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Lisa Grabinsky for the degree of Master of Arts in Applied Anthropology presented on May 20, 2020.

Title: Current Use of Dietary Guidelines in Private Clinical Nutrition Practice and its Impacts on the Dietary Patterns of Office Workers in Mexico City.

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For the last 30 years, the population of Mexico has grappled with overweight, obesity, and associated chronic diseases, such as type-2 diabetes and hypertension. To standardize care among healthcare providers and dietitians, an official nutritional guideline was published in the early 2000s, which included a non-modifiable food-based dietary guideline in the shape of a plate called *El Plato del Bien Comer* ("The Plate of Well Eating"). In the present work I examine *El Plato's* current use among young Mexican dietitians in their private consultation with office workers to consider the impact that it is having on dietary patterns in Mexico City. I draw on participant observation in regular private nutrition consultations, in depth interviews with five office-worker patients, and a focus group of four Mexican dietitians using photo-elicitation, as well as in depth interviews with two nutrition experts who helped to develop guidelines. I illustrate the diversity in consultation styles and health education tools among the dietitians who have been mandated to use *El Plato*. I also describe the divergence in patient's "correct" eating practices, which varied greatly between the weekdays and weekends. The thesis highlights the debate *El Plato* stirred among participant dietitians and concludes with a suggestion with how Mexican officials might redesign *El Plato's* dietary guidelines today.

Current Use of Dietary Guidelines in Private Clinical Nutrition Practice and its Impacts on the Dietary Patterns of Office Workers in Mexico City

by
Lisa Grabinsky

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I understand that my thesis will become part of the permanent collection of Oregon State University libraries. My signature below authorizes release of my thesis to any reader upon request.

Lisa Grabinsky, Author

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Introduction

Obesity and diabetes are two of the major public health issues that the Mexican public health system has grappled with for the past 30 years. As a response to the nutritional transition that came with Mexico's economic growth after it was included in the North American Free Trade Agreement (NAFTA), health professionals have developed tools, policies, and campaigns to address metabolic illnesses associated with such rapid development. In order to bring a consensus in regards to the messages nutrition professionals were giving to their patients, a group of experts from a myriad of institutions —with the help of the Mexican Ministry of Health and other government officials from Vicente Fox's administration— published the NOM-043: a set of official guidelines for dietitians and other health professionals to provide nutrition and food orientation. In order to better-explain these messages, these guidelines are accompanied by *El Plato del Bien Comer* ("The Plate of Well Eating"), a food-based dietary guideline (FBDG).

Since 2005, *El Plato* has been —by federal law— the FBDG all dietitians and health professionals engaging in nutrition education must comply with and use in their consultations, workshops, talks, etc. (Secretaría de Salud 2013). Regardless, not all of them agree with it or find it useful. For example, some dietitians prefer using the Mediterranean Diet Pyramid given the abundance of scientific evidence available on its benefits for cardiovascular health and cancer and chronic disease prevention, (Lavielle Sotomayor and Thompson Chagoyán 2017).

Very few studies have evaluated the effectiveness of *El Plato* as a nutrition education tool. It is currently so embedded in cultures of policymaking, health education and promotion, and clinical nutrition practice in Mexico that it is rarely questioned. Furthermore, funding was limited for the group that developed *El Plato* and the NOM-043, so they were unable to do a proper formative research, publish any initial findings, and establish an evaluation plan.

There are a few published articles that provide an analysis and a critique of *El Plato del Bien Comer* as an effective FBDG for Mexican populations —particularly among rural and Indigenous communities. These include recommendations aimed at improving the now

canonical food guide, while accommodating the cultural diversity of Mexico (Muñoz Cano 2015; Cabrera-Araujo et al. 2018; Macedo Ojeda et al. 2017). However, these studies have failed to measure the actual impact of *El Plato* in daily food practices in Mexican populations.

No study has observed *El Plato's* impact on the everyday dietary practices of Mexican populations. As a former dietitian —trained at *Universidad Iberoamericana* in Mexico City—my research will provide a new perspective on whether, and if so, to what extent, the concepts behind *El Plato* have been integrated into the practices of dietitians and the dietary patterns of office workers in Mexico City. The study will provide valuable insight into the usefulness of this FBDG as a tool for nutrition orientation.

The purpose of this study is to examine how Mexican dietitians are currently using *El Plato del Bien Comer*. In addition, I aim to explore how patients understand and utilize the information received from their interaction with dietitians. How are dietitians using *El Plato del Bien Comer* with their patients? How are patients assimilating and applying the concepts behind it in their diet? Where do these concepts intersect with everyday food practices in Mexico City among the office worker subculture? Where do they diverge?

Given its pervasive use, it is surprising that *El Plato's* impact on dietary patterns has been so under-analyzed. This study will impact the way nutrition education is carried out by health professionals, as well as policy makers and researchers that have neglected to analyze the efficiency of the most widespread tool by nutrition experts.

Also, white-collar office workers in Mexico City —whose hectic, sedentary lifestyle takes over times and spaces meant for personal care and wellbeing— have recently become an urban subculture of their own. However, little in-depth research has been done in regards to their dietary patterns. This study provides an overview of how public health dietary guidelines that are deployed by dietitians are received by office workers in Mexico City who undergo nutritional treatment.

Literature Review

Contextualizing the use of didactic materials in clinical spaces, I present an overview of how the health education process varies among different groups, as well as the advantages of using image-based tools. In regards to the latter, Food-Based Dietary Guidelines (FBDG) have become increasingly popularized since the early 2000s, shortly after the FAO/WHO published a set of guidelines on how to develop these visual representations of culturally appropriate diets and healthy lifestyles (FAO/WHO 1998).

I also address the current public health situation in Mexico, where levels of metabolic illness have been constantly increasing for several years. Special emphasis is made on Mexico City —the country's capital— where the high availability of a wide variety of foods add to the complexities of individual choices. In response to the increasing cases of obesity and associated diseases, experts in Nutrition science worked together with the Mexican government and even —at a certain point— with representatives of the food industry to develop the previously mentioned food and nutrition orientation guidelines (NOM-043) and their corresponding FBDG (*El Plato del Bien Comer*). Drawing from semi-structured interviews with Dr. Héctor Bourges and Mtra. Ana Bertha Pérez Lizaur, both of whom were directly involved with the development of the NOM-043 and *El Plato*, I also present a brief history of these guidelines.

Health Education Tools

Health learning processes vary among different groups. They depend on several factors, such as age, level of education, and level of literacy. Particularly among adults, teaching new concepts can be challenging for health professionals. By the time an individual reaches adulthood, their learning patterns have been long set by both their individual characteristics and the social and cultural environment in which they have developed (Beagley 2011).

However, it has been shown that, "adding pictures to written and spoken language increases patient retention, comprehension, recall, and adherence, and can be especially helpful to patients with low literacy skills (Peregrin 2010, 500)." Furthermore, the use of

images or photographs to aid in health education makes consultations more efficient because food and nutrition practitioners only have a limited amount of time to see their patients. Young dietitians in Mexico City would then benefit from visual health education tools to deliver nutrition messages to a wide array of patients within the timeframe of an average counselling session.

Food Based Dietary Guidelines (FBDGs)

One of the commonly used tools for nutrition education —not only meant for children, but also for adults regardless of their literacy skills— is Food Based Dietary Guidelines (FBDG). They are developed by interdisciplinary groups of experts in agriculture, health, education, nutrition, food science, anthropology, consumers, NGOs, food industry, and communications. Their purpose is to communicate in simple, understandable language general indications of culturally appropriate foods that should be eaten and in which quantities in order to accomplish a complete, balanced diet. The shapes and colors used in each FBDG must also comply with the cultural nuances within each nation. They can also include the promotion of other healthy behaviors related to nutrition, such as water consumption and physical activity (Montagnese et al. 2017).

Though originally targeted towards nutrient deficiencies, FBDGs have increasingly been used for the adoption of healthy dietary patterns associated with preventing obesity and comorbidities, such as diabetes, hypertension, and other non-communicable chronic diseases. However, a meta-analysis published by the *British Journal of Nutrition* showed that, regardless of the extended use of such guides worldwide as a consequence of its promotion by the FAO and the WHO, little attention has been paid to evaluating their "effectiveness or monitoring their impact on population health" (Brown et al., 2011: p.16). In addition, the fact that consumers are aware of the existence of FBDGs in their home countries and the messages they contain is not equivalent to an incorporation of these concepts into their actual dietary patterns (Brown et al. 2011).

Furthermore, although dietary recommendations must be tailored to specific cultural groups, considering available foods and food traditions, special interest among the global nutrition practitioner community —dietitians, nutritionists, and physicians specialized in

nutrition— has been directed toward the Mediterranean Diet. Due to the ongoing studies on the benefits this particular diet has on cardiovascular health and cancer, Alzheimer's disease, and Parkinson's disease prevention, its concepts have rapidly made their way into Western clinical nutrition practices (Lavielle Sotomayor and Thompson Chagoyán 2017).

Obesity in Mexico

The prevalence of obesity has increased significantly since the 1980s in middle-income countries, including Mexico. This situation has led to a shift in the nutritional status of the population. Particularly among the most marginalized, low-income groups that are still facing issues surrounding malnutrition and nutrient deficiencies, a double – or even triple – burden of poor nutrition can be observed, in which overweight is concurrent with underweight and nutrient deficiencies (Batis et al. 2018). In other words, while stunting and anemia are issues still prevalent particularly among marginalized communities —mainly in children younger than 5 years old—, so is overweight, obesity, and associated diseases. However, the latter encompasses micronutrient deficiencies as well, for they tend to be the result of a diet rich in highly processed foods with a low nutritional quality.

For the last thirty years, the population of Mexico —children and adults alike— has grappled with metabolic illness. According to the most recent results of the ENSANUT National Survey of Nutrition and Health, 72.5% of the adult population and 33.2% of children are either overweight or obese. For adults older than 20 years old and living specifically in Mexico City, the prevalence of obesity alone is 33.5% (Shamah-Levy et al. 2016).

El Plato del Bien Comer

In response to the nutritional transition in Mexico that started during the late 20th Century, the *Colegio Mexicano de Nutriólogos* ("Mexican School of Nutritionists") gathered a group of experts in 1995 to analyze and reach a consensus among the different tools that had been employed all around the country for nutrition and health education purposes. From this workshop, a proposal emerged that contained guidelines for health professionals involved in nutrition orientation and education (Casanueva et al. 2002).

After a few years of meetings, the group of experts —who called themselves the *Torre de Babel* ("Tower of Babel") because they came from different health institutions and had different ideas— was finally able to schedule a meeting and present their proposal to the Dr. Julio Frenk, who was the Minister of Health at the time and pushed forward the approval and eventual publication of these set of guidelines as the federal law: *"Norma Oficial Mexicana Nom-043, Servicios Básicos De Salud. Promoción Y Educación Para La Salud En Materia Alimentaria. Criterios Para Brindar Orientación."* ("Official Mexican Norm for Basic Health Services. Health Promotion and Education on Food-Related Topics. Criteria to provide guidance", from here on out, simply NOM-043) (Casanueva et al. 2002).

The NOM-043 was initially published as an NMX or *Norma Mexicana* ("Mexican Norm"), which means that it was not mandatory at first. According to Dr. Bourges, the *Torre de Babel* group was hesitant in regards to making the guidelines official because those types of norms necessarily encompass sanctions to those who infringe them. They felt this was not helpful in guiding nutrition orientation practices. However, Dr. Roberto Tapia —the sub-secretary of Health— was concerned about the bewilderment and confusion that roamed among health professionals. The first step towards bringing order was to make the guidelines mandatory, so they eventually went from NMX to NOM.

According to the NOM-043, health professionals must strive for their patients to follow a *dieta correcta* ("correct diet"). For a diet to be considered "correct", it must include the three main food groups that provide macronutrients (complete or *completa*), be balanced (*equilibrada)*, include a variety of foods (*variada*), innocuous for health and wellbeing *(inocua)*, sufficient for each individual's nutritional requirements *(suficiente)*, and adequate for their culture, taste, and financial resources *(adecuada)* (Secretaría de Salud 2013).

In order for a health professional or educator to successfully transmit the concept of a *dieta correcta*, they must use *El Plato del Bien Comer* ("The Plate of Well Eating", Figure 1) as a visual aid in their consultations or workshops. This stipulated plate-shaped FBDG designed by Silvia Olvera is comprised predominantly of images of culturally relevant foods, arranged into three main groups: fruits and vegetables (shown in a green section of the plate), cereals (shown in the yellow third), and legumes and foods of animal origin (shown in the remaining brick shade of red third, which is subdivided in these two groups).

Figure 1 The most recent version of "El Plato del Bien Comer" (Secretaría de Salud 2013)

The use of these specific colors is meant to facilitate food recognition when working with children or illiterate groups (Vargas and Long-Solís 2005, 177). It is also noted that accompanying the plate there are utensils, certainly to ground the idea that it is a plate of food and not a pie chart. The presence of a full set is meant to represent an aspirational behavior for rural populations that traditionally eat using corn *tortillas* and a spoon as their only utensils. Also, fats and oils —other than a small stack of peanuts portrayed in the legumes group— are not included in *El Plato* to discourage their consumption (Muñoz Cano 2015; Vargas and Long-Solís 2005, 177).

Prior to the development of the proposed guidelines, the most relevant antecedents that laid the groundwork for both the NOM-043 and *El Plato* were the short-lived *Sistema Alimentario Mexicano* (SAM) government program and the *Sistema Mexicano de Alimentos Equivalentes* ("Mexican System of Equivalent Foods"). It was at the end of José López Portillo's presidential administration that SAM was implemented as a self-sufficiency program that addressed all aspects of the food production system of Mexico but was "truncated by the 1982 debt crisis (Gálvez 2018, 77)". On the other hand, the *Sistema Mexicano de Alimentos Equivalentes* was based on US dietitian Ruth Simonson de Orellana's food exchange lists that she adapted from the American Dietetic Association (now Academy

of Nutrition) for her work as the head of the Nutrition department at the *Centro Médico ABC* in the 1970s (Pérez Lizaur et al. 2012).

Dietary Patterns in Mexico City

The results from the ENSANUT MC 2016 show that prevalence of overweight and obesity is still higher in urban areas than it is in the rural ones even though, compared to the 2012 ENSANUT, the gap has been closing rapidly (Shamah-Levy et al. 2016). In an enormous and chaotic city like Mexico City, its 20 million inhabitants, unsurprisingly, face difficulties procuring healthy foods that fit their budget and their spare time for cooking and exercising. As the capital city and a center for trade, one can find a wide array of foods that are continuously supplied, and the diet of the average *capitalino* is far from monotonous. These complexities among urban dietary patterns are commonly referred to as "food modernity" (Bertran 2006).

Though not specifically focused on office workers, Miriam Bertrán's research on dietary patterns in Mexico City provides a general description of food, behaviors, and perceptions within the population, stratified by socio-economic status. Regardless of the diversity in dietary patterns among the population, Bertrán notes commonalities of urbanization within the *capitalino* diet. She also points out how the budget for food changes from weekdays to the weekend, as well as whenever there is a celebration (Bertran, 2016).

As the white-collar middle class in Mexico City continues to grow, so do health issues related to the poor quality of life associated with office work and characterized by sedentarism, weight gain, eating in front of a computer, long hours of fasting and high levels of stress (Nájar 2017). Thus, office workers in Mexico City comprise a relevant percentage of the population that seeks the services of a dietitian.

Methods

Given the previous background and the gaps in the literature in regards to *El Plato's* use among Mexican dietitians, its impact on shaping patient dietary patterns, and the diets of Mexico City office workers, the current study was designed to address the following questions through a mixed-methods approach:

- How is *El Plato del Bien Comer* currently shaping nutrition education in Mexico City?
    - How do dietitians in Mexico City use *El Plato del Bien Comer* in their clinical practice and consultations?
    - What other tools have they found useful for transmitting the nutrition concepts related to *El Plato*?
    - How are office workers in Mexico City —who are undergoing nutritional treatment— assimilating and applying the underlying logic behind *El Plato* to their diets?
    - How do these concepts relate to everyday food practices in Mexico City among office workers?
- What are the most frequently consumed foods and beverages among middle class office workers in Mexico City? How often are these foods and beverages consumed?

During the Summer of 2019 —after almost 15 years since the publication of the NOM-043 and the inclusion of *El Plato* in public and private nutrition orientation practices, Nutrition degree curricula, and even free elementary school textbooks and food industry labeling—, I recruited a group of four young adult Mexican dietitians that held their private practice in the west-central area of Mexico City[1] and who graduated from Nutrition programs at diverse universities in Mexico within the last 10 years. I engaged in participant observation at each of the dietitian's consultation offices during one of their patient's normal counselling sessions and led one virtual focus group.

[1] Comprised of the following delegations (*delegaciones*): Cuauhtémoc, Miguel Hidalgo, Azcapotzalco, Álvaro Obregón, and Cuajimalpa

Parallel to this, I sought out five people working in office spaces in the same area, who were currently undergoing nutritional treatment with one of the previously mentioned dietitians or with an external one. They filled out the Food Frequency Questionnaire (FFQ) in order to assess their dietary patterns. Additionally, patient participants were asked to take pictures of their meals (breakfast, lunch, dinner, and *colaciones* or snacks) two days per week for two weeks with their smartphones. One of those days had to be a weekday and the other one, during the weekend. Taking pictures instead of writing a food journal reduced participant time burden. This method is known as photo-elicitation, and I afterwards used the photographs for both the dietitians' focus group and semi-structured interviews with each patient participant as prompts to incite conversations in regards to lifestyles, food choices, and their impact on health and wellbeing.

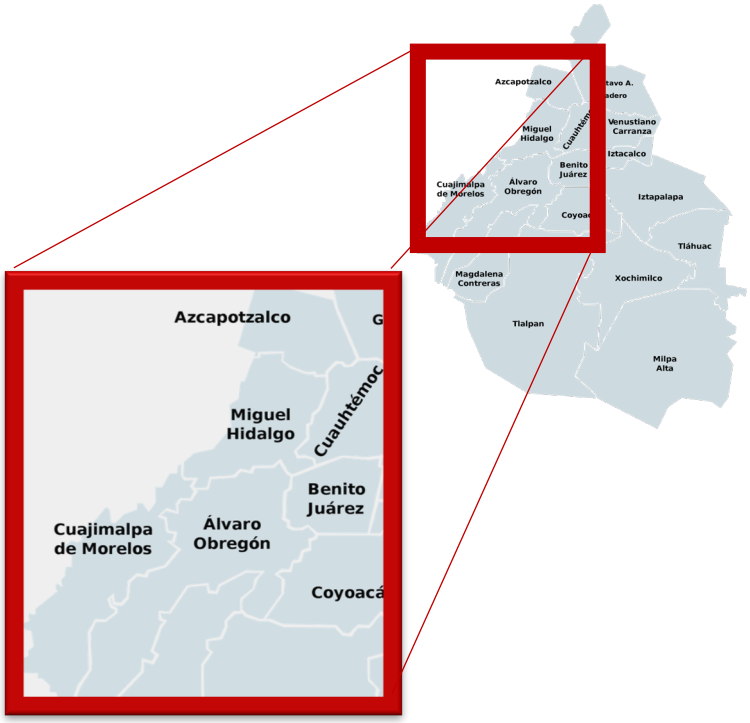

Figure 2 The west-central area of Mexico City

Finally, I also reached out to Dr. Héctor Bourges from the National Institute of Nutrition and Medical Sciences "Salvador Zubirán" (INCMSZ for its acronym in Spanish) and Mtra. Ana Bertha Pérez Lizaur from *Universidad Iberoamericana,* who consented on being cited. They were both members of *Torre de Babel,* so I performed a retrospective study on *El*

Plato's history through in-depth semi-structured interviews with them. I also addressed their current opinions on this tool, as well as their recommendations —if any— for improvement.

Having worked for two years in a private consultation office with a dietitian who preferred using the Mediterranean Diet Pyramid to *El Plato* (while also having to have a poster of the latter hanging from the office's wall for all patients and/or their companions to see), I initiated this study with existing awareness that not all dietitians may be using *El Plato* as intended. I have personally used both tools while providing health and nutrition orientation to patients, especially to office workers. In addition, for the majority of time I worked with this dietitian, I also worked a second administrative, white-collar job at an office. Thus, I have an insider's perspective to both narratives up to a certain point. However, my embodiment of the dietitian experience weighs more heavily than the office worker patient one. In other words, although I worked at an office and engaged in similar daily dietary practices as this study's participants do, never in my two years did I live through a nutrition counselling session as a patient nor did I have to follow a special diet. I hoped for the research to shine a light on the struggles of undergoing nutritional treatment in the midst of a hectic, busy, and fast-paced lifestyle, which would provide a more holistic vision of the dietitian-patient relationships.

Population and sampling

For this research, I recruited four dietitians who are currently practicing clinical nutrition in Mexico City, together with one adult patient of each of the participating dietitians (four patient participants in total). In addition, I sought and gathered five office workers undergoing nutritional treatment, and I interviewed two of the nutrition experts that were responsible for both the design, development, and implementation of *El Plato del Bien Comer* within the NOM-043, for a total sample of 15 participants. Because this is an ethnographic study, the number of participants is not meant to be representative of the population of dietitians and office workers in Mexico City. Instead, a small sample provides an opportunity for in-depth data collection and analysis.

As for the dietitians, the participants had to be Mexican citizens, have acquired a Bachelor's degree in Nutrition within the last 10 years from a Mexican university, hold a

valid professional license *(cédula profesional),* and provide private nutrition consultations in the west-central area of Mexico City, where there is a large concentration of office spaces. Dietitians and office worker patients were selected using social media and targeted snowball sampling (Stern et al. 2017; Dusek, Yurova, and Ruppel 2015).

Recruitment

Being an insider, I have access to several Nutrition expert and dietitian Facebook and WhatsApp groups. Because alumni from the Nutrition program of *Universidad Iberoamericana* are the informants with which I have an easier access to, so a selection based on key informants alone would lead to a biased sample.

In order to have a wider, more diverse perspective on *El Plato* as an active tool for nutrition consultations in the west central area of Mexico City, I utilized Mexican Facebook dietitian groups, WhatsApp, and LinkedIn to recruit volunteers for the study. As for the Facebook groups, I posted the recruitment flyer on "*NUTRICIÓN CON CIENCIA", "Bolsa de trabajo nutricionistas México", "Unidos Por La Nutrición", "Nutriólogos de México"*, and *"Nutrias Ibero 40 Aniversario"*. I also shared the information on a WhatsApp group of diabetes educators I belong to, most of whom are dietitians. On LinkedIn, I shared the information as a public post.

For those dietitians that responded to the post and passed the initial screening, I stated my interests in engaging in participant observation during one consultation, thus including one of their adult patients in the study (18 years old or older), as well. When agreed upon, the dietitian officially became part of the sample.

On the other hand, office worker patient participants had to meet the following requirements in order to be recruited:

- Age: 20 to 45 years old
- Living in Mexico City or surrounding areas (commonly referred to as *Zona metropolitana*)
- Mexican citizenship, given that other nationalities may require additional IRB approval from international agencies
- Employment: white-collar office workers

- Own a cellphone with a camera
- Level of physical activity: light or sedentary
- Attending nutrition consultations with their dietitian on a regular basis

Office workers were recruited using informational flyers about the study, out of which I physically placed 50 color copies in the waiting rooms of each dietitians' office. Drawing from the participant observation experiences, half of the dietitian sample had a receptionist that greeted the patients. We instructed them on the participant requirements in order to offer the flyers to any incoming patients who may have met them. I also spent a few extra minutes in the waiting room of one of the receptionist-less dietitian offices talking to incoming patients about the study.

Since only two people responded to the flyer through this approach —out of which just one actually enrolled in the study—, I had to recruit the remaining four also through social media and targeted snowball sampling (Stern et al. 2017; Dusek, Yurova, and Ruppel 2015). I distributed the study information as public posts on my personal Facebook, LinkedIn, and Twitter.

I offered gift cards to total not more than MXN$500.00 (USD$25.00) to the dietitians and the patients (both the office workers and the ones whose counselling session I observed) in compensation for their time.

Finally, being an alumna of *Universidad Iberoamericana* —the first university to offer a Nutrition program in Mexico—, I had previously met both Dr. Bourges and Mtra. Ana Bertha. She was the head of the Health Department when I was in the Nutrition and Food Science, and having been part of the Student Council during the 2013-14 academic year, I already had her contact information. As for Dr. Bourges, one of my dietitian colleagues used to work as his teaching assistant for his Nutrition Physiology course; she reached out to him as my key informant and was able to help me secure an appointment.

Protection of privacy

Both dietitians and all patient participants' names are not disclosed. Instead, codes and pseudonyms are used to identify them. As for the nutrition experts —who are well-known

figures in the field of Nutrition in Mexico—, they agreed on being cited at the time of the interview.

Data collection methods

Phase 1: Participant observation at nutrition consultations

At the moment of study enrollment, I asked each dietitian to let me be present in one of their consultations for participant observation. Having agreed to it, each one proceeded to look at their schedules and find any appointments in which the patient might be open to the possibility of my presence during their counselling session. They all selected adult patients who had come at least once before instead of first-time ones to ensure that they would accept.

At the beginning of the appointment, I explained my role as researcher in the consultation and the protection of the patient's private information. Then, I asked the patient if they agreed with my presence during the consultation; if they did not, I re-assured them that there would not be any repercussions, and I would simply remove myself from the dietitian's office.

In order to make the patient comfortable, I dressed in my regular clothes instead of wearing a white coat (Wind 2008), although I brought one with me on every occasion in case the dietitian had a strict dress code. I offered to assist the dietitian in tasks related to the consultation, such as taking measurements, so as to disrupt as little as possible. Instead, however, my role as participant observer relied more heavily on the patient perspective narrative than on the clinical assistant.

Phase 2: Assessment of office worker dietary patterns

I met the recruited participant patients for the first time either at their homes or offices for an informal interview, in which I explained the tasks they had to perform, and asked them to complete a food frequency questionnaire (FFQ) to assess their food and beverage consumption. The FFQ of most commonly consumed products in Mexico was developed by researchers at the National Institute of Public Health (INSP, for its acronym in Spanish) as part of the data collection for the ENSANUT MC 2016. Frequency was measured referring to a 7 day period (Ballew et al. 2006; Instituto Nacional de Salud Pública 2016).

To complement the results from the FFQ, participant patients were also asked to carry out a photo journal of their diets for two weeks. They were asked to take a picture with their smartphones of everything they eat and drink (meals, snacks, etc.) during one weekday and during one day in the weekend. For scale, they had to make sure that in every picture they included an element with a standard size, such as a pen or a coin. Participant patients then sent the pictures to the researcher directly via WhatsApp.

The use of visual methods to document food practices in mixed methods research has been used mostly with children and adolescents because of their limited linguistic competence (O'Connell 2013; Lachal et al. 2015) and with women because they are traditionally the food providers of the family (Patricia et al. 2017). In this case, the purpose of photo-elicitation is to reduce participant burden, while providing an accurate representation of food practices during two days of the week when dietary patterns among *capitalinos* can differ significantly (Bertran 2016).

Phase 3: Focus group and semi-structured interviews using photo-elicitation results

I conducted a focus group with the dietitians to discuss the tools they use for food and nutrition education in their consultations, as well as their thoughts on *El Plato* and on how participant office worker patients carry out their diets. It had to be held via Skype because coordinating the four's personal and professional schedules to meet in person was not possible.

The purpose of the focus group was gathering data on the type of patients these dietitians usually serve, how they engage in health education practices during their consultations, what tools they used and how effective they believe them to be for the majority of their patients, and their knowledge of and opinions on *El Plato del Bien Comer.* De-identified photographs provided by the office worker patient participants were used both as a visual aid and to stimulate the general discussion. Prior to the beginning of the session, participants were asked permission for the focus group session to be audio recorded (Bernard 2011).

On the other hand, each office worker patient participant was interviewed about the photographs they took in a place that was convenient for them. I also asked each participant if the semi-structured interview could be audio recorded. The purpose of these interviews

was to gain a deeper understanding of the participants' lifestyles and dietary patterns, as well as their nutrition treatment history. I also used their photographs to elicit conversation. For each photograph they took and that they were shown in the interview, they had to specify what foods were shown, who prepared them, where were they consumed, with whom, and if there was a special occasion surrounding its consumption (e.g. a birthday, a holiday, a wedding, etc.).

Phase 4: Semi-structured interviews with nutrition experts

Finally, I conducted a series of semi-structured interviews with two of *El Plato's* creators. These interviews were designed to complement the written documentation available on the history of this FBDG, as well as their perspectives on its effectiveness after almost fifteen years of its implementation within the NOM-043.

Once again, I asked permission for the interview to be audio recorded and for the participants' consent on being cited. As a token of appreciation for their participation, I gave both participants a small gift.

