



Caregivers' Feeding Practices of Malnourished Children

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Abstract

Malnutrition continues to be the underlying factor for many diseases in both adult and children, and it contributes greatly to the disability-adjusted life years worldwide. Parents, teachers, community leaders, and health practitioners have increasing concern in recent years about the range of negative outcomes surrounding eating habits and weight of children. The objective of the study sought to determine the caregivers feeding practices of malnourished children according to exposure to food and responses to feeding behavior. Further, it sought to determine if there is a significant difference in the caregivers feeding practices of malnourished children according to Parent related variables: socio-economic status, educational background, number of children, caregiver category and ethnicity; and child related variable; weight category and rank of child.

The study made use of the descriptive survey design. The study was conducted in 28 Barangays of the city of Baguio. The total number of caregivers of malnourished children included in the study was 280. A 20 item questionnaire was used in the study. Collected data was then organized and tabulated. Frequency, percentages and chi square were utilized in the study. The study revealed that caregivers give vitamins and noodles to child (191) followed by allowing to eat snacks when watching TV (187) and inclusion of vegetable in the meal (186). With regards to responses to feeding, caregivers give special privileges to child (204) and trying him to eat food when food is not consumed (203) are practiced. The study revealed that there is a significant difference in the caregivers feeding practices on malnourished children along exposure to food according to parent variables, socio-economic status, educational attainment, number of children, type of caregiver and ethnicity. Furthermore, it revealed that there is a significant difference in the caregivers feeding along responses to feeding according to parent variable: socio economic status, number of children, type of caregiver and educational attainment. Moreover, it revealed that there is a significant difference in the caregivers feeding practices of malnourished children along responses to feeding according to parent variable: weight category and rank of the child. Meanwhile it also revealed that there is a significant difference in the caregivers feeding practices of malnourished child along responses to feeding according to weight category. The study concludes that caregivers feeding practices of malnourished children vary along exposure to food and responses to feeding. Furthermore, the study concludes that parent variables, socio-economic status, number of children, type of caregiver and ethnicity affects the caregivers feeding practices of malnourished children. On the other hand, child related variable, weight category, affects the caregivers' feeding practices.

The researcher recommends that infants or child feeding behaviors be studied in the future to present a more detailed picture of feeding practices among malnourished children. The study may be done in rural setting and later compare it with the urban setting to clearly depict the possible factors that might affect feeding practices. Programs can be developed such as reinforcing interventions through proper information about proper nutrition and information wherein the caregivers can easily understand and reinforce to their child in such a way that both parties, the health worker and

caregiver, would benefit.

Keywords: Caregivers; Malnourished Children; Feeding Practices

Abbreviations: MUAC: Mid Upper Arm Circumference; BMI: Body Mass Index; SES: Socio-Economic Status; MUAC: Mid Upper Arm Circumference; RA: Research Assistants; CHNS: China Health Nutrition Survey; FITS: Feeding Infants and Toddler Study; RDA: Required Daily Requirement

Introduction

Worldwide, there is a growing global burden of malnutrition among the under five children where 178 million are stunted, 112 million are underweight, and 55 million are wasted [1]. According to the Global hunger index, Southeast Asia has the highest child malnutrition rate of world's regions contributing to about 5.6 million deaths every year.

In the Philippines, 27.6% and 26.7% are underweight among the 0-5 and 6-10 years of age group respectively while only 1.3% are overweight [2]. Although 1998-2003 data shows an increase in over nutrition, the prevalence of under nutrition seems unchanging. In the cordilleras including Baguio City, the prevalence rate of malnutrition for both under nutrition and over nutrition among five years old and below is 20 percent or at least 20 out of 100 children and in the 2012 Operation Timbang results revealed that the population of the combined obese, underweight and severely underweight is 832 in the different health districts of Baguio City [3-5].

Malnutrition is the condition that results from taking an unbalanced diet in which certain nutrients are lacking or in excess. A number of different nutrition disorders may arise, depending on which nutrients are under or overabundant in the diet. Malnutrition is technically a category of diseases that includes: under nutrition, and over nutrition among others. The life-long impact of malnutrition includes poor school performance, reduced productivity, and impaired intellectual and social development. Malnutrition continues to be a world problem [6] and the underlying factor for many diseases in children contributing greatly to the disability-adjusted life years worldwide [7]. Poor nutrition severely hinders personal, social and national development. Malnutrition is more common in developing countries in the form of calorie and or protein deficiency. In wealthier nations it is more likely to be caused by unhealthy diets with excess fats, and refined carbohydrates. Over and under nutrition

can be established by using measures such as height for age, weight for age, the mid upper arm circumference (MUAC), the body mass index (BMI) and weight –height ratios [8]. Once the malnutrition status of children is established, interventions are undertaken. An interview of parents or caregivers may also be needed to identify the eating habits or feeding practices that may have led to or contributed to the child's nutrition status. Only then can the problem be dealt with effectively. Parents, teachers, community leaders, and health practitioners have increasing concern in recent years about the range of negative outcomes surrounding eating habits and weights of children [9]. This includes underweight and overweight, negative body image and maladaptive eating and dieting behaviors as documented [10]. There is now greater awareness that dietary patterns and lifestyle are changing dramatically. Thus the caregiver's role is critical to the development of taste preferences, eating habits, and weight maintenance.

Parental feeding starts as complementary feeding, the process starting when breast milk or infant formula alone is no longer sufficient to meet the nutritional requirements of an infant, starts and when other foods and liquids along with breast milk or a breast milk substitute are needed. The role of complementary feeding is essential to meet the dietary requirement of the child to stay healthy. Early initiation of the complementary food and poor feeding practices might change the feeding practices of caregivers as observed. Parenting styles which includes Feeding practices are analyzed as background that moderates malnutrition. The parental style of the act of allowing considerable child self – regulation allows avoidance of confrontation with their children [11]. For example caregivers who are both demanding and responsive give and monitor clear standards for their children's conduct. This suggests that caregivers want their children to be assertive as well as socially responsible, self- regulated and cooperative. The extent to which parents intentionally foster individuality, self-regulation and self- assertion by being attuned, supportive, acquiescent to children's special needs and demands [11] and high parental demands with emotional responsiveness and recognition of child autonomy [12], is critically used to benefit not only the children but also the caregivers. When the parental styles are applied to feeding practices, they are able to balance the demand with their individuality and be able to balance their need for individuation and autonomy I terms of nutrition. The

parent or caregivers' role is critical because infants and young children are dependent on them to provide food [13] with nutritive value. Feeding practices are caregiver behaviors that augment nutritive deficiencies that can develop due to a child faulty eating habits? These practices may however have either positive or negative effect on a child self-regulation of energy intake and satiety. Parental restrictive and controlling feeding practice like limiting of sweets and serving specific food or snacks for instance has been associated with weight gain while demanding-authoritarian-nonresponsive parenting feeding styles are more associated with the development of underweight children [1,14]. Research suggests that feeding practices play a critical role in the development of children's taste, eating habits, nutrition and eventually their weight status [15]. Early feeding practices include the determination of infant's exposure to food and the responses to the infant feeding behavior. These feeding practices strongly influence children's eating pattern [16]. Poor feeding methods include hygiene, and child care practices such as unsupervised feeding, lack of interaction between caregiver and child, unhygienic food preparation and storage and unclean feeding utensils and Bottle-feeding, which could probably lead to the incidence of malnutrition. Exposure to food is defined as caregivers' feeding practices and how they expose children to the different kinds of food including food and portion sizes that are offered, the frequency of eating occasion and the social context in which eating takes place. Research nowadays reveals that feeding practices are important in the light of epidemiological data as they influence the quality and quantity of foods consumed by children. Infant feeding practices on exposure to food constitute major components of child caring apart from socio-cultural, economic and demographic factors. Unfortunately this feeding practice constitutes one of the neglected determinants of young child malnutrition in spite of their important role in growth pattern [13].

A study related to food exposure revealed that preschooler food consumption of grains, fruits and vegetables increased from 1977 to 1998, but added sugar, fruit juice intake and pizza and desert [17] also increase as caregivers exposed their children to variety of food [18]. Though it might be deemed as unhealthy, some parent might still practice these styles or method. On the other hand, Responses to Feeding behavior is defined as the manner caregivers react when the child consumes or rejects food they offer. This enhances healthy eating habit due to positive eating experiences and exposure to a variety of foods until the end of the first year of life. Feeding a toddler is more difficult because of issues of independence and playfulness. An unpleasurable feeding

experience could possibly lead to food dislike or rejection [19]. And the use of structural choice with meal choices works well for toddlers. For instance the caregiver might ask questions about the child's food preference and giving them alternatives. This would make the child feel independent and therefore encourages the child to eat. Having children taking their own portions of food from a serving dish further helps develop autonomy and interest in food. The "JUST TASTE" rule is also helpful in helping the child learn to love food. Children with tactile defensiveness generally have poor appetite [20]. Conversely attempting to force a picky child could backfire. And an authoritative feeding style using force has a negative effect on food intake [21]. Furthermore, the "CLEAN PLATE" rule is found to have a negative impact to food consumption in children. Therefore if the child appears to be a picky eater, offering of the food that they like help the child appreciate food those that they dislike.

According to Donna Spruijt-Metz (2007), ethnicity, sex, and socio economic status do not contribute significantly to variance in caring of malnourished children but the feeding practices and feeding styles do. Furthermore, studies done by Michelle [22] revealed that Parental restriction was a significant predictor of child adiposity while parental pressure to eat had an inverse relationship with child adiposity. The caregivers' role in nutrition cannot be over emphasized, Nutrition being a determinant in the overall growth and development of children who are future of any nation, thus, the constitution protects the rights of children and acknowledges their role in nation building. Together with the department of health has initiated programs like the garantisadong pambata, child 21 program, and Kinetic-Kid program ensures proper nutrition among children. Despite the efforts of the private and public sector to curb malnutrition, the incidences of this problem persist. The findings of the Department of Health are alarming due to the increasing prevalence of malnutrition. The monthly nutrition monitoring done by nutritionist still revealed a number of malnourished in Baguio City. The researcher wants to validate if these feeding practices are true to the population. As observed caregivers give more ready to eat foods from fast food restaurant to their children and they allow their children to eat variety of foods, it could be nutritious or not. And there are still a number of cases in the locale that warrant attention. Thus the objective of the study sought to determine the caregivers feeding practices of malnourished children according to exposure to food and responses to feeding behavior. Further, it sought to determine if there is a significant difference in the caregivers feeding practices of malnourished children according to Parent related variables: socio-economic status, educational background, number of children,

caregiver category and ethnicity; and child related variable; weight category and rank of child.

The study made use of Lieninger's Cultural Care theory. The theory underlines the meaning and importance of culture in explaining an individual health and caring behavior to which the ultimate goal is to provide cultural congruent nursing care practice. The author posits that if one fully discovers care meaning, patterns and process, one can explain and predict health and well-being. The theory assumes that every human culture has its own care knowledge and practices and usually professional care and practices vary transculturally. In relation to the present study, Unmasking feeding practices would help the nurses design a care plan to modify or strengthen practices to curb malnutrition. Caregivers practices which are taken from their own backgrounds to feed the children are assumed to be innate and could manifest in the manner they feed their children. The discovery of caregivers feeding practices could lead to adopt culturally friendly feeding practices to meet the desired weight of the child. The study assumes the notion that clients who experience nursing care that is congruent to their beliefs and practices will be transposed to improvement of the practices and ultimately a change in the children's weight. Correlating to Pender's Health promotion model, the caregivers are affected with different factors relating to child feeding practices. Propositions state that persons engaging in behaviors are influenced by peers, families and healthcare providers to whom they learned to develop characteristics which are affected by external and internal environment that affects their own beliefs, cognition and emotions. This results to greater adherence to nursing action resulting to fewer barriers to attain the commitment of a plan to more likely achieve a health promoting behavior and be maintained to time. In the research, the caregivers of the malnourished children play a crucial role, for their learned beliefs and practices about health and nutrition may directly affect their action on how to feed the children. A factor could be poor educational background wherein cognition affects action they portray. The theory's applicability in the research which posed some base in relation to the three major areas included is: (1) individual characteristics and experiences, (2) behavior specific cognition that affect behavioral outcomes. These outcomes covers several factors namely personal factors, that is age and gender; perceived barriers to action, poor educational background, low income, category of caregiver, number of children; perceived self-efficacy, i.e. personal capability, rank of the child, and attitudes. Activity related affect interpersonal influences such as ethnicity, situational influence; i.e. poverty and weight category; and immediate competing demands and preferences. Every

caregiver has various characteristics, experiences and several concerns which could probably affect feeding practices that would hinder him/her to give the best behavior to the child for them to achieve a healthy mind.

In relation to Albert Bandura's theory, the theory connects that people learn from one another, via observation, imitation, and modeling. The theory has often bridge between behaviorist and cognitive learning theories because it encompasses attention, memory, and motivation. Most human behavior is learned observationally through modeling: from observing others, one forms an idea of how new behaviors are performed, and on later occasions this coded information serves as a guide for action. Social learning theory explains human behavior in terms of continuous reciprocal interaction between cognitive, behavioral, and environmental influences. Correlating to the study, attention includes various factors that increase or decrease the amount of attention paid, including distinctiveness, affective valence, prevalence, complexity, and functional value. One's characteristics like educational attainment, socio-economic status and past experiences could affect attention. Once this attention is retained, the individual remembers what will be attended to. This includes symbolic coding which is reflected to his/her feeding practices. The coding is conceptualized when the adult had experienced a good feeding during their childhood. The reinforcement of this experience is enhanced by their educational attainment which developed the understanding of feeding and socio-economic status that allowed them to practice his feeding based on their resources. Experiences that had been retained are reproduced. The reproduction thus includes educational attainment and the type of caregiver. The self-reproduction of observed images could drive the caregiver to practice his feeding practices. Another tenet of the theory includes motivation, a reason of having a good reason to imitate. This could be triggered by what the individual experienced, observed and learned from various situation, media or institutional learning. This could include the number of children, educational attainment, and socio-economic status, wherein individuals practice their feeding practices based on what they have. Infant feeding practices are influenced by a multitude of factors that can be broadly classified into two categories: internal personal and socio-environmental. These feeding practices provide a framework for understanding how infant feeding choices are reciprocally determined by internal personal and socio-environmental factors. Internal personal factors which influence the decision to feed may include; cognitive/affective (e.g., knowledge, attitudes, beliefs), outcome expectations (e.g., best for baby), self-efficacy (e.g., confidence, previous

experience), biological (e.g., age), or psychosocial (e.g., comfort in feeding). Socio-environmental factors such as institutional factors also affect them in their infant feeding decisions.

The knowledge generated by this research can provide information which can be used as a basis in supporting, modifying and enhancing wrong feeding practices. Knowing the various beliefs and practices of caregivers can assist health care providers who conduct feeding practices seminars so they can develop more responsive materials addressing their needs. Knowledge of the caregivers needs allows for collaboration and coordination to appropriate agencies like the DSWD and the DOH utilizing strategies that can better support change needs. Lastly, this can serve as added literature for researchers who would like to conduct studies on similar topics.

Methodology

The study made use of the descriptive survey design to determine caregiver's feeding practices of malnourished children of Baguio City according to food exposure and responses to feeding behavior. The barangays included are Asin, Loakan Proper, Poliwes, Sta Escolastica, Gabriela Silang, Bakakeng Norte, Dontogan, Ambiong, North Central Aurora Hill, Camp Allen, Cresencia Village, City Camp Central, Ferdinand, Sto Nino, Engineers Hill, Hly Ghost Extension, Holy Ghost Proper, Padre Burgos, Padre Zamora, Trancoville, Lucnab, Outlook Drive, Pacdal, Irisan and Imelda Village. There were 290 respondents taken with the criteria; a resident of Baguio City who is the primary or secondary caregiver of malnourished children aged 12-59 months. The researcher used convenience sampling in attaining the number of respondent. The profile of the respondents is shown below.

| Variable | Frequency | Percentage |
|--------------------------------|-----------|------------|
| Parent Related Variable | | |
| Socio-Economic Status : | | |
| a. Above poverty level | 119 | 42.5 |
| b. Below poverty level | 161 | 57.5 |
| Educational Attainment: | | |
| a. Elementary | 57 | 20.35 |
| b. High School | 124 | 44.29 |
| c. College | 99 | 35.36 |
| Number of Children: | | |
| a. 1-2 | 77 | 27.5 |
| b. 3-4 | 112 | 40.0 |
| c. 5-6 | 91 | 32.5 |
| Caregiver Category: | | |
| a. Primary | 189 | 67.5 |
| b. Secondary | 91 | 32.5 |
| Ethnicity: | | |
| a. Cordilleran | 118 | 42.14 |
| b. Non cordilleran | 162 | 57.86 |
| Child Related Variable | | |
| Rank of Child: | | |
| a. 1 | 23 | 8.21 |
| b. 2 | 54 | 19.29 |
| c. 3 | 73 | 26.07 |
| d. 4 | 39 | 13.93 |
| e. 5 | 66 | 23.57 |
| f. 6 | 25 | 8.93 |
| Weight category: | | |
| a. Obese | 71 | 25.36 |
| b. Underweight | 141 | 50.36 |
| c. Severely underweight | 68 | 24.28 |

Table 1: Profile of the Respondents N=280.

The tool used in the study was adopted from Eizenman [23]. Modifications were made to consider the culture of the locality. The questionnaire is divided into three parts. Part one is a letter to the respondents about the purpose of the research. The second part was the demographic data and the third part is the questionnaire proper with 32 items answerable by yes or no. Twenty items on exposure to food and twelve items on responses to feeding behavior. The modified questionnaire was evaluated by experts and revealed a CVI score of .89. Pretest was done for face validity and to identify the flaws of the questionnaire. The researcher incorporated the comments and suggestions of the respondents to improve the tool. And reliability was computed as 0.02. With the help of the Baguio Health Department, the different Barangay health Workers and Barangay Nutrition Scholars, respondents were identified and located. Consent was taken from each of the respondents before they were given a questionnaire to answer. There were

five research assistants (RA) employed during the data gathering. The RA were oriented, trained and tested for reliability before allowing them to gather data. Once the questionnaire was given to the respondents, they were given 30 minutes to accomplish them. Upon retrieval, each completed questionnaire was checked for completeness. The respondents were thanked before leaving the area.

The collected data were organized, tabulated, and analyzed. The use of frequency, percentages, and chi square was utilized in the study.

Results and Discussion

The results of the study are presented and discussed below. Table 2a reveals caregivers feeding practices of malnourished children according to exposure to food.

| Exposure to food | Yes | | No | |
|--------------------------------------------------------------|-----|--------|-----|-------|
| | f | % | f | % |
| I serve noodles to my child daily | 191 | 68.214 | 89 | 31.79 |
| I give vitamin supplements to my child to increase appetite | 191 | 68.214 | 89 | 31.79 |
| I allow my child to eat nutritious snacks when watching TV | 187 | 66.786 | 93 | 33.21 |
| I allow my child to drink soft drinks (cola) | 187 | 66.786 | 93 | 33.21 |
| I include vegetables in my child's meal | 186 | 66.429 | 94 | 33.57 |
| I keep canned goods in the cabinet | 183 | 65.357 | 97 | 34.64 |
| I let my child eat whatever he/she wants | 181 | 64.643 | 99 | 35.36 |
| I allow my child to taste new foods | 179 | 63.929 | 101 | 36.07 |
| I see to it that fruits are available at the table | 169 | 60.357 | 111 | 39.64 |
| I store processed food (tocino, hotdog) | 168 | 60.000 | 112 | 40.00 |
| I always have egg at home | 163 | 58.214 | 117 | 41.79 |
| I allow my child to eat variety of foods | 147 | 52.500 | 133 | 47.50 |
| I allow my child to eat rice and soup only | 141 | 50.357 | 139 | 49.64 |
| I serve cooked foods from restaurants and canteens. | 135 | 48.214 | 145 | 51.79 |
| I allow my child to eat frequently in fast food restaurants | 114 | 40.714 | 166 | 59.29 |
| I allow my child to eat rice in between meals | 102 | 36.429 | 178 | 63.57 |
| I give my child something sweet to eat before going to sleep | 84 | 30.000 | 196 | 70.00 |
| I serve my child fried foods daily | 84 | 30.000 | 196 | 70.00 |
| I allow my child to eat junk food | 82 | 29.286 | 198 | 70.71 |
| I allow my child to assist in cooking | 76 | 27.143 | 204 | 72.86 |

Table 2a: Caregivers Feeding Practices of Malnourished Children according to Exposure to Food, N= 280.

(Table 2a) reveals that of the top 5 food exposure practices, all are unhealthy except for the fifth which is the inclusion of vegetables in the diet. This means that caregivers practices unhealthy more than healthy practices. Among the unhealthy practices are serving of

noodles, keeping of canned goods, giving cola drinks and storing processed foods. Healthy feeding practices include giving vitamins, inclusion of vegetables and fruits. The table reveals that caregivers gave noodles and at the same time doesn't allow their children to help in preparing the

food. Both of which are bad food exposure because this means that there is no nutritive value being served to the children and caregivers are unable to appreciate the love and caring placed in the preparation of food. Both are reflective of the convenience, although the “NO” highest may also mean that they do not want the child to experience out and burns associated with food preparation and cooking. In addition, Caregivers doesn't allow junk foods and sweets, however they give cola to their children. This could be reflective of the inability of the caregivers to differentiate what are healthy snacks from unhealthy snack. A possible reason is that they would use cola to encourage eating as a reward. Furthermore, most caregivers don't buy foods from restaurants and fast food but they served process foods. The contradictory results could be an indicative of good intention but shortage of time and therefore food preparation is more on the convenience of the caregiver. It could also be explained why children are still malnourished because of poor modeling.

An analysis of the top five choices further revealed that these are food choices that reflect convenient preparation and cooking. Caregivers tend to feed their child according to their convenience and conformity to their schedules. According to some caregivers, they store noodles, process foods and canned goods in their home because they are easily prepared when they are busy in their work. And sometimes they buy cooked foods from the canteen or restaurants because it is cheaper and less time consuming. This analysis is supported by a recent study analyzing the data of China Health Nutrition Survey (CHNS) collected in 1991 and 1997 Liu et Al. [24] which showed that snack consumption and consumption of food prepared outside the home have significantly increased among children This is supported by the study of Shan (2010) that eating food prepared outside of the home is not significantly linked to more intake. It further revealed that the positive association was found between increased snack consumption and foods prepared outside the home and the family income. The findings is in contrast to that of Ramos et al. [25] on feeding practices which revealed that allowing the child to assist and prepare is moderately practiced. Modeling also appeared to be associated with parents and children's internal motivation and to have a role in eating related attitudes. According to Knowles [26], adults are ready to learn things that have immediate relevance to their jobs or personal lives. Their time perspective changes from gathering knowledge for future use to immediate application of knowledge. As such, adult learners become more problem-centered rather than subject-centered. Since care giving is a responsibility, they tend to focus on the problems that the child is showing them and try to

manage them immediately based on what they've learned and what available resources they have. Caregivers tend to use these practices because they conform to the busy lifestyle of the family. Caregivers tend to be more permissive in their feeding practices. This could be due to the caregivers understanding that that giving food during this period would entice them to eat because of the influence of media. This situation could also let the child concentrate eating snacks while watching. The analysis is strengthened by Wang et al. [27] who examined the eating behaviors of the Chinese people, focusing on snacking and cooking methods. It revealed that most urban Chinese gave nutritious snacks during leisure activities to lure children to eat while doing something like playing or watching television. Although classified as unhealthy habit, caregivers used this to motivate their children. The assumption maybe due to role modeling of parents and parents comfort in cooking. Thus this is strengthened by the Wardle [28] findings which indicated that there is a strong association between a parents and their children's food intake in general and unhealthy snacks and food yesterday. A possible reason could be that the caregivers that attended nutrition counseling and seminars had delineated the task of feeding to other individuals. Thus the transition of information could be inadequate. The inadequacy of information that is communicated to other caregivers could be a factor that leads to unhealthy feeding practices. Another reason would be that caregivers' belief that the vitamins would help increase the weight of their children. The availability of vitamins might be misconstrued as meeting the required daily requirement (RDA) of the child when multivitamins are taken religiously without giving additional vitamins and minerals from the raw sources such as fruits and vegetables. This is in congruent to the findings of Barros et al. [29]. That supplemental vitamin when given to underweight persons increases their body weights.

This might be due to the influence of media. The power of media to influence caregivers is very high. The images and the messages in the advertisement encourage the caregivers to follow a coded message, in this case the feeding practice of caregivers. Bandura's theory on Social learning, believes that retention of the message would motivate the caregiver to practice such feeding behavior because it conforms to his or her lifestyle. This might also imply that other factors affect feeding practices. The food environment was generally unhealthy with regards to food availability and family eating patterns. For example caregivers had soft drinks and junk foods are being served to children. Caregivers are practicing their feeding practices because of the caregivers drive in bringing their children to a healthy state. Research nowadays reveals

that child feeding practices are important in light of recent epidemiological data as they influence the quality and quantity of foods consumed by children. Based on the study from FITS (Feeding Infants and Toddler Study), feeding practices in promoting patterns of food intake has a great impact on fuelling the children malnutrition epidemic. It revealed that infants and toddlers are not eating enough fruits and vegetables but instead consumes too many sweetened drinks and too many sweet and salty energy-dense snacks which are introduced too early in their diet. Feeding practices nowadays are more different from the feeding practices before. Parents tend to continue the traditional feeding practices routinely, automatically, and without question, even in the face of dramatic changes in our eating environment [19]. Caregivers also showed that they do healthy feeding practices. This might be due to the massive information drive by health officials to encourage caregivers to serve vegetables to their children. They are taught to do preparations of food with vegetable in such a way that children would like to eat vegetables. This is supported by the research done by Ramos et al. [25] on feeding practices of severely undernourished children that caregivers serve their children vegetables and mix them in soups to encourage eating leafy vegetables.

This might imply that the caregivers are responsive to the food that they want to serve their children. The exposure to different kinds of food would help entice their children to eat and explore different kinds of food. Practical advice

for parents includes how to foster children's preferences for healthy foods and how to promote acceptance of new foods by children. The intervention of the nutrition specialist might be a factor that could lead to such phenomena. The caregivers are able to appreciate the importance and significance of the feeding practices among malnourished children. According to Knowles [30], as a person matures he accumulates a growing reservoir of experience that becomes an increasing resource for learning. With the advent of learned ways on serving food their children, they tend to use this knowledge to prepare food that could encourage their children to eat. The caregivers are able to appreciate the importance and significance of the feeding practices among children. The findings above are congruent with the research of Anzman [31], which stated that parental attempts to help children with lower self-control by restricting their access to favorite snack foods can make the forbidden foods more attractive, thereby exacerbating the problem and since the result revealed that most of the caregivers of malnourished children are using authoritative feeding style, their children have higher probability of getting the risk of getting malnourished. Because the caregivers have the idea of adjusting the feeding practices; and continuous reinforcement of information will allow them to further facilitate their capabilities in the prevention of the risks. Table 2b shows the caregivers' responses to feeding of malnourished children when their food is consumed and did not consume their offered food.

| Response to feeding | Yes | | NO | |
|----------------------------------------------------------------------------|-----|--------|-----|-------|
| | f | % | f | % |
| A. If my Child consumes the food | | | | |
| I give him/her special privileges like watching TV or Playing with friends | 204 | 72.857 | 76 | 27.14 |
| I praise the child for consuming the food served | 182 | 65.000 | 98 | 35.00 |
| I discuss to my child the nutritive value of the foods consumed | 157 | 56.071 | 123 | 43.93 |
| I discuss with my child what to eat and not to eat | 135 | 48.214 | 145 | 51.79 |
| I allow my child to get food that he/she can consume | 133 | 47.500 | 147 | 52.50 |
| I offer sweets as a reward for good behavior | 102 | 36.429 | 178 | 63.57 |
| B. If my child did not consume the food | | | | |
| I try to get him/her to eat anyway | 203 | 72.500 | 77 | 27.50 |
| I give him/ her favorite snack | 188 | 67.143 | 92 | 32.86 |
| I will instruct my child to finish his food before leaving the table | 177 | 63.214 | 103 | 36.79 |
| I remove playing privileges | 173 | 61.786 | 107 | 38.21 |
| I force the spoon in to the mouth to let my child eat | 83 | 29.643 | 197 | 70.36 |

Table 2b: Caregivers' Feeding Practices of Malnourished children according to Responses to Feeding, N= 280.

The table revealed that when the child consumed the food, caregivers practiced unhealthy approaches in response to feeding. Moreover, caregivers also tend to practiced healthy response to feeding. Acceptable

responses include discussion of what the child eats and not to eat and I give him/her favorite snack. The unhealthy responses to feeding when the child consumes the food might be due to caregivers' insensitivity to needs

of the child and the caregivers' emotional support and reinforcement on the child's success. It is believed that no matter how small the food consumed, it could help develop a good and healthy feeding behavior. The caregiver displays confidence in the child's effort and redirects the child in such a way as not to belittle the child's ability to modify his behavior. The finding is in contrast with that of Baumrind [11] on rearing a competent child who revealed that a parent should be sensitive to the views of the child and find compromise to promote a good home and feeding environment. Another possible reason for a high response is the caregivers style in feeding. Caregivers provide support skillfully throughout the lifespan and they interact with the children and acknowledge the validity of their views. The caregivers encourage the children to negotiate the course of action in the task while acknowledging their intention. The caregivers may model their individualism but they have to accept the views of their children. The finding is in contrast with the finding of Darling [32] on parenting style as the context revealed that respecting the autonomy of children with appropriate parental control could give children the opportunity to develop their self-confidence and self-esteem.

The caregivers made use of authoritative feeding style. Caregivers who are both demanding and responsive in monitoring the impact of clear standards for their children's conduct. The study suggests that caregivers want their children to be assertive as well as socially responsible, and self-regulate as well as cooperative. The extent to which parents intentionally foster individuality, self-regulation and self-assertion by being attuned, supportive, acquiescent to children's special needs demands and parental demands are consistent family predictors of competence from early childhood to adolescence [11,33]. Authoritative parenting style that include emotional support, high values appropriate autonomy granting and clear, bidirectional communication is utilized by the majority of the caregivers because it has been made known to help children develop an instrumental proficiency characterized by the pondering of societal and individual needs and responsibilities [34] and the resolution of high expectations and child regulation is necessary. There was a substantial experimental evidence for the influence of parenting practices such as pressure, restriction, modeling, and availability on child eating, the majority of the evidence for the association between parenting and child weight [35]. They want their children to become healthy as they are by influencing the children to eat what the caregivers are eating and what the caregivers give them. It is their responsibility to model to their children proper eating behaviors. Parents can indirectly influence

their children's eating habits by modeling eating behaviors (Brown & Ogden, 2004). Through modeling and parental support, parents can indirectly shape their children's feeding behaviors which may contribute in our efforts to limit malnutrition among children.

This might be due to previous experiences by the caregivers when they were fed during their childhood. A caregivers' experience of an effective feeding behavior to include adaption to a feeding method, encouragement to eat, providing second help, positive relationship between the feeder, and the child and a good feeding situation could mold the child's positive attitude to feeding. The findings support that of Larson et al. (1987) which revealed that the strategies that use behavioral modification have resulted in changes in feeding behaviors and encouragement is essential in the care of the child [15]. It is observed that when a child is ill, he or she refuses to eat. This finding is also congruent to the study of Aboud et al. [36] which stated that approximately 80 percent of mothers reported that their children had difficulties in eating including lack of appetite, and caregivers must overcome their children's lack of interest in food. This include: diversion, following the child with food, force feeding, giving vitamins or going to the doctor, beating, pausing from feeding, threatening harm, increase the selection of food and waiting for the child to open their mouths. Many mothers reported that they decide what food their child eats and how much food is appropriate for them to eat. They also believe that they were in the right position to know how much food their children need to consume. Furthermore, the possible reason for the healthy feeding response to feeding could be that caregivers had attended seminars done by health agencies particularly on nutrition to include food preparation and child care. They might have gained the knowledge on positive reinforcement and importance of having a good feeding environment to uplift the child's weight. Moreover, the behavior change theory underlying interventions emphasized the use of a home care and feeding environment to improve the feeding behavior of the child or how the child responds to feeding. This is congruent to the findings of Aboud (2009) on responsive feeding revealing that responsive feeding interventions provided significant improvement in children's self-feeding with caregivers' verbal responsiveness. This might be due to the acquired knowledge that excessive reward like sweets has an effect to the child's well-being. The finding supports the findings of Capaldi (1996) which suggest that using sweet foods as a reward for eating healthy food may alter taste preferences, encouraging increased liking of the sweet food and decrease the liking of a healthy food. Although the caregiver's concept of reward or positive reinforcement is effective in his

perception, the technique of type of reward given could have an impact to the child's response to feeding. Caregivers are very cautious in giving food reward because they might believe that it might lead to another problem. Feeding constructs used by caregivers like offering food as reward might be useful in caregivers feeding behaviors and practices that would change the child's response to feeding. Eizenman [24] in her study on feeding practices revealed that possible repeated exposure to food could be a part of a healthy environment or encouraging balance. However, the practice could change the feeding response of the child. In addition, the distinction of food as a reward could be used as situational management or a bribe to entice the child to have an acceptable feeding response.

Meanwhile, caregivers also practiced unhealthy responses to feeding when the child doesn't consume the food served. This might be due to the reason that caregivers probably would like to maximize all resources to meet the nutritional needs of the family with limited resources. Feeding practices of caregivers' utilize available resources based on the child's needs. With such resource restriction, caregivers would probably use parental control over child's intake of food to meet the need of the child. Moreover, the impact of economic decline and adjustment on food security probably made caregivers to practice this approach. Sahn (1994) in his research on macroeconomic issues on nutrition revealed that the impact of economic and food adjustment affected child care and feeding and child centered activities. Further, a possible reason is that caregivers had gained knowledge on different parenting and feeding styles, such that they could impose a specific feeding practice. An alternative approach to child food response could focus on developmental theories. In line with Social Learning theory by Bandura, some research had highlighted the role of observational learning and modeling. Modeling appeared to have a role in the transmission of eating related attitudes which result to both the child and caregivers' internal motivation related to feeding practices and responses to feeding. The result of the study supports the modeling theory of parental influence and indicates the caregivers' feeding practices and attitudes of children in response to feeding. Caregivers attempt to control the child diet can be due to the pre-existing tendency of the child not to eat or not to eat unhealthy foods. Studies by Fischer et al. [1] revealed that caregivers' enforced restriction and control has a paradoxical effect on the response of the child to feeding and the greater use of food as a tool of behavioral modification reported a higher level of satisfaction [37]. This could be due to the caregivers wish to let the child eat in such a way he or she could meet the nutritional need. Caregiver also tried to attempt to use the favorite

snacks as a bribe to let the child eat and encourage him to continue eating. The finding is congruent to that of Sherry et al. [38] on attitudes, practices and concerns about child feeding revealed that accommodating request and serving liked foods encourage the child to eat. Another possible reason for the use of unhealthy feeding response is believed to be due to the timing the food served. Children sometimes had full stomach and yet caregivers tend to feed the child. This might led to non-consumption of the food. Thus caregivers tend to force the child to consume the food. Another possible reason could be the child's timing in chewing the food. This factor could be misconstrued by the caregiver as a delaying tactic in prolonging eating thus they urged them to finish their food quickly. A possible reason for the healthy response to feeding practice is that, caregivers have experienced the same during their childhood and they were counseled about different feeding and parenting styles. Previous experiences could be modeled such that this could motivate not only the caregivers but also a good feeding response by the child. Some observed practices done by families include food arrangement and preparation, reward promises using food, punishment, and praising the child. The result strengthened the findings of Hughes et al. [39] on emotional climate wherein the feeding practices and feeding styles revealed promises food rewards, promising other rewards and situational management were commonly observed behavioral feeding practices. Reinforcement theory of motivation by Skinner overlooks the internal state of individual, i.e., the inner feelings and drives of individuals. This theory focuses totally on what happens to an individual when he takes some action. Thus, according to Skinner, the external feeding environment of the child is designed effectively and positively so as to motivate him or her to eat. On the other hand, the feeding practices of caregivers in response to feeding could motivate the child to eat healthy foods to meet his or her needs. Positive Reinforcement implies giving a positive response when an individual shows positive and required behavior. For example - Immediately praising the child after consuming the food could increase the probability in incurring a good feeding behavior. It must be noted that more spontaneous is the giving of reward, the greater reinforcement value it has. Giving privileges to children could also help motivate them to consume the food.

The response to feeding can be conceptualized as the reflection of parents' child-feeding practices. Caregivers may bring home what they want their children to eat and set up eating environment to encourage certain eating behaviors in them. This might imply that caregivers could negotiate with children and at the same time impose parental control to let them eat. Positive and negative

reinforcement are instilled to check children's behavior and responses to feeding. The results show that the food environment aspects assessed in this study was generally positive. A limitation of the study was that the feeding style was not included but it might have a bearing in the feeding practices of caregivers. Furthermore, feeding practices related to responses to feeding may influence child's weight and health status. Parents and caregivers might need to be educated on mealtime behaviors that

advocate the adoption of healthy eating in early childhood. Research is needed to identify which characteristics of a caregivers feeding style which results in healthy eating habits of children as well as the long term consequences of these styles. Table 3a shows the difference in the caregivers' feeding practices of malnourished children along exposure to food according to parent variable related.

| Variable | Socio-Economic Status | | Educational attainment | | Number of children | | Type of caregiver | | ethnicity | |
|----------------------|-----------------------|-----|------------------------|---------|--------------------|-----|-------------------|-----|-----------|---------|
| | X2 | int | X2 | int | X2 | Int | X2 | int | X2 | int |
| Exposure to food | 128.925 | sig | 72.010 | sig | 103.01 | Sig | 102.01 | sig | 60.210 | sig |
| Responses to Feeding | 39.955 | Sig | 13.25 | Not sig | 59.03 | Sig | 57.15 | Sig | 4.69 | Not sig |
| | 13.69 | sig | 16.18 | sig | 35.86 | Sig | 24.88 | sig | 13.49 | sig |

Table 3a: Difference in the Caregivers' Feeding Practices of Malnourished Children along Exposure to Food according to Different Parent Related Variables, N=280.

The table 3a shows the chi square distribution result of the difference in the caregivers feeding practice of malnourished children along exposure to food according to the different variables.

The study revealed that there is a significant difference in the caregivers' feeding practice on malnourished children along exposure to food according to socio-economic status (SES). The result revealed that caregivers are aware of the different feeding practices and tried to use this style to their family. Feeding practices imposed by caregivers may have an effect to the child's nutritional status and health outcomes. The UNICEF conceptual framework (1997) suggests that care and feeding, in addition to food security, health care services, and a healthy environment are critical for children's survival, growth and development. This is particularly relevant in resource-poor settings, where enhanced care giving behaviors can optimize existing food resources [40]. This might imply that the household resources play an important role in the availability and exposure of the child to different kinds of food because caregivers can or cannot afford to buy different kinds of food. Studies had shown that risk factors such as unfavorable lifestyle factors, poor feeding practices to include availability of food and malnutrition have a higher prevalence on lower SES strata [41] and most to consume less healthy diet [42]. The result may imply that caregivers possibly maximize their resources in the home to meet the demands and budget of the family. This assumption is strengthened by the study of Lawrence [12] which stated that buying cheap foods, that children would eat, was a strategy adopted by low income parents to ensure their

families were adequately fed. This strategy was associated with parents and children eating a poorer diet. Moreover, the result may imply that caregivers might apply what they have learned in seminars on nutrition especially on food preparation and food content in the framework of their socio economic status capability.. The result is congruent to the findings of Dowler et al. [27] stating that socio economic variable such as income is an environmental influence on eating behavior. Moreover, this might imply that caregivers with low SES might have limited resources in getting information on how to feed the child. High SES tends to avail of different information and consults on what available food for their child. However, Low SES caregivers might depend on their experiences and information from health workers. This strengthens a research study by Guinther et al. [33] that health professionals acknowledge that low income caregivers receive information from health workers and felt that a lot of time providing support to low income caregivers is needed to increase compliance, may it be on food preparation and food content that conform with their feeding practice and family environment. Meanwhile along Educational attainment, the findings revealed that there is a significant difference in the feeding practices of caregivers along food exposure according to educational attainment. This might be due to the fact that being exposed or educated as such could have increased their awareness on how to feed the child and thus manage to do a feeding practice that could mold a good feeding environment and exposition to food. This might be attributed to the caregivers limitation specifically for elementary caregivers in understanding the relevance of good nutrition. Elementary caregivers might execute

feeding practices based on what are practiced by their parents during their childhood days and what were observed by them in their neighborhood. High school caregivers practice such feeding practice may be due to their experience when they had their class in high school and their possible recall of the benefits of these foods could encourage them to serve these foods. Meanwhile, college caregivers who practice such feeding practices could be due to the busy schedules and storing food would allow them time to prepare easy cooked foods. Possible reason could be due that they are working and they are bounded with tight schedules.

This may also imply that regardless of educational level of caregivers, it does affect their feeding practices when the food is not consumed. This might be due to the caregivers' ability to maximize their resources while combining their knowledge, feeding practices, and experiences in their childhood. Since caregivers are responsible for managing food intake at home, the practices they employ would have a significant effect on the household members' health and nutritional status. This is strengthened by the study of Fisher et al. [19] which states that caregivers tend to restrict their children in the amount and kind of food they are eating. In contrast, the study of Sika-Bright [43] revealed that the level of education and employment status were found to be significantly related to infant feeding practices. However, there is no significant difference in the caregivers' feeding practices according to responses to feeding when the food is consumed. This might be due that caregivers are more permissive in the feeding approach. Caregivers want to include their children in developing a good healthy eating behavior. The caregivers believe that by doing such measures, the children will be able to limit the risks of being malnourished. Feeding practices is best analyzed as a background that moderates the influence of definite feeding practices in the child and modifications in these parenting could lead to the successful malnutrition campaign. Caregivers use permissive type maybe due to their busy schedules and they allow their children to decrease tantrums. The act of allowing considerable self-regulation by caregivers allows them to avoid confrontation with their children. Consider the facts that permissive parents are lenient in their action but they are more conscientious and committed to their child [11]. It is said that parents become permissive due to their busy schedules and to show their commitment when it comes to the health of their children, they hire caregivers that would take care of their children. With such use of feeding types, risky behaviors such as behavioral problems and low performance in school might suffice. However, the child's behaviors would be more social relationships with higher self-esteem and low level of depression [41]. The

study strengthens the result that the use of permissive type can help decrease malnutrition in children. Letting the children be mainly responsible for the food that they eat makes them more responsible when it comes to controlling of their food intake and in choosing their food choices that might largely affect their body weight. The reason why parents are using permissive type is because the optimal environment for children's development of self-control of energy intake is that in which parents provide healthy food choices but allow children to assume control of how much they consume [42].

Along variable number of children, the findings revealed that there is a significant difference in the caregivers' feeding of malnourished children along exposure to food. This might be due to the training that they had undergone. Parents are educated on responsible parenting wherein taking care of their children and being sensitive to the needs are emphasized. Young caregivers and with less children tend to become more idealistic in care such as employing an excellent practice or response. As couples start a family, they try to attend to seminars that could improve their parenting style. Some may probably grow up with the idea that the more they do to their children; the better parents they will become. According to Knowles [26], adults are ready to learn things that have immediate relevance to their jobs or personal lives. Their time perspective changes from gathering knowledge for future use to immediate application of knowledge. Since care giving is a responsibility, these people would be willing to undergo series of teachings in which they get more aware on how to take care especially feeding their children. They tend to focus on the problems that the child is showing them and try to manage them immediately based on what they've learned. These people tend to become more idealistic in giving an excellent practice on responsive feeding. The finding is contrast with the study of Rosamma [44] which revealed that there was no-significant association between feeding practices and mothers' demographic variables such as age, number of fewer than five children, type of family, birth order, and age of the child, gender and sources of information.

The result may reveal that caregivers would differ in their feeding practices due to imposed conditions confronting the caregivers and the number of children they have. Working caregivers confront substantial time demands which may translate into systematic difference in the type of food fed to children. The finding is congruent to the finding of Grzywacz [29] that working mothers used commercially prepared foods for infants' feeding and. Rely heavily on commercially and pre packed food sources for meal planning (Kant,2000). Thus this might

explain the practice of instant foods being served because they are easily prepared in a least possible time. Further, the result may imply that caregivers tend to expose their children to food with caution due to limitation imposed by certain conditions. These conditions and belief may include that the less mouths to feed, the more food can be served. The availability of the caregivers to supervise the child while eating could also be a factor. The findings was based on the study done by Klesges et al. (1991) that children selected different food when they were being watch by their parents compared to when they were not and) mother and children's food intakes suggest improvement in child diets [42]. On the variable type of caregivers, the finding showed that there is a significant difference in the feeding practices of caregivers when grouped according to type of caregiver. The result revealed that primary caregivers had the passion on serving the right food for their children. The supervision of primary caregivers showed that they are aware of the importance of proper nutrition. The primary caregiver's direct handling on feeding may reflect their responsiveness to the need of the child. However, the feeding practices of the secondary caregivers maybe due to the handed instructions by the primary caregivers and they don't possibly want any confrontation with the child. The result may imply that in feeding children, there might be a constant transfer of information between primary and secondary caregivers specifically on how to feed the child. With this assumption, the caregivers possibly practice a routine feeding that best suit their families. DeVault's work [45] supports the notion that families are created through relationships involving food and that feeding a family is an activity to central family life. Studies of food and families show that daily recurrent practices characterizing routine family feeding can be examined for the ways in which they symbolize, reinforce, and reproduce social relations and divisions. The ways in which people feed their families occur in a network of social relationships which involve, and go beyond, the individual and the household [46]. Furthermore, this might imply that the caregivers understanding of good feeding is a necessity for their children thus providing adequate environment is modeled. This is strengthened by a research done by Sheryl O Hughes et al. [39] which stated that child care providers, much like parents, influence children's eating by modeling, providing instruction through directives, and/or through little or no instruction leaving children to their own devices. On variable ethnicity, the finding revealed that there is a significant difference in the caregivers' feeding practices along exposure to food. This may imply that since Filipinos are known for their close family ties they try to at least provide the best care to their family members specifically on feeding practices. Though, the influence of

ethnicity and culture on the relation between child-feeding practices and child- weight status is largely unknown [1]. Unlikely, many years of research and policy initiatives, rates of infant malnutrition and under-nutrition have remained consistently high [47]. This is hugely due to the fact that most of these infant feeding campaigns are almost always directed to the mothers and are based on the assumption that women are free to make their own decisions on feeding their infants. But in all cultures, there are a number of factors that affect women's decisions on how to feed their children [48]. This implies that there might be a change in the exposure of food due to cultural beliefs and practices. The availability of food and accessibility of the food might vary due to the caregivers previous exposure to different food. Further, the role of mass media has an impact on the information dissemination of health or even unhealthy eating/feeding habits. Mass media influence both the parents and the children in several ways. According to a study by Henry Kaiser [49], mass media is contributory to malnutrition. Pediatricians, child development experts, and media researchers have theorized that media may contribute to childhood malnutrition in one or more of the following ways:

- The time children spend using media displaces time they could spend in physical activities
- The food advertisements children are exposed to on TV influence them to make unhealthy food choices
- The cross-promotions between food products and popular TV and movie characters are encouraging children to buy and eat more high-calorie foods
- Children snack excessively while using media, and they eat less healthy meals when eating in front of the TV
- Watching TV and videos lowers children's metabolic rates below what they would be even if they are sleeping; and lastly
- Depictions of nutrition and body weight in entertainment media encourage children to develop less healthy diet.

Thus this type of feeding practice gives an explanation regarding food which will be served, and most parents nowadays use this to be able to let their children understand the value of what is being inculcated to their children. However along responses to feeding on variable socio-economic status, this reveals that both classes where caregivers belong would comply with the primordial necessity of the child who is underweight or overweight. Seemingly, the result revealed that higher SES practiced their feeding practices for they had extra to spare for foods and gives variety to children while Low SES caregivers practice their feeding practices can be attributed to the caregivers' ability to maximize their

money in response to family needs. This findings strengthened the findings of Olsen [25] which state that the early the introduction of solid food and other poor infant feeding maybe prevalent in lower income population.

The study revealed that there is a significant difference in the caregivers' feeding practices on malnourished children along response to feeding according to socio-economic status (SES). This might imply that caregivers SES help develop a feeding response based on the available resources they have. These responses might be geared towards controlling or restricting feeding practice. Caregivers control over child's feeding has been associated with child's eating. The use of pressure to eat is associated with low SES while restrictive feeding might be associated with high SES. Limited studies had been evaluated on issues of causality and responses to feeding in relation to control or restriction, thus most caregivers initiate controlling feeding strategies in response to perceived child's nutritional status. Cross sectional comparison done by Tiggerman [40] showed that caregivers has been showing repeat of using more pressure to eat and uses heavier monitoring in children. Moreover, caregivers restriction of child's intake has been associated with disinhibiting eating, poor self-regulation and child weight and feeding [50]. It is also important to note that one of the limitations of the study is that self-regulation and SES were not closely included. However, such analysis would help in understanding responses to feeding. Moreover, this might imply that caregivers' SES highlights the important influence that caregivers have in the development of healthy and unhealthy feeding practices, thus implies intervention training for caregivers to promote healthy feeding must be discussed. Cantazo argued in his study on feeding practices of caregivers showed that high controlling approaches by HES to child's feeding undermines child's ability to develop and exercise self-control in feeding. The caregivers control in feeding is negatively associated with child and caregivers' ability to self-regulate [42], thus restricting child feeding may interfere with the ability to exercise control in stimulating eating to the child.

Furthermore, SES affects feeding responses. Assessment includes the development of demandingness, and responsiveness had resulted to a feeding practice that conforms to the available resources [51], in their study of parenting and feeding styles had shown patterns of association between SES and feeding practices. The result is congruent to the findings of Dowler et al. [52] stating that socio economic variable such as income is an environmental influence on eating behavior. On variable educational attainment, the findings revealed that there is

no significant difference in the caregivers' feeding practices of malnourished children along responses to feeding when the child consumes food. This might imply that regardless of educational attainment, caregivers responded to feeding practice positively or negatively because they are exposed to the different feeding styles as taught by experience, observation or learnings from health counselors. In contrast, the findings also showed that there is a significant difference in the caregivers feeding practices of malnourished children along responses to feeding when the child doesn't consume the food. Since elementary caregivers has a shorter duration spent in school, making them not achieve a profession that will give them a possible better living. Thus having less chances of acquiring a work, they only have a little amount of budget for basic necessities in life. As a result, caregivers most likely restrict their children's needs specifically limiting the food intake to maximize their home resources to meet the daily requirements of the family. This is supported by the study of [53], that caregivers restriction of access by children to less healthy foods was associated with coercive behaviors to the poorer ones. High school caregivers use this feeding practice because of the knowledge on the child's growth due to health educators counseling. The type of feedings used tends caregivers to consider that during the stage of growth and development, nutrition is essential to meet the demands of the child. This is in congruent with the studies of Patterson [54], that different combination of variables predicts each behavioral outcome and the value of temperament, parenting and pursuing interaction leads to the child behavioral development. This further state that in helping a child to have the attitude of good eating habits, there should be less temper among the caregivers in presenting the food that the child will eat. Secondly, this may be attributed to the past experiences of caregivers during their childhood.

Caregivers tend to impose some contrast in feeding practices due to concepts of body concerns and eating habits. The caregivers within the college level see that a type of feeding practice is a more effective way to feed the child the analysis strengthens the study by Agras [55] which states that there is evidence of considerable interaction between the parent and the child characteristics in the development of malnutrition.

The findings revealed that there is a significant difference in the feeding practices of caregivers of malnourished children along response to feeding according to educational attainment when the child did not consume the food. This might imply that the level of understanding on how to feed the child varies due to educational status. Education of the caregiver is an important modifiable

factor which can be targeted to address malnutrition levels in children. It was found in the study that the caregivers of malnourished children when grouped according to educational attainment reveals that they are practicing a feeding practice based on their educational attainments and experiences. Related to the theory of andragogy by Knowles that adults learn their ways from their experiences, they only apply their experiences in feeding their child. Shown in the above findings that parents' education is an attribute to the feeding practices of caregivers of malnourished children may be due to their lived experiences during their childhood that they are now applying as adults and caregivers to their children. In parallel, there were marked relationships in parents' educational level. This may imply that the duration that an individual spent in school does affect their knowledge in feeding practices, though their practical experience in life serves as their guide in their daily living. The findings is supported by the study of Engle et al. [56] which states that traditional knowledge may be valuable, but widespread changes in families due to urbanization, women's increased economic role, and population increase may require changes and adaptations in care practices.

The result implies that caregivers with higher education attained, had been equip with the knowledge about feeding practices. This is because of the higher exposure in school, influence by media, information taken from books and pamphlets, attendance in seminars and health teachings in their barangays, thus having acquired a richer knowledge, making them more think of the consequences that their action will bring about, therefore, the more they do better ways in modifying their lifestyle, for the benefit of their families. However, there is no significant difference in the caregivers' feeding practice on malnourished children along educational attainment when the child consumed the food served. The result may imply that regardless of educational attainment, caregivers are exposed to different information and educational campaign about nutrition and proper feeding of children. The caregivers might possibly learn the feeding style to medical practitioners and tried to apply it to the family. This might imply that caregivers might be aware of the cues given by their children so they responded immediately to their children's needs. One reason also is that they have adequate resources for care and other needs. The assumption was strengthened by the study of Gross, Pollock and, Braun [38] which revealed that family and home environment factors is a very important factor in the child's fruit and vegetable intake and response to feeding. The caregivers give their attention in rearing their children considering their nutritional status. These caregivers have the patience and

the encouragement in feeding their children. They might be aware that talking to their children could lead to an increase acceptance of food of the caregivers are giving. On variable number of children, the findings revealed that there is a significant difference in the caregivers' feeding practices along responses to feeding. The caregivers' feeding practices of malnourished children regardless of the household size, are being influenced by means of multi-media such as radio and television announcements and programs, commercial advertisements and reading articles. Caregivers would apply what they see, hear, and read that conform to the number of children they have. They can also be influenced by the government's programs on nutrition such as the Kineti-kid program, Garantisadong Pambata and Child 21 program that would help increase their awareness on health and nutrition regardless of the number of children they have. Through the awareness on these programs, the caregivers are empowered to practice feeding styles. According to Birch et al. [11], preferences and consumption are related to parents' preference, beliefs, and attitudes toward food. Thus previous experiences of caregivers would allow the feeding practice to be remodeled to conform to the child's state of nutrition. Since caregivers focus too much attention in the children's nutritional status, they tend to respond to the children's need to have the food they believe would be good for them. With the small number of children to be nurtured, the caregivers are able to compensate with the children's health problem and they try to enhance care by responding to their needs. Feeding style and practices of caregivers will still depend on the characteristics of a child wherein if the child has poor appetite or is easily distracted during meal times, the caregiver would try and encourage the child to eat. Some eating problems are behavioral and environmental in nature. According to Sulkes [57] parents of young children are often concerned that their children are not eating enough or eating too much, eating the wrong foods, refusing to eat certain foods, or engaging in inappropriate mealtime behavior, such as sneaking food to a pet or throwing or intentionally dropping food. Thereby caregivers impose feeding practices to control the feeding of the child. In contrast to other studies, research revealed that the number of children in the family affects the nutritional status of a child. A larger family size, overcrowding and inadequate spacing are associated with the increased risk of severely acute malnutrition. This supports the notion that non-nutritional factors should be essential components in the effort to reduce severe malnutrition [58]. We say that mothers who have many children will devote less time to child care than the mother who has two children or less. On the other hand, a large number of children in the family suggest that there is more competition for available food [59]. Although it is

not shown in this study that having many children would cause competition. There were alternative findings that conclude the child's nutrition as affected by the family size. As supported by the Bulletin World Health Organization [27] concludes that the most frequently suggested causes of malnutrition are poor feeding practices and family size among others. On variable type of caregivers, the result revealed that primary caregivers direct involvement can affect the responses to feeding. This might be due to the direct relationship of the caregivers with a sense of gentle authority with responsiveness to the need of the child. However, secondary caregivers' response might reflect the lesser ability control responses because they might be following instructions from the primary caregivers. Secondary caregivers might practice such to avoid confrontation with the child and the primary caregivers as well.

The findings revealed that there is a significant difference in the caregivers' feeding practices on malnourished children along responses to feeding according to the type of caregiver. This implies that caregivers have different ways of being aware in feeding responses of malnourished children. The caregivers have different learning capabilities and preparations in learning the appropriate feeding practices. Practical advice for parents and caregivers include how to foster children's preferences for healthy foods and how to promote acceptance of new foods by children. The caregivers are able to appreciate the importance and significance of the feeding practices among malnourished children. The study implies that caregivers want their children to be assertive, socially responsible, self-regulated and cooperative. This type of feeding practices is able to balance the demand with their individuality and be able to balance their need for individuation and autonomy. With the child having self-regulation and self-assertion as his traits, the child would be able to verbalize his needs for food and would be able to control his manner of eating. The premise is supported by Weiss & Schwarz [33]. This states that high parental demands with emotional responsiveness and recognition of child autonomy, is one of the most consistent family predictors of competence from early childhood to adolescence. On variable ethnicity, the findings revealed that there is no significant difference in the feeding practices along responses to feeding according to ethnicity when the food is consumed by the child. This might be due to the fact that regardless of ethnicity, both caregivers are equally exposed to nutrition information. Caregivers of malnourished children are taught by Barangay health worker, BNS and Nutrition specialist the different feeding practices and styles. The UNICEF care and nutrition conceptual framework encourage active feeding as a

programmatic emphasis to improve child nutrition [38]. The development of healthy eating behaviors depends on both healthy food and responsive parenting behaviour. Their efforts to promote healthy growth and to prevent underweight and overweight among young children incorporate and evaluate responsive feeding which are encapsulated in the study of Black and Aboud [60].

However, the findings revealed that there is a significant difference in the caregivers' feeding practices along responses to feeding according to ethnicity when the child doesn't consume food. This might imply that children's eating is no longer deprivation driven but influenced by an increased response to parental cues [61]. Differences may be seen in how each culture and each family within the culture attempts to meet these needs. Traditional knowledge may be valuable, but widespread changes in families due to urbanization, women's increased economic role, expansion of primary education, and population increase may require changes and adaptations in care practices for which families may be ill prepared. These changes may undermine positive traditional practices. The caregivers possibly learned the feeding styles from BNS and tried to apply them to the family. Not only culture, but also economic conditions, governmental policies, and the ecological environment can influence care practices and resources for care [56]. Table 3b shows the difference in the caregivers feeding practices of malnourished children along responses to feeding according to child related variables.

| Variable | Weight category | | Rank of child | |
|---------------------|-----------------|-----|---------------|---------|
| | X2 | int | X2 | int |
| Exposure to food | 64.191 | Sig | 286.18 | Sig |
| Response to Feeding | 36.23 | Sig | 26.93 | Not sig |
| | 64.14 | Sig | 24.16 | Not Sig |

Table 3b: difference in the Caregivers Feeding Practices of Malnourished Children along Responses to Feeding according to Different Child Related Variable, N=280.

The table shows the chi square distribution result of the difference in the caregivers feeding practices of malnourished children along exposure to food according to the different variables. On variable weight category, the result implies that the different feeding practices of caregivers were done because they want to include their children in developing a good healthy eating behavior and equal exposure to different types of food available. The caregivers want their children to have positive attitude regarding eating behaviours because these children would be eating what they know is right. The caregivers believe that by doing such measures, the children will be

able to limit the risks of malnutrition. Also, as per Presidential Decree 491 establishing July as Nutrition Month, the caregivers are exposed to different lectures and symposiums in which they increase their awareness not only to the nutrition content of the food, but also to the different parenting style and feeding styles that they will opt to use for their children.

The findings revealed that there is a significant difference in the caregivers' feeding practices on malnourished children along exposure to food according to weight category. This could be probably due to the reason that in each weight category, there are different restrictions and control on to the child. Seemingly the difference may be due to the attitude of caregivers on the different types of food due to their availability and non-accessibility. This suggests that the caregivers are mostly in favor of modeling a healthy eating for the child by eating healthy foods themselves due to their desire to promote healthy eating habits due to increased awareness. The finding supports the study done by Lau [62]. This states that parental influences were significantly related to attract physical activities and limit sugar in overweight children and increase in high carbohydrate among undernourished ones. Second, more caregivers approve of discussing to the child the nutritional value of foods in contrast with putting him or her on diet and restricting food to control his or her weight. The finding was substantiated by the study done by Cooke [63], which concluded that a parent-led, exposure based intervention involving daily tasting of a vegetable holds promise for improving children's acceptance of vegetables. Hence, in the given range of age, children are expected to be duplicating their parents' actions, curious and inquisitive in nature. In this stage, what a child sees his or her parent is eating him or she is more likely to take the same food and have similar eating habits. Further, the result may imply that caregivers exercise feeding controls in such a way that they could not aggravate the condition of the child. The parental feeding controls are usually influenced by variety of ways. The caregivers determine what food is offered, when and where they are eating, which foods are forbidden and what the emotional tones of eating are. This strengthens Fisher and Birch studies that caregivers own restraint is also associated with the restriction access to foods due to their weight. Wardle contended that caregiver's attitude must certainly have affected their children indirectly through the food purchased and served in the household [64]. On the variable rank of the child, controlling feeding practices related to exposure to food are employed in variety of ways. The result might be due to the caregivers' method on how they feed their children related to their order of birth. They have varying strategies on how to deal especially with the feeding which is a common

problem of this age group and rank. A possible reason could be that the age of child and the birth order had a great difference, and the number of siblings could also affect the exposure to food. The exposure to food could also be limited to the resources available to the family. The findings revealed that there is a significant difference in the caregiver's feeding practices on malnourished children along exposure to food according to rank of the child. This might be due to the caregivers' ability to address the different needs of the children based on their rank. The caregiver ability to adjust and be counterproductive in providing food could be a factor that was mustered by the caregiver in dealing with the child. This might also imply that need of child could be modeled based on the food that is accessible and available to the family which affects the feeding practices of the caregivers. This might also imply that caregivers play an important role in feeding practices imposed on children and should examine effects to the child's weight. Examining the weight status should include the child's nutritional intake, preferences and eating behaviors. The findings is in contrary to the research done by Bilkes [65] which states that there is no difference in the nutritional status in children by birth order and showed no association with caregivers' feeding practices. Meanwhile along responses to feeding on variable weight category, the findings revealed that there is a difference in the caregivers' feeding practice on malnourished children along responses to feeding. This might imply that caregivers are aware and responsive to the needs of their children. Other studies have highlighted the role of caregiver's feeding control. Some had explored the impact of controlling food intake by rewarding the consumption of healthy food. Birch et al. [11] in his study gave children food in association with positive adult attention. Further it found out that the relationship between food and reward appears to be complicated and allowed a combination of feeding practice styles and control. Hence, Caregivers use different styles in the care and management of children according to their weight. The study suggests that the use of authority is needed to control the child's feeding due to his risky behavior. With these results, caregivers highly approve limiting the freedom of what to eat and the amount to be placed on his or her plate in comparison with offering sweets (candy, ice cream, cake) to their child as a reward for a good behavior synonymous with allowing their child to eat between meals. This study is congruent to the study by Clark (2007) that parents report using a wide range of child-feeding behaviors, including monitoring the child's feeding behavior, pressuring him to eat and restricting him on healthy foods.

Furthermore, the use of inappropriate child feeding behavior inadvertently promotes weight gain or weight loss in childhood. This might be due to the caregivers belief that allowing their children to be involved in their weight management. While caregivers of underweight practice more letting the child eat would encourage them to eat. The belief of the caregivers might be geared to a more careful approach while encouraging children to be part in having a good eating behavior. Meanwhile, caregivers of severely underweight children practice a more responsive type of responses. Furthermore, the use of parental feeding control is essential in the care of malnourished children. The findings is congruent to the study of Moens [43] which states that parents of overweight children reported to exert more external control on their children's feeding behavior and an equal amount of parental support in comparison with parents of children with less weight and reflect fewer opportunities for younger children to eat out of the presence or influence of their caregivers. It is possible that the responses to feeding might reflect subsequent difficulties regulating hunger and satiety because of lack of autonomy in eating and free access to food. However, it would be irresponsible to suggest that caregivers should not exert appropriate level of control over the intake of children who are either obese or undernourished. But given that controlling feeding practice, it can exacerbate the issues that are designed to resolve the problem; alternative feeding strategies are needed to respond to children's weight concerns. On variable rank of the child along response to feeding, the study revealed that there is no significant difference in the caregivers feeding practices on malnourished children along responses to feeding according to rank of the child. This might be due to the fact that parents take part in feeding their children based on their needs and based on the availability of resources by the family. This might also imply that caregivers have the responsibility to equally distribute their attention to each of their children regardless of birth order. And lastly this might be due to the equal access of caregiver to information regarding nutrition, parenting style and feeding practices to include reinforcement and parental feeding styles. The findings might possibly imply that caregivers constantly communicate with their children about weight control measures. Verbalization during feeding has been positively associated with response to feeding and child development (Kleges 1992). Caregivers do exhibit responsive feeding behaviors and positive verbalization to the children, thus increasing acceptance to food and developing a good feeding practice for the caregivers. This might also imply that modeling of caregivers to the children regardless of birth order was shown to the children. Wardle and colleagues [64] found that caregivers tend to feed their children in the same

way that they eat, caregivers who offered food to deal with their child's emotional distress were more likely to have high levels of emotional eating, and those who used food as reward were more likely to present high external eating (Olivier 1992). The role of control can also be explored in terms of use of food to modify behavior or to mold a feeding response to food. It attempts to control the diet of the children and further showed that caregivers report mostly reported attempts to restrict the children's intake. This imposition of control could indicate eating more or eating less [11]. The result of the study therefore support a modeling theory of parental influence and indicate that parents' eating behavior and attitudes closely correspond to those of their children in response to food. The study by Charmarbagwal [66-69], State that there was no significant difference seen between the feeding practices of a caregiver with lesser number of children compared to the caregiver rendering care to a large number of children and birth order. Household size and birth order appears to have a positive effect on child nutrition this is almost entirely due to the positive relationship between household size, birth order and nutrition found in some studies in East and Southern Africa. There are, however, more countries for which birth order is estimated to be insignificantly correlated with nutrition, including in East and South Asia.

Conclusion and Recommendation

This chapter presents the conclusions and recommendations based on the research findings.

Conclusion

The study concludes that caregivers feeding practices on malnourished children vary along exposure to food and responses to feeding. Furthermore, the study concludes that parent variables, socio-economic status, number of children, type of caregiver and ethnicity affect the caregivers' feeding practices of malnourished children. While Child related variable, weight category, affects the caregivers feeding practices.

Recommendations

The researcher recommends that infant or child feeding behaviors be studied in the future to present a more detailed picture of feeding practices among malnourished children. The study may be done in the rural setting and later compare it with the urban setting to clearly depict the possible factors that might affect feeding practices. For the Nursing Practitioner, it is important to know the feeding styles of caregivers of malnourished children as it can be a step in the modification of the wrong feeding

practices. Through this modification, they could reinforce and apply them to their own children. They should be able to emphasize the importance of knowing and practicing the proper feeding practices that could contribute to the prevention of malnutrition. Promoting low-cost nutrition program resources for the caregivers may be done. Programs can be developed such as reinforcing interventions through proper information about proper nutrition and information wherein the caregivers can easily understand and reinforce to their children in such a way that both parties, the health workers and caregivers, would benefit.

Moreover, the government may also fund such researches and should make use of the available barangay health workers or barangay nutrition officers in the research process. These may be needed in order to develop nutrition programs and policies which are evidence based that could effectively address the nutrition and productivity aspect of the nation. For the Department of Health, they should be able to strengthen the Responsible Parenting Program and give focus on the proper feeding practices of caregivers of obese children not only on the city's district health centers rather on every barangay. Dissemination of information and educational campaign materials in every barangay is also necessary.

Nutritionist, nurse nutrition counselors, and community health nurse to intensify the monitoring of feeding practices of caregivers and conduct nutrition survey and classes to them. Giving emphasis on nutrition classes the proper feeding practices that caregivers must render to their children may be done. Child health programs related to nutrition specifically the Kinetic Kid program and child 21 programs by the Department of Health may also be integrated in lectures so as to provide students a better grasp of different services which may be endorsed to handled patients in the community or hospital setting. This would help disseminate available services for the utilization of members of the community.

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