

**THE INFLUENCE OF FOOD STORIES ON THE FOOD PREFERENCE AMONG
KINDERGARTEN CHILDREN; A CASE OF MVITA SUB-COUNTY**

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DECLARATION

Student declaration

I declare that this research project is my original work and has not been presented for the award of an academic degree in any other university.

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SUPERVISOR'S DECLARATION

I confirm that the candidate has conducted the research and submitted this research project for review with my approval as a university supervisor.



23/10/2023

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DEDICATION

I dedicate this research proposal to my entire family, whose unwavering support has been a cornerstone of my academic aspirations. My family members' guidance, encouragement, and sacrifices have played an instrumental role in shaping my academic journey and fostering my pursuit of knowledge, and their unwavering belief in my abilities has instilled in me the determination to embark on this scholarly endeavor. Their confidence in the value of education, as well as their ongoing support, has spurred me onward, encouraging me to broaden my intellectual boundaries and dig deeper into the realms of study. Their emotional support has created the foundation for me as I embark on this study project. In acknowledging my family's assistance, I recognize the sacrifices they have made to facilitate my education and enable me to pursue my academic interests. Their commitment to my development has been a motivating force in my determination to strive for greatness in all of my intellectual activities. Finally, this tribute represents my deepest gratitude for my family had an important influence in my academic path. Their unrelenting dedication to my education has been a source of inspiration and proof of the strength of familial relationships in supporting individual growth and accomplishment.

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LIST OF ABBREVIATIONS AND ACRONYMS

BMI	Body Mass Index
FAO	Food and Agriculture Organization
NACOSTI	National Commission for Science, Technology & Innovation
PP1	Pre-Primary 1
PP2	Pre-Primary 2
SPSS	Statistical Package for The Social Sciences
TV	Television
UNICEF	United Nations International Children’s Emergency Fund
USA	United States of America
WHO	World Health Organization

ABSTRACT

Due to the increasingly prevalent diets in modern society such as foods high in sugar, high in fat, and ultra-processed food, (junk food) posing threats to human health, biodiversity, and the climate, there is an urgent need to shift towards more plant-based diets. The unbridled obesity epidemic demonstrates that traditional efforts towards diet change are insufficient and regulations focusing mainly on restrictions of unhealthy food are of limited success at best. This research study aimed to explore the impact of food stories on the food preferences and habits of kindergarten children in the Mvita sub-county. The objectives of this study were; to investigate the association between food story exposure and food preferences among kindergarten children, to investigate the feasibility of utilizing positive food narratives as an instructional tool to promote healthy eating habits among kindergarten children and to assess the frequency of consumption of healthy and unhealthy foods among kindergarten children in Mvita sub-county, Kenya. The study was conducted by exposing a sample group of kindergarten children to various food stories and observing any changes in their food preferences and consumption behaviors. The data collected was analyzed to determine the extent to which food stories influenced food preferences and habits among this age group. This study used an experimental research design. Data was collected through observation and recording of food choices by the children. Simple random sampling was used to get a representative population from the children. Correlation analysis was carried out using statistical software to help conclude the data gathered on the relationship between the two variables. The findings of this study provided valuable insights into the role of food stories in shaping the food habits and attitudes of young children and will contribute to the development of effective strategies for promoting healthy eating among this population. This research has implications for parents, educators, and policymakers concerned with promoting healthy food habits among young children. The findings indicated during the first five days of setting the baseline in the experimental group, the mean ranged from as low as 0.00 to as high as 10.00. Contrary to the control group, for the first five days, the mean ranged from 3.00-10.00 across the days, which is high based on the no intervention or story relayed on the choice of foods to the target population. In the findings of days 6-15, in the experimental group, the choice of unhealthy food was reduced to a mean range of 1.00-6.00. The results in the control group also had a similar effect in terms of reduction of the mean to a range of between 0.00-9.00. The skewness for choice of healthy diets for days 1-5 was positive. The distribution changes between days 6-10 to have values between -0.5 and 0.5, which in this case are considered to have a symmetric distribution, and the choice of healthy foods from days 11-15 is considered to have values less than -0.5, which in this case consider the distribution to be negatively skewed. The findings for the kurtosis analysis for unhealthy food choices had a consistent figure of less than -1.0. The kurtosis on healthy foods was majorly ranging between 0 and 1 which indicated a normal or mesokurtic distribution starting from day 1- day five. The Kurtosis of days 6-14 had a range of -1 to 0 which was a platykurtic distribution. The study findings based on the experimental group in weeks one, two, and three were significant at $p=0.001845$, $p=0.0002783$, and $p=0.01223$ respectively. Food stories, according to the findings, have a positive influence on food preference. The findings demonstrated that food stories had a direct positive effect on food preference among kindergarten children in Mvita Sub-County, as demonstrated by findings from week one to week three of the study. The study therefore recommends to educators, parents, and policymakers that kindergartens should incorporate food stories into their curriculum and support nutrition education programs by allocating resources and sufficient funding.

CHAPTER ONE

INTRODUCTION

1.1 Background of the Study

The food preferences and habits of children are shaped or informed by a number of factors such as cultural and familial background, peer influence, the media including television advertisements among others, ease of availability of food whether at home or school and food familiarity (FAO, 2021). Lately, researchers have developed interest in investigating the impact of food stories on food preference with research suggesting that food stories can play a significant role in shaping food attitudes and behaviors. Food stories refer to narratives that are either fictional or real and that relate to food and eating and can be communicated through mediums such as books, television and personal anecdotes (Singh et al., 2015).

Kindergarten children are at a critical stage of development where their food preferences and habits are established early in life in and are likely carried through to adulthood. Given the potential impact of food stories on food preferences, it is important to understand the influence of these narratives on young children. This information can then be used to develop targeted interventions aimed at promoting healthy eating habits and attitudes among this population (Kubik et al., 2020; Young et al., 2019).

Food habits in children are also influenced by advertising through the media which may take any form including television advertising and these advertisements are almost always junk and unhealthy foods. Research findings have indicated that there is a clear connection between the food and drink advertisements that children are exposed to and their food preferences (Smith 2019).

Modern foods and drinks marketing campaigns have infiltrated into the areas considered safe places for children such as schools and households (UNICEF, 2019). A study conducted in South America found that nearly 75% of food advertising directed towards children is classified as unhealthy while 50% of the allocated time for children's television time (screen time) is occupied by food advertisements (Alexandra, 2021).

According to recent research, for every one-hour increase in television viewing per day in children, there are higher intakes of sugar-sweetened beverages, fast food and overall calories. This is a result of the persuasive advertising that children are exposed to during screen time.

Children are particularly susceptible to persuasive messages used in marketing communication because their cognition allows them to recognize the selling and persuasive intent of marketing communications. It has been argued that marketing exploits children's cognitive limitations (Ayieko, and Midikila, 2019).

Poor eating habits in children can lead to various health complications such as diabetes, cardiovascular diseases and obesity. Research findings show that obesity is a direct result of the persuasive advertising means employed by corporations in the media (Smith, 2019). Globally, the prevalence of overweight and obesity that result from poor food habits has risen drastically amongst children between the ages of 5 to 19 years as obesity is known to track into adulthood resulting in over forty million children potentially becoming obese adults (WHO, 2020).

As compared to unhealthy foods, healthy foods are only advertised less than 3% of the time in different forms of media. This largely impacts children's food preferences considering the fact that the food industry spends an estimated 2 billion dollars every year on food marketing campaigns directed at children. The fast-food industry is also estimated to spend nearly 5 million dollars a day in marketing food products that are high in sugar, fat, and salt while also suggesting portion sizes grossly disproportionate to a child's energy needs (UNICEF, 2019).

Social and familial context as well as the media, were the most important risk factors for eating disorders. The media and social environment have been linked to the cult of thinness. Mealtimes seemed to be crucial in determining eating behavior and the development of disorders in the home setting. Eating disorders were linked to nutritional issues such as (growth, retardation and weight increase), oral health which include (cheilitis, dental erosion, periodontitis and salivary gland hypertrophy) and social bias (Jacobson et al., 2013).

Despite the growing recognition of the impact of food stories on food preference, there has been limited research in this area particularly concerning the effects of these stories on kindergarten children. This study, therefore, aimed to address this gap in the literature by exploring the impact of food stories on the food habits of this particular age group.

1.2 Statement of the Problem

In the last ten years, poor eating habits in children have risen in all parts of Kenya and is no longer a problem exclusive to urban dwellers alone as rural dwellers are also affected due to far-

reaching impacts of advertising that focus on food and drinks. The other enabling factor is the easily available junk food in fast food restaurants and supermarkets that are widespread in every part of the country (Mbithe, 2018). According to research food preferences and habits are established early in life and carry through into adulthood (Birch & Fisher, 2020; Wardle et al., 2018). Furthermore, children are influenced by several factors when it comes to their food preferences and these include cultural backgrounds and personal experiences (Wardle et al., 2018). With the increasing recognition of the impact of food stories on food preferences, it is important to understand the influence of these narratives on young children.

There exists a strong connection between the modernization of the retail sector in Kenya and the consequent nutritional outcomes such as obesity (Onyango, 2021). In the U.S. the media is unregulated when it comes to marketing food especially those targeting children. To remedy this problem, most of those involved in the food industry such as manufacturers, have offered out of their own volition to limit the kind of unhealthy food marketing that target children. Despite the effort made by the food industry to protect children from food advertising, there have been a number of research groups that still raise concerns about ways in which the food industry has failed to entirely desist from targeting children in promoting unhealthy food. (Alexandra, 2021; Lytle et al., 2016).

In recent years, it is quite challenging to avoid fast food in Kenya. Different forms of advertisement are found everywhere in public spaces. Research has proved many young people are struggling with weight problems as a consequence of unhealthy eating. Young children are now facing challenges with their weight even as a recent report by UNICEF warns that the number of those suffering are as a result of unhealthy diets and a failing food system. (UNICEF 2019).

In Kenya, children that hail from well to do families are more susceptible to high body mass index (BMI) as compared to those from underprivileged families. Obesity in children is often characterized as having a body mass index (BMI) greater than a set threshold. Despite the well-established role of food habits and preferences in promoting healthy eating behaviors, little research has been done to examine the specific impact of food stories on these behaviors among kindergarten children (Shariff et al., 2018). While some studies have suggested that food stories can play a significant role in shaping food preferences, the mechanisms by which this occurs, as

well as the specific types of food stories that have the greatest impact are not well understood (Hendrie et al., 2019). This lack of understanding has important implications for promoting healthy eating behaviors among young children as it limits the ability to develop targeted interventions aimed at improving food habits and preferences.

Therefore, the lack of extensive research into the influence of food stories on the food habits of kindergarten children needs to be addressed. This study aimed to fill this gap in the literature by exploring the influence of food stories on food habits among kindergarten children. The findings of this study have provided a better understanding of the role of food stories in shaping food preferences and habits among young children and may inform the development of interventions aimed at promoting healthy eating.

1.3 Purpose of the Study

The purpose of this study was to examine the influence of food stories on food preferences among kindergarten children in Mvita Sub-County, Mombasa County Kenya.

1.4 Objectives of the Study

- i. To investigate the association between food story exposure and food preferences among kindergarten children in Mvita Sub-County, Kenya
- ii. To investigate the feasibility of utilizing positive food narratives as an instructional tool to promote healthy eating habits among kindergarten children in Mvita Sub-County, Kenya
- iii. To assess the frequency of consumption of healthy and unhealthy foods among kindergarten children in Mvita Sub-County, Kenya

1.5 Research Questions

- i. What is the association between food story exposure and food preferences among kindergarten children in Mvita Sub-County Kenya
- ii. What is the feasibility of utilizing positive food narratives as an instructional tool to promote healthy eating habits among kindergarten children in Mvita Sub-County
- iii. What is the frequency of consumption of healthy and unhealthy foods among kindergarten children in Mvita Sub-County, Kenya

1.6 Null Hypothesis

H₀₁: There is no significant relationship between food story exposure and food preference among kindergarten children in Mvita Sub-County, Kenya

H₀₂: There is no significant relationship between the feasibility of utilizing positive food narratives as an instructional tool and food preference among kindergarten children in Mvita Sub-County, Kenya

H₀₃: There is no significant relationship between the frequency consumption of healthy and unhealthy foods and food preference among kindergarten children in Mvita Sub-County, Kenya

1.7 Justification of the Study

The examination of the impact of food narratives on the dietary preferences of kindergarten children carries substantial significance stemming from its profound implications for advancing future research. This study addresses a notable void within the academic discourse specifically about this particular demographic of kindergarten children. This void is even more pertinent in the context of a region that grapples with an escalating prevalence of unhealthy dietary practices and their ensuing repercussions.

Within the contemporary landscape, the food industry persistently leverages a multitude of channels with media serving as a predominant mode used to promote their products with the allure of delivering gratifying experiences. This necessitates a comprehensive evaluation of the broader health implications inherent in these practices. A comprehensive assessment of the holistic health ramifications becomes paramount, affording consumers the ability to make informed decisions each instance they decide to purchase any consumables. This echoes the fundamental entitlement of consumers to access requisite information about the ingredients and quantities associated with the products they opt to consume.

In an era marked by heightened awareness and growing concerns regarding dietary choices, investigating the correlation between food narratives and young children's food preferences emerges as an intellectually rewarding and practically consequential endeavor. This research intends to fill discernible gap within the existing scholarly canon, particularly about a

demographic of children that stands susceptible to the pervasive influence of unhealthy dietary practices, especially in regions grappling with this emergent dietary dilemma.

