

**UBC Child Care: Feeding Practice
Philosophy and Guidelines Project**

**Bao Ying Zhang, Farimah Darvishi, Grace Fanting Bu, Hadas Haft, Negar Teymouri Bayat, Soohyun
Cheon**

University of British Columbia

FNH 473

April 25, 2017

Disclaimer: "UBC SEEDS Program provides students with the opportunity to share the findings of their studies, as well as their opinions, conclusions and recommendations with the UBC community. The reader should bear in mind that this is a student project/report and is not an official document of UBC. Furthermore readers should bear in mind that these reports may not reflect the current status of activities at UBC. We urge you to contact the research persons mentioned in a report or a SEEDS team representative about the current status of the subject matter of a project/report".

UBC Child Care: Feeding Practice Philosophy and Guidelines Project

FNH 473 (2016/17W)

Negar Teymouri Bayat, Grace Fanting Bu, Soohyun Cheon,

Farimah Darvishi, Hadas Haft, Bao Ying Zhang

TABLE OF CONTENTS

1. EXECUTIVE SUMMARY -----	3
2. INTRODUCTION -----	4
3. SITUATIONAL ANALYSIS AND PLANNING FRAMEWORK	
a. RELEVANT PROBLEMS -----	5
b. BEHAVIOUR -----	6
c. MEDIATING FACTORS -----	7
d. HEALTH BEHAVIOUR THEORIES -----	9
4. PROJECT GOALS AND OBJECTIVES -----	11
5. OUTPUTS -----	12
6. EVALUATION PLAN -----	15
7. CONCLUSION -----	17
8. AUTHOR'S CONTRIBUTIONS -----	18
9. REFERENCES -----	20
10. APPENDIX -----	23
a. Appendix A- Logic Model -----	23
b. Appendix B - Newsletter style of Report -----	24
c. Appendix C - Feeding Practices Philosophy & Guidelines for staff -----	25
d. Appendix D - Parent's Guide to Centre's Feeding Practices -----	27
e. Appendix E - Cue to Action Poster -----	28
f. Appendix F - Child Care Centre Feeding Practice Pre-survey -----	29
g. Appendix G - Child Care Centre Feeding Practice Post-Survey (Post-guidelines) -----	32

1. Executive Summary:

Recent concerns from parents regarding what children are eating and how have led some staff to feel compelled to pressure children to finish their food or eat in certain order. However, previous studies have shown that pressuring or restricting children in eating can have negative effects on growth and has been associated with poor eating habits in children (Galloway et al., 2006; Gable & Lutz, 2001). As a result, UBC Child Care Services requested a formal feeding practices guidelines to be created. We have chosen the Division of Responsibility (DOR) in feeding by Satter (2007) as a core philosophy in developing a Feeding Practice Guidelines for child care centres which can help create a positive feeding environment which contributes to healthy eating habits in the long term. In planning our project, we used the Theory of Planned Behaviour and Health Belief Model to examine various factors affecting child care staff's behaviours in feeding. We also created a Logic Model and defined SMART short- and medium-term objectives, as well as long-term objectives that were addressed by our project outputs. These outputs include a Feeding Practices Guidelines document for child care staff, a Parent's Guide to Center's Feeding Practices, and a Cue to Action Poster to be displayed in the child care centres as a reminder of DOR for staff. We evaluated the effectiveness of our outputs by assessing staff's baseline knowledge of DOR, confidence, and behaviours in feeding, and comparing that to post-intervention assessment of these. Throughout this project, we learned to be flexible in order to address our community partner's concerns and wishes, and to be able to tap into their strengths and assets for the success of our project. Successful implementation would require expansion of the program beyond the two centres: Acadia and Hummingbird, and re-evaluation to ensure that centres have adopted the recommended guidelines.

2. Introduction:

UBC Child Care Services (CCS) has been operating since 1969 to serve the needs of university students, faculty and staff with families. UBC CCS operates programs for children aged 0-5 (UBC Child Care Services, 2017). Our group worked directly with Acadia and Hummingbird centres, and the two primary target audiences were staff and parents of children attending these centres. However, due to time and scheduling constraints we could not directly involve parents in our project. Each centre has a supervisor that makes decisions about the curriculum, schedule and operation, so while all centres provide snacks to the children, often one in the morning and afternoon, each centre does so differently to better suit staff abilities and children's routines in their own programs. Since each centre makes its own snack foods decisions, some centres pay more attention to nutritional value than others. Recent complaints from parents regarding nutritional values of food served; regarding situations when children do not finish their homemade lunch or prefer unhealthy foods over healthier foods within their lunch box have led some staff to feel compelled to pressure children to finish their food, or eaten in certain order. This has led UBC CCS to request a formal document about feeding practice guidelines to be created in order to empower staff to critically think about their practices at the centres and to communicate that to parents (D. Thomson, personal communications March 27th, 2017; M. Rudzki, personal communication, March 6, 2017; L. Song, personal communication, March 6, 2017). Principles from Division of Responsibility (DOR) in feeding (Satter, 2007) were chosen as a guideline since their benefits are supported by research.

