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ANCHOR –Multidisciplinary Research Journal is published annually and welcomes research papers on multi-disciplinary issues.

Foreword

Research, it is said, is a prerequisite for academic growth and excellence. Fr. Agnel College promotes and encourages research in various ways, with one way being through the publication of ANCHOR, the peer reviewed, ISSN numbered, national level online inter-disciplinary Research Journal. ANCHOR provides faculty as well as students, from within and beyond the College and State, to publish research papers.

The present edition of ANCHOR continues to have, second year in running, great symbolic significance as it comes in extremely challenging times caused by the COVID-19 pandemic.

This volume would not have been a reality had it not been for efforts of the Editorial Board, and especially of Asst. Prof. Dr. Murelle Maria L. Da Costa e Mascarenhas who ably shouldered the responsibility in bringing out this issue. My sincere thanks to the entire Editorial Board for the painstaking work; a special word of appreciation to the contribution of the Peers who meticulously scrutinized the papers. On behalf of the entire Editorial Board my thanks and appreciation also to all the contributors for their efforts in preparing and submitting their research papers. God Bless us all

Prof. Savio P. Falleiro
Principal
Editor-in-Chief

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UNDERSTANDING THE CONSUMER BEHAVIOUR TOWARDS ONLINE FOOD DELIVERY APPLICATIONS DURING COVID-19 PANDEMIC WITH SPECIAL REFERENCE TO SELECTED AREAS IN GOA

Eunicia Fernandes
Assistant. Professor
Department of Commerce
Fr. Agnel College of Arts & Commerce, Pilar- Goa

Abstract

The ongoing lockdown and Covid-19 Pandemic scare means we are all staying indoors and reducing social contacts, as advised by the Government and health authorities. In such a scenario, getting food (cooked or as raw ingredients) is fraught with issues. Venturing out means potentially spreading or catching the Coronavirus. Today, more people are getting connected through a mobile application and they are ready to trade through it. Companies have changed their traditional business strategies into online marketing to suit customer needs and taste at any time. In urban India, most people are getting their groceries and food via Online Food Delivery businesses which have seen an exponential rise in orders. People are shifting to Delivery Apps for everything from groceries to takeaways. In such a scenario, the hygiene and safety practices in the pick-up and delivery system become important, to safeguard both workers and consumers. This research paper aims to understand the consumer behaviour towards Online Food Delivery Apps in selected areas of Goa. The survey was conducted for a purposeful analysis of the study comprising of 122 respondents. The purpose is to know the frequency of usage of Online Food delivery Apps, the influencing factors affecting the behaviour of customers, mode of payments, and overall satisfaction towards Online Food Delivery Apps.

Keywords : Online Food Delivery App, Covid-19, Pandemic, Consumer Behaviour, Satisfaction level

Introduction

Technology has played a key role in revolutionizing the Food Delivery Services in India, it has contributed to the changes in consumer preferences as their dependency on technology has motivated them to do everything online comprising getting cooked meals delivered to their doorstep. Convenience is the prime factor to the consumers, as to place an order is as simple as few clicks on any mobile device. Technological dependency, convenience, and less time are

taken for the food to be delivered aids as a good reason for the consumers to choose the services offered by the Online Food Ordering and Delivery Service Portals. (Das, 2018)

The Online Food Delivery Apps have made life easier with the customers choosing what they want to purchase, being just a few clicks away. Online Food Delivery App defines a process, as the name suggests delivery of take-out or food items from a local food diner or restaurant through a Mobile Application or a webpage. In this process, the consumer can choose whether to get the food delivered at their home or office address or get it picked up directly from the restaurant and can also decide from the various methods of payment which includes credit cards, E-wallets, debit cards, smart cards, any other mobile wallet or Cash on Delivery (COD). The most important factor is that the Food Delivery Apps need to be kept updated and enhancement of the quality and services provided should be in regular checks for the satisfaction of regular and new customers. The pressure of getting food as early as possible diminishes and it shifts to getting happy discounts or extra merchandise along with it. (Shahabade, et al 2020)

The India Online Food Delivery market has reached a value of US$ 4.35 Billion in 2020. The market is currently witnessing growth on account of the increasing internet penetration and the boosting sales of smartphones. This, in confluence with the growing working population, inflating income levels, and the current Covid-19 Pandemic situation is driving the market further in the country. On account of the rising cases of COVID-19, some of the key players operating in the industry are introducing contactless delivery services, which ensures that the food reaches the customers safely with adequate social distancing measures. A sudden outbreak of the COVID-19 Pandemic has led to the implementation of stringent lockdown regulations in India resulting in the closure of dine-in facilities of restaurants to mitigate the risk of Coronavirus transmission. This has increased the demand for Online Food Delivery Services in the country. (India Online Food Delivery Market: Industry Trends, Share, Size, Growth, Opportunity and Forecast 2021-2026, n.d.) There are a lot of initiatives to ensure all safety and hygiene measures are taken care of during the Coronavirus Pandemic. Some of them include distribution of protective gear for delivery partners, training on hygiene practices, no-contact delivery, disabling Cash On Delivery transactions, hygiene checks across restaurants, and its cloud kitchens. (India, 2021) A lot of people know about Swiggy, UberEats, Zomato, etc. for their fast and quality service for the consumers from various regions, areas, and clients along

with remarkable taste. The most preferred Online Food Delivery Apps in India are Zomato App and swiggy App to order food online in India from a nearby restaurant. These two Apps have services almost in every corner of the country and they deliver restaurant food at the comfort of one's doorstep and also provide the best offers, which are affordable. (Upadhyay, 2020)

Objectives of the Study

1. To understand the consumer behavior towards ordering food using the Online Food Delivery App during Covid-19 Pandemic.
2. To identify the different factors in ordering food using the Online Foods Delivery App.
3. To know the most preferred Online Food Delivery Apps in India.

Literature Review

According to *Chorneukar, 2012-2014,* the study says that nearly 33 percent of the respondents used smartphones and laptops to order food electronically Nowadays the smartphones are the most commonly used gadgets and people are finding it very easy to access the locations/information, etc., Development of application in improving the services in Mobile applications will help in growing the business. Usage of available mobile technology will help in expanding the business.

According to *Tyagi & Dr. Pabalkar, 2021,* due to Covid-10 Pandemic, it was suggested to the whole world by all the medical agencies, especially by WHO to maintain a safe distance and wear masks to kill the contamination. To stop the Pandemic, governments of nearly all the countries effectively implemented lockdown in their respective countries. All the people around the world were restrained in their houses and in addition, their respective workplaces were shut down.

Kumar, 2020, says that the consumers have been held at home due to government-imposed lockdowns, preventing regular shopping habits, and many brick-and-mortar businesses have closed. Pharmacies and grocery stores, for example, have stayed open but with altered hours. Many restaurants have closed or resorted to takeout to stay afloat. For many customers, home delivery has provided a solution to some of COVID-19's challenges. Ecommerce and home delivery may be a convenient option for staff who are expected to work remotely, as well as

some other categories, such as parents who must manage work and parental duties, or those who are at risk of severe COVID-19 health complications.

As per the study conducted by **Yusra & Arawati Agus, 2020,** the Online Food Delivery service industry seems to be hugely promising. However, delivering superior service to increase customer satisfaction and loyalty, is crucial in any service industry to gain a competitive advantage. It infers that firms must obtain a positive response from the user first before customer loyalty is created and the competitive advantage is achieved. Thus, assessing the perceived service quality of the customer is very crucial for the service company in its effort to achieve customer loyalty to sustain and survive in this very competitive market.

The changing nature of urban consumers has sparked the emergence of Online Food Delivery services as highlighted by **Saad, 2020**. This idea of food delivery is quickly flourishing due to the increase in the number of the working population and their time-cramped work-life culture in metro cities. Global researchers have widely studied online shopping behaviour to gain good insight into consumer behaviour in this area. Convenience, usage, usefulness, and other motives are reasons why consumers prefer online services.

According to **Gupta & Duggal , 2020**, the online business segment in India was restricted until a few years because of the low internet penetration rate. But, after technological disruptions in terms of the growth of the telecom sector in India and the emergence of telecom operators offering inexpensive data at a faster browsing speed, even middle and poor classes have access to this growing business segment. Local Indian residents are also becoming more contented with application-based services and are prepared to go and try novel services. With the rapid adoption of smartphones and subsequent development of mobile applications (apps), the lifestyles of Indian consumers have revolutionized dramatically. Now, almost everything can be procured online, from flight tickets to groceries, hotel rooms, food orders or even purchasing a house.

Research Methodology and Data Analysis

The data collected is from Primary and Secondary sources. The statistical technique used is the percentage method.

Primary Source -A structured questionnaire was circulated using a Google Form to 122 respondents from the selected areas of Goa.

Secondary Source – The use of Research articles, Journals, websites of the Food Delivery Apps.

To understand the behaviour of customers regarding usage of Online Food Delivery Apps during Covid-19 Pandemic is studied. There is a total of 122 respondents who are a part of the research.

Table No.1: <u>Demographic data of the respondents</u>

Sr. No	Particulars	Options	No. of Responses	% of Responses
1.	**Gender**	Male	83	68%
		Female	39	32%
	Total		*122*	*100%*
2.	**Age group**	20-25 years	101	82.8%
		25-30 years	20	16.4%
		30-35 years	Nil	Nil
		35-40 years	Nil	Nil
		40 years and above	01	0.8%
	Total		*122*	*100%*
3.	**Income Level (annual)**	Below Rs. 50,000	78	63.9%
		Rs. 50,000- Rs. 1,00,000	26	21.3%
		Rs. 1,00,000- Rs. 1,50,000	05	4.1%
		Rs. 1,50,000- Rs. 2,00,000	06	4.9%
		Rs. 2,00,000 and above	07	5.7%
	Total		*122*	*100%*
4.	**Occupation**	Employed	35	28.7%
		Student	66	54.1%
		Self – Employed	05	4.1%
		Unemployed	08	6.6%
		Others	08	6.6%
	Total		*122*	*100%*

Source: Primary data

Table No. 2: <u>Online Food Delivery App usage.</u>

Particulars	No of Responses	% of Responses
Yes	96	78.7%
No	26	21.3%
Total	*122*	*100*

Source: Primary data
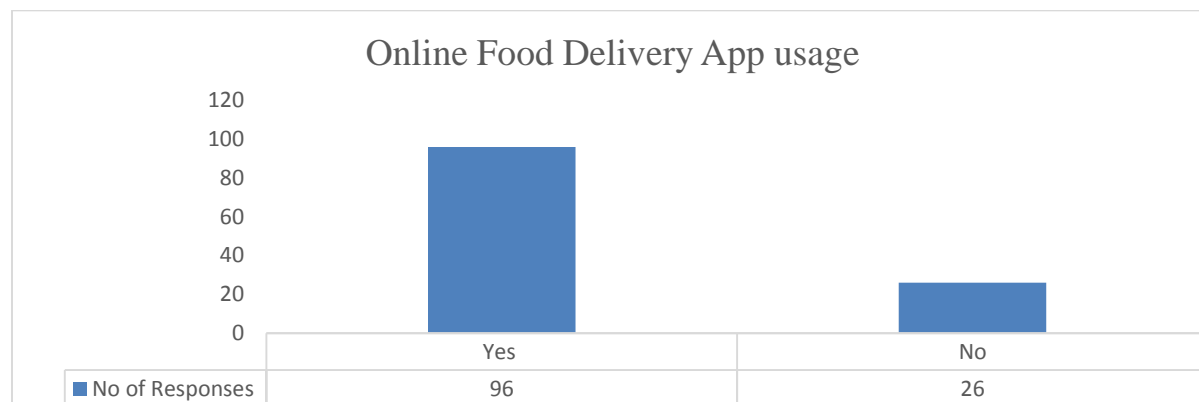
Source: Primary data

Fig No.1: Online Food Delivery App usage.

Table No. 2: <u>Since when you have been using the Online Food Delivery App.</u>

Particulars	No of Responses	% of Responses
Less than 6 months	22	18%
More than 6 months	12	9.8%
About a Year	62	50.8%
Not yet ordered	26	21.3%
Total	*122*	*100*

Source: Primary data
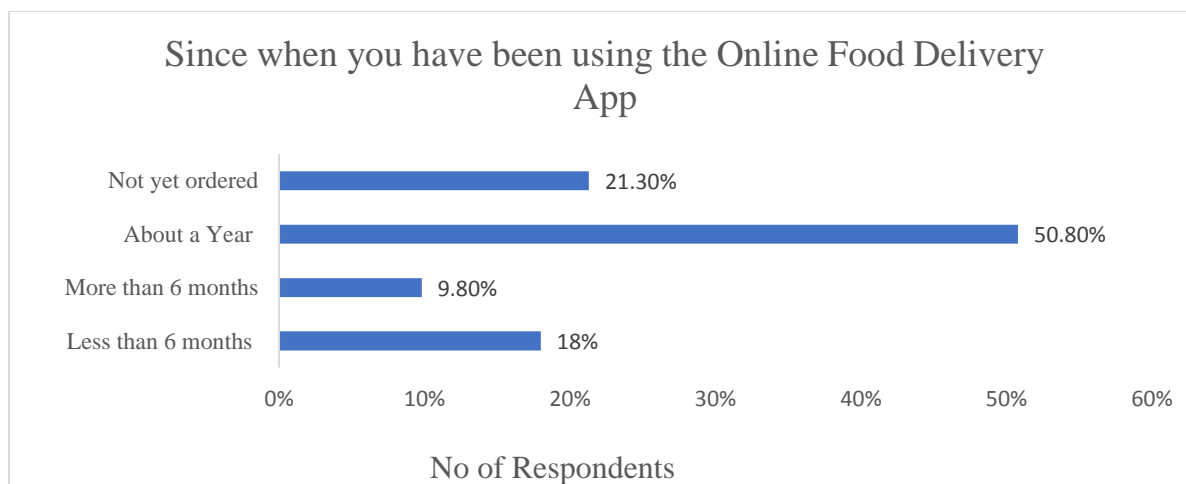
Source: Primary data

Fig No.2: Since when you have been using the Online Food Delivery App.

