[00:00:00] It's time for meaningful insight, every researcher's delight. It's Data Night.

Kasha Ely: Hello, and welcome to Data Night with the Odum Institute. I'm your host, Kasha Ely and joining me today is Khristopher Nicholasm a fourth-year PhD candidate in nutrition at UNC-Chapel Hill. Hi, Khristopher.

Khristopher Nicholas: Hello. Hello. Thank you for having me.

Kasha Ely: Thank you for joining us. So, today I'd like to talk about your work that you're doing with the [00:00:30] UNC Center for Galapagos studies, particularly your project, Food Environment in the Galapagos. So, the very first line of your dissertation proposal states that your work is exploring the extrinsic, geographic and intrinsic behavioral domains of food environments and health in the Galapagos Islands. Can you expand a little on what that means in the context of your project?

Khristopher Nicholas: Sure. So, the basis for my project and food environments generally, but particularly here with the [00:01:00] food environment in the Galapagos is that we don't actually know a whole lot about how food environments impact diets and health or I guess more pointedly, the literature is inconsistent. We have a lot of literature in high-income countries for... thinking here of the US, Australia has them a lot, in Europe particularly the UK around fast food and fast-food outlets and supermarkets and the idea being how the environment shapes our diets and health it influences [00:01:30] our diet and health differently and all the different contexts, but we don't know a lot about this in low-income countries. I mean or even less about it in, but the UN calls quote small island developing states since, the Galapagos, where I was originally from in the Caribbean in Trinidad. And so, for the behavior for their geographic part, I want understand that part. So how does the environment shape our behavior and health but then recognizing that it's not just a straight line between the food options we have around us and then what we eat, but we make decisions [00:02:00] in the store. We have budgetary constraints, time concerns, and so that's a behavioral piece of understanding how the physical, the geographic piece, and the behavioral piece work together to ultimately work through food environments to shape our diets and health

Kasha Ely: Great. Thank you. What would you say are the main aims of your research?

Khristopher Nicholas: So, ultimately what I want my research to be able to do is to inform public health interventions, but then if we work backwards, if we're, if we want to ultimately improve diets and health, we have to understand the behaviors that shape diets and health. [00:02:30] Ff we want to understand the behaviors, we have to understand the stimuli that shape behaviors and one of those particularly for food and nutrition is the environment, is that the food options available to us. So, my goal is to sort of understand that flow from environment through behavior to health outcomes and all of the important pieces along the way, so demographic status, and how all of those factors fit in and again particularly here, we're talking about the Galapagos and these small island contexts where there isn't a lot of research. So, hopefully [00:03:00] ultimately I'll be able to inform interventions to improve diets and health in these in these contexts.

Kasha Ely: And what makes the Galapagos uniquely well-suited for this type of study?

Khristopher Nicholas: Yeah, so, particularly for the food environment, there are two main reasons. I'll touch on the first is that a common challenge that a lot of researchers face when they do food environment research is if you're sampling food outlets or if you're going to all the markets in an area in the US, for example, you have what's called [00:03:30] the Edge Effect where what if you live just across the border in one county or for looking at a county level or state level you live just across the border, but all the outlets that that project might count in your area is those with are those within your state, but you might actually hop across the state line because there's a cheaper grocery store like, but 5 miles down as opposed to 10 miles away, whatever the case is, but those Edge effects. We just don't have them in Galapagos because they are I mean, it's the Galapagos. They're these tiny communities [00:04:01] that aren't sprawling. There's not a lot of, there's no I mean, there's no suburban development with different characteristics different community characteristics. So, that gives us the opportunity to avoid that methodological challenge, and then the other reason is that we can actually sample all the food outlets. In the US you can sample the grocery stores, of course and the fast-food markets and the growth and the supermarkets, but what if someone orders Fresh Direct or any of these food delivery services and then you just [00:04:31] can't account for those things, but in Galapagos, the only place to really get your groceries are in the markets and we can actually sample all of them. So, it really gives us a unique opportunity to get a total to assess the totality of the food environment that to my knowledge, no other setting affords that same opportunity.

