

# **How does peer influence affect dietary choices among young adults ?**

**Bachelor project submitted for the degree of Bachelor of Science HES**

by

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## Abstract

This research sheds light on the impact of peer relationships on the dietary habits of young adults using a quantitative survey approach. 170 responses were collected from participants between the ages of 18 to 30 through social media and online platforms. The survey collected information on the demographics, dietary preferences, peer relationships, and other factors influencing dietary habits of young adults.

The findings from the study indicate that most respondents are conscious of their dietary decisions, with a notable number of respondents being confident about their understanding of nutrition. Peer influence was found to be noticeable, as a majority of the respondents frequently dined with their peers and were in some way influenced by their peers' dietary choices. Yet, it was revealed that peer acceptance and peer pressure did not play major roles in the decision-making process, which suggests that individuals rely on their own preferences when making food choices, at least consciously but there still remains a subconscious influence which this study will explore upon.

The complexity of peer influence is emphasized in this research, showing that although young adults are influenced by their peers passively and indirectly, their primary driver in shaping their dietary decisions is still their personal preferences. The results indicate that in order to promote healthier eating habits, institutions should focus on providing individuals with nutritional information, and raise awareness on the indirect and unconscious impacts of peer relations on individuals' dietary habits.

Constraints such as reliance on self-reported data collected by the respondents and a potentially uniform sample. Future research should use a mixture of interviews, focus groups ,and potentially a dietary tracking app to further validate these findings across different populations and larger populations. Overall, the study highlights the complexity of food choices shaped by personal and social influences among young people

# Table of contents

Disclaimer .....	2
Acknowledgments .....	3
Abstract.....	4
Contents.....	v
List of Tables.....	<b>Error! Bookmark not defined.</b>
List of Figures.....	vii
1. Introduction .....	1
2. Literature review.....	4
2.1 Peer impression impact on food intake and choices .....	4
2.2 Effects of peer relations on dietary intake .....	7
2.3 Peer influence on snacking behavior .....	9
2.4 The evolution of dietary habits across age groups .....	12
2.5 Limited scope of peer influence studies .....	14
2.6 Age and developmental considerations .....	14
2.7 Contextual factors and environmental influences.....	14
2.8 Psychological mechanisms and individual differences .....	15
2.9 Longitudinal studies and Interventional research .....	15
3. Methods .....	16
3.1 Study design.....	16
3.2 Research question.....	16
3.3 Participants.....	17
3.4 Survey instrument.....	17
3.5 Data collection .....	18
3.6 Data analysis .....	<b>Error! Bookmark not defined.</b>
3.7 Ethical considerations.....	18
3.8 Study limitations .....	18
4. Results and discussions .....	20

5. Conclusions.....	32
References.....	35
Appendix : Quantitative survey.....	42

## List of Figures

Figure 1 : Frequency of reflection on dietary choices.....	20
Figure 2 : Confidence in understanding nutrition .....	21
Figure 3 : Frequency of seeking out information.....	22
Figure 4 : Primary influencers in dietary decision making .....	23
Figure 5 : Frequency of eating with peers.....	24
Figure 6 : Peers influence on food choices when eating together .....	25
Figure 7 : Peer approval in dietary decisions.....	26
Figure 8 : Peer pressure.....	27
Figure 9 : Peer impression .....	28
Figure 10 : Likelihood of following peers when ordering dessert.....	29
Figure 11 : Likelihood of following peers in trying a new restaurant .....	30
Figure 12 : Peers food choices vs own preferences when dining out.....	31

# 1. Introduction

In the complex environment of health and well-being, the dietary choices of individuals can often be found at the heart of the factors that influence well-being and health (Daly, O'Sullivan, Kearney 2022a; Ragelienė, Grønhøj 2020).

Among the numerous factors that influence food choices (Chung et al. 2021; Fitzgerald et al. 2010; Neumark-sztainer et al. 1999; Shepherd, Dennison 1996), the omnipresence of peer influence emerges as a compelling area of study which I've decided to elaborate on. This thesis aims to explore the nuanced dimensions of peer influence and its ramifications on the dietary choices of young adults (Suleiman, Deardorff 2015).

**Peer influence** in its essence encompasses a large variety of complex concepts such as the following : **social exchange theory** which states that human beings attempt to maximise rewards and benefits (rewards minus costs) by interacting with other individuals which is not to be confused with social interaction (Rubin, Bukowski 2009), **peer groups** which entails banding together in collectives with two or more people, in groups that vary in size, cohesiveness, density (Rubin, Bukowski 2009).

**Peer relationships** which refers to interpersonal relationships established and developed during social interactions among peers or individuals with similar levels of psychological development (Greca, Harrison 2005), and are a form of social support .

**Social networks** which allude to the way in which individual lives are inserted in networks including numerous distinctive people, ways of considering these networks both qualitatively and quantitatively, the social processes involved in their creation and their impact on individuals (Rubin, Bukowski 2009).

**Group dynamics** which is defined as the influential actions, processes, and changes that occur within and between groups (Forsyth, D. R. 2014). The tendency to join groups with others is perhaps the most important human characteristic, and the processes that occur within these groups leave an indelible impression on its members and society, and to understand people, you need to understand groups and their dynamics (Forsyth, D. R. 2014). ., **social norms** which are defined as common standards within a social group regarding socially acceptable or

appropriate behaviour in particular social situations, thus guiding human behavior (Chandler, Munday 2011).

They consist of what individuals do, what individuals believe they should do, what individuals believe others do, what individuals believe others do and approve of, and expect people to do (Chandler, Munday 2011). **Social identity theory** which claims that individuals infer a portion of their character, their social character from the groups to which they belong, as for example an identity as “Real Madrid supporter”, “student”, “Gym rat” etc (Scheepers, Ellemers 2019).

One cannot talk about peer influence without mentioning **social media** which keeps growing and recorded a whopping 5,04 billion users as of January 2024 (Statista 2024). It has become one of the biggest tools of behavior influence as companies use it for social marketing and influencers use it to sell their products. Social media is also a place where individuals exchange ideas and discuss different topics and a place where individuals go for information gathering which makes it one of the most influential tools.

As we’ve seen, **peer influence** encompasses numerous complex concepts which are intriguing and could be a study on their own but won’t be elaborated on in this study, as this study sheds the light on a particular aspect of peer influence which is **peer relationships**. The aim of this thesis is to understand how peer relations affect dietary decision making.

**Relationship** as defined in the following way : “A continuing and often committed association between two or more people, as in a family, friendship, marriage, partnership, or other interpersonal link in which the participants have some degree of influence on each other’s thoughts, feelings, and actions”(APA Dictionary of Psychology.2007) is the definition we’re going to be using for the **peer relationships**, so in other words this study aims to shed a light on how family, friendships, continued associations, marriage etc. affect the dietary choices of younger adults.

Understanding how peer relationships affect dietary choices is crucial as dietary choices have health consequences (Gulati, Misra 2014; Heianza, Qi 2017; Hruby et al. 2016; Li et al. 2010). Dietary choices have been linked to long-term weight gain which might not in itself be harmful but has been linked to obesity (Hruby et al. 2016; Li et al. 2010; Mozaffarian et al. 2011).

Research also indicates that poor dietary habits leading to deficiency in potassium, calcium, magnesium and fiber have been linked to cardio vascular diseases (Ascherio et al. 1998; Chen et al. 2023; Huang et al. 2014). Dietary habits consisting of high consumption of added sugars have been positively correlated with diabetes (A. Colditz et al. 2000; Gulati, Misra 2014). Which is why it is crucial to understand the mechanism by which peer relations shape dietary choices to design effective interventions that promote healthier eating habits and minimize the negative health consequences linked with a poor dietary practices (Daly, O'Sullivan, Kearney 2022a; Hruby et al. 2016; Kaur, Scarborough, Rayner 2017; Li et al. 2010).

The World Health Organization (WHO) anticipates that by 2025 more than 1.4 billion people globally will be overweight and amongst those that are overweight 300 million of them will be obese (Breda et al. 2015). The annual cost of all cardiovascular diseases is anticipated to be at 1 trillion American dollars and 23 million deaths are expected to result from it each year globally (Nawsherwan et al. 2022).

For us to understand the influence of peer relations on the dietary choices of young adults, we need to understand the different mechanisms of influence, whether direct or indirect and passive or active. Passive influence is when individuals are subtly influenced by the behaviours of those around them, whereas active approval-seeking is the intentional effort to seek positive feedback from peers through specific actions.

It is also crucial for us to comprehend the influence of peers on human behavior across infancy to early adulthood because these behaviors developed in the early childhood and/or adolescence can persist into adulthood.