The pivotal role played by the food industry in perpetuating certain consumption patterns warrants a comprehensive examination especially considering the omnipresent advertising strategies deployed promising gratifying experiences. This calls for a broader assessment of the holistic health-related costs these practices engender which aligns with the principle that consumers are entitled to receive comprehensive and accurate information about the products they choose to incorporate into their diets. Empowering consumers with such knowledge invariably bolster their capacity to make informed and health-conscious choices when engaging in the act of food consumption.

1.8 Significance of the Study

This research holds considerable importance for a diverse array of stakeholders, including parents, educators, children, and kindergarten administrators within Mvita Sub-County, Kenya. The insights gleaned from this study serve to empower kindergarten children with a heightened understanding of the intrinsic value underpinning the adoption of health-conscious eating patterns during their crucial years of growth and development. Parents, too, stand to gain profound insights into the remarkable influence wielded by food narratives over their children's dietary predilections. This underscores the pressing need to wholeheartedly embrace the practice of integrating food stories into their children's literary diet.

The ramifications of this study reverberate within the educational realm as well, making palpable the significance of fostering a culture of nourishing sustenance among young learners. Educators and the comprehensive kindergarten management recognize the imperative of championing the consumption of healthy diets such as fruits and vegetables during school hours. Furthermore, this study's findings offer a compass for devising novel strategies aimed at cultivating health-conscious eating habits among children. The pivotal role of this research in shaping the curriculum emerges through the recommendation of providing wholesome and nutritious meal options during their scheduled repasts, while concurrently kindling enthusiasm for these offerings by employing various persuasive approaches.

Policymakers also stand to derive substantial insights from this study. The investigation serves to cast a luminous spotlight on the affirmative impacts of food narratives that specifically target

children, championing wholesome dietary choices to mold their eating behaviors. This insight augments the policy arsenal, facilitating informed modifications within the education sector that can effectively promote robust nutritional habits among children within school premises. This cohesive approach not only enriches the educational experience but also augments the overall health and well-being of the younger generation.

1.9 Scope of the study

This research endeavor was specifically aimed at kindergarten children situated within the geographical bounds of Mvita Sub-County, Kenya. The central goal of this study resided in the exploration of the potential impact exerted by food narratives exhibited by kindergarten children towards dietary choices. Within the framework of this investigation, the pivotal role of the independent variable, denoted as food stories, was accentuated. This variable was systematically manipulated to assess its potential influence on the dependent variable, which was food preference. Furthermore, the intricate fabric of this study was interwoven with a trio of confounding variables, namely gender, age, and socio-economic status. These variables, while not the central focus of the study, were nonetheless acknowledged as elements that could potentially introduce extraneous effects or nuances into the observed relationships. By factoring in these variables, the research aimed to achieve a more comprehensive understanding of the dynamics at play within the context of food preference among kindergarten children.

1.10 Limitations of the study

The scope of this study encompassed a kindergarten situated within the precincts of Mombasa County, Kenya. Consequently, the outcomes derived from this investigation may not inherently be extrapolated to alternate demographics characterized by disparate culinary predilections, such as primary schools or high schools located in distinct regions of the country. Context specificity is a key consideration, underscoring the necessity for cautious interpretation and application of the findings within these broader contexts.

It is essential to acknowledge that the ambit of this study was fundamentally confined to the kindergarten stratum. This narrow demographic scope inherently limits the generalizability of the findings beyond this specific cohort. Inferences drawn from the outcomes might not be universally transferable to a gamut of diverse populations, encompassing adults, teenagers, and the elderly. The unique physiological, psychological, and sociocultural aspects characterizing these age groups could engender nuances in responses and behaviors that diverge significantly

from those observed within the confines of the studied kindergarten children. Thus, a circumspect approach must be adopted when attempting to extrapolate these findings to these distinct demographic subsets.

1.11 Operational definition of terms

Advertising - This is a means of communicating with users of a product that is paid for by those who intend to inform or influence the product choices of people.

BMI – body mass index is a value derived from the mass and height of a person. It's calculated by dividing a person's weight in kilograms by the square of their height in meters.

Cancer – Is a disease that leads to the multiplication of abnormal cells in the body which then destroy body tissues.

Diabetes – This is a disease that affects the body's ability to produce and respond to insulin resulting in elevated levels of glucose in the body.

Food preferences – refer to how people evaluate food and their attitudes towards the available types of food including the taste, nutritional value, and the ease or difficulty of preparation of food.

Food stories – This refers to written stories about various types of foods and their benefits that are tailored to capture the attention and interest of children.

Food/eating habits - This defines why and how people eat, which foods they eat, and also the ways people obtain, store, use, or discard food.

Junk food – refers to food that is high in calories such as sugar and or fat but contains very little nutritional value.

Obesity – is the state of being abnormally overweight by accumulating excessive fat that presents a risk to one's health.

Threshold – Refers to the level or point at which something is realized.

Type 2 Diabetes – this is a disease that affects the way your body uses sugar to produce energy by stopping the body from using insulin properly which then leads to elevated levels of blood sugar if not treated.

CHAPTER TWO

LITERATURE REVIEW

2.0 Introduction

This Chapter focused on scholarly work related to the Research topic.

2.1 Food story exposure on food preference

Culinary inclinations and predilections are an intricate interplay of diverse influences, ranging from one's cultural and familial heritage to personal experiences and the sway of peer interactions. In recent times, there has been a discernible surge in acknowledging the pervasive role that food narratives assume in sculpting attitudes and behaviors concerning nourishment (Shariff et al., 2018). The term food stories encapsulate narratives, whether they be fanciful fabrications or real-life chronicles, that revolve around the realm of food and eating. These narratives find their expression through a myriad of mediums, encompassing literary works, cinematic creations, and personal anecdotes alike (Graves et al., 2019). The central objective of this report was to undertake an in-depth exploration of the intricate role these food stories play in shaping dietary habits and, subsequently, to elucidate the potential implications of such insights in the pursuit of advocating for healthful dietary practices.

A growing body of research underscores the substantial influence that food stories wield over dietary preferences and behaviors. For instance, investigations have elucidated that exposure to these narratives can culminate in diversifying the array of foods embraced and exerting a beneficial influence on dietary preferences and consumption routines (Tin et al., 2021). Notably, the nature and frequency of interactions with food stories seem to exhibit a positive association with individuals' inclinations toward healthful eating and prudent dietary choices. Moreover, the cultural and familial narratives that are interwoven with food choices emerge as potent agents in shaping consumption habits and dietary predilections (Kader, 2011).

Crucially, these findings find a particular resonance within the realm of young children, as their culinary habits and preferences are forged early in life and tend to persist into adulthood. Hence, comprehending the role that food stories play in shaping the eating habits of youngsters assumes paramount importance. This understanding can form the bedrock for the development of

precisely targeted interventions aimed at instilling healthful eating habits and fostering constructive attitudes within this demographic (Birch & Fisher, 2020; Wardle et al., 2018).

Another medium that can be considered to have as much effect on children's food preferences as food narratives do is television advertising of food items that specifically target children. The exploration of the influence of advertising on children traces its origins back to the 1970s, as highlighted by the comprehensive inquiry conducted by Alexander et al., (1998). Over the years, a diverse array of inquiries pertaining to children's interaction with advertising has been posed by academic scholars, advocacy groups, and governmental bodies. The initial investigations in this domain, converged around seven pivotal themes (Tin et al., 2021). These encompassed the evaluation of children's television viewing habits concerning advertisements, their cognitive assimilation of commercial messages, the ramifications of TV advertising on their social development, their behavioral responses to commercials, the cognitive dimensions of learning through commercials, the cultivation of awareness, interest, desire, and product preferences, and finally, the exploration of purchase-related behavior among children (Resnik et al., 2019).

A subset of researchers has also delved into the intricate interplay between children and television advertising, postulating that children's exposure to such advertising constitutes an inherent facet of their consumer socialization process (Wardle et al., 2018). Within this framework, how television advertising can facilitate children's transition into discerning consumers has been the subject of research. Moreover, the family unit's role as an influencer in children's socialization vis-à-vis television advertising has been a subject of discourse. Reid's (2017) investigation, for instance, unearthed the nuanced connections between familial group dynamics, children's comprehension of television advertising, and their overall understanding of consumer behavior.

Another dimension explored revolves around the formation of children's attitudes toward television advertising, a process significantly shaped by the influences emanating from family members. Research has established that a child's manner of engaging with television advertising is profoundly modulated by the role played by their primary caregivers. The overarching viewpoints and stances of these caregivers regarding television watching were discerned to wield a pivotal role in steering the future consumer behavior of these children (Wardle et al., 2018).

Even the tangible effects of advertising strategies aimed at children were noted to be molded by the perspectives harbored by family members.

A considerable bulk of early researchers dedicated their efforts to untangle the intricate tapestry of family dynamics that exert an impact on children's attitudes and outlooks toward television advertising. Brown and Linne (2016) focused on the familial unit as an indispensable intermediary in mediating the influences of advertising on children. Moreover, the establishment of specific regulations within families about children's exposure to television advertising emerged as a pivotal determinant in shaping children's responses to television commercials (Traahms, and Pipes, 2020; Reid, 2017). These insights not only highlight the paramount role of familial influences in children's interactions with advertising but also underscores the intricate interplay between family characteristics and the evolving landscape of children's advertising attitudes.

In summary, the function of food stories expressed through various mediums in influencing dietary habits stands as an increasingly vital subject of scrutiny, given the burgeoning awareness of their potent sway over food preferences and consumption habits. Further inquiry in this domain, particularly concerning the impact of food stories on young children, is imperative to tailor efficacious interventions directed toward cultivating healthy eating patterns. By delving into the role of food stories in the realm of dietary habits, this research has the potential to yield a substantial contribution to our comprehension of this subject, thereby paving the way for the formulation of strategies geared towards fostering healthy eating practices (Lakshman et al., 2021).

2.2 Feasibility of utilizing positive food narratives to promote healthy eating habits

Food narratives wield a profound influence in sculpting the dietary inclinations and preferences of individuals, particularly in the context of children. These narratives, encapsulated within the domains of both fiction and reality, are interwoven with the sphere of food and nourishment. They traverse diverse mediums of expression, spanning literature and cinema, offering a multifaceted channel for their communication (Jacobson et al., 2013).

Extensive research underscores the affirmative impact that exposure to food stories can exert on children's dietary predilections and consumption patterns. A compelling illustration of this influence lies in the findings indicating that children who encounter food stories spotlighting wholesome, nutritious fare are more prone to opt for these choices over less nutritious alternatives (Eboh and Boye, 2016). Furthermore, the potency of food stories extends to cultivating an expanded spectrum of dietary preferences, engendering in children a heightened propensity to explore novel culinary offerings (Kader, 2011).

In tandem with the overarching impact of food narratives, investigations delve into the salient roles played by cultural and familial food narratives in shaping children's dietary behaviors. For instance, cultural tales and traditions interweave their threads into children's food preferences, shaping their outlook toward wholesome eating (Kader, 2011). Equally instrumental in this context are the food habits and attitudes modeled by parents, resonating throughout the familial sphere to resonate in children's dietary practices (Birch & Fisher, 2020).

Research also accentuates the role of food stories in mitigating "food neophobia," a phenomenon entailing the aversion to embracing new culinary experiences. These narratives have been observed to familiarize children with previously unfamiliar foods, rendering these novel offerings more palatable and enticing (Wardle et al., 2018; Lytle et al., 2016).

In summary, the compendium of literature underscoring the impact of food narratives on the dietary inclinations of children magnifies their pivotal role in shaping attitudes and behaviors about food. The need for further exploration is evident to elucidate the intricate mechanisms underlying this influence and to subsequently devise targeted interventions that champion healthy eating among children.

2.3 Frequency of consumption of healthy and unhealthy foods among children

Consumption of healthy and unhealthy foods is informed by eating habits. Eating habits also known as food habits, encompass the intricate array of choices and patterns that delineate the reasons, manners, companions, and modes associated with individuals' consumption of food. This intricate matrix focuses on the underlying motivations behind dietary decisions, the social contexts within which meals are shared, and the multifaceted processes involving procurement,

storage, utilization, and disposal of food resources (Tin et al., 2021). A myriad of factors exerts their sway over the shaping of people's eating habits, encapsulating a spectrum of influences ranging from individual proclivities to the intricate interplay of social, cultural, religious, economic, environmental, and political forces (Onyango, 2021).

While the fundamental purpose of eating pertains to the sustenance of human existence, the spectrum of motivations encompassed by consumption extends beyond mere survival. People often partake in eating to signify appreciation, establish a sense of affiliation with their social circles, and honor long-standing familial customs and traditions. The intricate web of motivations is interwoven with psychological, sociological, and cultural threads that collectively paint a nuanced picture of human dietary behaviors (Smith, 2019).

A pivotal facet of people's eating habits rests on a bedrock of learned behaviors, including a variety of social norms and etiquette governing meal practices, snack routines, portion sizes, and the repertoire of acceptable edibles (Traahms, and Pipes, 2020). For instance, certain individuals might consider the act of consuming food using their hands as an ordinary practice, while others firmly adhere to the conventions of utilizing cutlery as the sole acceptable modality for partaking in meals. These practices and norms are embedded within cultural contexts, which in turn form the crux of individuals' perceptions regarding appropriate dietary conduct (Hendrie et al., 2019).