Data analysis methods

Interviews and focus groups were transcribed *verbatim* in Spanish and coded for common themes using modified grounded theory (Charmaz 2005; Lofland et al. 2012). For the coding of transcripts, ATLAS.ti (version 8.4.4) was used.

FFQ results were analyzed with descriptive statistics using RStudio Pro (version 3.6.0) as the quantitative software, and reported accordingly. Because the ENSANUT MC 2016 data files are open source, I also analyzed with descriptive statistics their national FFQ results by region (North, Center, Mexico City, and South) and compared it with this study's results. For the data analysis, the items contained in the questionnaire were grouped into the same categories used in the previously mentioned national survey (Table 1).

Table 1 FFQ analysis food groups

Food Group	Examples of included foods	Category
Fruits	Banana, pineapple, orange, guava, apple, papaya, watermelon	Advisable
Vegetables	Lettuce, spinach, tomato, broccoli, carrot, corn, zucchini	
Legumes	Beans, lentils, yellow fava beans, haricot bean	
Unprocessed meats	Chicken, beef, pork, fish, and seafood	
Drinking water	Drinking water	
Egg	Egg by itself or in stews	
Dairy	Cheese, yogurt, and milk without added sugars	
Processed meats	Sausage, ham, mortadella, *longaniza*, and *chorizo*	Not advisable for their daily consumption
Fast Food and fried or greasy Mexican *antojitos*[2]	Hamburger, pizza, hot dog, *quesadillas*, fried *sopes*, tamales	
Snacks, sweets, and desserts	Ice-cream, lollipops, hard candy, corn fritters, fruit in syrup	
Sweet cereals	Corn flakes with sugar or chocolate, sweetened puffed rice, cookies, industrialized baked goods, *pan dulce*, cakes	
Non-dairy sweetened beverages	Coffee and tea with sugar, *atole* with water, fruit water, fermented milk drink, industrialized soft drinks, and soda	
Sweetened dairy beverages	Milk with sugar or chocolate, drinking yogurt, *atole* with milk and sugar	

(Shamah-Levy et al. 2016).

[2] *Antojitos:* Literally translates into "little cravings". *Antojitos* is a term used in Mexican food culture to describe small dishes that can be served either as appetizers, side dishes, or snacks, "often as street food ("Antojito | Meaning of Antojito by Lexico" n.d.)".

Ethical Considerations

This Level-2 Flex study received approval from the Institutional Review Board at Oregon State University on May 15th, 2019. IRB Number: IRB-2019-0140

Given that participant observation was carried out in a clinical setting, patient confidentiality was an ethical issue considered in negotiating my participation during consultation. In order to accomplish this, both patient and dietitian had to verbally give their consent and were provided a copy of the consent document, in which the researcher committed to change all identifiers to conceal the private information of both participants.

No additional IRB approval was needed because the study was not funded or done together with any agency, neither in Mexico nor in the US. In addition, the participant observation was done in private nutrition consultation offices, not in hospitals nor public health institutions.

Chapter 1. Office Worker Culture in Mexico City

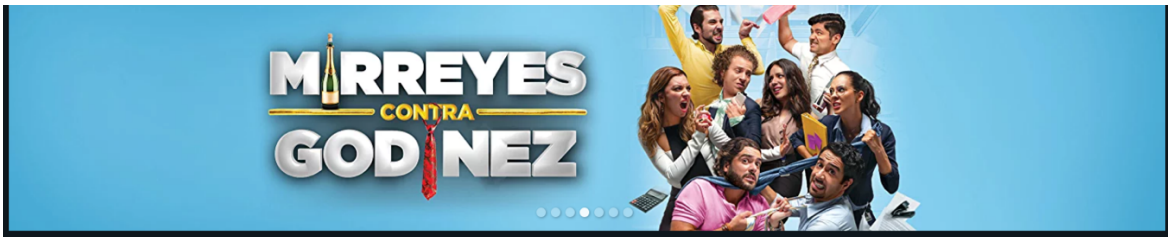

Figure 3 Banner promoting the 2019 Mexican comedy "Mirreyes contra Godínez", a movie about office worker culture and socioeconomic disparities between them and another subculture of modern-day Mexico City: "Mirreyes[3]"

According to the most recent data from the Mexican Secretary of Work and Social Welfare (STPS for its acronym in Spanish), the largest age group in the country's workforce is that of 25 to 44 years old (Secretaría del Trabajo y Previsión Social 2019). Within this age group, in Mexico City alone, and as of 2017 —which is when the STPS published the latest data—, there are 167,370 men and 102,256 women working in professional, financial, and corporate services. The nature of these types of services is associated with white-collar, office jobs, an increasing trend associated with even more young people going to college and becoming professionals in a specific area.

Needless to say, the STPS's official statistics might only be taking into consideration those workers in the formal sector, which means that employers are obligated to provide *prestaciones de ley*[4] to their employees. Unfortunately, this is not the case for a large number of employees. Smaller businesses, startups, or companies that hire employees via outsourcing might be considered informal, so employers are not bound to provide the *prestaciones de ley.* Furthermore, this increasing population of young professionals with college degrees are the

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[3] "*Mirreyes*": Popular term used to refer to upper-class, wealthy people in Mexico City, who have a tendency to spend large amounts of money in parties and alcohol. "*Mirrey*" stands for *"mi rey*" or "my king", which is how they often refer to each other.

[4] *"Prestaciones de ley"*: Employers in the formal sector must comply with providing to their employees benefits and public services. Some of these are maternity leave, days of rest, seniority, a vacation period, indemnity for unjustified layoff, healthcare provided by either the Mexican Institute of Social Security (IMSS) or the Institute of Security and Social Services for State Employees (ISSSTE) (*Procuraduría Federal de la Defensa del Trabajo 2018*).

ones who will most likely become part of the informal sector from any area, succumbing to the need to take on underpaid, temporary jobs in order to make ends meet (Bertran 2016, sec. 186).

Paired up with the increase in young professionals employed in office spaces, between 2006-15 the prevalence of high sitting time (≥ 420 minutes/day) increased by 8% in Mexico City. In addition, "men, those aged 20–49 years, overweight/obese individuals, participants with high levels of glucose (survey finding), those who perceived their jobs to be low intensity, students, working people, and participants with the highest educational level were more likely to be in the highest sitting category (≥ 420 minutes/day) (Medina et al. 2017)". In other words, in the recent years that more people aged 20-49 with an educational level higher than high school began working low-intensity jobs —such as a conventional desk job at an office—, the prevalence of high sitting time increased, which is associated with a high risk of metabolic illness, regardless "of total reported physical activity (Medina et al. 2017)".

Popularization of office worker culture through various forms of media in Mexico City has been prevalent since the 1960s, when a popular *telenovela* called "*Gutierritos"* aired on national television. In it, the main character is an employee at an office, who is constantly humiliated by his boss, his wife, and his children. During that period of time, *Gutierritos* was the popular term used to refer to white-collar workers in Mexico City (Nájar 2017). Following the overflow of young professionals saturating the job market and the boom of social media at the beginning of the 21st Century, the term made a comeback and evolved to *Godínez*. This name might have come from either a character in the popular 80s sitcom "*El Chavo del 8"*, in which Godínez is a boy who is always distracted and does not get good grades in school, or from the Latin American Spanish dubbing of "The Simpsons", where Homer references a coworker named Godínez who constantly sets a bad example for him (Nájar 2017). One of the elements from the *Godínez* subculture that receives the most mockery from social media users is their dietary patterns, as well as their usually failed attempts to eat healthier (Fig. 4).

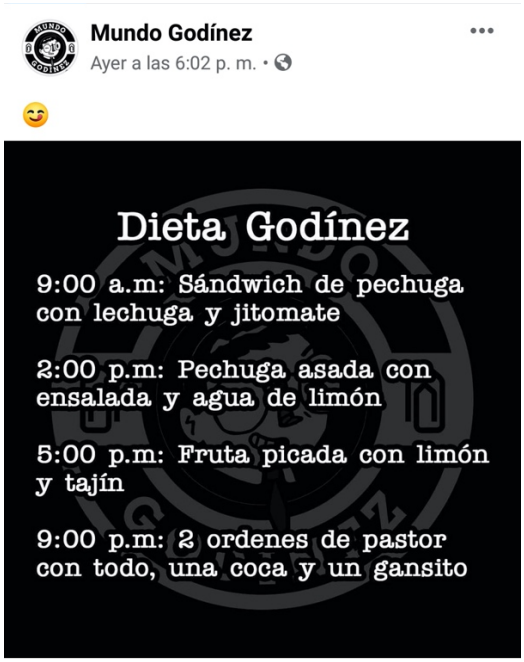

Figure 4 Facebook post mocking the "Godínez Diet"[5]

Drawing from past experiences as both an office worker and a dietitian who saw office worker patients, a working day goes from 9 am to 6 pm with an hour or two to eat lunch from Tupperware containers, an employee cafeteria, a *fonda*, or a street vendor. Certain jobs —such as information technologies or government agencies— require employees to stay later than 6 pm and even work on the weekends. Furthermore, busy, stressful working schedules prevent office workers from maintaining their eating schedules, let alone cooking, and exercising, the latter due to the physical and mental exhaustion these routines cause. This stressful, hectic, and sedentary lifestyle generates a myriad of health issues, which range from gastrointestinal diseases (gastritis and colitis being the most common) to metabolic illness (obesity, cardiovascular disease, and diabetes).

[5] Translation of the text embedded in the image: "Godínez Diet: 9 am: Turkey breast sandwich with lettuce and tomato; 2 pm: Roasted chicken breast with salad and lemonade; 5 pm: Chopped fruit with lime and *Tajín* brand powdered chili pepper; and 9 pm: Two *Pastor* taco orders with all the toppings, a Coke, and a *Gansito* industrialized pastry."

Figure 5 Nescafé advertisement in a subway station in Mexico City that reads: "In Mexico, 'Godinear' is a classic". Here, the term Godinez is used as a verb.

The purpose of this chapter is to provide an overview of the real life of office workers under nutritional treatment in the west-central area of Mexico City. I touch upon their daily routines and diets and how these shape their social relationships, both in and out of the office, as well as their personal motivations for seeking the services of a dietitian, benefits and constraints of following a diet or a meal plan given their resources and available options, and the way they interact with the concepts learned from their dietitians.

In general, physical appearance and weight loss were the initial motivators for seeking the services of a dietitian, especially after major life changes: marriage, migration, a family death, or the incursion into the workforce. As office worker patients carry out constantly and consistently with their treatment, the focus of their motivation changes, along with their own language to refer to their dietary practices and their bodies.

However, the ever-increasing food offerings — characteristic of any large city— adds complexity to food decisions: within their wide array of food options, these individuals struggle to find a balance that satisfies personal taste, nutrition advice, convenience, and social relationships. This, in addition, clashes with their hectic office worker lifestyle, regardless of alleged flexibility (e.g. home-office schedules that take over times and spaces meant for personal wellbeing). They must navigate Mexico City's traffic 1-3 hours per day only to sit alone for several hours at a desk. Not having enough time nor energy to cook anything more complicated than a scrambled egg or a protein shake, these office worker

patients often rely on a third party to assume the role of food providers: parents, spouses, domestic employees, or food delivery apps. Furthermore, dynamics change over the weekend: sleeping in, spending quality time with friends and/or family, or running errands that they cannot attend to during the week become priorities over strictly following a meal plan.

The "*Godínez*" Lifestyle Reality

Navigating Mexico City and its office spaces

Sara —a 36-year-old actuary— and her husband live in Huixquilucan, a municipality from the State of Mexico that comprises the Metropolitan Area of Mexico City. Their apartment is located in a new residential building that can only be accessed through a 20-minute car drive from the highly urbanized Interlomas neighborhood. In fact, when I went to interview her the morning of August 11th, 2019, she asked me to arrive to the Interlomas Krispy Kreme shop, so she could pick me up because GPS technologies do not accurately give directions to her address.

Figure 6 Indoor soccer field inside the Galerías Reforma office complex

She works at a small office inside the *Galerías Reforma* plaza —*"donde estaba la pista de hielo" (*"where the ice rink used to be", and now, it is an indoor soccer field that employees from the offices use after work)—, located in Santa Fe, a neighborhood in the Cuajimalpa delegation that has a high concentration of corporate buildings. Except for a

veterinarian, a Jenny Light nutrition center that replaced a convenience store, a beauty salon, and a little music school, most of the premises are office spaces. On average, it takes Sara 30 minutes to drive from her apartment to *Galerías Reforma* every morning.

According to the United Nations, Mexico City and its Metropolitan Area is considered one of the biggest cities in the world, with 21,581,000 people currently inhabiting it (United Nations 2018). With such an immense population that is expected to continue growing, improving roads and the public transportation system to efficiently mobilize large numbers of people has not been an easy task. This is worsened by the fact that since even more of the population within the largest group of working age has also increasingly transitioned into low-intensity jobs, as well as women entering the workforce and a need for manual (construction, gardening, etc.) and domestic labor has mobilized populations from outside the city into Mexico City, even if it is just for the day.

Given the chaotic nature of rush hour traffic in Mexico City, along with an increased awareness on the need to engage in sustainable and environmentally friendly practices, there has been a trend among businesses to implement a model of home office schedules. Such are Elena's and Martín's cases.

Elena is a 29-year-old digital marketer, whose job entails doing workshops and courses with associated agencies in Polanco (Miguel Hidalgo) and in La Roma (Álvaro Obregón), while the main office is located all the way up in Bosques de las Lomas (between Miguel Hidalgo and Cuajimalpa). Since she lives with both her parents and her younger sister in Polanco, she is able to continue working from home whenever she has to attend a workshop or a course instead of having to drive 35-40 minutes to Bosques to do so, only to have to drive for almost an hour back home in the afternoon.

If she does home office and gets hungry in the mid-morning, she will snack on *Sunbites* popcorn *"sin sal y sin no sé qué"* ("without salt and without I don't know what"). She will also order lunch from a vegetarian restaurant through the UberEats app and/or have something previously cooked by the domestic employee who works at her apartment. Doing home office does not translate into her levels of stress decreasing to the point of not having to rely on a third party to satisfy her food needs. Also, because all the members of her household would be in their respective jobs while Elena stays working from home, she eats

both meals alone, whereas at the office, she would eat in the company of her coworkers. On the plus side, she has more freedom to act on the feelings of physical hunger that she would otherwise have to ignore when jumping from one meeting to the next and that could potentially cause a damage to her health. Once again recalling from my prior professional experience, I had observed that headaches, digestive issues (gastritis, reflux), or even altered glucose levels are some of the most common immediate issues that arise from prolonged and consistent long periods of fasting while under the stress of office work.

In contrast to the way we saw the convenience of home-office schedules for Elena's job tasks, for Martín —a 23-year-old Marketing and Communications undergraduate student at the Tecnológico de Monterrey (Santa Fe campus)— this flexibility allows for his full professional development and for strengthening family relationships. He is about to graduate and works part-time at an ice-cream company in Bosques that allows for him to go to class in the afternoons/evenings and to work from his home located south of the city in El Pedregal on Fridays, relieving him from having to commute for the total of 3 hours he normally would when he has to come to the office and to school. When he does not have class in the afternoons, Martín has the option of going home to have lunch with his parents and continue working from his living room.

Even though the home-office schedule accommodated his lifestyle, the week I had gone to see Martín for our final interview was actually his last one working for the ice-cream company. He was about to graduate college and had been working as an intern hired through an outsourcing agency. Since the company was not currently hiring new plant personnel, his future career in that job was uncertain. Therefore, he had been able to get a more stable job that offered a better salary, benefits, and was close to his parents' home, so he resigned. Since the dietitian he had been seeing was within Bosques, he was going to have to look for a new one closer to his home if he wanted to continue treatment.

Home-office models are seen as alternative ways of work that provide flexibility for the employee that in turn translates to an increased motivation and productivity on account of a significant decrease in stress, which can oftentimes be related to transportation costs, as well as childcare and even food and clothing costs (Hill, Ferris, and Märtinson 2003). As such, these work models should be conducive to the onset of low-stress lifestyles that lead to

individual health and wellbeing. For both Elena and Martín, a home-office schedule relieves them from 1 to 3 daily hours of sitting down in their cars while facing the stress of Mexico City's traffic to get to Bosques from wherever it is that they are commuting from (home, school, another office), and instead, allocate that time and energy for other activities, which may or may not be work-related.

For Martín, it provides him with the flexibility to finish his college studies and obtain a degree, with which he will be able to become a professional in his area. Unfortunately, no matter how attractive for his mental health, family life, and professional growth having a job that allows home office schedules is, company hiring policies that rely on outsourcing agencies that generate a quick turnover of underpaid employees represent an enormous risk for Martín's future financial safety.

For Elena, working from home provides her with a less hectic schedule that allows her to listen to her body's needs and satisfy them on the spot, regardless of her decision to rely on a third party to obtain the food she requires. However, working often from home could lead to feelings of isolation and the impact these could potentially have on her mental health. Her specific family life happens after working hours, when her parents and sister return from their own jobs, so this is in particular might not be something Elena benefits from by doing home office.

Eating is a bio-psycho-social act, meaning that it is more than just a physical need. It is also an act that has an impact on a person's mental health and provides an avenue for socializing. The NOM-043 emphasizes eating "relaxed, tasty, in company of someone, preferably with family (Secretaría de Salud 2013, 23)." A calm and attractive environment in the company of others makes the human brain perceive eating as a pleasurable act in and of itself, "and as the body gets pleasure, it registers that it is eating and at some point will signal that it has had enough to eat (Vogel and Mol 2014)."

We see in both Elena's and Martín's cases that home office options can be a double-edged sword. The freedom and flexibility of allocating time from their work schedule to perform home-bound tasks does not necessarily translate into a lifestyle that is conducive to long-term overall health and wellbeing beyond diet. This situation, however, is not exclusive to home office work models. Though her job does not provide this option, when I arrived on

the evening of August 8th, 2019, to interview Jessica —a 33-year-old art studies expert— at her apartment in Anzures, she was dealing with a work emergency on the office laptop she had to bring home that day. Otherwise, she would have normally exercised for about 20-30 minutes in her living room. Even when the work day is supposed to be over, Jessica's job obligations find their way into her home, preventing her from engaging in activities that she feels provide a benefit to her health. Thus, she is unable to comply with one of the NOM-043's messages that accompany *El Plato*: "Accumulate at least 30 minutes of physical activity per day (Secretaría de Salud 2013, 23)."

Certainly, today's advancements in communication technologies make it easier for professionals to be constantly engaging with their work regardless of their location. Furthermore, taking advantage of these technologies instead of depending on fossil fuel-based transportation significantly decreases one's carbon footprint. The downside, however, is that the lines between work and rest, office and home, become blurred to an extent that people's jobs and work routines insidiously take over times and spaces meant for personal wellbeing, such as exercising and sharing meals and moments with others, elements that though not explicitly present in *El Plato*, are some of the key messages the NOM-043 aims for health professionals to transmit.

Eating at the office

On July 29th, 2019, I visited an office in Santa Fe to meet Jorge —a 36-year-old accountant— for our first session of the study. We originally had agreed upon me arriving to his office between 4 and 4:30 pm. However, a meeting he had scheduled at 1 pm got pushed back until 4 pm. Thinking it would only last one hour, I arrived at the lobby of the corporate building where Jorge's office is located at 4:50 pm. After registering with the receptionist and because I came for a personal matter, I had to wait for a few minutes for Jorge to rush downstairs, escort me to his office, unlock an empty conference room for me to sit in and wait for him, and return to his meeting, which ran for another 30 minutes.

After I left Jorge's office at around 6:30 pm, he probably remained working there for at least another half an hour, making sure he eats his afternoon *colación* either at his desk or in his car while driving home. Otherwise, it is likely for him to succumb to the cravings he

usually gets when he leaves the office in the evenings, and end up having dinner at a *torta*[6] street stand close to his apartment or getting a cup of *Maruchan* instant noodle soup at a convenience store. If he does have time to eat his *colación* at the office, he cannot always do it at his desk in the presence of his coworkers. For example, whenever he brings chopped papaya in a Tupperware container as a snack, he has to go eat it somewhere else in the office, such as the kitchenette where he and his colleagues usually eat lunch together. This happens because his desk neighbor dislikes the smell.

This is not the only moment in Jorge's workday routine when his special diet has represented a barrier in the social relationships with his peers at the office. He mentioned that on Fridays he and his coworkers do not bring their lunches from home and instead enjoy eating at one of the restaurants near the corporate building. Sometimes they choose one with available options that match his diet, but if everyone is craving *Taquearte*, *"pues ya me amolé"* ("well, I am screwed"), and the healthiest thing he can order there is an *alambre*[7] and not eat the tortillas.

Bertrán (2016) notes that the conundrum Jorge goes through every Friday at lunchtime is a phenomenon called the paradox of "food modernity" —a phrase coined by Jean Pierre Poulain— and is common in contemporary urban societies, where there is an abundance and a variety of food options that is constantly changing and increasing. This, in turn, makes dietary decisions more complex because when an individual has to choose what to eat, seemingly contradictory ideas encounter each other: hedonism, pleasure, and gastronomy versus health and corporal image, all of this usually embedded in a social context. Every decision that is made involves a certain amount of risk in exchange for some benefit, and performing an extra task to try and find a balance that counters the risk seems to be the only way to feel satisfied with one's decision (Bertran 2016, secs. 518–520).

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[6] *Torta:* Mexican sandwich done with a *bolillo* or *telera* bread (both similarly made to resemble an individual-sized baguette). It usually comes with some type of meat.

[7] *Alambre:* Mexican dish consisting of pieces of various meats (both lean and processed), peppers, onion and cheese

Jorge's Friday lunches with his coworkers exemplify Bertrán's take on food modernity: eating lunch with his coworkers knowing that there is a risk for them to choose a restaurant with no available options for him versus eating alone at the office kitchenette. When said restaurant is chosen, he attempts to find balance by choosing a menu item that comes as close as possible to what his diet prescribes and skips the part of the dish that might not.

In addition to the home-cooked meals that she re-heats in the office microwave for lunch, Jessica oftentimes gets her mid-morning *colación* —consisting of a Starbucks cup of natural yogurt with not-so-natural fruit and a granola topping (dried cranberries or apples with cinnamon and amaranth)— through the UberEats app, shown below in Figure 6. Surely, she is conscious of how much more industrialized this cup of yogurt is, especially the fruit it contains, but it is the option that matches her meal plan and is available to her at the moment when she forgets to bring this *colación* from home. Plus, she likes it; therefore, she decides to prioritize convenience and her personal pleasure over nutritional quality, while balancing her decision by choosing the option most similar to her meal plan.

Figure 7 Jessica's cup of Starbucks natural yogurt ordered through UberEats

Elena also faces the paradoxes of food modernity when she does go to her office in Bosques de las Lomas to work. There, she has the option of having lunch at the employee cafeteria, which is open from 12 to 2 pm. Since this is an early eating schedule for her and for Mexico City food culture in general, and because her work agenda is very demanding in regards to meetings, she does not always eat there and has to go outside with her coworkers to grab a meal to-go from a business nearby. Back at the office, they all eat together in their communal workspace. Fortunately for Elena, the fact that everyone cannot take time to go

sit at a restaurant and thus have to get their food to-go provides her the freedom, if need be, to buy hers separately from a salad place and still engage in the socializing aspect of lunch.

Figure 8 "Mi foto súper Godín" ("My very Godín photo") — Elena's to-go salad at her work station

If she does have time to eat at the employee cafeteria, however, her decision-making process becomes more complex. She usually goes for the vegetarian options —even though she thinks they might not be the healthiest sometimes— because the meat options *"se ven como medio dudosas"* ("they look kind of questionable"). She also avoids the rice because she would rather get those calories from something else, even though this cereal is present in *El Plato* and is consumed often within Mexican food culture due to its low cost and long shelf-life. In this particular situation, though, Elena has to prioritize her own personal taste over the nutritional quality when selecting a main course to counter the disgust and nausea she would get if the healthier meat option had a piece of skin or bone in it. So, for example, if the vegetarian option were spinach crepes, the fact that she skipped the rice and can allocate those calories towards said main course balances her decision, even if those calories come from a food that is probably richer in fat, which *El Plato* would certainly discourage (Secretaría de Salud 2013, 23).

As soon as Sara arrives to her desk at 8 am, she eats yogurt, oats, and papaya or a scrambled egg with cheese from Tupperware containers and ground black coffee with Splenda from a Thermos for breakfast "*porque si no luego con la jefa es más difícil."* ("because afterwards when my boss is here, it's more difficult."). From that moment on, she will remain at *Galerías Reforma* until 6 pm, and she will be having the rest of her meals —

except for dinner, which she eats with her husband back at home or out— either again alone in her cubicle while working or sitting with her coworkers during lunchtime (2-3 pm) at a little table in the office kitchenette, that is if she does not have scheduled meetings that will prevent her from eating when she normally would.

Figure 9 Kitchenette space at Sara's office

Martín had only been undergoing nutritional treatment for a month at the time of the study and confessed that it had been difficult for him to follow it. He jokingly mentioned missing the one or two popsicles he ate every day, which were readily available and free to him in freezers all over his office. Regardless, some changes in his eating habits were not as hard for him to do. For example, it was easy for him to develop a habit of drinking 600 ml of water from his plastic bottle several times per day and to eat an apple for his mid-morning *colación* at the office. These were possible on account of two elements in his working environment: 1) his employers give away apples at the office every day, and 2) there is a small gymnasium in the building, which no one but Martín uses *"para no estar sentado todo el día"* ("to avoid being sitting down all day"). While walking on the treadmill, he works on his computer and gets thirsty because of the exercise.

Figure 10 Martín's mid-morning colación: an apple and two 600 ml rations of water

It seems that in Martín's office his employers deal with the paradoxes of food modernity directly affecting their employees. On the one hand, it is an ice-cream company and they provide free samples at any given moment, but they also provide a healthy snack option and a space for exercising to balance and counter for the high availability of treats in the working space. That the employees decide whether or not to take advantage of these options in the midst of an environment of mixed messages is beyond the employers' control. Thus, the responsibility of making "correct" food and lifestyle choices fall on the employees' shoulders, and probably only those who —like Martín— are undergoing nutritional treatment would choose the apples over the popsicles and the treadmill over the desk.

Eating at home

Figure 11 Sara's weeknight dinner at home

During the interview at her apartment and given that a large percentage of Sara's meals are cooked by her husband, he came out into the living room and interrupted us by jokingly expressing that he was starting to feel incriminated. Overall during the week, she

follows a meal plan consisting of three main meals and two *colaciones* or snacks, one between breakfast and lunch and the other one between lunch and dinner. As previously mentioned, she eats breakfast early in the morning at her office alone while sitting at her desk, as well as her *colaciones,* which can range from a small apple or a cup of sugar-free gelatin prepared by her, to roasted chicken tacos made by her husband and a cup of berry-flavored *Ades*[8]. Her lunch, on the other hand, can be as easy as two packets of tuna and a salad —which require little-to-no preparation— to cheese pasta also cooked by her husband accompanied by a whole cucumber and a tomato. Back at home during the evening and if they do not have dinner out, her husband will once again prepare the meal, which usually consists of two portions of roasted beef with plenty of lettuce and sugar-free gelatin.

Table 2 Summary of office worker participants, their jobs and household composition

Office Worker Patient	Job
Sara (36 y/o) Lives w/husband	Actuary in Galerías Reforma (Cuajimalpa)
Elena (29 y/o) Lives w/parents & sister	Digital marketer in Bosques de las Lomas (Cuajimalpa)
Martín (23 y/o) Lives w/parents	Marketing and Communications undergraduate student and intern in Bosques de las Lomas (Cuajimalpa)
Jorge (36 y/o) Lives alone	Accountant in Santa Fe (Cuajimalpa)
Jessica (33 y/o) Lives w/husband	Art expert in Lomas Altas (Miguel Hidalgo)

All five participants lived with either spouses or their immediate families, who represent their individual support network that assist them in following their meal plans during the week. The NOM-043 makes the assumption that people cook their own meals, making a set of recommendations on cooking techniques that are traditional and "do not have a negative effect on health (Secretaría de Salud 2013, 11)." Because of their hectic lifestyle,

[8] Ades: Brand of soy beverages

office workers have a tendency to rely on a third party to assume cooking responsibilities —whether from their support network, a domestic employee, or the food industry—, unless the meal itself requires little-to-no preparation. For example, Jessica lives with her husband, and since they both work full-time, they hired a domestic employee that comes and cooks for them once per week. In this way, they only need to pack their meals in Tupperware containers and take them to their offices, hers located in Lomas Altas (Miguel Hidalgo delegation). Occasionally, some dishes Jessica takes to the office were prepared instead by her husband.

