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Applying Change Theory when making Kombucha at the Albany County Downtown Clinic

Aleksandra S. Zarzycka
azarzyck@uwyo.edu

Rachel Watson
University of Wyoming, rwatson@uwyo.edu

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Applying Change Theory when making Kombucha at the Albany County
Downtown Clinic

Presented to the Honors Program in partial fulfillment of the requirements for the
University Honors Program

Aleksandra Zarzycka
Rachel Watson, Honors Project Advisor
University of Wyoming
Laramie, Wyoming
May 1, 2017

Abstract

As a student of the Microbiology Senior Capstone class last semester, we learned how to propose, perform, and present a scientific research study to address a real problem within the Laramie community. My group partnered with the Albany County Downtown Clinic (DTC) and investigated how to make kombucha, a probiotic drink, while also supplementing the kombucha with additional bacteria. Passionate about the research study, I am continuing research with the Downtown Clinic and kombucha. However, instead of manipulating the components of kombucha, I have turned to investigating how Change Theory can apply to structuring a future class on how to make kombucha for the clients and family members of the Downtown Clinic. As a society, we constantly perform research, but how do our results efficiently reach our desired audience? Change Theory is a technique which: 1) identifies long term goals and 2) maps backward to structure preconditions. The purpose of the study is to administer a survey to the clients of the DTC in order to understand these preconditions. After the surveys are completed, Change Theory will be applied to analyze the survey data, which will allow for conclusions about how to structure a kombucha class. Probiotics are a poorly understood concept for many people, and I believe administering this survey to the clients of the DTC will bring us one step closer to teaching people about the benefits of probiotics and how to make an affordable and easy to make probiotic drink by structuring a kombucha class in the future.

Introduction

The Downtown Clinic of Laramie is a clinic developed strictly for low income, uninsured citizens of Albany County. The clinic is designed to help people who cannot afford healthcare, by providing them healthcare in the areas of primary care, counseling,

pharmacy, lab and diagnostic testing, and other specialized needs. As all the patients at the DTC live below the poverty line, they suffer from very low food security and are unable to access or afford fruits, vegetables and high quality proteins. As a result, their diets are high in carbohydrates, refined sugars, and fats; while being low in vegetables, fruits, and proteins (Seligman et al, 2009). These diets correlate with various metabolic and neurological conditions such as Type II Diabetes, hypertension, obesity, anxiety, and depression; all of which the Downtown Clinic patient population struggle with on a daily basis. In recent years, previous studies have shown a correlation between poor nutrition and various metabolic and neurological conditions (Guinane et al, 2013).

The human gut microbiome is the name given to all of the bacteria, which live within our gut and are a part of our normal flora. One hundred trillion microbial cells influence human physiology, metabolism, immune function, and nutrition; and are thus necessary for proper body functioning (Foster et al. 2013). However, food insecurity can cause a microbiota imbalance in the gut, which can lead to many metabolic and gastrointestinal diseases (Guinane et al. 2013). Thus, there is a connection between the good bacteria within the gut, and diseases like Type II diabetes, obesity, and depression.

While the patients at the Downtown Clinic are given different types of medications to combat these diseases, the area of supplementing their treatments with probiotics is fairly new. The Downtown Clinic does offer their patients probiotic supplements in combination with antibiotics; but, the long-term use of probiotics is a new idea at the clinic. If a diverse gut microbiome can successfully improve the wellbeing of a patient, why would the Downtown Clinic not prescribe more probiotics to patients? A typical, generic, probiotic supplement for 42 days from Wal-Mart costs about fourteen

dollars. To provide a probiotic for one year for one patient would cost about 100 dollars. Since the Downtown Clinic is run through volunteers and the medications are donated from local pharmacies and state drug programs, the administration of probiotics for a full year would not be feasible.

However, probiotics can be consumed not only in daily pills, but also from food or drinks. Specifically, fermented foods and drinks are high in probiotics that help with digestion, immunity, and diseases correlated with an imbalance in the gut microbiota like obesity and Type 2 Diabetes. One such tasty probiotic product is called kombucha. Kombucha is a black tea based probiotic drink that is made through the fermentation process of a Symbiotic Culture of Bacteria and Yeast or SCOBY. The SCOBY is essentially a giant biofilm that allows a complex environment of bacteria and yeast to coexist in harmony (Chakravorty et al. 2016). The major organisms of the SCOBY are *Zygosaccharomyces*, a yeast, and *Gluconacetobacter*, a bacterium. However, there is a large diversity of less major contributors including *Lactobacillus*, *Bifidobacterium*, *Enterococcus*, and many more (Marsh et al. 2014). The bacteria contained within this SCOBY have beneficial powers for gastrointestinal and metabolic disorders.