Kasha Ely: And how long have you been working in the Galapagos? When did you get to the Galapagos Center?

Khristopher Nicholas: Yes, I'm my fourth year of the PhD now and, my first year, my, one of my wonderful advisors, Amanda [00:05:01] Thompson, received a grant to start some, to take a lot of the work that UNC had been doing in the past and ramp it up, and she was looking at mental health, water security, food security dual burden, so that I was lucky in that my first year was when she got the grant, so I got to go down that first summer and help out with the data collection and then plan my dissertation along the way using both those data and data that summers since we've gathered additional data and gone with different sort [00:05:31] of spin-off projects. But yeah, so that was this is my fourth year somehow. I don't know where the time went. But here we are.

Kasha Ely: Awesome. I'd like to dig a little deeper into your methodologies for your dissertation. Through our earlier discussions, it sounds like there are three main pieces of data collection and Analysis first, you're collecting spatial data for food environment maps. What does that entail? And for those of us who are unfamiliar with the term, what is it food environment map?

Khristopher Nicholas: Yeah. [00:06:01] So this was, this is one of my most, one of my favorite parts of my dissertation because we're using a method that hasn't been used this way before in food environments and that we sort of have created along the way. So, basically, the analogy I like to use is when we think of environmental exposures or particulate matter, if you want to understand the amount of ozone in a given area, you can't sample every square foot of this area. So, you have just a variety of sampling points [00:06:31] and then you apply, you apply some statistical function to those sampling points and then you get a map of ozone concentration for example, and in the Galapagos because what we're able to do is sample all the food outlets, meaning there's not like we, there's no Fresh Direct. There's no, again, there's none of these confounding random places to get food from the markets are the markets in the Galapagos and because of that we can conceptualize of continuous food environment surface map. That's a function [00:07:01] of the quality of the food at the market. How much food is there at the market? And the distribution of the markets themselves, right? Like if, when neighborhood has no markets versus another one has five markets, that would in theory affect the food market, the food environment score, that we expect for that neighborhood. So, the spatial method really allow us to take the market data. So, we go into the markets, and we assess them using a standardized survey for quality and quantity of food, and we can generate a food environment surface [00:07:31] map, and we can think of it like a heat map, where if you live, if you point, if you find an area on the map, that's red, we'll think of that as a quote unquote hotspot, or that it has an area of its high food environment. There's a lot of markets, great food quality in that area, and the cold spots conversely would be areas where maybe they aren't as many markets or the foods in those markets are of lower quality. So, that was the impetus for the food environment piece of spatial component interesting.

Kasha Ely: Thank you. How many, I'm just curious how many people are on your team surveying these markets? [00:08:04]

Khristopher Nicholas: 2, a team of 2, but no, it, the first summer ,and I guess I should know, we did these are different time points because one of the really interesting parts of living in the Galapagos, but also the challenge from the residents' perspective is that food has to be shipped in from thousand kilometers away. So, what, the results we see sampling at one time point of the markets, we might not see even the next week or the next month if the shipments are delayed. So, I said that because we had a team [00:08:34] of wonderful students and research assistants that typically come down in the summer and then one or two of them might help me go to the markets and conduct the surveys, and then we have wonderful local research assistants who in the cold season, they will be able to go in then so in that when we're not there in the summer, they'll be able to go in and get the second round.

Kasha Ely: When you're collecting the spatial data, can you tell me a little bit about the survey instrument that you're using?