She does prepare her own weekday breakfast, as well as dinner, both of which she usually eats alone in her apartment. These two meals that she is responsible for cooking usually encompass dishes that require very little time and technique, such as a portion of "*proteína*" ("protein") in the shape of scrambled eggs with tomato and cheese, accompanied by one or two portions of *"cereales"* ("cereals") in the shape of a slice of toast and a small, colorful plate of whichever pre-cut fruits she has at home—strawberries, banana, papaya, cantaloupe— *"para llenarme bien"* ("to get properly full"). Because at the time of the study she was pregnant with her first child, she had been craving a small glass of *Jumex's Único Fresco* orange juice with her breakfast, along with her usual cup of coffee with skim milk.

Figure 12 Jessica's weekday breakfast

Figure 13 Elena's weekday breakfast protein smoothie

Precisely these types of quick and easy recipes —also interchangeably consumed for breakfast or for dinner— are one of the tools Elena's dietitian provides and that she has found more useful to keep herself motivated into following her prescription diet. She claims they are ideal for her agitated and fast lifestyle and mentioned that she would have never thought

of recipes such a packet of *Salmas*[9] smeared with labneh or a smoothie made with a *nopal*, orange juice, olive oil, and IsoPure protein powder, whose flavor she describes as *"medio horrible, pero bueno… ahí me lo tomo"* ("kind of awful, but okay… I drink it"). In regards to that smoothie, once again Elena faces the paradoxes of food modernity: she sacrifices pleasure for health and convenience.

Since the rest of the members of her household are seeing the same dietitian, Elena expressed how this is both beneficial and disadvantageous this situation can be. On the one hand, they all have to follow a prescribed diet, so family meals at home do not have to make special accommodations for her. On the other hand, if one of them breaks away from the meal plan, —in her own words— they tend to all fall together. For example, during a weeknight all four working household members may be too hungry but also too exhausted to cook, so they will all order dinner from a food delivery application, such as UberEats or Rappi. The advantage with the boom of these delivery service technologies is that it provides a much wider variety of takeout food than the traditional food-chain pizza. However, this very same ample offer of foods adds that paradoxical food modernity layer of complexity to their eating decisions, and their "healthy" take-out food choices might not please dietitians, a topic I will be addressing in upcoming chapters.

Figure 14 App delivery dinner at Elena's household

[9] *Salmas:* Commercial brand of corn saltines

Jorge is the only participant who lives alone, but his parents' home is located across from his apartment. Therefore, even though he has not lived with them for over two years, he shares meals and moments with them every day. In fact, his mother cooks the majority of his meals —including the lunch he takes to the office in his containers Monday through Thursday—, though the preparation of the meals specifically eaten in the company of both his mother and father tend to be more cooperative. For example, he will squeeze fresh orange juice while his mother cooks for him a scrambled egg with a yolk and two whites and 30 or 40 grams of ham. Jorge attributes the improvements he has been noticing in his customs precisely to keeping a close relationship with his parents. Constantly sharing these moments with his parents while following a nutritional treatment has provided a reciprocally beneficial relationship, in which his parents have started to make healthy changes in their lives and lost weight as a consequence of accommodating their son's dietary needs.

Figure 15 Jorge's weekday lunch, cooked by his mother

Martín's is an interesting case, for his meal plan has actually motivated him to experiment in the kitchen, when he would previously rely on whatever his mother or the domestic employee that works for his family cooked. When eating at home, Martín asks both of these women to keep a chicken breast or a fish fillet separated for him to prepare with lime juice, pepper, and perhaps other spices he has started to get excited about when cooking his own meals. Although his diet might appear slightly monotonous and repetitive, his curiosity when cooking motivates him to enrich his meals with different and new flavors and spices, even if the resulting dish does not taste quite as good as he expected. However, if he does not tell them beforehand and decides on the spur of the moment to come home at lunchtime, he will have to eat whatever his parents are eating, which might not always match what is

prescribed for him. Martín's curiosity in the kitchen seems like a natural defense against a repetitive diet, strengthening its "varied" aspect and pushing forward his accomplishment of a "correct" diet. Yet how could he have the agency to balance the other pillars when his meals depend on his household dynamics?

Figure 16 Martín's home-cooked breakfast with some spices he has been experimenting with in his cooking

Weekends vs. Weekdays

Over the weekend, nutrition patients' diets theoretically should not deter from what they eat Monday through Friday. However, the dynamics of their routines change significantly, making it complicated for them to follow the meal plan as strictly as they would during the week. Special events and occasions, travel, running errands that they do not have time to do during the week, taking time to socialize with friends and family, or simply sleeping a few more hours become priorities over following a meal plan. Therefore, less thought is placed on food decisions and the quality of meals may diverge significantly from what *El Plato* aims for.

During one of the weekends of the study, a couple of newlyweds invited Sara, her husband, and his family to spend the weekend in Puebla. They all stayed at a hotel that offered a breakfast buffet, "*entonces pues, ni modo: nos sentaron al buffet"* ("so tough luck: they sat us at the buffet"). While describing what she ate, she jokingly expressed having sinned by eating a small *pan de dulce* with her buffet breakfast of scrambled eggs, sausage, orange juice, beans, and a flour tortilla quesadilla. Afterwards, while strolling around the city center

of Cholula with her husband and in-laws, she bought a handful of *chapulines*[10] with lime, salt, and chili pepper from a street vendor. Later that afternoon, the whole family went to an African restaurant for lunch and —aside from what each person ordered individually— shared a few entrées. Since lunch was a little too heavy for her, for dinner with her husband at a taco shop she was not really hungry and only had one flour tortilla *quesadilla*.

Figure 17 Sara's weekend breakfast during Puebla trip

When there is not a special occasion happening over the weekend, Sara usually has more control over her meals, particularly if she eats at home. However, the weekend is also a time for her to meet up with friends and family. She might take an apple as her *colación* to the park where she will meet with a friend to chat, but if she goes to have lunch cooked by her mother at her parents' house, she gets slightly frustrated that neither of them quite understand what foods she is allowed to eat and do not always provide the options she needs, such as corn tortillas that are rich in fiber instead of flour ones that are made with shortening.

Sara had recently referred her mother to these dietitians, and even her father-in-law was considering also going to see them. Therefore, once her mother engages with a similar meal plan, she will be able to get a better sense of her daughter's nutritional needs. If she had not asked Sara for the recommendation or if she gave up on her meal plan shortly after starting treatment for whichever reason, it would perpetuate the limited options she offers her daughter when she comes to visit. In turn, this could potentially generate a rupture in their relationship.

Jessica will also take advantage of the weekends to spend quality time with her loved ones. She does this by visiting her parents or her sister and having breakfast with the latter

[10] *Chapulines:* Crickets

and her mother at a restaurant, having friends over for dinner, or have a date afternoon with her husband, with whom she rarely eats meals with during the week. On that note, if they run out of prepared food at home, they would rather eat out in a restaurant they both like —such as "Burger Bar Joint" in the *Parques Polanco* mall located close to their apartment— instead of wasting the energy they are both trying to recover in going grocery shopping and cooking a meal.

Figure 18 Jessica's weekend lunch at Burger Bar Joint

Though trying as much as possible to stick to their prescribed meal plans, Sara and Jessica's priorities shift during the weekends. Saturdays and Sundays are days when they detach from the stress of the week to enjoy the company of their families and friends, while also indulging in the occasional "sinful" treat (e.g. a pastry or *pan de dulce*, a hamburger with fries). Furthermore, in the words of Sara's husband after we were done with her interview and they were taking me to a *barbacoa* stand they both like having lunch at on Sundays: slightly diverging from the diet on weekends *"te quita esa ansiedad de tragarte esa rebanada de pastel"* ("takes away the anxiety of engulfing that slice of cake").

Precisely because navigating being on a special diet while engaging in social situations has an increased level of complexity, Martín expressed having limited himself from them to avoid as much as possible deterring from his diet. When he did, for example, attend a party at a friend's house, he would avoid drinking alcohol all night by limiting himself to sparkling water instead. Because of this situation, he got tired and went to bed earlier than his friends, who remained at the party until late. This also made him the first one to get up

the next morning and wander to the kitchen at his friend's house to eat an apple and drink a couple of glasses of water alone.

In a sense, even when not conscientiously doing it, the changes in his eating habits are isolating Martín from his social groups, who share the food culture and habits he was currently trying to modify. He is prioritizing his nutritional treatment over his social relationships during one of the only times of the week when office workers are able to spend quality time with loved ones.

Office Workers and Nutrition

Nutrition talk

One thing I began noticing while conducting interviews is the different ways the participants talked about their diets. On the one hand, those who had been consistently seeing the same dietitian for more than a year used very technical nutrition jargon and exact food quantities, along with terms that have been popularized by the media and the food industry (e.g. calories, protein, carbohydrates, etc.). For example, Jessica would refer to foods of animal origin —eggs, turkey, and cheese—, as *"proteína"* ("protein") and bread and tortillas as *"cereales"* ("cereals"). Jorge would provide exact amounts of his food and beverage portions, such as 300 ml of coffee or one and a half cups of chopped papaya.

On the other hand, Martín, Elena, and Sara, who have attended nutrition counselling services less often or not as consistently, rely more on "healthy diet" talk and talk that stigmatizes obesity and speaks negatively about the shape/size of one's body, also known as "fat talk" (Salk and Engeln-Maddox 2012). In the upcoming descriptions of their dieting history, I represent this way of speaking in order to show the negative connotations that concepts related to fatness have and how they are used in a harmful manner.

Nutrition treatment history

As previously mentioned, at the time of the study Jessica was pregnant with her first child. However, she began her current nutritional treatment as part of her 2018 New Year's resolution to lose the weight she gained after getting married. She explains how combining

her nutritional treatment with a good exercise routine helped her observe short-term changes on her appearance and medium-term ones on her overall health. She confirmed the latter with blood tests she had done for her pregnancy that came out clean. Because she got pregnant while still attending consultations, she continued treatment, but the goals shifted towards a healthy weight gain and maintaining her blood levels of glucose, cholesterol, and triglycerides in order.

She describes a mutually positive relationship with the group of dietitians she goes to, in which they constantly cheer her on in regards to the progress she makes while Jessica's wellbeing feeds back onto the dietitians' satisfaction of a job well done. In other words, the positive reinforcement Jessica receives on her progress keeps her motivated to continue her treatment, and it goes beyond simply being congratulated: seeing her accomplish her nutritional goals makes her dietitians happy because their work is helping her become a healthier person. This loop of positivity in the consultation also maintains the dietitians' motivation to provide Jessica in-depth health education, so that she will go home without any questions or doubts about her treatment, test results, or measurements.

Jorge first began his nutritional treatment four years ago, after a year and a half of living in the United States, where he gained the extra weight he was struggling to lose and was affecting his quality of life beyond just his physical appearance. "Migration erodes many social supports migrants may have enjoyed in their communities of origin (Gálvez 2018, 165)". The lack of his parents' support, the sometimes prohibitive prices fresh produce can have in the US when compared to Mexico, and other environmental factors could have been causes of the impact that living abroad had on Jorge's metabolic health.

He explained that he was able to improve a lot of his eating habits during the first couple of years, which led him to a constant weight loss tendency. However, his progress plateaued when he started struggling with getting rid of some habits. This situation — along with the fact that he became overly confident because of the weight he had managed to lose so far— made him neglect his diet again, coming back to old habits and gaining back some of the weight. Surely, by this point in his treatment, meal plans have become easier to follow, and he feels that the options have become more varied. However, as previously mentioned, Jorge acknowledges his success to his parents' support.

Similar to Jessica, Sara noticed that ever since she got married, she gained *"un montón de peso"* ("a ton of weight"). In addition, her religious wedding was coming up on February 2020, for which she borrowed a dress. However, her main motivation was the need to start taking care of herself after seeing elevated levels of cholesterol in recent blood tests and knowing that she has family history of diabetes and hypertension.

Even though her life revolves around the western outskirts of Mexico City, Sara and her husband attend once-per-month nutrition counselling services in Barranca del Muerto, a neighborhood still in the west-central area of the city (Álvaro Obregón delegation), though nearby the Southern part of Mexico City. She mentioned how convenient it is for her and her husband to go only once a month because —regardless of the short 10-minute consultation— the dietitians are very communicative and engaging with their patients through alternative media outlets, such as WhatsApp or their website. The only thing that she is unhappy about is the fact that their household expenses have increased because they have to buy different foods every week to be able to follow the meal plans accurately. This means that their nutritional treatment has not been conducive to what the NOM-043 would consider as a "correct" diet. In other words, Sara and her husband are sacrificing the adequateness of the budget for their diet to fulfill the other five pillars.

As for Elena's motivations for seeking nutritional counselling, she initially talked about how she has seen dietitians "on and off" throughout some time. However, a couple of friends recommended to her the one she currently goes to after expressing that she felt *"enorme"* ("huge") and that she had had enough of it and needed to change. Adding onto her own personal physical reasons for seeking nutrition counselling, a sudden death in the family on account of a stroke made everyone in her household want to go to see the dietitian with concerns about their cardiovascular health.

Although the four members of the household felt their progress had plateaued and Elena was about to switch to a new dietitian, she talked about the strategies employed by the current one that not only helped her stick to the meal plan and start seeing changes in her physical appearance, but also made her more conscious of the long-term benefits of her diet. She emphasized the health education tools about fat and cardiovascular health the dietitian used to explain how diet could be related to a stroke. For example, Elena talked about a model

of *"una vena, una aorta o algo así"* ("a vein, an aorta, or something like that") that gets increasingly clogged with fat until it becomes less flexible. Having gone through a related experience, she found it shocking to learn, and associates the dietitian's explanations with a newfound *"*awareness*"* that although one cannot really cure or clean the blood vessel, a change in diet can help prevent an occlusion.

When he began working at the ice-cream company, Martín would eat at least one or two popsicles per day from the free-sample freezers as a sort of *"novatada"* ("hazing"). In addition, he ate *"fatal"* ("ghastly") because he did not always eat at the office or his meals were limited to *"cosas muy engordativas"* ("very fattening things"), which were responsible for his weight gain. Furthermore, since he still lives with his parents, he talked about how his family tends to cook recipes *"muy de gordos"* ("very of fat people"), such as chicken in a creamy chipotle and mushroom sauce or Alfredo pasta. However, *"la gota que derramó el vaso"* ("the drop that spilled the glass") was noticing that a suit he wanted to wear for a friend's graduation did not fit him anymore. This situation scared him into immediately seeking nutritional counselling and begin dieting.

Martín talked about what had motivated him the most to engage with his nutritional treatment. He mentioned being interviewed in the first session about depression and medicines he took to overcome it, as well as his daily routine and when he noticed he had been gaining weight. Then, he was measured, weighted and underwent a bioimpedance analysis. After a week, they sent him a .pdf file with his results, which showed that he had a metabolic age of 39 instead of 23 and eight kilograms of fat surrounding his stomach, when the average should be of four. These results scared him, so his dietitian explained to him that his case was not extreme, but he was "*empezando en el mundo de sobrepeso"* ("starting in the world of overweight").

To summarize, office worker patients tended to seek out the services of a dietitian when a major life change (marriage, pregnancy, change on employment status, migration) resulted in a lifestyle conducive to weight gain, while also recognizing the risk of other potential associated health issues that may arise. In general, they find motivation in communicative dietitians that ensure patients understand nutrition concepts that directly pertain to their own health concerns. This implies that health education tools used in nutrition

consultations can be incredibly varied and general guidelines would need to be adaptable for different populations and interests, a topic that was addressed in the dietitian focus group and in the nutrition expert interviews discussed in the upcoming chapters.

Prohibitions and somatization of diet

In the first weeks of treatment, Sara and her husband could not eat *"nada, nada de carbohidratos"* ("absolutely no carbohydrates"), but during the second week of her participation in the study, her new plan allowed her to include one slice of toasted whole wheat bread with her breakfast scrambled eggs with cheese. She described being able to finally eat that piece of bread as: *"¡Gloria!"* ("Glory!"). With that week's meal plan, she was also allowed to eat sugar-free dark chocolate, and though the dietitians did not specify an amount, she was cautious not to risk her progress and only ate *"un chocolate pequeñito"* ("a very tiny chocolate") with dinner.

Sara expressed how —after fifteen weeks of treatment— she now finds the sugary treats that would have previously given her anxiety *"súper empalagoso"* ("too cloying"). She attributes this noticeable short-term change to the fact that the meal plans forced her to quit foods rich in simple carbohydrates abruptly because *"se supone que la base de la dieta es algo químico que genera tu cuerpo, entonces si te comes un cachitito de algo de azúcar… ¡ya! Echaste a perder la dieta de la semana"* ("supposedly, the basis of the diet is something chemical that your body generates, so if you eat a little piece of something with sugar, you've just ruined that week's diet").

Similar to Sara, both Jorge and Jessica mentioned that they have noticed how *"comidas (…) más chatarra, más pesadas, ya me caen muy mal*" ("more junky, heavier foods do me bad"). In other words, occasional meals rich in fats and sugars that are usually associated with special events, such as Christmas dinners or office pizza and beer parties, make them feel sick. While being pregnant, Jessica had been allowing herself to "misbehave" and satiate cravings she was getting, but she expressed that she could not do it: her body does not tolerate certain fats and foods anymore.

Though she did not explicitly state that her dietitians had banned added sugars from her diet, Jessica also consumes products *sin azúcar* ("without sugar") on a daily basis: artificial sweeteners (Splenda) with her coffee, sugar-free Coke, sugar-free Turín chocolate, and sugar-free meringues.

In Elena's case and since her concern was cardiovascular health, fat was *"mala"* ("bad") and chose to snack on salt-free industrialized popcorn. Because she learned from her dietitian that Splenda was *"pésimo"* ("the worst"), she instead added sugar to the black tea with milk she enjoys drinking on the weekend.

At the end of Martín's interview, I expressed to him my concerns about how restrictive and limited his meal plan seemed to be, especially after he mentioned how tired he had been feeling. He replied that he had a trip to the beach planned in November and wanted to look good, so he had asked his dietitian for a very intense meal plan. However, he did realize by engaging in the study that he had been skipping meals —specifically dinner after a day of work and school—, which might have further contributed to his lack of energy.

In my personal career as a dietitian, I learned to identify signs of warning for an eating disorder, in addition to the skills I developed to estimate caloric content of a meal. Noticing from Martín's pictures that he was probably consuming an estimated total caloric intake that appeared insufficient for a 23 year-old man who keeps active as much as he is able, along with the stigmatizing language he used and his mentioning during our interview that he had gone through a depression, I could not remain silent. It was my ethical responsibility as a health professional intervening before his diet started having a greater negative impact on him than just exhaustion. In response, Martín agreed on expressing both our concerns to his dietitian in an upcoming appointment and request a change in his meal plan.

Conclusion

The road towards accomplishing long-term health and wellbeing is long and full of complexities, which participants must maneuver with skill just like they would rush hour traffic in Mexico City. Elements of the environment that further push them from following prescribed meal plans —especially on the weekends— are beyond their control, starting with the fact that eating is as much a social act as it is a biological one. As a social act, eating

decisions done as a group are dependent on a wide array of factors, being food culture itself the most important one. However, isolating oneself from others so as to avoid breaking away from the diet can have an impact on mental health because eating is a psychological act, too. Unfortunately, it appears that the hectic office worker lifestyle in Mexico City already managed to begin isolating them without them realizing it, and it started with the commonality among the participants of eating their *colaciones* alone in their workplace (e.g. cubicle, desk, home, or treadmill), even if there might be people close by.

Also, having an increasing offer of products in addition to mixed messages and seemingly contradictory ideas received from dietitians, media outlets, and the food industry makes every decision made in regards to eating exhausting. Office worker patients have to constantly re-arrange their priorities in order to make the most satisfying choice that should address, as much as possible, their personal taste, budget, nutrition knowledge, dietary needs (prescribed meal plan), and work/life schedule, while also maintaining healthy social relationships with those around them. When they perceive their decisions do not satisfy their nutritional treatment, these patients are at risk of stigmatizing their bodies and the foods they enjoy in a negative way, further perpetuating radical and extreme ideas in regards to nutrition, obesity, and metabolic illness.

One interesting observation about office worker meals is that quite a few of them were not even eaten from a plate. Elena's weekday lunch came in a cardboard take-out container, for which she only needed a plastic fork to eat it with. Likewise, Jorge's lunch and Sara's breakfast Monday through Friday are eaten from Tupperware containers. Should there be an adaptation of *El Plato* that addresses the influence hectic lifestyles in Mexico City have on office worker diets? If so, what criteria should be considered for the development of such a version of the FBDG? In upcoming chapters, I address how dietitians discussed the possibility of having a set of *Platos* instead of just a unique one that aims to unify the diversity of Mexican food culture.

Physical appearance seems to be a common reason for office workers to seek nutritional treatment. Weight loss and feeling "fit" are short-term results from beginning a change in eating and/or physical exercise habits. As they engage more constantly and consistently with their personal nutritional treatment, they begin to consider the long-term

benefits that a change in certain habits can have on their physical health. In the next chapter, I address more in-depth the patient-dietitian relations during counselling sessions, as well as their usual process and which moments are key in shaping the patient's experience and the outcomes of their treatment.

Drawing from the findings from this chapter, though, it is important to note that having a support network not only provides a relief from the added stressors cooking and meal prepping represent to their already hectic lifestyle, but it is also vital for the office worker patients' attachment to their prescribed meal plans. After all, eating is as much a social act as it is a biological and a psychological one, and though the messages that the NOM-043 relates to *El Plato* emphasize this, it is not depicted in the FBDG.

Chapter 2: Cultures of Nutrition Counselling in Mexico City

Being that *Universidad Iberoamericana* was the first institution to offer an undergraduate degree in Nutrition and Food Science in 1972 ("Historia de La Nutricion" n.d.), Nutrition is a relatively new discipline in Mexico. As such, guidelines for practicing nutrition were shaped to address contemporary and culturally relevant health issues. Nowadays, the training Mexican dietitians undergo has become standardized on account of the publication of the NOM-043 in 2005. Nevertheless, each dietitian —regardless of the institution where they obtained their degree from— has their own particular counselling style.

A nutrition counseling session goes beyond the ABCD[11] of a patient. Some nutrition experts, such as Dr. Alicia Parra Carriedo —current head of the Health Department at Universidad Iberoamericana—, often talk about the emotional aspects of food, adding the "E" to the beforementioned acronym. However, these indicators fail to explicitly address social, cultural, and economic aspects that not only determine a person's dietary patterns, but also their access to nutrition care, particularly if it is provided by a dietitian in a private consultation office. In addition, while working as a full-time dietitian who sees hundreds of patients each year and performs the same mechanical tasks and engages in the same medical speech over and over, one can easily lose sight of patients as human beings.

Surely, in modern-day Mexico —where overweight, obesity, and associated cardiovascular diseases are at an all-time high—, dietitians provide their services in public health clinics and hospitals for free to those affiliated with any of the government providers:

- Mexican Institute of Social Security (*Instituto Mexicano del Seguro Social-IMSS)*: available for employees working for any formal business that by law must provide basic government benefits.
- Institute of Security and Social Services for State Employees *(Instituto de Seguridad y Servicios Sociales de los Trabajadores del Estado-ISSSTE)*: available for employees from government agencies.

[11] Acronym commonly used amongst Mexican dietitians to refer to the anthropometric, biochemical, clinical, and dietetic measures of a patient.

- Popular Insurance (*Seguro Popular)*: available for employees in the informal sector and/or those who are unemployed.

Due to an increasing overflow of patients in such institutions, as well as a limited access to them in regards to time and distances, private nutrition consultation services have become a go-to resource for those struggling with metabolic illness who have the economic power to pay for these services, such as an office employee with a steady income.

In this chapter, I portray what navigating the services of a private nutrition consultation office in Mexico City looks like, especially for an able-bodied person with the financial resources to access said services. I show the overwhelming experience that accessing the premises where a dietitian's office is located can be, from the commute and the available schedules to the presence (or lack) of a reception desk and/or a waiting room.

Table 3 Summary of dietitian-patient dyad participants

	Dietitian	Patient	Office Location
1	Sofía	Leslie	Southern Roma (Cuauhtémoc)
2	Lorena	Mr. Pedro	Northern Roma (Cuauhtémoc)
3	Natalia	Claudia	Lomas de Chapultepec (Miguel Hidalgo)
4	Roberto	Norma	Nueva Santa María (Azcapotzalco)

I describe the common phases a usual nutrition counselling session goes through: establishing rapport, doing a check-in, taking anthropometric measures, engaging in individualized nutrition education —which may or may not directly include the use of *El Plato*—, and providing tools for dietary change. In each of these situations, issues arise that could potentially add onto the distress that attending biomedical services already has on individuals. I also shine a light on the power dynamics that happen between dietitian and patient during a counselling session, raising the questions of who of these two actors has agency in deciding what foods to consume as part of the prescribed diet, and how the development of the latter is negotiated.

Consultation offices and accessibility

In the west-central area of Mexico City, one can find nutrition counselling offices in a myriad of neighborhoods, from the low/middle-income Nueva Santa María in the Azcapotzalco delegation and the increasingly gentrified middle-income Roma in the Cuauhtémoc delegation, to one of the fanciest and most expensive neighborhoods in the country: Las Lomas (Miguel Hidalgo delegation). Regardless of the increasing availability of nutrition counseling services in Mexico City, patients do not necessarily attend counselling sessions nearby their homes or their jobs, such as the case of Leslie.

Leslie is a middle-aged woman, who is currently a first-year undergraduate student in the History program at the *Universidad Nacional Autónoma de México* (UNAM). She is undergoing nutrition treatment with dietitian Sofía, a woman in her mid-thirties and an *Universidad Iberoamericana* alumna. Sofía's private practice is located in Southern Roma, in an office she shares with a couple of psychologists and a lawyer. Leslie and her family live all the way up in Tlanepantla, a municipality belonging to the State of Mexico, which means they do not actually live in Mexico City. Thus, Leslie has to commute *"¡De la punta a la punta!"* ("From one tip of the hill to the other!") to access nutrition counseling services with Sofía and to access gymnasium facilities at the Asturiano Club, the latter located in Polanco (Miguel Hidalgo delegation).

In addition to commuting to the location where their dietitian's office is, gaining access to the premises while trying to get to the appointment on time could be a potential added stressor to the ones attending medical services usually has on a patient. Natalia —a woman in her late twenties and another *Universidad Iberoamericana* alumna— has a consultation room located in a corporate office building in the high-income, financial neighborhood of Lomas de Chapultepec (Miguel Hidalgo delegation). The night before the participant observation session, she texted me the location and gave me the following instructions: her consultation office is on the 12th floor, so I have to tell the person at the reception desk that I'm going to *Sláinte* with Natalia Álvarez.

The next morning, I arrived at the reception desk exactly at the time Natalia cited me, provided the information I was told, and the receptionist asked for my ID. As she enters my information in her computer, she kindly greets the cleaning lady who is working behind her.

With a smile, she hands me a badge with a printed ticket that has my full name perfectly written, and she tells me to go to the 10th floor and ask the people at the reception desk to stamp the ticket. This confused me because Natalia told me to go to the 12th floor, so I did not pay attention to her when she told me which elevator I am supposed to take. As I walked towards the turnstiles, I heard her yell at me: *"¡Ah, no! Te dijo al 12, ¿verdad? Entonces sube al 12, perdón."* ("Oh, no! She told you to go up to the 12th, right? Then go to the 12th floor, sorry!").

I got to the automatic turnstiles, and the guard indicated the location of the sensor. I placed the badge where he pointed, and the little glass door opened up. I walked towards a long aisle with five elevators on each side, and I automatically pushed the button to call for the first one to my left. However, I realized I did not actually know which one to take. The signs hanging from the ceiling were confusing and only showed floor numbers without arrows pointing to the corresponding elevators. I returned to the turnstiles and asked the guard which elevator to take to get to the 12th floor. He responded that the first two from either side, so I went back to the first one I had gone to, except that now there were several office workers with their Starbucks disposable coffee cups and paper bags with pastries waiting for it too.

When I got to the 12th floor and exited the elevator, I turned to my right and saw a reception desk with a man and a woman sitting behind it. Since I noticed some company's logo on it, I assumed that side belongs to said business, so I turned left into a long hallway with many small offices with opaque glass windows and a small sign with a number next to each wooden door. I again assumed that one of those offices must be Natalia's, yet I did not see her nor a sign on any door that might indicate that that particular one was hers. I texted her that I had arrived and went back to the elevators to wait for her. A couple of minutes later, she appeared next to the reception desk to the right. She was dressed in jeans, black Adidas sneakers, and an army-green raincoat with little-to-no makeup and her hair up in a ponytail. As she stood cleaning her calorimeter's mask with a disinfectant wipe, I asked her about wearing my white coat, to which she responded: *"Yo la neta no la uso. Prefiero que sea así más casual, más relax."* ("I honestly don't wear it. I prefer it to be more casual, more relaxed.")