2.3.1 Culinary Traditions and Heritage

The concept of Culinary Traditions and Heritage deeply focuses on the intricate connection that exists between food, cultural customs, and individual and communal identities. This scholarly inquiry navigates through the annals of history, cultural contexts, and societal dynamics to unravel the multifaceted process by which food is prepared, shared, and commemorated across successive epochs (Ambrosini et al., 2019). It delves into an assortment of elements, including the genesis, emblematic significance, and ceremonial observances associated with iconic gastronomic creations. This comprehensive examination illuminates the role of culinary practices as veritable chronicles of the past, preserving and safeguarding the intricate narratives of cultural lineages (Mahr et al., 2015). The complex interplay of adaptive processes and innovative culinary transformations is underscored, thereby illustrating the dynamic evolution of culinary

edifices while simultaneously retaining an unbreakable connection to their historical origins (Bante et al., 2020).

Moreover, the purview of this academic discourse encompasses an insightful dissection of the challenges that pose threats to the perpetuation of culinary heritage. This discourse extends to the efforts that conscientious individuals and collectives deploy in their endeavors to rejuvenate and resuscitate fading traditional gastronomies (Mbithe, 2018). The fabric of culinary traditions and heritage is complex and constitutes not only a sustenance matrix but also an intricate mosaic that reverberates with the echoes of bygone eras. It is within this profound interplay of sustenance, ritual, and historical continuum that our cultural tapestries are interlaced and our identities are etched with the vivid hues of the past (Casey et al., 2018).

2.3.2 Cultural Cuisine Preservation

Cultural Cuisine Preservation involves the conscientious and deliberate undertaking to safeguard and perpetuate the culinary heritage and customs that are an integral part of diverse cultural tapestries (Mahr et al., 2015). This scholarly subject is centered around a resolute dedication to the sustenance of age-old recipes, time-honored culinary techniques, and revered gastronomic rituals that have traversed the corridors of time through successive generations. The essence of this theme lies in the ardent commitment to the preservation of gastronomic practices that are deeply enshrined in the cultural fabric of societies worldwide (Littleton, and Ollendick, 2021).

This erudite exploration immerses itself in understanding how these culinary heritages serve as profound repositories of cultural narratives, historical narratives, and the very essence of a community's ethos. The very heart of this scholarly inquiry is to dissect how these gastronomic traditions encapsulate not only flavors but also the stories, memories, and values that have been ingrained over centuries. It is through the lens of this study that the intrinsic connection between food and identity becomes starkly evident, as the dishes served on tables unveil the rich tapestry of a culture's history and shared values (Vereecken, and Maes, 2017).

By delving into the depths of cultural cuisine preservation, one unearths the layers of significance that these practices hold. They transcend the realm of mere sustenance to serve as conduits for the transmission of cultural continuity. Through the act of preserving these culinary

legacies, communities ensure that their ancestral stories remain relevant, that their heritage is not diluted by the passage of time, and that their cultural distinctiveness perseveres for the enrichment of posterity (Maffeis et al., 2018).

In essence, cultural cuisine preservation stands as an indomitable testament to the intricate interplay between the past, the present, and the future. It illuminates the profound role that food plays in knitting the tapestry of human history and maintaining the integrity of cultural narratives. As we delve into this realm, we embrace the responsibility to nurture the flavors, techniques, and stories that are both a tribute to our forebears and a bequest to the generations yet to come (Ambrosini et al., 2019).

2.3.3 Global Food Challenges

Global Food Challenges comprises a complex web of multifaceted issues within the fabric of worldwide food production, distribution, and consumption. This domain presents an exhaustive exploration of a myriad of obstacles that wield their influence over pivotal facets such as ensuring food security, fostering sustainable practices, and ensuring equitable access to nourishing sustenance for diverse global populations (Lioret et al., 2020). This avenue of scholarly investigation entails an examination of the scope of pertinent factors, including the burgeoning dynamics of the global population, the relentless impacts of climate change, the depletion of vital resources, and the socio-economic disparities that together orchestrate a multifaceted symphony that significantly impacts the collective global capacity to provide sufficient and nutritionally enriched sustenance to all segments of society (Noel et al., 2011).

By immersing ourselves in the domain of global food challenges, we are bestowed with a sweeping vista that allows us to grasp the urgency that underscores the imperative of addressing these pressing concerns. This academic pursuit not only serves to illuminate the multifarious dimensions of the challenges at hand but also emphatically underscores the paramount importance of devising innovative and visionary solutions (Vivas et al., 2020). The critical exigency of these solutions is further accentuated by the complexities that characterize the modern global food ecosystem. It is within this milieu that the compelling necessity for transformative change, pioneering innovations, and enduring sustainable reform resonates powerfully (Casey et al., 2018).

In essence, the overarching theme of global food challenges extends an enlightening aperture through which we gain insight into the grand tapestry of global sustenance. As we delve deep into these matters, we glean profound insights into the compelling imperative for a comprehensive and adaptive paradigm shift. Such a transformation is indispensable not merely for securing the well-being of existing generations but also for laying a robust foundation to foster the prosperity and nourishment of generations yet to come. In our pursuit to unravel the complexities of these challenges, the world implores the formulation of visionary strategies and collaborative endeavors, underscoring the innate interconnection that binds the global food system with the holistic welfare of humanity at large (Smith, 2019; Johnson et al., 2020)

2.3.4 Food Accessibility

The concept of food accessibility entails a web of multifarious elements that impact an individual's capacity to procure, attain, and afford a diet that is both sufficient and rich in essential nutrients. This scholarly area of exploration largely focuses on a spectrum of challenges that possess the potential to impede unencumbered access to food. These challenges span a wide terrain, encompassing economic disparities, geographical placement, transportation hurdles, and societal impediments. The thematic expanse extends to comprehensive scrutiny of the disparities inherent in the allocation of food resources, thereby culminating in discernible ramifications for the collective health and well-being of communities (Olivares et al., 2020).

By delving into the nuances of food accessibility, we gain valuable insights into the imperatives that underscore the call for harmonious and just resolutions. This academic pursuit not only elucidates the multifaceted dimensions intrinsic to the challenges at hand but also accentuates the critical urgency for crafting solutions that transcend disparities. The pressing need for these solutions is driven by the factors that govern the distribution of food within the contemporary global fabric. Within this milieu, the necessity for transformative measures, novel strategies, and sustainable frameworks is resoundingly evident (Patrick, and Nicklas, 2021).

In essence, the exploration of food accessibility serves as an illuminating window through which we glimpse the overarching panorama of nourishment availability. As we delve deeper into the intricacies enshrouding this subject, we glean profound insights into the compelling exigency for a paradigm shift that reconfigures inequities. Such a transformation is not just vital to the

sustenance of present and future generations, but also forms the bedrock of societal health and vitality. As we chart our course in deciphering the labyrinthine challenges of food accessibility, the clarion call resonates for concerted efforts, visionary approaches, and the harmonization of our global collective to ensure that the fundamental right to nourishment is upheld for all (Dixon et al., 2019; Loopstra & Tarasuk, 2012).

2.3.5 Nutritional Awareness

The concept of nutritional awareness encompasses a broad and in-depth comprehension of the vital significance that balanced and nourishing diets hold in the pursuit of fostering not only optimal physical health but also overall well-being. This academic domain traverses the dimensions inherent in nutrition, including the pivotal roles played by an array of essential nutrients, the tenets of dietary guidelines, and the reverberations of individuals' dietary choices upon their holistic health (Graves et al., 2019). This encompasses a spectrum of efforts, including educational endeavors, awareness campaigns, and purposeful initiatives all geared toward equipping individuals with the knowledge necessary to make prudent and informed decisions about their dietary habits. As we embark upon an exploration of nutritional awareness, a spotlight is cast upon the profound import of cultivating a populace that is well-versed in the nuances of nutrition, thereby serving as a robust shield against prevalent health challenges and catalyzing the cultivation of lifestyles that brim with vitality (Young et al., 2019).

By delving deeply into the dimensions of nutritional awareness, we are bestowed with a vantage point that grants us the opportunity to fathom the far-reaching implications of our dietary choices. This scholarly endeavor not only reveals the facets interwoven within the realm of nutrition but also underscores the paramount significance of inculcating a culture of informed dietary decision-making (Zellner et al., 2016). This resonance is especially pertinent considering the intricate web of interconnections that link nutrition to the broader landscape of public health. It is within this matrix that the pressing need for promoting nutritional awareness emerges as an unequivocal priority, offering a strategic path toward the amelioration of health challenges and the cultivation of lifestyles that epitomize holistic well-being (Popkin et al., 2021).

In essence, the exploration of nutritional awareness serves as a luminous beacon that illuminates the path toward nurturing individual and collective health. As we navigate the contours of this

academic inquiry, we gain profound insights into the pivotal role of knowledge in shaping dietary behaviors and subsequently influencing health trajectories. This pursuit beckons for a concerted collaborative effort that transcends individual choices, resonating with public health policies and educational initiatives. Ultimately, it is within the crucible of nutritional awareness that we find the potential to forge a healthier future that transcends the boundaries of age, demographics, and socio-economic strata, as a well-informed populace steers toward choices that radiate vitality and well-being (Lupton, 2015; Contento, 2016).

2.3.6 Cultural Influence on Food

The exploration of cultural influence on food involves delving deeply into the relationship between cultural dynamics and the gastronomic realm, uncovering how diverse cultural contexts and traditions mold the entire spectrum of how food is perceived, prepared, savored, and ascribed value within a myriad of societies (Zellner et al., 2016). This academic subject embarks upon a journey to understand cultural norms, beliefs, and practices collectively shape an array of culinary decisions, ranging from the selection of ingredients to the methods employed in cooking, and even extending to the rituals and conventions surrounding communal dining experiences. This theme envelops the attempt to understand the iconic culinary creations that hold profound cultural significance, the traditional culinary practices that have stood the test of time, and the pivotal role that food assumes in ceremonial observances and festivities (Hendrie et al., 2019).

This academic pursuit not only reveals the manifold dimensions of cultural influence on food but also underscores the profundity of the connections that underlie this symbiotic relationship. In this context, food transcends its physical form to manifest as a powerful conduit for conveying cultural identities, values, and stories across generations (Radcliffe et al., 2020).

2.5 Theoretical framework

The study was guided by the operant conditioning theory.

2.5.1 Operant conditioning

Operant conditioning, initially conceptualized by the behaviorist Skinner constitutes a prominent learning mechanism rooted in the application of rewards and penalties to elicit specific behaviors. Through this process, a pivotal link is forged between a behavior and its corresponding outcome, whether positive or negative, thereby shaping future conduct. This influential approach permeates everyday learning experiences, with instances of reinforcement and punishment ubiquitously manifesting in natural contexts.

Within the framework of behaviorism, Skinner subscribed to the notion that delving into internal cognition and motivations was redundant for comprehending behavior. Instead, he advocated scrutinizing the external, discernible catalysts that drive human conduct. This perspective not only simplified the study of behavior but also underscored its external determinants.

During the early 20th century, behaviorism emerged as a dominant paradigm in psychology, with John Watson's ideas wielding significant influence. Watson's emphasis on classical conditioning remained a cornerstone in the inception of this school of thought, he asserts that he could mold any individual, regardless of background, into any desired role through systematic conditioning.

While the initial wave of behaviorists focused on associative learning, Skinner's interests diverged toward the impact of consequences on human actions. This proclivity paved the way for his theory of operant conditioning, which explored how the consequences of actions interwoven with behavior.

Operant conditioning operates as a behavioral learning theory underpinned by dopamine, a neurotransmitter crucial for associations and behavioral acquisition (Mackintosh, 1983). Often dubbed the "feel-good" hormone, dopamine orchestrates a spectrum of functions including learning, cognition, movement, mood, and motivation. Activities linked to pleasure trigger dopamine release, thereby catalyzing the pursuit of recurring pleasurable experiences (Ayano, 2016).

Food, known for its potent reinforcing attributes, provides a pertinent illustration of operant conditioning. Individual variations in the rewarding value of food could elucidate the excessive caloric intake contributing to obesity and weight gain. Positive reinforcers, including food, stimulate the release of dopamine in the brain. Dopamine's neurological action hinges upon the

interplay between its release, reuptake, and binding to synaptic dopamine receptors (Epstein et al., 2004). This intricate interplay within the realm of dopamine elucidates the mechanisms through which operant conditioning finds its neural foundation.