In fact, probiotics found in food, like kombucha, are actually more efficacious than probiotics found in a pill from Wal-Mart. First of all, probiotics in food are guaranteed to be alive and diverse. The probiotics sold at stores claim to be “live cultures”, but most often than not, the bacteria within probiotics are not alive, thus some bacteria may not be active in producing beneficial affects (Lahtinen et al. 2004). Also, probiotics that come in pill form usually contain a couple of different strains of bacteria, while in food products bacterial variety is endless, which induces a larger variety of

beneficial results in the gut. Secondly, the bacteria within fermented food and drink are acid-resistant, since the fermentation occurs under low pH. Thus, the bacteria is guaranteed to pass through the low pH of the stomach and reproduce beneficial affects in the gut, where the microbiome resides. On the other hand, probiotics sold from the store are produced in a laboratory setting, so the outcome of probiotic pills can be very variable and unreliable from the moment the pill is ingested. Finally, ingesting probiotics in the form of food provides people with food dignity, or a feeling of happiness when eating; whereas taking a probiotic pill cannot induce food dignity (WHO 2000). Thus, probiotics sourced from fermented foods and drinks, like kombucha, are overall more effective and they taste great!

Not only is kombucha a delicious and carbonated drink, it is also very easy to make at home and inexpensive. The average time commitment to devote to making kombucha in a week is about thirty minutes, but as an individual grows with experience, the time reduces. Also, making kombucha for a full year costs just below one hundred dollars. Therefore, making kombucha at home can be designed for any socioeconomic class or age group. In addition to the SCOBY of kombucha having probiotic benefits, tea also has several powerful health benefits. For example, antioxidants and polyphenols in tea have been correlated with reducing cardiovascular disease and cancer (McKay 2013). Finally, kombucha can be advertised as a replacement drink for soda amongst the Downtown Clinic patients. Soda is a popular drink of choice for the Downtown Clinic patients, which ultimately leads to a less diverse microbiome and disease.

That being said, introducing kombucha to the Downtown Clinic could change the lives of many patients by introducing probiotics into their daily lives. Therefore, a

future class on how to make kombucha and teach the benefits of probiotics would be a great addition to the Downtown Clinic. To begin the process of implementing a future kombucha class at the DTC, my Honors Thesis is based on an appropriate way to execute this end goal. A pre-class survey was administered to the patients of the Downtown Clinic in order to set a baseline for how to conduct the kombucha class in the future. Finally, Change Theory was used to assess how to create a successful kombucha class.

Relevant Literature

Kurt Lewin's Change Theory Model. Lewin's Model of Change Theory is the model that informed our diffusion of the kombucha innovation. This model is based on three stages: 1) unfreezing, 2) changing, and 3) refreezing (Schein). Overall, Lewin's Theory can be incorporated into successfully constructing and conducting a kombucha class for the patients of the Downtown Clinic. The process will first consist of unlearning incorrect thoughts about probiotics and kombucha. Then, the patients will learn the correct benefits of probiotics and kombucha, along with how to make kombucha. Finally, patients will be able to take the supplies they acquired from class home so that they can start making kombucha on their own. Applying Change Theory to the class will create an open, friendly, and positive environment to learn how to make kombucha.

First, the process of unfreezing will be accomplished. The method of unfreezing is based upon a dynamic equilibrium between driving and restraining forces, influencing one's thoughts and behaviors. Previous studies have shown that simply adding a new driving force will not change a person's behavior. However, removing restraining forces while also adding driving forces has shown to be successful in unfreezing one's pre-existing attitudes and behaviors about a given subject. The removal of restraining forces

is easier said than done; thus, Lewin has stated that in order to unfreeze, an additional three steps must be followed. These three steps are: disconfirmation, induction of guilt or survival anxiety, and overcoming learning anxiety (Schein 2014).

Disconfirming old information is key to the process of change. Removing stereotypical ideas or inaccurate information is the first step to changing one's opinion about a topic. Only when a person truly believes that the disconfirming information is valid, will the person be willing to change. However, simply rejecting old ideas will not lead to changing and learning new ideas. An intrinsic or extrinsic motive in which the person can personally connect to is required as well. Thus, disconfirmation must trigger survival anxiety, or the belief that if one does not change, they will fail to achieve a goal in which they set out for themselves. Consequently, creating goals will be a part of this stage. Finally, the individual conducting the change, or the teacher of the class, will have to balance the amount of discomfort the disconfirming information and survival anxiety brings to the individual, while also providing a safe zone in order for the individual to feel motivated to change and reduce learning anxiety. A couple of methods in which this can be accomplished are through working in groups, breaking down the learning process into manageable steps, and remaining positive about the end goal. All of these methods will ultimately reduce learning anxiety and create an environment in which the individual becomes motivated and comfortable to change (Schein 2014).

Next, Lewin explains that the learning process can be implemented after unfreezing. In order to successfully accomplish the learning portion, it is important that learning is followed by refreezing. Anyone can attempt to learn something new; but not every individual will retain and apply the learned information into his or her life. This is

why refreezing is so important. The goal of refreezing is to make sure that the learned information can be congruent with the rest of the learner's behavior and personality, or else the new information will not survive, and it will become unlearned. If all of the steps of Lewin's Change Theory are applied, it is likely that the learner will obtain the learned information and apply it to daily life in the future.