Table No. 3: **Frequency of using Online Food Delivery App.**

Particulars	No of Responses	% of Responses
Weekdays	11	9%
Weekends	37	30.3%
During Functions	46	37.7%
Do not order	28	23%
Total	*122*	*100*

Source: Primary data
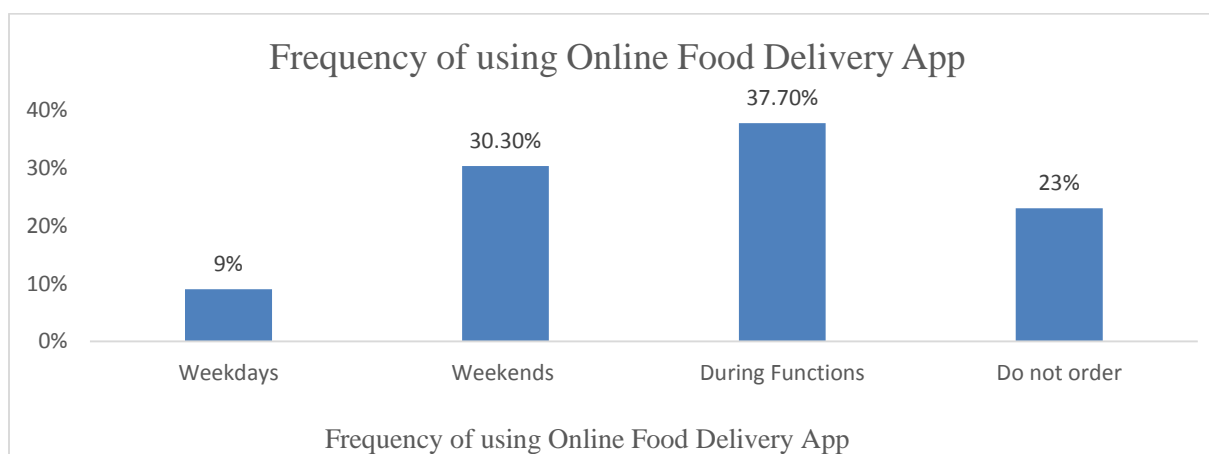
Source: Primary data

Fig No.3: Frequency of using Online Food Delivery App.

Table No. 4: <u>**Most preferred Online Food Delivery App.**</u>

Particulars	No of Responses	% of Responses
Zomato	11	9%
UberEats	Nil	Nil
FoodPanda	Nil	Nil
Swiggy	85	69.7%
Grubhub	Nil	Nil
Deliveroo	Nil	Nil
Domino's Pizza	21	17.2%
Just Eat	03	2.5%
DoorDash	Nil	Nil
Postmates	02	1.6%
Total	*122*	*100*

Source: Primary data
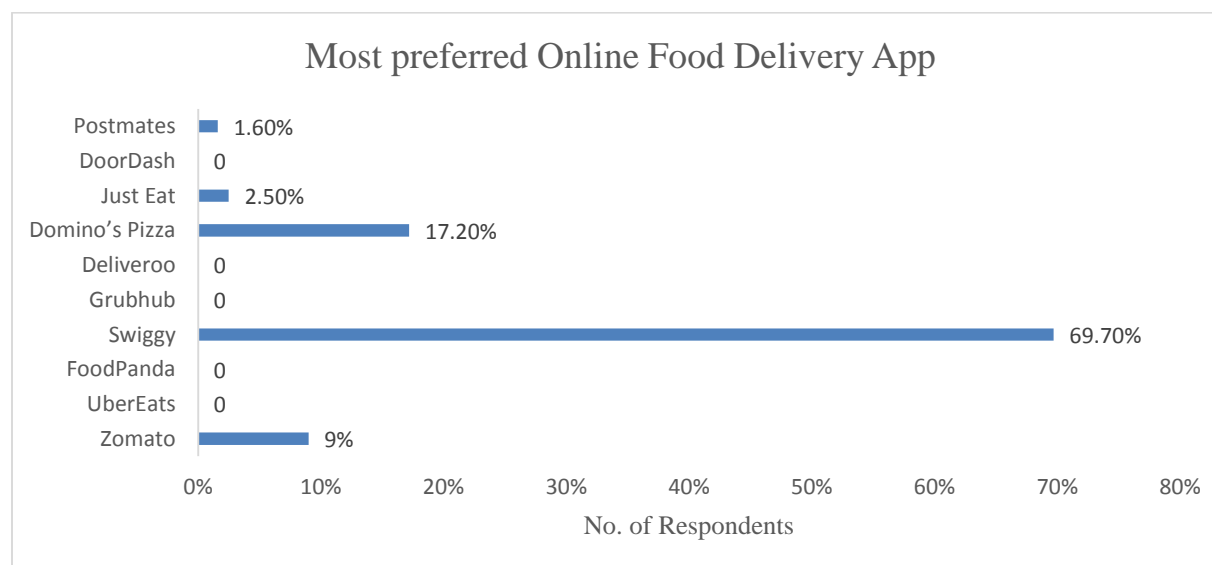
Source: Primary data

Fig No.4: Most preferred Online Food Delivery App.

Particulars	No of Responses	% of Responses
Breakfast	04	3.3%
Lunch	37	30.3%
Dinner	34	27.9%
Others	47	38.5%
Total	*122*	*100*

Source: Primary data

Table No. 5: <u>Preferred type of meal to be ordered.</u>
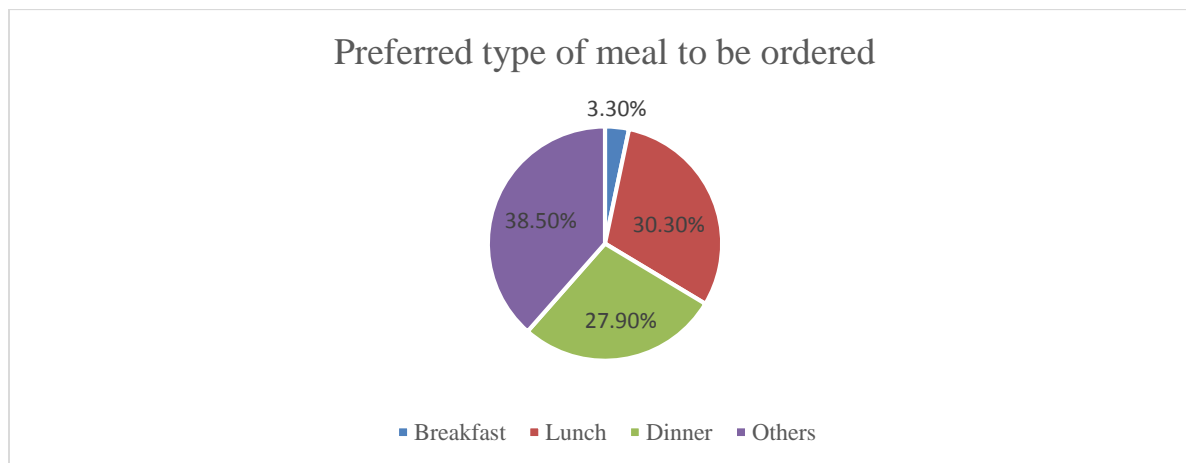
Source: Primary data

Fig No.5: Preferred type of meal to be ordered.

Table No. 6: <u>Mode of Payment used in Online food Delivery App.</u>

Particulars	No of Responses	% of Responses
Cash on Delivery	81	66.4%
Debit/ Credit Cards	27	22.1%
Net Banking	04	3.3%
Other Payment Portals	10	8.2%
Total	*122*	*100*

Source: Primary data

Mode of Payment used in Online food Delivery App
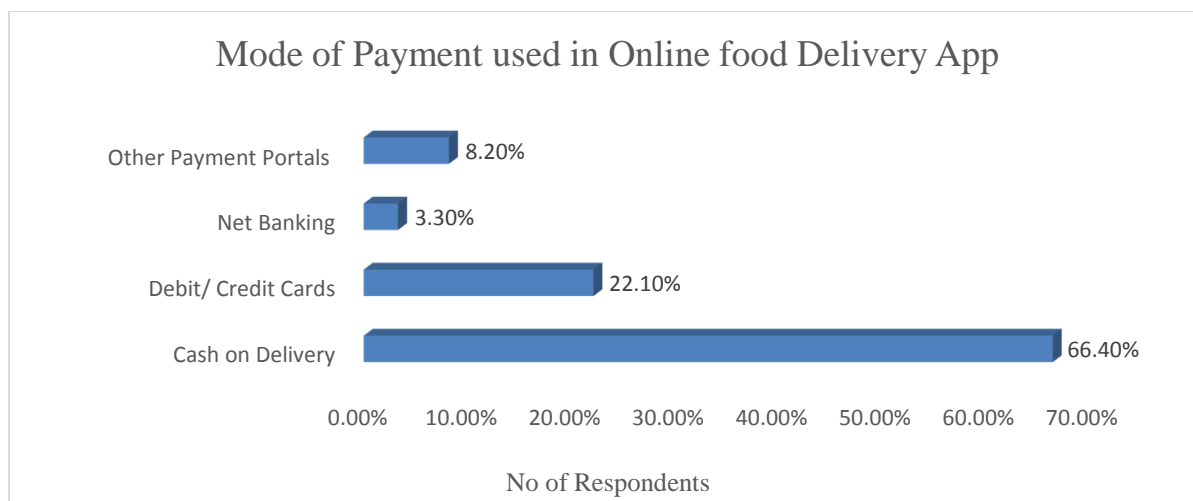
Source: Primary data

Fig No.6: Mode of Payment used in Online food Delivery App.

Table No. 7: Factors influencing the buying behaviour of consumers during the Covid-19 Pandemic.

Particulars	No of Responses	% of Responses
Time-Saving	83	68%
Convenient to use	32	26.2%
Availability of food	32	26.2%
Variety of Cuisines	38	31.1%
Price of the dishes	27	22.1%
Easy payment methods	28	23%
Quality food	20	16.4%
Availability of Offers	41	33.6%
Cost Effective	23	18.9%
Efficient delivery speed	24	19.7%
Others	02	1.6%
Total	*350*	*200.87*

Source: Primary data

Factors influencing the buying behaviour of consumers during Covid-19 Pandemic

Factor	%
Others	1.60%
Efficient delivery speed	19.70%
Cost Effective	18.90%
Availability of Offers	33.60%
Quality food	16.40%
Easy payment methods	23%
Price of the dishes	22.10%
Variety of Cuisines	31.10%
Availability of food	26.20%
Convenient to use	26.20%
Time Saving	68%

No. of Respondents
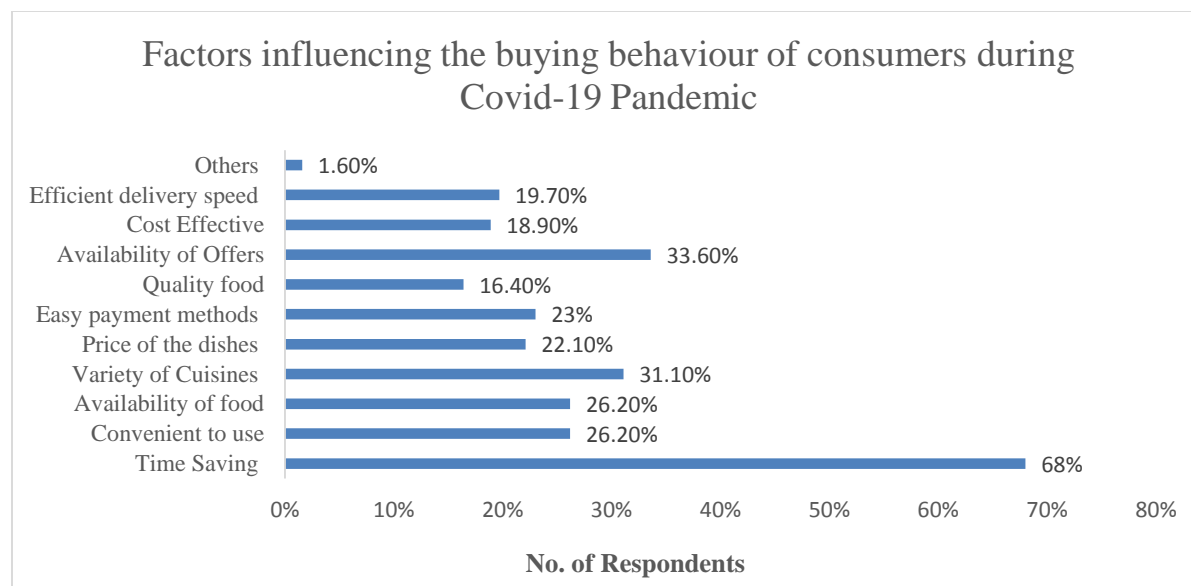
Source: Primary data

Fig No.7: Factors influencing the buying behaviour of consumers during the Covid-19 Pandemic.

Table No. 8: **Overall satisfaction in using Online Food Delivery App during Covid-19 Pandemic.**

Particulars	No of Responses	% of Responses
Highly Satisfied	12	9.8%
Satisfied	66	54.1%
Neutral	41	33.6%
Dissatisfied	02	1.6%
Highly Dissatisfied	01	0.8%
Total	*122*	*100*

Source: Primary data

Overall satisfaction in using Online Food Delivery App during Covid-19 Pandemic
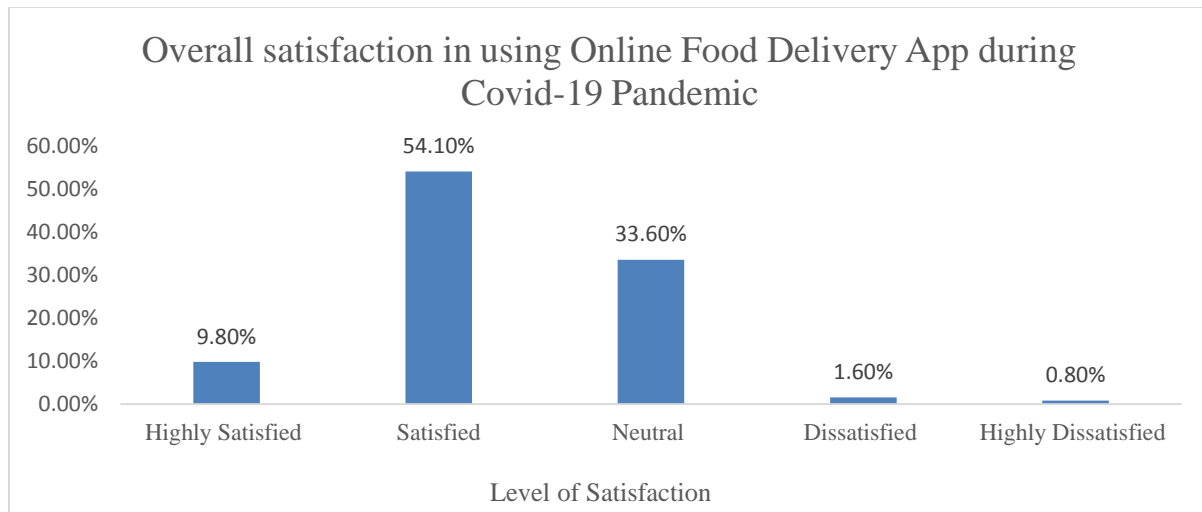
Source: Primary data

Fig No.8: Overall satisfaction in using Online Food Delivery App during Covid-19 Pandemic.

Interpretation of Graphs

1. It can be seen from *Table No.1*, the majority of 68% are Males, 82.8% of the respondents fall in the age group of 20-25 years, their income level of 63.9% is below Rs.50,000 and the respondents for the research are students with a maximum percentage of 54.1%.

2. In *Fig No.1*, the Online Food Delivery App usage can be seen, it can be observed that 96 respondents use the App whereas 26 have not used the App from a total of 122 respondents.

3. The *Fig No.2* shows the duration of usage of Online Food Delivery App, it is found that 50.80 % of the respondents have used the App for about a year, 9.80% of the respondent have experience of more than 6 months and 21.30% have said that they have not ordered.

4. In *Fig No.3,* it can be seen that 122 respondents frequency of using the Online Food Delivery App. It is observed as 46 respondents (37.7%) ordered food during functions, 37 respondents (30.30%) ordered during weekends, 28 respondents (23%) have not ordered at all and 11 respondents (9%) prefer ordering during the weekdays.

5. The *Fig No.4* shows the most preferred Online Food Delivery App, the majority of the respondent has selected Swiggy with 69.70%, Domino's Pizza with 17.20%, the rest of

the respondents prefer to order from Postmates (1.60%), Just Eat (2.50%) and Zomato (9%).

6. *Fig No.5* depicts the type of meal ordered by 122 respondents. It can be found out that 47 respondents prefer to order other meals like snacks from the Online Food Delivery App, 30% of the respondent prefer to order lunch, 27.9% of the respondent's order dinner and 3% of the respondents order breakfast using the Online Food Delivery App.

7. *Fig No.6* shows the mode of payment used by the respondents in ordering food using the Online Food Delivery App. The majority of 66.4% respondents prefer to use Cash on Delivery to make payments, 22.10 % respondents prefer to make payments using Debit/ Credit Cards, 8.20% respondents use other Payment Portals like Google Pay, Phonepe, Paytm, etc. and 3.30% respondents use net banking.

8. *Fig No.7* shows the factors influencing the buying behaviour of consumers during the Covid-19 Pandemic using the Online Food Delivery App. 68% of the respondents have opted as Time-saving, 33.60 % have said the availability of offers is the reason for placing orders, 31.10% place an order to avail a variety of cuisines, 18.90 % buy cause its cost-effective, 16.40% prefer the quality of food and 1.6% have opted for others.

9. The *Fig No.8* shows the overall satisfaction of respondents using Online Foods Delivery App during the Covid-19 Pandemic, 54.10% of the respondents are satisfied using the Online Food Delivery App, 9.80% of the respondents are highly satisfied with the Online Food Delivery App, 33.60% of the respondents are having a neutral opinion whereas 0.80% are highly dissatisfied with the Online Food Delivery App.

Findings

The study is done at a time when it is most needed to be focused on the food aspects and food habits of the people when it is most affected due to this ongoing pandemic COVID19. However, the study highlights some important findings:

- The male respondents are more than the female with 68 percent.
- Respondents between the age group of 20-25 years have ordered using the Online Food Delivery App.

- The level of income of the respondents is below Rs.50,000.

- The majority of the students preferred to order using the App.

- Nearly 78.7 percent of the respondents use the Online Food Delivery App.

- 50.8 percent of the respondents have used the App for about a year.

- The majority of the respondents prefer to order food during functions.

- Swiggy is the most preferred Online Food Delivery App under this research.

- The respondents placed orders for lunch using the Online Food Delivery App.

- Most of the users found Cash On Delivery as the most convenient mode of payment.

- The factors which affected their buying behaviour are time-saving, availability of offers, variety of cuisines, availability of food, convince to use.

- 54.10 percent of the respondents were satisfied with services of Online Food Delivery Apps during Covid-19 Pandemic.

Conclusion

The study shows that many respondents have used the Online Food Delivery Apps during the Covid-19 Pandemic. As there has been a lockdown initiated by the Government to curb the spread of the deadly virus, the movement of people to go out has been reduced, and the comfortable use of smartphones. The Online Food Delivery Apps have come to the rescue by offering contactless deliveries and following all the safety and hygienic measures to keep their customers satisfied during the Covid-19 Pandemic. As per the study the respondents have been using the Online Food Delivery App for more than a year. The most preferred App which is been used is Swiggy, as it provides a lot of offers and discounts and they deliver their orders on time. There is also a wide variety of choices of cuisine they can make. They have the flexibility in making payments by using the cash on delivery option also which is very convenient to use. This mode of getting food is to be appreciated otherwise masses will go starved due to lakh of availability of reliable supply of cooked food and other food items.

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A STUDY ON OCCUPATIONAL STRESS AND JOB SATISFACTION AMONG TEACHERS IN GOA

Zuzeth D. Cardozo
Assistant Professor
Department of Economics
Fr. Agnel College of Arts & Commerce, Pilar-Goa

Abstract

The present study examines the influence of Occupational stress and Job satisfaction among teachers in Goa. The sample consisted of 100 teachers selected through a method of convenient sampling (N=100). The Occupational Stress Index and Job Satisfaction Scale were administered to obtain quantitative data on the variables. The data was analyzed statistically to examine the relationship between Occupational Stress and Job Satisfaction using Pearson's' Product Moment Correlation and ANNOVA. Results of this study indicated a weak to negative relationship between Occupational Stress and Job Satisfaction. The analysis also revealed that the sample group showed differences in Occupational Stress while no significant difference was noticed on Job Satisfaction.

Key words: Job satisfaction, Occupational Stress, Occupational stressors, Teaching profession, Teacher turnover.

Introduction

Teaching profession has been held in high esteem in almost all societies. Teachers impart knowledge to their students which passes down from generation to generation. A teacher is a nation builder. The strength of a nation depends upon how well educated its citizens are. Therefore, a teacher's role is very significant in the development of a country. The influence transmitted by a good teacher mould, inspires, motivates and gives wings to a pupil's dreams. Recent trends suggest that teaching is being considered the most stressful occupation among other professions. An analysis by the National Foundation for Educational Research (2019) states that 1 in 5 teachers feel extremely tensed about their jobs most of the time, compared to similar professionals.

With the onset of COVID 19 pandemic in late 2019 and specially in early 2020, substantial changes began to take place in academic activities globally. A change in approach to imparting quality education to their students, teachers have reportedly shown a substantial rise in their stress levels. In a survey conducted by the Yale Centre for Emotional Intelligence and the

Collaborative for Social Emotional and Academic Learning (2020), teachers were asked to describe three most recurrent emotions they felt in their daily life. More than 5,000 teachers responded to the survey in just three days. The results indicated that teachers felt *anxious, fearful, worried, overwhelmed*, and *sad*. Anxiety was the most repeated emotion. Teachers need support as much as students do. Ensuring teachers well-being and how it impacts the students and the learning process must be duly considered in such a scenario.

With this brief background in mind, this study lays down three objectives:

Firstly, to study the relationship between occupational stress index and job satisfaction, Secondly, to examine the difference in occupational stress index among teachers from secondary school, higher secondary school and college. And Thirdly, to determine the difference in job satisfaction among teachers from secondary school, higher secondary school and college.

The paper critically reviews occupational stress and job satisfaction among teachers in the context of this study after giving a brief introduction and objectives of this study in Section 1. The remainder of this paper is organized as follows: Section 2 discusses theoretically the concepts: job satisfaction and occupational stress and its causes over the broad spectrum. Section 3 critically reviews the insights from literature related to occupational stress and job satisfaction. Section 4 explains the methodology, sample profile and data sources for this study. Section 5, analyses the results of the survey, and Section 6 concludes the paper with brief remarks and suggestions for future researchers.

Occupational Stress and Job Satisfaction

World Health Organisation (2004) defines Occupational or work related strain as, "the response people may have when presented with work demands and pressures that are not matched to their knowledge and abilities and which challenge their ability to cope."

Similarly, the National Institute of Safety and Health (1999) defines job stress as the harmful physical and emotional responses that occur when the requirements of the job do not match the capabilities, resources, or needs of the worker.

According to the American Dictionary of Psychology, occupational stress is a physiological and psychological response to events or conditions in the workplace that is detrimental to health and well-being.

Occupational Stress can be simply understood as stress at work. It could be mental, physical or emotional strain or tension which could occur when an individual's ability falls short of demand at the workplace.

A teacher's occupation is challenging, both physically and mentally as it utilizes a lot of energy towards daily classroom activity along with the teacher's personal, family and societal commitments.

Causes of Occupational Stress

Some of the causes of occupational stress among teachers are as follows:

1. Work schedule: Heavy workload, irregular breaks, long work hours; hectic and routine tasks, odd jobs not related to teaching (various college committee works), squandering of teachers' skills.

2. Participation: Deprivation of teachers in decision-making, poor communication in the organization/institution, strict and unfavourable policies.

3. Interpersonal Relationships: conflicts among teachers, poor social environment, and lack of support or help from co-workers and supervisors.

4. Work Roles: Performance expectations that are conflicting and do not match the teacher's training and abilities.

5. Career Concerns: Job insecurity, and lack of opportunity for professional and personal growth, promotion, sudden changes that demand skill advancement.

6. Environmental Conditions: Unpleasant or dangerous physical conditions such as crowding, noise, air pollution, dust pollution, or ergonomic problems.

Job Satisfaction

Job satisfaction is generally referred to as a person's feeling of satisfaction on the job, which acts as a motivation to work. In other words, it is the relationship between an individual and the employer for which he is paid.

Many well- known authors have defined job satisfaction as follows:

Smith et al. (1969) define job satisfaction as 'the feeling an individual has about his or her job.' Locke (1969) suggested that job satisfaction was a positive or pleasurable reaction resulting from the appraisal of one's job, job achievement, or job experiences. Lofquist and Davis (1991), defined job satisfaction as 'an individual's positive affective reaction of the target environment as a result of the individual's appraisal of the extent to which his or her needs are fulfilled by the environment'. Vroom (1982) defined job satisfaction as workers' emotional orientation toward their current job roles. Similarly, Schultz (1982) stated that job satisfaction is essentially the psychological disposition of people toward their work.

Review of Literature

A healthy work environment is essential in improving the performance and management of an organisation. The focus of any organisation often takes an upper hand on productivity or performance by its employees. Very little attention is drawn towards the pressure exerted on to the employees by the work roles. The current study attempts to trace work stress and job satisfaction among teachers. It tries to identify stressors that impact teachers' overall performance and disposition towards their work and seeks to find ways to improve their conditions. Teaching profession in current scenario has turned out to be very challenging. In this current pandemic the academic activities going online has kept the teachers on their feet. Acquiring new skills to carry out the educational activities, daily reports, preparation of classes (through PowerPoint presentations), evaluating classwork, meeting deadlines and shouldering a lot of responsibilities of students has been an energy draining routine to most of the teachers. Sitting before the PC screens for long hours, be it for preparation or delivering classes has led to mental exhaustion and strain among teachers. Besides academics, managing family life has been

a tough endeavour to many. Therefore, understanding teachers overall well-being and how work stress affects job satisfaction has been the main focus of this study.

Job satisfaction among teachers is very crucial as it could have various implications on the teachers' well-being, students' output and the performance of the institution as a whole. Poor levels of job satisfaction often lead teachers to leave the profession. Job satisfaction improves teachers' performance and reduces their turnover (Skaalvik & Skaalvik, 2014). According to the theory of goal setting (Locke & Latham, 2006) higher goals lead to higher satisfaction. When work goals are achievable, there is a sense of accomplishment among teachers and it improves subjective well-being. When met with biases, resistance in work environment, achievement of work goals could be affected. Similarly, working conditions such as poor infrastructure, lack of proper teaching aids, school/college policies that demand heavy workload adversely affect teachers and their level of satisfaction at work (Demirdag, 2015).

Pay is considered to be one of the important determinants of job satisfaction. According to Ghana National Association of Teachers (2014), researchers noted that pay problems resulted in dampening the moral spirit of teachers to deliver in their classrooms. Another study by Herzberg and his associates in Ololube (2008) sought to examine the relationship between job satisfaction and production. Results showed that presence of achievement, recognition for responsibility and advancement in work situation led to strong motivational satisfaction and good job performance. In a study on Teacher job satisfaction: the importance of school working conditions and teacher characteristics, Anna Toropova, Eva Myrberg & Stefan Johansson (2020), examined the relation between the characteristics of teachers, work conditions at school and teacher job satisfaction for eighth grade mathematics teachers. The study employed TIMSS 2015 (Trends in International Mathematics and Science Study) data from Sweden. The findings show that there is a positive relation between school working conditions and teacher job satisfaction. Moreover, teacher workload, teacher cooperation and teacher perceptions of student discipline in school were the factors most closely related to teacher job satisfaction. With regards to teacher characteristics, the study showed that female teachers and teachers with more work-experience had higher levels of job satisfaction. Furthermore, it was found that the relationship between teacher cooperation and job satisfaction was more obvious amongst male teachers, while student discipline was important for job satisfaction of teachers with lower self-worth.

A study on 'Perceived Occupational Stress among Teaching and Non-Teaching Employees working in L.N. Mithila University, India', was carried out by Anis Ahmad (2015). A total sample of one hundred and twenty employees (N=120) comprising of 60 teaching employees and 60 non-teaching employees were selected randomly from different departments of the university. Data was collected through the questionnaire which incorporated the occupational stress index developed by Singh and Srivastava (1981). The study found that non-teaching employees were found more likely to face occupational stress than the teaching employees working in the University. Moreover, the two groups of the sample showed that role overload, role ambiguity, unreasonable group and political pressure, role conflict and strenuous working conditions were the major causes of occupational stress.

Dr. Naresh Gandhi (2017) conducted a study entitled, Relationship between Occupational Stress and Job Satisfaction. The study was conducted among a sample of 100-degree college teachers of Abohar. The tools used were Occupational Stress Index (OSI) by Srivastava & Singh (1984) and Job Satisfaction Scale by Singh and Sharma (1986). The data was analysed using Pearson's Product Moment Correlation. Result of the study revealed that there is significant and negative correlation between occupational stress and job satisfaction.

Harish K A, B Jeya Prabha (2018) attempted to study the Occupational stress and job satisfaction of teachers of Government & Private sectors. A sample size of five hundred secondary school teachers (N = 500) from Government and Private schools in Chennai were taken for the study. The findings of the study are as follows: Firstly, the teachers working in private secondary schools faced higher level of occupational stress as compared to teachers working in government-aided secondary schools. Secondly, female secondary school teachers encountered high level of occupational stress as compared to their male colleagues. Thirdly, the level of job satisfaction was found to be much lower amongst private school teachers as compared to government-aided secondary school teachers. And, finally the female secondary school teachers face low level of job satisfaction as compared to their male counterparts.

Ranjan Vyas (2019), in his study on 'Occupational Stress, Anxiety and Job-Satisfaction among Female Government and Private School Teachers', aimed to analyse the effect of occupational stress and anxiety level on the job satisfaction among Government and Private female school teachers. The study involved 60 female teachers, 30 from Government schools and 30 from

private schools, within the age group of 30-40 years. Occupational stress index framed and standardized by Srivastava and Singh (1984) and Job satisfaction scale developed and standardized by Singh and Sharma (1986) were used for the study. The results of the study showed that female government school teachers have less occupational stress and anxiety than female teachers working in private schools. Therefore, female Government school teachers exhibited higher levels of job satisfaction as compared to the female private school teachers. The study also highlighted the need for private authorities to ascertain the reasons behind stress and dissatisfaction among private school teachers and help them enhance their job satisfaction.

Methodology, Sample Profile and Data

This is a correlational study since it studies relationship between two variables namely Occupational Stress and Job satisfaction. It is also a comparative one as it analyses the variables across teachers from secondary, higher secondary schools and colleges.

The following hypothesis are tested for its significance in the context of this study:

H_a1: There will be significant relationship between occupational stress and job satisfaction among teachers.

H_a2 – There will be significant difference in occupational stress index in teachers working in secondary schools, higher secondary schools and colleges.

H_a3 – There will be significant difference in Job satisfaction among teachers working in secondary schools, higher secondary schools and colleges.

The sample for the study consisted of 100 teachers. The sample was divided into teachers from secondary schools (35), higher secondary schools (32) and colleges (33). The fig. 1.1 below shows the sampling profile of this study.

Distribution of teacher's sample
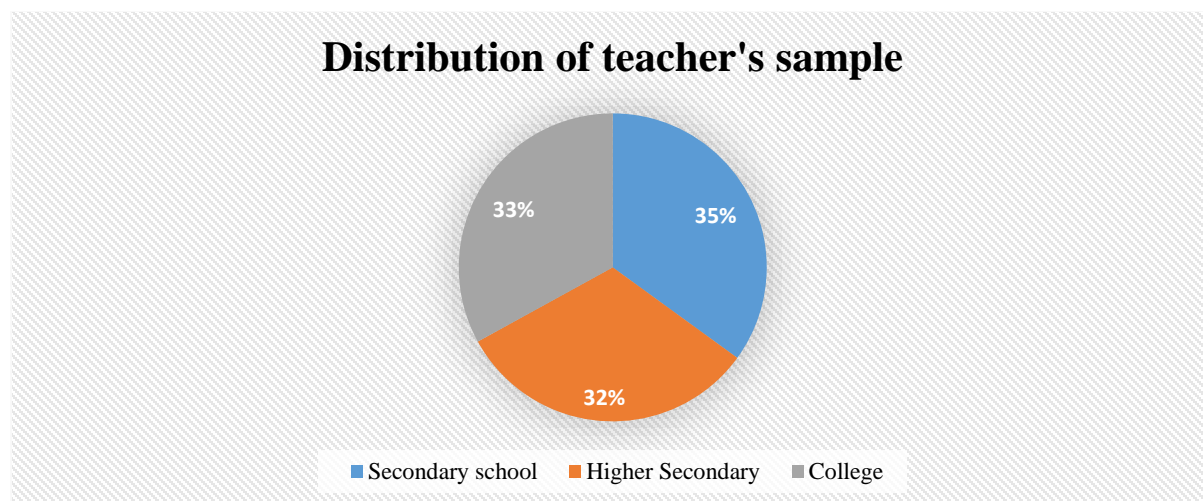
Source: primary data

Fig. 1.1. Sample distribution of teachers

On the basis of this sample profile and for the purpose of collecting data the Occupational Stress Index and Job Satisfaction Scales were administered using a google form through online mode. Data obtained was analysed using different statistical tools and psychological tests to get the desired outcome for this study. The Occupational Stress Index (OSI) developed by Srivastava and Singh (1984) was used for the study. The scale consists of 46 items, covering 12 indicators or dimensions of stress like role overload, role conflict, role ambiguity, powerlessness, responsibility for persons, under-participation, unreasonable group and political pressures, poor peer relations, intrinsic impoverishment and strenuous working conditions, low status and unprofitability.

A short description of the stressors of occupational stress among teachers of this study are given below:

1) Role overload: A situation in which the employee is faced with excessive workload thus making him/her incapable of completing the work on time.

2) Role conflict: Occurs when official instructions and formal working procedures do not comply with the job expectations of the employee.

3) Role ambiguity: A state in which the employee's duties and responsibilities at the workplace are imprecise.

4) Powerlessness: A situation where the employee is not given importance in important matters like decision making or problem solving matters of the organisation.

5) Responsibility for persons: The employee feels greatly responsible for the progress and prosperity of the organization.

6) Under- participation: Lack of employee's involvement in providing suggestions for the betterment of the organisation.

7) Unreasonable group and political pressure: A situation where the employee has to do some work unwillingly as an obligation towards a certain group or political pressure.

8) Poor peer relations: lack of sufficient co-operation and cohesion among the employees of the organization.

9) Intrinsic impoverishment: lack of motivation for employee's internal or personal growth and aptitude development.

10) Strenuous working conditions: a state of discomfort where the employee works under stressful circumstances.

11) Low status: a state where the employee's self-worth is affected, especially when higher authorities or colleagues do not give due importance to their post and work.

12) Unprofitability: considering the job to be under-paid or lack of any rewards or incentives given by the organisation.

The total 46 items were rated on a 5 point Likert Scale having choices like 'strongly disagree', 'disagree', 'undecided', 'agree' and 'strongly agree'. Out of these, 28 items are 'true keyed' and 18 items are 'false keyed.'

The following table 1 shows the Sub-scales of Occupational Stress Index (OSI) with their items serial numbers:

Table 1: Sub-scales of Occupational Stress Index

S. No.	Sub-scales of OSI	Serial of the Items in OSI
1.	Role Overload	01, 13, 25, 34, 44, 46
2.	Role Ambiguity	02, 14*, 26, 37
3.	Role Conflict	03, 15*, 27, 38* ,45
4.	Unreasonable Group and Political Pressure	04, 16, 28, 39
5.	Responsibility for Persons	05, 17, 29
6.	Under participation	06*, 18*, 30*, 40*
7.	Powerlessness	07*, 19*, 31*
8.	Peer Group Relations	08*, 20, 32*, 41*
9.	Intrinsic Impoverishment	09, 21*, 33*,42
10.	Low status	10*, 22*, 34
11.	Strenuous Working Condition	12, 24, 35, 43*
12.	Unprofitability	11, 23
Total		46

Source: primary data

*False keyed items

The Job Satisfaction Scale developed and standardized by Singh and Sharma (1986) was used to assess the job satisfaction of 100 teachers. The scale has a total of 20 items which are rated on a five point Likert scale ranging from 'Strongly Disagree' to 'Strongly Agree'. There are 12 positive statements for which the response categories are assigned values from 1(Strongly disagree) to 5 (Strongly agree) respectively. The remaining 8 statements are reverse scored.

Table 2: Scoring of Job Satisfaction Scale

False keyed items	2,5,6,8,9,10,11,15,16,17,18,20
True keyed items	1,3,4,7,12,13,14,19

Source: primary data
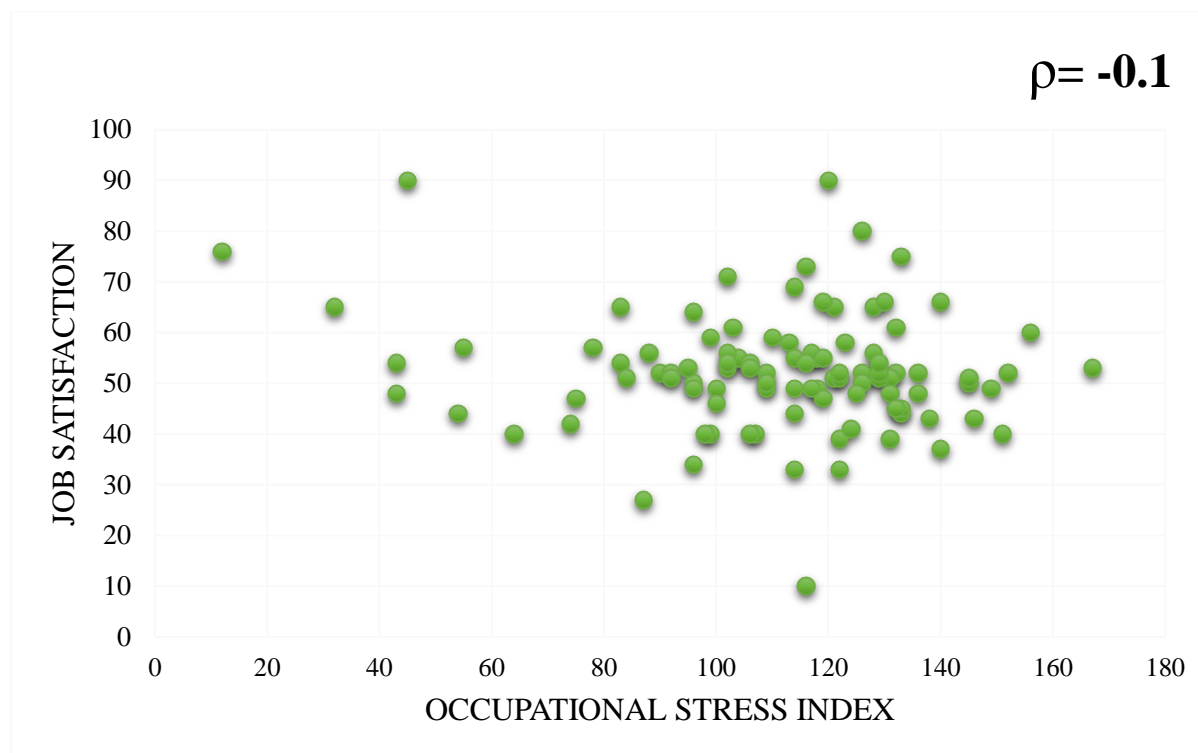
Result and discussion

H$_a$1: There will be significant relationship between occupational stress index and job satisfaction among teachers.

The scores obtained from a sample of 100 teachers were analysed. The highest and the lowest scores on occupational stress index are 230 and 46 respectively.

The average of the scale is 115. After administering the scale to the sample group, the highest score obtained was 167 and the lowest score obtained was 55. The average obtained was 111.63 which was lower than the average of the scale.

Similarly, the highest and lowest scores one can obtain on job satisfaction scale are 100 and 20 respectively. The average is 50. The study sample obtained the highest score of 90 and lowest score of 25. The average obtained was 52.15 which was higher than the average of the scale.

The Pearson's Product Moment correlation was used to find the correlation between occupational stress index and job satisfaction. The correlation coefficient obtained was -0.1. The results show a weak negative relation between occupational stress index and job satisfaction (Fig.1.2 below). This is indicative of an inverse relation between the two variables. Therefore, the hypothesis is accepted, which means, higher the occupational stress index, lower the job satisfaction.

Source: primary data

Fig. 1.2. Scatter plot showing correlation between job satisfaction and occupational stress among teachers.

Dr. Naresh Gandhi (2017), in his study titled, Relationship between Occupational Stress and Job Satisfaction among degree College Teachers' obtained similar results. Result of the study revealed that there was significant and negative correlation between occupational stress and job satisfaction.

Ha2: There will be significant difference in occupational stress index among teachers working in secondary schools, higher secondary schools and colleges.

The hypothesis was tested with the data collected from 100 teachers, consisting of 35 secondary school teachers, 32 higher secondary school teachers and 33 college teachers. The data was analysed using one-way ANOVA. The highest score one can obtain on occupational stress index is 230 and the lowest is 46 with an average of 115.

The highest score obtained among secondary school teachers was 151 and the lowest score obtained was 64. The average was 113.75.

Among the higher secondary school teachers, the highest score obtained was 156 and the lowest score was 74. The average calculated was 117.97 which was higher than the average of the scale.

Similarly, the highest and lowest scores obtained by the college teachers was 167 and 55 respectively with an average of 102.84 which was lower than the average of the occupational stress index scale.

The standard deviation in the group of college teachers (34.03) was found to be more as compared to the secondary school teachers (20.90) and higher secondary school teachers (17.26). Fig. 1.3 explains this phenomenon of occupational stress stated in the hypothesis.

Source: primary data

Fig. 1.3. Mean and Standard deviation in Occupational Stress Index scores.

The hypothesis was tested using one-way ANOVA. The F-ratio obtained was 3.81 which is greater than the table value 3.09 at 5% level of significance (α=0.05) at (2, 97) degrees of freedom. Therefore, the hypothesis is accepted which indicates that the stress levels vary in all three educational settings.

H$_a$3 – There will be significant difference in Job satisfaction among teachers working in secondary schools, higher secondary schools and colleges.
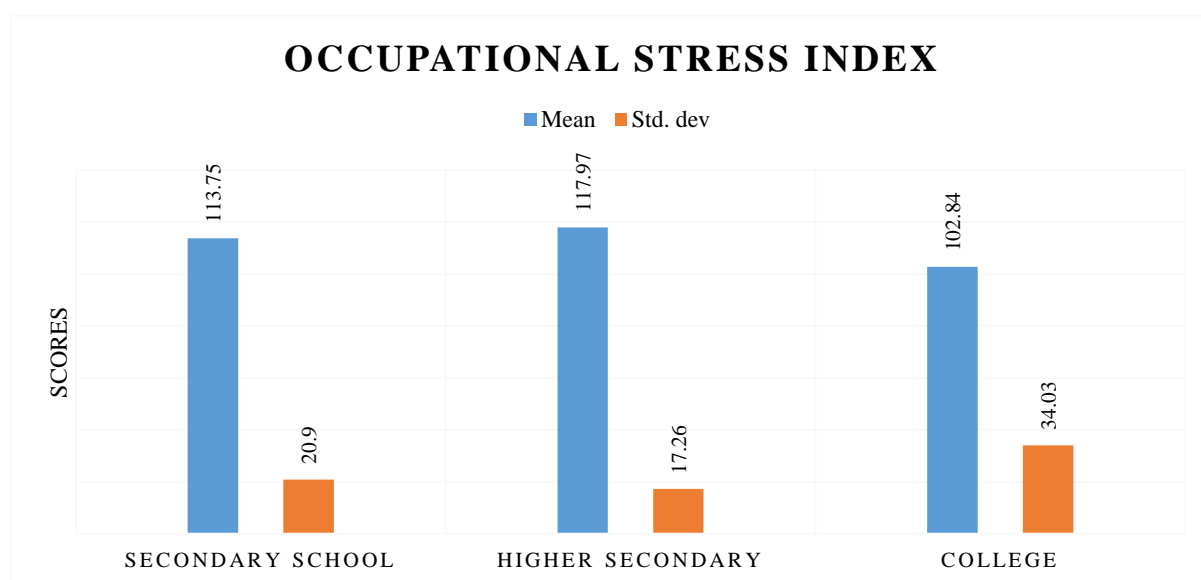
The hypothesis was tested with the data collected from 100 teachers, consisting of 35 secondary school teachers, 32 higher secondary school teachers and 33 college teachers. The data was analysed using one-way ANOVA. The highest score one can obtain on Job satisfaction scale is 100 and the lowest is 20 with an average of 50.

The highest score obtained among secondary school teachers was 75 and the lowest score obtained was 33. The average was 48.28.

Among the higher secondary school teachers, the highest score obtained was 73 and the lowest score was 40. The average calculated was 54.68 which was higher than the average of the scale.

Similarly, the highest and lowest scores obtained by the college teachers was 90 and 25 respectively with an average of 53.21 which was again higher than the average of Job satisfaction scale.

The standard deviation in the group of college teachers (14.08) was found to be more as compared to the secondary school teachers (9.29) and higher secondary school teachers (9.80). Fig. 1.4 shows job satisfaction among teachers in Goa.

JOB SATISFACTION

■ Mean ■ Std dev
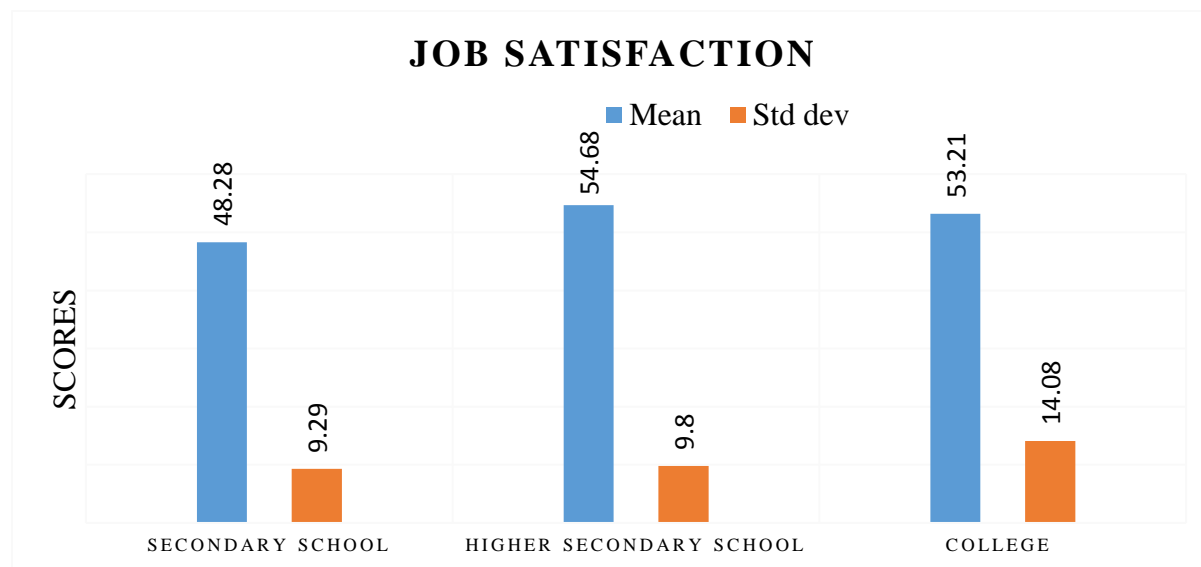
Source: primary data

Fig. 1.4. Mean and Standard deviation in Job satisfaction scores

The hypothesis was tested using one-way ANOVA. The F-ratio obtained was 2.95 which is less than the table value 3.09 at 5% level of significance ($\alpha=0.05$) at (2, 97) degrees of freedom.

Therefore, the hypothesis is rejected, which indicates that in all the three educational settings, job satisfaction is more or less similar.

Conclusion

Occupational stress implies job related stress. In today's scenario, teaching profession is no longer restricted to just dispensing textbook knowledge; but the work demand includes various academic as well as non- academic activities such as lesson planning and teaching, accountability for student performance, classroom management and discipline, supervisory role, extra-curricular activities and so on. Educational institutes must therefore, meticulously plan and execute the academic, administrative and organisational tasks so that teaching becomes a satisfying, enabling and less stressful venture.

The current study examined the relation between occupational stress and job satisfaction among teachers. The findings of the study indicated that occupational stress does affect job satisfaction, however, the results obtained were not at a significant level. Significant difference was found in occupational stress index among teachers across all three educational settings. With regards to job satisfaction among teachers from secondary, higher secondary schools and colleges, no significant difference was noticed.

We live it here for future researchers, to consider a bigger sample with a better method of sampling (random) which would give better results and good policy generalizations. The variables could be studied across gender, age, marital status, work position and so on, which could widen the perspective of this study.

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Dr. P.S.S. PISSURLENCAR'S CONTRIBUTIONS TO PORTUGUESE MARITIME HISTORY

Xavier M. Martins
Associate Professor
Department of History
Sant Sohirobanath Ambiye, Government College of Arts and Commerce
Virnoda, Pernem, Goa

Abstract

Dr. Pandurang S. Pissurlencar was one of the pioneers in Asia in the field of Indo-Portuguese history. His work is a canvass of collection of the documents, arranging them methodically and annotating them wherever possible. Among his several works, Assentos do Conselho do Estado is the most important, as it deals with different issues of the Portuguese colonialism, covering the period from 1618 to 1750. It throws a searching light on the political, economic and social history of the Portuguese in the East. This paper aims to highlight the importance of his work, Assentos do Conselho do Estado in five 5 volumes to study the Portuguese maritime history.

Keywords: Armadas, Cartaz, Cafila, Dutch, Galleons

Introduction:

There is no in-depth study by any Goan historiographer on the Indo-Portuguese maritime history covering the issues like naval expeditions, nautical science, naval forts, hydrography, shipbuilding, maritime policies, etc of the Portuguese. There is a plethora of material available in the Goa Historical Archives, shedding light on above-mentioned areas of the Portuguese maritime empire in the east. Dr. Pissurlencar was an enthusiastic student of old records, who collected and published them enriching the Indo-Portuguese studies. Some of the documents published are of great help to the scholars probing different aspects of the history of Portuguese navigation in the East.

Theme

Dr. Pandurang S. Pissurlencar's contributions to Goan histography are certainly sizeable and have remained unrivalled in most of the areas of research. His works can be summarily grouped into two categories. Firstly, his research always based on published and unpublished primary

sources were published in the form of books and articles in different historical journals. The second category is his collection of documents, studying them very meticulously and publishing them with notes. Thus, making available, a corpus of primary data to the scholars of Indo-Portuguese history. These documents are not confined (exclusively) only to political history but cover a wide spectrum of Knowledge. One such area was Indo-Portuguese maritime history. His much-valued and widely acclaimed   work is the *Assentos do Conselho do Estado* published in five volumes.

These are the minutes of the proceedings of the Council of State in Goa, an advisory body to the Viceroy, attended by the top functionaries of the State. The minutes record the members of the council present, the matters placed before them by the viceroy and the opinions expressed by them.

Dr. Pissurlencar complied five volumes of the minutes covering the period from1618 to 1750 and published them between 1953 to 1957. (Shastry p.15) All five volumes contain documents relating to Portuguese navigation in the East. This source in general, is indispensable for any scholar studying the Portuguese rule in Asia. Some documents in these volumes are shedding light on the sailing of the Portuguese armadas, sailing permits, general sailing regulations, loading and unloading of the cargo, storing of the artillery and the naval assistance sent from Goa to different Portuguese eastern possessions, safety measures to be adopted by Portuguese ships at the bar, naval strategies against the Dutch, naval treaties signed with the local rulers, fortifications of the Portuguese naval forts and so on. These published documents provide insight into various maritime challenges posed to the Portuguese naval superiority in the seventeenth and eighteenth centuries from European powers and the native rulers in India, and in different parts of Asia.

The first volume covers the period from 1618 to 1633. It contains very interesting and important documents on the crucial period of the Portuguese rule. There are letters written by the Viceroy Conde de Linares to the King of Portugal from 1630 to March 1631. Among them, the most notable is the agreement signed by the Viceroy with the envoy of Veerapapa Naik, the ruler of the Ikkeri. It was agreed that the ruler of Ikkeri would allow the Portuguese to cut and take the required quantity of timber for shipbuilding without any obstruction. The Ikkeri ruler also agreed that he would not allow any ship of the Malabaris   in their port to take any food grains. (Pissurlencar, Vol. I, p.536) Another important document is the agreement signed by the captain-major of the fortress of Cranganor, Antonio Monis Barreto with the Zamorin, the ruler of Calicut. In this document, Zamorim promised that no one would be allowed to sail in his ports without a Portuguese *Cartaz*. Zamorin also promised that he would provide all assistance to defend the Portuguese naval installations located from Cranganor to Cannanore. He also agreed to supply all necessary provisions from his land to the Portuguese whenever they were in need. (Ibid.p.547) The Portuguese grouped their eastern possessions into different zones, each under a fleet commanded by the captain-major. For effective control over the eastern seas, the Portuguese divided their possession into different zones, each placed under the Armada. There

were Northern Armada, Southern Armada, Red Sea Armada and the Armada of Malacca. Each armada was placed under the command of the Captain-Major.(Mathew, p.1520) Each armada sailed on the a specific time and route. Matters relating to their rigging and sailing were placed before the State Council by the Viceroy for advice. These documents shed light on the naval expeditions sent from Goa to relieve Ceylon, the financial problems of the *Estado da India* on account of the confrontation with the Dutch in Ceylon and so on. There are documents relating to the sailing of different armadas to different parts of their eastern empire.

 Documents in this volume enable us to understand the various strategies adopted by the Portuguese to ensure the safe conduct of their trade and the safety of the navigation. There are also letters from the Captain-Majors soliciting the advice of the Viceroy and the State Council on defence matters. In 1630 the State Council deliberated on the loss of the *cafila (* a term used to ships sailing with provisions under the escort*)* sailing with of provisions from the north. The State Council felt that adequate protection needs to be provided to the *Cafila*. The Council believed that three ships out of seven, which sailed under the command of Francisco Coutinho, Captain-Major of the Northern Armada should be used to provide protection to the *cafila* sailing with provisions. Further, it determined one *almadia* (a light ship of two prows) in the rivers of the north to assist the *cafilas*. The council opined that the succour to Daman was more crucial than sailing to the south.   (Ibid.p.275) The State Council consented to provide three well-equipped galleons from Manila, to ensure the safety of ships sailing to Machao and from Machao to Goa. Expenses towards the cost of sailing were to be defrayed by levying 2% duties on the cargo onboard the said galleons. An additional duty of 4% of were to be charged on the cargo brought from Machao to Goa. (Ibid. p.268).

There are also documents in this volume shedding light on the naval aid sent from Goa to Mangalore under the command of Dom Diogo Coutinho, the Captain-Major of the Armada de Canara. When Ayres de Saldhana assumed the office of the Viceroy, the Ceylon affairs attracted his attention. The movement of the Portuguese ships was closely monitored by the Dutch following the outbreak of their hostilities in the East. At times, information about the Portuguese convoys was given to the Dutch by certain people who had commercial dealings with the Dutch. This was pointed out by Fr. Antonio Pereira, a Jesuit priest in his letter in 1630, which was read before the State Council. Occasionally, galleons were sent out to   locate the Dutch ships, so that the Portuguese vessels could adopt a safer route. Sometimes, advance warnings were issued to the Portuguese ships.

The second volume covering the period from 1634 to 1643 contains 189 documents along with 55 documents as an appendix. The State Council opined that the high sea fleet should sail by the end of February to North till Dio. It recommended precautionary measures against the Dutch vessels in the vicinity. It was proposed that the *nau* (Portuguese ocean-going ship) and galleon, that were at Mormugão _ be brought to the bar, before the arrival of the Dutch ships, which would obstruct the Portuguese sailing to Lisbon. Specific instructions were given in the

*regimentos (*regulations), directing that no soldier of the armadas would be allowed to disembark on land without the knowledge and the permission of the captain. (Pissurlencar, Vol II.p.107)

On 6th February 1636, the Viceroy Pero de Silva received a letter from Martins Texeira Azavedo, the Captain-Major of Canara fleet, about the presence of 6 Dutch ships, 2 large and 4 small on the Malabar coast. The letter also informed about 5_*sanguisices* (small and light war ship) sailing under the command of Domingos da Costa de Figueredo to provide escort to ships coming from Bacaner with rice. (Ibid.p.57) Among the appended documents, the letter of Nuno Alvares Botelho, the Capitan-Major, written from Malacca about the galleons waiting to sail to the straits of Ormuz, Red Sea and Pulicat. (Ibid,p.279) .The State Council also approved the proposal to strengthen the defence of Goa by erecting a fort with two bulwarks at the Cape of Our Lady (cabo) with artillery and prohibiting any ship sailing without the permission of the viceroy. (Ibid,128)

The Portuguese *nau,* Atalaya and the galleon, São Bento which were equipped to take the cargo could not undertake the voyage as 5 Dutch ships were obstructing the _voyage of the Portuguese ships. At the State Council, Gaspar Gomes stated that the two ships were not in a position to fight the Dutch as they did not have adequate artillery. (Ibid. p.473). There are documents which shed light on Antonio Teles de Menezes, taking the charge of the office of the Viceroy following the death of the Viceroy Pedro da Silva on 24th June 1639.

The_third volume consisting of 226 documents captures the period from 1644 to 1658. The 97 appended documents include letters of the viceroy to native rulers, instructions to the heads of religious congregations, ratifications of the treaties signed by the Portuguese with the Adil Shah of Bijapur, and so on. There are also documents relating to the Portuguese-Dutch naval conflict in this volume. The Dutch challenged the much-celebrated monopoly of the Portuguese lucrative spice trade in the east. The Portuguese fortresses in Malacca, Molucas, Ceylon, Persian Gulf and India came under the Dutch attack. To counter the Dutch naval threat, specific sailing instructions were given to the Portuguese factors and to the Captain Majors of the armadas. Naval fleets sailed from Goa to different Portuguese fortresses throughout the period of Portuguese-Dutch confrontations

The Portuguese power equation in the east changed with the advent of the Dutch, French and English to India. It was a period of intense rivalry between the Portuguese and the Dutch in the form of aggression against the Portuguese possessions in Ceylon and on the western coast of India. The native anti-Portuguese potentiates found allies to confront the Portuguese. The Portuguese had become weak politically and militarily. The Portuguese had to face the growing might of the Dutch in Ceylon, Moluccas, on the Malabar coast and on the eastern coast of India. The presence of the Dutch was impeding the supply of provisions to Colombo and therefore, it was decided to send one galleon. The naval strength of the Portuguese was weak to counter the Dutch. (Danver, Vol.II p. 187)

In 1644 the State Council unanimously agreed that the captains of Chaul and Bassein should send 2 well-equipped *galeotas,* (an oar propelled warship*)* one each, from the fortress of Chaul and Bassein to provide protection to the ships coming from Lisbon.   One of the ships was to accompany the Lisbon ship till the bar of Bombay and other from Bassein till Bombay.   Each escort vessel had to be provided with a pilot of good confidence to ensure the safety of Lisbon ships, in view of the Dutch presence in the waters. (Pissurlencar, Vol.III, p.33.) In 1644, the State Council arbitrated upon the proposal presented by the Captain-Major Joao de Siqueira Varejoão, to sail to Ceylon in the month of February, with his men after the loss of Nigumbo**.**

The Dutch attack over the fortress of Manar was countered by 2 Portuguese companies from Jaffanapattam. The loss of Manar dealt a great blow to the prestige of the Portuguese power in the East. The captain of the Manar fortress, therefore solicited the help of the Portuguese authorities in Goa. In 1653, the State Council agreed to send naval assistance to the fortress of Manar, in the form of 15 ships under the command of the Captain-Major Luis Giza de Sousa. These vessels were to be provided with gunpowder, munitions, tools and the provisions which would be sufficient for a period of eight months. The State Council   also voted unanimously to send   out least four small ships with soldiers, gunpowder, ammunitions and whatever they could carry. On 4th December 1652**,** the Council of State deliberated on the issue of sending assistance to Colombo where there were 5 Dutch ships besieged the Bar, thereby impending the entry and departure of the ships. The Council unanimously agreed not to send fleets to Celyon. (Ibid,p.212). Naval reinforcement was sent from Goa to Ceylon to fight against the Dutch. In 1654, the Council of State decided to equip and send <u>five </u>galleons to provide succour to the fortress of Ceylon.   The State Council deliberated on the route and the time of sending the naval aid. According to Dom Gillanes de Noronha, captain of the city, suggested that the galleons should leave the Bar of Goa immediately along with three galleys with provisions to Ceylon, so that they could leave the shores of Ceylon by 20th of March and reach Goa safely. (Ibid. p.312). It was also resolved to equip 5 galleons to sail to Ceylon to provide security and support to the Portuguese ships.

There was a scarcity of soldiers and skilled sailors in Goa to provide for the galleons. Therefore, it was essential to provide instructions pertaining   to the route and time that was to be followed by the Portuguese ships. For this purpose, the State Council called captain Gaspar Pereira de Reis who had a good deal of practical experience to advise whether the galleons, waiting to sail to Columbo, at the beginning or end of February or till the beginning of March, were capable of returning back to the city of Goa for wintering and in case, if these galleons could sail back to Columbo, if they were attacked by the Dutch. The State Council called captain Gaspar Pereira de Reis, an experienced navigator to advise whether the galleons could sail to Columbo from Goa, at the beginning or end of February. His opinion was also sought whether the galleons could sail to Goa for wintering or could sail back to Colombo in case of attack by the Dutch on the way.

There are also documents dealing with the Dutch conflict with the Portuguese in Canara. In one of the   documents, we also find a reference to the force of 5000 Nayars provided by the ruler of

Cananore to fight against the Dutch in Kanara. The State Council took the view of the prevailing military situation at Canara, Cochin and Mangalore fortresses. The deployment of six ships by the Portuguese for the defense of the fortresses was not sufficient. It was therefore, suggested to send ten ships of the Canara fleet with a new chief, manned by adequate number of soldiers and mariners.

The report on the loss of the fortress of Barcelor and the condition of Cambolyn was placed before the State Council for discussion. It was stated that all possible assistance was to be provided within a reasonable time for military operations against the Dutch. The report prepared by the Captain of the fortress acknowledged the services rendered by Fr. Antonio Correira. (Ibid.p.121)

Among the various documents in this volume, the most important and informative is the *regimento* given to Francisco de Távora de Ataide, the Captain-General of Muscate. He was instructed to conduct the *alardo* (muster roll) of the soldiers meant for the defence of the fortress and also to the fleet. The Captain-General was further instructed to garrison the sentry unit of the Muscate with up to 500 soldiers to maintain necessary vigil over the fortress. (Ibid. p.513)

In 1631, the Portuguese forces suffered heavily against the Dutch, resulting in the death of Constantino de Sa, the Portuguese commander in Ceylon. This battle cost the Portuguese about 100,000 *Xerafin*s, hitting the finances of the Portuguese in Ceylon. In the same year, the State Council gave its opinion on recruiting people for the 8 galleons which were sailing to Ceylon. The State Council resolved that these 8 galleons would take 800 *reinos*, the men of war, the bombardiers, some *fidalgos,* 300 servants of the viceroy, 100 experienced sailors, 120 Canaries and 1000 *paravas* from the fishery coast. In 1658, the captain-major Luis Mendonça was instructed to avoid open and direct confrontation with the Dutch on the high seas, if the Dutch vessels were more than 10.

Driving the Dutch out from Pulicate was a formidable challenge to the Portuguese as the Dutch had gained considerable strength and were attacking the Portuguese ships on the coast. To check the Dutch menace in this region, the deployment of the oar vessels were required. However, the Portuguese lacked the resources for undertaking the construction of such vessels. The Portuguese ships could hardly navigate according to the schedule as they were attacked by the Dutch.

There were several instances wherein counterfeit names were entered in the register of the ship. Therefore, the captains were specifically instructed to check the register immediately after the departure of the ship. Anybody unregistered found on board was taken to the task. There are documents relating to the general discipline on board the ships. It also speaks about Joao Roiz Armenio who went to Muscate as the ambassador in the *pataxo* (a ship of two masts), knew to speak Arabic and the Persian language. (Ibid, pp.509 -515)

There are documents relating to the water conditions at Murmugão and Panelim. It was pointed out at the proceedings of the State Council about the presence of the insects at Panelim, attacking the bottoms of the ship and thereby causing a loss to the state exchequer. The State Council also expressed its opinion on the assistance that was to be provided to the fortress of Malacca. It was agreed to send one galleon and two *urcas* (a ship used in the Iberian Peninsula) to Malacca.

The fourth volume, containing 194 documents, covers the period from 1659 to 1695. In addition to these, there are 50 appended documents shedding light on the social, economic, political and maritime history of the Portuguese. There are sailing instructions and the advice given by the State Council to the captain majors of the armadas against the Dutch attacks in the *Estado da India.* One document speaks about the Portuguese plan of defence at the bar of the Assolna river in view of the Maratha attacks. The State Council deliberated on the reports of Francisco Simões Leitão, the Captain of the Rachol fortress. (344) The State Council expressed its views on the *fragatas* (frigate) and the armada of the *galeota*s which were in the state of preparedness to sail to the north with the assistance to the fortress of Chaul. The Portuguese were attacked by Sambhaji and the defense of Goa was accorded high priority by the Portuguese government.

The Portuguese authorities at Goa decided to send money, gunpowder and ammunition to the fortress of Cochin to defend against the Dutch. It was suggested to provide gunpowder, ammunition, etc. through the light and small vessels which can escape the enemy detection. Five ships of the armada were to be deployed to guard the Bar of Cochin with 150 soldiers under the charge of Manoel Salgado, Captain Major of the fleet.

The beginning of 1660 saw the appearance of the Dutch General Rijkloff van Geons on the Malabar coast with a fleet to take over Quilon or any Portuguese fortress on the Malabar coast. The Dutch succeeded in taking over Quilon and Cranganor. Among the appended documents to this volume, the most important are the instructions given to Inacio Sarmento de Carualho, Captain-General of the armada and the northern coast who sailed to the city of Cochin with military aid. He was warned about the presence of the Dutch ships comprising of five naus, 13 *pataxos* and other small vessels.

The fifth volume comprising 190 documents, covers the period from 1696 to 1750. In 1697, the Viceroy complained to the Council of State about the delay caused in the erection of the strong wall on the lands confining with Bardez, on the river Chapora and from the opposite of the Island of Rane. There is also a document dealing with the proposal to disband the *tropa da Guarda* of 60 archers and one unit of 60 horses on account of the cost factor. The observation of authorities on the death of horses on account of the climatic conditions in Goa was placed before the State Council

The state was in crisis on account of the lack of adequate funds to pay the salaries of the ecclesiastical and the secular servants of the state. The Council of State deliberated on the attack

of the Arabs on the Island of Salcete under the jurisdiction of the Bassein. It was pointed that about the Arab vessels had disembarked about 2000 people close to Versova, who inflicted heavy loss to the Portuguese. The Portuguese General of the North, Pedro Vaz Soares gathered a small number of troops to resist the Arab attack. The Council ordered that the three *naus, Nossa Senhora da Estrella*, *Nossa Senhora de Valle* and *Nossa Senhora de Boa Ora* to be rigged and equipped, to be sent immediately to succour the Island of Salcete.

Dr. Pissurlencar has complied many documents relating to the sailing of the *Cafila.* In 1653, the State Council   suggested that the northern armada sailing under the command of Dom Braz de Castro would sail to Canara and would not be wait/ anchor in that region beyond one month.

Conclusion

Documents collected and complied by Dr. Pissurlencar in the *Assentos do Conselho do Estado* enables the scholars to know the economic, political and military position of the Portuguese. These documents supplement information on naval strategies adopted by the Portuguese against the Dutch and the Indian potentates resisting the Portuguese domination.   The documents appended in each volume corroborate some of the issues placed and the resolutions passed by the State Council. There are also documents that ~~which~~ give good information pertaining to the Portuguese activities in the Persian Gulf. Documents also unfold the Portuguese naval policy towards the Moghuls. Scholars working on any issue of the Mughul economy or diplomacy would find a valuable information in this work.

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CASH OR CASHLESS: A PREFERRED MODE OF PAYMENT

Shirlie Camilo
Manisha Manerikar
Assistant. Professors
Department of Commerce,
Fr.Agnel College of Arts and Commerce, Pilar-Goa

Abstract

In a cashless economy all the transactions are done using cards or digital mediums. Usage and circulation of physical currency is minimal in a cashless economy. This paper focuses on identifying inclination of respondents towards cash or cashless mode of payments. A structured questionnaire was framed and circulated among 99 respondents in the State of Goa. The broad objective of this study is to examine the nature and value of cash or cashless transactions done by the respondents and to analyse the preferred cashless mode of payment across gender of the respondents.

Keywords: Cashless, Payment, Transactions.

Introduction

The introduction of cashless transaction with the help of information technology these days is fully supported by the national Government in India. This initiative has not only helped the fast transaction but at the same time it has saved a lot of time and money in a country. If we see the worldwide trend in the market it is clear that all over the world people have started taking interest in cashless transactions. Academicians, legislators, administrators and above all the economists all over the world actively recommend about going cashless. Cashless Transaction is a new way of doing payment. It is done without actual cash or money. The effortlessness of conducting financial transaction is most likely the biggest inspiration to go cashless. A cashless transaction is an economic state whereby financial transactions are done through the transfer of digital money. Cashless India is the program aimed to make economy developed by ensuring more security, anti-corrupted, safer and universally accessible ever Indian Economy. The meaning of a cashless economy does not mean economy without cash, but it is the economy functioning and transactions that are carried through electronic means of payment and receipt. A person can go cashless by using various modes such as Debit/Credit Cards, Cheques,

NEFT/RTGS, Mobile Wallets, UPI's, Net Banking to mention a few. Given this background, the study embarked on two fold objectives: firstly, to assess the nature and value of cash or cashless transactions done by the respondents. Secondly, to analyse the preferred cashless mode of payment across gender of the respondents.

In this paper we have given a brief introduction about cash and cashless mode of payment, and objectives of the study in section 1. The review of literature is given in section 2. section 3 explains the methodology, data sources and analysis of this study. Finally, section 4 concludes the paper with a brief comment on the study.

Review of Literature

Eswaran, (2019) aimed to determine customers perception towards digital payment mode with special reference to Digital Wallets. The study was conducted to determine customer's perception and association of demographic profile with adoption of digital mode of payment. The primary data has been collected from 150 respondents with help of structured questionnaire. ANOVA test and frequency analysis was used to analyse the data. It was concluded that out of all items of demographic profile only education has significant role in acceptance of digital payment. Apart from ANOVA the frequency analysis highlighted that time saving is the most important factor depicting perception of consumers.

Goel, Sahai , Vinaik, & Garg, (2019) conducted a study which aimed at determining the awareness level among the citizens and to determine the factors which influence people to shift from cash to cashless economy. The primary data was collected by distributing questionnaires to 280 respondents who have been using digital mode of payments. The study made use of correlation, regression and ANOVA to analyse the data collected. The analysis helped to conclude that working professionals and business class respondents use the digital payment methods more frequently. Various factors have influence people to shift from cash to cashless, it includes offers, rewards, cash back, hassle free etc. the respondents also stated infrastructure and network issues as the major road blocks.

Kumari & Khanna, (2017), Cashless payment: a behavioural change to an economic growth. The paper aims to study how a behavioural change led to an economic growth in the Indian economic scenario. After the study conducted it was seen that various factors were responsible

for such a change as people were finding various benefits and opportunities by adopting such a change.

Podile & Rajesh, (2017) conducted a study to examine Public perception towards cashless transactions and also identify challenges faced during transactions. The researcher undertook this study with help of primary data collected through structured questionnaire. The respondents were selected based on strata simple random sampling technique; the sample size was 195. The analysis was done with help of percentages and Chi- square tests. The analysis has proved that the negative perception is towards issues like security problems, poor network coverage, lack of merchant willingness, high transactional cost etc. whereas the convenience in use and incentive system prove to be positive perception.

Rajanna, (2018) in his research paper "Perception and Awareness of Customer towards Cashless Transactions" made an attempt to study awareness regarding benefits of cashless transactions, how frequently respondents use cashless transactions and the problems faced by respondents. The samples were selected in simple random sampling method. Primary data was collected using questionnaire from the 150 respondents. The paper concludes that customers agree with the government on the usefulness of cashless economy as it helps to fight against terrorism, corruption, money lenders etc, and how important it is to strengthen internet security from protection against Cyber crime and online frauds.

Sharif & Pal, (2020) undertook a study aimed towards studying the level of awareness, challenges and benefits among the citizens about cashless transactions. Primary data for the study was collected from 100 respondents from Kangara district. For the analysis of the data Likert scale, mean, standard deviation, skewness and kurtosis were used. The analysis has proved that people are highly aware of banking cards, ATM, NEFT and RTGS. The respondents also stated that the major issues faced by them were no security, poor network connectivity, literacy problems etc. Moreover, there is less awareness of the latest modes of digital payments.

Teoh, Chong, Lin, & Chua, (2014) the study examines factors influencing Malaysian consumers perception towards e-payment. The study collected primary data from 183 respondents. The results reflected that Analysis on the data collected was conducted with the help of multiple linear regression, which helped to conclude that benefits, self efficacy and ease

of use have an significant influence on consumers perception towards e-payment, whereas trust and security warrant depicted insignificant influence.

Yuvaraj & Sheila, (2018) undertook a study to identify customer's perception towards cashless transactions. The study also determined factors influencing cashless transactions based on awareness level among the customers. Objectives of the study were attained by collecting primary data with sample size of 160 respondents. Convenient sampling technique was used to identify the respondents. The data so collected was analysed with help of Percentage analysis and Chi Square analysis. From the study it was inferred that Privacy and security, convenience were the factors which influences consumers towards cashless transactions. It was also found that the consumers have fairly enough awareness about the information security issues in cashless transactions.

Methodology and Data Sources

The primary data for the study was collected through distributing structured questionnaires among the consumers. The sample size is limited to 99 respondents. The study was conducted based on the convenient sampling technique. The data collected was statistically analysed by ppercentages and Chi-Square using SPSS. As a part of the methodology the following hypothesis were tested to find the validity of the problem proposed in this study.

Hypothesis

H_0: There is no significant relationship between Gender and most used cashless payment option.

H_1: There is significant relationship between Gender and most used cashless payment option

H_0: There is no significant relationship between Gender and frequency of usage of cashless payment.

H_2: There is significant relationship between Gender and frequency of usage of cashless payment.
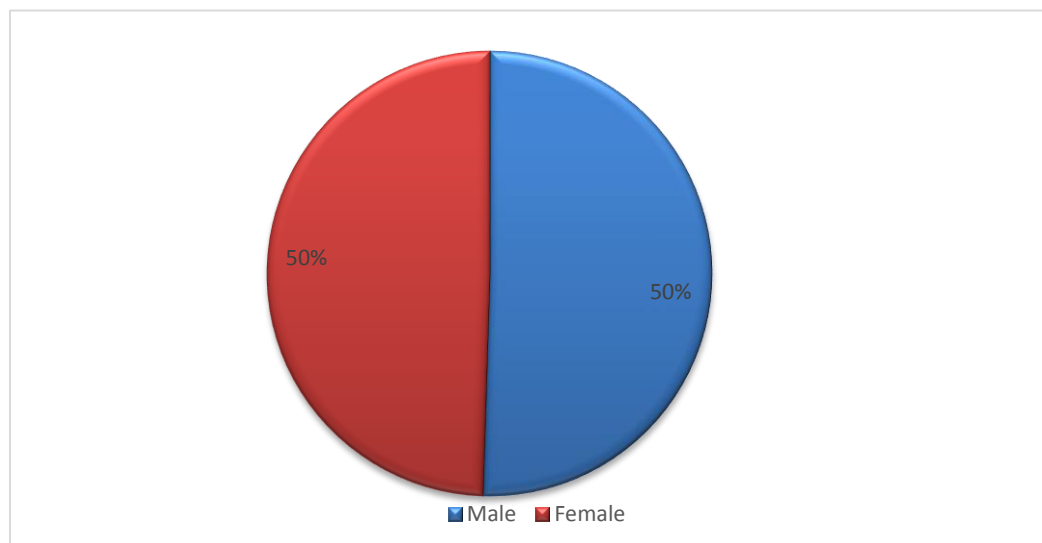
Data Analysis

Demographic Profile of the Respondents

Table 1: Gender wise distribution

Gender	Frequency	Percentage
Male	50	50.50%
Female	49	49.50%
Total	**99**	**100%**

Source: primary data

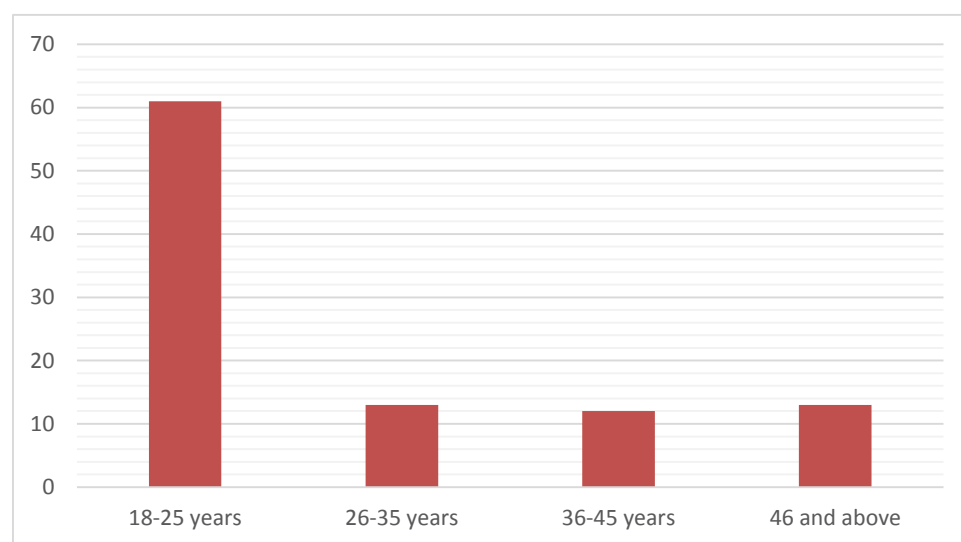**Figure 1: Gender wise distribution**

Source: Primary data

It can be seen in figure 1 the respondents share equal weightage between male and female. Hence responses so collected can be further utilised for better analysis.

Table 2: Age wise distribution

Age	Frequency	Percentage
18-25 years	61	61.6%
26-35 years	13	13.1%
36-45 years	12	12.1%
46 and above	13	13.1%
Total	**99**	**100%**

Source: primary data

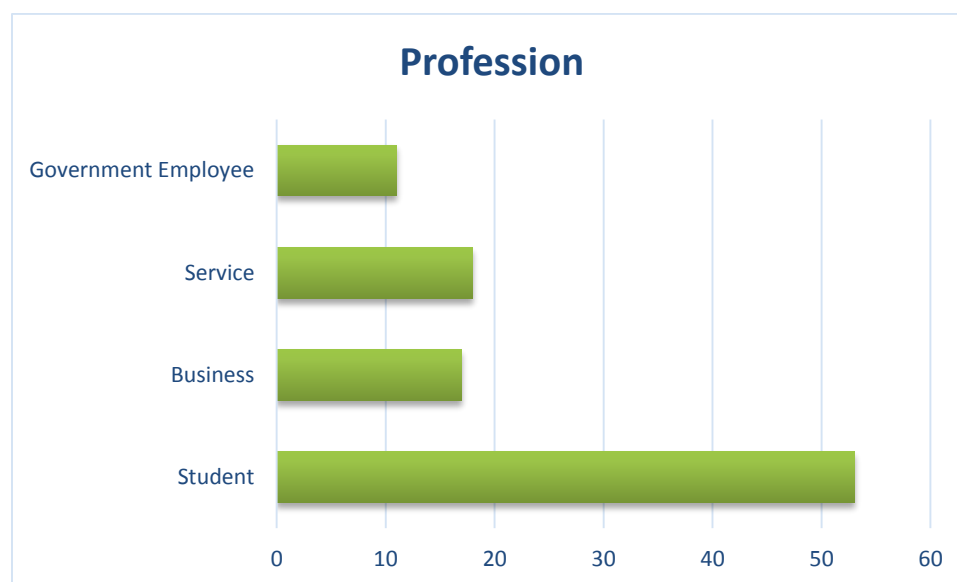**Figure 2: Age wise distribution**

Source: Primary data

The figure 2 shows that the most of the respondents belong to young age group of 18-25 years. The other three categories have almost same frequency of responses.

Table 3: Profession wise distribution

Profession	Frequency	Percentage
Student	53	53.5%
Business	17	17.2%
Service	18	18.2%
Government Employee	11	11.1%
Total	**99**	**100%**

Source: primary data

**Figure 3: Profession wise distribution**

Source: Primary data

The figure 3 depicts higher concentration of students as respondents. It is followed by service category people and business owners. The least respondents are Government employees.

Table 4: Monthly Income wise distribution

Monthly Income	Frequency	Percentage
Below ₹10,000	58	57.6%
₹10,000-₹25,000	29	29.3%
₹26,000-₹40,000	6	6.1%
₹41,000-₹60,000	5	5.1%
₹60,000 and above	2	2.0%
Total	**99**	**100%**

Source: primary data

Figure 4: Monthly Income wise distribution
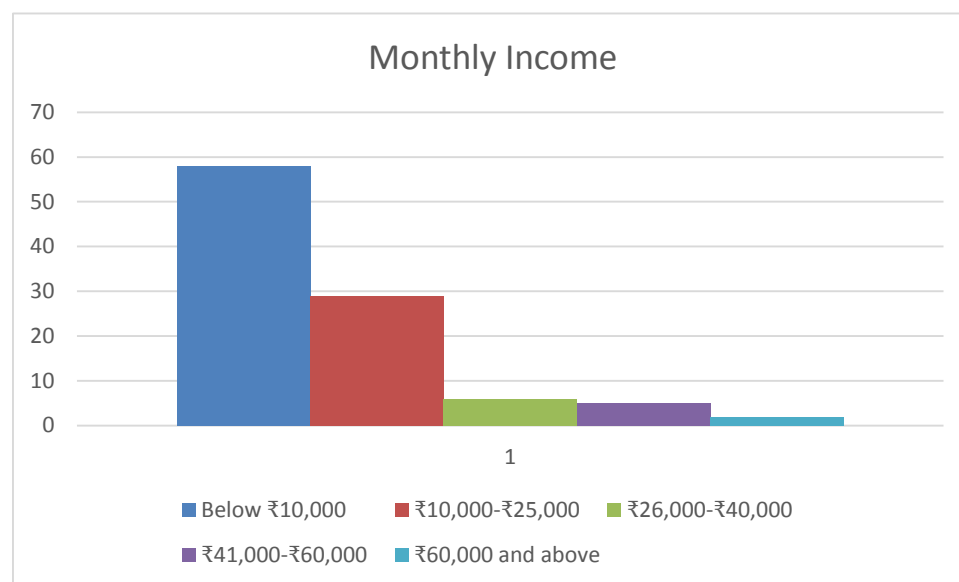
Source: Primary data

The monthly income shown in figure 4 depicts that most number of respondents belong to the category of less than ₹10,000 and rest of the categories follows in descending manner from ₹10,000 - ₹25,000, ₹26,000-₹40,000, ₹41,000-₹60,000 and ₹60,000 and above respectively.