2.5.2 Conceptual framework

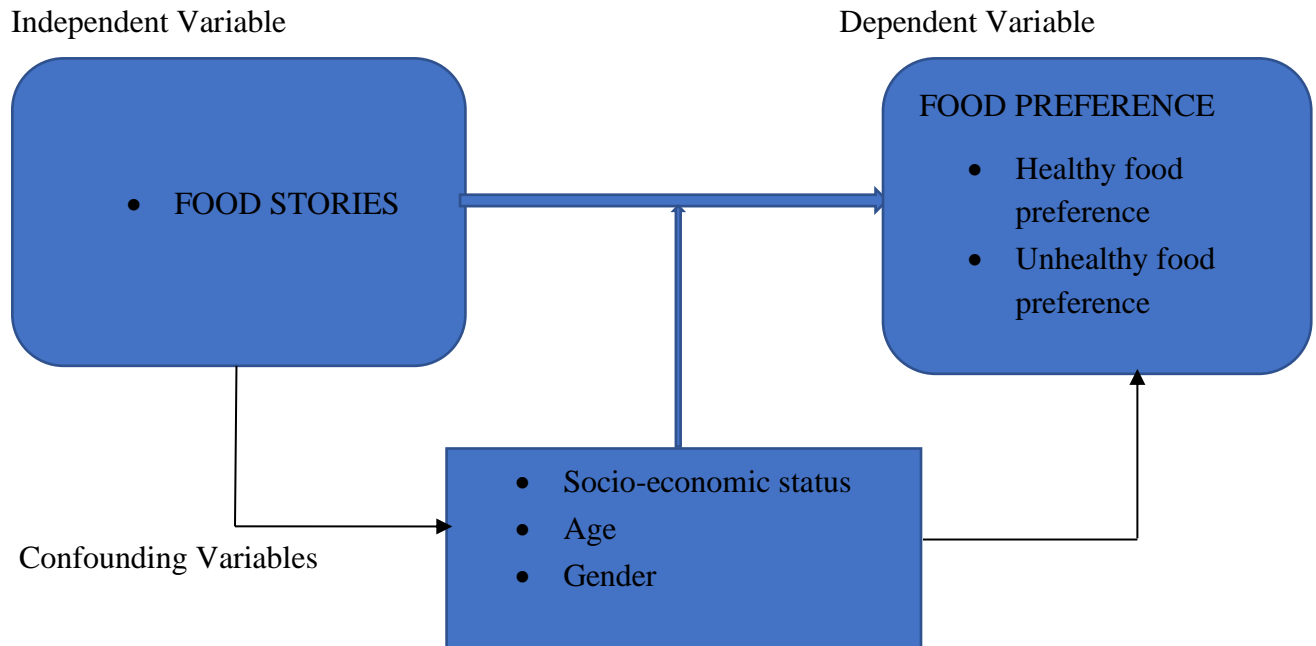


Figure 2.1 Conceptual Framework

Within the ambit of this comprehensive inquiry, food stories assumed a pivotal role as the independent variable, encapsulating narratives that meticulously underscored the favorable repercussions of embracing nutritious food among the kindergarten children. In concurrence, the

dependent variable materialized as food preference, encompassing a spectrum that traverses from nourishing and wholesome options to their less optimal counterparts within the dietary panorama of children. These behavioral tendencies are profoundly shaped by a labyrinthine interplay of factors, the confluence of which exercises a substantial impact on the dietary choices of the young demographic. It is worth accentuating that the preeminent forces molding these choices oftentimes emanate from the omnipresent advertisements that pervade various platforms. This influence casts its sway during the pivotal developmental juncture when children are in the throes of cultivating their dietary propensities. Consequently, this phase serves as the crucible for the formation of preferences that harmonize with the content persistently disseminated through the sensory conduits of visual and auditory nature.

CHAPTER THREE

RESEARCH METHODOLOGY

3.0 Introduction

Within this chapter, an exposition of the methodologies harnessed by the researcher to realize the study's research objectives is proffered. The methodologies employed encompassed a comprehensive spectrum of facets, each crafted to contribute to the attainment of the study's overarching goals. The methodological framework encompassed the research design, the delineation of the target population under scrutiny, the sampling procedure and corresponding sample size determination, a comprehensive elucidation of data collection methodologies, portrayal of the experimental protocol, an outline of the analytical techniques adopted for data interpretation, and an ardent consideration of ethical imperatives governing the conduct of the study. Collectively, these methodological facets converge harmoniously to underpin the rigorous and systematic nature of the research endeavor, ensuring its fidelity to scholarly standards and objectives.

3.1 Research Design

The utilization of an experimental research design was fitting for the implementation of this research. Experimental research serves as a methodological approach aimed at investigating cause-and-effect connections. In this context, the researcher deliberately altered one or more independent factors and assessed the subsequent impact on the dependent factor. This method

was particularly well-suited to this study due to the imperative of scrutinizing the cause-and-effect dynamic concerning the influence of advertising on dietary behaviors among kindergarten children.

3.2 Study location

This study was conducted in Mvita Sub-County, Mombasa, Kenya. As detailed by the Mombasa County Department of Education, Mvita Sub-County has more than thirty public and private kindergartens that are mostly within primary schools but are separated from the primary section and recognized as pre-primary 1 (PP1) and pre-primary 2 (PP2). Mvita Sub-County largely consists of a middle-class population that mostly rely on small scale businesses as a source of their daily income. The kindergartens in the Mvita area were contacted after obtaining the approval of the relevant authority.

3.3 Target Population

This research undertaking was centered on young children enrolled in kindergarten within the geographical confines of Mvita Sub-County, situated in Mombasa County, Kenya.

Predominantly, the main participants in this study were positioned within the age range of 4 to 6 years, a delineated span that had been previously expounded upon in the cited sections of relevant scholarly literature within the purview of this investigative pursuit. This particular age group has been duly acknowledged in antecedent academic dialogues as a demographic that advertisers frequently direct their promotional endeavors towards, intending to advocate for the consumption of what would be considered as unhealthy foods.

Moreover, the specific demographic segment chosen for the study was envisioned to encompass a considerable quotient of juvenile individuals who demonstrate a consistent propensity to engage in dietary consumption that tends towards nutritional unfavourability.

The strategic selection of Mvita sub-county in Mombasa County signified a prudent and discerning choice for this erudite inquiry. This selection was notably underscored by its demographic diversity, encapsulating an expansive range of sociodemographic strata. This demographic heterogeneity within the geographical vicinity is emblematic of a broad spectrum spanning various socioeconomic echelons. Furthermore, the salient attribute of an equitable allocation between privately managed and publicly funded kindergarten establishments within this geographic domain, imparted the unique and pivotal advantage of conferring access to an

all-encompassing cross-section of subjects, thereby ensuring a multifaceted representation derived from sundry sociocultural orientations.

3.4 Sample procedures and Sampling size

A sample, in the context of research, pertains to a manageable segment extracted from a larger populace. The process of sampling encompasses the deliberate act of selecting a subset from the entire population, intended to encapsulate its essence on a smaller scale. In the present investigation, a method referred to as simple random sampling was adeptly employed when dealing with the kindergartens situated within Mvita Sub-County, a locale nestled Mombasa County, Kenya. Through this method, a segment of participants was randomly chosen from the total population of 97 kindergarten children.

By implementing this procedure, a representative sample of 90 children was garnered from the total population of 97 kindergarten children by writing all the 97 names of the children on small cut out pieces of paper and mixing them all up in a jar. 90 pieces of paper were then picked out from the jar at random without replacing and the children whose names appeared on these randomly drawn pieces of paper were the participants of the study. The responses garnered from this selected group subsequently proved instrumental in effecting insightful inferences, thereby contributing to the comprehensiveness and validity of the study's findings.

The representative sample for the study which was 90 kindergarten children was divided into two distinct groups comprising 45 kindergarten children in both the experimental and control groups. This was ascertained in congruence with established guidelines prescribing minimum sample sizes for experimental studies. These two groups were then further sub-divided into smaller groups of 10 children each making them 8 groups in total, four groups of ten children in each group for the experimental group and another four groups of 10 children in each group for the control group. There were two other tiny groups of five children each for both the study groups that were later discarded during analysis due to missingness. This thoughtful determination ensured that the research objective was underpinned by a statistically sound foundation, reinforcing the integrity of the ensuing analyses and conclusions.

3.5 Research instruments

Two narratives that were developed by Undine Sommer (2020) tailored for the sensibilities of children were crafted to optimize the constructive influence of wholesome sustenance,

underpinned by the tenets of psychological priming. These two narratives revolved around a fraternal duo embarking on their inaugural days of scholastic sojourn, wherein they confront an enigma of dire import. The enfeeblement of all hues within their urban realm. In a display of resourcefulness, they rise to the occasion, uniting their efforts to extricate their metropolis from the clutches of this chromatic catastrophe.

Within one narrative, their triumph is secured by catering to the culinary needs of a character endowed with magical artistic abilities, referred to as the "magic painter." This painter's skillset is instrumental in revitalizing the faded hues of their cityscape, subsequently restoring its vibrancy. In an alternate iteration of the story, their successful endeavor materializes through the provisioning of fresh pigments to the aforementioned painter, thereby accomplishing the city's rejuvenation through a distinct avenue.

These narratives were architected, adhering to principles known to captivate and engross young minds effectively. The overarching objective was to captivate their attention while fostering absorption of the stories' overarching themes, thereby nurturing a holistic engagement with the narrative content. After the children were exposed to these narratives, observation and recording was employed after offering them different foods to determine their preference

3.6 Data collection procedures

All procedural undertakings transpired within homogenous clusters of children, ensuring uniform conditions across the groups. The narrative for the experimental group which was about providing healthy nourishment to the "magic painter" to garner energy for painting the now dull city back to its brilliant bright colors, occurred under the guidance of the experimenter and was delivered before lunchtime on Monday marking the commencement of the second week within the study's timeline. The same applied to the control group which was told a different narrative that had nothing to do with food and instead was about providing paint daily to the "magic painter" to paint the city back to its bright colours. Pertinently, the experimental story was exclusively recounted to the control group during the ultimate day, after the completion of the preference assessment phase.

Throughout both the prelude to the narrative delivery (designated as the pre-story week) and the actual narrative-conveying week (designated as the story week), the investigative process encompassed daily evaluations involving both groups. These evaluations sought to gauge the

children's proclivities toward specific food items, as delineated in the prior specifications. The food offerings were proffered a few minutes before lunchtime capitalizing on the potential hunger of the children, ensuring that each child solely selected either healthy or unhealthy food items and promptly consumed it if deemed appealing.

The pivotal measure underpinning the inquiry was the categorical selection of food items, classified into the categories of healthy and non-healthy, serving as the dependent variable within the study's framework. The initial five days during the pre-story week served as an interval of stabilization, effectively establishing a baseline. During the pre-story week, both healthy and unhealthy snacks were offered to the children side by side in equal ratio and they were let to freely choose what they preferred without any influence as the experimenter recorded their preferences per group. The healthy snacks in this case included fruits such as bananas, grapes, apples, mangoes, pears and carrots while the unhealthy snacks would range from cupcakes, cookies, biscuits, lollipops and sweets. Three different types of healthy and unhealthy snacks were offered daily in order to allow the children have a variety of choice. The types of snacks offered were also changed every day. Subsequently, days six to ten encapsulated the temporal window during which the divergent impact of the narrated story unfurled, elucidating its lasting influence over time. This meticulous delineation of the study's progression ensured a comprehensive and discerning assessment of the interplay between food stories and children's food preferences.

3.7 Data analysis

The analytical methodology adopted for this study encompassed the utilization of t-test analysis, a robust statistical tool renowned for its efficacy in examining the significance of differences between two sets of data. The statistical package for the social sciences (SPSS) was harnessed as the instrumental medium through which descriptive and inferential statistics were generated, affording a comprehensive exploration of the data's inherent characteristics and implications.

The data acquisition process entailed the observation of both the experimental group and the control group, with subsequent channeling of this amassed data into the realm of inferential statistics. Through this analytical approach, the overarching goal was to derive substantiated conclusions, elucidating the extent of influence that food stories wielded over the discernible food preferences within the cohort of kindergarten children. By harnessing this methodological

framework, the study endeavored to substantiate its research assertions with empirical evidence, fostering a comprehensive comprehension of the dynamic interplay between narratives and the food preferences of young children.

3.8 Ethical Considerations

A pseudonymization procedure was employed as part of the ethical protocols governing participant confidentiality. Upon expressing their willingness to participate, children received a letter addressed to their parents, containing a comprehensive exposition of the study's details and an accompanying consent form. The parents, in turn, provided their informed consent for their child's involvement in the research endeavor by affixing their signature to the provided letter and subsequently returning it to the kindergarten administration.

Following the receipt of parental consent, the researcher implemented a systematic protocol wherein each study group was allocated a distinctive code. This code, pivotal for maintaining the integrity of data records throughout the experiment, was pivotal for data management, linking a group's outcomes across multiple testing sessions and simultaneously associating the code with pertinent demographic data. Importantly, the confidentiality of this association was vigilantly safeguarded, with only the kindergarten administration retaining the confidential linkage between the group's identifier and the corresponding code.

A noteworthy facet of this process lies in the fact that, upon the culmination of data collection, the list binding the group's identifier and the code was prudently destroyed, rendering any subsequent efforts to trace data back to individual participants or their parents untenable. This approach fortifies participant confidentiality, ensuring that their identities remain entirely shielded.

CHAPTER FOUR

DATA ANALYSIS, PRESENTATION AND RESEARCH FINDINGS

4.0 Introduction

Within this chapter, a comprehensive dissection and exposition of the research objective analysis and subsequent findings is carefully undertaken. The focus of this analytical exploration rests squarely on the data collected, a corpus that delves into the intricate interplay between food stories and the food preferences harbored by kindergarten children. The dataset was compiled over a span of 15 days and constitutes a representation of the children's responses to food stories centered on both healthy and unhealthy foods.

The analytical process, guided by an overarching objective, is characterized by a systematic need to unravel prevailing patterns and discernible trends within the children's food. By embarking on this methodical journey, the research aimed to unearth insightful revelations from the vast troves of collected data, culminating in the formulation of substantiated conclusions that bear significance within the broader discourse surrounding food choices among kindergarten children. Through an analysis of the amassed data, this chapter seeks to contribute to the academic understanding of the intricate dynamics at play when food stories interact with the evolving palate preferences of young kindergarten children.

4.2 Data Analysis

The comprehensive dataset amassed for this study entailed logged daily records detailing the preferences exhibited by each group of children towards both healthy and unhealthy foods

throughout the designated 15-day interval. This data corpus, painstakingly collated and organized, forms the bedrock upon which the subsequent analysis is founded.