Using Lewin's Change Theory Model is a technique which: 1) identifies long-term goals and 2) maps backward to structure preconditions. Probiotics are a poorly understood concept for many people, and I believe administering this survey to the clients of the DTC will bring us one step closer to teaching people about the benefits of probiotics and how to make an affordable and easy to make probiotic drink by structuring a kombucha class in the future.

Methods

The first step in administering a survey to the Downtown Clinic patients was creating a survey and receiving acceptance from the Institutional Review Board (IRB). The main goal of administering the survey to the patients was to get an understanding of how much information patients already know about probiotics and kombucha, and if patients would be interested in attending a kombucha class. Thus, we asked a multiple choice question addressing which diseases probiotics can benefit. The answers to this question could set a baseline for what patients already know or what needs to be taught in the class. Similar questions addressing pre-existing knowledge were dichotomous question types addressing if patients knew what probiotics or alternative probiotics are, further developing a baseline for the class. Also, a contingency question was asked to understand if patients at the Downtown Clinic take probiotic supplements. All of this

information will lead the construction of the unfreezing stage of the kombucha class. On the other hand, questions regarding the interest in making kombucha were also asked to evaluate the feasibility of patients continuing to make kombucha at home after the class has finished. Multiple choice questions regarding the cost and time investment were asked on the survey to address this point. Also, a scalar question was asked in order to find out if patients would make kombucha at home. Finally, a dichotomous question was asked to evaluate how many people would take the free kombucha class at the Downtown Clinic. Thus, the last few questions addressed the refreezing stage of Lewin's Change Theory. It is important to note that all question types were closed ended and written in layman's terms for all patients to understand without ambiguity. The survey as a whole evaluates what Downtown Clinic patients know about probiotics and if they would attend the class in the hopes of continuing to make kombucha and incorporating it in their daily lives.

Once the survey was complete, the IRB exempt form was filled out. The IRB form was filled out to completion with information about how the research will be conducted, what risks are involved in the research, how consent will be given in the research, amongst other things (See Appendix). The IRB exempt form was turned in, and the approval to begin research was granted within twenty-four hours. The next step was to administer the survey to the patients of the Downtown Clinic.

Since the Downtown Clinic is strictly run by volunteers, Wednesdays are the days in which patients have their appointments with physicians and counselors. Thus, the survey was administered to the patients from 4-7 pm on Wednesday nights in the waiting room of the clinic, while they waited for their appointments. The participants read over

the consent agreement and took the survey if they wanted to participate. Because the consent form was the only thing linking the participant with the responses, an informed consent statement, with no signed consent form was used. By taking the survey, the participant gave his/her consent. The survey includes nine questions, which address the consumption of kombucha, its potential health benefits, and the willingness of participants to one day attend a kombucha class where patients could learn how to make kombucha (Figure 1). Also, since there is a large population of Latin Americans at the Downtown Clinic, a Spanish version of the survey was given as well. Finally, after the results of the survey were gathered, Change Theory will be incorporated to understand how to conduct a future kombucha class.

Application of Change Theory

For the purposes of the kombucha class, the survey was used as the first stage of the unfreezing step in Lewin's Change Theory Model. The survey given to the Downtown Clinic patients is intended to evaluate what the patients already know about probiotics and kombucha, and if they would be interested in attending a free class on how to make kombucha. Thus, the results of the survey will further the construction of the kombucha class. For now, Lewin's Change Theory can be applied to a theoretical kombucha class as follows.

After obtaining results from the survey, the kombucha class will first begin by disconfirming pre-existing ideas about probiotics, and convincing the patients that the new ideas presented about probiotics and kombucha is valid. This will be obtained by group work activities such as brainstorming what they know about kombucha and the benefits of probiotics. Group work will establish a friendly environment in which the

patients feel comfortable in voicing their own opinions and thoughts about kombucha. Later, the group work will be followed up by a class discussion of the actual benefits of kombucha for health. This will allow the patients to either fill in the gaps, or learn the correct health outcomes of kombucha. Next, some time will be spent in order to set up long-term and short-term goals, which will incorporate the use of kombucha in their daily lives. Thus, survival anxiety and motivation will be incorporated into their outlook on health. At the end of this stage, the patients should have more positive rather than negative expectations of the kombucha class, as well as feeling comfortable and positive about the learning process.

Next, the process of learning can be introduced. After the patients at the Downtown Clinic understand how important probiotics are to health, they will be taught how to make kombucha. This portion of the class will be taught through modeling and observational learning. As the teacher, I will be outlining the steps in how to make kombucha through demonstration, while the people attending the class will be following what I do. Once each person's kombucha is complete, it will have time to ferment. In order to enforce all of the things they have learned throughout the class, another class will be taught in a week to start the refreezing stage. During this next class, the kombucha should be fermented to completion and the individuals attending the class can give their finished kombucha a taste and take it home. Since the patients are allowed to take their kombucha home, the hope is that since they have the SCOBY already and learned all of the wonderful benefits of kombucha; they can continue to make kombucha in their daily lives and thus refreeze.

