

# AWARENESS AND KNOWLEDGE OF THE HOSPITALITY INSTRUCTORS OF PROBIOTIC BEVERAGES

**\*Munesh Kumar Dadha<sup>1</sup> and Deeksha<sup>2</sup>**

<sup>1</sup>Lecturer, Institute of Hotel Management Rohtak, <sup>2</sup>Ph.D Research Scholar, M.D. University

[munesh\\_dadha@yahoo.com](mailto:munesh_dadha@yahoo.com)

## ABSTRACT

**Background:** *In today's world there is an imbalance in the intestinal bacteria. Sedentary lifestyle and poor sleeping schedule have affected our entire body. Apart from that we are regularly consuming unhealthy diets which are low in fiber and high in processed foods and added sugar. Intake of probiotics will be led to the development of intestinal immune system which regulates the intestinal bacteria.* **Objectives:** *To check the awareness and knowledge of the Food & Beverage Instructors working in Hospitality Institutions/colleges/universities about probiotic beverages and to check the need of incorporating the concept of probiotics in the curriculum of the hospitality students.* **Methodology:** *To fulfill the objective of this research paper we used both primary and secondary data. Numbers of respondent were 77. The respondents were Food and Beverage department instructors working at different Institutes of Hotel Management across India. For primary data collection, a structured questionnaire was designed and sent to Food and Beverage instructors/trainers/lecturers/teachers in the hospitality institutes. Percentage Analysis was done for the calculation of data.* **Results:** *The faculty members are very well aware about the concept of probiotic beverages. The results clearly state that not much attention has been paid to the concept as most of the faculty members have not taken theory and practical classes on this topic. However, they intend to take this concept in the future.* **Conclusion:** *It can be concluded that despite the knowledge that the faculty members have, for probiotic beverage more attention needs to be given on teaching the concept of probiotic to the hospitality students as due to the current scenario customers are more inclined towards the beverages which along with satisfying their palate provides nutritional benefits to them.*

**Key Words:** *Functional Beverages, Probiotics, Nutritional Value, Hospitality Instructors*

## **INTRODUCTION**

The interest in the functional foods and beverages has increased globally. These functional foods and beverages are capable of having a positive effect on health. The consumer demand and interest both have increased over time. The positive effects include lowering the sugar level, ability to enhance the immune system, decreased cholesterol level, also help in digestion. Consumer demand of beverages is met in terms of shapes, size, storage and some possibility of having essential bioactive compounds and nutrients (Sanguansri & Augustin,2010). (Ghoshal, 2019) considered beverages to be a source of nutraceuticals, which ultimately resulted in classification, interaction with the foods, health benefits, retention during storage of vitamins, essential fatty acid, minerals, amino acids, and herbs are some of the key ingredients of the functional beverages. Functional beverages are beneficial to support the immune system, help in weight management, and improve gut and cardiovascular health. It also acts as an adjuvant to resist the ongoing process. One can classify functional beverages as- dairy based beverages (mineral enriched drinks and probiotics), fruit and vegetable beverages, and energy and sports drinks (Corbo et al., 2014). In the commercial market several products are available that can be identified as energy and sports drinks or enriched drinks. Barbano (2017) studied dairy based beverages and examined the production of various types of milk available for past two years. The variety of milk includes flavored milk, low-fat milk and skim milk, long-shelf life milk to lactose- reduced milk, to milk available with high calcium and protein contents. Orru et al. (2018) reviewed available literature regarding the micronutrients that are enriched with micronutrient. These functional beverages are considered to be effective in sports performance and recovery.

Rioux et al. (2005) stated that the combination of prebiotics and probiotics is collectively called synbiotics. Synbiotics enhances the colonization of microbes which aids survival of the live bacteria in the host gut. Hill et al. (2014) The International Scientific Association of Probiotics and Prebiotics can be “defined as selective substances that result in the specific changes in the composition and / or activity of the gastrointestinal microbiota, thereby positively affecting the health of the host in the favor of beneficial bacteria constituting the microbiota. Slavin (2013) developed a culture of probiotic fermented goat milk Kefir, in which reduced C-reactive protein, type II diabetes, fasting glucose levels, serum total cholesterol content and HbA1C were found. Jalali et al. (2016) reported decreased induction of apoptosis and cell proliferation to control human acute erythroleukemia. It is possible with