Of course, not all nutrition consultation offices have such elaborate accesses to the premises. Going back to Sofía's consultation office in Southern Roma, even though it is also located in an office building where there are not only health providers, but also other types of professionals, when I stated the purpose of my visit to the doorman at the entrance, he kindly allowed me go into the elevators without registering or even showing any ID. Surely security risks increase the more populated and new an office building is, in addition to the higher the income level of the neighborhood it is located in. This would explain the need for additional security filters. However, thinking about patients who come to see a dietitian obligated by doctor's orders —such as one I address later on in this chapter— a convoluted access could be the first deterrent from continuing treatment.

Reception desk and waiting room

Having gained access to the dietitian's consultation office —either with or without ease—, the first spaces a patient encounters are the reception desk and the waiting room. Their environment and the interactions with the receptionists, other patients, and dietitians or their assistants are meant to ease any stress before the appointment. These spaces encompass a mix of messages that range from nutrition knowledge and a preview of the power structures that will develop during the session to the marketing of products that complement treatment.

Dietitian Lorena —a woman in her late twenties and alumna of *Universidad Anáhuac*— has a consultation office in Northern Roma, and it was the easiest one to gain access to. I simply walked inside and approached the reception desk, where there were three female receptionists. I approached the first two to tell them that I was there to see Dietitian Lorena. They indicated me to take a seat on one of the few brand-new black leather chairs put up against the curved wall because the dietitian was still in a counselling session.

When I first arrived to Lorena's office, I thought that I had gotten it wrong: it looked more like a pharmacy, for it had a large sign outside with the clinic's diabetes-related name, halogen lights, impeccably clean white floors, and counters in the back of the reception desk that displayed "healthy" snacks, whose wrappers resembled those of nutritional supplements

(Skinny Pop popcorn and *Susalia*[12] chips), boxes of Abbot Free Style glucometers, and a rack of eyeglass frames that are for sale. In addition, a large TV screen hung behind the reception desk and displayed a list of patients' first names whose glycosylated hemoglobin (Hb1Ac) had significantly gone down since they had started the nutritional treatment at that clinic, along with some facts about diabetes. These products and elements are certainly a marketing strategy that adds value to the counselling session, providing a convenient yet optional complement to a patient's appointment, as well as an extra source of income for the dietitian. Furthermore, similar "healthy" products for sale were present at other waiting rooms, such as Sofía's and Natalia's.

After a few minutes, Lorena came to get me from the reception/waiting room. As we climbed upstairs to her office, I noticed I was panting, even though I am an able-bodied woman in her late twenties. The clinic Lorena provides nutrition counselling sessions for is specifically targeted to people living with diabetes, who are likely to have associated complications in their cardiovascular health and the integrity of their extremities could be compromised on account of diabetic neuropathy. This office might have been the least complicated to gain access to, but it might not be accessible for the targeted patient audience.

On June 27th, 2019, around noon, I went to dietitian Roberto's consultation office. Roberto is a man in his early thirties, an alum of *Universidad Iberoamericana*. His practice is located in the ground floor of a small, old but well-kept green apartment building in residential neighborhood Nueva Santa María (Azcapotzalco delegation). I arrived quickly to the consultation office because it was a Sunday morning, so there was very little traffic. This would be a very convenient schedule for patients who work or study full-time and/or come from far away, such as Leslie. However, Norma —a woman in her mid-40s whose consultation I observed— confided in me that coming to see Roberto during the weekend *"le parte el día"* ("cuts her day in half"), plus it is not something she would like to do during a Sunday. For twelve years, she had been a journalist at *Crónica* and *El Universal*, two major newspapers in Mexico. Now, she has her own business, in which she sells vegan bouillon,

[12] Susalia is a brand of cactus (nopal) and corn-based products

palo santo, and infusions, to which she describes as “her hippie side taking over”, so she is not limited by strict and excessive working schedules during the week anymore.

The main entrance of the building was closed and where the doorbell should be, a piece of Roberto’s personalized stationary hung from the electrical wires and read that if you come for a nutrition consultation with him, you had to knock very hard on the mirrored lattice door located a couple of meters to the left. I knocked on such door and received no answer. As I waited on the street outside, Roberto texted me, asking me if someone had gotten the door for me. He personally received me since Karla — a young woman in her last year of college at *Universidad Iberoamericana* who works as his assistant— was currently measuring the next patient.

“Como tú quieras.” (“As you wish.”), Roberto replied with a smile a few seconds after I asked if he wanted me to wear my white coat. He was wearing a black suit with black shoes, white shirt and no tie, while his assistant Karla was wearing a white blouse, dark trousers, and a light-colored headband. Their dress code aimed for looking professional regardless of their respective age, while also projecting a more relaxed environment than the one a patient would find in other clinical spaces, thus preventing the “White Coat Syndrome” from altering the blood pressure measurements (Pioli et al. 2018).

Contrary to Sofía’s and Lorena’s waiting rooms, Roberto’s did not have a reception desk. During the week, patients can arrive to the main entrance and be announced to Roberto and his assistant by the receptionist from the other medical consultation offices that share the ground floor of the building with his. On Sundays, Roberto’s office is the only one operating, so either he or Karla have to be on the lookout for any arriving patients while they are engaging in a counselling session. Though during the week the arrival of patients may be more dynamic thanks to the main reception desk, the advantage of providing services on a Sunday is overshadowed by the confusion that might arise from such an intricate access to the premises, not to mention the security issues that a person standing alone on an empty street can encompass.

Consultation room(s) and dietitians

After waiting for a few minutes, the next step in a regular nutrition consultation appointment in Mexico City takes place inside the dietitian's office. These spaces and even their dress codes tend to reflect elements from the dietitian's personality, nutrition interests and opinions, and years engaging in private practice, which further shapes the overall experience of patients.

Once upstairs, Lorena and I go into her consultation room: it is the second door to the right. Lorena goes inside first because she notices that the carpet has a little dust stain next to the patients' seats and quickly tries to wipe it with her high-heel, black shoe. I come inside, and she offers me a seat across from her desk. The walls of her office are impeccably white and nothing hangs from them. The window behind Lorena's faces a wall, but there is a beautiful, green, and well-kept vertical garden on it. She sits across from me. She is wearing light-colored slacks, a blouse, a silver heart necklace with little diamonds, impeccable makeup, a polyester white coat with her name and the logo of the clinic, and her hair is tied up in a bun. I ask her if she wants me to wear my white coat as well. She replies that she has to dress up, but not me. The impeccable, light-colored and almost sterile nature of the space and her appearance matches her perfectly spread and arranged food replicas that occupy half of her desk, though contrasts slightly with their colorful nature and with laminated documents that she quickly put away when we came inside.

Figure 19 Food replicas at Lorena's consultation office

I noticed there was no scale in her office, which reminded me of my own personal experience attending a nutrition counselling session in the United States with a dietitian who used the "Health at Every Size" approach, in which one focuses on behavior changes that lead to healthy lifestyle, not on body weight or composition (Penney and Kirk 2015). I remember my surprise that the session felt more like a psychological therapy one, in which I sat down on a sofa across from the dietitian's chair to talk about concerns surrounding my diet for a little less than an hour. Though the focus of Lorena's approach is also on behavioral change, the lack of a scale in her consultation room, however, was fortuitous. It was simply located in her colleague's office, but Lorena did have measuring tape that looked like the one Sofía also uses —thick and with a body mass index (BMI) calculator.

After spending a few minutes with Norma in Roberto's waiting room, Karla came in to indicate that we could go into her consultation room for the measurements. This first office was a small square with two white walls, a window, and one blue wall with a poster explaining *El Plato del Bien Comer* and its food groups, with the *concha* and the *tamal* crossed out of "Cereals" with a black pen.

Figure 20 "Plato del Bien Comer" poster with the concha and the tamal crossed out from the "Cereals" group at Roberto's consultation office

Once Karla finished measuring Norma and the previous patients Roberto was seeing were gone, we went into his consultation room. It was wider and had orange walls and a large black desk with a bookshelf attached to it, which had a couple of guides of the *Sistema*

Mexicano de Alimentos Equivalentes and two volumes on anti-aging medicine. Roberto sat down on a black, leather chair behind his desk, while Norma sat on one of the white leather chairs across from the desk and set her bag on the other one. I took a folding chair that was leaning on a wall and placed it at the corner of the desk, facing both of them. The wall behind Roberto was a little water-damaged and had several diplomas hanging from it, most of them his, though there were a couple that belonged to his sister, who is a psychologist and with whom he shares the consultation office.

Contrary to Lorena's almost brand new and immaculate space, Roberto's matches his additional and consistent years of professional experience as a clinical dietitian in that same office, an idea that his varied diplomas hanging behind him and the technical textbooks sitting in his bookshelf aim to convey.

Phases of a consultation

Drawing from both my participant observation for this study and my own professional experience as a practicing clinical dietitian in Mexico City, I will take the reader through the phases of a typical nutrition counselling session. What I want to show is how each dietitian has adapted the almost textbook-based standardized process to their own personality, while also depicting how patients engage with each counselling style, allowing for power relations to emerge between dietitian and patient.

1. *Establishing rapport*

When I was in college, the Nutrition program at Universidad Iberoamericana included a mandatory psychology course on interview theory and techniques. The professor taught us that the first step is establishing a rapport to lower the interviewee's stress levels, and this could be accomplished by making small talk about any topic unrelated to the consultation, ranging from discussing the weather to more personal stories, depending on how well we know the person.

For example, Sofía started off Leslie's counselling session by asking her about school, her exams, and the final paper she had to write about the war between Greece and Sparta. Leslie responded that since she was so stressed by her paper, she got very anxious and

confessed to Sofía that for her afternoon snack she ate both the options that she had prescribed for her. It was either a yogurt or a chocolate; she ate both. She also confessed to having added sugar to her *agua de Jamaica*, even though Sofía told her to use Splenda or Stevia. Furthermore, she was unable to go to the Asturiano club to exercise, and she lost the charger of her pedometer bracelet among all the stuff crowding her desk, so she was unable to count whether or not she walked 10,000 steps every day. However, she was sure that she had not because she spent many hours siting down and working on her finals. She even got slightly constipated and her legs were sore because of this. Sofía gently scolded her for not counting her steps: *"¡Ibas muy bien!"* ("You were doing great!").

Another example of establishing rapport happened in Roberto's office, when Karla picked up Norma's file from the desk and asked her how her week went, to which the latter replied not that good because she currently had visits: two guys from France and a girl from Portugal. One of the French guys loves to cook, so he brought French cheese and made *paella*. Norma also cooked some "unhealthy" Mexican dishes for her guests, such as *mole* and *huauzontles* battered in flour, not to mention that they drank a lot of alcoholic beverages: wine, cognac, and *pulque*. Even though Norma tried to stick to her diet and exercise as best as she could, her friends kept teasing her, telling her that she pays money to be tortured by going to see a dietitian. On the other hand, she said that they walked a lot as well because they went hiking to the archeological site of Teotihuacan and to a region between the states of Morelos and Guerrero.

> *"Bueno, pero al menos comiste rico y elegante. Lo bueno es que caminaste mucho y seguiste con el ejercicio. Eso lo compensa. Y lo disfrutaste, es lo importante."* ("Well, at least you ate yummy and fancy. The good thing is that you walked a lot and kept on exercising. That compensates for it. Besides, you enjoyed it, and that's the most important thing.")
>
> - Karla's response to Norma's story

Afterwards, Roberto will say something very similar to Norma when she tells him about her week, adding the following: *"Te están 'chamaqueando' porque los franceses comen muchas verduras."* ("They are deceiving you because the French eat a lot of vegetables."). This statement was meant to scold Norma not because she broke her diet, but because she let herself be fooled by her European guests, who would typically have a much healthier diet.

Although the rapport Sofía and Karla tried to establish was based on simple questions that were seemingly unrelated to the patients' treatment, they were stress-charged topics for them that directly affected their progress in between nutrition counselling appointments. Leslie's and Norma's detour from their meal and exercise plans due to circumstances beyond their control weighed heavily on their consciousness, so a seemingly innocent open-ended question meant to serve as a rapport builder failed in its purpose.

2. Weighing the patient

Except for Lorena's office, all of the dietitians from my sample had a bioimpedance measuring scale, considered the "golden standard" for body composition analysis. These machines use an electric current transmitted through hand and feet electrodes that goes through body fluids, providing an almost accurate estimation of muscle and fat mass. Because of the electricity going through their bodies, patients must remove anything with metal they might be carrying with themselves. Though the electric current is very mild and cannot be felt, the moment of weight measurement through a bioimpedance test in the consultation itself can generate a discomfort in the patient, who —depending on their self-perception of agency— may negotiate with their dietitian for accommodations.

Claudia —a woman in her late 40s— had been seeing Natalia since she was at another location, and last time she had an appointment with her, Natalia had just moved into her current one. The rapport between dietitian and patient revolved around how different the office looked now, a topic most certainly related directly to Claudia's nutrition counselling sessions but that touched upon a topic that was not stress-charged for her.

As we went through her informed consent at the beginning of her session, she began preparing for her bioimpedance test. She took off her wedding ring, her Apple watch, and her earrings, and placed everything on the coffee table in front of her, where a stack of perfectly arranged National Geographic magazines laid. When it was time for Claudia's test, Natalia asked her to remove everything metal on her. Claudia pointed at the coffee table, but as she removed her black patent leather flat shoes and thick, black sweater with white stripes, she realized she missed one earring. Pointing to her ear, she explained to Natalia that she

cannot take that earing off because she just had the piercing made. Regardless, Natalia did not insist on her taking off the missing earing and still performed the test on Claudia.

Figure 21 Inside of a nutrition consultation office with a bioimpedance machine depicted in the bottom-left corner (photo courtesy of Natalia)

Karla also asked Norma to remove everything metallic and her shoes and to climb on the machine. Norma complied by removing her earrings, belt, necklace, and shoes, tossing the first three in her bag. Climbing onto the machine and placing her bare feet on the foot-shaped electrodes, a female voice with a Spanish accent immediately instructed Norma to stand still while her weight was being measured and not to grab the hand electrodes. After a few seconds, the voice informed that the weight measurement was done, cueing Karla to enter Norma's information on the computer, confirming her first and last name before starting the test. Then, the voice instructed Norma to grab the hand electrodes and stand still with her arms slightly open. As the machine was running the body mass analysis, Norma expressed how this measurement makes her feel like a lab mouse, a discomfort she had previously expressed to Roberto, who in return agreed on performing the test every 15 days instead of every week.

Sofía did not specifically ask Leslie to remove her shoes or any metals on her before climbing on to the body mass composition analyzer. When it was time for the anthropometric measures, Sofía simply indicated Leslie to go into the small changing room in the back of the room without further instructions other than getting undressed. While we waited for her to come out in her underwear with a blue, worn-out hospital gown covering her body, Sofía worked on the Excel file of Leslie's record. Leaving her flat shoes behind, Leslie stepped on

the scale, and Sofía ran the test directly on the machine's screen. Sofía was the only dietitian that instructed her patient to remove their clothes, and though doing this assures an extra level of precision when measuring weight, some patients find it uncomfortable. As Sofía measured Leslie's arm, waist, and abdominal circumferences, the latter struggled to keep the hospital gown from opening up in front of me, eventually giving up with resignation.

Bio-impedance machines can be quite expensive, but being the golden standard for body composition analysis —in other words, the most precise method for this measurement—, it is only natural that dietitians who have one aim to make the most of their investment. However, the precision of this tool is contingent upon the control of certain elements from a patient's body, such as any metals that may interfere with the electric current (e.g. earrings, watches, rings, etc.) or clothes that add weight to the measurement. On focusing too much on the machine's precision, dietitians risk losing sight of their patients' own comfort.

3. Nutrition education

When Mr. Pedro —a 71-year-old journalist living with type-2 diabetes— comes in 12 minutes late to his appointment with Lorena, I learn that the endocrinologist next door is the one who measures incoming patients' weight. Clients from that clinic hire a year-long treatment that includes consultations with an endocrinologist, a dietitian, a psychologist, and on Saturdays, an optometrist that comes to make a fundus examination. Thus, they are bound to keep going to consultations because they pay up-front. Due to his tardiness, however, Mr. Pedro was not weighed in the clinic that day, but he assured Lorena that he weighs himself on his bathroom scale often, and he has not seen any changes.

Mr. Pedro's nutrition counselling session went differently than the rest of my sample's. Lorena started it by asking him to list all the foods he ate the 24 hours prior to the consultation. As Mr. Pedro listed foods and beverages he consumed the day prior, Lorena occasionally made references to concepts related to glycemic index (GI), which they addressed a month ago, during Mr. Pedro's first appointment. She also used the food replicas on her desk to address the portion sizes of several items from Mr. Pedro's diet, though he became increasingly annoyed at Lorena's insistence on knowing exact amounts of, for

example, honey that he added to a bowl of Gluten-free Kelloggs' cereal his wife bought "because it's good for him":

> Mr. Pedro: *"No sé, un poquito, casi nada."* ("I don't know. A little bit, almost nothing.")
>
> Lorena: *"¿Pero cuánto más o menos? ¿Una cucharadita o…?"* ("But more or less how much? A teaspoon or…?"
>
> Mr. Pedro, interrupting Lorena: "Sí, una cucharada." ("Yes, a spoonful.")

While Roberto relied on referencing scientific studies to explain to Norma that drinking alcohol disinhibits one's appetite and that skipping dinner if we ate a very heavy lunch is not as bad as we thought and Natalia gave Claudia tips she uses in her daily life to make herself drink more water every day, Lorena had a wide array of visual tools for nutrition education, specifically in regards to diabetes. First, she showed Mr. Pedro a diagram of the Plate Method developed in the US for diabetic patients. Lorena explained that half of it consist of vegetables, the other half is divided evenly into two groups: 1) foods of animal origin and 2) bread, tortilla, and cereals (though the image displayed on her computer screen shows beans in this section, which are legumes). Next to the plate, there is a glass of water accompanied by a plus sign, indicating that plain drinking water should accompany the meals. Aside from the plate and the glass of water, there is an apple and a glass of milk, stating that dairy and fruits should also be consumed only occasionally during the day. Lorena asks Mr. Pedro where would he place some of the foods that he mentioned in his 24-hour recall. He gets them all right, but he expresses still being confused about portion sizes.

Lorena, then, handed him a couple of color print-outs, while also opening up the original files in her computer for us to see. The first is a diagram that visually categorizes foods on account of their glycemic index and macronutrient content. Carbohydrates are depicted as red stars because they give immediate energy, but if they are of slow absorption, the star has a turtle. Fats are shown as yellow blocks. Protein is portrayed as orange bricks. Mr. Pedro has a hard time believing that egg whites have protein and do not belong to the carbohydrate group: *"Es que son poca cosa, ¿no?"* ("It's just that they are such an insignificant thing, aren't they?"). The diagram uses the colors of a traffic light:

- **Green (no carbohydrates, so no sugar/glucose):** Foods of animal origin and fats and oils (olive oil, butter, mayo, and avocado)
- **Yellow (slow absorption carbohydrates + fats and/or protein):** vegetables and seeds and nuts.
- **Red (high carbohydrate content):** This last group is subdivided based on the complexity of carbohydrates and the glycemic index. In the low GI group, we had legumes, corn tortillas, dark chocolate, and some fruits, such as berries. In the medium GI group, there were complex, starchy carbohydrates (potatoes, oats, pasta), other fruits (apples).

"Está bien. Ya no le voy a poner miel." ("Alright. I won't add honey anymore."), said Mr. Pedro when Lorena showed him that honey, sugar, fruit juice, bananas, watermelons, rice, breakfast cereal, and skim milk were in the high GI group. About the latter, Lorena told him that any cow milk —no matter the fat percentage— had a high GI, and that people with diabetes who like drinking milk a lot should drink sugar-free almond milk instead, not rice milk, which is the one Mr. Pedro asked about. She Googled the Silk brand sugar-free almond milk so he could see the package and look for it in the store. She also Googled for him to see the Lindt 90% cocoa chocolate bars and told us that two squares had 5 grams of fiber, and that even though it also had a little sugar, the amount of fiber countered 1 gram of the sugar. Mr. Pedro asked her to email those to him.

Given that Mr. Pedro was a returning patient, some of the topics Lorena explained to him in that counselling session had been addressed on a previous one. Though the materials she used were highly visual and colorful —making them appropriate for adult learning—, it may have been too much information for just one session that was shortened due to tardiness. This, in combination with a reluctant patient that constantly challenges the dietitian, could not be conducive to a successful learning environment.

4. Meal plan

Lorena was not the only dietitian from my sample that encountered pushbacks and resistance from a patient. Although Roberto's technique for prescribing diets is writing them on the spot after asking the patient: *"¿Qué se te antoja comer esta semana?" ("What are you*

craving for this week?"), Norma had very particular food preferences, and the menu planning stage went by in a constant struggle for which party had the power over the contents of the meals. Roberto had several meal options lined up for Norma's prescribed diet that week, but he had to alter them to adapt them to her taste. For example, since Norma walks 6 kilometers every morning, Roberto said that she should eat 1 cup of hydrated oats, which was originally a 100-calorie amaranth bar. He had to change it because Norma declared that she did not like the bitter aftertaste of amaranth. Norma also asked him to include a smoothie, so she can be the least amount of time possible in her kitchen while her visitors ate breakfast. Roberto's recipe used low-fat yogurt, but he switched it for soy milk because Norma does not like the texture of the smoothie with yogurt.

Sofía, on the other hand, quickly entered numbers into the Excel file to calculate Leslie's new dietary requirements, occasionally engaging in the conversation Leslie and I were having about our universities. In no more than five minutes, Leslie's new prescribed diet was printed out, and Sofía explained to her what it included. *"No le vayas a agregar nada de tu cosecha."* ("Do not add anything 'from your own harvest'."), she indicated Leslie in regards to a green juice recipe for breakfast. Sofía also included *Susalia* brand *tostadas* in Leslie's diet, both at lunch and at dinner.

Natalia and Lorena took different approaches to the "traditional", fixed prescribed diet printed on a sheet of paper. As for Natalia, she uses an app called "Nutrify" that all her patients download into their devices and log in with a code, which Claudia asked for because her previous phone broke down, and she had to get a new one. Seeing my surprise about the existence of the Nutrify app, Claudia mentioned that she jokingly tells her daughters that she has a "Millenial diet" because it has its own app. Being able to access her diet at any given moment is convenient for Claudia's lifestyle, for she works at a kindergarten and when I observed her nutrition counselling session, the schoolyear was almost over; therefore, she had been really stressed out because she needed to write down reports and go back and forth to the Ministry of Education's office to get the students' certificates. However, the app stopped being convenient once her phone broke down.

Finally, Lorena did not provide Mr. Pedro with a prescribed diet of any kind. Just like with the "Health at Every Size" approach, she told me that the focus of her treatment relies

on psychological aspects, stages of change, and empowerment, which is attained mostly by engaging in health education. Mr. Pedro had asked Lorena to email him the pictures of the sugar-free almond milk and the 90% cocoa chocolate. In regards to this, Lorena asked him if he received her emails from the first consultation, in which she sent him a format to register his meals and his glucose. He said that he did not. Then, he corrected himself and confessed that he was not sure because he just receives so many emails every day. He promised that he would put her emails separately and email her a confirmation of having received her emails from now on. Once again, relying only on technology can represent a barrier to access one of the services that the monetary cost of the nutritional treatment includes.

Conclusion

Every dietitian has their own style for providing nutritional treatment, based on their own personality, professional interests, access to facilities, and adaptability to advancements in Nutrition science and technology. Those with a private practice strive to provide the best quality for their appointments, whether for them this means using "golden standard" body mass measuring machines and new technologies (e.g. apps), continuously educating themselves on health topics and advancements in Nutrition, drawing from personal experiences to provide empathetic advice, using or even developing their own educational tools that sum up in a pedagogical way complex nutrition topics, and/or providing resources that complement nutritional treatment (e.g. dietary supplements, "healthy" snacks, other health services, etc.).

Though these services could be deemed as marketing tools to attract potential patients, it is the relationship of trust that they build with their dietitian that motivates them to continue with their treatment, even if they have to commute long distances or on a Sunday. However, building this relationship takes into account other factors, such as addressing patient's comfort over precision of measuring tools or adapting a meal plan to each individual patient's lifestyle, health, financial resources, and social and cultural backgrounds. The latter could be accomplished either by involving the patient in the design of their prescribed menu or allowing them to freely build their own diet plan, based off of the tools provided by the dietitian.

As for the nutrition education tools, *El Plato* may or may not be physically present somewhere in the consultation office. However, patients' educational needs usually require more specialized or personalized tools than what both *El Plato* and the NOM-043 offer, particularly for subsequent patients. In the upcoming chapters, I will be addressing this particular situation, which is a topic that arose from the focus group.

It would be helpful for dietitians to begin addressing more holistic elements from the environment of their consultation office: geographical location, ease of access to the premises, accessibility of the installations for targeted patients, reception desk staff, rapport building, dietitian dress code that projects professionalism but also comfort to the patient, measurement-taking requests that may cause physical discomfort, technical difficulties when relying on certain tools (e.g. email, apps), among other sometimes minor factors that shape a patient's experience as customers and their eventual success or failure in their nutritional treatment.

Chapter 3: Nutritional Theory vs. Real-Life Practice

In recent years, public health professionals in Mexico have strived for the general population to acquire certain behaviors that could potentially have a positive impact on the metabolic illness statistics. According to the Social-Ecological Model (Figure 21), they act upon policy changes that —although seemingly tackle system changes—are focused on individual behaviors. They depend on cost-effective measures to be able to get approval in government agendas and wider structural changes require much more resources. Because of this situation, public health researchers' actions tend to be less impactful than they would originally expect. Furthermore, this "self-care" approach based on "'shared responsibility' and 'co-management of risk' (Gálvez 2018, 123–24)" deflects the attention from major systemic failures shaping individual choices that public health professionals are struggling to change.

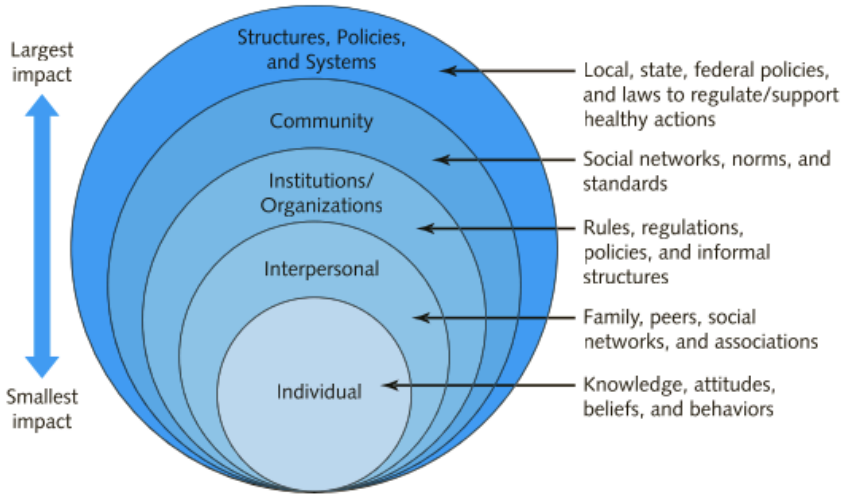

Figure 22 The Social-Ecological Model (Boyle 2017, 13)

For example, the current fight the INSP's Center for the Research of Nutrition and Health (CINyS for its acronym in Spanish) involves simple, clear frontal nutrition labeling in industrialized foods, so consumers know whether or not a portion of a certain product is high in sugars, fats, sodium, and/or calories, elements and nutrients that are associated with an increase in weight and risk of cardiovascular disease. With this change in labeling, public health researchers expect the population to make food decisions that will have a positive

impact on their wellbeing. Though multiple studies point towards more positive food choices by adopting a clear labeling strategy, these types of policies often fail to address other factors that determine food and beverage decisions among consumers, such as issues with sanitation, food access and distribution, and food insecurity (Santos-Antonio et al. 2019). Even though, in the end, it got full approval from the Mexican government and will be set in motion at the end of 2020, the food industry fought back by requesting a suspension through an *amparo*[13], which was granted by a judge at the beginning of March 2020 (Michail 2020).

Figure 23 Advertisement in the Mexico City subway promoting the clear food labeling law

One of the crown jewels among Mexican nutrition policy makers was the soda tax that went into effect in 2015, a victory that should have ensured a decrease in the consumption of sweetened beverages and an increase in that of drinking water. The latter would have been made more accessible by allocating the collected tax money to potabilization and water supply infrastructure. The soda tax, then, would eventually stimulate a plateau and decrease the prevalence of type-2 diabetes, one of the current major causes of death nationwide.

[13] *Amparo*: Judicial tool with which an individual or agency can defend themselves against abusive or illegal acts from the authority that go against the Mexican Constitution and the Human Rights it recognizes (Ángel 2019).