Khristopher Nicholas: Yes. So, what we use is called the nutrition environment measurement survey tool for stores. [00:09:04] It's really really popular, very famous, developed by some researchers and here in the US and has been used across the world. And basically, it assigns a score to markets, the premise being you get more points if you have more and healthier food options, so we think of whole grains, vegetables and these vegetables and produce are ranked according to their quality around 1 to 5. And then you get fewer points if you have more unhealthy food options: ice cream, snacks, [00:09:34] sodas, those sorts of things, so the markets are assigned the score based on this survey that we of course have to adapt to the Galapagos because the food in the Galapagos and the markets are different, and that, the survey informs only one part of the food environment scores because of what we also have to understand is that access plays a big role. So, our algorithm that we created takes into account not just quality as measured by the scores at these markets but also the distribution of the markets themselves, so if [00:10:04] I live basically want to capture reality, if I as a resident, what if I live really close to five mediocre scores, stores, or I live kind of far from one really really good score. We wanted to be able to have, capture food environment where we can capture those two important pieces. So, yeah, that's all I was really, the quality and access together shape the food environment scores.

Kasha Ely: Interesting. Thank you. For the next section, you're doing factor analysis to determine food purchasing [00:10:34] strategies, which maybe comes into what you were just talking about, where people decide to go get their food, I'm guessing?

Khristopher Nicholas: Yeah.

Kasha Ely: So, my understanding of factor analysis is that you're taking the quantitative data that you have collected, a whole bunch of different variables and observances, and using statistical analysis to kind of consolidate the many variables hopefully into a smaller more manageable number of broader composite dimensions or factors. Is that about right?

Khristopher Nicholas: Yeah, that's spot-on. I need to listen [00:11:04] to this and write that down for my own dissertation because I, because that's a great summary. No. Yeah, it, that's exactly what we did. So, for the food purchasing strategies, basically, we asked a whole host of questions to the primary food preparer in the household, such as why do you go to the markets you go to, which markets do you go to, and then we give them certain reasons. We ask them how they get there. How much money do they spend to get there? How much money would they like to spend? How [00:11:34] how far would they be willing to travel? So, a whole lot of these scenario modeling questions and then food purchasing questions now, and to your point, that's a whole lot of data and the food, the factor analysis really allowed us to allow, to aggregate the data naturally right allowing. It's a data-driven aggregation process. So, what ended up shaking out was that there are three main factors that describe the food purchasing strategies of the households that we that we surveyed and [00:12:04] the first is sort of a factor associated with difficulty paying. These households are more likely to request credit for example, when purchasing food or borrow money to purchase their food, then there's another factor that's characterized by convenience. So, these are folks who prioritize getting to the market at the fastest way, so and I'll step back and note that the area were working in, in San Cristobal island is small and that you can walk from one end to the other of the urban [00:12:34] area in maybe 30, 30 minutes 30-40 minutes at a brisk walk, but folks often take taxis, or they have scooters and there are not too many cars in the Galapagos. But so, I say that because of the second factor is characterized by folks who say nope, I'm taking the scooter or I'm taking a taxi, I'm not walking, so that's sort of transportation is a means of convenience and the final factor is the quality driven factor. So, these are folks who will spend more time to get to markets. They'll spend more money to get there. They'll prioritize [00:13:05] food related reasons, so the food quality for example versus the market distance, all as underlying why they get to the market. So, their, the factor analysis is great because it's not necessarily ordinal, right, it's not tiered. It's not a factor, 2 is better than Factor 3, but they just simply characterize the different kinds of priorities that residents have when they are food purchasing.

Kasha Ely: Thank you for expanding a little bit of on how it's not a tiered system. It's breaking it down into these categories. [00:13:36] I'm curious. How you link that back to your hypotheses?

Khristopher Nicholas: Yeah. So, this was a tricky part. That's a really good question. This was a tricky part of early on because one of my earliest hypotheses were that there would be compensatory food purchasing behavior in the face of poor food environments. So, I thought maybe households that live farther away kind of farther away from the density of markets or don't have access [00:14:06] to transportation would be more willing, we might see that they're more that they tend to travel farther or that was a hypothesis and the benefit of testing hypotheses that we might also see that folks just make do with what's around them, but all of these, either way, finding that have implications for how you how best you target improving the behavior change, but of course the factors didn't shake out and you know, it's hard to characterize these as good and bad. It sounds like I'm not answers the questions because I'm not answering the question because that's exactly [00:14:36] what I'm testing now. That that's where I am in my analysis now, but basically what I'm trying to do is relate the food environment scores and the different measures. I can talk more about that as well -- the different measures of the food environment to these different purchasing strategies, and as we'll get to in a minute, the last part of my dissertation is qualitative, and so, it's really exciting because these findings now relating to factor scores back at the food environment will inform the kinds of questions that we get to ask will inform, [00:15:06] the how we probe uncertain food purchasing decision making, so it sort of hypothesis testing as a as a circle in a loop as opposed to a line.

