

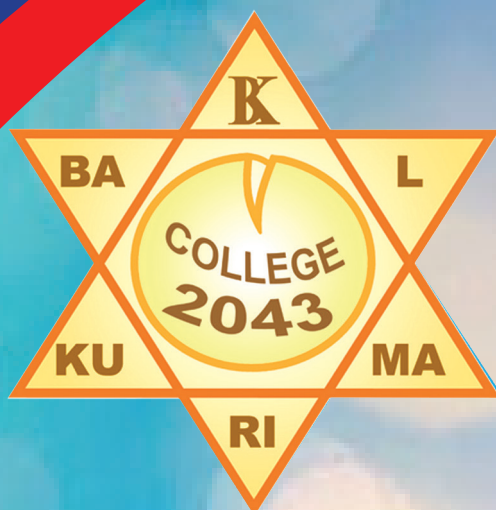
ISSN 2467-9321 (Print)
ISSN 2738 -957X (Online)

Journal of Balkumari College

(Containing Research based Articles)

Ashadh, 2080
June, 2023

Volume- 12 Issue- 1 Peer Reviewed Journal



Published by:

Research Management Cell

Publication Division

Balkumari College, Narayangarh

Chitwan, Nepal

Email: info@balkumaricollege.edu.np

Website: <http://www.balkumaricollege.edu.np/journal/>

<http://www.nepjol.info/index.php/jbk>

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<http://www.nepjol.info/index.php/jbkc>

Email: info@balkumaricollege.edu.np

Printed at:

Chitrawan Printers, Narayangarh

EDITORIAL NOTE

It is my immense pleasure and great privilege to present another volume of **Journal of Balkumari College**. It is an annual, multidisciplinary, peer reviewed journal that publishes original research as well as review in Management, Finance, Science, Health, Education, Literature, Information Technology and other related field. The objective of this journal is to include highest quality empirical, theoretical and methodological and original research papers alongside relevant and insightful reviews. It encourages interested professionals, academicians and research organizations working in the above field to share new idea or new perspectives on existing research. The essential purpose of this journal is to provide an opportunity to the faculty to publish their academic research work and make significant contribution in the above mentioned disciplines. I hope the academicians, researchers and practitioners will make good use of this valuable research finding for the publication in this journal.

At last but not least, on behalf of editorial team and myself, I am thankful to all who contributed to fulfill our dream. First and foremost, let me thank our Chairman **Mr. Pramod Kumar Shrestha** who was always with us, to provide a wonderful platform to nourish the talents. I extend my sincere thanks to our Principal **Mr. Jagadishwar Khanal** who is always in the forefront to encourage and inspire to execute wonderful ideas. It would be totally unfair if I am not mentioning the effort of editorial team who dreamt together to bring out Journal of Balkumari College tenth volume. I would like to extend my heartfelt thanks to contributors, advisors and peer review team for joining us in this fascinating and promising academic development.

Dr. Guna Raj Chhetri

Chief Editor

June, 2023

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Human Resource Management Practices and Employee Retention

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ABSTRACT

The purpose of this study is to examine the relationship between HRM practices and employee retention in bank and financial institutions (BFIs) of Nepal. Recruitment and selection, training and development, promotion opportunities, and compensation practices are the four HRM practices examined in this study. A questionnaire with a five-point Likert scale is used for collecting data. 135 completed questionnaires were returned out of the 205 that were distributed, representing a 65.85% response rate. The results show that selection and recruitment have no significant relationship with employee retention. The findings also indicate that there is little to no relationship between training and development and employee retention. There is a strong positive association between employee retention and other aspects of HRM practices like promotion opportunities and compensation practices. Therefore, Nepalese BFIs need to provide timely promotion opportunities and fair compensation practices so that they can retain talented employees in their organizations. Moreover, to meet the challenge of gaining a competitive edge, today's organizations must create a workplace that encourages performance, productivity, and retention.

Keywords: Human resource management, Recruitment and selection, Training and development, Promotion opportunities, Compensation practices

1. Introduction

The essence of the concept of human resource management (HRM) is that the people working in organizations are viewed as a valuable resource (Shrestha, 2016). If properly managed and treated, people help to increase productivity through their full commitment and capability and enable the firm to compete in local and global markets. The management of human resources, therefore, is one of the key elements in the management and coordination of work and people in an organization (Adhikari & Shrestha, 2022). Managing human resources is essential to an organization's effectiveness since it is impossible to achieve its stated goals without enough employees. The majority of firms today treat their employees as their most valuable resource. Particularly, human resources are more essential than manufacturing assets in service organizations, therefore improvements must be more closely related to personnel concerns (Boselie & Wiele, 2002). In fact, human resources are seen as capital in today's competitive environment and are crucial to an organization's survival. In this environment, businesses struggle to find and keep the talented people (Porter, 2001).

HRM practices, which are widely accepted in modern businesses, provide the foundation for luring and keeping competent workers who continue to provide their services (Shah et al., 2021). Such practices, systems, or strategies are also concerned with high involvement or high-performance work practices. Lado and Wilson (1994) define HRM practices as "a set of distinct but interrelated activities, functions, and processes that are directed at attracting, developing, and maintaining (or disposing of) a firm's human resources". Such practices are a crucial result of starting and expanding a business (Boxall et al., 2007). They involve methods, guidelines, and regulations that affect employee morale, productivity, and retention (Lwin, 2022). Thus, a good HRM practices consists of a coherent set of practices that enhance employee skills and abilities, provide information, empowerment and participation in decision-making, and motivation (Applebaum et al., 2000; Pfeffer, 1998).

Studies show that HRM practices have helped businesses become more productive and successful, especially

in terms of employee retention. The staff retention rate and turnover rate are both lowered by well-structured HRM processes. These practices raise employee satisfaction. When workers are happy in their jobs, they become more dedicated to their work and the company, which improves performance, productivity, and the desire to stay with the company. According to Kemelgor and Meek (2008), employees generally quit their jobs because they are dissatisfied with their work, aren't getting enough support from their managers, aren't getting enough growth opportunities, and are being paid inefficiently. Since an organization may spend more time generating and less time educating employees, employee retention is essential for the firm's economic performance (Vasquez, 2014). Employees may have a positive or negative attitude toward certain tasks, goods or services, coworkers or management, or the company as a whole. Every organization's long-term growth and success depend on its ability to keep its employees. Today's businesses must compete with internal staff retention in addition to external competition (Lwin, 2022).

Employee retention is a burning issue in every business organization. Organizations need to find and keep the greatest employees for a long time in addition to attracting them. The competition is getting fiercer and fiercer in various businesses as a result of numerous factors like globalization and skilled workers (Shrestha, 2019). Since human resources are the most important asset in the current world, employee retention is crucial for every company's competitive advantage. Other resources can be organized with ease, but the most challenging challenge is to acquire efficient and competent human resources. As a result, organizations are now paying more attention to employee retention (Anis et al., 2011). Effective HRM practices help to retain employees at work. Therefore, the impact of HRM practices (in terms of recruitment and selection, training development practice, promotion practices and compensation practices) on employee retention has emerged as the dominant research issue in the HRM field. Thus, the main objective of this study is to examine the relationship between HRM practices and employee retention in bank and financial institution (BFI) of Nepal.