## 2. Literature review

### 2.1 Peer impression impact on food intake and choices

It is understood that social modelling is a major determinant of human eating behavior (Cruwys, Bevelander, Hermans 2015). Eating with peers has become one of our most enjoyable parts of cultural experience which is the reason why most of the eating takes place in that cultural setting, therefore it follows that one's eating behavior could deeply be affected by social factors (Rozin 2005; Cruwys, Bevelander, Hermans 2015). 40 years ago it was demonstrated that social modeling not only plays a crucial role in eating behavior but is the primary determinant of eating behavior (Cruwys, Bevelander, Hermans 2015; Nisbett 2017).

The argument that women's motivation concerning eating are complexly influenced by the "thin ideal" (cultural bias) which is a concept that encompasses a cultural emphasis on thinness, associating it with notions of success and allure, particularly targeted toward women (Thompson, Stice 2001; Garner, Garfinkel 1980; Thompson, Covert, Stormer. 1999)

Aligned with the notion that women face greater pressure than men to adhere to the thin ideal (Rodin, Silberstein, Striegel-Moore 1984), though this study is 40 years old and things could have changed. It's been suggested that the desire to impress peers concerning food and eating could hold more significance for women than for men (Herman, Polivy 2010; Roth et al. 2001; Vartanian, Herman, Polivy 2007). Thus social influence may be bigger in women in comparison to men.

Trying to make a good impression has been shown to influence people dietary choices, in conditions in which it's believed that good impressions are important, women tend to eat minimally in order to accomplish this (Roth et al. 2001).

Women who eat minimally have been shown to be viewed in a more positive light than those that eat a lot (Bock, Kanarek 1995). Women have also been shown to eat minimally in situations where they're self-conscious about their weight (DeJong, Kleck 1986). Again we have to take into consideration that both of these studies were done approximately 40 years ago.

The study demonstrated the power of social influences on eating are significant, as it was shown that people will adhere to norms set by unknown others even in cases where they're completely alone with no incentive to do so, moreover the

study's findings suggested that both dieters and non-dieters seemed to be motivated to behave like everyone else had (Roth et al. 2001).

In that particular study, participants consumed food in the presence of other female observers, which is very interesting because females have been shown to have a strong desire to portray themselves as feminine in the presence of attractive males, but in this case females were willing to present themselves as minimal eaters even to other females (Roth et al. 2001).

Numerous studies have investigated how the type of food eaten affects ratings of various characteristics of social or interpersonal significance (beyond masculinity and femininity). Typically, these categorize foods as either "good" or "bad" and to explore whether individuals who consume good or bad foods are themselves viewed as good or bad individuals (Mooney, Amico 2000; Stein, Nemeroff 1996; Fries, Croyle 1993; Oakes, Slotterback 2004; Barker, Tandy, Stookey 1999).

For example, (Stein, Nemeroff 1996) discovered that participants who consumed "good" (i.e., non-fattening) foods were seen as more physically attractive, more likable and more moral compared to the participants who consumed "bad" (i.e., fattening) foods.

It was also found in the (Mooney, DeTore, Malloy 1994) study that both male and female evaluators deemed female participants who preferred low-fat foods to be more attractive, more intelligent, more composed and more conscientious in comparison to female targets who preferred high-fat foods.

In a (Mooney, Lorenz 1997) subsequent study it was found that participants who ate the feminine diet in that study were graded higher on the personal qualities scale compared to the participants who adhered to the masculine diet.

In the (Mooney, Amico 2000) study they had individuals read a description of a female who ordered either a "good" lunch (salad and chicken sandwich) or a "bad" lunch (hamburger and fries). Even though participants deemed the eater of the good lunch as more moral (e.g., less likely to have cheated in college), they were also less likely to socialize with the eater.

In a similar way, (Fries, Croyle 1993) had individuals provide their impressions of consumers of a low-fat/vegetarian diet or high-fat/fast food diet, using both open-ended responses and trait-rating formats. Those who adhered to high-fat/fast-food were perceived as less physically attractive, less warm, less intelligent and less

studious, they were also viewed as more inclined to attend parties, consume alcohol, and to possess a more easygoing demeanor.

It was discovered in a study conducted in 2004 that oatmeal-eating participants were viewed as being more physically attractive, more responsible, more intelligent and more moral, however less humorous and more boring than the pie-eating participants. (Oakes, Slotterback 2004).

One more study concluded something similar, (Barker, Tandy, Stookey 1999), as it was demonstrated that consumers of low-fat diets were rated as attractive, middle-income, intelligent, but also, unhappy, antisocial and high-strung whereas the participants that adhered to high-fat diets were perceived to be unintelligent, unattractive, and working class, but also happy, fun-loving and sociable.

If there is one thing that these studies have made clear, it's the fact that the types of food individuals consume has an impact on how they're viewed by other individuals and that individuals have an incentive to change their dietary habits in order to improve their appearance in social contexts and that they're more than often willing to do so.

In general people who were more careful in regards to their dietary choices (low-fat dieters) were perceived as more intelligent, higher class, more moral, more attractive and being more conscious but on the other hand they were perceived as less social, less fun and unhappy. These stereotypes have shown to have been exploited by individuals who are trying to impress or conform to societal norms.

## **2.2 Effects of peer relations on dietary intake**

Numerous studies have shown that individuals tend to adapt their dietary intake to that of their companions (Wansink 2004a; Salvy et al. 2008; Salvy, Kieffer, Epstein 2008; Rozin 2005; Herman et al. 2005; Diliberti et al. 2004; Cruwys, Bevelander, Hermans 2015).

It was 40 years ago when it was first demonstrated that young males eating portions were influenced by their male companions eating portions, the more their companions ate , the more they ate and vice versa (Nisbett 2017a; Cruwys, Bevelander, Hermans 2015).

A study has demonstrated that meal sizes have an impact on the perception of individuals, individuals were perceived less feminine and more masculine as the meal portion increased (Bock, Kanarek 1995).

Meal sizes were reported to have a greater impact on the female targets attractiveness variables whereas the males' ones weren't as affected (Bock, Kanarek 1995).

Research has also shown that meal portions tend to be greater when eating with peers (Herman et al. 2005; Diliberti et al. 2004; Cruwys, Bevelander, Hermans 2015; Julia A , Jenny H , Barbara J 2005).

The presence of other people has been shown to increase the volume of food an individual will consume at a given meal (Wansink 2004; Faith et al. 2004; de Castro 1994; Cruwys, Bevelander, Hermans 2015; Clendenen, Herman, Polivy 1994; Salvy, Kieffer, Epstein 2008).

One would think that the primary determinant of an individual's dietary intake in social contexts is hunger, however it has been demonstrated by Herman and his colleagues, that the principal regulatory of influence is belief about how much or what is appropriate to eat, individuals view the amount other individuals consume as an indicator of how much they should eat without overeating (Herman et al. 2005; Cruwys, Bevelander, Hermans 2015).

It has been concluded by observational as well as correlational studies that people adapt their dietary intakes to that of their companions, as it was observed that the variance of food intake among participants is reduced when eating together (Cruwys, Bevelander, Hermans 2015; Salvy et al. 2008; Salvy, Kieffer, Epstein 2008). In 1974 a study was employed to communicate societal norms around eating and discovered that individuals consumed a greater amount of food when paired with a companion who consumed 20 crackers compared to the one who only ate a single cracker (Nisbett 2017).

Similar results have been obtained by (Rosenthal, McSweeney 1979) and (Conger et al. 1980). As we've seen dietary intakes of individuals depend on numerous social factors, one of which is body image disturbance which as a consequence can cause eating disorders, they rank as prevalent and disabling clinical challenges frequently faced by adolescent girls and young women (Thompson, Smolak 2001; Shroff, Thompson 2006).

(Thompson et al. 1999; Shroff, Thompson 2006) Proposed a tripartite influence model concerning body image and eating disturbances, serving as a theoretical framework to consolidate numerous factors from diverse studies into one unified model, within this framework three primary influences (peers, parents and media) are believed to have a direct impact on body image dissatisfaction, and as mentioned before, body image dissatisfaction has been hypothesized to directly impact restrictive eating. (Shroff, Thompson 2006) study came to the conclusion that body dissatisfaction was significantly correlated with eating disturbance.

### **2.3 Peer influence on snacking behavior**

As we've seen it's been consistently demonstrated that individuals will adapt their diet to that of their peers, snacking is no exception to that phenomenon as most of the snacking by adolescents happens at home or in a school type environment (Clendenen, Herman, Polivy 1994; de Castro 1994; Herman 2015; Roth et al. 2001; Cruwys, Bevelander, Hermans 2015; Herman et al. 2005; Pedersen, Grønhøj, Thøgersen 2015; Wansink 2004).