Results

Overall, the majority of patients at the Downtown Clinic have heard of probiotics. However, the majority of patients do not take probiotics (Table 1). The patients who do take probiotics claim to take them only when certain symptoms arise like diarrhea (Figure 2). Also, most patients have heard of alternative forms of probiotics such as yogurt, but most patients have not heard of kombucha (Table 1). Additionally, the majority of patients believe probiotics could benefit diseases such as Irritable Bowl Syndrome and Urinary Tract Infections (Figure 1). The majority of patients claimed they could spend between \$50-60 in a year on making kombucha (Figure 3). In addition, patients answered that they might or might now be able to make kombucha on their own, or they probably could (Figure 4). Finally, patients believe that it takes either 10 minutes or 30 minutes to make kombucha for a given week (Figure 5). Overall, 65% of patients answered that they would take a free kombucha class if it were given at the Downtown Clinic (Table 1).

Question	Percentage Answered Yes
Q2) Do you know what probiotics are?	68%
Q3A) Do you take probiotics?	35%
Q4) Have you heard of alternative forms of probiotics like yogurt?	81%
Q5) Have you heard of kombucha?	23%
Q9) I would take a free class that teaches how to make kombucha.	65%

Table 1: The survey questions in which the answer was yes or no, and the corresponding percentage of yes answered out of a total of 31 surveys.

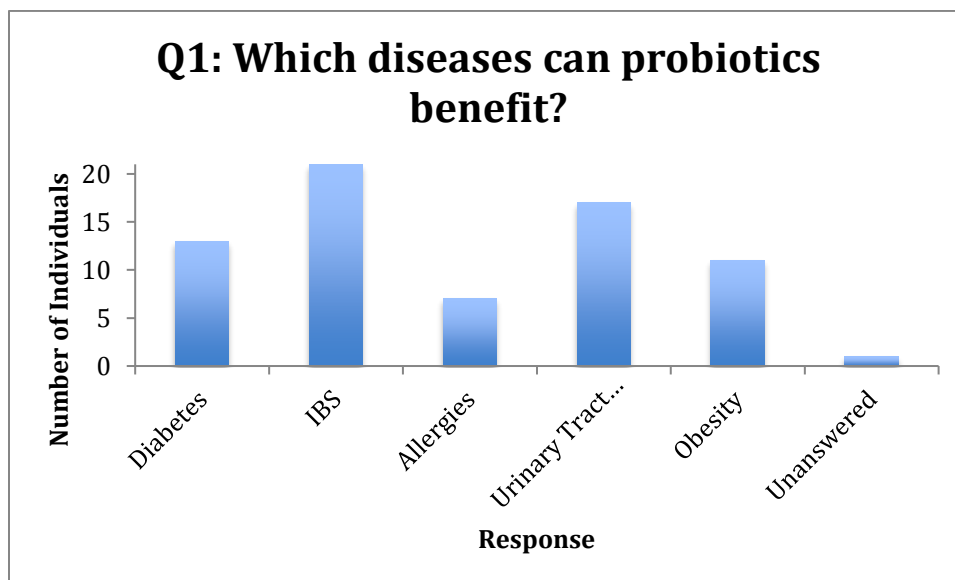


Figure 1: Answers to Question One, which was an opinion question, asking which diseases probiotics could beneficially affect.

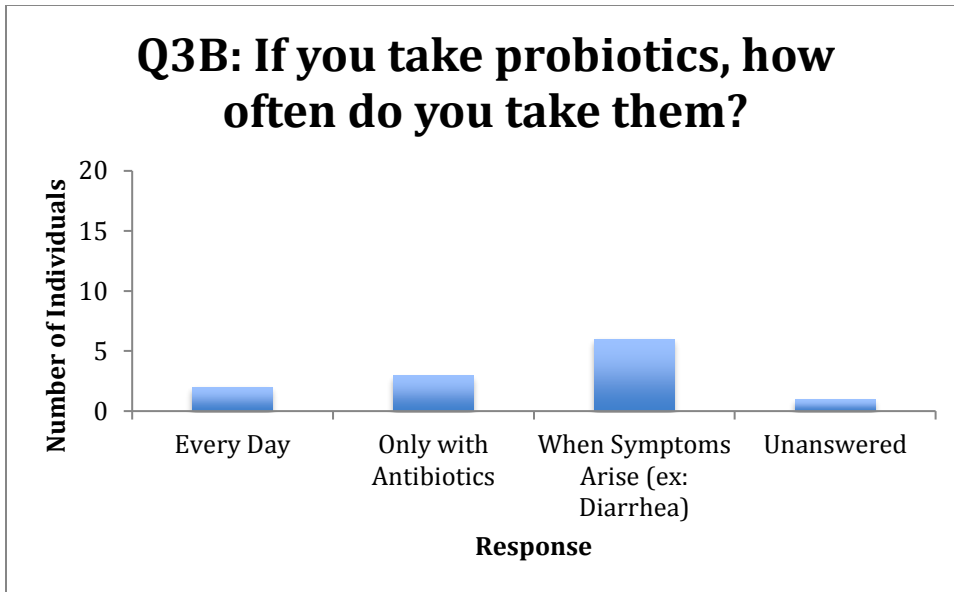


Figure 2: Answers to Question Three, asking how often patients take probiotics if they answered yes to taking probiotics in Question 3A.