3. Situational Analysis and Planning Framework

A) Relevant Problems

Child nutrition and feeding behaviours have a great impact on children's overall health and wellbeing in the long run (Satter, 2007). Parents often stress about their children's eating patterns, which may lead them to pressure or restrict foods at times. In turn, this is associated with children having less wholesome and unhealthier diet (Ystrom, Barker, & Vollrath, 2012). In a study by Galloway et al. (2006), caregivers' pressuring preschoolers to finish their meal resulted in consumption in lower quantity, more negative comments about food. This indicates that feeding practices that involve pressuring negatively affects not only the growth, but also their attitudes toward food and eating. On the other hand, optimal nutrition depends on the development of positive relationship between parents and child (Satter, 2007). It was also found those parents' negative mealtime behaviours and attitudes were associated with higher weight-to-height ratio in children (Gable, & Lutz, 2001). These studies show the importance of positive relationship between parents and children to child's healthy eating behaviours. As Satter (2007) describes, children eat best when caregivers recognize and respond appropriately to their needs because children have a natural eating ability. By this, she means that they eat and grow according to their needs and gradually consume food that their parents eat. Thus, they become competent eaters. DOR model can be used by caregivers to support children. The concept of DOR states that the caregivers' responsibility includes what, when and where to offer the food and the child's responsibility includes whether they will eat the food and by how much (Satter, 2007).

Parents' attitudes, feeding styles, and behaviours are important factors that determine the risk of obesity in early childhood (Thompson, Adair & Bentley, 2013).

According to a study by Agras et al. (2012), there are two mediators of pressure to eat, disinhibition of eating and hunger. Furthermore, the two major causes of child overweight/obesity are misinterpretation of a child's actual size and shape that leads to imposing food restrictions. A weight that plots consistently along a high or low percentile on the child's growth chart may still be normal for that child. (Satter, 2007). Therefore, restricting a child's eating behaviour based on their size and shape may be harmful because each child grows in their own unique manner. In addition, Birch et al. (1987) have argued that a child must learn to differentiate hunger from other distress cues. Hence, caregivers must not only acknowledge and respect their child's autonomy, but also provide proper food in a way that the child can manage in a socially accepting and loving environment (Satter, 2007). Furthermore, an Institute of Medicine policy statement (Birch, 2011) emphasizes the importance of providing guidance, education, and training to caregivers with appropriate tools in order to not only increase children's healthy eating, but also counsel parents about their children's diet (Birch, 2011).

B) Behaviours that Contribute to the Problems Identified

Parents and caregivers at child care centres all have the good intention of wanting their children to be healthy eater in order to grow up healthy. But their behaviors sometimes present conflict and interfere with this common goal. The feeding practices chosen are often influenced by many social factors such as family members, peers and the internet. There is a lot of information readily available on what the "best" way of feeding is, and it can become confusing and time consuming to consult this information. For the staff, there is an additional influence and pressure coming from the parents. Often there are opposing beliefs on feeding practices and parents have been voicing their concerns (D. Thompson, personal communication,

February 17, 2017; M. Rudzki, personal communication, March 6, 2017; L. Song, personal communication, March 6, 2017). The issue of disagreements on feeding practices at the child care centres could have been affected even more by lack of constant communication among staff themselves and between staff and parents. This may be due to the busy and varying schedules of both the staff and parents (M. Rudzki, personal communication, March 6, 2017; L. Song, personal communication, March 6, 2017).

The staff's decision-making behaviour for snacks in the centres are influenced by various factors including the use of snacks as rewards. Often it is used to entice children to eat the main meal or to calm the child. For example, in the past, crackers were offered when children began to cry or became fussy to slowly calm them down. However, children also tend to walk around when doing so (M. Rudzki, personal communication, March 6th, 2017). The idea about which snacks to purchase and using food as rewards differ among staff-staff and staff-parents. These disagreements are relevant to whether appropriate feeding practices are being used or not.

C) Mediating factors- Individual, Interpersonal and Environmental Factors

Different studies have suggested that treatment mediators help to identify possible mechanisms through which an intervention might achieve its effects. Identifying mediators not only enhance the intervention structure, but also improve our understanding of the nature of existing problems (Kraemer, Wilson, Fairburn, & Agras, 2002). Case studies also suggest that the results of real-world interventions truly depend on mediators acting at different levels (Moore, Silva-Sanigorski, & Moore, 2013). In order to identify mediators for our project we have looked at individual, interpersonal and environmental factors.

At an individual level, child's hunger and food preferences need to be considered. Children arrive at the centres at different times in the morning and have breakfast at different times. These factors would affect children's hunger levels during snack times or lunchtime. According to staff, children might not want to eat or even sit at the table if they are not hungry. Personal preference is another important factor, as children come from different families with different cultures and food preferences, which affect children's own food, likes and dislikes. Furthermore, another factor to consider is "food jag" which refers to a period of time when a child only wants to eat one or two foods (Rideout, 2017). All these factors result in children's eating behaviour that subsequently induces responses from parents in feeding.

One factor at interpersonal level is how staff communicates with children during meal and snack time. Caregivers are encouraged to have conversations with children, especially about food and eating behaviours, which will encourage children to accept and enjoy food (American Dietetic Association, 2005). In addition, child care staff' personal beliefs and their knowledge about the appropriate feeding can have a huge impact on the centre's feeding practices. If staffs lack the knowledge about DOR, they may force children to eat foods in certain order or quantity. For example, they might force children to eat their veggies before eating their cookies or eating their main dish before eating their fruits. All these behaviors would affect how children react to food at meal and snack time (Satter, 2007). Therefore, interpersonal relationship between caregivers and children influences children's attitude towards food and their nutrient intakes.

The environmental factors include the eating environment during meal and snack times created by the child care staff (Satter, 2000). Children eat best when

staff concentrates on making meal and snack times pleasant, positive, and supportive. A study done by Hendy and Raudenbush (2000) showed that more children tried new foods when caregivers created a positive food environment by exercising enthusiastic modelling while sitting down and eating the same foods as the children. Furthermore, Satter (2000) mentions in her book, *Child of Mine*, that when feeding is handled well in a child care setting, children with eating problems eat better at child care centres than they do at home. Therefore creating a food environment in which children feel safe and comfortable are crucial to children's healthy eating behaviours (Ontario Ministry of Children and Youth Service, 2016).