consumption of Kefir a dairy fermented probiotic beverage. Yadav et al. (2016) stated the beneficial aspects of the probiotic beverages. Various bacteria, yeast and molds are related to positive effects of these beverages which mainly includes *Lactobacillus* ssp and *Bifidobacterium*. Sun- Waterhouse (2011) neglected the research opportunities that are arising in the sector of food-derived product. Kandyliis et al. (2016) stated the variety of prebiotic and probiotic are enormous e.g. dairy and non- dairy beverages with high therapeutic efficacy, which includes weight loss, cardiovascular system enhancer, healthy effect on the digestive tract, antioxidant activity, boosting immune defense, improved joint function and cancer prevention. Chandrasekar and Shahidi (2018) gave the main evidence about herbal beverages was given by them. These beverages are prepared from different morphological parts of the plant which consist of stems, leaves, roots, buds, flowers and fruits. These herbal beverages are considered to be a rich source for many bioactive compounds like phenolic acid, carotenoids, flavonoids, alkaloids, coumarins, saponins, polyacetylene and terpenoids. Nigam (2018) stated survival of probiotics is possible in functional drinks. This survival is due to various factors such dissolved oxygen (DO), hydrogen peroxide (H<sub>2</sub>O<sub>2</sub>), pH, redox potential and acidity. Ton et al.(2020) found that intake of synbiotics- supplements milk which have been fermented using kefir grains have showcased positive effects on systematic inflammation, systematic oxidative stress, cognitive dysfunction and blood cell damage. Zhang et al. (2017) concluded in his study that probiotic culture system containing *Lactobacillus plantarum* enhances gut microbiota and antioxidant activities in the fermented milk.

This research was done so that students can be made aware about the concept of probiotics. Though instructors may have a knowledge about the concept it is important to deliver to the students as well. With the scenarios in the recent times we all have realized the importance of a healthy body. With the help of concept of probiotics, we can further develop more drinks and food that holds nutritional than just being tasty. But the elementary steps should be taken in the hospitality institutes that are building a skilled workforce for future.

The objectives of the study were:

- To check the awareness and knowledge of probiotics among Food and Beverage instructors from various institutions and universities.
- To check the need of incorporating the concept of probiotics in the curriculum of the hospitality students.

## METHODOLOGY

An exploratory study was carried out to fulfill the objective of this research paper. The questionnaire was distributed to the Food and Beverage instructors among Institute of Hotel Managements across the country including both state and central IHMs. Out of the sent questionnaires about buzz of eating and drinking healthy is prominent among the customers and these foods and beverages should be taught to the students in hospitality institutes. For this the instructors must be aware of these beverages and their benefits. Many journals, research papers and magazines are reviewed for the data collection.

**Research Design:** An exploratory study was conducted by sending the structured questionnaire to the respondents. Survey method was used to collect the primary data.

**Locale :** The study was conducted pan-India across all IHMs and certain universities of North India. The data was sent to F& B Instructors/ teachers/ lecturers at various designations.

**Sampling Design:** Simple Convenient sampling was used. 77 Food and Beverage instructors were respondents.

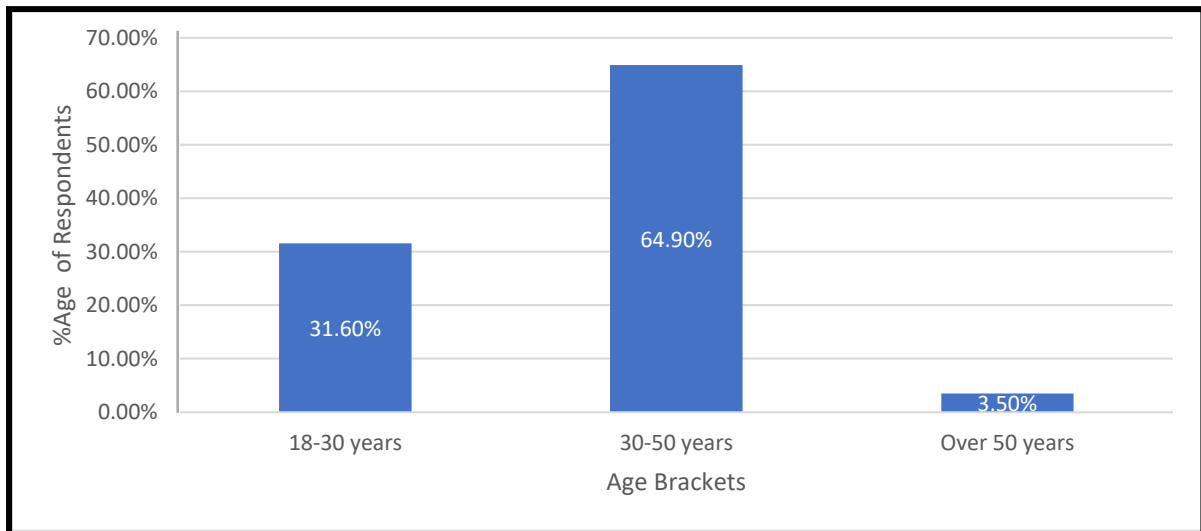
**Tools and Technique:** A structured questionnaire has been distributed among the Food & Beverage Instructors /teachers/lecturers/trainers among various IHMs. /colleges/universities which are the target population in this research paper.

