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MANAGEMENT OF HYGIENE BY STREET PANIPURI VENDER

Piyush Gawali*
Dr. Vijay D Kulkarni**

ABSTRACT

Growing economy and changing life style of consumers have changed Indian food market drastically. Reports indicate that Indian food market is set to double by 2025. Hygiene factors and knowledge about it was studied. Respondents Samples were collected from different locations in Nasik city, Maharashtra. Respondents samples were fractionated into two parts viz. khatta pani and smashed potato masala used in Panipuri. Total plate count and isolation of pathogenic bacteria were done on both basal and selective media. It was found that the there was a poor handling while filling the materials in Panipuri. Due to poor handling the materials in Panipuri, there is loss of hygienic value & causes mostly diseases stomach ache, diarrhea etc. Based on the study and result of it researcher has come up with automatic panipuri filling machine to reduce handling of material for food safety & increase the rate of panipuri filling by using automatic of mechatronics system.

Keywords: *Street food, Panipuri, Material filling, Automatic system.*

1. INTRODUCTION

In many developing countries, information on street food vending activities has been found to be greatly lacking. In order to show more light on street food sector, a study was carried out from May to Sept 2020 in 25 places in Nasik. During this study, information was obtained concerning the street food vendors and their activities by observation and brainstorming, and by interviewing **100** street food vendors using questionnaires. Results show that the major street food consumption points are located around areas of high social activity such as pubs, markets and road junctions. For 40% of the vendors, the practice of street food vending is an easy way of earning money. The general hygiene of the vendors is poor. Some of the hygiene malpractices in the street food system are due to the absence of running water at the vending site, and the lack of demand for quality in terms of hygiene by the consumers. Indian Authority of Food defines street foods as "ready-to-eat foods and beverages prepared and/or sold by vendors and hawkers especially in street and other similar public places". Urban people of present time are being dependent on street foods or ready-to-eat food items because of the scarcity of time and money. Consequently, street foods are enjoying the top list in popularity. In developing countries, drinks, meals and snacks sold by street food vendors are widely consumed by millions of people (2019).). The most popular street foods in India are Panipuri or Gol gappas and Papdi chaat among others. Although it is very popular, easily available and cheap, it is frequently associated with various food borne diseases Food borne illness associated with the consumption of street foods has been reported in several places in India and elsewhere. The most popular street foods in India are Panipuri or Gol gappas and Papdi chaat among others. Although it is very popular, easily available and cheap, it is frequently associated with various food borne diseases Food borne illness associated with the consumption of street foods has been reported in several places in India and elsewhere. Selling

*MBA 1st year Marketing, Ajeenkya DY Patil University, Pune
**Professor and HOD, Centre for Research, Ajeenkya D Y Patil University, Pune

the foods road side, unhygienic preparation and handling, insufficiency in water supply for cleaning purposes, make the street food one of the major sources of food borne diseases. Though, various physical and chemical agents are used in different food industries for preservation of food materials, natural biological compounds are always in demand as these are eco-friendly, degradable, devoid of side effects and more precisely cheaper than chemical preservatives.

2. STATEMENT OF THE PROBLEM

It was found that the there was a poor handling while filling the materials in panipuri. Due to poor handling of the materials in panipuri there is loss of hygienic value & causes mostly diseases like stomach ache, diarrhea etc. So to overcome this problem we are going to make automatic panipuri filling machine. It reduce poor handling of material for food safety & increase the rate of panipuri filling by using automation of mechatronics system. Hence we are trying to make an automatic panipuri filling machine.

3. SIGNIFICANCE OF THE STUDY

The significance of this study, is that due this Automatic Panipuri Pilling machine the Hygiene is improved with less Human involvement and efficiency of production is more.

This research project gives more good quality of food and even with more possible options of taste and flavors.

4. REVIEW OF LITERATURE

In the study, efforts are made to improve the Hygiene of Street food i.e. Panipuri. Till now the research was done on water dispensing or timer based dispensing for multiple water Flavors. Even few systems were PLC based monitored by SCADA for bottle filling. Most of vendors don't follow hygiene to reduce Costings. Which is improved by this setup yes prices will get increased but people are ready to pay more for Hygiene.