D) Health Behaviour Theories

The two Health Behaviour Theories that were used in planning this project are Health Belief Model (HBM) and the Theory of Planned Behaviour (TPB). The reason for basing our project on the HBM is because we theorized that child care staff's perception on current feeding practices influence their readiness to make changes and/or communicate it to parents. Based on the information we gathered from our situational analysis, we examined how the six main constructs of the HBM influences staff's behaviour (National Cancer Institute, 2005). First, perceived susceptibility of staff is the risk of conflict between staff-parents, staff-children, and staff-staff. There could be disagreement among staff about the appropriate method of feeding. Therefore, if the staff perceive higher susceptibility of this risk of conflict among various individuals, they are more likely to make use of the tool we provide in developing appropriate feeding practice and in communicating that with parents. Second, the staff's perceived severity would be their belief that their feeding practice could create unpleasant environment around food and eating for children and that its consequence is developing inappropriate attitudes in children about food. Third,

perceived benefit is that communicating with parents about feeding practices will reduce the risk of conflict and develop healthy food environment in their centres which will encourage them to engage in our project. Fourth, the time needed to read and learn about the feeding practices and recognizing conflicting personal beliefs are perceived barriers that discourages them from taking action to develop clear guidelines for feeding practices. Fifth, a simple poster that could be put on their centres' fridges as a great cues to action to remind them to follow the feeding practice guidelines. Lastly, staff's confidence in their ability to use the feeding practice guidelines and to use provided vocabulary to clearly communicate their feeding practices and philosophies with parents will encourage them to adopt the document we provide them.

Another theory that fits well into our project situation is the TPB (National Cancer Institute, 2005). The reason for choosing this theory is because centre's feeding practices are closely tied to staff's belief about what practice is appropriate and their attitudes towards food. If a staff thinks eating should be enjoyable, they are more likely to evaluate forceful feeding as bad. Therefore, our measurable approaches will be whether the staffs believe that changes in feeding practice will benefit the children and the staff's willingness to incorporate recommended guidelines into their centre's feeding practices. Furthermore, if there are no clear guidelines for feeding practices at the centres, they may be greatly influenced by subjective norm of parents. For example, if parents want their child to eat foods in particular order, staff may be motivated to do to gain parents' approval even when they believe that it is inappropriate. Lastly, staff's belief that they are able to decide on feeding practices in spite of parents' intervention is their perceived behavioural control that is one of the important determinants of their behaviour.

4. Project goals and objectives

The goals for our project is to build a better food environment and improve feeding practices in UBC CCS by providing them guidelines that are supported by scientific evidence and increasing parents' awareness of appropriate feeding practices. Objectives are made to bring about substantial and effective changes to the UBC CCS feeding practices. These objectives have been categorized into short-, medium- and long-term objectives:

Short term objectives include:
<ul style="list-style-type: none">• Increase staff's knowledge on Division of Responsibility by 60% within two months• Increase staff's confidence in communicating with parents about their feeding practices during the orientation by 35% within two months.• Increase staff's motivation to create a positive food environment for children by 30% within two months• Increase parents' awareness of child care centre's feeding practice guidelines by 15% within two months
Medium term objectives include:
<ul style="list-style-type: none">• Increase parents' support towards childcare centre's feeding practice guidelines within 2 years by 35%• Increase children's eating competence according to their hunger cues by 55% within 2 years• Maintain more than 80% implementation to these feeding practices and extend it to the rest of the 25 UBC child care centres in 5 years
Long term objectives include:
<ul style="list-style-type: none">• Reduce the risk for negative health outcomes (e.g. obesity, anorexia) in children of the child care centres as a result of appropriate feeding practices• Develop an ideal lifelong healthy food environment for children

5. Description of Project Outputs

In order to fulfill various objectives, a document on child Feeding Practice Philosophy & Guidelines (FPPG) was created as a deliverable and is provided to child care staff. The philosophy is largely based on Ellyn Satter's concept of DOR, which describes different roles of caregivers and children in feeding. In addition, other peer-reviewed scholarly articles and government sources are consulted to outline key factors of appropriate and adverse feeding practices. Based on research done, the FPPG consists of two parts: 1) a two-page summary of core concepts and guidelines on appropriate feeding practices, 2) an in-depth written explanation of the core concepts supported by scientific literatures (Appendix C). The two-page summary of core concepts contains description of DOR, evidence-based benefits of DOR, practical application of DOR with children of different age groups, and a table that lists what caregivers could do and could not do when feeding children at child care centres. The two-page summary will allow staff to quickly refer to the core concepts as needed on a daily basis, while the full guidelines will provide detailed explanations and related research to enhance staff's knowledge of concepts presented in the summary. This second part includes information about DOR, creating a positive food environment, and inappropriate feeding practice such as pressuring children when eating or using foods as rewards. Hence, these guidelines can increase staff's knowledge on DOR and motivation to create a positive food environment for children, thus addressing two short-term objectives of this project. Furthermore, the second part of the guidelines can also equip child care staff with strong evidence-based knowledge and language with which they can use to communicate to parents about their feeding practices. Thereby, their confidence in

communicating with parents could be increased, satisfying another short-term objective.