The analytical pursuit, an exercise in systematic scrutiny, involved a series of methodical steps aimed at gleaning insights from the collected data. Foremost among these steps was the calculation of frequencies and corresponding percentages associated with the children's proclivity for both healthy and unhealthy food selections. By distilling the data into quantifiable metrics, this endeavor sought to provide a comprehensive overview of the prevalent food preferences exhibited within each group.

In essence, this analytical endeavor endeavors to unearth valuable insights by unraveling the nuanced patterns concealed within the extensive dataset. Through the application of rigorous quantitative methods, the analysis aims to illuminate the prevalence and distribution of the diverse food preferences exhibited by kindergarten children, shedding light on their proclivity for either nutrient-dense or less-nutritious options over the designated timeframe.

4.3 Statistical Analysis

The analysis of the data involved two distinct cohorts that were carefully chosen for their specific roles within the analytical framework. These cohorts, pivotal to the investigation's overarching objectives, comprise the experimental group and the control group.

The experimental group included the amalgamation of groups 1 through 4 and stands as a focal point within the analysis. These groups were subjected to the pivotal intervention involving the introduction of food stories, and their subsequent responses represent a cornerstone in deciphering the potential influence of narratives on food preferences.

In contrast, the control group, constituted by the assemblage of groups 6 through 9, serves as a critical benchmark within the analytical landscape. Lacking the influence of food stories, this group provides a foundational context against which the experimental group's responses can be comparatively evaluated.

However, it is imperative to underscore that group five, despite its potential pertinence, was regrettably excluded from the analysis due to missing data. The absence of complete information hindered its integration into the comprehensive scrutiny, thereby necessitating its omission from the present analytical discourse.

4.3.1 Healthy Options per Group Across the Weeks

Table 4.1. Healthy options per group across the weeks

The table below represents the healthy options per group across the week from week one to week three. Week one which is the pre- story week for establishing baseline consists of days 1 to 5, day 6 to day 10 make up week two when the intervention was introduced while day 11 to day 15 make up week 3 which was the last week of study after the introduction of the intervention. The table below represent the number of children who chose healthy snacks per sub-group where each sub-group was made up of 10 children for both the experimental group and the control group. Additionally, the experimental group is represented by group one, group two, group three and group four while the control group is represented by group six, group seven, group eight and group nine.

Healthy Options per Group Across the Weeks

Grp	Healthy day1	Healthy day2	Healthy day3	Healthy day4	Healthy 5	Healthy 6	Healthy 7	Healthy 8	Healthy 9	Healthy 10	Healthy 11	Healthy 12	Healthy 13	Healthy 14	Healthy 15
GROUP ONE	7.00	4.00	1.00	0.00	2.00	10.00	7.00	8.00	9.00	5.00	7.00	5.00	8.00	5.00	5.00
GROUP TWO	9.00	4.00	0.00	0.00	2.00	9.00	7.00	5.00	7.00	7.00	6.00	6.00	7.00	8.00	8.00
GROUP THREE	5.00	7.00	2.00	4.00	5.00	9.00	8.00	10.00	7.00	8.00	6.00	7.00	7.00	9.00	5.00
GROUP FOUR	2.00	3.00	2.00	2.00	9.00	6.00	9.00	5.00	6.00	8.00	8.00	4.00	5.00	4.00	5.00
GROUP SIX	4.00	2.00	1.00	4.00	7.00	3.00	4.00	3.00	0.00	5.00	10.00	8.00	9.00	8.00	7.00
GROUP SEVEN	5.00	0.00	3.00	3.00	3.00	4.00	2.00	3.00	1.00	5.00	10.00	8.00	9.00	7.00	6.00
GROUP EIGHT	4.00	1.00	7.00	9.00	2.00	5.00	6.00	1.00	4.00	3.00	9.00	9.00	7.00	10.00	6.00
GROUP NINE	3.00	5.00	2.00	5.00	2.00	5.00	1.00	2.00	6.00	1.00	8.00	7.00	5.00	10.00	8.00

The comprehensive overview of healthy options for both the experimental and control groups is depicted in the table above. An examination of the mean scores within the experimental group reveals a notable variation, particularly evident during the pre-story week (days 1-5) – a period explicitly designated to establish a stable baseline. Notably, these outcomes exhibit fluctuation ranging from a minimal mean score of 0.00 on days 3 and 4 for groups one and two respectively to an elevated mean of 9.00 for groups two and four on days 1 and 5. Such fluctuations are

indicative of an initial lack of stability in the choice of food options potentially stemming from the children's nascent understanding of the underlying narrative influence on their preferences. These findings concur with those done by Tin et al., (2021) in which their study depicted that in the initial phases of behavior changes, the change process is quite slow and rigid among the population, but it gets better and faster over the implementation period as they get to learn and understand the benefits of the foods they are consuming.

Subsequently, a discernible transformation emerges from day 6 to 15, characterized by a stable pattern with mean scores spanning from 5.00 to 10.00. This shift signifies the association between food story exposure and food preference among kindergarten children. The findings are in line with a consumption and dietary habits project conducted among women and children, culture and familial narrative were impediments to the project but after breaking these barriers and getting the community to understand the benefits of the foods, they were able to increase the number of foods consumed per day due to this behavior change (Kader, 2021).

Akin to the experimental group, the control group experiences similar trends. In the initial five days, mean scores of food preference oscillate between 0.00 and 9.00, showcasing a comparable lack of stability. However, a pivotal distinction emerges during days 6 to 15, where the control group displays a variance in mean scores ranging from 0.00 to 10.00 across different groups and days. This unique pattern diverges from the experimental group's consistent trend, highlighting the distinctiveness of the narratives' influence on the experimental cohort's preferences based on the observed means. A study conducted by Wardle et al., (2018) is in agreement with these findings on, shaping the eating habits of youngsters is dependent on the benefits of the foods, the palatability and the food stories given on them, this enables fostering of a constructive attitude to food consumption.

4.3.2 Unhealthy Options per Group Across the Weeks

Table 4.2 Unhealthy options per group across the weeks

The table below represents unhealthy options per group across the weeks from week one to week three. Group one to group four represent the experimental group while group six to group nine represent the control group. The first week of establishing baseline which was designated as the pre-story week is represented by days 1 to 5, week two consists of days 6 to 10 and finally week

three is made up by days 11 to 15 in the table below. The figures in the table below show the unhealthy options per group of 10 children in each group per day through the weeks.

Unhealthy Options per Group Across the Weeks

Grp	Unhealthy day1	Unhealthy day2	Unhealthy day3	Unhealthy day4	Unhealthy day5	Unhealthy 6	Unhealthy 7	Unhealthy 8	Unhealthy 9	Unhealthy 10	Unhealthy 11	Unhealthy 12	Unhealthy 13	Unhealthy 14	Unhealthy 15
GROUP ONE	3.00	6.00	9.00	10.00	8.00	0.00	3.00	2.00	1.00	5.00	3.00	5.00	2.00	5.00	5.00
GROUP TWO	1.00	6.00	10.00	10.00	8.00	1.00	3.00	5.00	3.00	3.00	4.00	4.00	3.00	2.00	2.00
GROUP THREE	5.00	3.00	8.00	6.00	5.00	1.00	2.00	0.00	3.00	2.00	4.00	3.00	3.00	1.00	5.00
GROUP FOUR	8.00	7.00	8.00	8.00	1.00	4.00	1.00	5.00	4.00	2.00	2.00	6.00	5.00	6.00	5.00
GROUP FIVE	8.00	7.00	5.00	6.00	9.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
GROUP SIX	6.00	8.00	9.00	6.00	3.00	7.00	6.00	7.00	10.00	5.00	0.00	2.00	1.00	2.00	3.00
GROUP SEVEN	5.00	10.00	7.00	7.00	7.00	6.00	8.00	7.00	9.00	5.00	0.00	2.00	1.00	3.00	4.00
GROUP EIGHT	6.00	9.00	3.00	1.00	8.00	5.00	4.00	9.00	6.00	7.00	1.00	1.00	3.00	0.00	4.00
GROUP NINE	7.00	5.00	8.00	5.00	8.00	5.00	9.00	8.00	7.00	9.00	2.00	3.00	5.00	0.00	2.00

The elucidation of the study's outcomes, as illustrated in Table 4.2 above, sheds light on significant insights. During the preliminary five-day phase of establishing the baseline within the experimental group, the mean scores encompass a wide spectrum, ranging from the lowest point of 0.00 to a pinnacle of 10.00. In stark contrast, the control group's mean scores during the initial five days span from 3.00 to 10.00 across different days, indicating a relatively elevated range for a period devoid of any external intervention or narrative influence on the food choices among the target participants. This proves that food narratives can be used as an instructional tool to promote healthy eating. The findings agree with a study conducted in China exploring the behavior change due to the advertisement of foods done on social media by children. The reception rate is quicker and fast and convincing to the young and old to be able to uptake the foods and this easily changes the behavior and mindsets. The results could quickly shift either positively encouraging high uptake or negatively discouraging uptake based on the palatability (Tin et al., 2021).

Turning to the findings for days 6 to 15, a distinct transformation is observable within the experimental group. Here, the selection of unhealthy food choices manifests a decrease, leading to a constrained mean range of 1.00 to 6.00. Remarkably, a comparable effect is discernible in the control group, where unhealthy food preferences also experience a reduction, yielding a mean range between 0.00 and 9.00. An overarching observation gleaned from the study's results about unhealthy food choices is the consistent reduction in selections, evident through the declining mean values from day one to day 15. This phenomenon is credibly attributed to the narratives' influence on food choices, thereby rendering the observed reduction in preferences a direct consequence of the narratives' impact. The findings are in line with those done by Smith (2019), indicating that eating habits are influenced by the psychological, sociological, and cultural threads, which leads to either healthy or unhealthy habits.

4.4 Inferential Analysis

Table 4.3 below shows the descriptive analysis of both the healthy and unhealthy food options per day in terms of mean, standard deviation, median, minimum, maximum, skewness, kurtosis and standard error.

According to the findings as per table 4.3 below, the consumption of healthy foods among participants, the mean score increases gradually from as low as 2.556 in day 3 and gets up to 6.778 in the 14th day. The consumption of unhealthy foods also decreases from mean of as high as 7.444 in day three to a mean of 2.111 in the 14th day. Based on the mean findings, a quick conclusion can be made that the stories told had a positive impact in terms of the food choices made by the study participants. The findings indicate the skewness. The skewness for choice of healthy diets for days 1-5 had values greater than 0.5, which was considered the distribution to be positively skewed and in a graph the data points cluster on the left side and the tail is longer on the right side of the distribution. The distribution changes between days 6-10 to have values between -0.5 and 0.5, which in this case are considered to have a symmetric distribution. The choice of healthy foods from day 11-15 is considered to have values less than -0.5, which in this case consider the distribution to be negatively skewed or left-skewed where data points cluster on the right side and the tails are longer on the left side of the distribution. The change is skewness from positive, symmetric to negative, has a direct relation with the food stories which have an influence on the choices of food made by the study participants. The findings agree with

those done by various scholars in which the eating habits change over time depending on the level of impact of the food stories. In which a positive influence is realized when, a compelling illustration of this influence lies in the findings indicating that children who encounter food stories spotlighting wholesome, nutritious fare are more prone to opt for these choices over less nutritious alternatives (Eboh and Boye, 2016).

Consequently, the choice of unhealthy foods according to the study findings for days 1-10 ranges from between -0.5 and 0.5, which is an indication of a symmetric distribution. Although some of the days had indications of a negative skewness. As the days progress, the distribution for days 11-15 values greater than 0.5, which was considered the distribution to be positively skewed and in a graph the data points cluster on the left side and the tail is longer on the right side of the distribution. Based on the food stories given to the study participants, there is a positive correlation in terms of choosing less of the unhealthy foods overtime. Further, the results agree that, the potency of food stories extends to cultivating an expanded spectrum of dietary preferences, engendering in children a heightened propensity to explore novel culinary offerings (Kader, 2011).

The findings for the kurtosis analysis for unhealthy food choices had a consistent figure of less than -1.0, this indicated that the distribution was platykurtic, as the data was heavy-tailed, and the peak was flatter, almost like punching the distribution. The kurtosis on healthy foods was majorly ranging between 0 and 1 which indicated a normal or mesokurtic distribution starting from day 1- day five. The Kurtosis of day 6-14 had a range of -1 to 0 which was a platykurtic distribution. These findings indicate that both positive, normal and negative kurtosis was experienced based on the food stories given over the period of the 15 days for both healthy and unhealthy foods. Equally instrumental in this context are the food habits and attitudes modeled by parents, resonating throughout the familial sphere to resonate in children's dietary practices (Birch & Fisher, 2020).