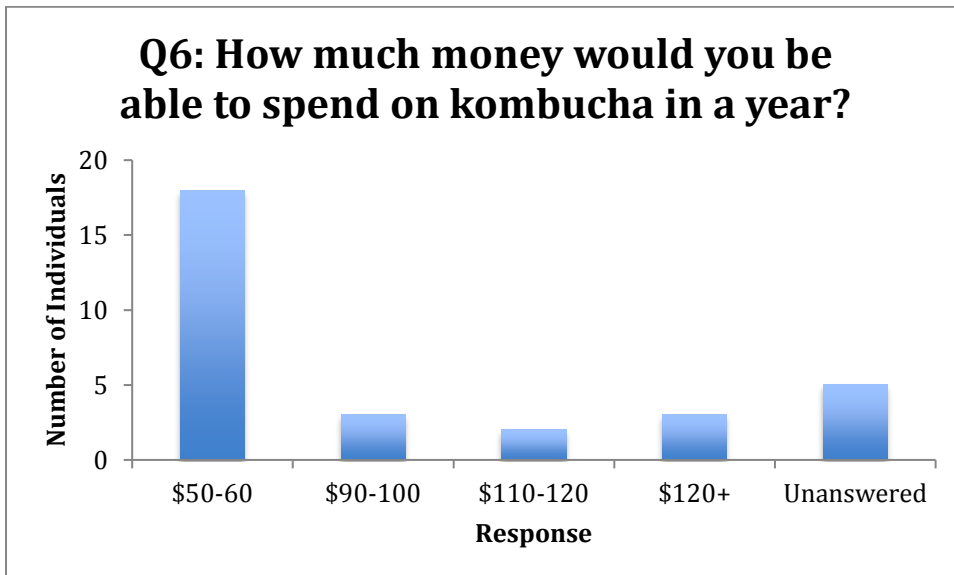


Figure 3: Answers to Question Six, asking how much money patients at the Downtown Clinic would be able to spend on kombucha.

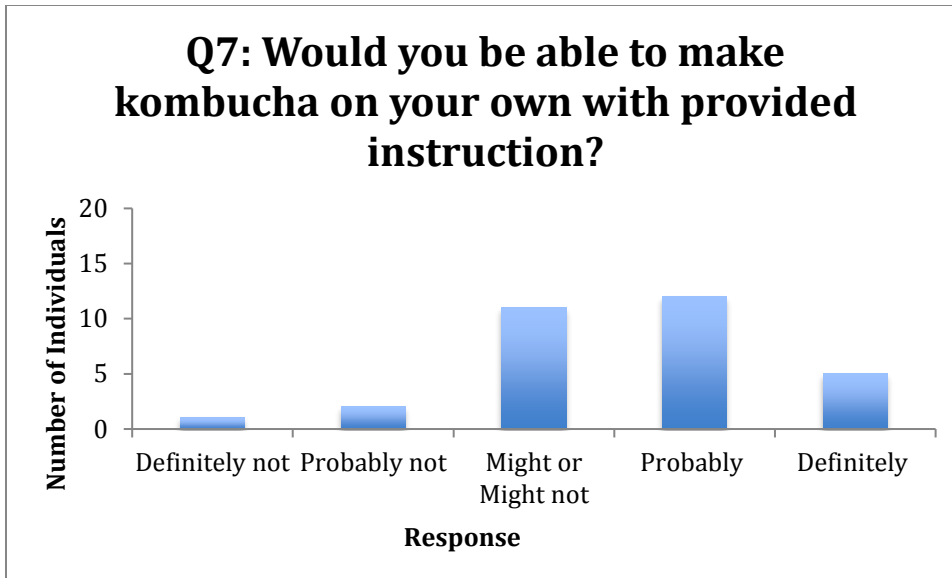


Figure 4: Answers to Question Seven, asking if patients would be able to make kombucha if given instructions on how to make it.