**Data and Statistical Analysis:** Percentage Analysis was done for the calculation of data.

*Table 1: Demographic Profile of the Respondents*

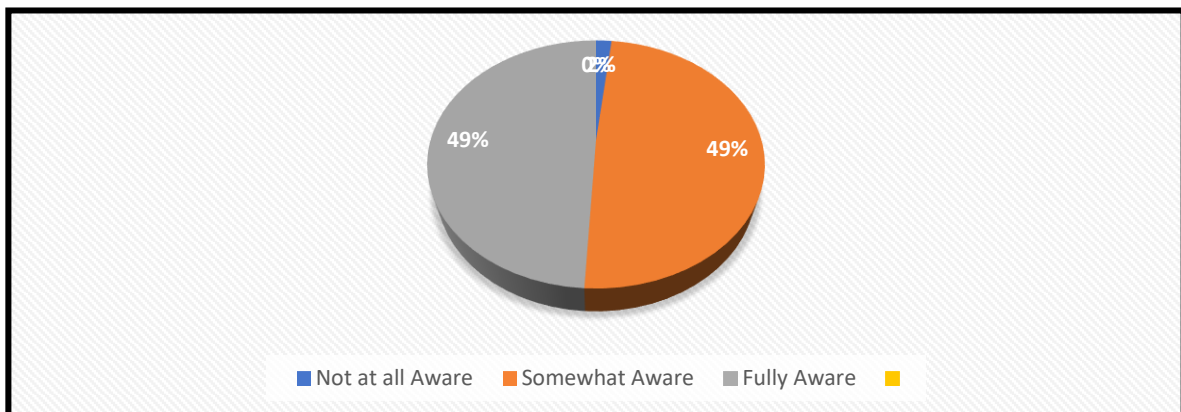
S. No	Gender	Percentage
1.	Male	78.9%
2.	Female	21.1%

## RESULTS AND DISCUSSION



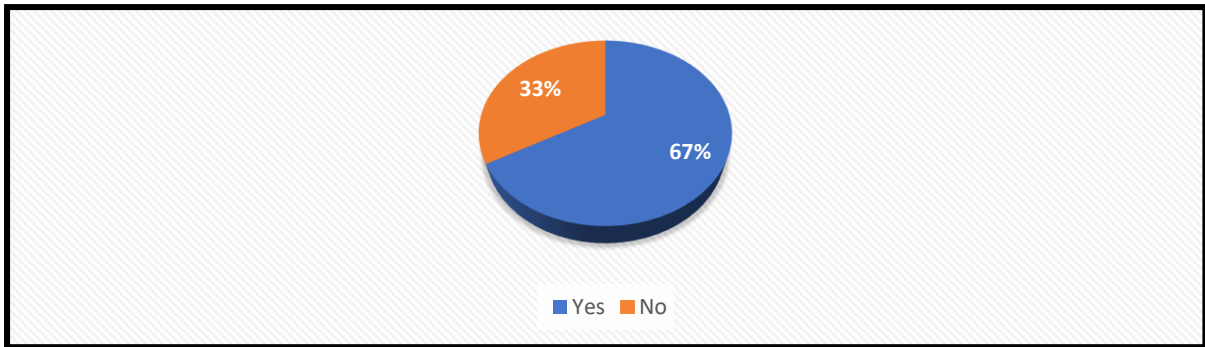
*Figure 1: Age Groups*

The demographics of the respondent was identified by dividing the respondents under various age groups. About 64.9% respondents belonged to the age group between 30-50years. This clearly states that respondents were well experienced faculties from the hospitality industry. Following this category, is age group which consists of respondents from 18-30 years of age and are about 31.6%.