Table 4.3 Descriptive Analysis of Healthy and Unhealthy Options per Day

	Mean	Sd	Median	Min	Max	Range	skew	kurtosis	SE
Healthy_1	4.555556	2.297341	4	2	9	7	0.596446127	0.7657805	0.7657805
Unhealthy_1	5.444444	2.297341	6	1	8	7	- 0.596446127	- 0.9364646	0.7657805
Healthy_2	3.222222	2.108185	3	0	7	7	0.168362005	- 1.0378704	0.7027284
Unhealthy_2	6.777778	2.108185	7	3	10	7	- 0.168362005	- 1.0378704	0.7027284
Healthy_3	2.555556	2.185813	2	0	7	7	0.827248920	- 0.6607976	0.7286043
Unhealthy_3	7.444444	2.185813	8	3	10	7	- 0.827248920	- 0.6607976	0.7286043
Healthy_4	3.444444	2.743680	4	0	9	9	0.489086940	- 0.5595426	0.9145599
Unhealthy_4	6.555556	2.743680	6	1	10	9	- 0.489086940	- 0.5595426	0.9145599
Healthy_5	3.666667	2.738613	2	1	9	8	0.829472844	- 0.9904527	0.9128709
Unhealthy_5	6.333333	2.738613	8	1	9	8	- 0.829472844	- 0.9904527	0.9128709

Healthy_6	5.666667	3.240370	5	0	10	10	- 0.165461088	- 1.2974721	1.0801234
Unhealthy_6	3.222222	2.728451	4	0	7	7	- 0.009859999	- 1.9014463	0.9094836
Healthy_7	4.888889	3.257470	6	0	9	9	- 0.259384023	- 1.7261720	1.0858233
Unhealthy_7	4.000000	3.082207	3	0	9	9	0.364286700	- 1.4586026	1.0274023
Healthy_8	4.111111	3.257470	3	0	10	10	0.490829498	- 1.1893446	1.0858233
Unhealthy_8	4.777778	3.382964	5	0	9	9	- 0.312428392	- 1.6629521	1.1276546
Healthy_9	4.444444	3.358240	6	0	9	9	- 0.237886785	- 1.7342715	1.1194134
Unhealthy_9	4.777778	3.456074	4	0	10	10	0.150197248	- 1.5722525	1.1520245
Healthy_10	4.666667	2.872281	5	0	8	8	- 0.321975283	- 1.4665510	0.9574271
Unhealthy_10	4.222222	2.773886	5	0	9	9	0.171086058	- 1.2161132	0.9246287

Healthy_11	7.111111	3.059593	8	0	10	10	- 1.187005611	0.4405111	1.0198644
Unhealthy_11	1.777778	1.641476	2	0	4	4	0.162517416	- 1.7551084	0.5471588
Healthy_12	6.000000	2.738613	7	0	9	9	- 0.973728991	- 0.1792593	0.9128709
Unhealthy_12	2.888889	1.900292	3	0	6	6	0.139929485	- 1.3069384	0.6334308
Healthy_13	6.333333	2.783882	7	0	9	9	- 1.108960813	0.1905037	0.9279607
Unhealthy_13	2.555556	1.740051	3	0	5	5	0.107271337	- 1.4730553	0.5800170
Healthy_14	6.777778	3.270236	8	0	10	10	- 0.816063066	- 0.6447978	1.0900787
Unhealthy_14	2.111111	2.204793	2	0	6	6	0.560075355	- 1.3067622	0.7349309
hHealthy_15	5.555556	2.403701	6	0	8	8	- 1.116709476	0.4240083	0.8012336
Unhealthy_15	3.333333	1.732051	4	0	5	5	- 0.584478050	- 1.1069959	0.5773503

4.5 Welch Two Sample T-test

Figures 4.5.1, 4.5.2, 4.5.3 below show the bar graph representation of the Welch two sample T-test analysis of the experimental group from week one to week three. It shows the variation in preference between healthy and unhealthy foods before and after the intervention was introduced among the study participants.

4.5.1 T-test for Week 1 experimental groups

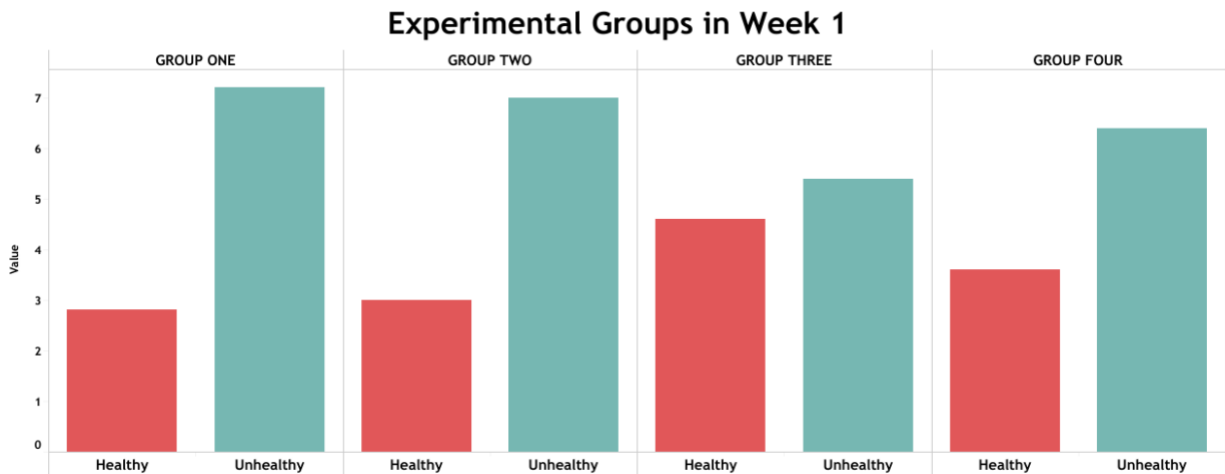


Figure 4.1 Experimental groups in week 1

The study findings are based on the experimental group in week one, according to figure 4.1 above, [95%CI=-20.47392 -7.52608; P=0.001845], the t value finding was = -5.2915. The pdf = 6, and sample estimates for a mean of $x = 13$, $y = 27$. The findings are indicative of low healthy eating habits in the first week as compared to the unhealthy score. The findings are coherent with those done by (Mbithe, 2018), indicating that the complex interplay of adaptive processes and innovative culinary transformations in the formative stages are slow but eventually picks up to have better and more detailed food consumption choices that are healthy.

4.5.2 T-test for week 2 experimental groups

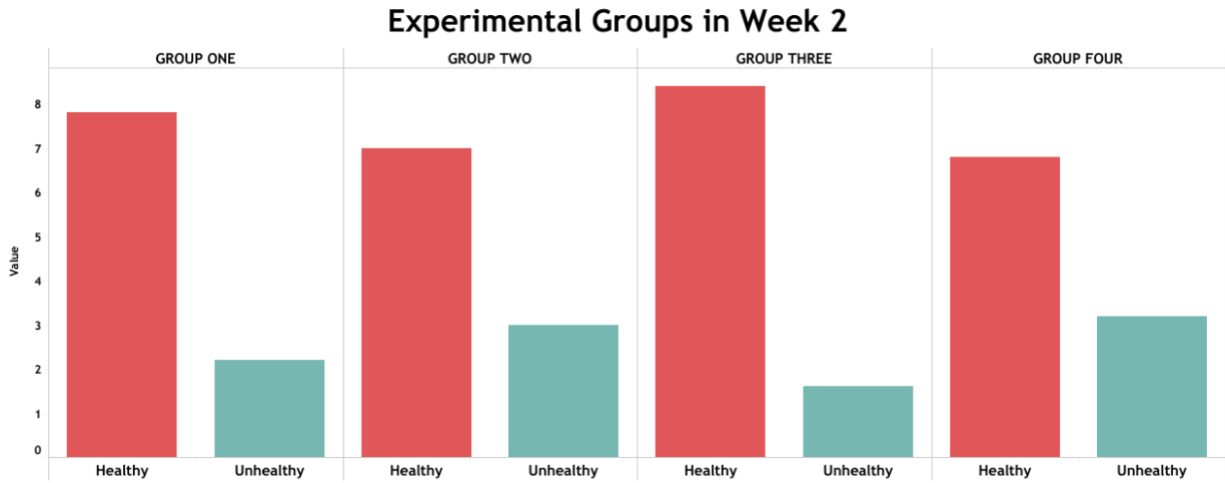


Figure 4.2 Experimental groups in week 2

The study findings were further analyzed for the same set of groups (1-4) for the second week and the findings as per figure 4.2 above, [95% CI=13.52608 - 26.47392; P=0.0002783], the t value finding was 7.5593 indicating that the standard error of the mean measures the variability of the sample mean, which shows that the sample mean is close to the true population mean. The pdf = 6, and sample estimates for a mean of $x = 35$, $y = 15$. The findings are indicative of a higher consumption score for healthy diets based on the food stories for this week as compared to unhealthy foods. The higher consumption score of foods is also observed in a study which indicates that the historical continuum of healthy foods is difficult to uphold among populations but eventually, the uptake is stabilized and enjoyed among the people (Casey et al., 2018).

4.5.3 T-test for week 3 experimental groups

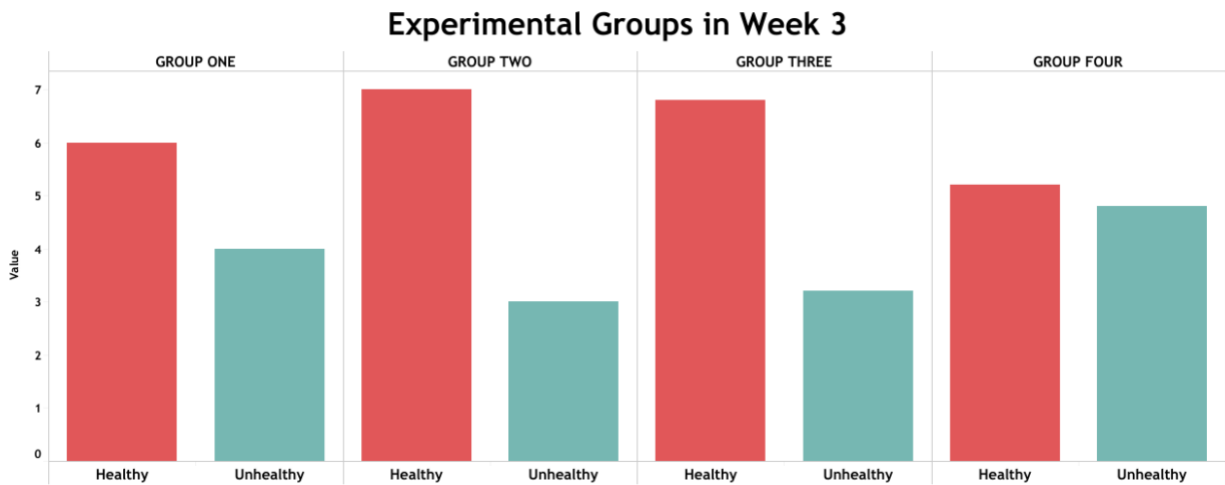


Figure 4.3 Experimental groups in week 3

The study findings for the last week were also analyzed with the same groups and based on the findings as per figure 4.3, [95%CI= 6.276099 - 26.723901; P=0.01223], the t value finding was 4.7063 this indicates that the standard error of the mean measures the variability of the sample mean, which shows that the sample mean is close to the true population mean. The findings at this stage of the study show that the frequency of consumption of healthy and unhealthy foods is not related to food preference among kindergarten children as it is seen that their preferences change throughout the week despite what type of food they consume more. The pdf = 6, and sample estimates for a mean of $x = 41.75$, $y = 25.25$. Similar to week 2, the findings indicated a higher consumption score for healthy diets as compared to unhealthy foods and this is directly related to the food stories and the significance level achieved. The consumption of cultural cuisines is at its highest in most of the origins and therefore an introduction of a new food product faces resistance or slow uptake. This is linked to the time-honored culinary techniques, and revered gastronomic rituals that have traversed the corridors of time through successive generations, therefore, healthy diet will be consumed in most of the time and compared to not consuming the healthy diets (Littleton, and Ollendick, 2021).

CHAPTER FIVE

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

5.1 Introduction

The discussion, conclusion, and recommendations are also provided in this section.

5.2 Summary of the findings

The main elements that were identified in this study were related to the research objective and summarized as seen in relationship between food story exposure and food preference, significant relationship between the feasibility of utilizing positive food narratives and relationship between the frequency consumption of healthy and unhealthy foods and food preference.

5.2.1 The association between food story exposure and food preference among kindergarten children in Mvita Sub-County, Kenya

The primary objective of this research was to ascertain the discernible effect of food story exposure on the food preference amid kindergarten children within the geographical confines of Mvita Sub-County, Kenya. Upon the analysis of the research outcomes, it was discerned that food story exposure wields a direct and affirmative influence on the dietary preferences embraced by kindergarten children. This observation is notably substantiated by the graphical representation in the form of a bar chart that juxtaposes the preferences during the second and third weeks, coinciding with the introduction of the food narratives after the establishment of baseline measures.

The implications of these findings resonate in a manner that aligns with the research hypothesis H01. This particular hypothesis, which had posited the absence of a consequential correlation between food story exposure and kindergarten children's food preferences within the confines of Mvita Sub-County, Kenya, is unequivocally contradicted by the empirical evidence and statistical analysis presented within this study.

5.2.2 The feasibility of utilizing positive food narratives as an instructional tool to promote healthy eating habits among kindergarten children in Mvita Sub-County, Kenya

The second aim of this research was to the feasibility of utilizing positive food narratives as an instructional tool to promote healthy eating habits among kindergarten children in Mvita Sub-County, Kenya. The outcomes of this assessment unveil an affirmative and coherent correlation between utilization of positive food narratives as an instructional tool to promote healthy eating habits and food preference among kindergarten children. This linkage is evident when scrutinizing the data across week two and week three. Notably, the initiation of healthy food consumption among the experimental group in the second week yielded an intriguing pattern wherein the observed food preferences remained unswayed across the study's duration.

As such, the verdict rendered by the research findings serves to contravene the underlying supposition encapsulated within hypothesis H2. This particular conjecture, which posited the absence of a significant relationship between the utilization of positive food narratives as an instructional tool to promote healthy eating habits and food preference among kindergarten children in Mvita Sub-County, is categorically invalidated by the empirical insights derived from this comprehensive investigation.