Unfortunately, the results have not been as expected. In conversation with nutrition researchers from the INSP while narrowing down the topic for my thesis, it came to my attention that the reason behind these unsatisfying results is that the original calculations and projections for the policy proposal were made taking into account an increase of MXN$2.00 per liter of soft drink. In the end, they could only accomplish the approval of a MXN$1.00 per liter increase. Furthermore, "a tax on foods and beverages is insufficient alone and does not incentivize the purchase of more healthful options or bring them within easier reach of low-income communities (Gálvez 2018, 132)."

Finally, when Dr. Juan Rivera Dommarco —former director of CINyS— took over the general direction of the INSP in 2017, he stated that he was going to focus research and actions towards sustainability in the Mexican food system. As co-author of "Food in the Anthropocene: the EAT–Lancet Commission on healthy diets from sustainable food systems", he acknowledges that a plant-based diet is potentially beneficial for both the individual who consumes it, as well as for the environment because the carbon dioxide emissions of fruits, vegetables, and vegetable protein (e.g. beans, lentils, soy, and other legumes) are much lower than foods of animal origin, especially red meats (Willett et al. 2019). Once again, however, individualizing diets and sustainability instead of prioritizing tackling inequality within the Mexican food system deflects the responsibility from the state in addressing these issues that shape individual behavior (Burnett et al. 2019).

Summarizing the introductory arguments, public health professionals engaging in community nutrition and policy changes in Mexico are actively working to create an environment that enables the population to acquire behaviors that Nutrition and Medical sciences deem as beneficial for cardiovascular health and weight loss. Specifically, some of their biggest actions that address the current metabolic health crisis have targeted:

- Drinking more water and less sweetened beverages
- Eating more fruits, vegetables, and plant-based proteins
- Decreasing the consumption of added sugars, fats, calories, and sodium, which are greatly present in industrialized products, such as fast food, processed meats, snacks, sweets, and desserts.

The purpose of this chapter is comparing and contrasting the dietary patterns of office worker patients with these desirable behaviors. In addition, I aim to describe how their patterns intersect with information, tools, and personal opinions as health professionals that the dietitian participants use and provided.

Individual Dietary Patterns and Mexican Food Culture

After analyzing the data obtained from the FFQ that patient participants filled out, one can observe in Table 4 that their diets are based on vegetables, fruits, dairy, and meats, while water tends to be their go-to beverage choice.

Table 4 Food and beverage weekly consumption frequency

Food/beverage group	Office worker sample	Rest of the country			
		North	Center	Mexico City	South
Fruits	**17.3**	8.4	9.3	10.0	8.1
Legumes	**1.8**	5.9	5.7	4.5	5.2
Meat	**9.8**	3.8	3.7	4.4	3.7
Processed Meats	2.8	3.6	2.9	2.6	2.6
Fast food and Mexican *antojitos*	**3**	2.0	1.9	**2.1**	2.1
Snacks, sweets, and desserts	**5.6**	4.0	4.1	**4.2**	3.4
Sweet cereals	4.6	3.8	3.9	4.6	3.9
Non-dairy sweetened beverages	**0.6**	8.4	7.4	8.1	8.3
Water	**7**	6.9	6.7	6.5	6.7
Sweetened dairy drinks	**0.2**	3.1	3.4	3.8	3.4
Dairy	**12.7**	5.4	5.2	5.5	4.8
Eggs	2.4	0.6	3.0	2.7	2.8
Vegetables	**27.9**	7.7	8.4	9.6	7.4

If we compare the means of their food and beverage consumption frequency with those of the rest of the country obtained from the ENSANUT MC 2016, we can observe that the sample of office workers who are under nutrition treatment consumes greater amounts of the previously mentioned groups than in any region of the country. Though the authors of the ENSANUT MC 2016 result brief categorize these food groups as "advisable", we can also observe above-average means of fast food and Mexican *antojitos*, snacks, sweets, and desserts, food groups whose consumption was deemed as "non advisable for their daily consumption (Shamah-Levy et al. 2016, 30)".

"Aquí ya perdimos. ¿Por qué justo me haces este cuestionario el fin de semana que fui a 'La Casa de Toño[14]' con mis papás?" ("We just lost here. Why would you make me fill out this questionnaire precisely the weekend after I went to *'La Casa de Toño'* with my parents?"), Jorge jokingly tells me when he stumbles upon the section of the FFQ that addresses fast food and Mexican *antojitos* consumption. Interestingly enough, the elevated intake of these types of foods among the office workers who participated in the study almost matches that of Mexico City's overall population. While it certainly seems like some dietary patterns of these individuals undergoing nutritional treatment coincide with behaviors public health researchers have strived for the general population to acquire, their socio-cultural context as people living in Mexico City and their condition of office workers that often rely on food services prevent them from fully transforming their diets into the Nutrition science ideal.

In contrast to their meat and dairy consumption, another interesting finding among office worker patients is their very low intake of legumes. Even though the NOM-043 and *El Plato* stipulate that health professionals must "promote the recuperation in the consumption of the ample variety of beans and the diversification with other legumes: lentils, fava beans, garbanzo beans, and chickpeas, for their protein and fiber content (Secretaría de Salud 2013, 10)" —not to mention their low cost and small carbon footprint of their production—, Mexican dietitians in practice usually prefer to prescribe low-fat foods of animal origin, particularly those specialized in diabetes care.

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[14] *La Casa de Toño:* Famous chain of Mexican *antojitos* restaurant, particularly famous for their *pozole*.

The reason behind this is that the total carbohydrate content in a portion of legumes (20 grams) is higher than one of cereals (15 grams) (Pérez Lizaur et al. 2012), and *El Plato* states that those two groups should be combined in order to obtain high biological value protein. Protein promotes satiety, yet low-fat foods of animal origin provide nearly the same amount as legumes minus carbohydrates and a small proportion of fat —an energy dense nutrient—, making this food group ideal for diets targeting weight loss.

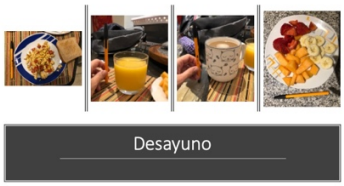
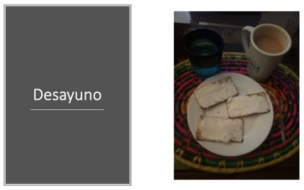
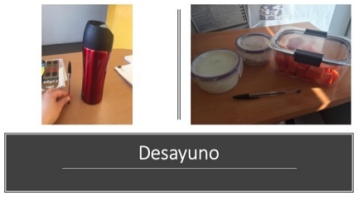
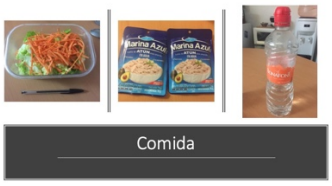
Correct to Eat?

Tapping onto their expertise as nutrition professionals, the dietitian participants were able to discuss some of the meals that office worker patient participants photographed. Regardless of unknown patients' background, lifestyle, and anthropometric factors that might alter their opinions on diet adequacy, the group of dietitians applauded the efforts made by patients in order to change their habits and eat similarly to nutritional recommendations. However, almost every picture shown displayed an element that raised the eyebrows of at least one of the dietitians.

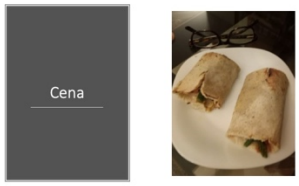
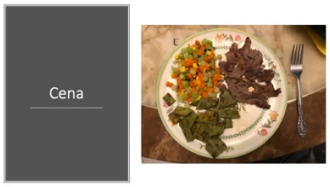
They brought to light more obscure medical and environmental issues with food that a common individual is less likely to be thinking about when deciding what to eat. In their dialogue, the participant dietitians provided alternatives, recipes, and substitutions to control for these elements. They also talked about ways in which they would deal or have dealt with these issues among their own patients in their consultation offices, so as to keep them motivated to continue treatment. Said "solutions", however, would add yet another layer of the complexities onto the stress that finding balance in food decisions already has in Mexico City's paradoxical food system.

"Se vé que le está echando ganas" ("It looks like they're making an effort."): Weekday Diets

Table 5 Office worker sample weekday meals

BREAKFAST		
		
Jessica's: scrambled eggs with tomato, 1 whole wheat toast, 1 glass of *Único Fresco* juice, 1 cup of coffee w/skim milk and Splenda, 1 plate of fruit Location: home	Elena's: 1 package of *Salmas* w/labneh, 1 cup of black tea with milk, 1 glass of water Location: home	Sara's: low-fat natural yogurt, chopped papaya, oatmeal, 1 black, ground coffee w/Splenda Location: office cubicle
MID-MORNING *COLACIÓN*		
		
Sara's: Berry-flavored *Ades* soy drink, 2 corn tortillas with roasted chicken Location: office cubicle		Martín's: 1 apple and 2 portions of 600 ml of water Location: office gymnasium
LUNCH		
		
Sara's: Salad, 2 packages of tuna in water, water Location: office kitchenette	Elena's: Takeout salad with pasta, broccoli, dried cranberries, corn kernels, lettuce, spinach, goat cheese, balsamic dressing Location: communal office workspace	Jessica's: Broccoli cream, chicken *tinga*, white rice with carrots, 1/3 of sugar-free Coke bottle, 1 sugar-free Turín chocolate Location: office terrace

Continuation Table 5 Office worker sample weekday meals

MID-AFTERNOON *COLACIÓN*		
		
Jorge's: Chopped cucumbers with lime Location: office	Elena's: Almonds Location: home	Sara's: Sugar-free gelatin Location: office cubicle
DINNER		
		
Elena's: Delivery app (Rappi or UberEats) vegetarian, whole wheat wrap with roasted asparagus and goat cheese Location: home	Sara's: 2 beef burgers, 1 lettuce, and 1 small bitter chocolate Location: home	Jorge's: 90 grams of roasted beef, mix of cooked frozen vegetables, and roasted *nopal* cactus Location: parent's home

In Table 5, we can observe some examples of office worker weekday meals, consumed whether at home or at work. Some comments that arose involved not seeing enough vegetables and concerns in regards to portion sizes, whether they were a little too big or too insufficient. For example, Elena's breakfast of *Salmas* with labneh had a small amount of protein and did not include any foods from the "green group" (fruits and vegetables), making the dietitians concerned about Elena not getting her daily vitamins to have more energy throughout the day, while her delivery vegetarian wrap was too big and did not have enough vegetables either. Jessica's breakfast —which included both tomato and mixed fruits, as well as whole grains— did not have enough vegetables from the dietitians' point of view, and they felt the portion of fruit was a lot of sugar in addition to the juice. Similarly, Natalia felt that Sara's portions of yogurt, papaya, and coffee were a little exaggerated, which makes

both her and Lorena imagine the person behind the photographs as this 1.90-meter-tall person that *"no se llena con nada"* ("does not get full with anything").

Roberto, on the other hand, provided a recipe to incorporate vegetables in Sara's breakfast by blending in lettuce and spinach to her natural yogurt as a sort of dip that is "*rico, da volumen y llena más a los pacientes y cuando se le pone un poco más de grasa con proteína, estimula el freno ileal, entonces puede ayudar a que tenga un poco menos de hambre si el objetivo es perder peso y como es oficinista, puede ser que sí.*" ("a yummy dip that adds volume and fills out patients more, and when you add a little more of fats with protein —seeds, nuts—, it stimulates the ileal brake, so this might help her to feel less hungry if her objective is losing weight, and since she is an office worker, it might be.")

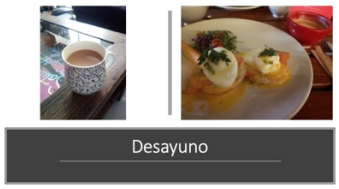
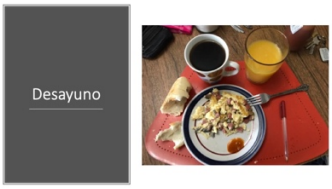
Since Lorena specializes in patients living with diabetes, her comments tended to mostly address sugar, protein, and whole grain intake. Both she and Roberto discourage the consumption of juice at breakfast — particularly if the individual also eats fruit— because it adds sugar to diets, unless they happen to have just exercised. Even though Sofía could not make it to the focus group appointment, I showed her the pictures in an informal interview shortly afterwards, and she disapproved of drinking industrialized juices or soy beverages and stated a preference for homemade green juice or a whole fruit. Natalia, on the other hand, defended having juice with breakfast, stating that "there are a ton of studies that have shown that people who have a habit of drinking juice at breakfast have a healthier weight than those who do not". If an elevated sugar intake is the concern, she suggested diluting half a glass of juice with half a glass of water, or overall switching it for a fruit if the patient is not used to having breakfast with juice, which would be Jessica's case because she only started drinking it because of her pregnancy cravings and is certain that these will stop once she has her baby.

> "*Turín es bueno porque sí tiene cocoa, sí tiene cacao como principales ingredientes, pero creo que tiene manitol, entonces si se lo come completo, se va a inflamar si es que tiene colitis, como la mayoría de los Godínez."* ("Turín is good because it does have cocoa and cacao as main ingredients, but I think it has mannitol, so if (Jessica) eats it whole, she will get swollen if she has colitis, like the majority of the *Godínez."*)
>
> – Roberto, about the sugar-free Turín chocolate Jessica had with her lunch

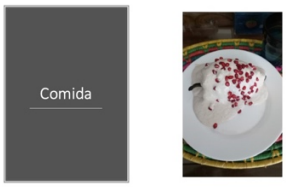
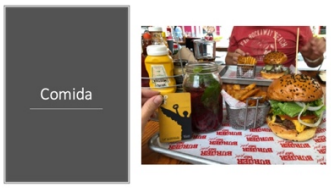
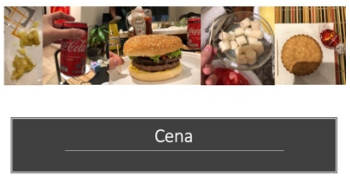
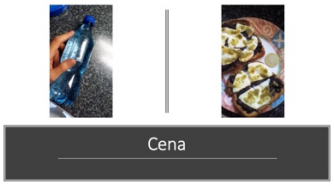
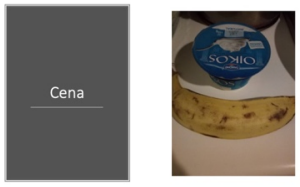
Speaking of sugar intake, the use of artificial, non-caloric sweeteners, as well as sugar-free versions of certain products, also stirred dietitians' emotions. The general opinion was to preferably avoid consuming sugar-free products and non-caloric sweeteners without Satanizing them. Natalia mentioned that if Jessica —who adds Splenda to her morning coffee and drinks sugar-free Coke at lunch— had been her patient, she would have suggested to her to slowly decrease her artificial sweetener consumption by cutting down the portions little by little. For example, if Jessica adds one *sobrecito* ("little pack") of Splenda every morning to her coffee, try adding only half of it the next day. Roberto, on the other hand, does not only disapprove of using non-caloric sweeteners but altogether advised against drinking coffee if they are office workers because, drawing from his personal experience, they probably have gastritis.

"Poco veneno no mata" ("A little poison won't kill"): Weekend Diets

Table 6 Office worker sample weekend meals

BREAKFAST		
		
Elena's: A cup of black tea w/milk (this time she added sugar), Benedictine eggs w/salmon, side salad, and coffee Location: home and restaurant	Jorge's: Black coffee, orange juice, 1/3 of *bolillo* bread, scrambled eggs with mushrooms and sausage, hot sauce. Location: parent's home	Martín's late breakfast/early lunch: 3 lettuce *taquitos* with leftover chicken and vegetables stir fry, 600 ml of water Location: home
MID-MORNING *COLACIÓN*		
		
Jessica's: Special K granola bar Location: parent's home		Sara's: Roasted *Chapulines* with lime, salt, and chili pepper Location: Downtown Cholula, Puebla

Continuation Table 6 Office worker sample weekend meals

LUNCH		
		
Elena's: Homemade *Chile en Nogada* Location: home	Jorge's: 2 slices of avocado with chili pepper flakes, a piece of rotisserie chicken, rice, sugar-free Coke, a tequila shot Location: parent's home	Jessica's: Cheeseburger with a side of fries and a berry-spearmint flavored Italian soda Location: restaurant
MID-AFTERNOON *COLACIÓN*		
		
Sara's: 1 coffee cookie, 1 piece of bitter chocolate, 1 cup of coffee w/Splenda, 1 sugar-free gelatin Location: parent's home		Jorge's: Americano coffee Location: coffee shop
DINNER		
		
Jessica's: homemade fries attempt, 1 sugar-free Coke, 1 hamburger with 2 frozen patties, hearts of palm, 1 cookie, 1 Lindt chocolate Location: home	Martín's: 2 homemade *molletes* w/ whole wheat bread, black beans, Panela cheese, Knorr Suiza chicken bouillon, and Habanero salsa Location: home	Elena's: 1 banana and a Danone OIKOS Greek yogurt Location: home

As we can observe in Table 6, the majority of weekend meals are eaten at home —either one's own or family members'—, with the occasional restaurant or other public place, whether or not it was a special occasion. As mentioned in previous chapters, the weekends are days in which the priorities of the office worker participants shift, and the weight of their food decisions depends greatly on their social interactions. Acknowledging patients' changes in routine and flexibility with meals over the weekend, the group of dietitians tried to remain positive with the way the expressed themselves in their opinions, applauding small victories and making suggestions to do better the next time:

- About Elena's weekend breakfast/brunch, Roberto said *"le diría que podría compartir y aparte pedir un poquito de fruta tal vez o verduras extras, pero siendo honestos, diría: 'Ahí está bien. Es una vez a la semana comiste azúcar y te fuiste a desayunar cosas medio extrañas, está perfecto y si quieres hacer algo más por tu dieta, ve a caminar y te vas a divertir más. Y lo vas a medio compensar y no pasa nada.'"* ("I would tell her that she could share and also order a little bit of fruit or perhaps extra vegetables, but honestly, I'd say: 'It's fine. It's once a week that you had sugar and went to eat kind of weird things for breakfast, so it's perfect, and if you want to do something more for your diet, go for a walk and you'll have more fun and you'll kind of compensate for it, and nothing will happen.'")
- About Jorge's tequila shot at lunch, Lorena commented *"del tequila (…) tampoco soy mucho de estarles recomendando, pero igual si sí es ocasional, pues no hay problema."* ("About the tequila, I am not someone who would usually recommend it, but if it is occasional, then there is no problem."). Sofía, seeing that he drank the tequila by itself and not mixed in with a sugary beverage as part of a cocktail, expressed that drinking it that way was *"menos peor"* ("less bad").
- About Jessica's Special K granola bar as a mid-morning snack, Sofía thought it was a practical option with an adequate amount of calories for the weekend, while Roberto also agreed that if it was a one-time situation that she had to buy it as an emergency while riding the subway, it was a good alternative.

Certainly, these ways of expressing themselves about food and beverage options they would not usually approve of for daily intake are tools used in their private practice to keep patients motivated and guilt-ridden when their routines change and they deter from their

prescribed diet. However, as I showed images of meals that were described as *"definitivamente va en contra de todo lo que predicamos"* ("definitely go against everything we preach"), the dietitians' responses were of shock and disappointment. Their language even became harsh and at times, stigmatizing, placing the blame on the individual for their "incorrect" food choices, perpetuating the Mexican public health system's approach to behavioral change.

> *"(...) pues le diría que: ¡N'hombre! Que se pasó. Que si desayuna eso, mejor que no cene, casi casi. (...) Está bien salirse un poquito, pero hay que poner verduras y hay que comer un poquito menos y hay que quedarse con un poco de hambre si quiere bajar. O sea, no hambre, pero sí sentir que no se llena.(...)"* ("(…) well, I would tell him: no way! He exceeded himself. If he eats that for breakfast, it might be best if he does not eat dinner. (…) It is okay to deter a little, but he has to add vegetables and eat a little less and stay a little hungry if he wants to lose weight. I mean, not hungry but feel like he is not full. (…)")
>
> – Roberto

Roberto was skeptical about Jorge having only eaten a small piece of *bolillo* bread with his weekend breakfast. Since he could not see or know information about Jorge other than his very basic demographic data, he began to calculate the caloric intake of Jorge's meal and even went as far as suggesting for him to either skip dinner entirely or add more vegetables, decrease his portions and stay a little hungry, behaviors that —although perhaps scientifically proven to generate a safe weight loss when controlled— could potentially trigger an eating disorder in susceptible patients.

Sofía used the word "*bomba"* ("bomb") to describe Elena's homemade *Chile en Nogada*, which is a dish rich in fats and sugars. It is also a culturally relevant and seasonal dish, only available during the timeframe of the Mexican war of independence's anniversary, which is celebrated on September 16th. Furthermore, the dietitians admitted that it is a once-in-a-year delicious, special dish that some of them would gladly eat if they had the chance, not to mention a complete meal in and of itself because it contains all of *El Plato's* food groups. Thus, their opinions and recommendations reflected an internal struggle between their identities as Mexicans and as nutrition professionals whose basic training was based on the NOM-043, which commands them to promote adequate traditional foodways as long as

these are do not pose a risk for nutrition and health when practiced daily (Secretaría de Salud 2013, 7).

Divided opinions arose from Sara's mid-morning snack in Cholula, Puebla: a handful of roasted *chapulines* with lime juice, salt, and chili powder. *"¡Ay! ¿Qué es eso?"* ("What is that?!"), Lorena replied with shock. *"¿Son chapulines?"* ("Are those crickets?"), Roberto wondered with curiosity. *"¡Me encanta!"* ("I love it!"), Natalia exclaimed with excitement. While both Sofía and Natalia were fully on board with this protein-rich and culturally relevant snack option, Lorena and Roberto expressed their own disgust in eating insects. Regardless of her personal taste, Lorena admitted that *chapulines* made a good *colación.* Roberto was skeptical at first, especially because the image was not very clear, so he thought the lime juice was oil and that the *chapulines* were fried. He was reminded of a patient of his that had also recently gone to Puebla and ate *chapulines* that were indeed fried, and he told us that she did not do so well that week on her nutritional goals, not to mention the *"colitis pero marca Diablo"* ("Devil brand colitis") she got that same night in Puebla. When we clarified that Sara's *chapulines* were roasted, he then said he would approve of including them as part of a meal plan if the patient is used to eating them and if they remove the little legs first because they can get stuck on their teeth and inflame the gums.

Eating insects has always been a taboo among Western, Judeo-Christian societies but is still a fairly common practice in Mexican food culture. *Chapulines, escamol* ant larvae*, chicatana* ants, and *maguey* cactus worms are some examples of endemic insect species that have been consumed in traditional Mexican diets since Pre-Hispanic times (Artes de México 2018). In her studies of "The Abominations of Leviticus", Mary Douglas notices an interesting distinction among edible critters depending on how they move on the earth. For example, if locusts crawl, they are unclean; if they hop, they are clean (Douglas 2013). It appears that *chapulines* —the most widely and commonly consumed insects in Mexico, that also happen to hop and are absent from *El Plato*— are a good *colación* as long they are roasted and have their little legs removed. However, they are not good to eat if they are fried and eaten whole.

Other Implications to Consider in Diets

Another interesting topic that emerged from the general discussion involved elements in the patient participants' meals that would not necessarily and only harm their personal health. For example, the dietitians discussed issues with disposable containers, plastic bottles, and red meat consumption. In regards to the latter, these were the concerns it arose: 1) it is too hard to digest for eating it at night, 2) it has a negative impact on cardiovascular health and colon cancer risk —particularly if carbonized—, and 3) beef production has a big carbon footprint.

Although all of the dietitians praised Elena's weekday takeout salad, describing it as a complete, balanced, and sufficient meal she was able to get so conveniently close to her office, Lorena made a comment about environmental care on account of the wasteful container and disposable cutlery, while Roberto expressed concerns about the sanitation of mushrooms and the quality of the cheese in a salad place.

Surely, Martín has significantly increased his water intake by drinking out of a 600 ml plastic bottle several times per day, but Natalia and Roberto would prefer if he used a thermos instead. They initially thought Martín was using different water bottles, so their concern was in regards to the plastic waste. Once I clarified that he was re-using the bottle, Roberto maintained his opinion on not drinking water out of PET bottles to decrease the levels of dioxins, which could make Martín become sterile in the future. Adding onto the dioxin intake, Roberto also made a note of the sodium content in the soy sauce Martín's mother used to cook the chicken-veggie stir fry he ate during the weekend, stating that no one older than 25 processes sodium very well.

However, all of these considerations about environmental care, accidental toxin consumption, food service hygiene and sanitation, chemical quality of foods, among others that dietitians are constantly informing themselves about because of their profession most likely do not cross the minds of patients who do not have a background in life sciences when they are deciding what to eat. Becoming aware of these issues adds even more layers of complexity to every food decision made in the paradoxical food system of Mexico City. In my conversation with Mtra. Ana Bertha Pérez Lizaur, she talked about how some of this information gets broadcasted through social media to raise awareness in the general public,

but when done through the wrong channels (e.g. by health coaches) and appealing to sensationalism, it ends up making people afraid of eating.

Conclusion: How do office worker dietary patterns match up to Nutrition knowledge?

> *"Sabemos que pues la lechuga son 3 tazas es un equivalente de verdura, entonces yo además de solamente tres lechugas ahí le hubiera puesto que le pusiera mucho más verduras, así como un poco más densas, ¿no? O sea un brócoli, calabaza, pimiento asado, cebollita o algo para que haya mucho más verdura que no tenga que estarse comiendo tres tazas de solamente lechuga.*" ("We all know that 3 cups of lettuce are an equivalent of vegetables, so I, in addition to the three lettuces there, would have added much more vegetables, like a little more dense, no? I mean, like broccoli, zucchini, roasted pepper, onion, or something to have much more vegetables and so that she does not have to be eating three cups of just lettuce.")
>
> – Natalia, about Sara's weekday dinner of two burger patties and lettuce

For dietitians, some concepts and changes in dietary patterns appear too obvious because of their years of training and professional experience. They certainly know by heart how many nutrients and calories an exact portion of certain foods contains, as well as how to swap these for others using the *Sistema Mexicano de Alimentos Equivalentes*. Patients, on the other hand, do not necessarily know this, especially if they have been undergoing nutritional treatment for a short period of time and/or inconsistently and if their previous reference is media outlets that portray "healthy eating" as feeding off of precisely lettuce and nothing else.

> *"(…) sí me han tocado pacientes que llegan contentísimos y me dicen: 'Es que no comí las tortillas.' O sea, como si fuera para darles un premio, pero no. O sea, no están viendo la importancia de mantener todos los grupos y la proporción de esos grupos."* ("(…) I've had patients that arrive really happy and tell me: 'I did not eat the tortillas.' I mean, as if I were to give them a prize, but no. I mean, they are not seeing the importance of keeping all the groups and the proportions around these groups.")
>
> – Roberto, when asked if he thought the images reflected the concepts behind *El Plato*

The participant dietitians are also fully aware of the deeply ingrained stigma around starchy foods that circles around social media and fad diets, and it is the cereal group —in addition to bigger and more varied portions of vegetables— that they felt was missing from the office worker sample's diets. Drawing from my own previous experience as a nutrition professional, some dietitians tend to prescribe low-carbohydrate/high-protein/high-fat diets (e.g. Atkins, Keto, Paleo) at the beginning of certain patients' nutritional treatments because weight loss is quick. When patients that were hesitant to attend a nutrition consultation at first see almost immediate results, they are motivated to continue their treatment.

In their conversation, participant dietitians navigated some of the seemingly contradictory factors the patient participants must balance when making food decisions (e.g. gastronomy, nutritional recommendations, socio-cultural context) and possible actions to deal with unsatisfactory final choice (e.g. sharing with someone else, eat only half of the portion and complement with a salad or veggie soup, compensate the excesses with exercise, skip a meal). Again, though some of these corrective actions appear harmless for someone whose professional life revolves around food and nutrition science, they can become a trigger for the onset of an eating disorder in at-risk patients. Furthermore, these corrective actions are prescriptive steps aimed at individual behaviors that result in a "pre-established and measurable goal (less fat, lower weight) (Yates-Doerr 2017)". They perpetuate the assumption of Mexican public health professionals that individuals are the embodiment of their society, and as such, always have agency over societal changes through their actions. Structures, environments, and systems have the greatest impact in shaping individual behaviors, but attention is deflected from flaws in the greater levels in the Socio-Ecological Model when public policy takes the individual behavior approach. As a consequence from this approach, stigma can emerge from society —including from health professionals themselves— that shames bodies for making irresponsible choices that lead to weight gain (Berlant 2017).