In addition to the FPPG provided to child care staff, we have also created a one-page simplified summary document for parents that could be added to each centre's orientation package upon registration named Parent's Guide to Centre's Feeding Practices (Appendix D). This document is similar to the first two-page summary of the FPPG as it also has a description of the DOR. However, instead of a list of what caregivers could do or could not do, it has a table addressed to the parents of what the child care staff will do and will not do in terms of feeding at their centre. The purpose of this deliverable is to address the short term objective to increase parents' awareness of the centres' feeding practice guidelines. Lastly, we have also created a cue to action poster that is provided for each centres to put on their fridge which will serve as a reminder to follow appropriate feeding practices (Appendix E).

All of these documents will be provided to Deb Thompson, the Manager of Children's Program and our community partner, as electronic files through email and she will distribute it to the UBC CCS centres. The two-page summary of the FPPG was previously provided to the staff in late-March as part of our evaluation process. However, the complete set of outputs is provided to the staff upon the completion of this course.

These outputs are directly related to the two theoretical frameworks, HBM and TPB, on which we based the planning of our project. As stated in earlier sections, according to the HBM, one's perception of a health issue is influential to their behaviour. First, it was defined by our community partner that the *perceived susceptibility* is the risk of conflict between childcare staff and parents about feeding

practices which is why we decided to focus on creating FPPG for the centres.

Second, providing scientific evidence supporting that inappropriate feeding induces adverse effects could increase the staff's *perception of severity* of children's health consequences as a result of lack of clear feeding guidelines in child care centres.

Third, the evidence-based benefits of following DOR highlighted in the FPPG could increase their *perceived benefits* of making changes to their feeding practices.

Fourth, the *perceived barrier* is the time needed to learn about appropriate feeding practices, which could be lessened by providing simple and clear two-page summary of the FPPG that is quick to read over. Fifth, the *cues to action* would be the fridge posters provided to the child care centres, as explained earlier. Lastly, the guidelines equip staff with reliable knowledge and resources they can use to communicate with parents, thereby increasing their *self-efficacy* and *confidence* in communicating with parents about their feeding practices. Therefore, increase in perceived susceptibility, severity, benefits, self-efficacy, and cues to action, while decrease in perceived barrier could encourage them to adopt FPPG we provide.

According to TPB, a participant is more or less likely to participate in a program depending on their attitude, perceived behavioural control, and subjective norm. The strong evidences we provide in the FPPG could change staffs' attitudes and encourage them to start thinking about the importance of adopting appropriate feeding practices in their child care centres. Despite this, they may still be influenced by subjective norms of parents but this influence might be less impactful compared to the strength of the scientific evidence provided in the guidelines. Furthermore, increasing awareness of child care's feeding practices in parents by providing the one-page simplified summary of our FPPG to parents and having clear guidelines to follow in the centres could increase the staff's perceived behavioural control.

Therefore, they may become more likely to implement the recommended guidelines in their centres.

6. Evaluation Plan

To help evaluate the effectiveness of our FPPG, pre- and post-surveys were given to the staffs in the both Hummingbird and Acadia centre. The pre-survey (Appendix F) have ten questions in total with two feeding and communication confidence questions, six basic knowledge questions in which some are scenario-type questions, and two pressure experienced questions. These questions address many of the short-term objectives to increase staff's knowledge of DOR, confidence in communicating with parents, and motivation to create a positive food environment. In the end, nine pre-surveys were collected from Hummingbird and four from Acadia. The post-survey (Appendix G) have the same ten questions with two additional questions to help evaluate the staff's opinions of the two-page summary of the FPPG directly. In the end, seven post-surveys were collected from Hummingbird and four from Acadia for comparison analysis. Each and every question is answered on a likert scale with extra space for explaining for their answer and general comments.

There is a general trend in the desired score, such as increased levels of confidence and basic knowledge, and decreased levels of pressure experienced from pre- to post-survey. There is also a general decrease in variability in the post-survey at both centres. Both centre staff experience fairly low pressure from the parents as the score was below half-point in questions 3 and 4. The greatest increase was in Hummingbird staff's basic knowledge on DOR, while it stayed about the same for Acadia staff. However, Acadia staff had a higher baseline average score than Hummingbird staff. Regardless, this showed that our output was effective in achieving a short-term objective to increase staff's knowledge of DOR. Acadia

staff also had a generally higher confidence score than Hummingbird staff, which addressed the second short-term objective. Furthermore, some comments were made on question 9 and 10, which were about eating with children and talking about food with them indicated that staff increasingly acknowledge the importance of creating a positive food environment. This is in accordance with the third short-term objectives. The general trend between centres were the same except for questions 3 and 4 about pressure experienced which were both scored below half-point but showed trends in opposite directions between the two centres.

There are several limitations to our current evaluation that we would like to address. One of the limitations is that we have a small sample size of two centres out of the total 25 centres around UBC campus. Further limitation occurred when only seven post-surveys were collected from Hummingbird. The small sample size and inconsistency in number of pre- and post-surveys are limitations that will reduce the accuracy of comparison and generalizability of the results. It would be important for future projects to conduct their own pre- and post-surveys when working with other child care centres. Another limitation is the high baseline scores that made it difficult to fully detect the FPPG's effectiveness. Furthermore, there were a few misinterpretations of the scales in the pre-survey answers, which was corrected in the post-survey by labelling the scale in each question. If these surveys are repeated in the future, the scales should always be labeled, and the surveys should be done more in advance with enough time in between the surveys and intervention.

In the future, we would like to evaluate the awareness of the parents about the FPPG through surveying the parents' awareness about the Parent's Guide to Centre's Feeding Practices in their orientation package and observing the conversations that happen between the parents and the staff. We would also like to

evaluate the implementation rate of our guidelines in not only the two centres we have worked with, but also other centres on campus, as well as conduct focus groups to evaluate the success rate of our guidelines with the staff.