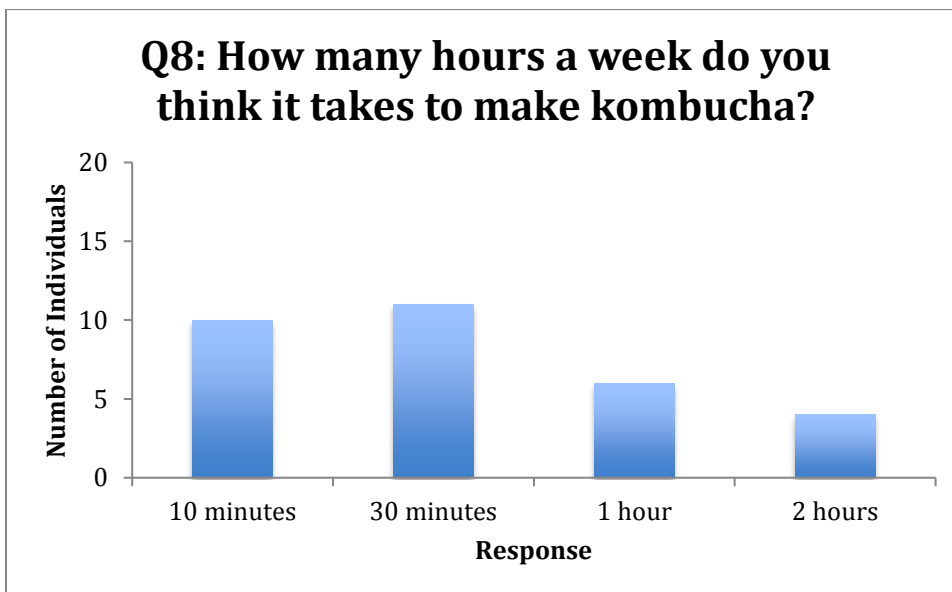


Figure 5: Answers to Question Eight, an opinion question, asking patients how much time it takes to make kombucha in a week.

Discussion

The research allowed us to evaluate if patients at the Downtown Clinic would like to attend a free kombucha class in the future. From the survey results, the majority of patients would attend a free kombucha class. That being said, Change Theory can be used to construct a kombucha class by using answers from the survey questions for guidance.

The survey also enabled us to determine which aspects of Change Theory we would most need to implement. It served as a survey of the patients' current knowledge and areas of misunderstanding. Thus, the survey allowed us to see what needed unfreezing during the first stage of the kombucha class. First, though the majority of patients knew what probiotics are, the class would first start out by addressing what probiotics are and how they benefit the gut microbiome in prevention of disease. The majority of patients believed probiotics help with Irritable Bowl Syndrome and Urinary Tract Infections; but, in fact, probiotics can benefit all of the diseases presented in the answer choices. Thus, a group exercise addressing the topic of 1) what probiotics are and 2) how probiotics can benefit overall well-being would be done by brainstorming in groups. Group exercise is a strategy that overcomes learning anxiety by creating a friendly learning environment in which everyone is free to share opinions. After brainstorming, the class will come together as a whole and the teacher will lead a class discussion about what probiotics are and their benefits. I will write a list of everyone's thoughts, but only put the correct ideas about probiotics; therefore, pre-existing inaccurate ideas will be disconfirmed. Thus, the patients will learn what probiotics are and how they can benefit their overall health. Next, in a similar manner, alternative

probiotics will be discussed. The majority of patients knew what yogurt was, but not many knew about kombucha. A discussion about the benefits of kombucha will be conducted, convincing patients that making kombucha is more efficacious than taking probiotic pills.

The next step of Change Theory is learning. With the help of a little fundraising and volunteers, the kombucha class will be able to provide the patients of the Downtown Clinic with free supplies for their first batch of kombucha. Students from previous Capstone classes can help run the kombucha class, while grants from the Downtown Clinic can help supply the class. The class will be led in an observational learning and modeling manner. The teacher of the class will go through how to make kombucha step by step, and as he/she does so, the class will repeat the steps with their own materials. Thus, the patients will get to experience hands on how to make kombucha, which will hopefully stick with them when they return home.

Not only did the survey address the unfreezing stage, but it also addressed the refreezing stage in Change Theory. The survey was used to assess if creating a kombucha class, under the principles of Change Theory, would eventually lead to continual use of kombucha in the daily lives of the DTC patients. The results of the survey suggest that patients would potentially keep making kombucha outside of class.

Survey questions six, seven, and eight were specifically introduced into the survey in order to assess whether the patients of the Downtown Clinic would continue making kombucha outside of class. The answer to question number six is \$90 to make 16 oz portions of kombucha to consume for a whole year. The majority of patients answered that they would be able to spend between \$50-60 in a year. However, if patients chose to

consume less kombucha in a given day, then the cost will go down. Thus, making kombucha could feasibly fit into the budget of patients of the DTC. Next, question number seven assessed if patients would be able to make kombucha on their own at home, addressing the refreezing stage of Change Theory. The majority of patients answered either “might or might not” or “probably” to this question. Thus, it is likely that the majority of patients will be able to recreate the steps of making kombucha at home after visually learning in the classroom. Additionally, patients will be sent home with a written recipe, in order to guide them in making the kombucha.

Finally, question eight is designed to assess how long patients think it takes to make kombucha per week. Depending on expertise, making kombucha can take anywhere between 10-30 minutes. The majority answer for this question was 10 minutes and 30 minutes. Therefore, taking the time to make kombucha could potentially fit into the schedule of the Downtown Clinic patients; suggesting that 10-30 minutes of maintenance time is not inconvenient for patients. The answers to these logistic questions provide evidence that the majority of patients will follow through with the refreezing stage of Lewin’s Change Theory.