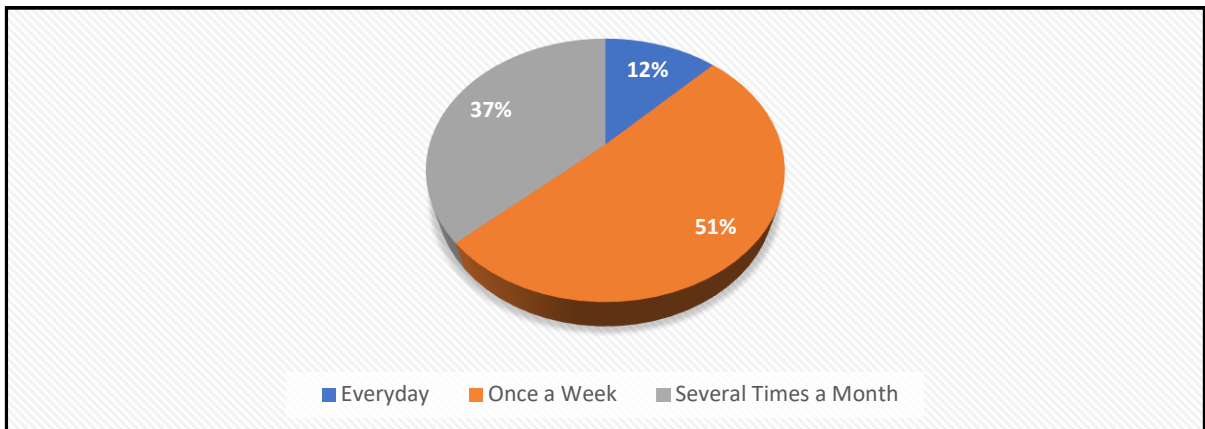
*Figure 2: Awareness about Probiotic Beverages*

The awareness of the hospitality instructors about probiotic beverages was checked with the above question. With the results obtained it's clear that instructors from various IHMs/ Institutions are aware of this term. Very few of them have been in the category which is not aware of the concept.



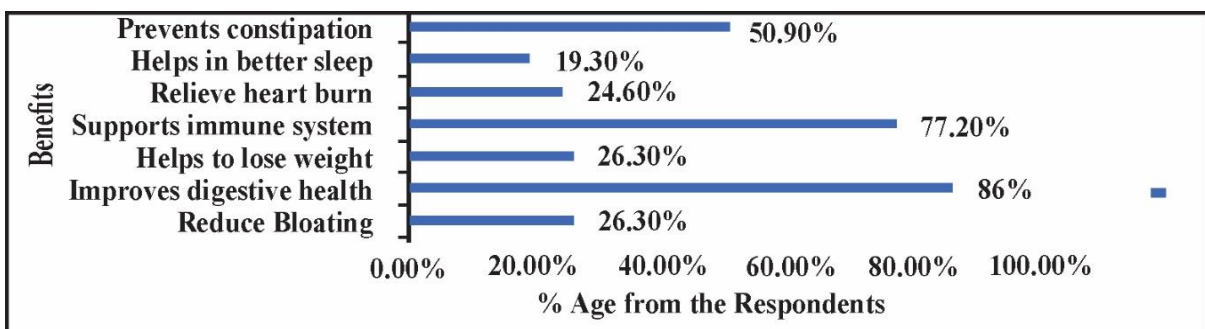
**Figure 3: On consumption of Probiotic Beverages**

About 66.7% respondents said that they consume probiotic beverages and rest 33.3% does not consume probiotic beverages. The outbreak of the corona virus has made us realize the importance of healthy foods in our modern life where we have taken even health for granted. Now the preference is for more healthy drinks rather than tasty drinks.