7. Conclusion

This project focused on improving caregivers' feeding practices and improving food environment at UBC CCS centres. The key deliverables of our project are: 1) "Feeding Practice Philosophy & Guidelines" for staff to understand Satter's concept of Division of Responsibility and appropriate practices, and 2) "Parent's Guide to Center's Feeding Practices" to be included in the parents' registration package to increase their awareness regarding UBC CCS's feeding practices.

The primary lesson we learned from this project was the importance of being flexible and ready to deal with surprises along the way. For example, the aim of our project was changed from developing healthy snack ideas to developing feeding practice guidelines for the centres in mid-February. Another valuable lesson we learned was the importance of planning in the whole project. We put much effort into doing situational assessment through which we were able to identify resources and gather data. We also set up an overall timeline that helped us to stay on track and efficiently and effectively move our project along. The detailed planning allowed us to successfully finish our project despite the sudden change near the beginning. We have also recognized the benefits of using Logic Models in health initiative programs, as it enabled us to form our evaluation plan early on. This has greatly helped us in conducting evaluation for our project in timely manner and gain insights on staff's perceptions on their current feeding practices and their readiness to make changes.

In order to reach our objectives, the next steps require the two child care centres to implement the feeding practice guidelines, and for UBC CCS to expand this program to rest of the centres. It would be crucial to follow up and reassess to ensure that the centres are following the recommended feeding practices guidelines, as well as to help continuously improve the FPPG to make it more accessible.

8. Authors' Contributions

As a group, each member contributed to the research of the DOR, writing and editing of the report as well as the guidelines for child care staff. In addition, each member had a specific role: BZ was responsible for Acadia's site visiting with two other group members, collected and analyzed data from Acadia's pre- and post-surveys, drafted multiple sections of the report, participated in developing the Feeding Practice Philosophy Guideline documents and edited the finalized report. HH was the designated communication person for Acadia child care centre, was in charge of design and creation of the different deliverables for the child care centres and for parents, and assisted in writing and designing of the newsletter. NT participated most of the group meetings, attended the site visits and conducted an informal interview with Acadia supervisor. She along with two other team members researched peer-reviewed journals for similar context and interventions, wrote the conclusion and the mediator section of the final report, and assisted with editing the final draft of the report. GB contributed as main communicator between the team and the stakeholders. Along with two other team members, she attended site visits and conducted observations and evaluations at Hummingbird centre. Contributed by doing research, writing the report and the Feeding Practice Philosophy & Guidelines document. SC attended all group meetings, attended all site visits to Hummingbird

centre with two other group members, and was in charge of providing, collecting, and analyzing the pre- and post-surveys for Hummingbird centre. Also, researched many peer-reviewed scholarly journals for situational assessment, participated in writing the Feeding Practice Guidelines, wrote theoretical framework section and output section of the final report, and edited and finalized the final report. FD participated in all scheduled meetings, as well as site visits to Hummingbird child care centre alongside two other members. Also, assisted in creating survey questions for the centres with team members. Used most recent journals with scientific evidence to develop a simplified version of the concept of Division of Responsibility by Ellyn Satter. Took part in developing the newsletter and assisted with editing the final draft of the report.

9. References

- Agras, W. S., Hammer, L. D., Huffman, L. C., Mascola, A., Bryson, S. W., & Danaher, C. (2012). Improving healthy eating in families with a toddler at risk for overweight: A cluster randomized controlled trial. *Journal of Developmental and Behavioral Pediatrics: JDBP*, 33(7), 529-534.
- American Dietetic Association. (2005). Position of the american dietetic association: Benchmarks for nutrition programs in child care settings. *Journal of the American Dietetic Association*, 105(6), 979-986.
doi:10.1016/j.jada.2005.04.015
- Birch, L. L., Burns, A. C., Parker, L., Institute of Medicine (U.S.). Committee on Obesity Prevention Policies for Young Children, National Academies Press Free eBooks, Institute of Medicine (U.S.), . . . Teton Data Systems (Firm). (2011). Early childhood obesity prevention policies. Washington, D.C: National Academies Press.
- Birch, L. L., McPhee, L., Shoba, B. C., Steinberg, L., & Krehbiel, R. (1987). "Clean up your plate": Effects of child feeding practices on the conditioning of meal size. *Learning and Motivation*, 18(3), 301-317.
- Domel, S. B., Thompson, W. O., Davis, H. C., Baranowski, T., Leonard, S. B., & Baranowski, J. (1996). Psychosocial predictors of fruit and vegetable consumption among elementary school children. *Health Education Research*, 11(3), 299-308. doi:10.1093/her/11.3.299
- Gable, S., & Lutz, S. (2001). Nutrition socialization experiences of children in the head start program. *Journal of the American Dietetic Association*, 101(5), 572-577. doi:10.1016/S0002-8223(01)00143-2