Junk food/snack availability in schools is probably also the reason why it's consumption is so high in those environments, as there is a high presence of vending machines in schools, almost all schools have one if not multiple of these 97% of high schools, 82% of middle schools and 17% elementary schools have these machines according to a study in 2008 (Finkelstein, Hill, Whitaker 2008). Those numbers have more than likely increased ever since.

The presence of vending machines in school has been highly associated with increased consumption of unhealthy foods (foods high in sugar and fats, and low in nutrients) among students (Wiecha et al. 2006; Park et al. 2010; Kubik et al. 2010; Finkelstein, Hill, Whitaker 2008).

As we've discussed previously, we know that peer relationships influence people's dietary choices, and as people have been shown to adapt their dietary choices to that of their companions, it is no surprise that lots of snacking happens in school type of environments.

A study found that soft drink consumption and individual snacking when a peer close to the adolescent had a considerable consumption combined with the high availability of snacks and soft drinks in the vending machines and in the cafeterias, individual and peer snack consumption was found to be highly associated in boys, lower educational level adolescents and normal weight adolescents (Wouters et al. 2010).

The same study suggests that the consumption of snacks and soft drinks are behaviors shared by adolescent friendship groups, the study also suggests that the availability of vending machines and snacks at the cafeteria in schools combined with peer groups consumption are factors determining individual snacking.

When the presence of snacks and soft drinks are limited or when they aren't provided by the schools, adolescents seem to influence each other less strongly. The study only assessed the presence and consumption of unhealthy food products but if their study were to be applied to all types of food, the peer group relations might aid in developing healthy dietary habits when healthy food is provided by the school (Wouters et al. 2010).

A similar study on peer influence on snack intake of pre-adolescent girls assessing the effects of peer influence in overweight and lean pre-adolescent girls found that the consumption of snacks of a co-eater was a predictor of their partner's food consumption in all conditions, which suggests that peer relations influence is one of the factors explaining participants' snack intake (Salvy et al. 2007).

Additionally, the same study found that the results regarding the amount of food consumed revealed that social influences had a different impact on overweight pre-adolescent girls compared to the lean ones, as it was found that overweight girls ate significantly more with overweight participants than with lean participants, the same was not found with the lean participants (Salvy et al. 2007). These findings were aligned with two other previous studies, (de Luca, Spigelman 1979) and (Maykovich 1978).

Although a difference between the two types of participants was found, determining whether overweight individuals consumed more than usual when accompanied by overweight partners, or if they reduced their food intake around leaner companions, wasn't feasible.

One potential explanation for that could be the fact that overweight individuals might have felt most at ease with overweight eating participants, resulting in a relaxation of inhibitions and an increase of food intake (de Castro 1994).

Alternatively, overweight participants paired with overweight peers may have been consuming the typical amount of food they would usually consume at home, whereas overweight participants paired with lean participants were restricting their intake. Studies show that overweight adolescents are aware of the weight stigmatization (Lerner, Korn 2021; Neumark-Sztainer et al. 2002; Staffieri 1967).

Studies indicate that overweight individuals are conscious of weight stigma, which could result in them suppressing their food intake to avoid the associated prejudices and seek approval (Maykovich 1978).

It's conceivable that overweight participants observed the eating habits of their lean companions as a reference as to how much they should consume, with the behavior of lean participants serving as a limiting factor on the consumption of snacks by the overweight eaters (Herman, Roth, Polivy 2003).

This notion seems to be supported by anecdotal evidence as overweight individuals dining with lean peers often requested to take leftover cookies home, implying a desire to consume more but limiting their intake in the presence of lean peers.

## **2.4 The evolution of dietary habits across age groups**

Home has always been an important factor in dietary behavior especially in children, as parents are in their case the most influential role models by setting food rules and by deciding which foods are available at home (Verloigne et al. 2012)

The family environment is likely to be the most impactful amongst all the factors influencing children's food preferences, for young children, in this example, less than five years old (Rozin, Millman 1987; Ventura, Birch 2008).

Parents have been proven to impact children's dietary behaviors, the presence at least one of the parents has been shown to be associated with a lower risk of poor consumption of vegetables, fruit and dairy foods and in adolescents it's been shown to decrease the risk of skipping breakfast (Rhee et al. 2009).

Parents have shown to have a major influence on the development of children's food preferences, via their choice of feeding (Ventura, Birch 2008; Faith et al. 2004; Mitchell et al. 2013; Wardle et al. 2003)

The impact of the influence of the parent has been demonstrated to depend on the parental style, initially 3 different parental styles were identified: Authoritative who are responsive and demanding, the ones who are less likely to be demanding and to demand mature behavior are classified as permissive, and authoritarians are also demanding although with a low level of responsiveness. A fourth parenting style (uninvolved, neglectful) was added in a study in 1983, they tend to be less demanding and require less mature behavior (Maccoby 1983).

During adolescence parental influence decreases and peer influence increases, overall adolescent behavior is largely impacted by peers. Adolescents spend a considerable amount of time with peers, eating has become an important form socialization. Given that adolescents crave peer acceptance and social belonging, it's commonly believed that peer pressure and group conformity are major determinants of food selection and acceptability. However few studies have explored this belief and have not found a strong association between the two (French et al.1999 ; Neumark-sztainer et al. 1999).

Numerous studies have concluded that the most important factors in determining adolescents' dietary choices are primarily and consistently taste, price and convenience (Neumark-sztainer et al. 1999; Hallström et al. 2011; Daly, O'Sullivan, Kearney 2022)

As I previously stated, adolescents tend to spend more time with peers as they grow and less with their families which is the reason why peer influence on their dietary choices increases in adolescence, multiple studies have confirmed this (Wansink 2004; Shepherd, Dennison 1996; Salvy et al. 2007; Neumark-sztainer et al. 1999; Wouters et al. 2010; Neumark-sztainer et al. 1999).

A study has found that in some cases for adolescents, social desirability and social norms concerning food, tend to hold greater importance in food choices (Neumark-sztainer et al. 1999; Stevenson et al. 2007; Wills et al. 2005).

Research suggests that the social aspect of dining often outweighs the significance of the food itself, particularly for adolescents as fast-food establishments offer not just affordable meals but also a favorable environment for socializing, which is the reason why this dynamic can significantly alter adolescents' dietary decisions (Shaw et al. 2023).

School environments have been shown to influence adolescents' eating behaviors, either directly through policies on the price and range of the foods available, or/and through peer norms related to food consumption and body image (Wiecha et al. 2006; Wills et al. 2005; Park et al. 2010).

Many studies have concluded that peer groups influence individuals' dietary choices and habits, this is seen in their increase in the consumption of snacks, soft drinks, and overall calories (Salvy et al. 2007; Wouters et al. 2010; Wiecha et al. 2006; Park et al. 2010).

While the literature review provides a comprehensive overview of numerous studies on the peer influence on dietary choices, several gaps can however still be identified.

### **2.5 Limited scope of peer influence studies**

Although this review discusses various studies on the influence of peers on dietary choices, it still has an emphasis on observational and correlational studies. There seems to be a lack of experimental studies or interventions specifically modelled to understand and address peer influence on dietary behaviours among young adults. In order to provide more robust evidence and insight into causality and mechanisms underlying peer influence, experimental studies could be very useful.

### **2.6 Age and developmental considerations**

The studies mention the influence of parents however they don't delve deeply into how parental influence evolves during different age groups or its interaction with peer groups, which could be detrimental to understanding the evolution of its influence.

It is crucial to understand the interplay between parental and peer influence across different developmental stages to develop comprehensive interventions to promote healthy dietary behaviors among different age groups.

### **2.7 Contextual factors and environmental influences**

While the review acknowledges the influence of school environments, such as the availability of vending machines, or the influence of social norms and social perceptions, such as the "thin ideal" it could benefit from further exploration of broader contextual factors shaping dietary choices, in order to eliminate all cultural biases and contextual biases.

Examining how factors such as cultural norms, socioeconomic status, and urban/rural disparities intersect with peer influence can provide a holistic understanding of adolescent dietary behaviours.

## **2.8 Psychological mechanisms and individual differences**

The review delves into psychological mechanisms underlying peer influence, such as impression management and social norms. However, there seems to be limited discussion on individual differences, such as personality traits, self-esteem, or body image perceptions, which may moderate the effects of peer influence on dietary choices.

In hopes of enhancing our understanding of why some individuals are more susceptible to peer influence than others, exploring those individual differences could be very useful.