Usage of Cashless mode of payment

Most often used Cashless Payment Option

Table 5: Most often used cashless payment option

		Gender		Total
		Male	Female	
Which is the cashless payment option you use the most?	Debit Card	24	31	55
	Credit Card	6	4	10
	Cheque	2	6	8
	Mobile Wallets	8	5	13
	UPI Apps	10	3	13
Total		50	49	99

Source: primary data

Figure 5: Most often used cashless payment option
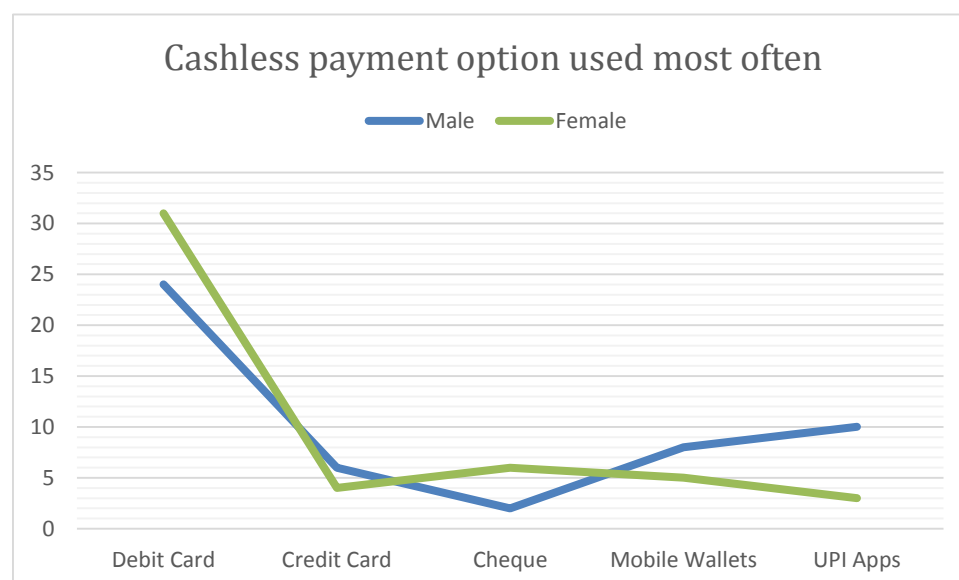
Source: Primary data

As seen in figure 5 in both male and female the most used cashless payment option is debit card. So we can see that there is no much change in the choices made by both the genders. Male also highlight the least chosen one as cheque and for female it is the UPI apps. The reasons could be security concerns.

Frequency of Usage of Cashless payment

Table 6: Frequency of Usage of Cashless payment across gender

		How often do you use cashless transactions?					Total
		1 - 2 times a week	3 - 6 times a week	Everyday	Once in a fortnight	Once a month	
Gender	Male	12	12	6	5	15	50
	Female	8	7	1	4	29	49
Total		20	19	7	9	44	99

Source: primary data

Figure 6: Frequency of Usage of Cashless payment across gender
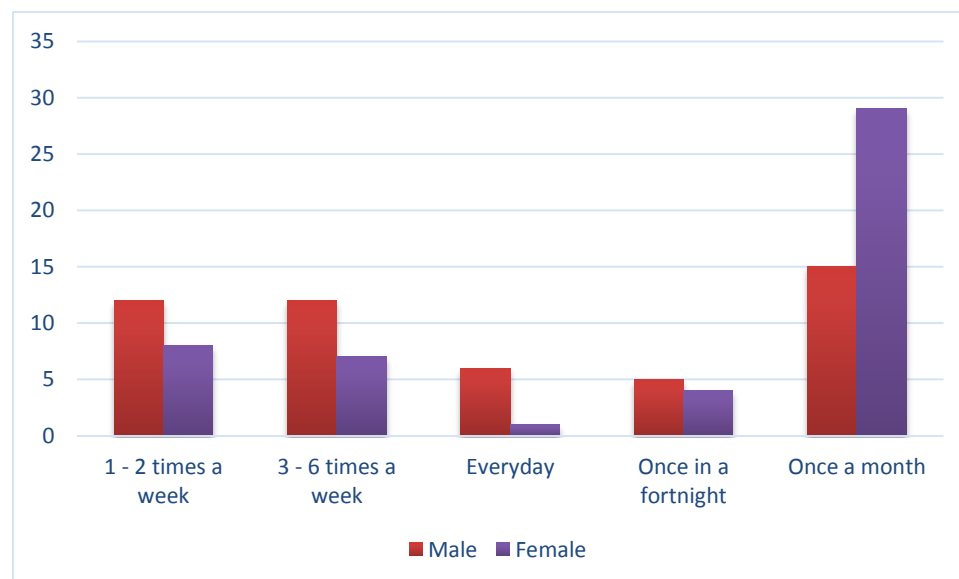
Source: Primary data

Figure 6 depicts that the once a month is the category where both male and female have given more response. Females rarely use the cashless payment options daily whereas male frequency is lowest for once in fortnight.
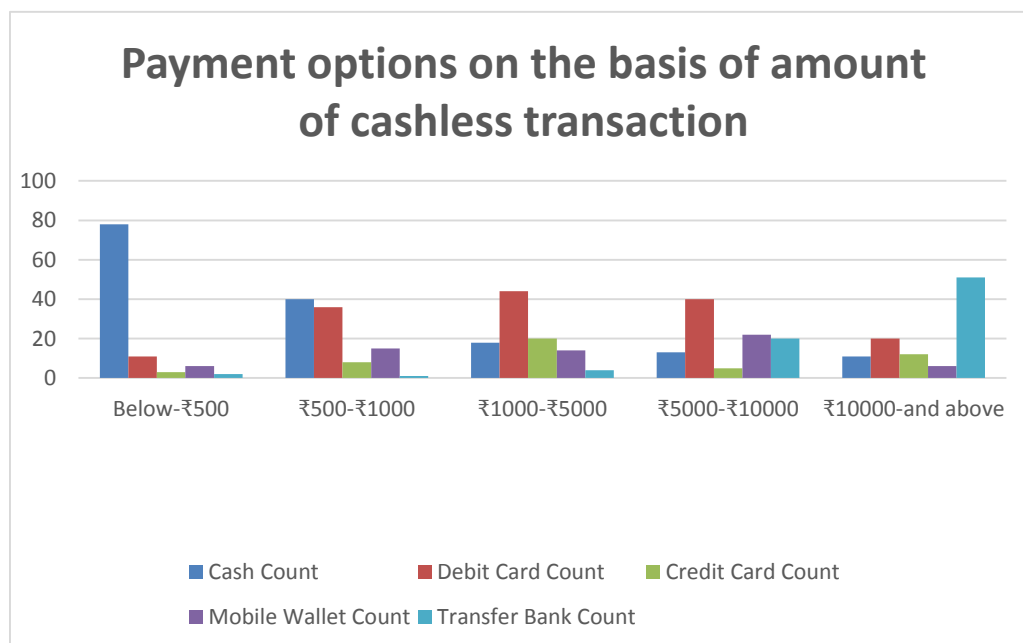
Payment options on the basis of amount of cashless transaction

Table 7: Value of transactions and choice of mode of payment

	Cash	**Debit Card**	**Credit Card**	**Mobile Wallet**	**Transfer Bank**
	Count	Count	Count	Count	Count
Below-₹500	78	11	3	6	2
₹500-₹1000	40	36	8	15	1
₹1000-₹5000	18	44	20	14	4
₹5000-₹10000	13	40	5	22	20
₹10000-and above	11	20	12	6	51
TOTAL	**160**	**151**	**48**	**63**	**78**

Figure 7: Value of transactions and choice of mode of payment

Source: Primary data

The figure 7 shows the different payment options on the basis of amount of cashless transaction, from the survey conducted we found out that when the amount is below ₹500 majority of the respondents chose cash as the payment option, when the amount is between ₹500 to ₹1000 again majority choose cash as the payment option, when the amount is between ₹1000 to ₹5000 most of the respondents have chosen Debit card, and also when the amount is between ₹5000 to ₹10000 they have chosen debit card and when the amount is above ₹10000 most of the respondents chose bank transfer as a payment option. As a whole we can say that majority of the respondents choose cash as a payment option for purchasing.

Preference towards modes of Cashless Transaction

Table 8: ranking of most preferred cashless payment mode

	Preference towards modes of Cashless Transaction						Total	Rank
	Rank 6	Rank 5	Rank 4	Rank 3	Rank 2	Rank 1		
Debit Card	23	19	17	10	21	10	383	1
Cheque	17	12	38	8	17	9	381	2
Mobile Wallets	15	27	10	14	16	18	357	3
Net Banking	12	20	7	32	11	16	334	4
Demand Draft	17	12	10	19	18	22	317	5
Credit Card	15	9	17	16	16	24	307	6

Source: primary data

From the table 8 analysis we can see that there are a total of six cashless payment methods that are generally used by the respondents. The respondents were asked to rank the factors on a scale of 1 to 6 with 1 for the most preferred mode of payment and 6 for the least preferred one. The total responses for each of the rank were multiplied by the rank i.e. 6, 5, 4, 3, 2 and 1. The total of all ranks was taken in order to arrive at the final rank. So from the data above we can see that

the majority of the respondents have given rank 1 to Debit Card, rank 2 to Cheque, rank 3 to Mobile Wallets, rank 4 to Net Banking, rank 5 to Demand Draft and rank 6 to Credit Card.
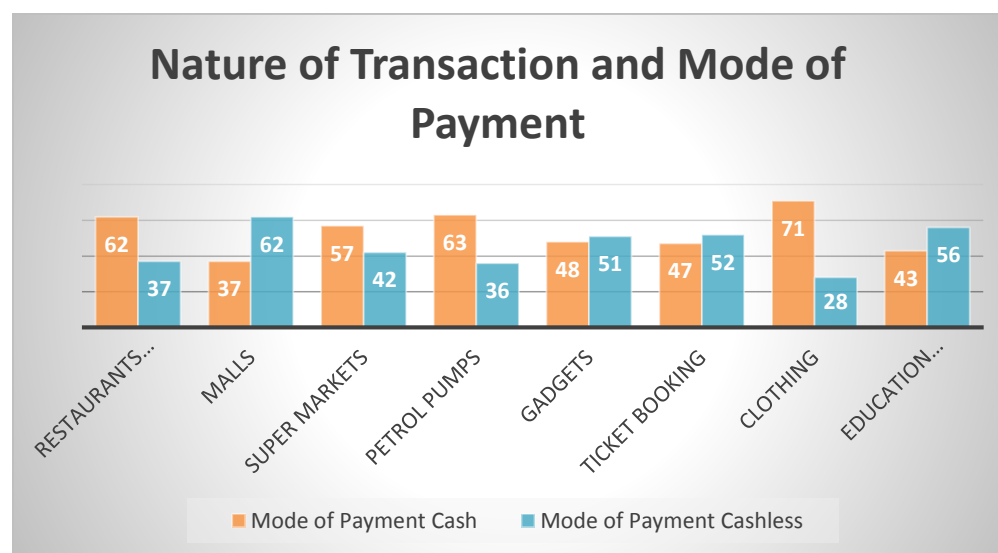
Nature of Transaction and Mode of Payment

Table 9: Nature of transactions and preferred mode of payment

Nature of transactions	Mode of Payment	
	Cash	Cashless
Restaurants &Hotels	62	37
Malls	37	62
Super Markets	57	42
Petrol Pumps	63	36
Gadgets	48	51
Ticket Booking	47	52
Clothing	71	28
Education fee payment	43	56

Source: primary data

Figure 8: Nature of transactions and preferred mode of payment

Source: primary data

Figure 8 depicts the mode of payment whether cash or cashless is used for different kinds of transactions. Respondents prefer cashless mode of payment while making payments at the malls, for buying gadgets, ticket booking and education fee payment. Whereas, respondents have preferred cash as their choice for payments at restaurants, super markets, petrol pumps and clothing.

Relationship between the preference and frequency of use of cashless mode of transactions and Gender.

Chi Square Test

The chi square test is run to determine the association between the variables. the test is run to find out if there is an association of Gender with most used cashless payment option and usage frequency of cashless payment options. The null hypothesis designed for the same expresses that there is no significant relationship between the variables and alternate hypothesis says the opposite.

Association of Gender with most used cashless payment option

The hypothesis for the study is as follows:

H_0: There is no significant relationship between Gender and most used cashless payment option.

H_1: There is significant relationship between Gender and most used cashless payment option

Table 10: Crosstabs				
		Gender		Total
		Male	Female	
Most used cashless payment option	Debit Card	24	31	55
	Credit Card	6	4	10
	Cheque	2	6	8
	Mobile Wallets	8	5	13
	UPI Apps	10	3	13
Total		50	49	99

Source: primary data

Table 11: Chi-Square Tests

	Test value	Df	p value
Pearson Chi-Square	7.743[a]	4	.101
Likelihood Ratio	8.054	4	.090
Linear-by-Linear Association	3.848	1	.050
N of Valid Cases	99		

Source: primary data

The test result from table 11 show that the p value is more than 0.05 i.e. the level of significance and hence we cannot reject the Null Hypothesis as there is no enough evidence to show association between the Gender and choice of payment method. It is concluded that there is no significant relationship between the Gender and the choice of cashless payment option.

Association of Gender with usage frequency of cashless payment options

H_0: There is no significant relationship between Gender and frequency of usage of cashless payment.

H_2: There is significant relationship between Gender and frequency of usage of cashless payment.

Table 12: Crosstabs

		How often do you use cashless transactions?					Total
		1 - 2 times a week	3 - 6 times a week	Every day	Once in a fortnight	Once a month	
Gender	Male	12	12	6	5	15	50
	Female	8	7	1	4	29	49
Total		20	19	7	9	44	99

Source: primary data

Table 13: Chi-Square Tests			
	Test value	df	p value
Pearson Chi-Square	10.244[a]	4	.037
Likelihood Ratio	10.733	4	.030
Linear-by-Linear Association	5.993	1	.014
N of Valid Cases	99		

Source: primary data

The Chi square test is used to assess the association between the variables. The result arrived at in table 13 show that the p value is smaller than standard i.e. 0.05, so we reject Null Hypothesis. The result is significant hence, the data suggests that variables gender and frequency of cashless payment options are associated with each other.

The test helps to conclude that the male as well as female users actively use the cashless payment once in a month. The 59.2% of females use cashless payment once in a month whereas only 30% of males use the cashless payment mode once in a month.

Conclusion

The present study has made a modest attempt to understand consumers' preferred mode of payment - cash or cashless. The analysis revealed that male respondents often use cashless mode of payment. It is further clear that most of the respondents prefer cashless mode of payment for high value transactions, and debit card being the most preferred mode of cashless payment. On the basis of chi-square analysis, the study revealed that there has been no significant relationship between gender and cashless mode of payment. And further there has been significant association between gender and frequency of usage of cashless payments. The digital payment system is the safest mode of payment in any economy and people at large have to make an attempt to adopt this healthy practice for their general satisfaction and safety. As narrated this issue in the above text we wish to make a further point for the future research scholars to go in-depth of this less unknown area in Goa.

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