- Galloway, A. T., Fiorito, L. M., Francis, L. A., & Birch, L. L. (2006). 'Finish your soup': Counterproductive effects of pressuring children to eat on intake and affect. *Appetite*, *46*(3), 318-323. doi:10.1016/j.appet.2006.01.019
- Hendy, H. M., & Raudenbush, B. (2000). Effectiveness of teacher modeling to encourage food acceptance in preschool children. *Appetite*, *34*(1), 61-76. doi:10.1006/appe.1999.0286
- Kraemer, H. C., Wilson, G. T., Fairburn, C. G., & Agras, W. S. (2002). Mediators and Moderators of Treatment Effects in Randomized Clinical Trials. *Archives of General Psychiatry*, *59*(10), 877.
- Moore, L., Silva-Sanigorski, A. D., & Moore, S. N. (2013). A socio-ecological perspective on behavioural interventions to influence food choice in schools: alternative, complementary or synergistic? *Public Health Nutrition*, *16*(06), 1000-1005.
- National Cancer Institute. (2005). Theory at a glance: A guide for health promotion practices (2nd ed.)
- Ontario Ministry of Children and Youth Services. (2016). Healthy eating matters. Retrieved from http://www.children.gov.on.ca/htdocs/english/specialneeds/healthy_eating.aspx#t7
- Resnicow, K., Davis-Hearn, M., Smith, M., Baranowski, T., Lin, L. S., Baranowski, J., . . . Wang, D. T. (1997). Social-cognitive predictors of fruit and vegetable intake in children. *Health Psychology*, *16*(3), 272-276. doi:10.1037/0278-6133.16.3.272.
- Rideout, C. (2017). FNH 371: Human Nutrition Over the Lifespan.
- Satter, E. (2000). *Child of mine: feeding with love and good sense*. Palo Alto, CA: Bull Pub.

- Satter, E. (2007). Eating Competence: Definition and Evidence for the Satter Eating Competence Model. *Journal of Nutrition Education and Behavior*, 39(5).
- Singh, A. S., Mulder, C., Twisk, J. W. R., Mechelen, v., W, & Chin A Paw, M. J. M. (2008). Tracking of childhood overweight into adulthood: A systematic review of the literature. *Obesity Reviews*, 9(5), 474-488. doi:10.1111/j.1467-789X.2008.00475.x
- Thompson, A. L., Adair, L. S., & Bentley, M. E. (2013). Pressuring and restrictive feeding styles influence infant feeding and size among a low-income African-American sample. *Obesity*, 21(3), 562-571. doi:10.1002/oby.20091
- UBC Child Care Services. (2017). About us. Retrieved from <http://www.childcare.ubc.ca/about/introduction/>
- Ystrom, E., Barker, M., & Vollrath, M. E. (2012). Impact of mothers' negative affectivity, parental locus of control and child-feeding practices on dietary patterns of 3-year-old children: The MoBa cohort study. *Maternal & Child Nutrition*, 8(1), 103-114. doi:10.1111/j.1740-8709.2010.00257.x

10. APPENDIX

APPENDIX A – Logic Model

Situation	Input	Output	Outcomes
<ul style="list-style-type: none"> • 2 Child Care Centres: <ul style="list-style-type: none"> ○ Centre 1: Toddlers (18mths-3yrs old) ○ Centre 2: 3-5 years olds 	<ul style="list-style-type: none"> • Scheduled meetings • Observe centre operation on feeding practices • Research on feeding practice philosophies • Partners: David, Deb, Melissa, 2 Centres (Supervisors: Maya and Liz) 	1) Provide guidelines to staff for: <ul style="list-style-type: none"> • Better feeding practices/activities and mealtime habits. 2) Create one-page document for parents about information on how centre chooses snacks in nutrition-wise, and how they provide snacks to children.	<u>Short-term:</u> 1) Increase staff knowledge on snack selection 2) Increase parents understanding of how the centre operates in terms of feeding practices
			<u>Medium-term:</u> 3) Change in staff's behaviour in feeding practices 4) Staff is now substituting snacks with healthier snacks options
			<u>Long-term:</u> 5) Create healthy food environment for feeding and eating 6) Help children develop a lifelong healthy relationship with food 7) Lessen burden on the health care system by increasing children in daycare's nutrition status

Feeding Practices SEEDS Project

With UBC Child Care Services

Grace Bu, Soohyun Cheon, Farimah Darvishi, Hadas Haft, Negar Teymouri Bayat, Chloe Zhang

Working on this project was a great learning experience for us; not only did we have the honor of assisting UBC Child Care Services, but we also got a chance to see some adorable faces along the process.

In this project, we worked directly with Deb Thompson, Manager of Children's Programs; and with SEEDS Sustainable Program Planner, David Gill, on developing our Feeding Practice Philosophy and Guidelines for the child care centres. Our group also had the opportunity to work with the child care staffs in developing enhanced feeding practice strategies.

As we have learned in this course and in others throughout our studies, the environment is very powerful in impacting our food and nutrition choices. It was very interesting and reassuring to see that UBC Child Care Services are making efforts to ensure that the feeding environment at the centres is positive, and one that fosters a positive relationship between staff, children, caregivers and food.

As a group, we were all really excited to work with UBC Child Care Services. Some of us are parents and are familiar with challenges related to feeding young children, so this topic “hit close to home”. For the rest of us, the opportunity to help resolve issues that could positively impact children’s nutrition was appealing.





Because most of us are inexperienced in community based projects, we faced many challenges. For example, our lack of comprehensive planning experience, changes to the project goals and conflicting schedules all led to some confusion and uncertainty. This required us to be more flexible, communicate more effectively and work closely as a team. We were able to improve our abilities and skills through our work on this project.

We hope that staff at the child care centres benefit from this project as much as we have. We aimed to provide child care staff and parents with a tool for building an optimal feeding environment by using appropriate feeding behaviours, based on the Division of Responsibility by Ellyn Satter. We expect that using this tool will reduce conflicts for staff, improve communications between staff and caregivers, and we are optimistic that these will improve the children’s relationship with food throughout their life.