5.2.3 The frequency of consumption of healthy and unhealthy foods among kindergarten children in Mvita Sub-County, Kenya

Finally, the third goal of this study was to assess the connection between the frequency of consumption of healthy and unhealthy foods and food preference among kindergarten children in Mvita- Sub County. The findings do not reveal any positive connection between the frequency of consumption of both healthy and unhealthy food to food preference among kindergarten children. Therefore, hypothesis H3 which predicted no significant relationship between the frequency of consumption of healthy and unhealthy food and food preference is upheld.

5.3 Conclusions

According to the findings, there is a positive relationship between food story exposure and food preference among kindergarten children in Mvita sub-county, Mombasa. The findings demonstrated that exposure to food stories had a direct positive effect on the food preference among kindergarten children in Mvita sub-county, Mombasa. As demonstrated by the bar graph representation of the T-test analysis across week 1 to week 3.

Based on the second objective, the study found out that utilizing food narratives as an instructional tool positively affects food preferences among kindergarten children. The findings revealed a positive and strong connection between the feasibility of utilizing positive food narratives and food preferences among kindergarten children in Mvita sub-county, Mombasa as shown by the difference in the data scrutinized from the pre- story week (week 1) which had no intervention through to week 2 and 3 after the introduction of the food narratives.

Lastly, the findings did not depict any clear or positive relationship between the frequency of consumption of healthy and unhealthy foods and food preference among kindergarten children in Mvita sub-county, Mombasa.

5.4 Recommendations

The empirical evidence gleaned from the study underscores a notable affirmative correlation existing between food narratives and the predilections governing food choices. The findings underscore the constructive influence of food stories, consistently indicating their propensity to exert a beneficial sway on culinary preferences. The outcomes notably illustrate that food narratives bear a direct and encouraging impact on the favored food choices embraced by the kindergarten cohort within Mvita Sub-County. This correlation is substantiated by the discernible patterns observed spanning week one through week three of the study's trajectory.

5.4.1 Recommendations for Educators

Kindergartens are encouraged to seamlessly integrate the captivating realm of food stories within their educational framework. This can be realized through the harmonious amalgamation of food narratives and engaging storytelling exercises, cleverly woven into the kindergarten curriculum. An effective strategy entails the utilization of age-appropriate literature, fostering a connection with children's cognitive capacities, thereby facilitating a more receptive engagement with the narratives. Storytelling sessions complemented by interactive undertakings can be adroitly employed to captivate young minds, fostering an environment conducive to the cultivation of health-conscious dietary inclinations.

To further enhance the efficacy of this integration, educators are advised to forge a tangible nexus between the narratives and the palpable realities that constitute children's lives. A pragmatic approach entails aligning the food narratives with real-world experiences, thereby

forging connections that resonate on a personal level. Integrating excursions to farms, farmers' markets, or events centered around culinary endeavors augments this approach. Such immersive outings facilitate the materialization of a bridge between the narratives and the very sustenance that children encounter in their quotidian existence.

Moreover, educators can greatly influence the establishment of healthful dietary proclivities by embodying the principles they seek to inculcate. Employing role modeling techniques, instructors can visibly display their proclivity for nutritious victuals, thus articulating a tangible embodiment of these values. This practice extends to meals and snack times, where educators can convey genuine enthusiasm for nutrient-rich offerings, effectively acting as a beacon that guides children toward adopting analogous choices. This pedagogical strategy is founded on the recognition that children often look up to authoritative figures as exemplars to emulate.

5.4.2 Recommendations for Parents

Parents are encouraged to incorporate a literary dimension into their children's dietary education by selecting literature that orbits around the theme of food and nutrition. When engaged in storytelling moments with their children, parents can opt for books that delve into the realm of sustenance and nourishment. This practice offers an opportune platform to foster conversations that revolve around salubrious eating habits. Parents can stimulate discussions encompassing diverse subjects, including the merits of well-rounded nourishment, the manifold food groups, and the significance of upholding a diet that strikes a harmonious equilibrium.

Fostering a collaborative approach, parents can orchestrate instances where meal planning and grocery procurement become shared endeavors. This collaborative activity serves a dual purpose: involving children in these decision-making processes and utilizing the experience as a means to emphasize the virtues of opting for fresh produce, encompassing fruits, vegetables, and whole grains. This interactive dynamic not only imparts practical skills but also leverages the moment to imbue children with insights accrued from their engagement with food narratives.

In cultivating culinary exploration, it is imperative to motivate children to step beyond their culinary comfort zones and embrace new comestibles, thereby acquainting themselves with an array of flavors and textures. An effective mechanism entails employing food stories as an incipient point of reference for acquainting youngsters with novel foods. These narratives can serve as a gateway to facilitate the introduction of previously unexplored nourishment,

subsequently offering a propitious opportunity to delve into discussions that highlight the inherent merits of these novel victuals.

This approach, rooted in the principles of experiential learning, encapsulates a holistic strategy to kindle the curiosity of children about nutrition, thereby fostering a proclivity for diverse and healthful culinary choices.

5.4.3 Recommendations for Policymakers

To fortify the foundation of nutritional awareness among young children, policymakers possess the prerogative to extend substantive backing to nutrition education initiatives. This endorsement can manifest through the allocation of resources, along with the provision of ample financial support, all dedicated to bolstering nutrition education programs that accentuate the pivotal role of food narratives in molding health-conscious culinary inclinations within the youth demographic.

In this pursuit, policymakers ought to undertake the establishment of comprehensive directives geared towards educators and parents. These guidelines would proffer discerning criteria for the curation of pertinent food-centric narratives that align harmoniously with the tenets of healthful consumption. A judicious approach necessitates the cultivation of symbiotic associations with experts in both child nutrition and literature. This collaborative dynamic would be instrumental in steering the creation of guidelines that are firmly rooted in empirical evidence, thereby contributing to the development of robust and evidence-driven directives.

Moreover, policymakers have the potential to forge meaningful partnerships with stakeholders within the food industry. Such engagements hold the prospect of catalyzing responsible advertising and promotional practices that emphasize the promotion of nourishing fare to the youthful demographic. This also extends to the prospect of orchestrating collaborations aimed at formulating and disseminating food stories that coalesce seamlessly with messages of healthful dietary choices.

Through the strategic implementation of these recommended actions, educators, parents, and policymakers collectively harness the transformative potential encapsulated within food narratives. This concerted effort resonates as a multifaceted strategy that effectively cultivates a proclivity for health-centric culinary preferences among young children. The ripple effects of

these efforts have the potential to cascade throughout a lifetime, instilling the enduring habit of embracing nutritious sustenance.

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APPENDIX I: EXPERIMENTAL MATERIALS -STORY I AND II FOR THE CHILDREN

STORY / TEST GROUP A

How Five Dishes Saved the City of Sparkling Colors

Let me tell you a story about a sister and a brother. They are called Asha and Omari and they are about as old as you are. And you know what? They were born on the same day which makes them what? Twins, that's right. Together with their mother father and grandmother, they live in a big city called the City of Sparkling Colors. Have you ever heard of the City of Sparkling Colors? It lies between three big mountains and a sea. From each mountain, a river departs and runs through the City of Sparkling Colors from where it flows into the sea. In the midday sun, the three rivers glisten and sparkle and the colorful houses are mirrored in their waters. Blue houses, red houses, yellow houses, you can see all of them reflected in the rivers. That is why Asha's and Omari's city is called the City of Sparkling Colors.

Today is a big day for Asha and Omari. They wake up very early. It's so early, it's still dark outside! Even their parents and grandma are still asleep. They have to be very quiet not to wake anybody up, but they cannot help themselves but jump up and down on their beds because they are so excited about this big day. Can you guess what day it is?

It is their first day of school!

Asha and Omari are helping each other put on their new uniforms. It is very hard to put the buttons of their shirt on one side into the matching buttonholes on the other side, but after three times they get it right! They sit down next to their school bags and check if they have everything. A pencil, a pen, an eraser, a notebook. It's all there!

When the sun rises, Grandma finally gets up. Asha and Omari are already sitting at the table waiting for her to prepare breakfast. Grandma opens the cupboard to grab a pot. "Where did all the pots go?" She exclaims. She opens another cupboard. "And where did all the food go?" She

looks around and sees no more tables and chairs. “Where did the furniture go and why is the floor grey?” Asha and Omari are still sitting on their chairs and still have their forearms resting on the table, but they, too, cannot see the chairs and the table. They feel the table and their weight is supported by the chairs, but they don’t see the table and the chairs. They also cannot see the pots or the food. The entire apartment has turned grey. “Grandma, what time is it?” Asha asks. And Omari adds “We cannot be late for school.” Grandma looks at the room clock, but it has turned into just a grey circle, and she cannot read the time without seeing the clock hands or the clock numbers. “Grab your school bags and let’s just go,” Grandma says. Luckily Asha and Omari knew exactly that they had put their school bags next to the door. But they are grey as well and blurred with the grey wall and the grey floor. They pat down the floor next to the door with their hands. They feel mommy’s shoes and daddy’s shoes. They feel grandma’s cane and right next to it, they feel their school bags!

Even before they get out onto the street, they already hear cars and trucks honking, people yelling and a few sirens howling. All the cars have turned grey, too! The street signs have turned grey and even the red, yellow, and green of the traffic light is just grey, grey, and grey light! “Grandma, how can we find the school bus?” Omari asks. “Grandma, why has the city turned all grey?” Asha asks. Grandma looks around the all-grey street, grey houses, grey cars, and grey sky. She had never seen anything like that happen before in the city of the Sparkling Colors. “Grandma, how will we make it to school?” asks Omari. “Grandma, I’m hungry,” says Asha. Just then Omari’s stomach rumbles in agreement. They still haven’t eaten breakfast after all.

“How about a carrot?” Asha and Omari turn around. Who said that? Behind them stands a street vendor holding out two bright orange carrots. The carrots taste sweet and refreshing, they are comforting, and Asha and Omari feel a little better. “Do you know why the city has turned all grey?” Omari asks the street vendor. The vendor takes a long look at them as if he were deciding whether he could trust the twins with a secret. Finally, he says. “Do you see the big mountain over there? On this big mountain lives a powerful painter, who paints the trees green and brown, the flowers red and yellow, the rivers blue, the pot with which your grandma cooks silver, and the table at which you sit for breakfast white. Usually, the painter is full of energy and goes out every day to paint the City of Sparkling Colors in all its beautiful colors. But sometimes the painter eats junk food which makes his energy drop. He feels heavy and tired. He can barely hold

the paintbrush in his hand, and he can no longer walk to all the places to paint the rivers and trees and school buses. That's why when the painter eats junk food all things fade into grey."

INTERACTIVE PART I

-The teacher asks the children which junk food/unhealthy food has possibly caused the painter to get weak

STORY CONTINUES

Asha and Omari wonder: When will the painter get better? And will he paint the school bus, so they can find it and get to school? The street vendor seems to have read their mind. He continues telling his story. "Every time the painter eats junk food and the City of Sparkling Colors fades into grey, a sister and a brother, just like you two, receive the magic powers to make the painter healthy and strong again. Then he can paint the world in all its colors, again. You two have found my vegetable stall. Therefore, it is you who hold the magic powers to save the City of Sparkling Colors." Asha and Omari are surprised to hear that they can help turn the City of Sparkling Colors back colorful again. "But what should we do?" they ask the street vendor. "My family" the vendor explains, "has been growing magic vegetables for many generations and you have the power to cook five different vegetable dishes for five consecutive days and to bring them to the painter's house on the mountain." "Five different vegetable dishes?" Asha and Omari exclaim. "But what exactly should we put inside?"

INTERACTIVE PART II

The teacher asks the children in the group (participants) which five different vegetable dishes they could make

Together they brainstorm and write down five recipes/ingredient lists

E.g.

Dish #1 Carrot Soup

Ingredients: carrots, beans, garlic

More possible actions:

Teacher asks: How do good healthy snacks taste and why do they taste better than unhealthy snacks? (They are making you stronger and it can be sensed in your stomach, etc.)

Each child draws the recipe/the vegetables

STORY CONTINUES

Now, thanks to you, Asha and Omari have a list of five vegetable dishes to make the painter strong again. They understand that they must fulfill this task before they can attend school. Nobody will be able to attend school before the painter gets back to painting the City of Sparkling Colors.

The first thing the next morning they return to the street vendor, whom they recognize by the red tomatoes, orange carrots, and green lettuce glowing like traffic lights in the grey city. They ask for the ingredients for Dish #1, which are:

//The participants (kindergarten children) name the ingredients of DISH #1 which they have possibly already drawn on the blackboard or into their notebooks during the INTERACTIVE PART II”//

They carry the ingredients back home where Grandma helps them find the grey pots and turn on the stove. They cut the vegetables and stir them in the big pot. It’s sizzling, bubbling, and steaming, and it smells delicious. They pack up the pot and begin to walk toward the mountain. It’s a hot day and it’s difficult to stay on the path because even the mountain, rocks, and trees have turned grey. Asha and Omari have already climbed half the mountain when Omari suddenly stumbles over a tree root and falls to the ground. Asha tries to help him up again, but she has also become so tired from walking that she sinks as well. She takes the chocolate bar she brought with her and offers it to Omari. Eagerly, he takes a bite from the sweet and sticky bar, which has begun to melt in the heat. The chocolate bar tastes foul and pierces his teeth, the sugar rushes to his head and his head begins to hurt. He lies down flat on his back, and he says to his sister “Asha, my teeth hurt, my head hurts, my legs are tired, we can barely see the path. How can we make it to the painter’s house on top of the mountain with the heavy soup pot we are carrying? I’m afraid we won’t make it. And if we don’t make it to the top of the mountain, how will we turn the city colorful again if the painter doesn’t gain back his energy to paint? How will we get to school?” Asha feels tired and weak, too. She doesn’t want to eat the rest of the chocolate bar

after seeing what happened to her brother. “I have an idea! Let’s eat some of the magical soup!” she exclaims. She takes the ladle and offers her brother a big scoop of the soup. Oh, how delicious it tastes! “My headache is gone!” Omari exclaims. “My teeth ache is gone! My legs feel no longer tired! Asha, eat some of this soup, it truly makes you strong!” Asha eats some of the soup and like her brother, she stands up and looks up the mountain The way no longer seems long, but short.