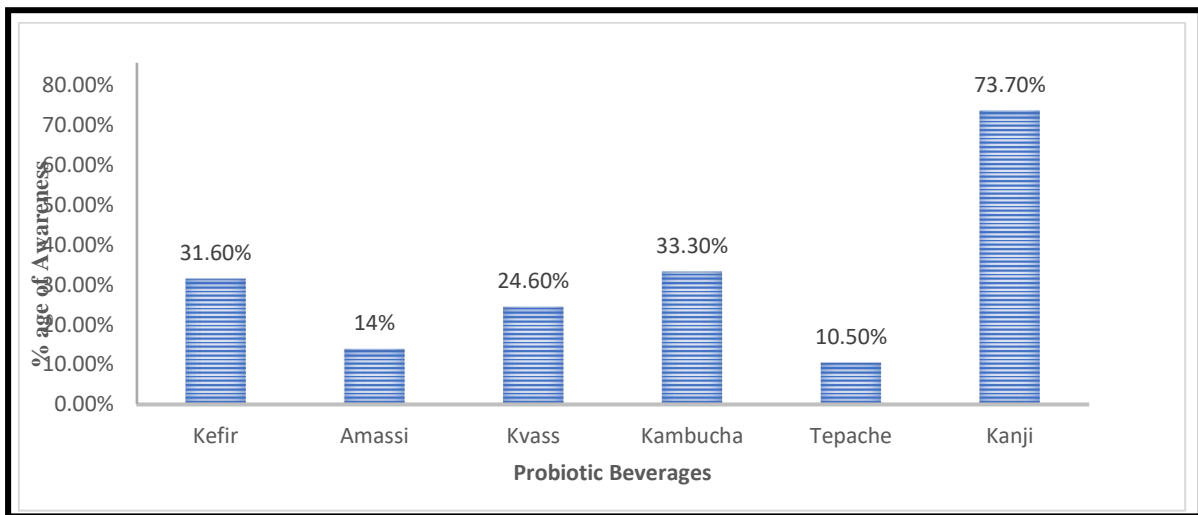
**Figure 4: Frequency of Consuming Probiotics**

On checking about the frequency of consumption of probiotic beverages among the respondents it was found that 50.9% respondents consumed probiotics once a week. Only 12.3% respondents consumed it on daily basis. Rest 36.8% consume it only once a month.



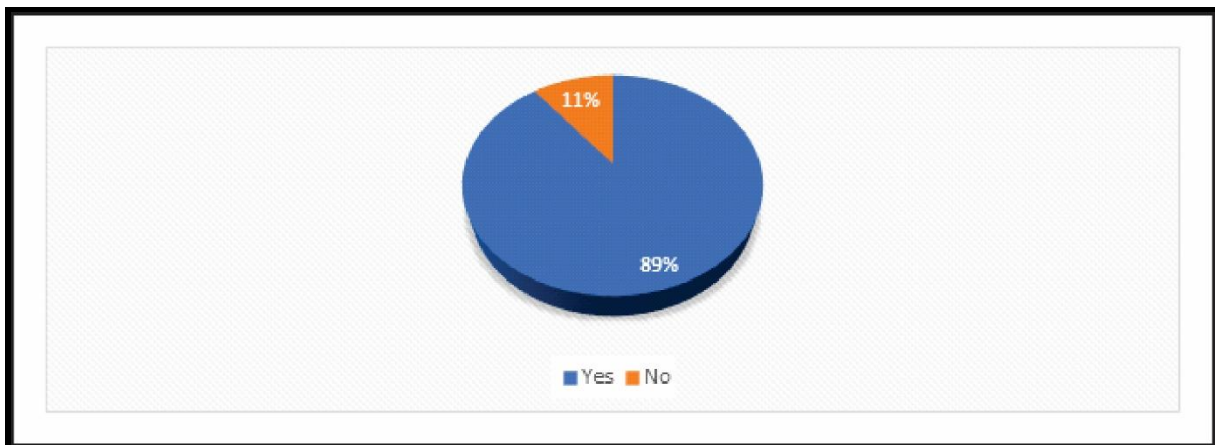
**Figure 5: Benefits of Probiotic Beverage**

In the above figure benefits of probiotic beverages were enlisted by the respondents. Apart from the above benefits of probiotic beverages they also show properties which are anti-allergic, anti-diabetic, anti-inflammatory, anti-cancer etc. The positive effects include lowering the sugar level, ability to enhance the immune system, decreased cholesterol level, also help in digestion. Particularly Kefir which has anti-obesity effects on the body (Choi et al., 2017).