In addition, office worker patients in Mexico City are being pulled in different directions when it comes to food, and the solutions dietitians provide only add more layers of complexity to their decisions because they sometimes account for situations that a normal

person would not consider. Thus, this chronic tension[15] that decision-making in a paradoxical food system produces could be yet another factor that potentially triggers a deleterious metabolic response, such as "chronically high blood sugar and insulin resistance that are implicated in diabetes (Weaver 2019, 79)".

If making satisfying everyday food decisions generated a debate and internal struggles among nutrition professionals, for an office worker with a background in accounting, marketing, or art, who gets constantly bombarded with mixed, contradictory messages in regards to food and health through a myriad of outlets (e.g. social networks, media, food industry, etc.), deciding what to eat was an everyday struggle. A key takeaway from the dietitians' conversation in regards to food and nutrition orientation is that one size does not fit all. The clearest example of this situation is the fact that dietitians tended to reply "it depends" whenever I showed them one of the office workers' pictures and asked them if they considered the contents healthy or not. From this, we can see how food guidelines must be tailored to patient's needs, backgrounds and the specific social-cultural and economic conditions in which they live, which in Mexico City can drastically change from one neighborhood to the next. The need for adaptability on *El Plato's* design to account for the wide diversity of food cultures in Mexico, along with nutritional needs of certain groups of patients, was an important topic that emerged from the second part of the focus group and the nutrition expert interviews I analyze in the next chapter.

[15] I am using the concept of *tension* instead of *stress* because according to Weaver (2019), "'stress' (…) often involve(s) a sense of being 'weighted down'. (…) 'tension' was inherently social, defined by the pull between competing roles and expectations (Weaver 2019, 68)". Office workers undergoing nutritional treatment in Mexico City are faced with competing expectations of following nutritional advice or a prescribed diet that fits their budget, while also enjoying their meals, maintaining their social relationships and their food culture.

Chapter 4: Back to Babel

> *"No había como tal, y sigue sin haberlas. Hay por ahí algún esfuerzo se hacen algunas guías alimentarias parciales para determinada enfermedad o algo así, pero las guías alimentarias debe ser algo mucho más amplio, y antes del Plato del Bien Comer por supuesto se tenían conceptos y se difundían, pero no existía la moda de una guía alimentaria basada en alimentos, que es lo que ahora es es la moda actual. El Plato del Bien Comer no es más que el emblema o el escudo o el logo digamos de la Norma 043, que ésta sí tiene una cantidad de contenido que puede convertirse en guías alimentarias, pero es algo que la Secretaría de Salud no ha hecho y debió haber hecho en ese momento."* ("There were no (dietary guidelines) per se, and there are still none. There is an effort somewhere on making some partial dietary guidelines for certain illnesses or something, but dietary guidelines have to be something more ample, and before *El Plato del Bien Comer*, of course, we had concepts that were disseminated, but the trend of a food-based dietary guideline did not exist, which is the current trend. *El Plato del Bien Comer* is nothing more than the emblem or the shield or the logo of the NOM-043, which does have a quantity of content that could become dietary guidelines, but it is something that the Ministry of Health has not done and should have done in that moment.")
>
> – Dr. Héctor Bourges

After my conversation with Dr. Bourges I understood that dietary guidelines are a set of science-based general recommendations in regards to —mostly— eating and exercising behaviors, which are developed with the overall population as the targeted audience. This concept does not apply to the NOM-043 because it is a guideline that only health professionals should comply with when providing nutritional counselling. In other words, the NOM-043 is a set of food and nutrition orientation guidelines to promote "correct" dietary patterns. *El Plato*, according to Dr. Bourges, is not a dietary guideline either, even though its design and dissemination through several outlets (e.g. elementary school textbooks, food labels) was based on the FAO/WHO report on the "Preparation and Use of Food-Based Dietary Guidelines" and coincides with Montagnese et.al.'s definition: "National FBDGs

have been conceived to provide general indications of what should be eaten in terms of foods rather than nutrients; FBDGs are written in simple understandable language, generally with illustrations, and provide a basic framework to use when planning meals or daily menus to achieve a healthy balanced diet (Montagnese et al. 2017)."

Apparently, both *El Plato del Bien Comer*'s publication and dissemination were ahead of the FBDG boom in Community Nutrition. Surely, Dr. Bourges also talked about the food pyramid trend that he witnessed during his years of experience in the field of Nutrition. He said there was even a pyramid for Latin America, one for vegetarians, among other image-based diet models that generalized and homogenized diverse food cultures to fit an arbitrary mold whose shape the *Torre de Babel* group's research later showed that evoked the *"pensamiento mágico"* ("magical thinking") from the Pre-Hispanic cosmovision among Mexican audiences.

> *"Después lo asumieron el Reino Unido y Estados Unidos, el plato. Como no tenemos publicaciones, entonces no pueden citar si la idea fue o no tomada del plato de México, pero desgraciadamente (...) No había recursos para publicar."* ("The plate was then adopted by the UK and the US. Since we do not have any publications, they cannot cite whether or not the idea was taken from the Mexican plate, but unfortunately (…) there were no resources to publish.")
>
> – Mtra. Ana Bertha Pérez Lizaur

Countries from the Global North, such as Germany, Denmark, and Italy, had developed their own FBDGs a decade or two before the boom, most likely being the United States and Canada the two countries that pioneered this type of nutrition orientation tool in the 1940s (Food and Agriculture Organization of the United Nations n.d.; "A Brief History of USDA Food Guides" 2017). However, the trend in national FBDGs all around the world began in the early 2000s after the WHO/FAO published its "Preparation and Use of Food-Based Dietary Guidelines" report in 1998 (FAO/WHO 1998). Shortly after their initial publication as a Mexican norm in 1999 (not yet an official one, but as an NMX), the UK and the US adopted a plate-shaped FBDG.

The *Torre de Babel* group had little-to-no resources to carry out research, and the main reason was because each member belonged to a different institution. No one took up

the responsibility of applying for grants or looking for other funding resources. Since there were no publications on *El Plato,* and what little research they were able to carry out was done through focus groups, Mtra. Ana Bertha is uncertain whether or not it influenced or inspired the use of that particular shape for both ChooseMyPlate (US) and the Eatwell Guide (UK). Both the NOM-043 and *El Plato* were developed without any financial resources to conduct a more profound formative research and to publish any initial findings, let alone to carry out both process and outcome evaluation as the FAO/WHO stipulates to assess the impact on dietary patterns and health time after its implementation (FAO/WHO 1998, 43–44). It is truly a case of *amor al arte*[16], in which the group of experts that conformed the *Torre de Babel* group developed these materials for the sake of Nutrition science and public health. Plus, if it had not been for a strike of good luck with Mtra. Ana Bertha's brother securing the appointment with Dr. Julio Frenk —the Health Minister during the Vicente Fox administration—, there was a risk that all that work might have gotten lost or become just another one of the myriad nutrition education and orientation tools in Mexico.

In this last chapter, I address — in their own words— the current use of *El Plato* among the participant young dietitians, ways they have adapted the use of *El Plato* to accomplish a better understanding of basic nutrition concepts among their patients, and other tools they have found to be more useful for their average patient demographic. Given that the last update was done in 2012, I will also compare and contrast opinions from both the dietitian participants and the two interviewed members of *Torre de Babel* on *El Plato's* relevance for modern-day Mexican diets and clinical practice.

[16] *Amor al arte* ("A love of the art")*:* Expression used ironically to describe providing a service or performing a task without receiving any sort of payment in return other than for the sake of it.

Current use of *El Plato del Bien Comer*

Table 7 Overview of dietitian participants and their private practice

Dietitian	Office location	Average patient	Use of El Plato	Other nutrition education tools
Sofía	Southern Roma, Cuauhtémoc delegation	Mostly focused on 8-10 y/o children Nutrition talks in offices for employees	Only in talks or w/children	Verbal explanations Drawings Education tailored to discomfort associated with diet
Lorena	Northern Roma, Cuauhtémoc delegation	Adults between 30-60 y/o living with diabetes	N/A	Plate Method Food replicas Self-developed didactic materials for macronutrient and glycemic index orientation
Natalia	Lomas de Chapultepec, Miguel Hidalgo delegation	Adults ages 20-35 Workers and/or students	Yes, but verbally modifies what she disagrees with	Portion-size estimation using hands
Roberto	Nueva Santa María, Azcapotzalco delegation	80% women ages 25-55 Lately, young adults between 25-35 y/o	Assistants normally use *El Plato*	Drawings Videos EAT-Lancet Plate CONADE Plates for athletes

Table 7 summarizes each participant dietitian's private practice: location of consultation office, type of average patients, and whether or not they use *El Plato* in their practice, in what instances, and how, as well as other tools they use for nutrition education among their patients.

Because Lorena specializes in people living with diabetes, she stated that *El Plato* does not match the diet this type of patient should follow, so she is the only dietitian in the sample that does not use it at all. Dietary guidelines for people living with chronic diseases have to be very specific, oftentimes targeting the intake of certain nutrients. Given that

diabetes involves the incapability of cells to internalize glucose —a simple carbohydrate or "sugar" that I would often tell my own patients to think about as the gasoline of our bodies— diets are typically low in carbohydrates, especially those that take the least amount of time to digest and be broken down to glucose (e.g. sugary foods and beverages, refined grains and cereals, starchy foods), also known as foods with a high glycemic index (GI). Diets for people living with diabetes can also be high in protein unless there is kidney damage/failure, as well as high in fats, preferably mono and polyunsaturated (plant-based) instead of saturated fats (from animal origin + coconut and palm oil) because of increased risk of cardiovascular disease.

> *"(...) muchas veces en el Plato del Bien Comer está el pan dulce, está el tamal. Son este tipo de alimentos, que bueno, van a decir: 'Ah pues si está ahí, sí lo debo de comer'. Entonces, pues igual pueden interpretarlo de forma errónea. No digo que está prohibido, pero se puede dar a malas interpretaciones."* ("(…) a lot of times *El Plato del Bien Comer* shows a pastry, a *tamal*. It is these types of foods that, well, (patients) are going to say: 'Oh, well. If it's there, then I should eat it.' So, well, they can interpret it in an erroneous way. I'm not saying it is forbidden, but it can lead to misinterpretations."
>
> – Lorena, when asked why or why not she uses *El Plato* in her consultations

Lorena is concerned that if her patients see it, they will interpret the contents in an erroneous way, thinking that a *pan dulce* and a *tamal* are valid foods for their day-to-day diet. Though she clarifies that these are not necessarily forbidden, they are not advisable for her particular patients' daily intake on account of their elevated simple carbohydrate and saturated fat content. Therefore, Lorena prefers using the US Plate Method she learned about in her Diabetes Educator training. It prioritizes vegetables for their fiber and lean foods of animal origin for the low-fat/high-protein, while classifying legumes and cereals in the same group because of their similar carbohydrate content and setting aside skim dairy and fruits for their sugar content.

> *"(…) me choca que tenga el pan dulce, que tenga el tamal, que no tenga el grupo de grasas, que no tenga el grupo de agua. Le falta muchísimo, pero lo tengo porque sí creo que ayuda para las bases y sí ayuda el decir que es una herramienta que el gobierno la hace como para hacer una manera sencilla para enseñar a la gente qué comer."* ("(…) I hate that it has the pastry, that it has the *tamal*, that it doesn't have the fats group, that it doesn't have the water group. It is missing a lot, but I have it because I do think that it helps for the basics, and it helps saying that it is a tool that the government developed to make teaching people what to eat easier."
>
> – Natalia, when asked why she chooses to use *El Plato* in her practice

Natalia uses *El Plato*, even though she does not think it is the most correct tool, and she would modify certain elements if she were to develop her own FBDG. She tells her patients that the government designed it, although it was the *Torre de Babel* group that did (which was mostly comprised of health professionals). If there were another tool or if she had the time to make her own, Natalia would not be using *El Plato*. Regardless, the nutrition basics of this "government" tool are well developed, and she recognizes its usefulness as a nutrition orientation tool in her consultation. She even feels that going through what she thinks is wrong with it alongside her patients helps them engage with the concepts better, but *"cada quien tiene sus métodos"* ("each one has their own methods") for explaining the concepts behind *El Plato*.

Even though a poster of *El Plato* with its basic concepts and a kit of food replica print-outs loosely based on *El Plato* are present in his office, Roberto mainly delegates its use to his assistants, while he chooses from a myriad of different tools once his patients are done having their measurements taken. The recent EAT-Lancet plate, the National Commission of Physical Culture and Sport (CONADE for its acronym in Spanish) adaptations to *El Plato* for athletes, narrating over videos, and badly-drawn diagrams are the some of the main strategies and methods Roberto is most comfortable using.

In Roberto's professional experience, *El Plato* is useful to teach patients who want to learn how to eat in a very short amount of time, which is ideal for the first part of the consultations that his assistants carry out. However, he does not always follow up with the patient about it afterwards, and if he considers that they are more "hippie", he switches to the EAT-Lancet Plate (Fig. 23) to explain the importance beyond personal health of a mostly

plant-based diet. He then specifies that *El Plato* does not emphasize this properly and is missing a vegetable fats group, which is present in the EAT-Lancet one. If he notices that the patient does not really care about the environment or nutrition education at all and only wants to chat or gossip, then he will use *El Plato*. He just has to give them some information included as part of their consultation's cost, and the basic nutrition concepts that *El Plato* comprise a good baseline.

Figure 24 The Planetary Health Plate (The Eat-Lancet Commission 2019)

Finally, Sofía expressed a preference on using her own expertise to provide either verbal explanations or draw diagrams about personal issues or discomforts for her adult patients in one-on-one appointments. She does find *El Plato* and the kit of paper food replicas particularly useful when engaging in nutrition education with children, which is her main patient population. Sofía also provides food and nutrition orientation talks to larger audiences at corporate offices, so *El Plato* is a convenient tool to provide them with general and basic nutrition concepts. If someone from this audience afterwards is interested in undergoing nutritional treatment with her, then she will use her previously described preferred methods for adult patients.

Advantages and Disadvantages of *El Plato*

Based on one of the few focus groups the *Torre de Babel* group was able to carry out, both Dr. Bourges and Mtra. Ana Bertha acknowledge that the previous conventional pyramid shape for FBDGs clashed with the Mexican cosmovision. Since Pre-Hispanic times, people in Mexico have seen the summits of pyramids as sacred places. Except for 2020 when the COVID-19 pandemic resulted in cancelations and restrictions of massive cultural events, hundreds of thousands of people gather every year on the Spring equinox (March 21st) in the archeological site of Teotihuacán to climb the Pyramid of the Sun and recharge their energy. Regardless of the lack of publications, even Natalia had heard about how pyramid shaped FBDGs were not appropriate for Mexican populations because they interpreted it as the most important elements being at the top.

To counter the ideologies on magical meanings behind pyramids, the *Torre de Babel* group decided that the tool they were developing had to be in a different shape. At first, they were working on a pie chart and decided to evenly divide it into the three general groups, although this number was also debated. Some members argued about missing certain groups, such as the fats and water, by limiting the number of groups to three instead of five. However, others —including Dr. Bourges himself— agreed that three food-group model used since the 1980s at the *Salvador Zubirán* hospital for a non-therapeutic diet representation is more efficient than more food groups, which are better for diets targeted towards the treatment of certain diseases.

In regards to dividing the chart evenly instead of proportionally, the idea was that all foods are important, while a pyramid would give more importance to the groups at the base. Therefore, there seems to be an erroneous misconception amongst young dietitians —myself included— that *El Plato*'s colors represent a traffic light. Dr. Bourges laments this generalized confusion and blames it on the colors selected to represent each food group. He stated that green and yellow were obvious choices for fruits and vegetables and for cereals because the majority of the portrayed foods in these groups have those colors. For the third group, however, there is a wide variety: milk is white, eggs are white and yellow, beans are brown or black, meat is red, chicken is yellowish. The final color choice was "brick" because

red was a most problematic color because it could make the viewer think that foods from that group are either the most important or altogether forbidden.

Since it portrays both sources of plant-based protein (legumes) and foods of animal origin, *El Plato'*s groups allow for both omnivore and vegetarian diets. It also depicts a wide selection of foods with different monetary and cultural value, so people from any socio-economic status can find elements that match their food culture, such as corn tortillas and beans for low-income populations and fish and pasta for higher-income ones. Mtra. Ana Bertha herself believes in the adaptability of *El Plato* given the selection it portrays and its usefulness for food orientation —particularly with group interventions and children—, even if it does not account for regionality and seasonality of foods.

It was not until a participant from a focus group noticed that if they added cutlery, it looked like a plate of food, that the *Torre de Babel* transformed their tool from a pie chart that only scientists could interpret to a plate that everyone could relate to. However, the choice of exactly which utensils to portray alongside *El Plato* stirred some debate among its developers. In my conversation with Mtra. Ana Bertha, she pointed out that people living in rural areas use corn *tortillas* as the vehicle for their food. If any, a simple spoon is the only utensil they might use in addition to *tortillas*. In the end, the *Torre de Babel* group decided on adding a whole set —fork, knife, and spoon— to add onto the "aspirational" nature of *El Plato.*

Furthermore, given the high levels of illiteracy in Mexico and *El Plato*'s use by dietitians like Sofía who work with children whose reading skills might be limited, Natalia acknowledged the need for a FBDG with as little to no words or numbers printed on it, further cementing the appropriateness of *El Plato*.

> *"(...) tratamos mucho de que las raciones fueran raciones (...) que fueran raciones más o menos pequeñas. El queso como queso Gruyere aunque la gente no se vaya a identificar con queso Gruyere por la imagen."* ("(…) we really tried to show that rations were rations (…) more or less small rations. The cheese as Gruyere, even though people might not identify with Gruyere for the image.)"
>
> – Mtra. Ana Bertha

The *Torre de Babel* group focused on portraying single portions of the foods to contrast the idea the food industry constantly makes consumers believe that they need to eat big portions when each individual has different needs. This, however, generated conflict between graphic designers and some of the people from the group. Dr. Bourges stated that a good cartoonist would draw a full chicken and not just a leg or a full watermelon instead of just a slice. Regardless, *El Plato*'s aim is to instruct about portions, which is why the perhaps unattractive drawings were important.

In theory, *El Plato* also tries to maintain a neutrality in the foods it portrays. There are no good or bad foods, as well as no brands because it is not a commercial instrument, even if Roberto tells his patients that *Bimbo*[17] paid to have a *pan dulce* included in the "cereals" group. Since *El Plato* is also a representation of a typical Mexican diet, traditional *pan de dulce* and *tamales* have earned their spot, and both Dr. Bourges and Mtra. Ana Bertha defend their presence in *El Plato.* Obesity — according to the NOM-043— may be a risk factor for the development of type-2 diabetes, hypertension and cardiovascular disease (Secretaría de Salud 2013, 25), but it is a multifactorial disease, so these foods do not singlehandedly cause it. The lard with which *tamales* are prepared is not a poison and eating them every now and then and in small amounts does not translate into illness or death. The issue is that medical discourse —particularly one that has been taken out of the clinical context for commercial purposes— has taken the place of religion as regulator of morality within Western societies (Bertran 2016, sec. 1171), satanizing the consumption of fats and sugars regardless of the socio-cultural context.

Natalia considers that *El Plato* is missing a lot and by trying to make it simple, its creators have complicated it even further. She recognizes and points out that it is not self-explanatory, so it cannot stand by itself. After all, *El Plato* was not originally conceived as a dietary guideline for the general population to access but as a tool exclusively for health professional use in clinical settings or nutrition workshops. It has to have an explanation behind, which should be based on the NOM-043. However, —according to Natalia— every dietitian's methods and speech about it is different when precisely the whole purpose of the

[17] *Bimbo*: Mexican-origin bread and baked goods multinational company

NOM-043 was to homogenize the messages given during nutrition and food orientation. It appears that *El Plato* failed to unify food orientation the moment it was taken out of clinical or community nutrition contexts.

In addition, the NOM-043 and *El Plato* were created for the *medicalisation* of food, meaning messages with scientific backing that are exchanged between patients and health professionals (Poulain 2011; Secretaría de Salud 2013, 3). Since Dr. Bourges believes people in general are only interested in learning how to eat differently, these messages are delivered without going into details about biochemistry and physiology of nutrition. The *Torre de Babel* group aimed to fight back against the *nutritionalisation* of food that the industry uses for commercial purposes, in which they highlight substances and nutrients that occur naturally in their products (e.g. calcium, iron, vitamins, fiber, etc.). *Nutritionalisation* happens when messages about Nutrition science are taken from the clinical setting and broadcasted to the general public, mostly via media outlets (Poulain 2011). Though its original purpose might have been geared towards prevention, Dr. Bourges points out that the food industry relies on it to motivate people to eat certain foods, specifically what they produce and in large quantities. Thus, this is one of the ways they have been contributing to the confusion among consumers immersed in the paradoxes of food modernity.

However, Dr. Bourges considers that a big mistake in the development of the NOM-043 and *El Plato* was precisely associating specific nutrients to the food groups: carbohydrates and energy for the "cereals" group, "protein" for the legumes and foods of animal origins group, and "vitamins and minerals" for the fruits and vegetables. In consequence, people —including health professionals, patients, the general public, the media, and the food industry— talk about substances (protein, calories, calcium, etc.) and not about foods. Michael Pollan describes this way of seeing Nutrition science as an ideology called *Nutrition-ism*, where the assumption is that foods' essence is the sum of their nutrients (Pollan 2008, 28).

Dr. Bourges does not see the point in educating patients using a *Nutrition-ism* approach because all items included in each of the food groups contain all the nutrients, only in different concentrations. Also, nutrient content depends on the amounts in which foods are consumed. For example, cereals are associated with the main source of energy because they

are eaten in abundance, but they also provide protein, minerals, and vitamins. Mtra. Ana Bertha also emphasizes that health professionals engaging in nutrition orientation and education should start talking about food and not nutrients because food is what people eat. As Marion Nestle points out, this focus "takes the nutrient out of the context of the food, the food out of the context of the diet, and the diet out of the context of the lifestyle (Nestle cited in Pollan 2008, 62)."

Time for a New *Plato?* Or *Platos?*

Mexico is considered a "megadiverse" country, for it forms part of a select group of nations that hosts over 70% of the world's species of flora and fauna (Comisión Nacional para El Conocimiento y Uso de la Biodiversidad n.d.). As such, *El Plato* provides a wide selection of options within each food group, thus striving to represent a diet that every person living in Mexico could relate to regardless of socio-economic status and location.

Portraying a diverse selection of foods also touches upon maintaining a varied diet, one of the five pillars of a "correct" diet. In order for a diet to be considered varied, the individual consuming it must select different foods from each group for every meal (Secretaría de Salud 2013, 7). According to Dr. Bourges, eating from a variety of equally important foods prevents an accumulation of substances in the food that are "potentially undesirable". He added that this also prevents a phenomenon known as *"hastío"* ("fed up"), in which a person gets tired of their monotonous diet and risks either *"enviciar"* ("corrupting") their diet or eating less. This could explain Martín's motivation to explore new spices and flavors when cooking his almost daily egg-white omelets and roasted fish fillets.

An important issue that Lorena pointed out about *El Plato*, however, is that in its attempt to portray Mexico's enormous food diversity, it might be too saturated with images, and this could lead to further confusion among patients. Contrary to Mtra. Ana Bertha's opinion that the selection was very complete, Dr. Bourges thinks that the issue he sees with regionality and seasonality representation can improve if each state's Ministry of Health office —working alongside the National Commission for the Knowledge and Use of Biodiversity (CONABIO for its acronym in Spanish)— adapted *El Plato* to accommodate for local foods, instead of trying to cram "commonly" consumed foods.

Roberto feels the need for different adaptations of *El Plato*, too. For example, he mentioned how ideal it would be if there was one for patients with diabetes and another for patients with kidney disease, such as the specialized ones Lorena uses in her practice. However, he also thinks there should be a "normal" *Plato* and one meant for people living in extreme poverty, the latter portraying corn, beans, and local, seasonal produce. To avoid offending any of these populations, he suggested naming the first one "The Mediterranean *Plato*" and use it for nutrition orientation with high-income communities, while the second one can be called either "The Economy-Friendly *Plato*" or "*Plato Chairo*[18]*"* and be taught in low-income populations, particularly mothers participating in social assistance programs.

These comments sparked a heated debate among the dietitians participating in the focus group. Natalia defended the alleged "extreme poverty" *Plato*, saying that a diet based on corn, beans, and vegetables is actually very healthy and everyone else in Mexico should aspire to eat like that. Both she and Lorena consider that different *Platos* based on socio-economic status can further exacerbate existing discrimination and racism issues. It could even be dangerous for low-income populations, who might look at inaccessible products portrayed in "The Mediterranean *Plato*" as better than the equally nutritious resources they have. This, in consequence, could lead to an abandonment of their traditional foodways and perhaps even starvation in order to allocate their meager resources to imitate what wealthy elites are eating. According to both her and Lorena, having different *Platos* just makes things more complicated when what works from one that is well done (e.g. simple, self-explanatory and with clear images of natural foods) is unifying the population.

Certainly, Roberto acknowledges that diets within Mexico change even throughout the different neighborhoods in Mexico City. Though we may all be part of the same culture, food culture in Mexico is truly a *"rompecabezas culinario"* ("culinary jigsaw puzzle") (Vargas 2006, 180) on account of a myriad of identities that characterize the intercultural population. On the one hand, there is the predominant *Mestizo* population, whose diets vary

[18] *Chairo*: Pejorative term used to refer to a "person that defends social and political causes against right-wing ideologies, but to whom it is attributed a lack of true commitment with what they say they defend; a person whose attitudes are self-satisfying ("Chairo | Diccionario Del Español de México" n.d.)". During the 2018 presidential election, this term was used to refer to current left-wing president Andrés Manuel López Obrador's supporters.

depending mostly on the region where they live and its local weather. On the other hand, there are also at least 70 different Indigenous groups (Instituto Nacional de los Pueblos Indígenas 2018)—several of which live in isolated, rural regions—, Jewish, Japanese, Lebanese, Spanish, Chilean, and many other immigrant communities (Vargas 2006, 180), and the Afro-Mexican community, who only now are being recognized and from which we will have more detailed statistical information about with the census that was carried out in March 2020 (Chaca 2019).

Making adaptations of *El Plato* to try and account for the food culture of broad ethnic groups —*Mestizo*, Indigenous, Afro-Mexican, Caucasian— would have been perhaps a more logical avenue for Roberto's argument. Unfortunately, disassociating between ethnic identity and socio-economic status is very complicated in Mexico. According to recent studies from the National Institute of Statistics and Geography (INEGI for its acronym in Spanish), the darker the skin tone and the increased likelihood of speaking an Indigenous language instead of Spanish, the least levels of education and higher income jobs one will achieve (INEGI 2017). Thus, the "Mediterranean *Plato"* for wealthy communities would actually serve light-colored-skin individuals who are most likely descendants of European immigrants, while "The Economy-Friendly *Plato*" for people living in extreme poverty would unintentionally target mainly Indigenous populations and the Afro community.

Babel

Surely, the NOM-043 stipulates that *El Plato* "must not suffer any alteration or modification (Secretaría de Salud 2013, 22)". Regardless, adaptations of it have already been set in motion. Mtra. Ana Bertha herself even made her own version for the cover of the newest edition of the *"Dietas normales y terapéuticas"* (*"Normal and Therapeutic Diets"*, Fig. 24*)* textbook she co-wrote. Because she is one of the people that was involved in developing *El Plato* and the NOM-043, she knows not to call her version *"El Plato del Bien Comer"* and even makes a note in the textbook about it being an adaptation, by no means a replacement.

In her version, she added elements that she considers are missing and that the rest of the *Torre de Babel* group did not always agree with her about. Specifically, she modified the

distribution of the food groups to resemble more the USDA's *ChooseMyPlate*, where fruits and vegetables should occupy half the plate. Mtra. Ana Bertha also made *El Plato* less saturated with images, changed the "brick" color of the legumes and foods of animal origin group to a brown, and added water —which Dr. Bourges classifies as a nutrient, not as food— and physical activity.