Kasha Ely: Definitely, and I do want to chat about the qualitative piece of your project for sure. But let's go back and chat a little bit more about the measures of the food environment that you just mentioned. Can you tell us a little bit more about that?

Khristopher Nicholas: Yeah, so [00:15:36] In essence, there are two categories of measurements, I'll call them. The first are the neighborhood or zonal food environment scores. So, basically, what I did here is going back to this food environment surface map, right, picture this undulating surface of high scores low scores that are neighborhood dependent. Basically, what I did was I took, let's say, a household associated at any random point in that map -- I wanted to know what is the mean food [00:16:06] environment score within 25 meters of the household and then within 50 meters of, 75 meters, and a hundred meters. Those are commonly used cut-offs in the literature. So, that's a sort of neighborhood catch-all measure of food environment scores that takes into account the market scores and access of surrounding markets at increasingly wide buffers around the household. So, that's the first category of food environment exposure food environment scores, and the second are maybe, what's a good way, [00:16:36] point-driven or market-driven food environments course, so this would be for example the market score at the household's preferred market or the market score at the nearest market to the household and the other one being at took the average market score at the five nearest households, right? So, those are more market-driven kind of point driven estimate and both of them have their validity in the literature because on one hand, we might imagine that the [00:17:06] host of factors around you, host of food outlets around you matter, the other hand, I don't know, maybe just I just go to the store near with me because I don't really want to deal with the hassle of food purchasing. I just want to go to a store and get it. So, both of them test slightly different hypotheses.

Kasha Ely: So, thank you. I know you're early on in your analysis, but are you seeing any patterns emerging yet?

Khristopher Nicholas: Yeah. So, with that last part with the two different types of food environment categories, the zonal neighborhood [00:17:36] one and then the market point driven one, so far in the early phases of my aim to dissertation analysis, it looks like the market driven, the point driven food environments are more meaningful for households. They shaped food purchasing strategies more so than the zonal neighborhood ones, meaning the market score at the market that the household really goes to really prefers because a lot of households tend to have a go to market either because they know the owner or [00:18:06] the owner gives them credit or it's just it's a family, or whatever the case is, or that market score and then the market score at the at the market that's nearest of a household, those scores tend to be associated with the food purchasing strategies, the factor scores, but none so for the zonal neighborhood, the food environment scores, which was pretty surprising to me. I would I would have thought that folks might have hedged their food environment options, right the food outlet, and maybe sourced different ones if [00:18:36] one place was missing something. But ultimately this is still really useful information because to target for public health interventions, to target markets, we have to understand why people make the decisions they do and if it's because of specific markets than that's really useful information.

Kasha Ely: Absolutely. Thank you for sharing, excited to see the final product and what you find at the end. The final piece of your project is qualitative and you're looking at community perceptions of and attitudes toward their food environments to [00:19:06] understand how best to tailor potential interventions. What methods do you intend to use to collect your qualitative data?

Khristopher Nicholas: So, for this aim, the two primary methods would be semi-structured interviews and then pile swords. Semi-structured interviews are pretty right standard. We have a set of questions as I noted earlier. For example, guided by some of our findings, and earlier in this earlier pieces around maybe we'll ask about specific markets versus neighborhood effects on food environment and [00:19:36] food purchasing strategies, and then we probe and that sort of open, then that becomes open-ended interviews that we then code and identify themes across different households. That's a pretty standard approach in qualitative data, and the other piece that I'm also just particularly more excited about is called pile-sorting and card-sorting and I'll just note, I'll set back and note, the idea for this piece here is that if a public health intervention, let's say we find I'm just gonna make up a [00:20:06] finding. Let's say you find that leafy greens aren't being consumed enough and markets don't have enough of them and when they do they're spoiled and then you identify like wow, this is a great avenue for public health intervention. Let's, I don't know, subsidized imports, leafy greens or whatever the case is you do all this, and then they still spoil, and when you eat them, the idea being whatever we find, it's sort of irrelevant if it's not context-specific, if it's not reinforced and [00:20:36] experience and validated by what community members say they experience, so the idea here is for example, the pile sorting is what we basically do is you give participants a whole bunch of cards with foods on them, pictures and names of foods on them, and then they group them into as many categories as they like based on a certain prompt, and the prompt can be for example, group these by foods that go well together or food that you like, foods are you don't like, foods that you think are hard to find on the island, and the idea being you can compare an individual's response to the community members, [00:21:06] the aggregate responses, to understand food valuation to understand what are people eating, what have you maybe, maybe they view beans and rice to go well together and they would maybe eat more leafy greens in that particular recipe, whatever the case is -- these, understanding these perceptions towards our food environment, and the values that they have for those who will inform the kinds of interventions that we can run and the kinds of foods that you would want to see focused on.

Kasha Ely: That's really cool. Have you used this method before in other [00:21:36] projects?

Khristopher Nicholas: I have not, but my, one of my wonderful advisors, Peggy Bentley, she used these two great success in Peru with the similar frame around understanding what, if memory serves, that project was around anemia among adolescent women. So, it was the idea being if we want increase iron consumption both what are the foods that they're actually eating and yeah, so she has experience [00:22:06] with that and thankfully she's a wonderful advisor with all the expertise, so I can learn from her.

Kasha Ely: Nice. I want to take a quick detour to discuss your role as a researcher here. What is it like going into a community to do research as an outsider?

Khristopher Nicholas: This is something that I think about often, and so so important and I struggle with it. So, I'm originally from Trinidad and Tobago in the Caribbean, and when I came to grad school, I really wanted to [00:22:36] work in Latin America and the Caribbean, Latin America or the Caribbean, and I sort of viewed my worldview as a combination of my heritage, and I came to the US and spent a lot of time here with immediate family and not really, I mean, in South Florida that where everybody's Caribbean in any case, but then also informed by my schooling here. I went to university, high school here, all these things and I say [00:23:06] that because coming to the Galapagos, I felt like there's a realization in my first summer of data collection where it sort of, I mean for lack of better words, I am espousing the power structures of colonialism, right? That's important to acknowledge, I think, in these research, and so where I am now is I'm sort of interrogating and constantly rethinking and evaluating how I want to engage with global health work in general [00:23:37] and again, I have, I can't overstate how wonderful my advisers are in that these aren't things that I'm thinking of by myself in a silo. These are things that they have thought about, do think about, have extensive careerism in thinking about this and understanding the different ways to incorporate this in our approach. I mean, it's something as small as, when we submit a paper, one of the last papers that we submitted to around food security and, sorry, water security in the Galapagos, it was to a journal that required that [00:24:07] if it's an international or if it's in a country that you are not a scholar in, you have to have a collaborator in that country. And you know, that's a small small example, but those are just the kind of ways that, just an institution level, I think we found to work and of course there are ways to incorporate this into working in the community as well.

Kasha Ely: Definitely. Thank you for your insights on that, and I know with the Galapagos Center, you have kind of a built-in community partner with [00:24:37] the University at San Cristobal. Is that correct?