**Figure 6: Various Probiotic Beverages**

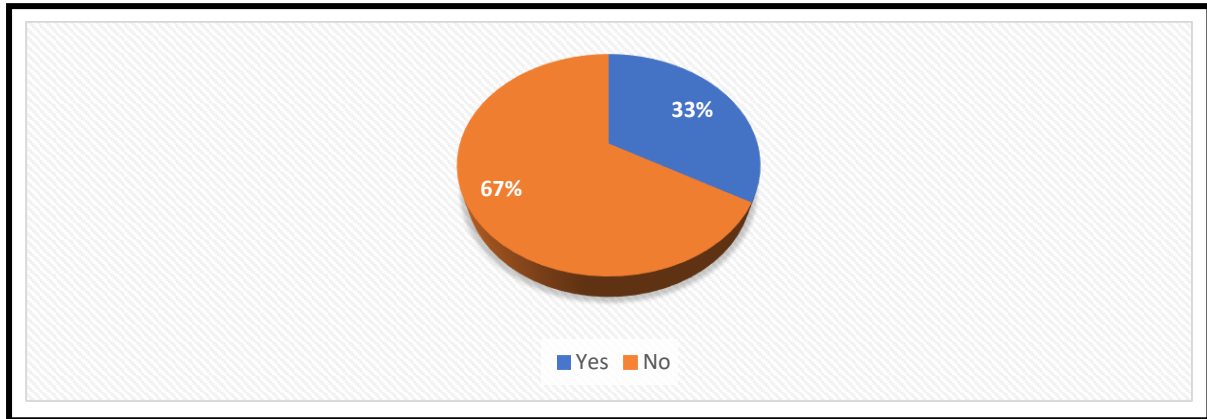
Respondents were asked about their knowledge of the probiotic beverages. Most of the respondents identified Kanji followed by Kambucha, Kefir and Amassi and Tepache respectively which depicts their awareness about these beverages.



**Figure 7: Yoghurt Consumption in diet**

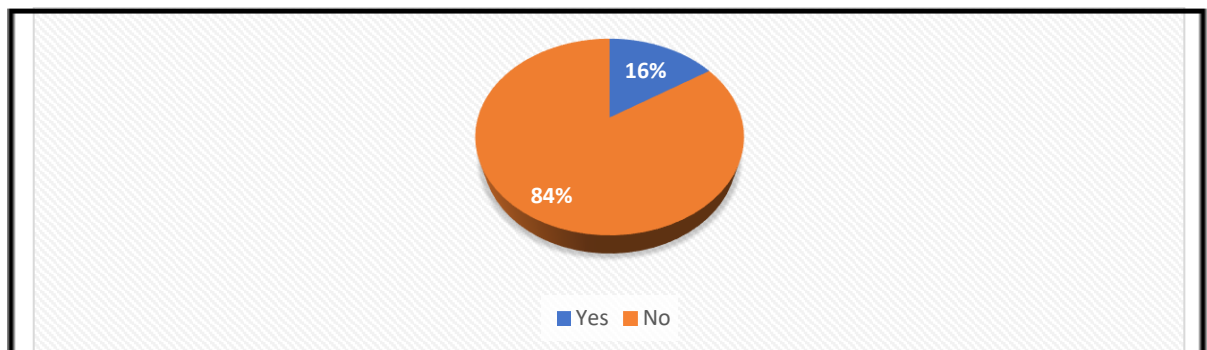
Most of the respondents about 89.5% consumed yoghurt because of its probiotic benefits. This shows that respondents are aware of the benefits of yoghurt and because of this have

included yoghurt their meal. Lactobacillus Barba rum increases the aroma of the yoghurt and naturally sweetens it (Baba et al., 2014).