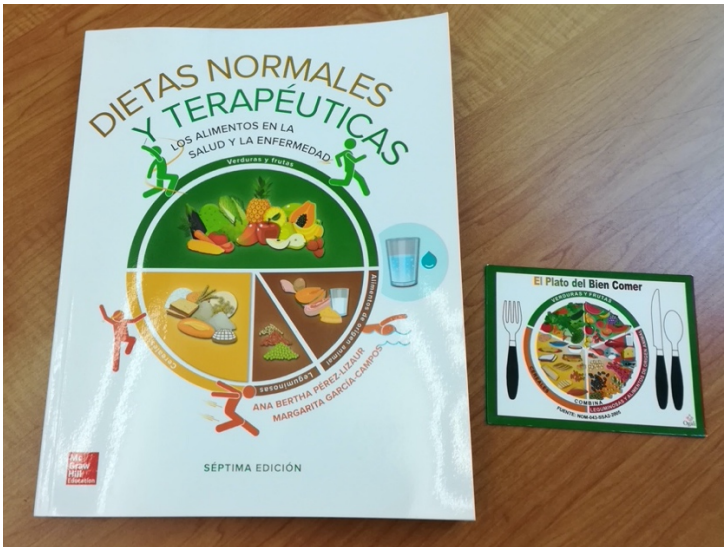


Figure 25 Mtra. Ana Bertha's adaptation of El Plato in the new edition of "Normal and Therapeutic Diets" textbook

Mtra. Ana Bertha is certainly not the only person who has developed versions of *El Plato.* The direct influence of this emblem has gone across borders in Latin America, not as similar adaptations, but almost as is. For example, even though Ecuador recently published their own set of dietary guidelines with a spoon-shaped FBDG, on a recent trip to Quito I stumbled upon a *Plato del Bien Comer* mural painted on the wall outside an elementary school. Likewise, Dr. Emily Yates-Doerr shared with me pictures of *El Plato* in use for nutrition orientation at health clinics in Guatemala, where their official FBDG is in the shape of a clay pot.

Figure 26"El Plato del Bien Comer" painted outside an elementary school in Quito, Ecuador

Figure 27 "Plato del Buen Comer" used in a health clinic in Guatemala (Photo courtesy of Emily Yates-Doerr)

There are certainly subtle differences between these *Platos* that are present across Latin America, perhaps as an attempt to adapt them to these countries' particular food cultures. However, a key difference with the Guatemalan version is in the name itself: "*Buen Comer"* instead of *"Bien Comer"*.

> *"Hablamos mucho de esta diferencia entre 'buen' y 'bien'. La idea es 'bien comer', no 'buen comer' porque el 'buen comer' tiene que ver con la gastronomía, ¿no? Lo cual también se vale, pero el 'bien comer' tiene que ver con una dieta correcta."* ("We talked a lot about this difference between 'good' and 'well'. The idea is 'eating well', not 'eating good' because 'eating good' has to do with gastronomy, right? And this is also valid, but 'eating well' has to do with a correct diet.")
>
> – Mtra. Ana Bertha, explaining the difference between *buen* and *bien*

For Mtra. Ana Bertha and the rest of the *Torre de Babel* group making the distinction between *bien* and *buen* was of the utmost importance. They put great thought into making sure the public *El Plato* was targeted for did not associate its contents with gastronomy and thus, hedonism, indulgence, and over-eating. Instead, they wanted the viewers to associate *El Plato* with the six pillars of a "correct" diet: complete, adequate, innocuous, balanced, varied, and sufficient. Why, then, a "correct" diet and not a "healthy" one? Mtra. Ana Bertha believes that "healthy" implies a desired health impact they had no specific scientific evidence for, unlike the numerous studies for The Mediterranean Diet's benefits to cardiovascular health (Lavielle Sotomayor and Thompson Chagoyán 2017, 67).

It would be risky making a health claim if an individual following a *Plato*-based diet did not accomplish a certain positive health outcome. Also, by not naming a diet "healthy", the presence of a *concha* and a *tamal* should not be problematic. However, naming the NOM-043's prescribed dietary patterns as "correct" may give the idea that any other ways of eating in Mexico are incorrect, even if they are socio-economic and culturally adequate but not innocuous or not sufficient enough in the eyes of a trained nutrition professional, as it is the case with the participant office workers. Eating "correctly" in Mexico City is as paradoxical as its food system, not to mention a utopia.

Coming back to the *buen* vs. *bien* situation, some of the participant dietitians actually used both terms interchangeably. Interestingly enough, Roberto and Natalia almost always called it *"del buen comer"*. Both of them either use it or have it in their consultation offices but do not fully agree with it. How is it that two dietitians whose training was based on the NOM-043 and who are constantly in contact with *El Plato* call it the wrong name? It could be possible that by doing this they are unconsciously disregarding it altogether. It could also be a sign of *El Plato* becoming an obsolete and irrelevant tool for both Nutrition science and modern-day Mexican diets, and it is the young dietitians that are noticing this firsthand thanks to their current, direct work with the population.

Conclusion

Not only is "Babel" back in Nutrition practice in Mexico: it never really left. The group of experts that developed *El Plato* and the NOM-043 might have reached a consensus, but this did not mean that everyone in it agreed with several of its key elements. Furthermore, between the four dietitians that participated in the study, they use at least 10 different nutrition education tools or techniques on a constant basis, out of which 3 were FBDGs that are not *El Plato del Bien Comer.*

This does not mean that health professionals see no value in *El Plato* as a food and nutrition orientation —not education— tool. It is easy to use and helps provide a general layout of basic nutrition concepts efficiently, which is suitable for short consultations, large audiences, children patients, or for adult patients who have little interest. As appointments unfold, the contents of consultations become more complex. As expected, *El Plato* is no

longer enough to build on the patients' knowledge once it laid the groundwork for nutrition education. Thus, dietitians must appeal to more personalized tools, which vary greatly depending on the patient.

Concerns that have arisen among young dietitians and experts that developed *El Plato* in regards to its design range from its food group distribution and how the language used to describe each one devolved in *Nutritionism* once it was taken out of the NOM-043 context, the lack of vegetable fats and water groups presence, confusion with the used colors, and image saturation to not being self-explanatory and an impossibility to account in just one FBDG for the wide biodiversity and the different food cultures in Mexico. Suggestions to improve *El Plato* as a tool and update it to more recent advances in Nutrition science sparked heated debates, in which the possibility of having adaptations based on socio-economic status uncovered issues of historical discrimination and racism in Mexico.

Furthermore, the conversations with both young dietitians trained with the NOM-043 and with the people who developed these guidelines for food and nutrition orientation left one thing clear: the consensus in nutrition practice that the NOM-043 established when it became an official norm and was included in Nutrition Degree curricula has begun to dissolve, not only among those more specialized practitioners, but also among those who use *El Plato* and/or have it present on a daily basis to the extent that they call it by the wrong name.

Finally, though it might be true that the majority of the nutrition recommendations embedded in the NOM are still relevant, this set of guidelines is lacking recent advances and concerns in Nutrition, such as the sustainability of food production systems agenda established by the EAT-Lancet commission. Unfortunately, since the priorities of nutrition and public health professionals in Mexico have been shifting more towards policies that shape individual consumer behaviors against the food industry, both the NOM-043 and *El Plato* have not been updated or received attention since 2012. Without resources to plan ahead for constant evaluation, they are becoming increasingly obsolete, resulting in their disregard once dietitians graduate from their undergraduate institution.

Conclusions and Recommendations

Dietary guidelines vs. food and nutrition orientation guidelines

By definition, dietary guidelines should be for the general population, which the NOM-043 and everything in it are not. They were meant to standardize food orientation practices among health professionals. Even though *El Plato* was designed as a FBDG, it has always been a tool for exclusive health professional use and was never meant to be taken out of the clinical context, let alone stand by itself. There was no plan to evaluate its impact and no resources to carry out initial research beyond a few focus groups to validate certain elements of its design.

The road towards the development and publication of the NOM-043 as a mandatory federal law was long and winding. A stroke of good luck in getting an appointment with the Secretary of Health —as well as the presence of nutrition professionals' allies working in the government up until Enrique Peña Nieto's administration (2012-18)— made it possible for the *Torre de Babel* group's work to see the light of day and become the official guidelines for nutrition orientation nationwide. However, the moment *El Plato* became popularized through, firstly, the food industry's product labels and afterwards, elementary school textbooks, it began losing its meaning because it was never meant to be self-explanatory.

In addition, back in 2005 (and afterwards 2012 with the latest update), the NOM-043 and *El Plato* might have fit better into Mexican diets than nowadays. Mtra. Ana Bertha recognizes that diet has changed, and there are foods that have become more common, like kiwi. Also, as much as nutrition professionals want the population to eat natural foods and cook more, the reality is that current lifestyles do not permit this, unless it is something quick and simple or someone else prepares their ingredients for them. She has observed how younger generations are relying more on ultra-processed foods that are not portrayed in *El Plato*, such as canned or packaged foods. It is possible that these people cannot identify themselves with it anymore. Mtra. Ana Bertha suggests that *El Plato* should be evaluated to make sure it still says something to the public.

As for the patients, they value to some extent their dietitians' efforts on health education, mostly in topics that pertain to their own wellbeing, and value even more the communication, trust, and positive reinforcement of not only their dietitians but also their

entire personal support network, that provides a safety net for them to successfully follow through meal plans as accurately as possible.

Particularly office worker patients in Mexico City struggle with the paradoxes of food modernity (Bertran 2016; Poulain 2011): they have a myriad of options to choose from, but seemingly conflicting messages from dietitians, the food industry, and social media make selecting foods too complex, adding *tension* (Weaver 2019, 68) to the process and resulting in not fully satisfactory food decisions. By tension, I draw from Weaver to argue that these oftentimes contradictory notions pull the office workers in opposing directions when deciding what to eat, which could in and of itself be stimulating a chronic biochemical response that makes them susceptible to the metabolic illness they are aiming to prevent through nutritional treatment. All of this is embedded in a social context and a hectic lifestyle that —even when it tries to show itself as flexible (e.g. home-office schedules)— takes over times and spaces meant for personal wellbeing.

How can El Plato del Bien Comer and the NOM-043 be improved?

As long as they are not being called *El Plato del Bien Comer* or that they explicitly state that they are adaptations, dietitians and nutrition experts —such as Mtra. Ana Bertha— have found a loophole in order to develop, use, and disseminate new versions of *El Plato* that fit each nutrition professional's patient demographic or their opinions on how "correct" diets should be represented. In addition, if there ever was a consensus in using a unique FBDG among all health professionals, it is now lost, and other pedagogical tools are used by different dietitians: EAT-Lancet plate, the Plate Method, Mediterranean Diet Pyramid, food replicas, etc. An update to the NOM-043 and *El Plato* to incorporate any advances in Nutrition science, health professional advocacy for food sovereignty and sustainability of food production systems agendas, and changes in diets since 2012 —which was when it was last updated— is long overdue.

Both Mtra. Ana Bertha and Dr. Bourges agree that it is time to do something about *El Plato*: update it, discard it and start over, or innovate it. However, whoever takes up the responsibility to do so must avoid making the same mistakes the *Torre de Babel* group committed. An interdisciplinary team with very clear individual roles (e.g. grant writing,

qualitative research, data analysis, public policy advocacy) must be assembled to perform formative research, publish findings, and organize an evaluation plan.

The group of dietitians do consider *El Plato* as a useful tool to explain basic nutrition concepts efficiently, particularly to large groups, children, and disinterested patients that do not have a diagnosis of a chronic disease. However, they feel frustrated about certain elements of its design, being the distribution of food groups, the lack of relevant dietary elements, the inclusion of certain "unhealthy" foods, and the image saturation the main issues they pointed out.

They acknowledge that every food group in *El Plato* is important, as long as the proportions are respected and portions are reasonable, but precisely food group proportions and portion sizes seem to be two of the trickiest elements to communicate and depict in a FBDG. Within our training in Nutrition at Mexican institutions, we learn the erroneous notion that these traffic light-like colors aim to represent food group proportions, but they do not match the way *El Plato* is physically divided. It is only after talking to the people that created the tool that I learned that this is a misconception.

The elements from *El Plato* that require special attention if and when it is evaluated for an update and re-design are the following:

- **"Cereals" group:** Do culturally relevant and traditional sources of cereals —even if they have added sugars and/or fat (e.g. *pan dulce*, *tamales*)— belong to this group? Should these foods be removed entirely from the FBDG? Should they remain but in a "cereals with sugar and fats" subgroup or as part of an "occasional foods" group outside from *El Plato*? Could they just be drawn in a smaller portion or size?
- **Vegetable fats:** One of the biggest critiques the group of dietitians has on *El Plato* is that it does not include sources of vegetable fats, other than the peanuts depicted as part of the "legumes". When the NOM-043 was developed, the nutrition experts wanted to decrease consumption of fats, particularly saturated and trans fats that affect cardiovascular health. The specific recommendation associated with *El Plato*, however, stipulates that one must "consume as little as possible fats, oils, (…), as well as foods that include them (Secretaría de Salud 2013, 23)". The idea must have been related to the caloric density of fats and oils (9 kcal/gram), and how they could easily

promote weight gain because of this. Regardless, antioxidant-rich, culturally relevant sources of vegetable fats —such as avocado, chia seeds, and cacao— could aid in improving cardiovascular health, not to mention that they promote satiety.

- **Color selection and distribution of food groups:** The colors that the current *Plato*'s design uses to represent each food group have generated a confusion among dietitians and nutrition professionals. The erroneous interpretation that they represent a traffic light clashes with the idea that every food group is equally important and should be consumed in equal proportion. It will be necessary to, first, assess among different age groups of the general population what they interpret from the current colors and food group distribution. Afterwards, there should be an assessment of which colors and distribution do not generate confusion among not only the general population, but also dietitians, health professionals, and nutrition undergraduate students.

In regards to portion sizes, the idea of people from any region of the country and from any socio-economic level identifying with *El Plato's* contents could be potentially broken when, for example, depicting a slice of Gruyere cheese (even if this is the most popularized way to portray a cartoon cheese) instead of more culturally relevant ones, such as a whole ball of Oaxaca *quesillo*. In general, it is also impossible to depict in just one image the enormous biodiversity of Mexico, as well as the regional cuisines and diets. Though the current *Plato's* design is a good effort, it should be adaptable for each state both in the contents of the plate and the utensils. Certainly, a full set of cutleries might be more appropriate for home-cooked meals in cities, like the ones the office worker patients would eat during the week, but not for rural communities —particularly if they are Indigenous— where only a spoon might be needed.

El Plato's current design is both a representation of Mexican diets at the turn of the century and a set of aspirational behaviors mostly inclined towards improving metabolic health within the population. However, if it were solely aspirational, a low percentage of the population would identify with *El Plato* and feel inclined to replicate it through their diets, taking into account their resources. The opposite might happen and can be just as harmful; people would sacrifice their own traditional foodways in an attempt to replicate a diet that is beyond their resources. Instead of aspirational, *El Plato* should strive to merge more harmoniously the diversity from all over the country so that people will embrace more

traditional dietary patterns, some of which have been stigmatized by medical discourse outside clinical settings or *nutrimentalisation*.

Furthermore, eating "correctly" as the NOM-043 stipulates is complicated to accomplish on a daily basis, even if a person is constantly and consistently undergoing private, individual nutritional treatment and has the resources and social safety net to do so. Though the NOM-043 theoretically strives to unify nutrition discourse among health professionals, in practice, as we saw in my research, nutritionists have their own methods, ideas, opinions, preferences as to how to engage in food orientation. As health professionals, they are constantly updating their knowledge as advances in medicine and nutrition emerge, so even if the NOM-043 provides them with basic messages based on scientific literature that remain relevant, its contents are beginning to become obsolete and insufficient to account for the increasing complexities in the food production system. Thus, they are bound to disagree on just how adequate, innocuous, balanced, and sufficient a patient's diet really is.

Dissonances in young dietitian and nutrition expert discourse speak volumes of the "return of Babel" in food orientation practices in Mexico. How can *El Plato* and the NOM-043 be improved to regain the consensus? By this point, *El Plato* is used as a FBDG, and according to Mtra. Ana Bertha, more and more of Mexico's population are familiar with it, regardless of having ever attended a nutrition consultation. This provides an area of opportunity to fully transform it and associate it with the dietary guideline efforts that were already developed in 2015 to lay the groundwork for policy changes (Academia Nacional de Medicina de México 2015) but that —according to Dr. Bourges— have not been set in motion.

In order to make *El Plato* more self-explanatory, it requires a re-design that provides a template for each state's local Health Ministry office to adapt. With the additional and urgent issues influencing diets in Mexico, it also needs to be conceived as guidelines that go beyond food, encompassing a more holistic view. Physical activity and drinking water are elements that Mtra. Ana Bertha included in her adaptation, being the second one also brought into the participant dietitians' conversation. However, there is a newfound awareness amongst nutrition professionals that individual diets must also contribute to environmentally-friendly, culturally relevant, and sustainable food-production practices. For example, both the

Mediterranean Diet Pyramid and the new Ecuadorian spoon-shaped FBDG (Figures 28 and 29, respectively) have managed to include these and other elements related to the socializing aspect of eating. The question is: how to depict this for a plate-shaped guideline and how to account for the myriad of traditional, regional cuisines and food production systems? That is food for thought for further research that should involve interdisciplinary work.

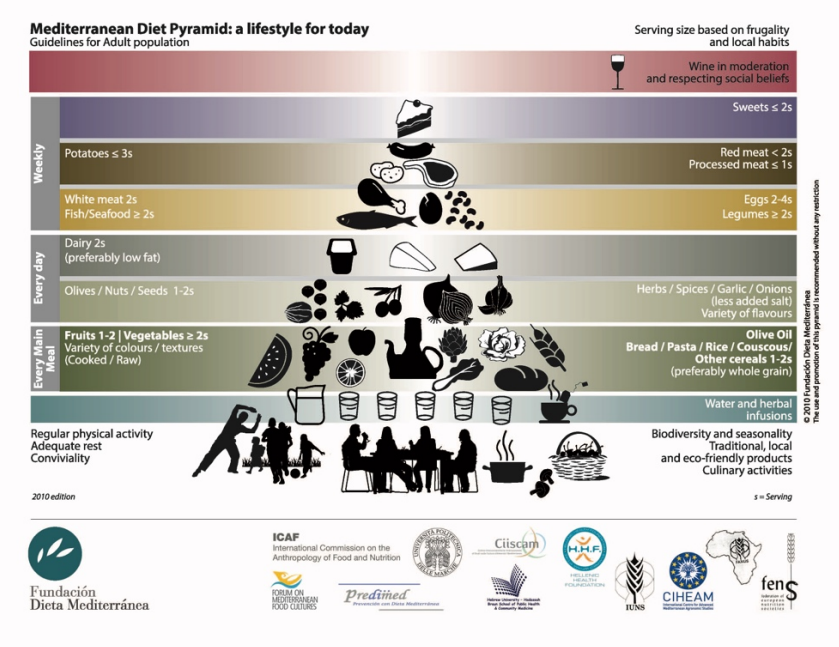


Figure 28 Mediterranean Diet Pyramid (Fundación Dieta Mediterránea 2010)

Figure 29 Ecuador's FBDG (Ministerio de Salud Pública del Ecuador and Organización de las Naciones Unidas para la Alimentación y la Agricultura 2018)

A new approach to nutrition education and private practice in Mexico City

Dietary and food orientation guidelines are not a silver bullet to solve the current metabolic health situation in Mexico. In fact, no public health strategy by itself is, and if the environment does not provide the resources for individual behaviors that lead to an improvement in health and wellbeing, these efforts will continue to have a small impact. Surely, an update to the NOM-043 and Nutrition degree curricula could aid in shaping dietitians that involve themselves more in social justice causes and advocacy. From the FFQ results, we can observe how influential individual nutritional treatment can be for developing those habits that public health researchers are struggling for the general population to acquire. Regardless, the impact is still limited to people that have the resources to attend private nutrition consultations constantly and consistently. Plus, their socio-cultural context will continue to shape their behaviors in more relaxed times, unless they isolate themselves, with which they are risking a rupture in their social and support networks.

Obesity is a multifactorial disease, and the rates of metabolic illness in Mexico did not increase overnight. Certainly, the issue became evident and showed a rapid development in the late 1990s/early 2000s, but this so-called crisis is a consequence of different frictions that have been set in motion across different temporalities within Mexican history, which led to the current "arrangements of culture and power (Tsing 2005, 5)" that are now hindering public health, such as the increased availability of food options in urban areas and the hectic work lifestyles that take over times and spaces for personal wellbeing..

Finally, both Mtra. Ana Bertha and Dr. Bourges spoke about people working for Vicente Fox's (2000-2006) and Felipe Calderon's (2006-2012) administrations who were allies of nutrition professionals. They believed in their work and helped push the NOM-043 forward, providing continuity to food orientation standardization. Where are these allies now? Why are they dormant? Are they focusing on different matters? Retired? Who could be potential new allies in the administration of Andrés Manuel López Obrador and presidents to come? It is important to address these questions in order for community nutrition and policies appropriately targeting systemic and structural changes to become priorities in present and future Mexican government agendas.

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Appendix 1. Interviews and Focus Group Scripts

Office Workers' Semi-Structured Interview

The purpose of these questions is to explore how you as a patient understand and apply the information received from your interaction with your dietitian into your daily food practices as an office worker in Mexico City.

1. How old are you and what was the last degree you have obtained?
2. Tell me about your average workday: how is your routine, emphasizing on what you commonly eat? Start with the moment when you wake up in the morning and finish when you go to sleep.
3. What area of the city do you commute from to go to your office?
4. Who are the other members of your household or do you live by yourself?
5. For how long have you been seeing your dietitian, and what motivated you to seek nutrition counselling?
6. Have you seen changes in your diet over that period of time? Which ones and to what elements from your treatment do you attribute these changes?
7. Now, I'm going to show you some of the pictures that you took of the food and beverages you consumed during weekdays. I want you to tell me: what it is, who prepared it, where were you when you consumed it, who was with you when you did, and if there was a special occasion surrounding its consumption (a birthday, a holiday, getting paid, etc.).
8. Now, we will do the same, but I'm going to show you the pictures you took during the weekends, and I want you to also tell me what it is, who prepared it, where were you when you consumed it, who was with you when you did, and if there was a special occasion surrounding its consumption (a birthday, a holiday, a baptism, a wedding, etc.).

Dietitians' Focus Group

The purpose of this study is to examine how Mexican dietitians are currently using *El Plato del Bien Comer*. In addition, I aim to explore how patients understand and utilize the information received from their interaction with dietitians. Are dietitians actively using *El Plato del Bien Comer* with their patients? If so, are patients assimilating and applying the concepts behind it in their diet?

Everything you share today is confidential and private. Your real name will not be used in the notes or publications of this study, and your confidentiality will be protected by all the researchers involved in this project. Other people may learn that you participated in this study but the information you provide will be kept confidential to the extent permitted by law. Research records will be stored securely. Data that we collect from you will be stored indefinitely for future publication in the same area of study.

All beliefs and opinions are welcome. If you do not understand one of the questions I will be asking, do not hesitate to ask for a clarification. You can refrain from answering any of the questions if you do not want to.

1. Can you describe your typical patients?
2. What are the essential tasks that you engage in during an average nutrition consultation?
3. Which of these tasks do you feel your patients find the most useful to help them maintain motivation for continuing with their treatment?
4. When you engage in nutrition education with your patients, what materials do you use? Why?
5. Is *El Plato del Bien Comer* present in your offices? Why or why not?
6. Have you used *El Plato del Bien Comer* in your consultations over the last 6 months? Why or why not?
7. If you haven't used *El Plato* for nutrition education purposes recently —or have used it sparingly—, have you used any other Food Based Dietary Guidelines (FBDGs)? Which ones and why?

8. I am going to show all of you some pictures of foods and beverages that an average office worker in Mexico City who attends nutrition consultations consumes during their workday. I want you to look at them and tell me if you consider the elements in the pictures “healthy” or not and why.
9. Now, I am going to show you more pictures of foods and beverages that office workers who attend consultations with a dietitian consume during the weekends. I want you to look at them and also tell me whether or not you consider the portrayed elements as “healthy” and why.
10. What were the main differences you noticed between both sets of pictures?
11. Do you think any of the meals in the pictures is a portrayal of either *El Plato del Bien Comer* or any of the other FBDG you have used in your consultations?

Nutrition Experts' Semi-Structured Interview

The purpose of these questions is to know about the history of food based dietary guidelines (FBDGs) in Mexico and *El Plato del Bien Comer*.

1. Prior to *El Plato del Bien Comer*, do you recall what FBDGs were being used by health professionals and dietitians engaging in nutrition education in Mexico?
2. Out of what need was the initiative for a unique and official FBDG in Mexico born?
3. What was your role in the development of *El Plato del Bien Comer*?
4. What were the research methods employed for the development of this FBDG?
5. What elements, shapes, or colors were originally considered in its design but were discarded? Why were these elements, shapes, or colors discarded from the final design?
6. When *El Plato* was finally published and put in use, did you and your colleagues plan on evaluating this tool's impact on dietary habits? How?
7. Reflecting on *El Plato's* use in Mexico: what do you think works well and why? What do you think could be improved and why?

Appendix 2. Office Worker Patient Stories

Sara

Sara —a 36-year-old actuary— and her husband live in Huixquilucan, another *municipio* from the State of Mexico, in a new apartment building that can only be accessed through a 20-minute car drive from the highly urbanized Interlomas neighborhood. In fact, when I went to interview her the morning of August 11th, 2019, she asked me to arrive to the Interlomas Krispy Kreme shop, so she could pick me up because GPS technologies do not accurately give directions to her address.

She works at a small office inside the Galerías Reforma plaza —*"donde estaba la pista de hielo" (*"where the ice rink used to be", and now, it is an indoor soccer field that employees from the offices use after work)—, located in Santa Fe, a neighborhood in the Cuajimalpa delegation that has a high concentration of corporate buildings. Except for a veterinarian, a Jenny Light nutrition center that replaced a convenience store, a beauty salon, and a little music school, most of the premises are office spaces.

"En cuanto llego, procuro desayunar porque si no luego con la jefa es más difícil." ("As soon as I arrive, I try to eat breakfast because afterwards with my boss here is more difficult.") — Sara

On average, it takes her half an hour to get there at 8 am every morning, and as soon as she arrives to her office, she has yogurt, oats, and papaya or a scrambled egg with cheese from Tupperware containers and black coffee "*de grano*" (instant coffee is forbidden) with Splenda from a Thermos for breakfast alone on her cubicle before her boss gets there. From that moment on, she will remain at Galerías Reforma until 6 pm, and she will be having the rest of her meals —except for dinner, which she eats with her husband back at home or out— either again alone on her cubicle while working or sitting with her coworkers during lunchtime (2-3 pm) at a little table in the office kitchenette, that is if she does not have scheduled meetings that will prevent her from eating when she normally would.

Even though Sara's life revolves around the western outskirts of Mexico City, she and her husband attend once-a-month nutrition counselling services in Barranca del Muerto, a neighborhood still in the west-central area of the city (Álvaro Obregón delegation), though

nearby the Southern part of Mexico City. She noticed that ever since she got married, she gained *"un montón de peso"* ("a ton of weight"). In addition, her religious wedding was coming up on February 2020, for which she borrowed a dress. However, her main motivation was the need to start taking care of herself after seeing elevated levels of cholesterol in recent blood tests and knowing that she has family history of diabetes and hypertension.

Overall during the week, she follows a meal plan consisting of three main meals and two *colaciones* or snacks, one between breakfast and lunch and the other one between lunch and dinner. As previously mentioned, she eats breakfast early in the morning at her office by herself on her desk, as well as her *colaciones,* which can range from a small apple or a cup of sugar-free gelatin prepared by her, to roasted chicken tacos made by her husband and a cup of berry-flavored *Ades*[19]. Her lunch, on the other hand, can be as easy as two packets of tuna and a salad —which require little-to-no preparation— to cheese pasta also cooked by her husband accompanied by a whole cucumber and a tomato. Back at home during the evening and if they do not have dinner out, her husband will once again prepare the meal, which usually consists of two portions of roasted beef with plenty of lettuce and sugar-free gelatin.

In the first weeks of treatment, she and her husband could not eat *"nada, nada de carbohidratos"* ("absolutely no carbohydrates"), but during the second week of her participation in the study, her new plan allowed her to include one slice of toasted whole wheat bread with her breakfast scrambled eggs with cheese. Sara described being able to finally eat that piece of bread as: *"¡Gloria!"* ("Glory!"). With that week's meal plan, she was also allowed to eat sugar-free dark chocolate, and though the dietitians did not specify an amount, she did not want to risk her progress and only ate *"un chocolate pequeñito"* ("a very tiny chocolate") with dinner.

Sara expressed how —after fifteen weeks of treatment— she now finds the sugary treats that would have previously given her anxiety *"súper empalagoso"* ("too cloying"). She attributes this noticeable short-term change to the fact that the meal plans forced her to quit foods rich in simple carbohydrates abruptly because *"se supone que la base de la dieta es algo químico*

[19] Ades: Brand of soy beverages

que genera tu cuerpo, entonces si te comes un cachitito de algo de azúcar… ¡ya! Echaste a perder la dieta de la semana" ("supposedly, the basis of the diet is something chemical that your body generates, so if you eat a little piece of something with sugar, you've just ruined that week's diet").