FEEDING PRACTICES
AT OUR CENTRE

DIVISION OF RESPONSIBILITY

 <p>We follow “We provide, Child decides”</p> <p>We create a positive food environment</p> <ul style="list-style-type: none"> - Safe and comfortable - Engage in conversation - Promote social interaction <p>We model sitting and eating at the table</p> <p>We are patient during conflict</p> <p>We encourage and support self-feeding</p> <ul style="list-style-type: none"> - Appropriate utensils - Small lidless cups <p>We offer a variety of snack foods</p>	 <p>We don't pressure children to finish their plate</p> <p>We don't restrict variety or amount of food</p> <p>We don't pressure children to eat certain foods off their plate or certain foods before others</p> <p>We don't force children to eat if they are not hungry or if they are full</p> <p>We don't reward or bribe children with sweets/toys to eat a certain way</p> <p>We don't use food to discipline children or influence behaviour</p>
---	---

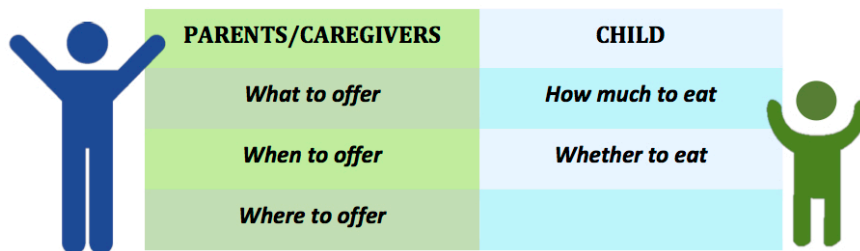
APPENDIX C – Feeding Practice Philosophy Guidelines for staff (2 pages)

OUR FEEDING PHILOSOPHY

Our feeding practices philosophy are inspired by Ellyn Satter’s (2007) “Division of Responsibility” as these have been shown to help children learn healthy eating habits that foster good nutrition for life.

DIVISION OF RESPONSIBILITY IS BASED ON:

- ✓ Children’s natural feeding abilities
 - Children eat as much as they need
 - Children progressively learn to eat the foods their parents eat
 - Children build on their natural ability to become competent feeders
 - Children learn and grow with eating
- ✓ Parents/caregivers’ acknowledgement and respect of their child’s autonomy
- ✓ Provide a positive and pleasant feeding environment
- ✓ The responsibilities of parents/caregivers and children are divided:



EVIDENCE-BASED BENEFITS OF DIVISION OF RESPONSIBILITY:

- Prevent eating disorders, obesity, anorexia, bulimia, and poor nutrition status in children
- Child learns to differentiate hunger from other distress cues
- Considers individual differences in child growth and development along international growth curves

DIVISION OF RESPONSIBILITY

MAIN POINTS

DO'S AND DONT'S



Follow "We provide, Child decides"

Create a positive food environment

- Safe and comfortable
- Engage in conversation
- Promote social interaction

Model sitting and eating at the table

Be patient during conflict

Encourage and support self-feeding

- Appropriate utensils
- Small lidless cups

Offer a variety of foods



Don't pressure a child to finish their plate

Don't restrict variety or amount of food

Don't pressure child to eat certain foods off their plate or certain foods before others

Don't force a child to eat if they are not hungry or if they are full

Don't reward or bribe a child with sweets/toys to eat a certain way

Don't use food to discipline a child or influence behaviour

The Division of Responsibility for infants:

- The parents/caregivers are responsible for *what* to provide to children.
- The child is responsible for *how much* they eat.

The Division of Responsibility for infants making the transition to family food:

- The parents/caregivers are responsible for *what, when, and where* the child eats food
- The child is *always* responsible for *how much* to eat and *whether* to eat the foods offered by the parent/caregivers

The Division of Responsibility for toddlers through adolescents:

- The parents/caregivers are responsible for *what, when, where.*
- The child is responsible for *how much* to eat and *whether* to eat or not.

APPENDIX D – Parent’s Guide to Centre’s Feeding Practices

Our feeding practices philosophy are inspired by Eilyn Satter’s (2007) “Division of Responsibility” as these have been shown to help children learn healthy eating habits that foster good nutrition for life.

DIVISION OF RESPONSIBILITY IS BASED ON:

- ✓ Children’s natural feeding abilities
 - Children eat as much as they need
 - Children progressively learn to eat the foods their parents eat
 - Children build on their natural ability to become competent feeders
 - Children learn and grow with eating
- ✓ Caregivers’ acknowledgement and respect of their child’s autonomy
- ✓ Provide a positive and pleasant feeding environment
- ✓ The responsibilities of caregivers and children are divided:

CAREGIVERS	CHILD
<i>What to offer</i>	<i>How much to eat</i>
<i>When to offer</i>	<i>Whether to eat</i>
<i>Where to offer</i>	

FEEDING PRACTICES AT OUR CENTRE

DIVISION OF RESPONSIBILITY



We follow "We provide, Child decides"

We create a positive food environment

- Safe and comfortable
- Engage in conversation
- Promote social interaction

We model sitting and eating at the table

We are patient during conflict

We encourage and support self-feeding

- Appropriate utensils
- Small lidded cups

We offer a variety of snack foods



We don't pressure children to finish their plate

We don't restrict variety or amount of food

We don't pressure children to eat certain foods off their plate or certain foods before others

We don't force children to eat if they are not hungry or if they are full

We don't reward or bribe children with sweets/toys to eat a certain way

We don't use food to discipline children or influence behaviour

APPENDIX E— Cue to Action Poster

**OUR FEEDING PHILOSOPHY:
ELLYN SATTER'S **DIVISION OF
RESPONSIBILITY****

PARENTS/CAREGIVERS	CHILD
<i>What to offer</i>	<i>How much to eat</i>
<i>When to offer</i>	<i>Whether to eat</i>
<i>Where to offer</i>	



Copyright © 2015 by Ellyn Satter. Published at www.EllynSatterInstitute.org.