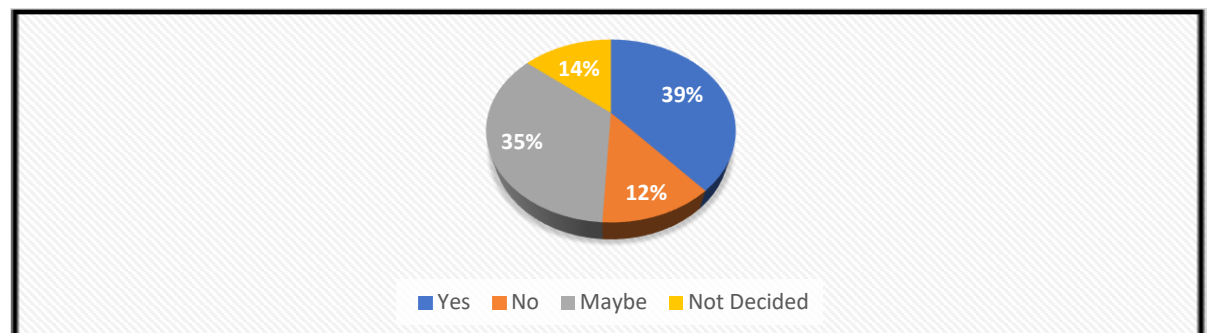
**Figure 8: On conducting theory sessions on Probiotic Beverages**

Only 33.3% instructors have conducted classes for teaching about probiotic beverages and most of the instructors have not conducted any session on this topic. In past few months we all have realized the benefits of consuming nutritional food but despite being in the hospitality industry students are not taught about this.



**Figure 9: On conducting practical/ seminars/ workshops on Probiotic Beverages**

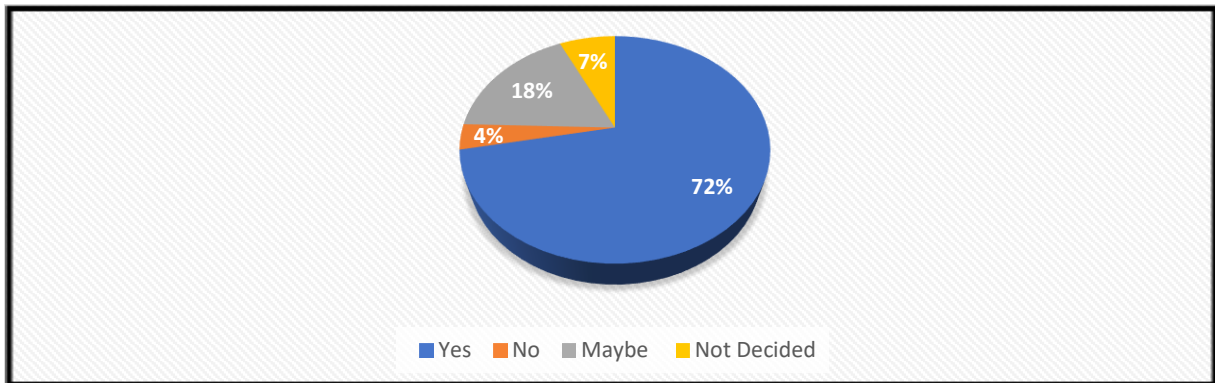
Only 15.8% respondents have conducted practical sessions for students on this particular topic. It can be clearly concluded that this topic is not discussed among hospitality students.



**Figure 10: On conducting sessions on Probiotic Beverages in future**



With the effect of the changing needs of the customers and their inclination towards healthy foods and beverages due to various reasons over time it is the need of the hour to update the hospitality curriculum. Respondents were asked if they wish to conduct such session in the coming times. 38.6% respondents strongly wish to conduct such sessions. 12.3% are still reluctant in conducting sessions on probiotic beverages. 35.1% were not sure. 14% respondents have not decided yet.



**Figure 11: On incorporating Probiotic Beverages in the hospitality curriculum**

71.9% instructors strongly feel that the topic of probiotic beverage should be incorporated in the curriculum of hospitality. 17.5% of the hospitality instructors were not sure of this. But 3.6% respondents felt that this particular should not be added.

## CONCLUSION

It can be concluded from the above findings that the hospitality instructors are very much aware about the concept of probiotics. They have enormous knowledge about the benefits and usage of probiotics. Despite having the knowledge, the hospitality students are neither taught about it in the class nor are practical sessions/workshops conducted for it. However, hospitality instructors are in favor of giving its due importance in the future and incorporating it in the curriculum of the course.

## REFERENCES

1. Baba, A.S., Najarian, A., Shori, A.B. Lit, K.W., & Keng, G.A. (2014), Viability of lactic acid bacteria, antioxidant activity and in vitro inhibition of angiotensin-I-converting enzyme of lyceum barbarum yogurt. Arab. J. Sci. Eng., 39, 5355–5362.

2. Barbano, D.M. (2017). A 100-year review: The production of fluid (market) milk. *J. Dairy Sci*, 100, 9894–9902.
3. Chandrasekara, A., & Shahidi, F. (2018). Herbal beverages: Bioactive compounds and their role in disease risk reduction—A review. *J. Tradit. Complement. Med.* 8, 451–458.
4. Choi, J.-W., Kang, H.W., Lim, W.-C., Kim, M.-K., Lee, I.-Y., & Cho, H.-Y. (2017). Kefir prevented excess fat accumulation in diet-induced obese mice. *Biosci. Biotechnol. Biochem*, 81, 958–965.
5. Corbo, M.R., Bevilacqua, A., Petrucci, L., Casanova, F.P., & Sinigaglia, M. (2014). Functional beverages: The emerging side of functional foods commercial trends, research, and health implications. *Compr. Rev. Food Sci. Food Safety*, 13, 1192–1206.
6. Ghoshal, G. (2019). Chapter 4—Beverages: A potential delivery system for nutraceuticals. *Nutr. Beverages*, 12, 1111–1142.
7. Hill, C., Guarner, F., Reid, G., Gibson, G.R., Merenstein, D.J., Pot, B., Morelli, L., Canani, R.B., Flint, H.J., & Salminen, S. (2014). The international scientific association for probiotics and prebiotics consensus statement on the scope and appropriate use of the term probiotic. *Nat. Rev. Gastroenterol. Hepatol*, 11, 506–514.
8. Jalali, F., Sharifi, M., & Salehi, R. (2016). Kefir induces apoptosis and inhibits cell proliferation in human acute erythroleukemia. *Med. Oncol*, 33, 7.
9. Kandyli, P., Pissaridi, K., Bekatorou, A., Kanellaki, M., & Koutinas, A.A. (2016). Dairy and non-dairy probiotic beverages. *Curr. Opin. Food Sci*, 7, 58–63.
10. Nigam, D. (2018). Probiotics as functional foods in enhancing gut immunity. In *Functional Food and Human Health*; Rani, V., Yadav, U.C.S., Eds.; Springer: Singapore.
11. Orrù, S., Imperlini, E., Nigro, E., Alfieri, A., Cevenini, A., Polito, R., Daniele, A., Buono, P., & Mancini, A. (2018). Role of functional beverages on sport performance and recovery. *Nutrients*, 10, 1470.
12. Rioux, K.P., Madsen, K.L., & Fedorak, R.N. (2005). The role of enteric microflora in inflammatory bowel disease: Human and animal studies with probiotics and prebiotics. *Gastroenterol. Clin. N. Am.*, 34, 465–482.

13. Sanguansri, L., & Augustin, M.A. (2010). Microencapsulation in functional food product development. In *Functional Food Product Development*; Smith, J., Charter, E., Eds.; John Wiley and Sons: New York, NY, USA, 3–23.
14. Slavin, J. (2013). Fiber and prebiotics: mechanisms and health benefits. *Nutrients*, 5:1417e35.
15. Sun-Waterhouse, D. (2011). The development of fruit-based functional foods targeting the health and wellness market: A review. *Int. J. Food Sci. Technol.*, 46, 899–920.
16. Ton, A., Campagnaro, B., Alves, G., Aires, R., Côco, L., Arpini, C., Oliveira, T., Campos-Toimil, M., Meyrelles, S., & Pereira, T. (2020). Oxidative stress and dementia in alzheimer's patients: Effects of synbiotic supplementation. *Oxid. Med. Cell Longev.* 1–14.
17. Yadav, R., Puniya, A.K., & Shukla, P. (2016). Probiotic properties of *Lactobacillus plantarum* RYPR1 from an indigenous fermented beverage raabadi. *Front. Microbiol.*, 7, 1683.
18. Zhang, J., Zhao, X., Jiang, Y., Zhao, W., Guo, T., Cao, Y., Teng, J., Hao, X., Zhao, J., & Yang, Z. (2017). Antioxidant status and gut microbiota change in an aging mouse model as influenced by exopolysaccharide produced by *Lactobacillus plantarum* YW11 isolated from Tibetan kefir. *J. Dairy Sci.* 2017.