During the kombucha class, the refreezing stage will be implemented by adding a follow-up class. The patients can come back and taste their final, fermented kombucha while also having the opportunity to take home the supplies they have gained from the class. Thus, if patients have the SCOBY, the only other additional materials they would have to buy would be sugar and tea. Hopefully, the people attending the kombucha class will learn, through Change Theory, that probiotics are extremely beneficial for an array of diseases, and that making kombucha is worth the time and money invested.

Over the course of the last few months, the Senior Microbiology Capstone Class, in collaboration with the Downtown Clinic, has really inspired me to teach the patients at the DTC about the benefits of probiotics, and how to incorporate kombucha into their lives. In the future, I see the kombucha class becoming a huge success at the Downtown Clinic. I envision the patients and families coming to the kombucha class not only to learn how to make kombucha but also to acquire relationships within the community. I see people exchanging phone numbers and staying in contact with each other for years to come. I see excited people sharing their opinions and thoughts in a safe environment. Finally, I would like to collaborate with the University of Wyoming Nordic Ski Team in making and selling kombucha at the Laramie Farmer's Market, so that patients at the Downtown Clinic become incorporated in the community and become exposed to healthy eating in general. Kombucha can be the vector for the patients at the Downtown Clinic to develop a healthy lifestyle in all aspects, including community engagement and overcoming food insecurity.

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Appendix

IRB Exemption Form:

University of Wyoming IRB Exemption Request
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<p>Institutional Review Board Room 308, Old Main 1000 East University Avenue, Dept. 3355 Laramie, WY 82071</p>
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Phone: 307-766-5320

Fax: 307-766-2608

email: irb@uwyo.edu

(Electronic submission via email is encouraged.)

**** Please be aware that if it is determined your research is not exempt, you will be asked to complete the full IRB form****

1. Responsible Project Investigator, Co-Investigators, & Faculty Supervisor

Responsible Project Investigator:

Name: Aleksandra Zarzycka	Title: student
Department: University Honors Program	
Office Address:	
Phone number:	Fax number (if applicable):
Email address: azarzyck@uwyo.edu	

Co-Investigators (add more boxes if necessary):

Name:	Title:
Department:	
Office Address:	
Phone number:	Fax number (if applicable):
Email address:	

Faculty Supervisor (if PI is a student):

Name: Rachel Watson	Title: Lecturer, Associate ETT
Department: Molecular Biology	
Office Address: 1000 E. University Ave.	
Phone number: 307-766-3524	Fax number (if applicable): 307-766-

	5098
Email address: RWatson@uwyo.edu	
If the principal investigator is a graduate or undergraduate student, submit the Research Supervisor Approval form from the faculty advisor, thesis or dissertation committee chair indicating review and approval of the proposal for submission to the IRB. The IRB will not approve a proposal without the proper Approval form.	

2. Title of Study:

Applying Change Theory when making Kombucha at the Albany County Downtown Clinic
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3. Anticipated Project Duration:

Spring 2017 semester

4. Purpose of Research Project:

<p>In LAY LANGUAGE, summarize the objectives and significance of the research:</p> <p>Last semester I was a student of the Microbiology senior Capstone class. Over the course of the class, we were able to propose, perform, and present a scientific research study to address a real problem within the Laramie community. My group partnered with the Albany County Downtown Clinic (DTC) and investigated how to make and add additional bacteria to kombucha, a probiotic drink. Passionate about the research study, I am continuing my Honors Thesis by investigating how Change Theory can apply to structuring a future class on how to make kombucha, designed for people who frequent the Downtown Clinic. The purpose of the study is to administer a survey to the clients of the DTC. After the surveys are completed, Change Theory will be applied to analyze the survey data, which will allow for conclusions about how to structure a kombucha class. Change Theory is a technique which: 1) identifies long term goals and 2) maps backward to structure preconditions. Probiotics are a poorly understood concept for many people, and I believe administering this survey to the clients of the DTC will bring us one step closer to teaching people about the benefits of probiotics and how to make an affordable and easy to make probiotic drink by structuring a kombucha class in the future.</p>
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5. Description of Potential Participants:

A. Are all Participants 18 or older? Yes No

B. Are any special classes involved (pregnant woman, prisoners, children, or cognitively impaired individuals)? Yes No

6. Procedure:**Description of participants' activities:**

The Downtown Clinic is open for clinic hours on Wednesday nights from 3-7 pm. During this time, I will go to the clinic and hand out surveys to the individuals working at the front desk, which can give the survey to clients of the DTC while they wait for their appointments. The participants will read over the consent agreement and take the survey if they would like to participate. Because the consent form is the only thing linking the participant with the responses, we request to use an informed consent statement, with no signed consent form. By taking the survey, participants give their consent. The survey includes nine questions, which address the consumption of kombucha, its potential health benefits, and the willingness of participants to take the kombucha class.

7. Confidentiality Procedures:**A. Explain whether or not participants will be identified by name, appearance, or nature of data:**

Participants will not be identified by name or appearance; all responses will be completely anonymous. Change Theory will be applied to analyzing the survey data, in order to structure the future kombucha class.