## **2.9 Longitudinal studies and Interventional research**

There is a heavy reliance on cross-sectional studies, which provide snapshots of associations at a single point in time. Longitudinal studies tracking individuals over time would offer insights into the trajectories of peer influence on dietary behaviors and how these patterns unfold.

## 3. Methods

### 3.1 Study design

In order to examine the relative importance of peer relations on the dietary choices of young adults, I used a quantitative survey methodology to examine the relative significance of peer relations on the dietary choices of young adults. This survey was formulated to encompass a wide range of factors such as demographic data, dietary preferences, social interactions, and additional factors impacting dietary choices.

### 3.2 Research question

***What is the relative significance of peer relations on the dietary choices of young adults amongst other (family, nutritional, personal preferences etc.) important factors influencing dietary choices ?***

To address this research question, the following aspect is being measured :

**Relative significance of Peer relations on dietary choices :** This research questions is set to assess the extent to which peer relations impact the dietary choices of young adults compared to other factors such as parental influence, media exposure, social norms and impressions. In order to answer this questions, we will examine the frequency and intensity of peer interactions related to eating, exploring the perceived importance of peer approval in dietary decision-making, and assessing the degree of conformity to peer eating behaviors and we will compare peer influence to these other factors to determine its relative importance.

By examining this question, ***It is hypothesized that peer relations are one of the most important factors influencing young adults' dietary choices.***

This hypothesis implies that peer relationships exert a significant influence on dietary behaviors, reflecting the importance social dynamics and peer norms in shaping food choices during young adulthood.

As individuals become more mature and more independent, peer influence may increase in importance and play a more prominent role in shaping dietary choices compared to other factors such as parental influence, individual preferences or societal norms.

### **3.3 Participants**

The participants were young adults between the ages of 18 to 30, mostly students, and gathered through social media channels such as Facebook, Twitter and Instagram and through online platforms such as Reddit and SurveyCircle. The purpose of this recruitment strategy was to diversify the sample of respondents to ensure generalizability of findings. A total of 170 participants were collected.

### **3.4 Survey instrument**

These were the 5 sections of the survey:

1. **Demographic information:** characteristics such as age, gender and employment status were inquired to establish background information and to control variables
2. **Dietary preferences:** inquiries were made about dietary preferences, assessing general factors and attitudes influencing dietary decisions, including the frequency of contemplating dietary choices, level of confidence in nutritional knowledge, and main influencers on dietary selections.
3. **Peer relationships:** Questions directly addressing peer influence, covering aspects such as frequency of dining with peers, the impact of friends' food preferences, the significance of peer endorsement, and pressure to conform to peers' dietary selections.
4. **Other influences:** questions measuring the impact of non-peer influences such as family influence, media exposure, societal norms, and nutritional value.
5. **Social settings:** scenarios are presented to assess peer influence in various social contexts, such as the probability of ordering a dessert when with fire.

### **3.5 Data collection**

The questionnaire was published online using Qualtrics. Links to the survey were shared on social media, on various subreddits related to Diet and health, and on the school's mailing system to maximize. The survey was open responses for responses for a three to four week period.

### **3.6 Ethical considerations**

The participants of the survey were informed about the purpose of study, the participants volunteered and weren't obligated to finish the survey, ensuring that full consent was given. The survey was anonymous and without the collection of personally identifiable information.

### **3.7 Study limitations**

It is important to acknowledge the limitations of this study, such as its dependance on self-reported information and a fairly uniform group obtained from online channels. Future studies may improve by widening the range of methods and including more participants to confirm the results across various demographic categories and cultural environments.

The sample size 170 total respondents is also one of the notable limitations of this study, a larger sample size would have been more beneficial to make representative conclusions.

The study's limitations arise from factors that may impact the findings and their applicability. A notable constraint is the dependance on data reported by participants themselves. Participants were requested to contemplate their own eating behavior and the factors impacting them, giving chance for potential bias in their responses. Individuals may inaccurately report by minimizing negative actions or exaggerate positive actions. Furthermore, memory retrieval may not always be accurate, resulting in discrepancies in the information given.

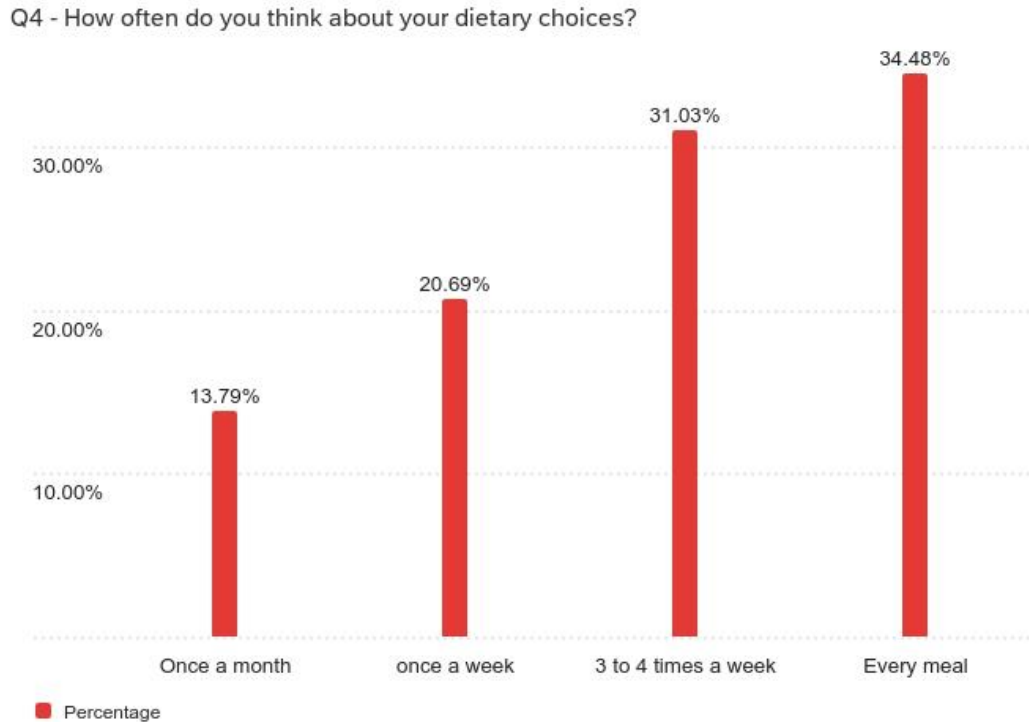
Another important constraint is the uniformity of the sample. The majority of the participants were recruited through social media and specialized forums. This gathering approach could appeal to a specific group such as the tech savvy young adults who are active on the internet.

To address these constraints, potential upcoming research should utilize wide range of research methods such as interviews and focus groups on top of quantitative surveys, to offer more profound understanding of the reasons for dietary choices and peer influence on these.

Additionally, the implementation of objective measures such as dietary tracking apps, can verify self-reported data. Enlarging the sample size and ensuring a diversifying the demographic can improve the robustness of the findings. Including participants from different age groups, cultural backgrounds and socio-economic statuses would help to determine whether the observed patterns would hold true across a broader range of individuals. Such diversity is crucial for developing universally applicable interventions and understanding cultural differences that might influence dietary behaviors.

## 4. Results and discussions

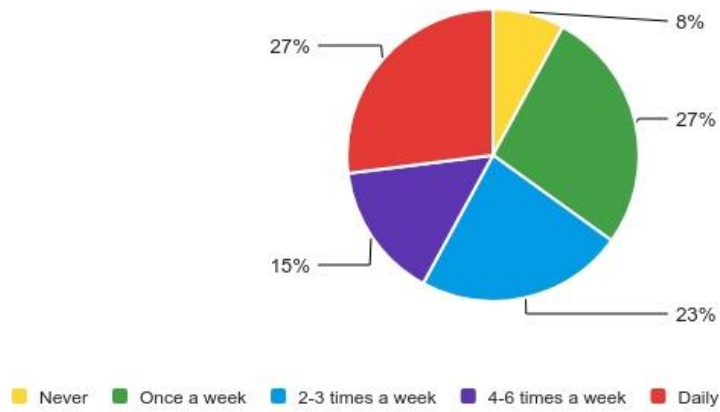
Figure 1 : Frequency of reflection on dietary choices (n=145)



As you can see in the figure 1, a varying frequency was found in how often participants think about their dietary choices. More than a third of the participants considered dietary choices with every meal (35%), followed by those who considered their dietary choices 3 to 4 week times a week (31%), once a week (21%), and once a month (13%). Given these results, it is clear that a significant proportion of the respondents are consistently thinking about their dietary choices.