1. Dr. Laxmana P 1 and Smt. Kavitha S2: Microbial quality assessment of street vended gol gappa and bhelpuri sold in Jaipur city of Rajasthan. Observations: From the above discussion it can be concluded that Pani Puri chaat businesses has become a bread earner and livelihood for few families. It is set to flourish in the coming days as the craze of the customers towards chaat items is ever increasing. Though quality and hygiene factors are of at most importance, Pani Puri businesses in Davangere is yet to realize these aspects. Meanwhile variants are many, it can be targeted for all segments of the population. As evenings are some sort of get together for youths and working population, it has become a trend to hang around chaat centers.
2. Shantanu L. Kulkarni M. Elango: Development of PLC based controller for bottle filling machine. Observations: The paper presents an automatic filling system controlled by PLC as per the filling requirement which has simple operation. The system has the advantages as simple structure and reliable operation. The system controlled by PLC and controlled or monitored by SCADA also PID controller reduces the errors from the system. The additional feature in the system is the use of SCADA for monitoring the complete system and the process may be started and stopped through SCADA screen that effectively avoiding unnecessary wastage of liquid.
3. R.K.Tem Nnam, T.Awono Enama, D.M.Biloa, and R.Ndjouenkeu: Study of the Street Food Sector in the Metropolitan Areas of a Cameroonian City, Yaounde Observations: Street foods were found to be concentrated in areas like road junctions, bars, motor parks, around universities, around churches, shopping centers, markets and public buildings such as police stations, banks, ministries, petrol stations Due to lack of effective system of catering such as canteens on the workplace, they buy street food at cheap price compared to what they would pay for a restaurant meal or even at home.
4. Bipin Mashilkar, Praseed Kumar: As the control system and the field unit has been successfully installed and the testing was

carried out under specified conditions, it was found that the system efficiently works with the help of solar power, using the appropriate amount of water to irrigate the field. This saves the water without wasting and also doesn't use electricity, thus saving power.

5. Dheeraj Pongallu1, Prof. S. R. Suralkar: It includes about how PLC & SCADA systems are implemented in the industry. So, it includes PLC & SCADA components and protocols of the system. And it also includes how to interface PC to the processing plant. PLC & SCADA software is mainly implemented for the control and monitoring between processing hardware and computer. It applies interfacing sever protocol when needed between the SCADA software and the hardware process. Filling process prototype has been designed with the help of hardware devices.

6. H.C.Edima*, R.K.Tem Nnam, T.Awono Enama: Street foods were found to be concentrated in areas where there were a lot of social activities such as road junctions, bars, motor parks, around universities, around churches, shopping centers, markets and public buildings such as police stations, banks, ministries, petrol stations. In fact, this activity offers to urban populations ready to eat food with the popular taste at an acceptable cost, likewise the lack of adequate urban transportation and time, prevent many workers, students, schoolchildren, to go home for meals. Due to lack of effective system of catering such as canteens on the workplace, they buy street food at cheap price compared to what they would pay for a restaurant meal or even at home.

Research Gap: Based on the various studies carried out and considered under the review of the literature, it is clear that the hygiene factor is focused on different paramiters, whereas the idea of Panipuri making machine was neither invented nor refer too. Hence the present study is different than all other studies.

5. OBJECTIVES OF THE STUDY

1) To reduce handling of food while filling & making of panipuri.

2) To explore the possibilities of automate the existing system.

3) To study the awareness about hygiene among the panipuri Vendors.

4) To provide the hygienic & best street food handling.

6. LIMITATIONS OF THE STUDY

- The study covers only Nasik city.
- Hence, the findings of the study are entirely applicable to cities similar to Nasik in demographic and economic wise.
- The study is an opinion survey; caution may have to be exercised while extending the result to other areas.

7. RESEARCH METHODOLOGY

The data was collected with the help of the questionnaire and field visit, discussion and observation. It is basically empirical study in nature with convenient sampling method.

Primary data was collected by visiting panipuri vendors on the different part of the Nasik City. The observation method was used to find out the human interference in the service.

The collected data and qualitative information was Tran scripted and analyzed in simple tabular format to get better understanding. In this section, detail description about propose approaches to outline detection methodology & steps to solve the problem during project manufacturing process has been provided. These were the steps of task followed

1- Field Observation and Problem Identification

2- Literation Survey

3- Objective and Problems Statement

4- Conceptual Model Development

8. DATA COLLECTION

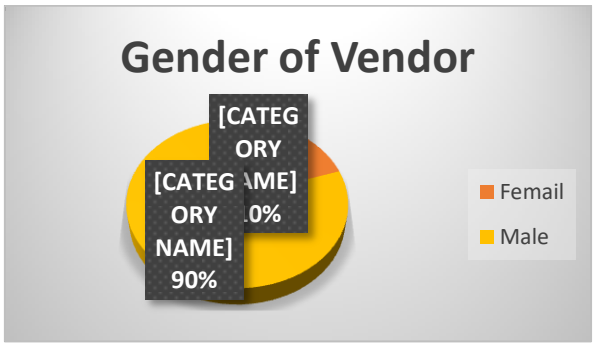
As per the study carried out into the market it was observed that there are many Panipuri Vendors into the city like if we see they are available on every nook and corner, so the survey was done on almost 100 vendors. It was observed that somewhere the vendors were not at all aware about the hygiene and its importance few of them were aware but they were ok with the traditional practices they use. Some of them were using the plastic bags or the Glows for serving the Panipuri. It was also observed that Customers were more conscious about health and Hygiene and they were preferring the vendors with glows and cleanliness over the vendors without the glows and cleanliness. So the final output was the effect on the sales, branding and there reputation. Almost 40 out of 100 were aware about the hygiene but out of 60 only 44 were using the glows or plastic covers for their hands to maintain the hygiene even out of 44 few were using proper new clean covers and glows rest were using the same used glows and covers for multiple times. So by which there sales were directly affected and they were losing their customers.

60 out of 100 were aware about the hygiene and its importance and 40 out of them were using glows and hand covers and even were maintaining the hygiene.

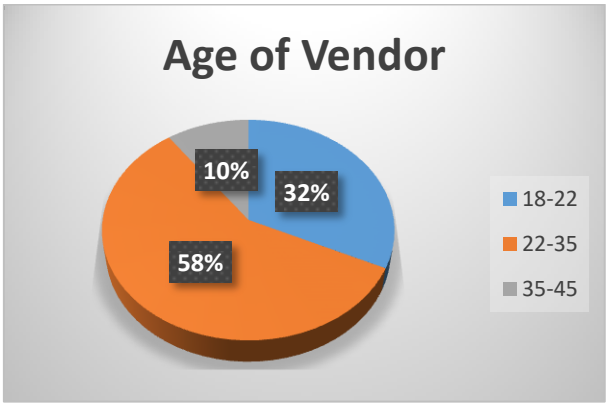
ADVANTAGES:

1) Machine work on the less manual handling of food as compare to the method of Panipuri filling.
2) It provides multiple material filling stations of panipuri filling.
3) The operation of the machine is well controlled.
4) Well balanced system.
5) Panipuri filling time will reduces due to the automation.
6) Only simple support structures are required design & fabrication is easy.
7) Highly accurate material filling can be easily obtained.
8) More accurate and economical in mass material filling.
9) It minimizes mishandling of materials & less floor space is required.
10) It increases the safety and hygienic working

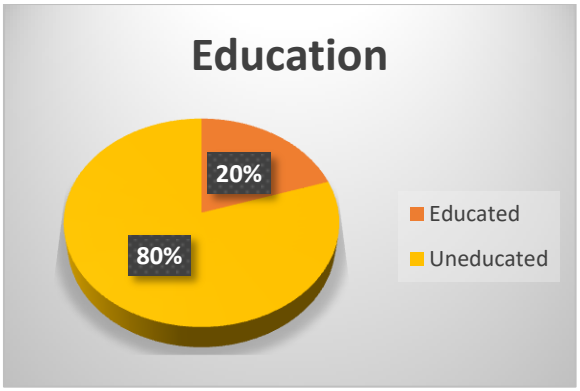
9. DATA ANLYSIS



As far as the data collection and the gender of the PaniPuri Vendors are concerned 90 percent are male and only 10 percent are female vendor in this business. In a way it is male dominated business. However as discussed with vendor the women play important role in supporting in the preparation of it.



The age factor is also varied and 58 percent of the vendor are from the 22- 35 age group in the selected sampling. Followed by 32 percent are from 18 to 22 age group.



If we look at the education of the vendors, surprisingly 80 percent of them are illiterate however they manage their business account very accurately. The need of the intervention in the area of the education may lead to the hygiene factor.

The important factors related to these vendors is the places from where they operate their business. From the total respondents 73 percent are street vendors, where as 27 percent are having their shops and they are more aware about the hygiene factor.

10. FACTS AND OBSERVATIONS

On an average a street vendor sells 10Rs per plate for Panipuri and in shops it costs around 15-20Rs per day so average income of street vendor is always low as compared to the shops. Even we can observe as the Income of the street vendors are less as Compared to shops owners so they can afford the machine but not the small vendors.

As per the customers point of view they prefer hygiene more, so most of them prefer shops to have panipuri but even many people even being conscious about health And hygiene still they prefer the street vendors for taste and spicy and different effect. Even some of panipuri vendors have become so famous that they have open there franchisees and they have opened shops at various places. So to gain more income.

11. CONCLUSION

1. The researchers based on the study and inferences drawn has helped to improve hygiene of street food i.e. Panipuri.
2. The researchers has find out the resources who made automated system which has, made work easy and fast. Wastage is reduced in the system. In this report, the researchers developed a branch and bound approach which is coupled with quick, effective bounds to optimize the system.
3. The researchers learnt that the system developed cannot be directly used because of limitations such as financial inputs and investment. The researchers has studied importance of hygiene, importance and in this Post Pendamic situation in new normal. The researchers were aware of the importance of health and hygiene, hence have carried out this study.
4. Using this machine human Interference with the PaniPuri will be least and will help Vendors to manage proper hygiene. But the researchers have suggested the option for future development of our automatic Panipuri filling machine.

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