"(…) a mí me ha funcionado muy bien (…) voy una vez al mes, me miden y ya: cualquier duda que tengo, por WhatsApp. Entonces es como súper fácil. Está como al instante cualquier duda que tienes, cualquier cosa que te estás sintiendo mal o lo que sea, puedes decir ahí." ("For me, it has worked very well. I go once a month, they take my measurements and that's it: any questions I have, through WhatsApp. So, it's like super easy. Any questions you may have, it's instantaneous. Any concerns that you are not feeling well or whatever, you can tell them there.") — Sara

In regards to what strategies she feels have helped her the most to remain motivated and see changes, Sara mentioned how convenient it is for her and her husband to only have to attend a 10-minute consultation once per month to track their anthropometric measurements. Regardless, the dietitians are very communicative and engaging with their patients through alternative media outlets, such as WhatsApp or their website. The only thing that she is unhappy about is the fact that their household expenses have increased because they have to buy different foods every week to be able to follow the meal plans accurately. Still, she had recently referred her mother to these dietitians, and even her father-in-law was considering also going to see them.

During the interview at her apartment and given that a large percentage of Sara's meals are cooked by her husband, he came out into the living room to interrupt us by jokingly expressing that he was feeling incriminated. After we were done, they both took me to a *barbacoa* stand close to their home where they sometimes eat lunch on Sundays. Sara's husband was confident on the emotional advantages of diverging from the diet on the weekend: *"Te quita esa ansiedad de tragarte esa rebanada de pastel"* ("It takes away the anxiety of engulfing that slice of cake"). On the car ride, they realized that they forgot to stop at a convenience store first to get diet sodas, which the street food stand merchants do not sell.

Over the weekend, Sara's diet should not deter from what she ate Monday through Friday. However, sometimes the dynamics of her routine change considerably, making it complicated for her to follow the meal plan as strictly as she would during the week. For example, during one of the weekends of the study, she and her husband went to Puebla with her in-laws, in a sort of communal honeymoon. In other words, a couple of newlyweds invited the whole family to spend the weekend there. Sara and the family stayed at a hotel that offered breakfast buffet, "*entonces pues, ni modo: nos sentaron al buffet"* ("so tough luck: they sat us at the buffet"). While describing what she ate, she jokingly expressed having sinned by eating a small *pan de dulce* with her buffet breakfast of scrambled eggs, sausage, orange juice, beans, and a flour tortilla quesadilla. Afterwards, while strolling around the city center of Cholula with her husband and in-laws, she bought a handful of *chapulines*[20] with lime, salt, and chili peppers from a street vendor. Later that afternoon, the whole family went to an African restaurant for lunch and —aside from what each person ordered individually— shared a few entrées. Sara had a little piece of bread with an exotic meat and some jicama and cucumbers, along with the lamb hamburger and can of diet Coca Cola she ordered for herself. Since lunch was a little too heavy for her, at dinnertime with her husband at a taco shop she was not really hungry and only had one flour tortilla quesadilla.

"Sí, con mis padres es más complicado porque por más que les explico qué puedo y qué no puedo comer,… O sea, yo les digo 'tortillas de maíz' y mi mamá tenía de harina, ¿no?" (Yeah, with my parents is more complicated because even though I explain to them what I can and cannot eat, … I mean, I tell them 'corn tortillas', and my mom had flour ones, right?")

When there is not a special occasion happening over the weekend, Sara usually has more control over her meals, particularly if she eats at home. However, the weekend is also a time for her to meet up with friends and family. She might take an apple to the park where she will meet with a friend to chat, but if she goes to have lunch cooked by her mother at her parents' house, she gets slightly frustrated that neither of them quite understand what foods she is allowed to eat and do not always have options for her.

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[20] *Chapulines:* Crickets

Jorge

On July 29th, 2019, I went to a different office building in Santa Fe to meet Jorge —a 36-year-old accountant— for our first session of the study. We originally had agreed upon me arriving to his office between 4 and 4:30 pm. However, a meeting he had scheduled at 1 pm got pushed back from 4 to 5 pm. I arrived at the lobby of the corporate building where Jorge's office is located at 4:50 pm. After registering with the receptionist and because I came for a personal matter, I had to wait for a few minutes for Jorge to rush downstairs, escort me to his office, unlock an empty conference room for me to sit in and wait for him, and return to his meeting, which ran for another 30 minutes.

"*Sí tiendo mucho a veces a saltarme la segunda colación. A veces por tiempo o por prisas y demás. Sin embargo, sí procuro tomármela porque me ayuda a no… me ayuda a escapar de los antojos que me podían dar en el transcurso… en el trayecto de aquí a mi casa. Sí soy muy propenso a… antojos, sobre todo cuando salgo de trabajar. En el transcurso del día es raro, pero cuando salgo de trabajar sí."* ("I do tend a lot of times to skip the second snack. Sometimes it's because of time, because I'm on a rush and such. However, I do try to eat it because it helps me to not… it helps me to escape the cravings I might get on the way… on the way from here to my home. I am very prone to… cravings, especially when I leave work. During the day, it is odd, but when I get out of work, I have them.") — Jorge

After I left Jorge's office at around 6:30 pm, he probably remained working there for at least another half an hour, making sure he eats his afternoon *colación* either at his desk or in his car while driving home. Otherwise, it is likely for him to succumb to the cravings he usually gets when he leaves the office in the evenings, and end up at a *torta*[21] stand close to his house or getting a cup of *Maruchan* instant noodle soup at a store.

Jorge would originally go to the gym for an hour to do cardiovascular exercise after the 30 minutes to an hour-and-a-half car ride home to Anzures-Polanco in the Miguel Hidalgo

[21] *Torta:* Mexican sandwich done with a *bolillo* or *telera* bread (a sort of individual-sized baguette). It usually has some type of meat.

delegation. Unfortunately, he hurt his knee and was told to swim instead, which he cannot do at that particular location. Thus, he had to quit his gym and has yet to find another one with a pool that has affordable membership prices and is close to his home. He currently spends his weeknights reading or watching shows on Netflix and having dinner with his parents, who live right across from his apartment.

During the week, Jorge might also eat breakfast with his parents at their apartment. He will squeeze orange juice while his mother cooks for him a scrambled egg with a yolk and two whites and 30 or 40 grams of ham. When he eats breakfast alone at his apartment, he will cook the eggs similarly, but the orange juice will come from a carton of *Jumex Único Fresco*, *"que alega ser natural, pero (...) no sé"* ("that claims to be natural, but I don't know"). As for his *colaciones*, he tries not to skip them, regardless of his busy schedule, and usually eats them in his desk while at the office. However, if he brings a Tupperware container with a cup and a half of chopped papaya, he has to go somewhere else in the office to eat alone because his desk neighbor dislikes the smell.

At lunchtime, he will eat with his coworkers at a kitchenette similar to the one in Sara's office, which has a microwave oven for Jorge to reheat meat stews (beef or pork) with vegetables and perhaps a pasta soup that his mother cooks for him. Similarly, the meals his mother will cook for him and his father at dinnertime usually consist as well on a 90 grams of roasted beef steak or chicken with cooked vegetables and *nopales*.

On Fridays, though, Jorge does not bring lunch with him because he and his coworkers like to eat outside in one of the restaurants that are nearby the corporate building. Sometimes they will choose one with available options that match his diet, but if everyone is craving *Taquearte*, *"pues ya me amolé"* ("well, I am screwed"), and the healthiest thing he can order there is an *alambre*[22] and not eat the tortillas.

Jorge first began his nutritional treatment four years ago, after a year and a half of living in the United States, where he gained the extra weight he was struggling to lose and was affecting his quality of life. He explained that he was able to improve a lot of his eating habits

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[22] *Alambre:* Mexican dish consisting of pieces of various meats (both lean and processed), peppers, onion and cheese

during the first couple of years, which led him to a constant weight loss tendency. However, his progress plateaued when he started struggling with getting rid of some habits. This situation — along with the fact that he became overly confident because of the weight he had managed to lose so far— made him neglect his diet again, coming back to old habits and gaining back some of the weight.

"Sí he notado el cambio en mí, en el hecho de decir de que yo ya no tolero fácilmente como ciertas cosas. Me cae pesado comer los mismos volúmenes, los mismos que comía antes." ("I have noticed a change in me, in the fact that I can say that I cannot easily tolerate like certain things. It feels heavy eating the same volumes I used to eat before.") — Jorge

Getting back on track with his nutritional treatment, Jorge has noticed that the meal plans have become easier to follow, and they offer a wider variety of foods. Similar to Sara, he expressed a discomfort that eating the same amounts of foods he used to. However, he attributes the improvements he has been noticing in his customs to keeping a close relationship with his parents. He might have moved out from their home two years ago, but he still *convive* a lot with them. In other words, constantly sharing moments and meals with his parents while following a nutritional treatment has provided a reciprocally beneficial relationship, in which his parents have started to make healthy changes in their lives and lost weight as a consequence of accommodating for their son's dietary needs.

Over the weekend, Jorge spends even more time and meals with his parents. Breakfast varies very little, and everyone —his mother, his father, and himself— contributes to some extent to its preparation. The major difference would simply be that Jorge drinks a cup of soluble coffee, which he would normally have a couple of 300 ml servings at the office.

Saturday and Sunday are days in which Jorge and his parents have time to run errands they are unable to attend to during the week. Therefore, their lunchtime gets pushed into a later timeslot, and they either get a rotisserie chicken and eat it with rice fresh out of the cooker, or they prepare something just as quick and easy, such as tacos with a *chicharron* from Costco *"que alega no tener mucha grasa"* ("that claims not to have a lot of fat") and some roasted *nopales*. Another important difference in Jorge's diet over the weekend is the fact that he tends to drink a glass or two of sugar-free soda pop with his lunch, and he even accompanied it with a shot of tequila once because his father's birthday was the next day. Since his meals

are slightly more abundant and are done later than he is used to, his dinner might be just a bowl of Quaker All-Bran Flakes-style cereal with skim milk or skip it entirely, along with both his *colaciones*.

Elena

Given the chaotic nature of rush hour traffic in Mexico City, along with an increased awareness on the need to engage in sustainable and environmentally friendly practices, there has been a trend among businesses to implement a model of home office schedules. Such is Elena's case. She is a 29-year old digital marketer, whose job implicates doing workshops and courses with associated agencies in Polanco (Miguel Hidalgo) and in La Roma (Álvaro Obregón), while the main office is located all the way up in Bosques de las Lomas (Miguel Hidalgo-Cuajimalpa), close to Santa Fe. Since she lives with both her parents and her younger sister in Polanco, she is able to continue working from home whenever she has to attend a workshop or a course instead of having to drive 35-40 minutes to Bosques to do so, only to have to drive for almost an hour back home in the afternoon.

As for Elena's motivations for seeking nutritional counselling, she initially talked to me about how she has seen dietitians "on and off" throughout some time. However, a couple of friends recommended her the one she currently goes to after expressing that she felt *"enorme"* ("huge") and that she had had enough of it and needed to change. Adding onto her own personal physical reasons for seeking nutrition counselling, a sudden death in the family on account of a stroke made everyone in her household want to go to see the dietitian with concerns about their cardiovascular health.

"Y entonces un poco con este mindset*, pues llegamos y justo pues nos hace ver (...) esta doctora como de: 'Bueno, no necesariamente por eso es que le pasó, pero tiene que ver obviamente con la salud y como que mientras más edad tienes, las arterias se tapan y puedes generar coágulos'. Entonces un poco también por ahí como que viene esta parte (...) de* awareness*, por así decirlo."* ("So with this mindset a little, we got there, and this doctor precisely makes us see: 'Well, it is not necessarily why this happened to her, but it obviously has to do with health and like the older you get, arteries get clogged and you can generate

clots.' So a little bit through there is that this part of awareness —so to speak— comes along.") — Elena

Although the four members of the household felt their progress had plateaued, and Elena was still craving sweets and about to switch to a new dietitian, she talked about the strategies employed by the current one that not only helped her stick to the meal plan and start seeing changes in her physical appearance, but also made her more conscious of the long-term benefits of a healthy diet. On the one hand, she mentioned that she learned simple and quick recipes that she would have never thought of, such as *Salmas*[23] smeared with labneh or protein shakes: ideal for her agitated and fast lifestyle. On the other hand, she emphasized on the health education tools about fat and cardiovascular health the dietitian used to explain how diet could be related to a stroke. For example, Elena talked about a model of *"una vena, una aorta o algo así"* ("a vein, an aorta, or something like that") that gets increasingly clogged with fat until it becomes less flexible. Having gone through a related experience, she found it shocking to learn, and associates the dietitian's explanations with a newfound *"awareness"* that although one cannot really cure or clean the blood vessel, a change in diet can help prevent an occlusion.

As previously mentioned, Elena finds the quick, simple recipes her dietitian shares with her very useful for her hectic lifestyle. For example, for breakfast by herself on weekdays she prepares and drink a *nopal*, orange juice, olive oil, and IsoPure protein powder smoothie, whose flavor she describes as *"medio horrible, pero bueno… ahí me lo tomo"* ("kind of awful, but okay… I drink it"). She might eat the *Salmas* with labneh instead. In addition, she drinks a glass of water to take a pill and a cup of black tea with milk and no sugar.

If she does home office and gets hungry later in the morning, she will snack on Sunbites popcorn *"sin sal y sin no sé qué"* ("without salt and without I don't know what"). She will also order lunch from a vegetarian restaurant through the UberEats app and/or have something cooked by the maid. She is also by herself during both meals at home.

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[23] *Salmas:* Commercial brand of corn saltines

When she does go to the main office in Bosques, Elena has the option of having lunch at the employee cafeteria, which is open from 12 to 2 pm. Since this is an early eating schedule for Mexico City food culture and because her work agenda is very demanding in regards to meetings, she does not always eat there and has to go outside with her coworkers to grab a salad to-go from a business nearby. Back at the office, they all eat together in their communal workspace.

If she does have time to eat at the employee cafeteria, she usually goes for the vegetarian options —even though she thinks they might not be the healthiest sometimes— because the meat options *"se ven como medio dudosas"* ("they look kind of questionable"). She also avoids the soups because *"son como horribles"* ("they are like awful") and the rice because she would rather get those calories from something else.

In the evenings, Elena might snack on a few almonds while watching a show with her mother and either order dinner from the UberEats or the Rappi app along with the rest of her family or eat a *Danone OIKOS* Greek yogurt with an apple and a cup of black tea with milk by herself while also watching Netflix.

During the weekend, Elena tends to wake up a little later than she normally would, although she gets up early for *"el estándar del mundo"* ("the world's standard"). Thus, at 7:30 am on, for example, a Sunday, she would get up, make the cup of black tea with milk she likes to drink every morning with the particularity that she will add sugar to it. When asked on the logic behind this, Elena mentioned that her dietitian says a lot that Splenda is *"pésimo"* ("the worst"), so she stopped using it and instead adds sugar to her tea exclusively during the weekend. Afterwards, if she gets hungry while reading or watching TV home alone, she might also eat a bowl of All-Bran cereal without sugar and skim milk. However, if she goes out with her friends to gossip over brunch at a restaurant, she will order something she truly enjoys: Benedictine eggs.

At lunchtime, they either also order take-out or Elena's mother cooks for the four family members. Her mother might cook a lasagna and a salad, while the take-out's source might vary from ordering it through UberEats, as they normally do during the week. While enrolled

in the study, Elena and her family bought *chiles en nogada*[24] from her friend's mother, given that it was the season for this traditional dish, and this lady cooks them for sale.

Finally and similarly to Jorge and Sara, Elena's eating schedules are usually pushed to later timeslots, so when it is dinnertime, she is not very hungry and has something light to eat while watching TV at home with her sister or by herself, such as one of her IsoPure protein shakes with the chocolate flavored one that —according to her dietitian— *"engorda más"* ("is more fattening") because it has more sugar or a *Danone OIKOS* Greek yogurt with a banana.

Martín

"(…) en mi oficina (…) te dejan aplicar home office. Entonces (…) tienen mucha mentalidad de tu presentas tus objetivos. No necesariamente cumples un cierto rango de horas." ("In my work, they let you do home office. So, they have a big mindset that you present your goals. You do not necessarily have to comply with a certain range of hours.") — Martín

Martín is a 23-year-old Marketing and Communications undergraduate student at the Tecnológico de Monterrey, Santa Fe campus. He is about to graduate and works part-time at an ice-cream company in Bosques that allows for him to go to class in the afternoons/evenings and to work from his home located south of the city in El Pedregal on Fridays, relieving him from having to commute for the total of 3 hours he normally would when he has to come to the office and to school.

Since he works for an ice-cream company, there are freezers all over Martín's office with free samples. When he began working there, he would eat at least one or two popsicles per day, as a sort of "novatada" ("hazing"). In addition, he ate "fatal" ("ghastly") because he did not always eat at the office or his meals were limited to "cosas muy engordativas" ("very fattening things"), which were responsible for his weight gain. Furthermore, he still lives

[24] Chile en nogada: Traditional Mexican dish consumed during the month of September for the anniversary of the War of Independence. It consists in a Poblano pepper filled with ground pork meat, covered with a creamy walnut sauce, and topped with pomegranate.

with his parents and talked about how his family tends to cook recipes “muy de gordos” (“very of fat people”), such as chicken in a creamy chipotle and mushroom sauce or Alfredo pasta. However, “la gota que derramó el vaso” (“the drop that spilled the glass”) was noticing that a suit he wanted to wear for a friend’s graduation did not fit him anymore. This situation scared him into immediately seeking nutritional counselling and start dieting.

Martín had only been undergoing nutritional treatment for a month and confessed that it had been difficult for him to follow it. He jokingly mentioned missing his popsicles. Regardless, some changes in his eating habits were not as hard for him to do. For example, he would have normally had fried eggs with a tortilla and ketchup for breakfast alone at home, but it was easy for him to switch that for an egg-white omelet with zucchini squash, garlic powder, dehydrated onion, and a thin slice of Panela cheese[25]. It was also easy for him to develop a habit of drinking 600 ml of water from his plastic bottle several times per day and eat an apple for his mid-morning colación at the office. These habits were possible on account of two elements in his working environment: 1) his employers give away apples at the office every day, and 2) there is a small gymnasium in the building, which no one but Martín uses “para no estar sentado todo el día” (“to avoid being sitting down all day”). While walking on the treadmill, he works on his computer and gets thirsty because of the exercise.

At the beginning of his treatment, Martín’s cousin came over one day to have lunch with him in his office, “pero como estaba comenzando con la dieta, no quería irme ya al restaurante por lo gordo” (“but since I was just starting with the diet, I didn’t want to go to the restaurant for the fat stuff”). Therefore, he went to buy a salad with supposedly roasted chicken breast, but he had no way to verify that indeed it had been roasted. If he does not have class, he sometimes goes home in the afternoon to eat lunch with his parents. He usually asks his mother or the maid to separate a chicken breast or a fish fillet for him to cook with just lime juice, pepper, and perhaps other spices he has started to get excited about when cooking his meals. However, if he does not tell them beforehand and decides in the spur of the moment to come home at lunchtime, he will have to eat whatever his parents are eating, which can be, for example, a pork meat stew with potatoes, accompanied by Mexican-style rice cooked

[25] Panela cheese: Low-fat cheese

with tomato sauce, Knorr Suiza[26], onion and frozen vegetables. At nighttime, he usually goes straight to bed instead of eating dinner because he is exhausted from a day of work and school.

During the weekend, his eating schedules were also shifted, so much so that his breakfast might be considered lunch instead. However, he remained attached to the contents his meal plan, and the more relaxed routine allowed him to experiment further on his cooking. For example, for late breakfast/early lunch one day he improvised lettuce tacos using leftover chicken with vegetables stir fry from an event his mother hosted the night before. Another day, he cooked his usual egg-white omelet but "spiced it up a little bit" by adding some tomato slices and Tabasco sauce approved by his dietitian. Finally, he is not as tired as he is during weeknights, so he does cook dinner, also experimenting with ingredients, condiments, and his dietitian's recipes. For example, he mentioned that his prescribed meal plan included a couple of whole wheat bread molletes[27] with salsa, which he topped with half a teaspoon of Knorr Suiza "para hacerlo interesante" ("to make it interesting").

"De hecho, me limité muchos eventos sociales por la dieta." ("Actually, I limited myself from attending social events because of the diet." — Martín

In order to avoid deterring greatly from his meal plan, Martín jokingly confessed that he isolated himself from social situations. When asked about his mother's event from which he ate the leftovers the next day, he stated that he did not participate in it. If he did attend, for example, a party at a friend's house, he would avoid drinking alcohol all night by limiting himself to sparkling water instead. Because of this situation, he went to bed early, while his friends remained at the party. This also made him the first one to get up the next morning and wander to the kitchen at his friend's house to steal an apple and a couple of glasses of water. Although the maid was present, he claimed to have consumed them alone.

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[26] *Knorr Suiza:* Brand of powdered chicken bouillon

[27] *Mollete:* a slice of bolillo bread with refried beans and gratin cheese.

"No sé si es por placebo, pero sí me siento más, como, delgado. Me siento más fit. (…) Me he notado un poco cansado. Eso sí." ("I don't know if it's a placebo, but I do feel more, like, thin. I feel more fit. (…) I do have noticed feeling a little tired, though.") — Martín

Martín talked about what had motivated him the most to engage with his nutritional treatment. He mentioned being interviewed in the first session about depression and medicines he took to overcome it, as well as his daily routine and when he noticed he had been gaining weight. Then, he was measured, weighted and underwent a bioimpedance analysis. After a week, they sent him a .pdf file with his results, which showed that he had a metabolic age of 39 and eight kilograms of fat surrounding his stomach, when the average should be of four. These results scared him, so his dietitian explained to him that his case was not extreme, but he was "empezando en el mundo de sobrepeso" ("starting in the world of overweight").

At the end of our interview, I expressed my concerns about how restrictive and limited his meal plan seemed to be, especially after he mentioned how tired he had been feeling. He replied that he had a trip to the beach planned in November and wanted to look good, so he had asked his dietitian for a very intense meal plan. However, he did realize by engaging in the study that he had been skipping meals —specifically dinner after a day of work and school—, which might have further contributed to his lack of energy.

The week I had gone to see him for our interview was actually his last one working for the ice-cream company. Given that he has about to graduate college, he had been working as an intern hired through an outsourcing agency, and the company was not really hiring new plant personnel, he had been able to get a more stable job that offered a higher salary, benefits, and was close to his parents' home, so he resigned. Since the dietitian he had been seeing was close to Bosques, he was going to have to look for a new one to continue treatment closer to his home.

Jessica

Though her job does not provide a home office option, when I arrived on the evening of August 8th, 2019, to interview Jessica —a 33-year-old art studies expert— at her apartment in Anzures, she was dealing with a work emergency on the office laptop she had to bring home with herself that day. Otherwise, she would have normally exercised for about 20-30 minutes in her living room.

"Empecé a ir al nutriólogo desde el 2018. Ya había ido algunas veces antes con la intención de ponerme a dieta y bajar de peso, pero desde que me casé subí mucho de peso y (...) me estaba costando mucho trabajo bajarlo. (...) literalmente fue un propósito de año nuevo para el 2018 que cumplí." ("I started going to the dietitian since 2018. I had gone on previous occasions with the intention of being on a diet and lose weight, but ever since I got married, I gained a lot of weight and was having a hard time losing it. It was literally a New Year's resolution for 2018 that I fulfilled.") — Jessica

At the time of the study, Jessica was pregnant with her first child. However, she began her current nutritional treatment before this particular situation, as part of her 2018 New Year's resolution to lose the weight she also gained after getting married. She explains how combining her nutritional treatment with a good exercise routine helped her observe quick short-term changes in her appearance and her health. She confirmed the latter with blood tests she had done for her pregnancy that came out clean. Because she got pregnant while still attending consultations, she continued treatment, but the goals shifted towards a healthy weight gain and maintaining her blood levels of glucose, cholesterol, and triglycerides in order.

Similar to Sara and Jorge, Jessica also mentioned that she has noticed how *"comidas (...) más chatarra, más pesadas, ya me caen muy mal*" ("more junky, heavier foods do me bad"). In other words, occasional meals rich in fats and sugars that are associated with special events, such as Christmas dinners or office pizza and beer parties, make her feel sick. "*Y eso quiere decir que creo que mi cuerpo se acostumbró a recibir alimentos saludables"* ("And I think that means my body got used to receiving healthy food"). While being pregnant, she had been allowing herself to "misbehave" and satiate cravings she was getting, but she expressed that she could not do it: her body does not tolerate certain fats and foods anymore.

Feeling supported and cared for by her dietitians through positive reinforcement and health education in regards to test results, anthropometric measures, and any other questions she might have are the two strategies and tools used in consultation that Jessica has found to be the most useful for her to accomplish her goals. In particular, she mentioned how happy it makes her dietitians to know that they are helping her whenever she shows positive results.

Jessica lives with her husband, and since they both work full-time, they hire a woman to come and cook for them once per week. In this way, they only need to pack their meals in Tupperware containers and take them to their offices, hers located in Lomas Altas (Miguel Hidalgo delegation). She does prepare her own weekday breakfast, as well as dinner, both of which she usually eats alone at her apartment.

For breakfast, she will cook a portion of "*proteína*" ("protein") in the shape of scrambled eggs with tomato and cheese, accompanied by one or two portions of *"cereales"* ("cereals") in the shape of a slice of toast and a small, colorful plate of whichever pre-cut fruits she has at home —strawberries, banana, papaya, cantaloupe— *"para llenarme bien"* ("to get full"). Sometimes, instead of eggs with toast, she prepares a sandwich with mayonnaise, mustard, cream cheese, turkey, Oaxaca cheese, lettuce and tomato. Because of her pregnancy, she has lately been craving a small glass of *Jumex's Único Fresco* orange juice with her breakfast, along with her cup of coffee with skim milk.

In addition to the home-cooked meals that she re-heats in the office microwave, Jessica oftentimes gets her mid-morning *colación*, consisting of a Starbucks cup of natural yogurt with not-so-natural fruit and a granola topping (dried cranberries or apples with cinnamon and amaranth), through the UberEats app. Even though she is physically among her coworkers when she eats either this *colación* or the baby carrots she might snack on at the office "*para llenar un poquito el estómago"* ("to fill the stomach a little") before going home in the afternoon, she considers that she eats alone while working on her desk.

At lunchtime, she will also be by herself. A coworker buys her a 600 ml bottle of sugar-free Coca Cola to accompany her meal, which consists of a vegetable cream, chicken cooked in a stew —either by the lady they hired to cook or by her husband—, and rice or potatoes with vegetables. She clarifies, though, that she does not drink the whole bottle of Coke on one day; it usually lasts her three. For dessert, she eats a stick of sugar-free Turín chocolate.

After a day's work, she returns home in the evening and eats her afternoon *colación* if she did not do this back at the office. In this case, she snacks on 7 pieces of sugar-free meringues. Finally, later in the evening, she will prepare three quesadillas[28] or a *sincronizada*[29]. If she is still hungry or has a craving for something sweet, she will eat half a banana and a piece of challah bread with Nutella or another small glass of orange juice. She will most likely be alone at home when eating dinner or the beforementioned afternoon *colación*.

For Jessica, the weekend represents as an opportunity to spend quality time with her family, her friends, and her husband, especially since she does most of her meals alone during the week. She can either have her usual breakfast at home slightly later than usual, only this time with her husband, or she can have something as close as she can order at a restaurant while eating breakfast with her sister and her mother. In regards to the latter case, she ordered a colorful bowl of seasonal fruit, a glass of orange juice, a cup of coffee with milk and Splenda, and a *mollete* made from a piece of ciabatta toasted bread with three different cheeses and *pico de gallo* salsa[30].

Even though her breakfast seemed like it did not deter from her meal plan, it was more abundant and heavier than she is used to, so at lunchtime at her parents' house with her husband and her sister, she simply had a Special K granola bar as a *colación.* Later that night, friends came over to her apartment for dinner, not necessarily on account of a special occasion. They brought canned palm hearts for snacking and Lindt chocolates accompanying some cookies she and her husband bought for dessert. Her husband tried to make French fries and grilled some ready-to-eat burgers for everyone to build their own hamburger. Jessica accompanied this meal with a 235 ml can of sugar-free Coca Cola.

If Jessica wants to spend a more tranquil day during the weekend, she will spend it solely with her husband at home. However, if there is no home-cooked food left, they would rather eat out at a restaurant both of them have been craving instead of cooking. While participating

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[28] *Quesadillas*: Corn tortillas with cheese. Jessica adds cherry tomatoes, nopal —if she has any at home—, and green salsa.

[29] *Sincronizada*: Flour tortillas with cheese and ham. In Jessica's case, she used turkey instead of regular ham and adds cherry tomatoes, as well.

[30] *Pico de gallo:* Salsa made from finely chopped tomatoes, onions, green chili pepper, and cilantro

in the study, they went to Burger Bar Joint and ate hamburgers, fries, and Italian sodas. Since it was a hot summer day, she spent some time with her husband at a Starbucks sipping on a small coffee frappé and eating a pastry that was bigger than what she would have wanted.

"Y no cené porque estaba muy llena." ("And I skipped dinner because I was very full.") — Jessica