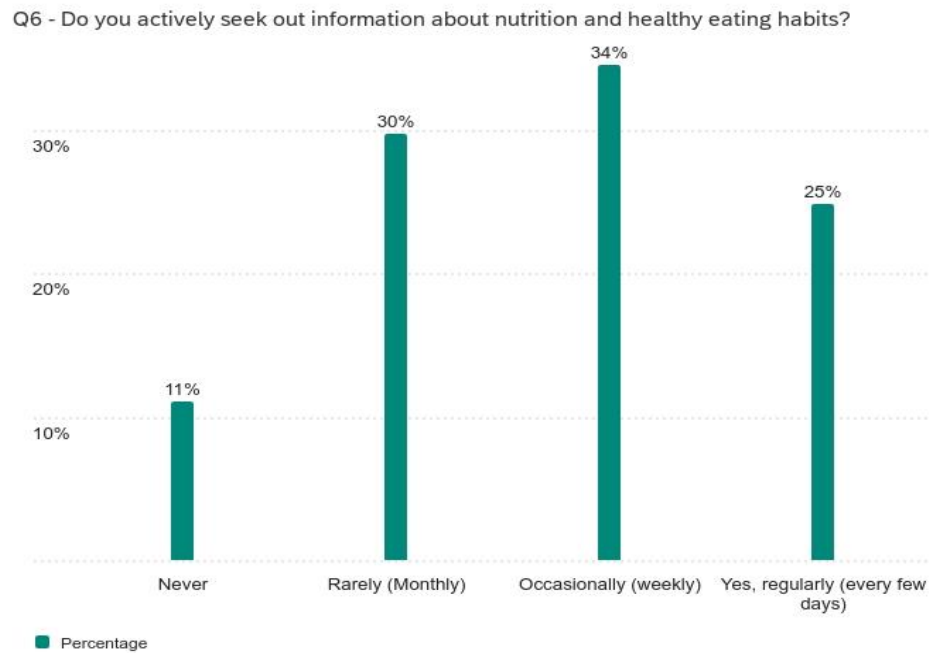
Figure 2 : Confidence in understanding nutrition (n=126)

Q8 - How often do you eat with your peers?



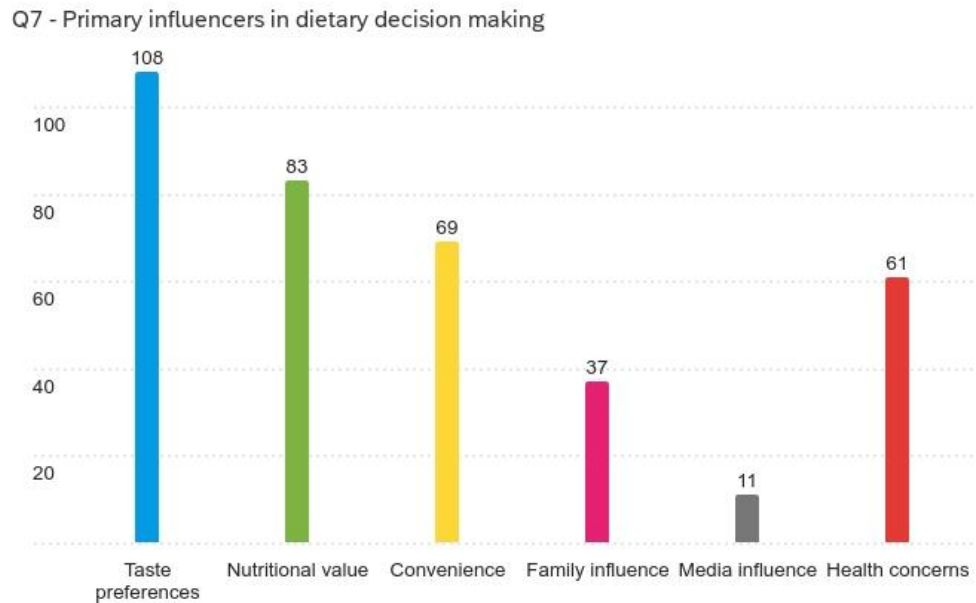
When assessing the confidence of the participants in understanding nutrition, the figure 2 lets us know that 45% of the respondents were confident of their knowledge, 25% were very confident. A smaller percentage indicated that they were not very confident 28% or not confident at all 3%. While a majority of the respondents feel knowledgeable about nutrition, there remains a notable portion with less confidence.

Figure 3 : Frequency of seeking out information (n=145)



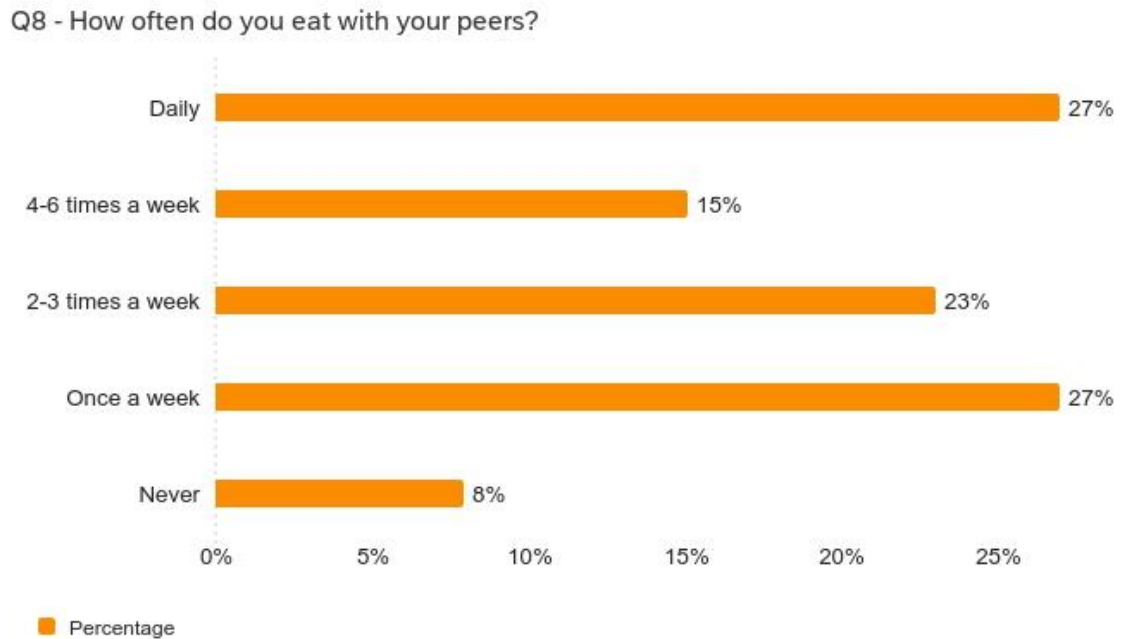
According to the results of the study presented on the figure 3, about 25% of respondents reported seeking information about nutrition regularly, while 35% of respondents reported doing so occasionally. Others reported rarely seeking information (30%) or never seeking out information (10%). These numbers indicate that while many are proactive in learning about nutrition, a significant proportion are less engaged.

Figure 4 : Primary influencers in dietary decision making (n=145)



The graph (figure 4) here above, consistent with previous research, taste preferences (74%) and nutritional value (58%) were reported to be the primary factors influencing food choices. This did not come as a surprise given the fact that taste has for a long time been a primary driver of dietary habits. Convenience (48%) and health concerns (42%) also played substantial roles in this research, while family and media influence were less impactful. It seems that personal factors are the primary influencers in dietary decision making according to these results.

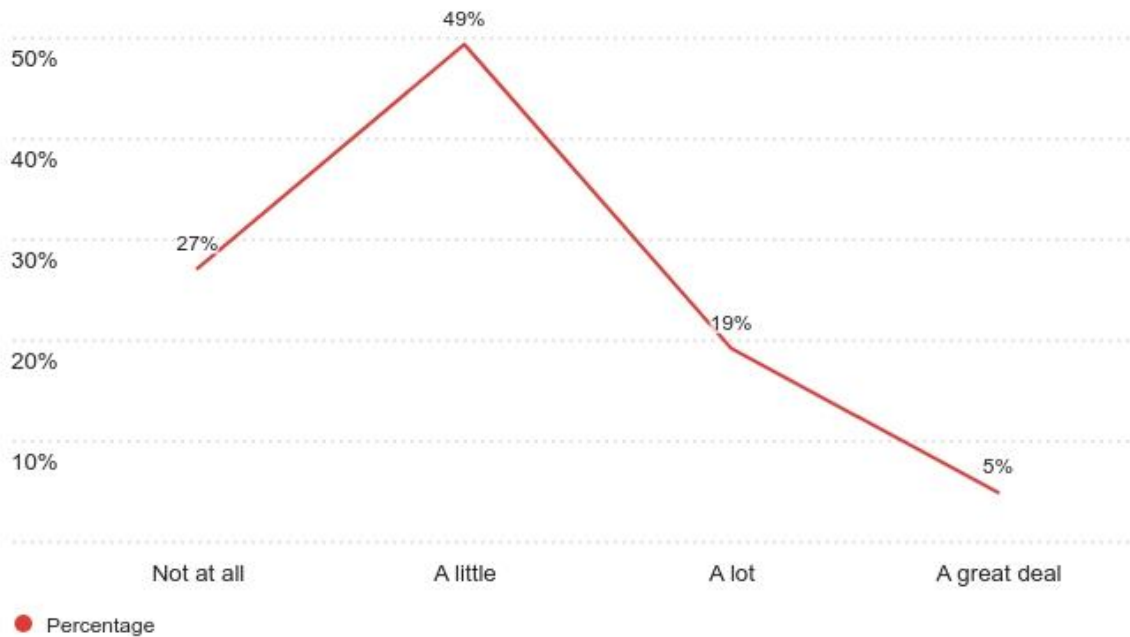
Figure 5 : Frequency of eating with peers (n=126)



It is clear here on figure 5, when assessing the frequency of participants eating with their peers, most of the participants reported eating with peers 93%, of which 27% reported eating with peers once a week, 23% reported eating 2 to 3 times a week, 15% eat between 4 to 6 times a week with their peers and a minority (7%) reported never eating with their peers. As these numbers demonstrate, most of the participants regularly eat with their peers which leaves them susceptible to be influenced, and in the majority of cases they are, as we will see in the results.

Figure 6 : Peers influence on food choices when eating together (n=126)

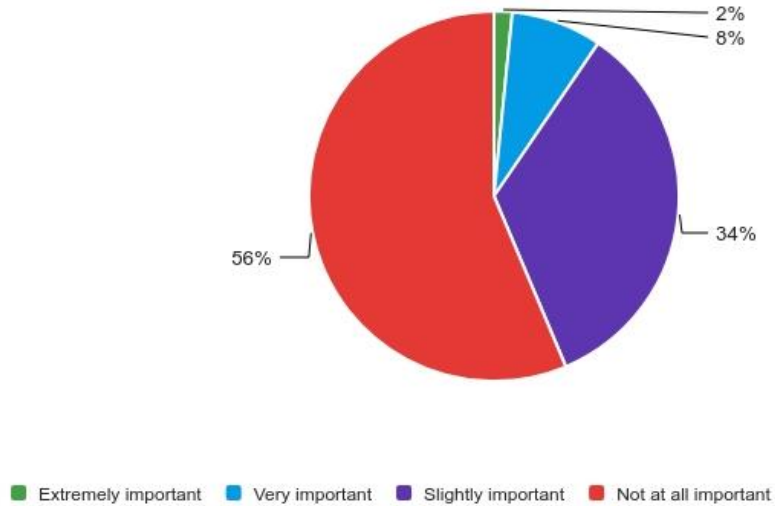
Q9 - How much do your friends' food choices influence your own when eating together?



As showcased by the figure 6, of all the participants, only 26% felt that their peers did not at feel influenced by their peers' dietary choices, whereas 50% of the respondents felt a little influenced by their peers, 19% reported being influenced a lot by their peers, and finally 5% felt influenced by their peers a great deal. These numbers show that most individuals feel at least a little influenced by their peers concerning their dietary choices and in some cases the influence can be significant.

Figure 7 : Peer approval in dietary decisions (n=126)

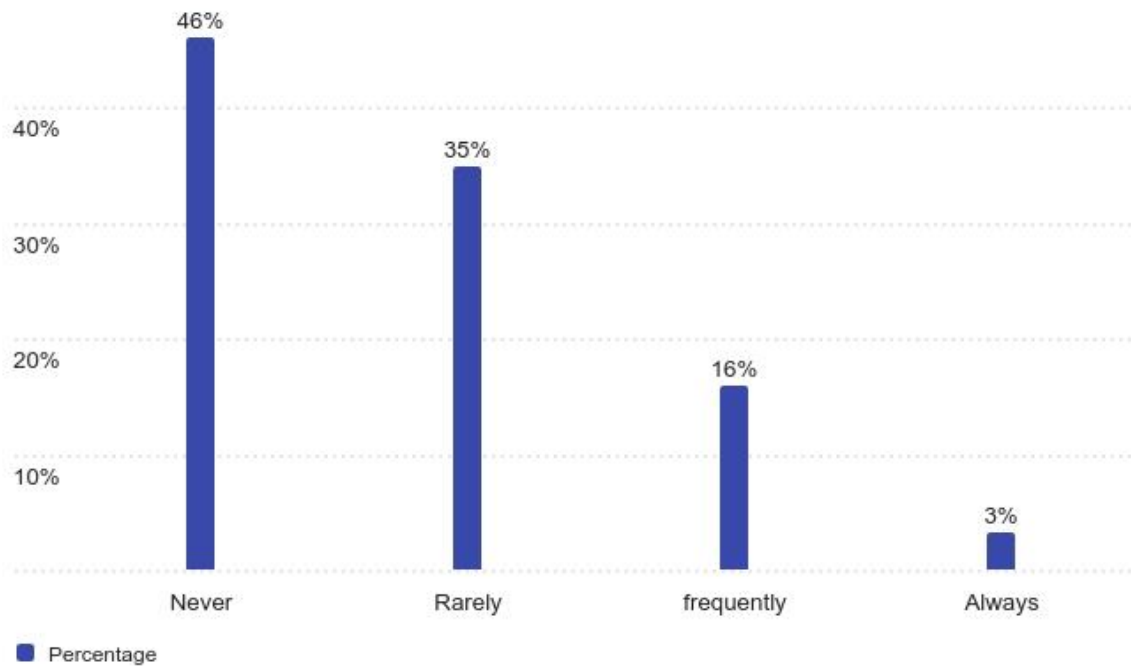
Q10 - How important is peer approval in your dietary decisions?



A majority of the respondents here on the figure 7, indicated that peer approval isn't at all important in their dietary decisions (56%), or only slightly important (34%). Only 10% of respondents reported peer approval to be important in their dietary choices, demonstrating that most participants do not at least consciously seek peer approval in their dietary decision making.

Figure 8 : Peer pressure (n=126)

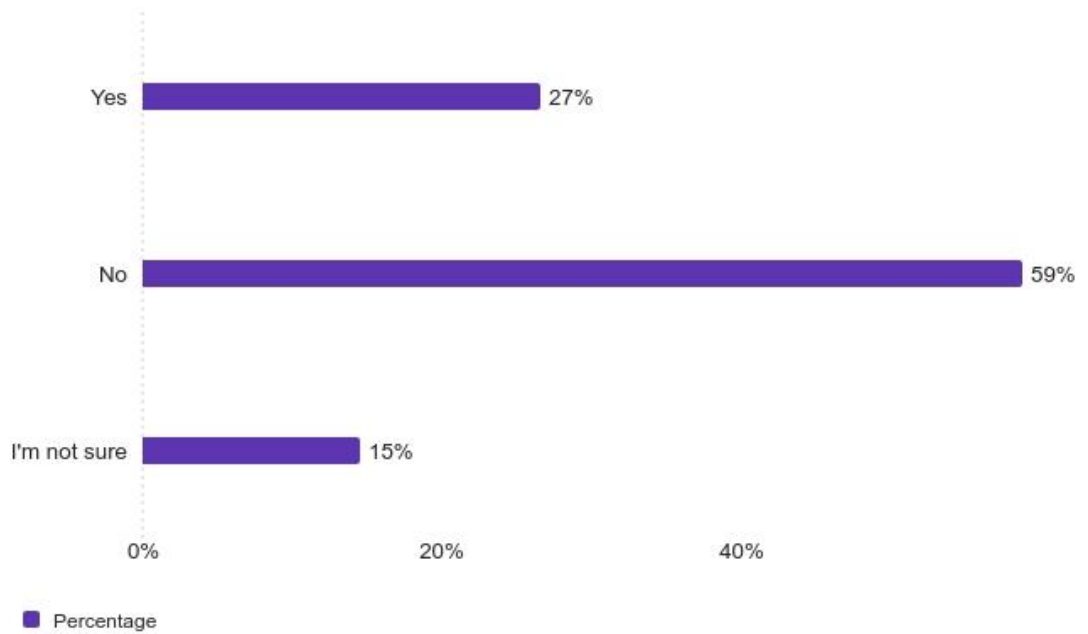
Q12 - When eating with peers do you feel pressured to conform to their dietary choices?



As seen on the figure 8, most participants reported never having felt pressure to conform to their peers' dietary choices (46%), while 35% have only rarely felt this pressure, some frequently (16%) and a minority have always felt this pressure (3%). In opposition with other findings, these findings indicate that peer pressure is not a major factor for most, but still present in some.

Figure 9 : Peer impression (n=124)

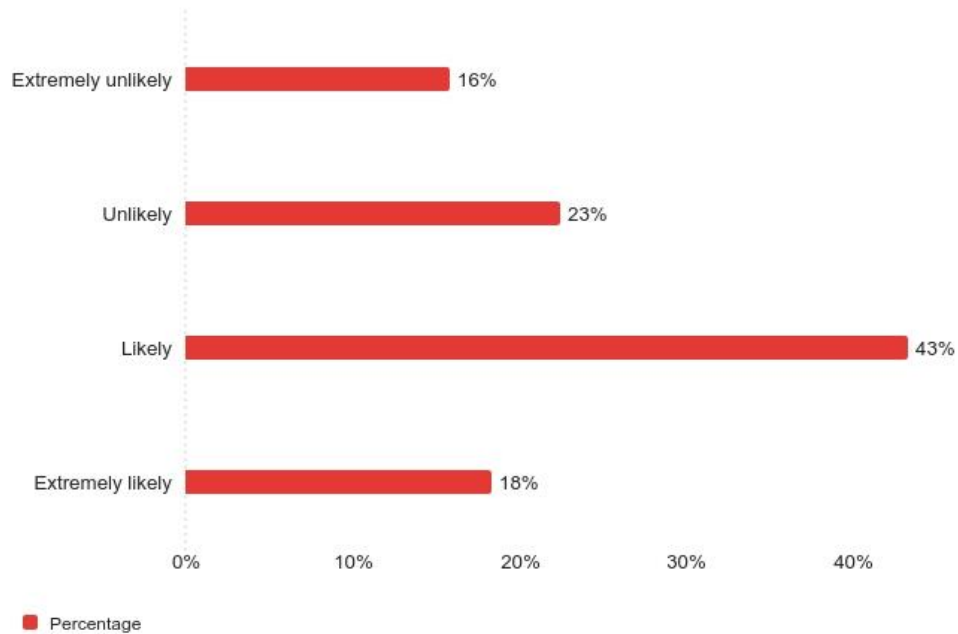
Q16 - Have you ever chosen a specific type of food, meal or drink to make an impression on your peers?



About 27% of the participants admitted having chosen specific foods to impress their peers, while 59% hadn't, and 15% were unsure. These findings seen on the on the figure 9 indicate that while some participants are moved by the desire to make a good impression, most prioritize their own preferences. Previous studies have shown that individuals tend be influenced by their desire to impress, that didn't seem to be the case in this study.

Figure 10 : Likelihood of following peers when ordering dessert (n=119)

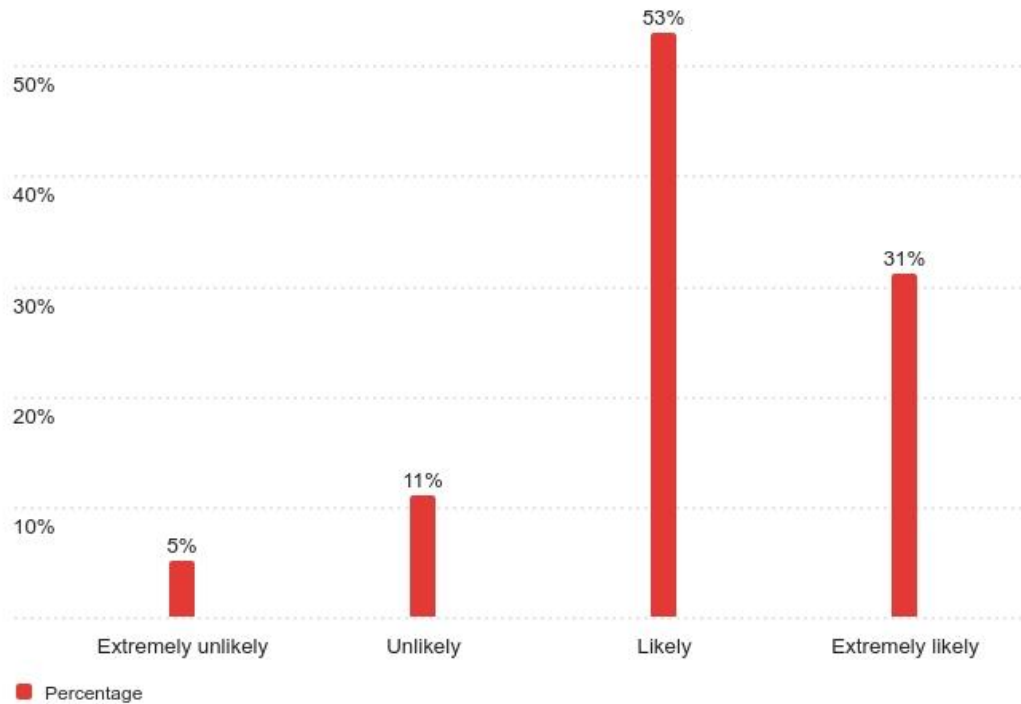
Q24 - Imagine you're out with your friends and they all decide to order a dessert. How likely are you to also order a dessert?



When participants were told to consider a situation where they were out with their friends and they all decide to order a dessert, the figure 10 revealed that 44% of the respondents reported being likely to also order dessert, 18% reported being extremely likely to also order dessert. 23 % reported being unlikely, and 16% extremely unlikely. These findings suggest that individuals the majority of the cases are more likely than not to order a dessert after seeing their peers do so.

Figure 11 : Likelihood of following peers in trying a new restaurant (n=120)

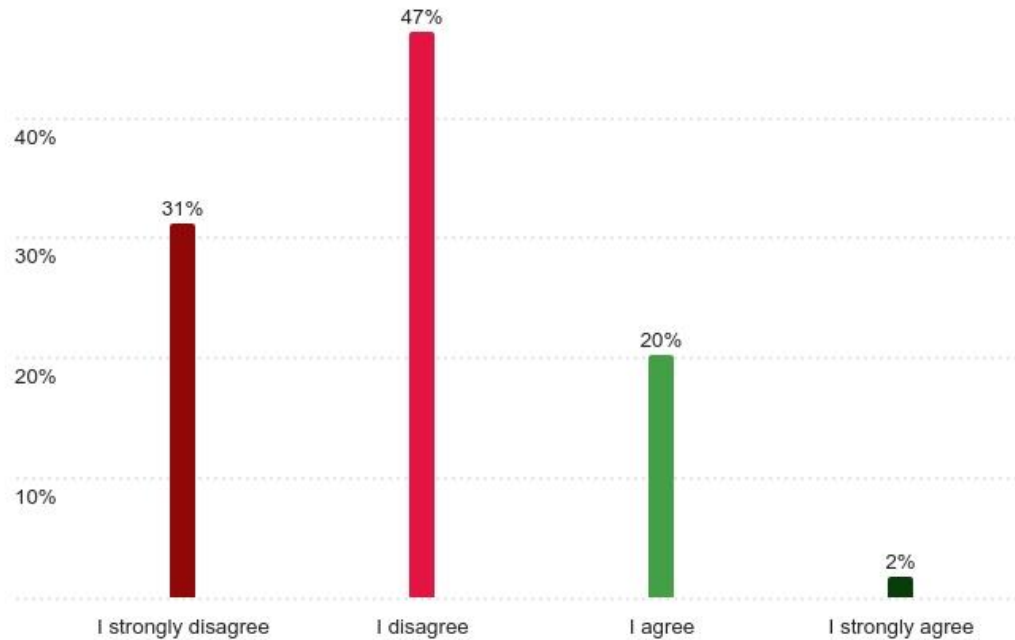
them, even if you prefer another type of food?



When participants were given a context where their friends decided to try a new healthy food restaurant, a majority of the participants as showcased by the figure 11 were likely to join them even if they preferred another type of food (53%), and almost a third of the participants reported being extremely likely to do so (31%), 11% on the other hand reported being unlikely to do so and 5% extremely unlikely. These numbers indicate that peers had a considerable if not great impact on the majority of the participants when deciding to try out a new restaurant, which means that peers have an indirect influence on the dietary choices of young adults, by influencing where they eat.

Figure 12 : Peers food choices vs own preferences when dining out (n=119)

Q26 - When dining out, you feel influenced by your friends' food choices more than by your own preferences.



This figure 12 is a graph created from responses collected from the participants question where participants were told to consider a situation where they were dining out, their own food preferences were still the biggest drivers of their food choices with 47% of the participants disagreeing with the claim that peers influenced their food choices more than their own preferences, and 31% strongly disagreeing. A fifth of the participants (20%) agreed with the claim, and a small portion (2%) strongly agreed with the claim. These findings indicate that there doesn't seem to be a conscious influence of peers as a majority of the participants did not believe themselves to be influenced.

## 5. Conclusions

It is important to understand how young adults make dietary choices in order to encourage better eating behaviours. This research took advantage of a quantitative survey method to investigate how important peer influence is on food choices among 170 adults aged 18 to 30, the results demonstrate how social interactions, particularly with peers, impact food preferences and behaviors.

The survey clearly showed that most participants often dined with friends, showing that social situations greatly influenced their eating behaviours either directly by influencing their food choices or indirectly by influencing where they ate which has an impact on what they could eat, for example eating at a fast food place with friends will have an influence on the foods that will be available for you to consume therefore indirectly influencing food choices.

Surprisingly even though peer influence was present, the significance of peer approval in dietary choices was discovered to be low. The majority of participants did not prioritize peer approval from peers when making dietary choices, indicating that although they are affected by peers' eating habits, their choices are mainly based on personal taste which aligns with previous research.

For instance, when dining with friends, the adult may feel slightly pressured to order a salad if that is what everyone else is ordering. Yet if they would rather have another dish or know the health advantages of an alternative, they will probably go with their own choice instead of opting for a salad to conform. This indicates that individuals have the freedom to make their own dietary choices, instead of solely conforming to their peers' choices for social acceptance.

This research sheds light on the difference between passive impact and active validation seeking.

This study's results along indicate that young adults tend to be more susceptible to passive influence, where they in majority of cases follow their peers' dietary habits in social contexts by for example by ordering dessert or increasing their caloric intake (in the case of previous studies) without necessarily drastically changing their habits in order to receive approval.

Although peer influence plays a role, the participants in this study showed a stronger commitment to their personal taste preferences and nutrition expertise highlighting their ability to make food decisions independently even when around

others. This insight can be valuable to understand how to promote healthy eating habits, by focusing on educating individuals with the impact of peers nutritional education and supporting their personal preferences instead of conforming to social pressures.

Furthermore, this research emphasized the complexity of peer influence. Although many participants said they were somewhat influenced by their friends' dietary habits, the extent of this influence differed. Some participants made small changes in their eating habits due to this influence, for instance having dessert when others did, but for others, pressure from peers to follow certain diets was low.

This indicates that peer influence on food choices varies and can appear differently in terms of strength in young to middle aged adults. It was made clear that a lot of participants recognized that their friends' eating habits affected them, mostly indirectly, meaning that they would subtly follow their peers' dieting habits (i.e ordering dessert) or that the place of dining would usually be influenced by their peers which would by consequence have an impact on the foods available to them.

Most individuals experienced slight peer influence, leading to small adjustments in their eating routines in the example of ordering a dessert or trying a new restaurant. That type of influence can be viewed as a slight push, with peers' behaviour and actions gently impacting an individual's decisions without necessarily significantly altering their eating habits. A very few participants experienced pressure to conform to their peers dietary choices, but in most cases participants felt indifferent when different dietary choices were made.

This study's results emphasize that peer influence on dietary choices is a complicated and a multi-dimensional occurrence. It is not as simple as individuals consistently following their friends' decisions. Depending on the individual's preferences and the environment the impact can vary.

This throughout comprehension is pivotal in creating successful methods to encourage nutritious dieting habits in individuals. Acknowledging that peer impact differs in strength allows for customised strategies that take into account personal variations.

For instance, efforts could be directed towards enhancing individual dietary preferences and knowledge about nutrition to enable people to choose healthier options, even in the presence of peers selecting less healthy choices.

By fostering environments that support healthy eating practices among peers such as promoting group activities centered around nutritious food choices, young adults can be encouraged to adopt healthier habits collectively.

This research shows that peer pressure plays a significant role in the dietary decisions of young adults, however it is not the only factor. Personal preferences such as convenience and taste have a major impact on their dietary decisions. These results suggest that while young adults are susceptible to be influenced by their peers in social contexts, or susceptible to change their place of dining due to the influence of their peers, their decisions are primarily still guided by their personal factors even though their dietary decision making is a combination of both personal and social factors.

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## Appendix : Quantitative survey

1.What is your age ? \*

2.What is your gender? \*

Male

Female

Non-binary / third gender

Prefer not to say

3.Which of the following best describes your employment status?

\*

Employed full-time (30 hours or more per week)

Employed part-time (1-29 hours per week)

Full-time student

Part-time student

Self-employed

Unemployed

4. How often do you think about your dietary choices? \*

Once a month

once a week

3 to 4 times a week

Every meal

5. How confident are you in understanding nutrition and its impact on health? \*

Not confident at all

Not very confident

Confident

Very confident

6. Do you actively seek out information about nutrition and healthy eating habits? \*

Never

Rarely (Monthly)

Occasionally (weekly)

Yes, regularly (every few days)

7. Which of the following factors influences your dietary choices the most? \*

*(Please select up to three options)*

Taste preferences

Nutritional value

Convenience

Family influence

Media influence

Health concerns

8. How often do you eat with your peers? \*

Daily

4-6 times a week

2-3 times a week

Once a week

Never

9. How much do your friends' food choices influence your own when eating together? \*

Not at all

A little

A lot

A great deal

10. How important is peer approval in your dietary decisions? \*

Not at all important

Slightly important

Very important

Extremely important

11. How often do you engage in social activities that involve eating with peers? \*

Never

Rarely

Once a week

Several times a week

Daily

12. When eating with peers do you feel pressured to conform to their dietary choices? \*

Never

Rarely

frequently

Always

13. How do you feel when peers make different dietary choices than you? \*

Judged

Uncomfortable

Indifferent

Comfortable

Excluded

Annoyed

Anxious

Lonely

Accepted

Excited

Other

14. How do the following statements describe your relationship with your peers and food? \*

Never 0	Sometimes 1	About half the time 2	3	Most of the time 4	Always 5
I usually eat fast food/snacks when I'm around peers					<input type="checkbox"/> Not Applicable
<input type="radio"/>					
My peers introduce me to new foods					<input type="checkbox"/> Not Applicable
<input type="radio"/>					
My peers influence where I eat					<input type="checkbox"/> Not Applicable
<input type="radio"/>					
My peers influence what I eat					<input type="checkbox"/> Not Applicable
<input type="radio"/>					
My peers encourage healthier eating habits					<input type="checkbox"/> Not Applicable
<input type="radio"/>					

15. How often do you discuss dietary concerns with your peers?

\*

Never

Rarely

Occasionally

Often

16. Have you ever chosen a specific type of food, meal or drink to make an impression on your peers? \*

Yes

No

I'm not sure

17. How do you think your peer group's dietary habits compare to those of the general population? \*

They are less healthy

I'm not sure

They're about the same

They are healthier

18. How do your dietary habits compare to those of your peer group? \*

They are less healthy

I'm not sure

They're about the same

They are healthier

19. How do your dietary habits compare to those of the general population? \*

They are less healthy

I'm not sure

They're about the same

They are healthier

20. How much does family influence impact your dietary choices?

\*

Not at all

A little

A lot

A great deal

21. How much does media exposure impact your dietary choices? (TV, social media, ads, etc.) \*

Not at all

A little

A lot

A great deal

22. How much do societal norms and expectations impact your dietary choices? \*

Not at all

A little

A lot

A great deal

23. How much does nutritional value impact your dietary choices?

\*

Not at all

A little

A lot

A great deal

24. Imagine you're out with your friends and they all decide to order a dessert. How likely are you to also order a dessert? \*

Extremely unlikely

Unlikely

Likely

Extremely likely

25.If your friends decided to try a new healthy food restaurant, how likely are you to join them, even if you prefer another type of food? \*

Extremely unlikely

Unlikely

Likely

Extremely likely

26.When dining out, you feel influenced by your friends' food choices more than by your own preferences. \*

I strongly disagree

I disagree

I agree

I strongly agree

27. In which of the following situations have you felt pressured by your peers to overeat or indulge in unhealthy foods? \*

At the movies

At school

Sports events

Holiday meals

Food challenges

At a fast food place with friends

Other

## 28. How do you typically respond to peer pressure regarding food choices? \*

Strongly disagree 0      Somewhat disagree 1      Neither agree nor disagree 2      Somewhat agree 4      Strongly agree 5

I give in and eat what they're eating  Not Applicable



I politely decline and stick to my own choices  Not Applicable



I try to compromise and find a middle ground  Not Applicable



I avoid situations where I might feel pressured about food  Not Applicable