APPENDIX F – Child Care Centre Feeding Practice Pre-survey

FNH 473 Project - Daycare Feeding Practice Survey

This survey is one of two surveys conducted as part of our project. These surveys will help us evaluate the effectiveness of the pamphlet that we create for each of the child care centres.

Results of this survey will be kept anonymous and help us determine child care staff's current beliefs, knowledge and confidence in communicating with parents regarding children's feeding practices at each participating centre.

Please respond to the following questions using a scale of 1 to 5, where: 1=not at all, 2=little bit, 3=neutral, 4=somewhat, 5=very

1. How confident do you feel about communicating with parents during the parent's orientation about the daycare's feeding practices?

1 2 3 4 5

Please explain your answer:

2. How familiar are you with the concept of "Division of Responsibility" in child's feeding?

1 2 3 4 5

Please explain your answer:

3. How pressured do you feel to follow parents' ways of feeding their child?

1 2 3 4 5

Please explain your answer:

4. How pressured do you feel by the parents to encourage their child to eat all the food that they have packed for lunch?

1 2 3 4 5

Please explain your answer:

5. How much do you agree with allowing a child who refuses to eat to skip a snack/meal?

1 2 3 4 5

Please explain your answer:

6. A child decides to eat their snack before their lunch, and a staff asked them to eat their lunch first. How much do you agree or disagree with this staff?

1 2 3 4 5

Please explain your answer:

7. How confident do you feel in communicating a child's eating pattern at the centre to their parent(s)?

1 2 3 4 5

Please explain your answer:

8. A staff tries to encourage a child to eat by promising to give them their favourite toy only when they finish their food. How much do you agree or disagree with this?

1 2 3 4 5

Please explain your answer:

9. How likely are you to eat with the children during snacks and meals?

1 2 3 4 5

Please explain your answer:

10. How important do you think it is to talk with children about food?

1 2 3 4 5

Please explain your answer:

Additional Comments:

APPENDIX G – Child Care Centre Feeding Practice Survey (Post-guidelines)

FNH 473 Project - Daycare Feeding Practice Survey (Post-guidelines)

This survey is the second of the two surveys conducted as part of our project. These surveys will help us evaluate the effectiveness of the pamphlet that we create for each of the child care centres.

Results of this survey will be kept anonymous and help us determine child care staff's beliefs, knowledge and confidence in communicating with parents regarding children's feeding practices after reading the Feeding Practice Philosophy Guidelines.

Please respond to the following questions using a scale of 1 to 5, where: 1=not at all, 2=a little bit, 3=neutral, 4=somewhat, 5=very

Did you fill out the first Daycare Feeding Practice Survey?

Yes / No

1. How confident do you feel about communicating with parents during the parent's orientation about the daycare's feeding practices?

1 2 3 4 5
Not at all confident A little bit confident Neutral Somewhat confident Very confident

Please explain your answer:

2. How familiar are you with the concept of "Division of Responsibility" in child's feeding?

1 2 3 4 5
Not at all familiar A little bit familiar Neutral Somewhat familiar Very familiar

Please explain your answer:

3. How pressured do you feel to follow parents' ways of feeding their child?

1 2 3 4 5
Not at all pressured A little bit pressured Neutral Somewhat pressured Very pressured

Please explain your answer:

4. How pressured do you feel by the parents to encourage their child to eat all the food that they have packed for lunch?

1 2 3 4 5
Not at all pressured A little bit pressured Neutral Somewhat pressured Very pressured

Please explain your answer:

5. How much do you agree with allowing a child who refuses to eat to skip a snack/meal?

1 2 3 4 5
Strongly disagree Disagree Neutral Agree Strongly agree

Please explain your answer:

6. A child decides to eat their snack before their lunch, and a staff asked them to eat their lunch first. How much do you agree or disagree with this staff?

1 2 3 4 5
Strongly disagree Disagree Neutral Agree Strongly agree

Please explain your answer:

7. How confident do you feel in communicating a child's eating patterns at the centre to their parent(s)?

1 2 3 4 5
Not at all confident A little bit confident Neutral Somewhat confident Very confident

Please explain your answer:

8. A staff tries to encourage a child to eat by promising to give them their favourite toy only when they finish their food. How much do you agree or disagree with this?

1 2 3 4 5
Strongly disagree Disagree Neutral Agree Strongly agree

Please explain your answer:

9. How likely are you to eat with the children during snacks and meals?

- | | | | | |
|--------------------------|----------------------------|----------------|------------------------|--------------------|
| 1 | 2 | 3 | 4 | 5 |
| <i>Not at all likely</i> | <i>A little bit likely</i> | <i>Neutral</i> | <i>Somewhat likely</i> | <i>Very likely</i> |

Please explain your answer:

10. How important do you think it is to talk with children about food?

- | | | | | |
|-----------------------------|-------------------------------|----------------|---------------------------|-----------------------|
| 1 | 2 | 3 | 4 | 5 |
| <i>Not at all important</i> | <i>A little bit important</i> | <i>Neutral</i> | <i>Somewhat important</i> | <i>Very important</i> |

Please explain your answer:

11. Having read the Feeding Practice Philosophy Guidelines, do you think this document is beneficial in developing a clear feeding practice guideline at the daycare?

- | | | | | |
|------------------------------|--------------------------------|----------------|----------------------------|------------------------|
| 1 | 2 | 3 | 4 | 5 |
| <i>Not at all beneficial</i> | <i>A little bit beneficial</i> | <i>Neutral</i> | <i>Somewhat beneficial</i> | <i>Very beneficial</i> |

Please explain your answer:

12. What more do you think could be added to the Feeding Practice Philosophy Guidelines?

Additional Comments:
