taken into consideration such as the articles must be within the selected keywords, the articles content must have core concepts and relevant related keywords as shown in the Table 1. Only those articles were used in this study which answered the research question. Subsequently, literatures were summarized to document the data analysis which helped to deliver the overall picture of the articles and answers to the research question. The summary table included author, title, participants/settings, methods and findings (see appendix 1). The findings were summarised that answered the research question. The abstract of the articles was read and selected which qualified the inclusion criteria.

| <b>Core concepts</b> | <b>Keywords</b>                            | <b>Related keywords</b>                                |
|----------------------|--|--|
| Eating behaviour     | Eating disorder, eating habits, body image | Anorexia, Bulimia, Binge eating disorder               |
| Social media         | Social media                               | Facebook, Twitter, TV, Snapchat, Instagram, smartphone |
| Children             | Child, Young children                      | Youth, Teenagers, adolescents                          |

Table 1: Keywords selection of articles

Four (4) steps for inclusion and exclusion of articles were applied during database searching as shown in Figure 1. The data collection methods are described below in the flow chart.

- Identification
- Screening
- Eligibility
- Inclusion

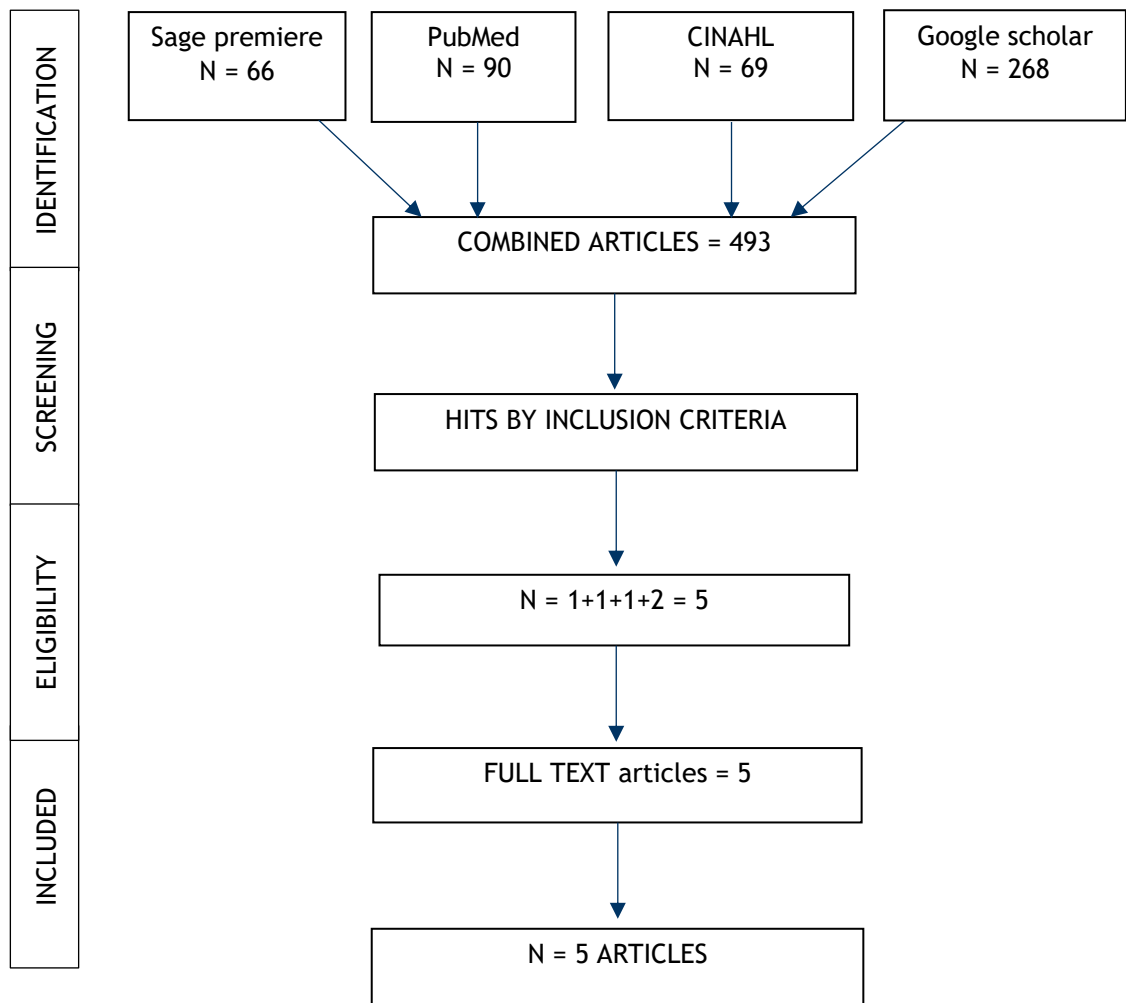


Figure 1: Data collection method

#### 4.1.2 Inclusion and Exclusion Criteria

'Inclusion and exclusion criteria enable the literature reviewer to identify the literature that addresses the research question and that which does not' (Aveyard, 2010 p 71). Before any article search is conducted, it is essential to construct a research question that will justify the purpose of the literature review. Inclusion and exclusion criteria list should be concrete so that it will help focus on the research question and not avert from it. The inclusion and exclusion criteria for the thesis is mentioned in the table below.

The articles that were reviewed for this thesis were evidence-based articles due to its validity and its quality. Any articles that will be published in academic or scholarly journals must be peer-reviewed and it must undergo a strenuous process to check for accuracy and validity. (Lloyd Sealy Library, 2018.)

| Inclusion Criteria   | Exclusion Criteria   |
|--|--|
| Articles published between 2010-2019   | Articles published prior to 2010   |
| Articles focusing on the use of social media in children 6-17 years                              | Articles focusing on the use of social media in infants, adults and elderly                            |
| Articles that focus on the effects of social media on eating behaviour in children of 6-17 years | Articles that focus on the effects of social media on eating behaviour in infants, adults and elderly. |
| Articles on eating behaviour, eating disorders, body image                                       | Articles on healthy eating, nutritional guide, body dysmorphic disorder                                |
| Articles that are empirical studies  | Non-academic articles, discussion papers, books  |

Table 2: Inclusion and exclusion criteria

## 4.2 Data Analysis

Data analysis is the process of interpreting the data collected for the research that answers the questions formulated by the authors. Business Dictionary describes data analysis as the process of evaluating data using analytical and logical reasoning to examine each component of the data provided (Business Dictionary, 2019).

According to Aveyard 2010, one of the methods to summarize the literature is meta-analysis which is a ‘statistical analysis of a large collection of results from individual studies for integrating findings.’ It is a summary of findings from different studies that are similar. However, its complex process limits the use of this tool especially at undergraduate level. Therefore, a more simplified approach was undertaken to analyse the collected data. Its purpose is to amalgamate the results of studies that have used different research methods. This method is often used by health and social care undergraduates for their literature review (Aveyard, 2010, p125 & 128). The articles collected were read and re-read to ensure that those articles were answering the research question. It was also important to construct and create relationship between these articles by comparing the results and finding similarities between them. The data relevant to research question were gathered. The result collected from all the articles were combined and reviewed again. The result is presented in detail in findings.

## 5 Findings

### 5.1 Source of Reference

In this literature review, 5 articles were analysed and found the result regarding social media and body image concern. Among 5 articles, three (3) articles was a research conducted in South Australia by Tiggemann and Slater (2013), one (1) article researched by Busse and Diaz (2014) on Peruvian Children, and one (1) researched by Cavazos-Rehg, Krauss, Costello, Kaiser, Cahn, Fitzsimmons-Craft & Wilfley (2019) in the United States of America. Four (4) of five (5) articles were conducted on online social media like Facebook, Internet, Twitter while one (1) article researched by Busse and Diaz (2014) was conducted in traditional media television.

Three (3) articles of Tiggemann and Slater (2013) were conducted on different age group of children (preteenager 10-12 and adolescent 13-15, twice) based on online social media Facebook, the internet and body image concerns, however the result showed, all forms of media exposure correlate to some form of body image concerns. Another study of online social media, Twitter was researched by Cavazos-Rehg, Krauss, Costello, Kaiser, Cahn, Fitzsimmons-Craft & Wilfley (2019) in children under 16 years of age also found the similar result relating to body image concerns while Busse and Diaz’s (2014) study conducted on television viewing programmes and eating habits of Peruvian children (children age 6-11) revealed result of body

image concern but found different result. The results suggest a strong correlation between Internet exposure, Facebook, Twitter, Television and body image concerns which proved the influence of social media on change in eating behaviour among the children.

In Busse and Diaz (2014) article, children watched television for 6-7 days/week and ate fast-food, chocolates and popcorns while watching TV. The study also noticed that parents do not have enough time to monitor their children as they were working a long day, night shift and even at the weekend. Some of the parents let their children watch TV before doing homework as children promised to finish their homework after the TV show was over. Tiggemann and Slater's (2013), study found 97% children had access to Internet at their homes and some even had it in their bedrooms. They spent about 1.5 hours on it and reported that Facebook was their favourite social media platform. Cavazos-Rehg, Krauss, Costello, Kaiser, Cahn, Fitzsimmons-Craft & Wilfley (2019) study did not reveal the time spent on Twitter but noted that under 17 years old adolescent use less twitter comparison to 17-19 years adolescent.

The writers Busse and Diaz (2014), Tiggemann & Slater (2013), Cavazos-Rehg, Krauss, Costello, Kaiser, Cahn, Fitzsimmons-Craft & Wilfley (2019), identified three categories under the effects of social media on eating behaviour in children. These categories are Television and eating habits, body image and eating disorder on Twitter and Facebook, internet exposure and body image. The result showed, most of the adolescent are highly engaged in social media and the users are increasing in a large number every year. The result of Busse and Diaz (2014) article found excessive television programme watchers (children) are obese but Cavazos-Rehg, Krauss, Costello, Kaiser, Cahn, Fitzsimmons-Craft & Wilfley (2019) found the result that the adolescents just wanted to be skinny which is opposite to the result of Busse and Diaz (2014). The result also reveal parents are influencing their children indirectly to watch TV, to use internet independently and connecting the internet network & television to their own bedroom.

## 5.2 Television and Unhealthy Eating Habits

Tiggemann and Slater's (2013) and Busse and Diaz's (2014) studies found magazines and television played a key role in eating disorder related behaviours. But Busse and Diaz (2014) studies claimed, television programmes had a higher influence on eating behaviours. They preferred to eat chocolates, potato chips, salty snacks while watching TV rather than a fresh homemade meal which changed their eating behaviour and lead them to be obese. The study also found children spending more time watching television were less engaging in physical sports activity and school activity. The images of thin celebrities on magazine and televisions aspired the general adolescents to become like them. Therefore, there is a relationship between exposure to online social media, traditional media and body image concerns.



### 5.3 Effects of Time Spent on Social Media

Tiggemann & Slater (2013) found the usage of social media (Facebook) had increased rapidly among adolescents during the second research after two years. They found the users spent more time than before, an increase in the number of friends, exposing and concerning their body shape among the group. While Cavazos-Rehg, Krauss, Costello, Kaiser, Cahn, Fitzsimmons-Craft & Wilfley (2019) research article based on twitter did not reveal the time consumed on twitter platform by adolescent but there were issues related to food and calorie intake expressing body image concerns. In Busse and Diaz (2014) article, the parents have reported the children to watch TV for almost 5 hours during the weekday and 7 hours during weekends. On weekends children watched their favourite programmes early in the morning, at lunchtime and up to the late night. The children asked for items such as chocolates, fast foods, popcorns, candies that they saw in Tv programmes.

The result also suggests that there is undoubtedly a correlation between the initial time spent on Facebook, Twitter which relates to body image concerns and internalization. A large number of adolescents were correlated to all internalisation, change in eating behaviour, body surveillance and drive for thinness. The increase in usage of Internet at their homes and some even had a television in their bedrooms, reported that Facebook was their favourite social media platform and spent about 1.5 hours on it while 5-7 hours in television (Busse and Diaz 2014 & Tiggemann & Slater 2013).

### 5.4 Eating Behaviour and Body Image Concern

The result of Tiggemann & Slater (2013) articles showed that all forms of media exposure correlate to some form of body image concerns. The total amount of time spent on the Internet was undoubtedly correlated to all four measures of body image concerns; internalization of the thin ideal, body surveillance, body esteem and dieting behaviour. Facebook users also scored high on overall Internet use as well as on internalization, body surveillance and dieting and lower on body esteem. There was, however, no correlation between the private or public setting of their Facebook profile and any variables of body image concerns. Internalization was also tested as a mediator of the relationship between Internet exposure and body image concerns. The initial relationship with Internet exposure was low but remained significant according to the regression analysis to predict body surveillance. Therefore, the result shows that the relationship between Internet exposure and body esteem, dieting behaviour were mediated by internalization whereas, the relationship with body surveillance was only partially mediated.

### 5.5 Unhealthy Eating Habits on Twitter

In Cavazos-Rehg, Krauss, Costello, Kaiser, Cahn, Fitzsimmons-Craft & Wilfley (2019) research article based on twitter, there were issues related to food and calorie intake expressing body image concerns. The adolescents were liking to be skinny by controlling food intake. Adolescents often associated with pictures that displayed thin legs or thigh gap, protruding hip bones and flat stomach and visible collar bones. Those pictures inspired them to become the same, encouraging change in eating behaviour. The study found body surveillance was stronger among adolescent girls who strived to have an ideal body which is now presumed as a standard for beauty.

### 5.6 Positive Aspects of Social Media

However, there are positive aspects of social media on the same research of Cavazos-Rehg, Krauss, Costello, Kaiser, Cahn, Fitzsimmons-Craft & Wilfley (2019) where the writers found some groups were active in discouraging eating disorders and those tweets were retweeted more than the tweets that encouraged eating disorder. Social media is a component to enhance our connectivity, so it can affect positively in human life. It can be used as a promotional platform for social welfare activities, create awareness, build communities, communication.

## 6 Discussion

The purpose of the literature review was to understand the effects of social media on eating behaviour in 6-17 years children. The findings were based on 5 articles which have been analysed by the researchers.

Social media has gained popularity in the past decade and there are large numbers of new users each year. It has become a medium for communication, sharing personal lifestyle, ideas and so forth, some of the most popular social networking platforms are Facebook, Instagram, Snapchat and Twitter. Most of the users are adolescents and young adults. These platforms not only have helped spread positive messages, but it also encourages darker aspects of human civilization. The standard for beauty is constantly changing and with these platforms where images, videos can be shared, it impacts the users' ideology.

The articles selected for this literature review were mostly concerned with the relationship between internet exposure and body image concerns. The studies were focused mainly on girls in their adolescent years and access to internet, television and usage of Facebook. The boys or male counterpart were not involved in the studies which should have been done to have a

better understanding of the possible effects of social media on the general population. This may be because eating disorder is generally associated with female population and which is also very common among them. The results of the articles suggest that Facebook played a prominent role in internalizing body image concerns rather than magazines and television which also contributed towards it. In our opinion magazines and television programmes focus more on celebrities and entertainment and may be viewed as unreal. However, personal profiles in social media display one's individual ideas and lifestyle and the users are more exposed to different images which are usually controlled in traditional media. Constant peer pressure also puts them at higher risk to aspire to become thin or skinny.

Tiggemann and Slater (2013) in one of their articles found that Facebook users scored higher on body image concern indicators than their peers who were non-users. It was not mentioned if these non-Facebook users were active in other social networking sites. The focus was mainly on Facebook and Internet exposure and therefore we cannot generalize that Facebook users are at higher risk of developing body image concerns. The studies could also have been done with other social networking sites which are more visually dominant such as Instagram or Snapchat and the results could have been compared to conclude which networking platform had a prominent role in developing body image concerns.

The results from the studies found that exposure to the Internet or social media did play a role in internalizing with body surveillance, dieting behaviours, or wanting to be thin. Tweets (Twitter) and images of thin girls encouraged ED related behaviours but there was, however, positive messages discouraging ED related behaviours as well. Social networking platforms may provide a safe corner for individuals already suffering with some sort of eating disorders where they can share their experiences and struggles but it should not be used to encourage such behaviour.

It is also evident from our everyday lives that humans spend more time on the internet and smartphone than socializing with people physically and emotionally. Pictures of food, vacation places, new clothes, shoes and cars are uploaded along with other materialistic objects which may create unwanted feelings of jealousy or greed in others. Images expressing thin body as ideal beauty standard has a negative impact on others encouraging unhealthy dieting, extreme exercising, body image concerns. The more time we spend on social networking sites we are more vulnerable to its negative effects. The more time they spent on these social media platforms they had a higher risk of being concerned with body images as well as the number of friends in these platforms determined body weight concerns.

Children who spend more time on TV have less interaction with family and friends and might affect their learning ability. Television programmes and advertisements have changed eating

habits and increased the consumption of unhealthy snacks or fast-food intake among children. (Busse and Diaz 2014.)

### 6.1 Ethical Considerations

In this study, search database was implemented electronically using different online sources such as Google Scholar, Cumulative Index to Nursing and Allied Health Literature (CINAHL), Sage premier, PubMed provided by Laurea University of Applied Sciences which were free of cost.

Ethical considerations were also considered while conducting the research. Ethics refers to the principles of morality; good or bad, right or wrong. It governs a person's behaviour and choices. (Singer, 2019.) The authors have followed the proper guidelines for writing this research using the Thesis Guide provided by Laurea University of Applied Sciences, Finland. The data and information collected from various sites have been referenced as well as the original authors of the articles collected have been given proper credit. Copyright issues and plagiarism has not been violated knowingly by the authors, they have used paraphrasing and given proper credentials. The authors have not made any biased judgement on the findings and have presented the result as a reflection of the data collected. The data and results have not been fabricated.

### 6.2 Limitations and Trustworthiness

This study was limited to five (5) articles found from different online databases. Relevant articles from the search database were difficult to find on children aged 6-17 years. Some of the research articles were relevant but contained only abstract or had to be purchased which proved to be a hindrance while collecting data. The online database that was used to search literature using a combination of keywords revealed many kinds of literature but on the different age group that was not included in this literature review. The language barrier was another limitation during data retrieval, articles written only in English were selected. The articles selected for this literature review were studies that were conducted focusing mostly on Facebook, Twitter, television and internet exposure. There were no articles found for the intended age group (6-17) on other social media platforms.

The inexperience on part of the authors may have limited the overall quality of this study, particularly with regards to the data analysis process. Furthermore, the authors have tried to answer the research question, which were raised objectively and to their full ability, however, this study was done based on data which were currently available. With presumable increase

in the body of work on the given topic, in times to come, is likely to yield more insights and findings to provide for more informed and refined outlook on the topic.

In this study, search database was implemented electronically using different online sources such as Google Scholar, Cumulative Index to Nursing and Allied Health Literature (CINAHL), Sage premier, Laurea Finna provided by Laurea University of Applied Sciences which were free of cost.

## 7 Conclusion and Recommendation for Further Studies

The global usage of social media has increased every year with the most popular platform Facebook, Instagram, WhatsApp, Snapchat and YouTube among preteens and adolescent. The research evidence has found, there is the high influence of social media among children relating to eating habits. Positive messages should be shared, and contents related to an eating disorder should be discouraged. These platforms can be used as an educational and awareness tool, which to some extent is being practised.

According to findings, it is crucial that the parents are not aware of their child's habit and eating behaviour, how social media is affecting them. If it can be regulated with guidelines, policies and applied in children to influence and to educate then it can be ensured with the positive productive result. Social media can be strongly recommended to use as an educational tool to influence children and to communicate in an effective way.

Social media is evolving with the newest technology, so its usage is skyrocketing all over the world every day. There are not enough researches done on it so further studies are essential and recommended to find on how social media platforms can be regulated and applied with policies and guidelines. There is a need to conduct more research and should explore how children's time has been spent on social media, what kind of education is necessary to motivate them, how the wasted time can be utilized in education, how parents can manage their time to children. A qualitative research is essential to explore all these questionnaires.

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Appendices

Appendix 1: Articles .....30

## Appendix 1: Articles

| Author   | Title   | Partici-<br>pants/ set-<br>tings  | Methods                                 | Findings  |
|--|---|---|---|---|
| Busse.P,<br>Diaz.R.<br>(2014)  | What is the television viewing and eating habits of children in Peru?                         | 38 children between 6-11 years and 8 focus groups with 36 female caretakers | Qualitative and quantitative study      | The children watch TV for almost 5 hrs during the weekday and 7 hours during weekends. The children asked for items such as chocolates, fast foods, candies that they saw in Tv programmes. 84% of children watched Tv for 6,7 days/week. 55 % of kids eat chocolates and popcorns while watching TV.   |
| Cavazos-Rehg, P.A,<br>Krauss, M.J,<br>Costello, S.J, Kaiser, N. Cahn, E.S, Fitzsimmons-Craft, E.E,<br>Wilfley, D.E | 'I just want to be skinny.': A content analysis of tweets expressing eating disorder symptoms | 3000 random sample of tweets on Twitter                                     | Quantitative research and data analysis | Out of 3000 tweets, 2584 were related to an eating disorder. 65% of 2584 displayed concerns about body shape. There were also tweets that included body image displaying thin thighs, flat stomach. Tweets that discouraged pro-ED were retweeted more and had a greater number of followers than tweets that encouraged or expressed about ED. |
| Tiggemann, M. Slater, A  | Facebook and body image concern in adolescent girls: A prospective study                      | 438 girls of ages between 13-15 years                                       | Quantitative research and data analysis | The study was conducted twice with 2 years gap. It was found that the number of Facebook users had increased as well as their concern for body shape. The number of friends on Facebook also correlated with body image concerns.   |

|                                |  |                                     |   |   |
|--------------------------------|--|-------------------------------------|---|---|
| Tiggemann, M.<br><br>Slater, A | NetGirls: The Internet, Facebook, and Body Image Concern in Adolescent Girls | 1087 girls aged between 13-15 years | Quantitative research and data analysis | The study found that 95.9% of the participants had internet access at home and spent about 2 hours every day. Facebook was their favourite website and spent about 1.5 hours. The time spent on the internet and concern about body image was correlated. |
|--------------------------------|--|-------------------------------------|---|---|

|                         |  |                                    |   |   |
|-------------------------|--|------------------------------------|---|---|
| Tiggemann, M. Slater, A | NetTweens : The Internet and Body Image Concerns in Preteen-ageGirls | 189 girls aged between 10-12 years | Quantitative research and data analysis | A survey on the relationship between media exposure and body image was conducted. The result shows that 97.5% had access to the internet in their home and internet use was higher in those participants who had access to it in their own bedrooms. It was also found that there was a correlation between Internet exposure and body esteem as well as dieting behaviour. |
|-------------------------|--|------------------------------------|---|---|