Khristopher Nicholas: Yes, absolutely it, it would be, I don't even know if it's possible to conduct research in the Galapagos at UNC through the Galapagos Science Center, and then purely obtuse way, because to your point we work through the science center, so that connects us with local collaborators, research assistants, and because -- the research project because there aren't too many folks doing at UNC, doing [00:25:08] human health research, versus marine or terrestrial ecology. It's a quote unquote small community in that we have research assistants and collaborators that roll over from year to year and their expertise, partners at the hospital. So, yeah, the science center is just phenomenal in connecting those sort of things, and even something as small as for me, every summer when I go down for data collection, it's important to me to stay with a host family. That [00:25:38] is one way I, well, I get to practice my Spanish, it feels, it's a great, it was like using my research dollars, investing it in local businesses and kind of staying in tune with sort of what they're saying, they give me so much insightful information on their perspective of living in the island, and I'm I was connected with them through the science center. That was something that they offer to students and researchers who would like to do that. So, yeah can't can also over say it how helpful the science center has been in that process.

Kasha Ely: That's [00:26:08] awesome. Do you have any particular experiences that you're willing to share during this phase of the project or others that you've used similar methods for that stand out to you? Maybe there is being particularly challenging or particularly encouraging?

Khristopher Nicholas: So, one or two separate experiences, but I guess under the same umbrella of couching what we do in how, the, in the I guess the lived experience [00:26:38] of the community members. So, for example in the -- I'm in the process of planning my in-depth qualitative data collection, but we did conduct a series of focus groups in 2019, is sort of a maybe a broad brush stroke first pass to understand community members' perceptions of food insecurity on the island, so general questions, and the focus groups are wonderful, and that allows this dialogue to happen in and folks can disagree, agree, and those sort of things and [00:27:08] interestingly, one piece that came up there that that is and I'm so glad we were able to conduct this because it's informing a lot of my approach to designing the qualitative data collection moving forward is that the participants responses were in the aftermath, and I was coding them and identifying themes, they match just perfectly onto just a classical supply chain framework. So, you have production of food, processing food, transportation [00:27:38] of food, market sale, they and all of their frustrations with the food environment in the Galapagos just matched perfectly in all of these and they were it linked to their professions, for example. So, for example airport workers, they kept being really frustrated with, yeah, the food comes on the boats and it'll come off the shipment, and they will, they'll get the cars, and you know, the airplane fuel was right next to the food. [00:28:08] What's that about? Or they’ll get all the commercial products first and the food sitting there in the sun for like eight hours, and you're right because their experience is very much and then that inform their whole perspective on the challenge with the food environment and likewise, we have government officials who were talking about production being a bottleneck. They were saying yeah, just local production is kind of hard here on these islands and in the Galapagos, only this is a side note, but only 3% of he terrestrial land is set aside for human [00:28:39] residents. So, from the government official side, is like yeah, you know, I wish we could produce more. So, I say all that to say the lived experience of all of these folks really informed how they navigated the food environment and even that applied to the market surveys and you know, there are various bans on use of single-use plastics in markets because of how vulnerable the Galapagos ecosystem is. So, that was something we had to navigate with store owners, telling them, like, hey, you know, I know this ban is going to be instilled [00:29:09] soon, and you know, we asked them to take pictures of some of the shelves and to sort of acknowledging this, you know, we're not here on behalf of the government, there's no trouble to be had. If you'd like us not to, that's totally okay, but all of these perspectives everybody has in the Galapagos there, how they relate to the food environment is also informed by the various perspectives, and that's just a very very important reminder in all research, but particularly here in the Galapagos.

Kasha Ely: Sorry, that was a great answer. I'm trying to think [00:29:39] of like a good way to say it, like that was awesome because I keep saying that, but it's a great. Thank you. Do you have any advice for people seeking to do this type of research in communities they're not a part of? I'm thinking specifically of qualitative research. Any strategies you found to be especially effective or ineffective in building trust?

Khristopher Nicholas: Yeah, a few strategies. The first is, [00:30:09] so again, I mentioned these focus groups that we conducted, those were so so immensely useful as initial passes to understand what's going on, right? It's very easy to as a researcher say, okay, well, here's a theory, here's what theory says, here's what good literature says, well, this island is similar to Galapagos. I'm using Galapagos as an example, so I'm going to use this a questionnaire and it's going to work and it's going to be great and that's wonderful. There's merit to that but to some extent [00:30:39] but I think it's a tough one because when you propose it, I guess I'm trying to say is the best way to do it requires time and money. And then when you have to submit a grant proposal, those are two things that you have to be very parsimonious with your request of, you know what I mean, they want to see that you can come in there and give results ASAP, which is not at all how the sign should be especially with something like qualitative research, especially when it's not a community that we might be familiar with or or [00:31:10] that has very unique circumstances such as the Galapagos. So, that's one huge thing where I'm grateful that we've had the time and to some extent funding available to do these iterative, to make qualitative research and iterative processes, and and this is not just my project, but this is stuff that my advisors and previous PhD students have done, talking to different folks, you know, the interviews at the hospital in, and our understanding of health realities which inform the kind of questions we asked in [00:31:40] a household, which will inform the questions that we ask in these in-depth survey. So, it really does flow great together. So, that, that's probably the biggest beasts and of course, they only, I mean, I should have lived with this, but we really have to work with local collaborators or local PI local research assistants at the very least. That just is a given in qualitative research, even if you know the language definitely.

Kasha Ely: Thank you. Thinking about this project we touched on this a little bit of course [00:32:10] and all the work you've put into it, what is your dream scenario for your research? Like, this could get, if you could get this in front of anyone, use it to help create or promote anything. What impact would you like to see it have?

Khristopher Nicholas: In the Galapagos, I love for this to be used. I want to say necessarily to spur or to leadoff in itself, but at least be used in the discussions that [00:32:40] I know we're being had around food security on the island and these discussions are also being had now particularly in the context of covid-19 and how shipment delays and all those and employment delays are affecting residents on the island. So, I'd love to be part of the conversation. My, one of my early ideas that was biting off way too much for PhD project, but one that I'm super interested in is there was a pilot intervention, not a pilot anymore, but there's a public health intervention done in Brazil [00:33:10] and that basically the, I'm calling it The Farmers Market, the farmers table, but the premise of it was you get locally produced food and fruits and vegetables, you have it on the table in the market and they're all sold at the same unit price per kilo or per pound. You have might have different sections, you might have like, anything on this table is $1 per kilo, anything in that table's $3 per kilo. And then this intervention of Brazil was great for the local farmers because they got their products to the table. I mean it [00:33:40] was it was a local intervention and was focused order to buy sweet potatoes and bananas or you know, the it is a great way to increase dietary diversity and that context and I don't know to what extent that exact it can be replicated here in the Galapagos, but I would love for this research to be used as particularly this qualitative piece around what folks want and need in their own words. I'd love that, to be part of the conversation around developing a similar sort of intervention.

Kasha Ely: I'm sure it will be. [00:34:11] You mentioned covid which we haven't talked about yet in this episode even though it is the continuing elephant in the room. You're now in your fourth year of your PhD program, and covid has been around for about a year of that time, at least here in the US, how has that affected your research in your experience as a student?

Yeah, well, I guess experiences as a student. I can [00:34:41] I can patch in my therapist if you'd like. I can, no see if she'll join, not kidding, but my, as research, why's it, so again, I'm in my fourth year and timeline-wise our final round of data collection that were planning for this coming summer was actually on a calendar to have happened last summer. This was not just additional market surveys at the largest island, so there's a Santa Cruz is the largest eye on the Galapagos by population. [00:35:12] And I mean, we talk about neighborhood size. If you can walk from one end to the other in San Cristobal and 40 minutes, and Santa Cruz you can walk from one end to the other in it easily, maybe an hour and a half. It's much bigger, much larger, much more unique neighborhood characteristics. So, that was going to be really exciting for data collection to compare the different islands, but of course that did not happen last summer because of covid, so at first it was a wrench in the system, but with [00:35:43] what I was saying earlier about the current findings shaping our qualitative data collection, it gave us an opportunity to do that. It gave us the opportunity to examine in more depth the data that we do have now to inform the kinds of questions that we want to ask of community members and allowed the, basically allowed my third aim, this this qualitative dissertation aim, to grow, to expand because this is the exciting part, we can do qualitative data collection virtually. We're able, we're currently in the process of [00:36:13] planning Zoom in depth interviews, and there's a wonderful software that a friend of mine at work has used to conduct even pile sorting online. It's a wonderful link and it has the data virtually stored and it's safe and secure. So, it's kind of exciting to plan this virtual data collection, and apparently in the Galapagos right now because there are no tourists, really the Wi-Fi is faster. So, this means that hopefully for, [00:36:43] exactly is that silver lining, will be able to do, you know, use Zoom in the household. Before we were going to have to hope that WhatsApp would hold out for us, but now we might even be able to use Zoom, so adjustments have to be made, but it's actually pretty exciting at the end.

Kasha Ely: It's awesome. Yeah. I want to back up a little bit. I like to find out where our guests, how our guests come to the Carolina community. So, first, I'm curious what drew you to nutrition [00:37:13] as a whole?

Khristopher Nicholas: Yes, so, well, let's see, thematically, I guess or topically, nutrition and health. It was, I mean one of my earliest memories emerging from the Caribbean and I grew up in South Florida, and I guess we'll call them working class communities, and I remember being frustrated when I to undergrad in New York City just like realizing like, damn, you know all we had were fast food spots and one Walmart around where I grew up and then [00:37:43] like three blocks away across the train tracks, I mean, not even just metaphorically literally. There's a train track across and then bam Trader Joe's, Whole Foods. And so that sort of realization birthed some frustration, exploration of the systemic inequalities that underlie those realities for sure. So, nutrition and food environments were always there, but I definitely did not know nutrition as a field. I didn't know what that was. I was a good immigrant boy, and [00:38:13] I wanted to be a doctor for my whole life as my immigrant parents would loved, I'm sure, but ended up majoring in sustainable development and I did more food systems research on the agriculture side in South, Southeast Asia and ultimately found nutrition, found UNC. It's super super interdisciplinary university and department, and I was able to scratch all the itches I suppose.

Kasha Ely: Yeah. Good to hear. Do [00:38:43] you have any advice for people who maybe are looking at nutrition as a field, looking at their, the possibility of starting a PhD, any thoughts on that that you could offer to listeners who might that might be relevant for?

Khristopher Nicholas: Definitely definitely definitely, okay, so, I'll use my department as one of their recent changes as an example of how I think the field of nutrition has gone. So, my department used to be split into these [00:39:13] categories. You come in as a student and you would be, you had tracks. You'd either be in nutritional epidemiologist. You would do nutritional biochemistry, or you would do intervention in policy. Those are sort of the the large tracts of nutrition in the field that you had to pick one, and my year was a guinea pig ear where they did away with that and I think that's one of the reasons I chose UNC and that I think has been so successful and so popular because nutrition is not just about okay, well, what [00:39:43] does choline metabolism look like in the body under a fasting state? Neither is it, well, what do these really large, secondary data sets tell us about how the world works, and neither is it well, here's the intervention that's going to actually do anything meaningful, but it's, you know, being able to ask questions like alright, climate change climate change's huge, how does that affect our food environments? How does that affect our coping strategies? How does it affect income? Right, so nutrition is just [00:40:13] food, I mean in general, is it such a scientific, but also cultural, but also just just emotional I guess Melting Pot of all these different fields, and I think traditionally, we used to think of nutrition as a very one-dimensional science, but the best and most exciting research now innutrition are the ones that are incorporating the climate science and the big data in physics or what, I mean, I don't know about physics, but hopefully somebody do something with physics, but yeah, [00:40:43] so that that would be my biggest, you know, embrace the interdisciplinarity of it all.

Kasha Ely: That's great advice. Thank you. You just made nutrition sound super exciting.

Khristopher Nicholas: Oh, I should send them my consulting bill then, my marketing bill.

Kasha Ely: Well, thank you so much for coming today to Data Night, Khristopher. This has been really great.

Khristopher Nicholas: Great. Oh, well, thank you for having me. That was, that was a lot of fun.

Kasha Ely: And to everyone listening, thank you for joining us. Until next time, stay safe and well.