B. Will the data you collect be anonymous or confidential (check the one that applies)?

Note: research is only anonymous if the researcher does not know the identity of the participants and there are no identifiers linking the participant to the research.

Anonymous

Confidential

8. Risks to Participants:

A. Describe the risks to participants:

Only normal and minimal risks are present in this study, such as risks associated with the range of emotions involved with being asked about health decisions. If the participants do feel uncomfortable at any time during the study, they always have the option to stop the study.

B. Is information that is obtained recorded in such a manner that human subjects can be identified and any disclosure of the human subjects' responses outside the research could reasonably place the subjects at risk of criminal or civil liability or be damaging to the subjects' financial standing, employability, or reputation? _____ Yes _____X_____ No

9. Description of procedure to obtain informed consent or other information to be provided to participant:

A. How and when will the participants be approached to obtain consent?

The Downtown Clinic is open for appointments on Wednesdays from 3-7 pm. During this time, I will go to the DTC and give the front desk the surveys. As clients check in, the people working at the front desk can hand out the survey to the clients and they can fill out the survey as they wait for their appointment.

B. Who will be responsible for obtaining consent (check the box that applies)?

Project Director _____

Member of Project team _____ (Aleksandra Zarzycka)

Other _____ (Please explain, and include name, affiliation, and title)

Survey:**Consent Form****1. General Purpose of the Study**

The purpose of the study is to administer a survey to you at the Downtown Clinic, in order to gauge how to structure a hands-on kombucha class in the future where clients will learn how to make kombucha.

2. Procedure

You will be given the choice to take a survey when they check into their appointment with the front desk. All survey results are anonymous, and the name and appearance of individuals will not be noted.

3. Disclosure of Risks

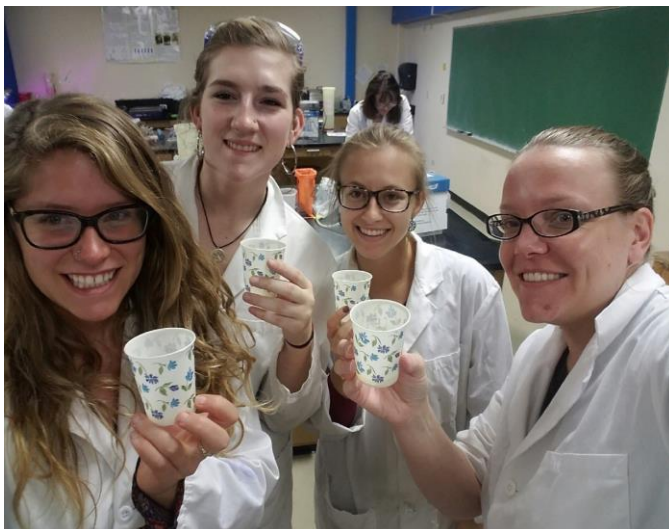
Minimal risks are present in this study, such as risks associated with the range of emotions involved with being asked about health decisions. If the participants do feel uncomfortable at any time during the study, they always have the option to stop the study.

4. Description of Benefits

The results of the survey will be used to analyze how to make a kombucha class in which clients are taught how to make kombucha.

5. Freedom of Consent

Completing the survey is entirely voluntary and refusal to participate or complete the survey will result in no penalty. You may decide to discontinue your participation at any time by letting the front desk know. By completing the survey on the back, you are indicating that you, the Participant, have read the description of the study and you agree to participate.

**6. Questions about Research**

If you have questions about this research or are interested in the results please contact Ola Zarzycka, or via email (azarzyck@uwo.edu). If you have questions about your rights as a research subject, please contact the University of Wyoming IRB Administrator at 307.766.5320.

Downtown Clinic Survey

By taking this survey, I give my informed consent (on front page).

Q1) Probiotics have been proven to help with many types of diseases. Which of the following do you think probiotics would help? Please mark any that you think apply.

- Type 2 Diabetes
- Irritable Bowl Syndrome (IBS)
- Allergies
- Urinary Tract Infections (UTI)
- Obesity

Q2) Do you know what probiotics are?

- Yes
- No

Q3A) Do you take probiotics?

- Yes
- No

B) If yes, how often do you take probiotics?

- Every day
- Only when I am taking antibiotics
- Only when certain symptoms develop (ex: diarrhea)

Q4) Have you heard of alternative forms of probiotics like yogurt?

- Yes
- No

Q5) Have you heard of kombucha?

- Yes
- No

Q6) Kombucha aids in digestion, provides immune support, and increases weight loss. How much money do you think you would be able to spend per year to make kombucha?

- \$50-\$60
- \$90-\$100
- \$110-\$120
- over \$120

Q7) If you were given instructions on how to make kombucha, would you be able to make your own? Please put an X by your answer.

- Definitely not
- Probably not
- Might or might not
- Probably
- Definitely

Q8) How much time in a week do you think it takes to make kombucha?

- 10 minutes
- 30 minutes
- 1 hour
- 2 hours

Q9) I would take a free class that teaches how to make kombucha.

- Yes
- No