Not long after, they arrive at the painter’s house. The house has almost faded to grey, too. Asha and Omari knock at the door and when nobody answers, they open the door and find the painter lying in his bed. “Oh, children, have you been sent by the street vendor?” he asks them as if he is awaiting their visit. “I have made a huge mistake and eaten junk food again, greasy and sugary, sucking the energy right out of my arms and legs. I cannot walk to the city. I cannot carry the paint and lift the brush. Oh, how terrible I feel!” Asha and Omari hurry to give him to eat from Dish #1. Already after a few spoons, his face relaxes, and he smiles at Asha and Omari. “Thank you, children, for bringing me Dish #1. I already feel energy returning into my body.” The painter is still too weak to get up, but Asha and Omari promise him to return the next day with Dish #2.

On day 2 Asha and Omari return to the street vendor to get the ingredients for Dish #2 which are: //The participants (kindergarten children) name the ingredients of DISH #2 which they have possibly already drawn on the blackboard or into their notebooks during the INTERACTIVE PART II”//

They cook Dish #2 with their grandma again and return to the painter’s house. This time, the dish gives the painter so much energy that he sits up on his bed and stretches his wrists as if to check if he can still move his hands well enough to paint.

On day 3 Asha and Omari return to the street vendor to get the ingredients for Dish #3 which are: //The participants (kindergarten children) name the ingredients of DISH #3 which they have possibly already drawn on the blackboard or into their notebooks during the INTERACTIVE PART II”//

This time when they return to the painter, the dish gives the painter so much energy that he stands up and lifts a paintbrush as if he were practicing painting the air.

On day 4 Asha and Omari return to the street vendor to get the ingredients for Dish #4 which are:

//The participants (kindergarten children) name the ingredients of DISH #4 which they have possibly already drawn on the blackboard or into their notebooks during the INTERACTIVE PART II”//

This time when they return to the painter, he is standing by the door to greet Asha and Omari. Dish #4 gives the painter so much energy that he dips his brush in a pot of paint, picks a grey flower from outside his house, and paints it purple. “I’m almost strong enough again to walk into the City of Sparkling Colors and paint your school bus,” he tells Asha and Omari. Hearing this, they can’t wait for the fifth and final day to bring him Dish #5.

Finally, on day 5 Asha and Omari return to the street vendor to get the ingredients for Dish #5 which are:

//The par, participants (kindergarten children) name the ingredients of DISH #5 which they have possibly already drawn on the blackboard or into their notebooks during the INTERACTIVE PART II”//

When they bring dish #5 to the painter, they see his house in all possible colors glowing from the distance. The painter has painted his house overnight! The rest of the way Asha and Omari run up the mountain. After the painter eats the final spoon of Dish #5 he jumps up and takes all his paint in a bag over his shoulder. “Let’s go to the city and paint your school bus yellow, shall we?”

Together with the painter, Asha and Omari return to the City of Sparkling Colors where the street vendor and grandma are welcoming them. The painter finds the grey school bus and paints it in a beautiful yellow. And you know what? He adds a big purple flower onto the bus to thank Asha Omari, and every one of you for coming up with these five powerful dishes to make him strong again!

With the painter having energy again, the City of Sparkling Colors returns to being colorful again. But before Asha and Omari step into the shiny yellow school bus with the purple flower they say goodbye to the painter and promise to visit him from now on every month to bring him

a pot of magical soup. Asha and Omari wave goodbye as they drive off to their new school. Finally, they can celebrate their first day of school together with all the other children.

THE END

STORY / TEST GROUP B

How Five Buckets of Paint Saved the City of Sparkling Colors

Let me tell you a story about a sister and a brother. They are called Asha and Omari and they are about as old as you are. And you know what? They were born on the same day which makes them what? Twins, that's right. Together with their mother father and grandmother, they live in a big city called the City of Sparkling Colors. Have you ever heard of the City of Sparkling Colors? It lies between three big mountains and a sea. From each mountain, a river departs and runs through the City of Sparkling Colors from where it flows into the sea. In the midday sun, the three rivers glisten and sparkle and the colorful houses are mirrored in their waters. Blue houses, red houses, yellow houses, you can see all of them reflected in the rivers. That is why Asha's and Omari's city is called the City of Sparkling Colors.

Today is a big day for Asha and Omari. They wake up very early. It's so early, it's still dark outside! Even their parents and grandma are still asleep. They have to be very quiet not to wake anybody up, but they cannot help themselves but jump up and down on their beds because they are so excited about this big day. Can you guess what day it is?

It is their first day of school!

Asha and Omari are helping each other put on their new uniforms. It is very hard to put the buttons of their shirt on one side into the matching buttonholes on the other side, but after three times they get it right! They sit down next to their school bags and check if they have everything. A pencil, a pen, an eraser, a notebook. It's all there!

When the sun rises, Grandma finally gets up. Asha and Omari are already sitting at the table waiting for her to prepare breakfast. Grandma opens the cupboard to grab a pot. "Where did all the pots go?" She exclaims. She opens another cupboard. "And where did all the food go?" She looks around and sees no more tables and chairs. "Where did the furniture go and why is the

floor grey?” Asha and Omari are still sitting on their chairs and still have their forearms resting on the table, but they, too, cannot see the chairs and the table. They feel the table and their weight is supported by the chairs, but they don’t see the table and the chairs. They also cannot see the pots or the food. The entire apartment has turned grey. “Grandma, what time is it?” Asha asks. And Omari adds “We cannot be late for school.” Grandma looks at the room clock, but it has turned into just a grey circle, and she cannot read the time without seeing the clock hands or the clock numbers. “Grab your school bags and let’s just go,” Grandma says. Luckily Asha and Omari knew exactly that they had put their school bags next to the door. But they are grey as well and blurred with the grey wall and the grey floor. They pat down the floor next to the door with their hands. They feel mommy’s shoes and daddy’s shoes. They feel grandma’s cane and right next to it, they feel their school bags!

Even before they get out onto the street, they already hear cars and trucks honking, people yelling and a few sirens howling. All the cars have turned grey, too! The street signs have turned grey and even the red, yellow, and green of the traffic light is just grey, grey, and grey light! “Grandma, how can we find the school bus?” Omari asks. “Grandma, why has the city turned all grey?” Asha asks. Grandma looks around the all-grey street, grey houses, grey cars, and grey sky. She had never seen anything like that happen before in the City of the Sparkling Colors. “Grandma, how will we make it to school?” asks Omari.

“Do you know what color your school bus is?” Asha and Omari turn around. Who said that? Behind them stands a street vendor holding out a bright yellow bucket of paint. “Do you know why the city has turned all grey?” Omari asks the street vendor. The vendor takes a long look at them as if he were deciding whether he could trust the twins with a secret. Finally, he says. “Do you see the big mountain over there? On this big mountain lives a powerful painter, who paints the trees green and brown, the flowers red and yellow, the rivers blue, the pot with which your grandma cooks silver, and the table at which you sit for breakfast white. Usually, the painter has a storage full of fresh paint and goes out every day to paint the City of Sparkling Colors in all its beautiful colors. But sometimes the paint goes bad. It dries up and gets all crumbly. He can no longer use it to paint the rivers and trees and school buses. That’s why when all things fade into grey.”

INTERACTIVE PART I

The teacher asks the children: “Why do you think did the paint go bad?”

STORY CONTINUES

Asha and Omari wonder: How will the painter get fresh paint? And will he paint the school bus, so they can find it and get to school? The street vendor seems to have read their mind. He continues telling his story. “Every time the paint goes bad and the City of Sparkling Colors fades into grey, a sister and a brother, just like you two, receive the magic powers to help the painter to paint the world in all its colors, again. You two have found my paint stall. Therefore, it is you who hold the magic powers to save the City of Sparkling Colors.” Asha and Omari are surprised to hear that they can help turn the City of Sparkling Colors back colorful again. “But what should we do?” they ask the street vendor. “My family” the vendor explains, “has been making magic paint for the painter for many generations and you have the power to choose five colors of paint and to carry them for five consecutive days to the painter’s house on the mountain.” “Five different colors of paint?” Asha and Omari exclaim.

INTERACTIVE PART II

The teacher asks the children in the group (participants) which five different colors of paint they want to choose

Together they brainstorm and write down five colors and things they know in these color

E.g.

Color #1 Blue

Things they know in this color: river, sea, sky, pants, books, etc.

More possible actions:

The children draw or paint e.g., various blue objects they can think of

STORY CONTINUES

Now, thanks to you, Asha and Omari have a list of five colors of paint to bring to the painter. They understand that they must fulfill this task before they can attend school. Nobody will be able to attend school before the painter gets back to painting the City of Sparkling Colors.

First thing the next morning they return to the street vendor, whom they recognize by the red, orange, and green buckets of paint glowing like traffic lights in the grey city. They ask for a bucket of paint in color#1 which is

//The participants (kindergarten children) name COLOR #1 and all the things they have found that exist in this color//

Asha and Omari pack up the bucket of paint and begin to walk toward the mountain. It's a hot day and it's difficult to stay on the path because even the mountain, rocks, and trees have turned grey. Asha and Omari have already climbed half the mountain when Omari suddenly stumbles over a tree root and falls to the ground. Asha tries to help him up again, but she has also become so tired from walking that she sinks as well. She looks up at the grey sky and sees two grey birds flying across. "Omari," she says "look how grey the sky is. Look how grey the birds are. Wouldn't it be wonderful to see a blue sky again, green grass and colorful birds? Let's rest for a while and then continue our way. We are almost there." "You are right," says Omari, even though he is out of breath and tired. "Let's turn the sky blue again and our school bus yellow, so we can go to school." They rest for a while and catch their breath and then, they stand up and look up the mountain and the way no longer seems long, but short.

Not long after, they arrive at the painter's house. The house has almost faded to grey, too. Asha and Omari knock at the door and when nobody answers, they open the door and find the painter lying in his bed. "Oh, children, have you been sent by the street vendor?" he asks them as if he is awaiting their visit. "My paint has gone bad! I can no longer paint your city!" Asha and Omari hurry to give him Color #1. He smiles at Asha and Omari. "Thank you, children, for bringing me Color #1. I already can think of so many things I will paint in this color." Asha and Omari promise him to return the next day with Color #2.

On day 2 Asha and Omari return to the street vendor to get the bucket of paint in color #2 which is:

//The participants (kindergarten children) name COLOR #2 and all the things they have found that exist in this color//

Asha and Omari return to the painter's house. This time, the delivery gets the painter so excited that he sits up on his bed and stretches his wrists as if to check if he can still move his hands well enough to paint.

On day 3 Asha and Omari return to the street vendor to get the bucket of paint in color#3 which is:

//The participants (kindergarten children) name COLOR #3 and all the things they have found that exist in this color//

This time when they return to the painter, the third bucket of paint makes the painter so happy that he stands up and lifts a paintbrush as if he was practicing painting the air.

On day 4 Asha and Omari return to the street vendor to get the bucket of paint in color #4 which is:

//The participants (kindergarten children) name COLOR #4 and all the things they have found that exist in this color//

This time when they return to the painter, he is standing by the door to greet Asha and Omari. He gets so excited about the new color that he dips his brush in the bucket, picks a grey flower from outside his house, and paints it in the new color. "Tomorrow, when you come with the fifth bucket of paint, I will have enough colors again to walk into the City of Sparkling Colors and paint your school bus," he tells Asha and Omari. Hearing this, they can't wait for the fifth and final day to bring him Color #5.

Finally, on day 5 Asha and Omari return to the street vendor to get the bucket of paint in color #5 which is:

//The participants (kindergarten children) name COLOR #5 and all the things they have found that exist in this color//

When they bring color #5 to the painter, they see his house in the four colors from the previous days glowing from the distance. The painter has painted his house overnight! The rest of the way Asha and Omari run up the mountain. He grabs the fifth bucket of paint from Asha and Omari's hands and throws all the other paints in a bag. "Let's go to the city and paint your school bus yellow, shall we?"

Together with the painter, Asha and Omari return to the City of Sparkling Colors where the street vendor and grandma are welcoming them. The painter finds the grey school bus and paints it in a beautiful yellow. And you know what? He adds a big colorful flower onto the bus to thank Asha Omari, and every one of you for coming up with these five beautiful colors to make the City of Sparkling Colors return to being colorful again!

But before Asha and Omari step into the shiny yellow school bus with the colorful flower they say goodbye to the painter and promise to visit him from now on every month to bring him a fresh bucket of paint. Asha and Omari wave goodbye as they drive off to their new school. Finally, they can celebrate their first day of school together with all the other children.

THE END

APENDIX V: NACOSTI LICENSE



REPUBLIC OF KENYA



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RESEARCH LICENSE



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