2. Literature Review

Human Resource Management (HRM)

Human resource management (HRM) is an approach used by organizations to use their workforce for the growth, development, and self-satisfaction of the individuals involved as well as the organization as a whole. It is a system that places a greater emphasis on the growth of human resources within the organization and on good people management to ensure that workers are treated with respect at work (Pradhan & Shrestha, 2022). The main purpose of this study is to assess the relationship between HRM practices and employee retention in Nepal. So, this section presents some review of HRM practices, and employee retention.

HRM Practices

Human resource management is concerned with the people dimension in the organization. It focuses on the management of human energy, competencies, and capabilities to improve productivity. To achieve the organizational objectives, the management of an organization has to consider various HRM practices (Shrestha et al., 2022). However, this study is concerned with four HRM practices such as variables namely, recruitment and selection, training and development, promotion opportunities, and compensation practices.

a. Recruitment and Selection

Recruitment is any procedure by which an organization seeks candidates and draws in potential employees; selection is the method by which an organization recognizes those applicants who possess the knowledge, skills, abilities and other qualities that will enable it to accomplish its objectives (De Cieri & Kramar, 2008). The main goal of the recruitment and selection procedure is to find as many qualified workers as possible at the lowest possible cost to meet the organization's human resource requirements (Armstrong, 2003). Although recruiting competent individuals is a good place to start, using a variety of sophisticated human resource management systems is more likely to make it easier to create and maintain a committed team (Raghuram et al., 1993). Employers make an effort to choose and hire the best applicants. In addition, job seekers learn about companies and open positions; but, as they are unable to fully understand all available options and their possible traits, they must rely on incomplete signals (Chan & Kuok, 2011).

b. Training and Development

Employee training serves as more than just a means of equipping them with the skills they need to do their jobs;

it is frequently seen as a sign of an employer's commitment to its staff (Storey & Sisson, 1993). Additionally, it may be interpreted as reflecting a general organizational strategy that emphasizes increasing value rather than cutting expenses. The ability of many of the most successful businesses in the world to recruit and keep the best personnel for their organization is directly related to the provisions they make for training and development activities (Bassi & Buren, 1999). Therefore, it is crucial for employers to give their employees the chance to learn (Arlond, 2005; Bernsen et al., 2009), as proactive development plans will not only boost team capabilities but also employee motivation, leading to a more devoted workforce (Kyndt et al., 2009). Studies across a wide range of industries and sectors have all found a positive correlation between investment in training and employee commitment (Bassi & Buren, 1999). Investment in training measures and the implementation of development schemes are increasingly recognized as crucial elements of HRM (Oakland & Oakland, 2001). In conclusion, effective training helps to increase employee retention because it gives workers a sense that their skills are valued and gives them opportunities to further hone their skills (Kyndt et al., 2009; Visser, 2001).

c. Promotion Opportunities

Promotion is an ascent in the vertical direction. In terms of the organizational structure, it is upward mobility. In this regard, promotional opportunities are the openness of an organization's policies and the potential for staff employees to advance within the organization (Delery & Doty, 1996). Such opportunities increase employee loyalty and happiness, and decrease their desire to leave the company. As a result, retention is improved (Palwasha et al., 2017). Therefore, promotion opportunities are also taken as one of the key HRM practices that support employee retention.

d. Compensation Practices

Compensation is a crucial component of HRM practices. According to De Cieri and Kramar (2008), an effective compensation or pay system is crucial for carrying out strategies. According to Milkovich, Gerhart, and Hannon (1991), how workers are paid has an impact on the caliber of their work, how they treat clients, and how willing they are to adapt and pick up new abilities. According to De Cieri and Kramar (2008), a company can attract and keep high-quality personnel by offering competitive compensation and/or benefits. According to Ryan and Sagas (2009), one-way workers determine if their time and efforts are useful is through compensation. Rice et al. (1989) found using discrepancy theory that workers' satisfaction is a result of what they believe their contributions and job requirements are and what they should receive in return; Chelladurai (2006) supports this. The treatment that other employees receive within a company is one benchmark that an employee may consider. If their salary is commensurate with the time, effort, and commitment they expend in comparison to that of other workers, they will be happy with it. Dissatisfaction may happen if people believe their contributions and efforts are not being adequately recognized by the organization or employment, particularly in terms of remuneration (Ryan & Sagas, 2009). Monetary compensation is reportedly one of the most crucial factors affecting employee retention (Shaw et al., 1998). Bergmann et al. (1994) discovered that thoughtfully crafted employee benefit packages are effective tools for attracting, motivating, and retaining employees.

Employee Retention

Employee retention is the capacity to keep the most desired personnel in a company for a longer period of time is known as employee retention. It consists of a number of initiatives that motivate workers to stick in the business longer. It is "a voluntary action by an organization to establish a climate which engages employees for the long term" (Chaminade, 2007). To avoid the loss of competent individuals from leaving productivity and profitability is a more specific and contemporary definition of retention (Chiboiwa et al., 2010). Some see employee retention as the outcome of implementing procedures and policies that help workers stick with the business by offering a working environment that satisfies their demands (Baer et al., 1996). According to a 2002 source mentioned in Starosta (2006), employee retention is the opposite of turnover, which is the total of an employee's voluntary and involuntary separations from their employer.

Since a company's ability to be economically competitive depends heavily on the knowledge and abilities of its workforce, it benefits from keeping talented employees (Kyndt et al., 2009). Periodic labor shortages can make it harder for organizations to retain high-performing workers (Jones & Skarlicki, 2003). As a result, both employees and employers are looking for better employment opportunities and ways to boost employee productivity

(Leeves, 2000). However, retaining personnel can be difficult (Barney, 1991; Taplin & Winterton, 2007). Due to restricted rationality, particularly due to local cultural and social norms (Metcalf, 2008), HR managers may find it difficult to recruit and retain talent (Barney, 1991; Samuel & Chipunza, 2009). Because employee desire to quit is disappointing for both employees and employers, organizations are more concerned about employee retention. Organizations must accept the costs associated with both hiring new employees and letting go of existing ones, according to Lockwood and Ansari (1999), therefore they make an effort to retain their current workforce. In fact, the organization's investment in employee recruitment is preserved thanks to the retention of employees and the talents they are valued for (Acton & Golden, 2003). This results in a smaller loss of human capital and higher retention.

HRM Practices and Employee Retention

Many studies report that HRM practices are highly essential for retaining employees at work. Employee retention and HRM systems have a close relationship, according to Arthur (1994). Employee relations are a functional component of HRM that includes job analysis and design, recruiting and selection, training and development, performance management, pay structure/incentives/benefits, and performance management (De Cieri & Kramar, 2008). According to Bergmann et al. (1994), well-designed employee benefits packages are powerful resources for luring, inspiring, and keeping people. According to a survey, many of the world's most successful businesses are aware that their ability to recruit and keep the best personnel for their organization depends on the arrangements they make for training and development activities (Bassi & Buren, 1999). Since periodic labor shortages might make it harder to find high-performing personnel, Jones and Skarlicki (2003) note that employee retention becomes more crucial for organizations. Due to the beneficial effect HRM practices have on employee retention, the majority of firms have integrated HRM practices into their daily operations ((Lwin, 2022).

Based on the literature review, the following hypotheses are developed to test the relationship between HRM practices and employee retention.

Hypothesis 1

There is a significant relationship between recruitment & selection and employee retention.

Hypothesis 2

There is a significant relationship between training & development and employee retention.

Hypothesis 3

There is a significant relationship between promotion opportunities and employee retention.

Hypothesis 4

There is a significant relationship between compensation practices and employee retention.

3. Research Methodology

In order to gather the respondents' perspectives, a set of questionnaires is used as the tool. Each of the statements is subjected to a five-point Likert scale questionnaire. This research is conducted among the employees of five BFIs including two commercial banks, one development bank, and two finance companies. The questionnaire was distributed to 205 employees.

A statement outlining the goals of the study, the voluntary nature of participation, and the confidentiality of the information was included with each questionnaire. And out of 205 employees, 135 completed questionnaires were returned, representing a 65.85% response rate. Table 1 presents the demographic characteristics of the respondents.

Table 1: Demographic Characteristics

Demographic Characteristics	N	Percent
Designation		
Officer	84	62.2
Non-officer	51	37.8
Age		
Under 21	0	0
21- 30	72	53.3
31-40	39	28.9
41-50	15	11.1
Above 50	9	6.7
Gender		
Male	82	60.7
Female	53	39.3
Marital Status		
Married	90	66.7
Single	45	33.3
Educational Level		
SLC	3	2.2
+2/Intermediate level	6	4.4
Bachelor	39	28.9
Master	78	57.8
M .Phil/Ph .D.	9	6.7
Experience		
Less than one year	12	8.9
1-2 years	21	15.6
3-5 years	48	35.6
6-10 years	39	28.9
Above 10 years	15	11.1

The Cronbach's Alpha is used to evaluate the validity of each component, including recruitment & selection, training & development, promotion opportunities, compensation practices and employee retention. Table 2 below lists all the variables in summary form, the number of items used to measure each variable, and the results of the reliability test for each variable.

Table 2: Reliability Coefficients (N = 135)

Variables	Number of Items	Cronbach Alpha
<i>HRM Practices</i>		
Recruitment & Selection	5	0.80
Training & Development	3	0.83
Promotion Opportunities	3	0.88
Compensation Practices	6	0.72
<i>Employee Retention</i>	4	0.76

Table 2 shows that Cronbach alpha for recruitment & selection is 0.8, for training & development is 0.83, for promotion opportunities is 0.88, for compensation practices is 0.72, and for employee retention is 0.76. Thus, the Cronbach alpha for the entire variables shows a value above 0.70 which means that the value for each variable in the study is acceptable because according to Sekaran (2006), the higher the coefficients, the better the measuring instrument.

4. Data Analysis and Results

This section deals with correlation analysis among variables of HRM practices and employee retention. The correlations are computed and analyzed by using the Pearson Product Moment Method. All the relationship has been checked at a one percent level of significance with a two-tailed test.

Table 3: Correlation Results of Variables of HRM Practices and Employee Retention

	S&R	T&D	PP	CP	ER
Selection and recruitment (S&R)	1				
Training and development (T&D)	0.04	1			
Promotion Opportunities (PO)	0.15	0.63**	1		
Compensation Practices (CP)	0.23**	0.37**	0.25**	1	
Employee retention (ER)	0.06	0.03	0.32**	0.33**	1

*Note: ** Correlation is significant at the 0.01 level (2-tailed)*

Table 3 shows a very negligible and insignificant relation between selection & recruitment and employee retention ($r = 0.06$; $p > 0.01$). Hence, the result does not support Hypothesis 1. On the other hand, the result also shows a very negligible and insignificant relation between training & development and employee retention ($r = 0.03$; $p > 0.01$). This does not support Hypothesis 2. Furthermore, other variables of HRM practices such as promotion opportunities and compensation practices have a positively significant relationship with employee retention showing a statistically significant value of $r = 0.23$; $p < 0.01$, $r = 0.32$; $p < 0.01$ and $r = 0.33$; $p < 0.01$ respectively. So, the results support Hypotheses 3 and 4.

5. Discussion and Conclusion

Employee retention is one of the most frequently studied issues in the area of human resource management. It is the systematic effort made by a company organization to develop and support a work environment that motivates current employees to stay with it. Effective retention techniques are thought to improve a company's capacity to draw in and keep talent (Shrestha, 2019). Therefore, organizations need to focus on effective HRM practices as key techniques for retaining talented employees.

The results of this study show that selection and recruitment have no significant relationship with employee retention. The results of this research are inconsistent with the research results of Huselied (1995); and Vandenberg and Nelson (1999). They concluded that recruitment and selection practice is positively related to employee retention. In the same way, Chan & Kuok (2011) reported that when the cost of a mistake in recruitment is high, organizations are more discerning and the turnover of employees will increase. However, good recruitment and selection practices can lower employee turnover. Additionally, the findings indicate that there is little to no relationship between training and development and employee retention. It is supported by the findings of Anis et al. (2011). They argue that keeping employees on the job for a long time after their training and development is not difficult (Anis et al., 2011). Gan and Halimah (2019) also mention that the relationship between training and retention among employees is inconsistent.

Furthermore, there is a strong positive association between employee retention and other aspects of HRM practices like promotion opportunities and compensation practices. Promotion opportunities support employees to stay with the organization (Miller & Wheeler, 1992). Due to these opportunities retention is improved. Promotion opportunities enhance employee happiness and loyalty, and reduce their desire to leave the organization (Biwi et al., 2017). Furthermore, employee retention is greatly impacted by the total compensation package (Miller & Wheeler, 1992). Numerous productivity studies highlight the fact that people with great talent frequently aim for high compensation. Therefore, they might stay with the existing company provided the company can provide an alluring compensation plan for them (Shepherd & Matthews, 2000; Jardine & Amig, 2001). In addition to this, implementing the concept of decent work (Shrestha, 2021, 2022, and 2023) can assist in creating productive workplaces and increase employee retention.

In conclusion, Nepalese BFIs need to provide timely promotion opportunities and fair compensation practices so that they can retain talented employees in their organizations. Moreover, to meet the challenge of gaining a competitive edge, today's organizations must create a workplace that encourages performance, productivity, and retention. Effective management/leadership skills and HRM practices are key factors in employee retention.

6. Implications

The purpose of this study is to address the issue of how HRM practices relate to employee retention in BFIs. The results of this study will therefore be useful in describing how HRM practices affect employee retention. Employee retention is positively associated with HRM strategies. Therefore, the research's findings will be useful to managers as they assess the effectiveness of the HRM practices they are currently using and determine how they affect employee retention. Additionally, BFI management can update the HRM practices that are currently in use as needed.

7. Limitations

Despite the research suggesting the best HRM practices, this study only takes four of them into account: recruiting and selection, training and development, promotion opportunities, and compensation policies. Other aspects of the workplace environment affect employee retention as well. In this study, those factors are not taken into account.

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Entrepreneurship Development: A Crucial Factor for the Sustainability of Nepalese Microfinance Institutions (MFIs)

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ABSTRACT

In this study, the researcher makes the efforts to examine impact of relationship marketing strategies followed. The purpose of the paper is to highlight the prospects and challenges of entrepreneurship development programs of Nepalese microfinance institutions (MFIs) and their sustainability. Descriptive research design has adopted in the study based on review of best practices. Micro entrepreneurs are those types of members of microfinance who are graduated from microfinance. Nepalese MFIs faced a numbers of challenges for entrepreneurship development (EDs). Finding shows that unskilled human resources, low technical knowledge, financial constraints and poor financial literacy are main constraints of Nepalese MFIs for entrepreneurship development. Conclusion from the study is drawn that entrepreneurship development directly affects viability and sustainability of microfinance institutions (MFIs) through scale of loan disbursement, saving mobilization, profitability for further investment, business development, market analysis and complying with all rules and regulations provided by regulatory authority. The findings of the study might be applicable to the BFIs, MFIs, regulatory authorities, SMEs analyst, entrepreneur and planners.

Keywords: Entrepreneur, Entrepreneurship, MFIs, Microenterprises, Sustainability.

JEL classification code: B₂₁, B₂₆, O₁₂

Introduction

Nepal was ranked in 149th in 2018 as per Human Development Index (HDI) and depicted one of the most impoverished countries in South Asia. Today, around 35 percent of Nepal's population is understood to be poor in terms of health, education, and living standards (multidimensional poverty). In a population of nearly 30 million people, 56 percent of the population live on less than \$2 per day (Renewable energy impact report, 2020).

In Nepal, about 80 percent of the total population lives in rural areas, and subsistence agriculture is the major occupation. So agriculture is backbone of rural people (Lamichhane, 2022). It is associated with low production, low income, low saving, low economic growth etc. Geographically, most of the area consists of hilly and mountainous regions. Various programs intended to reduce deep rooted poverty have been identified and implemented in the targeted areas of the country, one of them is microfinance (Rijal, 2009). It has been going on for some time in the country. Operationally, it is focused on poor and deprived women both from rural and urban areas.

The overall impact of microfinance performance shows that the microfinance clients, the loan portfolio outstanding, and savings are in increasing trend and clients of microfinance are able to handle business and able to generate income. Despite these efforts, the level of poverty remains unchanged across the rural poor households. Moreover, the status of female child enrollment in private school has significantly increased irrespective of the level of earning of households which is possible only through microfinance and they become a successful entrepreneur (Paudel, 2013). Microfinance is a powerful instrument for reducing poverty because the

poor require access to adequate financial services, can repay loans, pay the true cost of loans, and can save money (Greuning, 1999).

Microfinance is a one of the important tool of poverty alleviation. It is a provision of saving, credit, remittance, money transfer and insurance services to the poor people excluded from those services (Dhakal, 2010). Thus, microfinance is significantly supporting for the poverty alleviation as a powerful weapon. Microfinance program provides financial services to marginalize and disadvantages people particularly poor of the poorest women in society. Microfinance has positive impact to clients of microfinance in term loan transaction, income and saving, living and non-living assets, food self-sufficiency, clothing and housing, health care, education for children, participation in social and political events and empowerment of women's (RMDC Nepal, 2009).

In Nepal, near about one forth of population is below poverty line due to insufficient provision of health, education, food, sanitation, employment and business opportunities. More than two third of rural population depend on informal financial resources (i.e. local money lenders, traders, landowners, relatives, friends, neighbors, etc.) and traditional agriculture livelihood. Poorest of poor people can't borrow loan because of collateral assets and any legal documents and incapability of returning debts. The simple assumption is that microfinance provides financial services to the poor without collateral guarantee, only just solidarity group guarantee (RMDC Nepal, 2009). Ultimately microfinance program helps poor and marginalized people to uplift their life from absolute poverty (Dhakal, 2010). If the loan provided to the people is utilized on productive sector or utilized for enterprise development, it creates employment and capital. In Nepal, large portion of loan provided to microfinance clients is used on consumption (i.e. food, cloths, shelter, education, health and other personal obligation) and only small portion is used on productive sector. If one does not been able to increase capital from borrowing, it will not uplift the life of the poor. In contrary, it will increase poverty and degrade the life of the borrower. For capital increment it is necessary to aware and mobilizes the microfinance members regarding business development through orientation about how to invest money they have and how to select an appropriate as well as viable business. Microfinance institutions (MFIs) playing an important role for the promotion and development of small scale business (Rakhal, 2015). Thus, MFIs are providing seed funds for small and cottage enterprise, agro-enterprises, buffalo rearing, goat rearing, for just livelihood purpose. They are not properly mobilized their capacity and resources for the development of entrepreneurship development of their clients. Entrepreneurship development crucial for economic prosperity and sustainability of microfinance institutions.

The decision for an individual to become self-employed or to remain as an employee is dependent on some factors. Many studies pointed out how these factors play an important role in motivating and restraining people to become self-employed. The motivating factors make self-employment to be attractive. For instance an existing opportunity for profit making may attract young people to start up their own business. Similarly, low wage or dissatisfied condition of work would make paid employment less attractive. Analyzing factors that influence individuals' decision to become self-employed and why people choose paid employment rather than floating their own business will provide an important guide for policy makers. The reasons why people become self-employed or choose to be employees have been discussed in entrepreneurship literature. Self-employment is being considered synonymous with entrepreneurship.

The major contemporary challenge of most the developing countries is combating unemployment among particularly youth. It is pertinent to find out if changing the orientation of students toward self-employment could be efficacious in reversing the trend of youth unemployment in the country.

Entrepreneur is the main elements of the entrepreneurship. Entrepreneur is the person who creates new idea, knowledge, and behavior and creates opportunity of rewards and bears the risk for rewards (Gautam, 2019). S/he require high level of intellectual intelligence for converting the idea in to business, managing people, market place and resources that is financial, and HR as well as recognizing the change in business environment.

Entrepreneurship refers to the act of developing and managing a business venture in order to achieve pre-determined organizational objectives that is profit, growth and operation. It is individual interpersonal capacity/ideas to solve certain problem. Entrepreneurial aptitude and company management expertise are recognized as the strongest business sustainability indicators (Ligthelm, 2010).

Entrepreneur requires bearing several risks during the operation and growth. Entrepreneurship requires remarkable business ideas, investable capital, skills human resource, risk bearing tendency, and managerial ability to its success (Gautam, 2019). Thus, entrepreneurship is a way of living a professional life with certain venture i.e.

wealth, interest and risk initiation.

Entrepreneurship consists of creation of idea, investment, of money/capital and management of profit or value creation ideas/knowledge. It forces identifying and searching opportunities for being self-employed and creating and generation the employment of many individual (Gautam, 2019). Thus, entrepreneurship is not only limited to searching and innovate new business ideas, management, operation, risk bearing and new job creation for job seekers those are not self-employed in the local levels but also enhance the economic levels of micro entrepreneur as well as nation economic prosperity. The general objective of this study is to analyze role of entrepreneurship for the sustainability of Nepalese MFIs.

Review of related literature

Theoretical Foundation

Theory of Economic Development

Schumpeter (1934) an expert of entrepreneurship was developed the theory of economic development (ECD). This theory placed a strong emphasis on the entrepreneur's function as an inventor and the carrier of the economic change mechanism in his Theory of Economic Development. According to Schumpeter (1934), an entrepreneur's job is to create new goods by fusing various productive variables. This practice helps the entrepreneur keep a competitive advantage in the industry. When defining economic progress, Schumpeter emphasizes the value of entrepreneurs' activity in producing fresh concepts and product combinations through the introduction of novel goods and novel production techniques.

Theory of Entrepreneurial Discovery

The entrepreneurial discovery hypothesis was first presented by Kirzner Shockley, G. E., & Frank, P. M. (2011); Schumpeter, Kirzner (1973), who emphasized the crucial function of the entrepreneur in eliminating price discrepancies and establishing market equilibrium. The profit-making motive of purchasing items at a discount and reselling them at a premium drives the entrepreneur. Kirzner holds the opinion that market prices are set by businesspeople. As a result, the market's potential profit prospects drive the entrepreneur as designed shape.

The Theory of Entrepreneurship

The Theory of entrepreneurship was firstly developed by Mishra and Zachary (2014) focused with entrepreneurial value creation theory examines the core of the entrepreneurial process by taking into account a two-stage value creation process and a proper framework. The box for entrepreneurial prize and the discovery of an outside opportunity are said to be the major motivators for the entrepreneur throughout the initial phases of venture formation, according to the authors.

Empirical review

The literature review is a major component in this conceptual framework. The purpose of literature review in research is to situate the proposed research in the context of what is already known in the field. It should be able to provide the theoretical basis for the current work on the one and helps to narrow down the proposed topic.

Acharya S., (2007) analyzed empowering rural women through a community development approach in Nepal. In this paper they explore a community development strategy to empower rural women through education and small scale household economic activities. They used qualitative and quantitative data analysis methods to assess the impact of community development project. Acharya (2008) also shows poverty reduction along with the promotion of industrial employment in Nepalese manufacturing sector. He also shows relationship between poverty reduction along with industrial employment of women and export of Nepalese handicraft products. In this paper he analyzed the Nepalese industrial labor market using macroeconomic data and explored strategy for poverty reduction.

Yu Fu Lai, Tony (1997) looked a book named entrepreneurship and economic development in Hong Kong which is the first systematic study of the nature, operation and contribution of entrepreneurship to the growth of Hong Kong from a new entrepreneurial perspective of economic development. They argue that the success of Hong Kong is attributable principally to entrepreneurship development. Yu (1998) shows entrepreneurship is the one of the main instrument in the economic development of Hong Kong. He also explored the role of entrepreneurship for the economic development of modern Hong Kong. In this book he also explored the alert opportunities and high degree of flexibility of production and respond rapidly to change.

Raffa (2018) also shows a clear cut picture of the small growing firm that to support successfully, must have a

minimum size, hold internal skills, and maintain a network of stable linkage with external economic agent. In this paper they analyzed how entrepreneurs learn and explored the learning experience of entrepreneurs from small size firm.

Julien (2002) analyzed the role of SMEs for the new job creation and economic development and shows the importance of entrepreneurs and SMEs as the main variable of economic change. He also explored the relationship between SMEs and economic theory with highlighting the role of SMEs may lead to the development of new economic theory based on the concept of instability and contingency.

Rakhil (2015) analyzed entrepreneurship, microfinance and social relation: An Empirical analysis of women's perceptions. From this study he found that there is significant relationship among microfinance, entrepreneurship and social relation. They also point out that the credit access to women not only improves the economic status of the family but also increases the social relations. He explores the women's experiences on microfinance schemes aimed at creating independent women entrepreneurship.

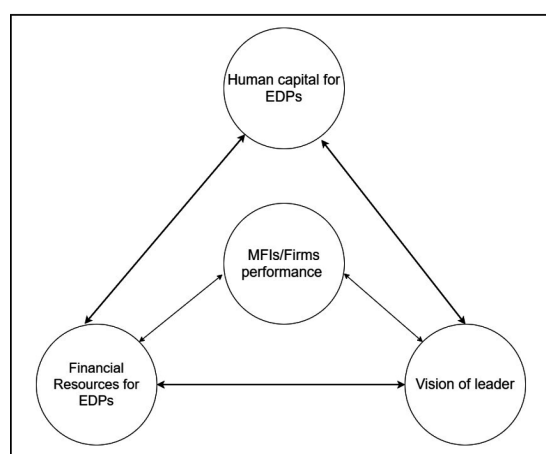
Research gap

The result of the above mentioned literature review illustrates that human capital is not only foundation of organization operational capabilities but also acts as bridge in linking the knowledge and resources (i.e. human resources and financial resources) of the organization to the external knowledge for entrepreneurship development. There is inadequate and poor EDPs mechanism and unskilled human capital for graduation of existing borrower of MFIs.

Currently, the government of Nepal has also been creating favourable and inductive environment for the development of women entrepreneur through operation micro-enterprise development for poverty alleviation (MEDPA) in every district of the country. These innovation and program is not enough for the promotion and development of micro-enterprises, it needed strategy and managing all organizational resources in order to achieve the planned EDPs.

Inadequate funding is the major root cause of several SMEs' unproductive activities and closure which is, which finance banks become the major sources of capital providers for entrepreneurs in rural areas (Obasan, 2014). In addition, many microfinances offer social intermediation services to group members, including group creation, confidence building, and training in financial literacy, and company management skills (Bashyal, 2008). These are targeted to develop a more sustainable business which positively effect on sustainability of MFIs.

Figure 1 below exemplifies possible relationship between professional human capital for EDPs, financial resources, leader's innovations/vision and MFIs performance related to high figure of loan portfolio and interest income.



(Fig 1: Key Factors of Entrepreneurship Development)

Based on the review of the literature, there exists a research gap. Despite numerous studies on the related topics, little is known regarding the structural relationship and casual effects between four constraints. This study therefore deals with certain conceptual framework about entrepreneurship for the sustainability of Nepalese microfinance institutions (MFIs).

Methodology

In order to establish a conceptual framework to explain the relationship between entrepreneurship development and sustainability of Nepalese microfinance institutions (MFIs) and the knowledge based view of current EDPs in Nepalese microfinance institutions and challenges faced by MF sector. In analyzing the EDPs issues in Nepalese MFIs, we take into consideration the following issues:

Some serious issues in entrepreneurship development in Nepalese context

EDPs are affected with a number of problems which are responsible for low level of success of the programs. The problems come from the trainers, trainees, the various organizations imparting training programs, the supporting organization and even sometimes the government. Some of the problems faced by EDPs are narrated as follows:

i. No clear-cut policy at the national level for EDPs

There is no a clear-cut national policy on entrepreneurship. Therefore, the growth and development of entrepreneurship put to a halt due to the antithetic attitude of the supporting agencies like banks, financial institutions and other supporting agencies.

ii. No clear-cut national objectives

The institutions engaged in EDPs are not convinced and certain about the task they are supposed to perform and objectives to achieved. They are conducting EDPs because they have to conduct the same.

iii. No clear cut future course of action for EDPs

The course contents are not standardized and the agencies engaged in EDPs are themselves not very clear about the course of action they are supposed to follow. There is no accountability and feedback system for further improvement.

iv. Poor follow-up/Feedback mechanism

Institutions providing EDPs do not show much concern for objective identification and selection of entrepreneurs. No follow-up actions follow EDPs after training. Regular follow-up makes a newly entered entrepreneur more aware about the product, market and its competitors, and other strategy.

v. Non-availability of infrastructural facilities

EDPs are not successful due to non-availability of adequate infrastructural facilities required for the conduct of EDPs. Rural and backward areas are lacking in proper class rooms, guest speakers, boarding and lodging etc. for successful conduct of EDPs.

vi. Lack of commitment and involvement by the corporate sector

Corporate sector shows less concern for the successful conduct of EDPs. They filled EDs program is a governmental economic developmental related therefore Government of Nepal must invest money. They filled they lack of commitment and involvement in EDPs. There seems to be low institutional support entrepreneurs. For the development of MSME and SME, corporate sector can provide relevant training/skills, technical support, necessary funds for startup, marketing the product, etc. They can participate actively for the development of entrepreneurship.

vii. Non-availability of competent faculty

The faculties selected for giving training are not sometimes competent enough to give proper training to prospective entrepreneur. Even if competent and qualified teachers available, they are reluctant to serve in rural and backward areas. This creates problem smooth conduct of EDPs. Well knowledgeable and competent faculty can play vital role for the development of entrepreneurship by providing necessary entrepreneurship development training and skills.

viii. Non conducive environment

Non-conducive environment and constraints in the backward regions has become a major problem for the conduct of EDPs. It makes the trainer-motivator's role ineffective. In rural areas, it's difficult to provide training and other skill/capacity development activities for entrepreneurship development.

ix. Selection of wrong trainees

There is no uniform procedure adopted by various agencies and institutions conducting EDPs for the selection of trainees. This results in the selection of wrong trainees which leads to low success rate of

EDPs. Interested and needy trainees to be selected for entrepreneurship development training. It'll only be effective if the training is provided to needy people.

x. Determinants constraints

There are some major constraints which affect to the development of entrepreneurship. An appropriate level of knowledge and skill, and level of confidence to do something new, matter for the establishment and success of an enterprise. The knowledge about what to do, the skill how to do and the confidence about I can do make any enterprise to success or failure. Working capital is one of the constraints for the development of entrepreneurship. Limited amount and access to working capital hinder the activities of entrepreneurship. Lack of fund for the establishment of an enterprise is also a constraint for entrepreneurship development. Without the availability of fund in reasonable or in subsidized cost, it's hard to start any business, it may either be micro enterprise or small enterprise.

xi. Comparative advantages with critical shortage

For the development of entrepreneurship, the price and availability of raw material play an important role. Availability of raw material in predetermined price is major for the pricing strategy for an entrepreneur. If the price of raw material is volatile, it's hard to fix the price of final goods. The market for the product produced by an entrepreneur is the last resort for success or failure of an entrepreneur. If goods cannot be sold in the market in time, the cost of storage and hold for the product ultimately increase the price of the good. If the price of good is high in relations to its competitor, it's hard to sustain in the market.

Challenge of entrepreneurship development program (EDPs)

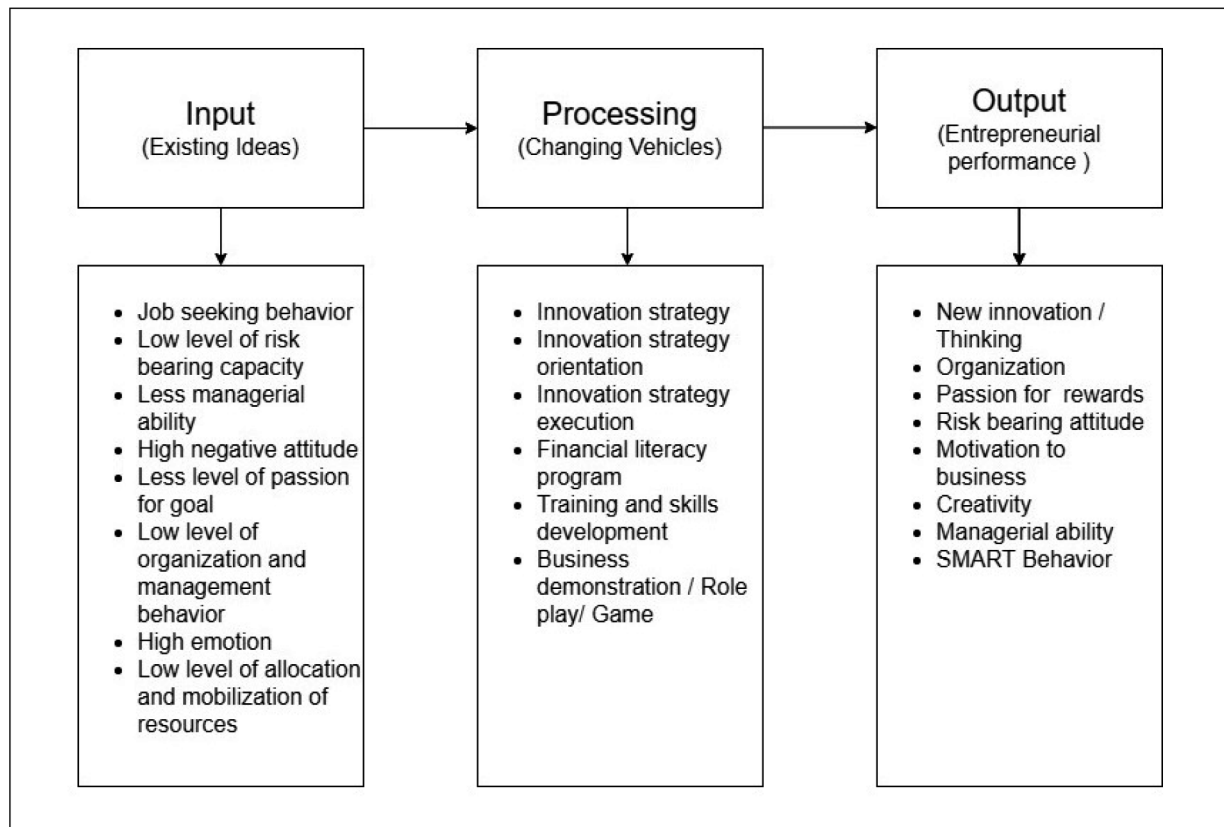
Based on the approach mentioned in section five, the challenges of entrepreneurship development Program in Nepalese MFIs are as follows:

- i. Lack of skilled human resources**
In microfinance sector, there is a lack of skilled human resources for the development of entrepreneurship. No microfinance institutions have adequate skilled manpower for the development of entrepreneurship.
- ii. Inadequate technical knowledge**
Technical knowledge is a vital for the development of entrepreneurship. Without technical knowledge of the product that they want to produce, they can't survive for long run. So, an entrepreneurship must have technical knowledge about the product that they want to produce. So, microfinance institutions can't afford to develop technical skill to their clients.
- iii. Inadequate financial resources**
Large amount of money should be invested for the development of entrepreneurship. MFIs have small amount of capital and their larger amount of financial resources depend on external borrowing. Their main business is to lend money and recover it. If, they invest their borrowing for entrepreneurship development, they face scarcity of fund for fulfilment of day to day business activities.
- iv. Inadequate political, economic, social, and technological (PEST) Analysis knowledge**
MFIs don't have the practice of PEST analysis. In Nepal, the business environment is highly volatile. A little projectable environment is required for the development of entrepreneurship.
- v. Inadequate vision of top leader**
BOD and top leaders of MFIs are more interested to invest more loans. Generally, loan portfolio and profits have positive correlation to each other i.e. if loan portfolio increases profits and rate of return also increases. For the development of entrepreneurship, top management must ready to invest in training and skill development activities which provide negative impact on profitability of MFIs.

Results/Outcomes

Proposed conceptual framework for entrepreneurship development program

Constructing on the mentioned methodology, literature review and the research gap, this study proposes a synergetic conceptual feamework on the causational relationship between entreprunership knowledge/ ideas (existing ideas), innovation strategy (change vechile), and improved knowledge (entrepreneurial performance) based on the conceptual lens of resources based view the firm/MFIs and knowledge based view.

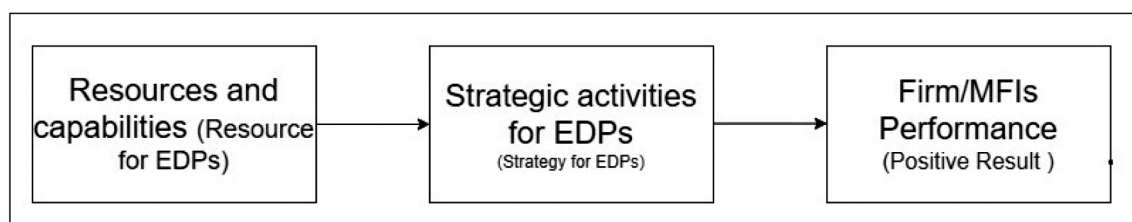


(Figure 2: Process of entrepreneurship development)

Entrepreneurship development is regular function of the top level management of microfinance organization. The success of any microfinance institutions is mainly depending on business development which is only possible through Entrepreneurship development program (EDPs). Proposed entrepreneurship development program (EDPs) framework/processes are as shown in figure 4.

Proposed relationship

Building upon the proposed conceptual framework and the literature, this study postulates that, the original three levels. Additionally, this study also suggests three propositions on the relationship between the greater dimension constructs of the proposed conceptual framework as below.



(Figure 3: Preliminary conceptual framework for entrepreneurship development)

Proposition 1 Microfinance institutions (MFIs) with high level of entrepreneurship development program (EDPs) approaches with capabilities and high level of strategic activities for EDPs will likely have high loan outstanding performance and high revenue generation.

Proposition 2 Microfinance institutions (MFIs) with high level of entrepreneurship development strategic and capabilities and low level of strategic activities for EDPs will likely have medium-low loan outstanding, medium income which directly affects sustainability.

Proposition 3 Microfinance institutions (MFIs) with high level of financial resources and high strategic and capabilities and low level of activities will likely have medium-high performance.

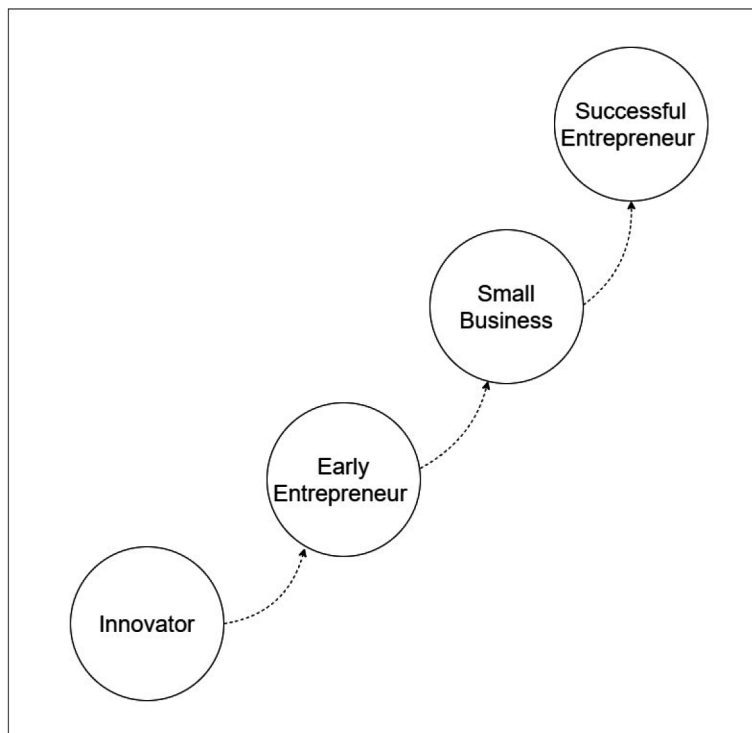
Proposition 4 Microfinance institutions (MFIs) with high level of creating environment of SMEs lending will

likely have high level entrepreneurial skills and high member's capacity to manage bigger loans.

Process of converting to successful entrepreneur

Nepalese microfinance institutions (MFIs) has been introducing micro enterprise loan for the graduate members who attained capacity to utilize and manage bigger income generationg activities. The loan size is dependes on the project and loan taking capacity of the members of group. The main objectives of micro enterprise program are: to create new employeement opportunities, to increase income of the family,to increase living standard, to increase production of local products by mobilizing local materials and human capital, and to enhance the existing efficiency of entrepreneurs. Nepalese MFIs introduced SMEs loan to their member for upgrading members business and build confidance and capacity to entrepreneurial behavior.

The criteria of MFIs for selection of member of micro enterprise loans. Capacity to manage bigger loans limit. Clients of MFIs received micro enterprise development and business developmemt training. They need to fulfill 90 percent of attendance in the group meeting. They should fully utilize of the previous loans and good track records regarding loan repayment and willing and able to attend group meeting and regularly deposit in saving account. The clients willing and able to give fixed collateral and cooperative behavior. MFIs gives them various capacity building and enterprises development training. They have separate planned and hidded curriculam for enterprise development. They have plays role as economic incubator and catalyst for change. Following figure clearly shows the entrepreneurial development process of clients of microfinance.



(Figure 4. Process of convert to successful entrepreneur)

Innovator

An innovator is a person who introduces new methods, ideas, or products. It is the very initial stage of entrepreneurship. It is the stage of raw idea coming in mind. Raw ideas come in mind after taking some skill development training, brainstorming, listning others' ideas, interaction with someone, etc.

Early entrepreneurship

When a person introduces new methods, ideas, or products, s/he tries to implement it. S/he makes a road map about what to produce, how to produce, sources of funds to meet the financial needs, how to sell, know how about the competitor, and find out the breakeven point. Early entrepreneurs can be benefited from the service provided by microfinance institutions. Microfinance institutions can provide small size of loan as seed fund in easy way, and they can provide other entrepreneurship development training to the early entrepreneur.

Small business holder

This is the stage after early entrepreneur. In this stage, a person establishes a small business enterprise. S/he

produces, price, sell, and get profit for the sustainability of the business. The business enterprise has small size of investment, small size of staff, produce in small size, and getting a little amount of profit.

Successful entrepreneur

When an entrepreneur get experience running a small business, the level of confidence simultaneously increases. The entrepreneur has a product that people have already believe and listened about. The entrepreneur has the access to commercial banks, s/he can borrow from commercial bank; can invest more for scale up the business. S/he has a large number of employees, can invest on research and development, and diversification of product line.

Conclusion and discussion

Entrepreneurship is an organized and systematic process of enhancing the motivation, knowledge and skills of the potential entrepreneurs. It is based on the belief that individuals can be developed, their outlook can be changed and their ideas can be converted into action through training. It develops first-generation entrepreneurs who on their own cannot become successful entrepreneurs. It is an endeavor in human resource development. It emphasizes on operational rather than academic training. It is regarded as a tool of industrialization and a solution to unemployment problem. Entrepreneurship acts as catalyst for developing industry and economic program for poverty alleviation which is in line with (Acharya, 2008). Entrepreneurship is not totally based on training. Much of it is personal counselling and support. Entrepreneurship is a way of living a professional life with certain venture i.e. wealth, interest and risk initiation. Entrepreneurship consists of creation of idea, investment, of money/capital and management of profit or value creation ideas/knowledge. It focuses identifying and searching opportunities for being self- employed and generating employment for more individuals which is in line with (Julien, 2002). Nepalese MFIs organized various entrepreneurship development related activities during the period of centre meeting and center chief workshop. They are playing vital role for client graduation through EDPs. It is universally proved that high entrepreneurial and skilledfull borrower take much more loan from MFIs than less entrepreneurial capable borrowers that's why s/he has more ideas, knowledge, business attitude, innovation, high risk bearing capacity and high level of taking and trackling a particular problem than less entrepreneurial borrowers. There is positive relationship between entrepreneurship development (EDPs) and sustainability of MFIs which is in line with (Raffa, 2018). Entrepreneurship development directly affects viability and sustainability of microfinance institutions through scale of loan disbursement, saving mobilization, profitability for further investment, business development, market analysis and complying with all rules and regulations provided by regulatory authority

Limitation and future directions for research

This study proposes a synergetic conceptual framework on the general relationship between microfinance and entrepreneurs development. This study is based on the conceptual lenses, past literature, the logical explanation, best practices and scholar's professional experience. The next step is to test if the proposed conceptual framework and the propositions are academically legit and empirically supported. There could be many limitations such as generalization of ability of the proposed conceptual framework when applied to specific industry or country setting. Further study can be done through the empirical ways to explore more evidences in the same field.

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Academic Procrastination's Antecedents and their Predictability on College Students in Kathmandu Valley

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ABSTRACT

The purpose of this study is to examine the predictability of self-efficacy, self-regulation on academic procrastination of undergraduate students in Kathmandu Valley. For this, first, the undergraduate students from management program in three different districts in Kathmandu valley were taken through convenience sampling. The sample were examined by using self-report scale viz. Academic Procrastination Scale, Self-Efficacy Scale, Self-Regulation Scale and Self-efficacy for self-regulation Scale, followed by correlation and hierarchical regression under cross-sectional research design and finally, hypotheses were tested. The study found negative bivariate correlation between academic procrastination, self-efficacy, self-regulation and self-efficacy for self-regulation. Among all the the predictors, self-regulation stood the strong predictor. This study tires to provide the general understanding of procrastination in the Nepalese context, with the view to support on determining the antecedents in developing the possible intervention program for overcoming procrastinatory behavior among undergraduate students.

Keywords: self-efficacy, self-regulation, self-efficacy for self-regulation and academic procrastination.

Introduction

Academic success is a vital component for career development. However, required educational processes like higher devotion in study, completing academic tasks, regular attending classes, submitting assignments, engaging in group discussion, submitting projects etc. for academic improvement are restrained by procrastinatory behaviour (Kandemir, 2014). In addition, Steel (2007), claimed that most college students procrastinate on a regular basis. Ellis and Kanus (1977) went further claiming that 70-95% of undergraduate students procrastinate, where 20-30% are severe procrastinators.

Academic procrastination can be understood as individual's scenario where s/he knows what is supposed to do, and perhaps even wanting to complete it, but failing to perform the activity within the expected or desired time-frame (Senecal, Koestner & Vallran, 1995 as in Wolter, 2003). Rothblum, Solomon and Murakami (1986), expressed it as postponing academic duties such as preparing for exam and delaying homework sometimes or constantly. In addition, Steel and Klingsieck (2016) defined as a "voluntarily delay an intended course of study related action despite expecting to be worse for delay" (p., 37).

Academic procrastination has been seen as an impediment to academic success because it decreases the quality and quantity of learning while increasing the severity of stress and negative outcome in student lives (Howell & Watson, 2007). Ellis and Kanus (1977) argued that, procrastinators are frequently unsure of their ability to complete task and consequently they delay starting the task in question. Further, procrastinators are more likely to engage in negative self-talk, especially regarding excuse making (Greco, 1985 as in McCown, 1986).

However, Chu and Choi (2005), reported that some students benefit from working under time pressures, and actively choose to procrastinate. In addition, undergraduate procrastinators experience less stress and illness than non-procrastinator early (but not later) in an academic semester (Tice and Baumeister, 1997). Further, Steel (2007) argued that, procrastinators are aware of negative outcomes.

In such academic debate, procrastination is viewed as both positive and negative phenomenon, however, majority of the researchers have connoted the procrastinatory behavior negatively and presented various antecedents but still needs higher scrutiny to determine the agreeability.

Problem Statement

Procrastination is a voluntary delay caused due to the deviation of intention from the regular course of action needed and is contrary to strategic delaying behavior (Klingsieck, 2013). Plethora of studies indicated various antecedents of procrastination, for example, reduced cognitive and meta-cognitive learning strategies (Howell & Watson, 2007; Wolter, 2003), low level of perseverance and high level of distractibility while working on a task (Demitt & Schoumenurg 2002), poor planning skills (Rabin, Fogel & Nutter, Upham 2011), restless and unpleasant emotional experience during superficial learning (Orpen 1998), low conscientiousness (Steel 2007; Eerde, 2003), low self-esteem (Solomon & Rothblum, 1984) and overall low level of self-efficacy for self-regulation (Klassen, Krawchuk & Rajani, 2008). However, consensus among these predictors are still difficult to ascertain. Besides, there is always the necessity for scientific community to examine these antecedents effectively in different context to determine the possible accurate predictors. In addition, most of these studies were conducted in a western context, and still have a discrepancy in validating in Nepalese students' context where the academic cultures are different. Further, undergraduate courses are relatively high in length with long contact hours and also demand stringent academic discipline for better performance, which further challenges students to stick within the courses and thus, might prone to procrastinatory behavior.

In such backdrop, this study aimed to identify the level of procrastinatory behavior among undergraduate students and examined the effect of mostly explored antecedents viz. self-regulation self-efficacy and self-efficacy for self-regulation (see, Steel, 2007) on procrastination using a cross-sectional strategy under retrospective research design.

The specific objectives are;

- To identify the nature of academic procrastination among the undergraduate students of management.
- To ascertain the level of self-regulation, self-efficacy and self-efficacy for self-regulation among the undergraduate students.
- To measure the predictability of self-regulation, self-efficacy, self-efficacy for self-regulation in academic procrastination.

Literature Review

Klingsieck (2013) a large body of research on the causes, correlates, and consequences of procrastination has been accumulating over the last 40 years. The aim of this paper is to provide a systematic characterization of the trends in procrastination research and to suggest future directions for research and practice. The systematic characterization comprises a comparison of procrastination to functional forms of delay (referred to as strategic delay observed the procrastination heuristic, by categorizing different standpoints of scholars on procrastination under four perspectives i.e. differential psychology, motivational and volitional, situational and clinical psychology perspectives. Each perspective has its own unique way to interpreting procrastination, for instance, differential psychology define procrastination as a personality trait, whereas motivational and volitional perspectives assume it as deficit of individual willpower to self-regulate, again, situational perspective highlight the lack of proper situational factor in a job and, finally, clinical psychology consider stress and anxiety as the prime factors for procrastination.

Since, an individual shows his/her behavior on the basis of how s/he interpret the encounter with the situation (Mackey & Perrewé, 2014). Thus, this study also focuses on examining an intrapersonal cognitive resources that link to the student's academic procrastinatory behavior.

Self-Regulation

Self-regulation is ability to regulate oneself i.e. capability to avoid distraction and continuously maintain cognitive engagement in work or in given task in a defined environment (Corno, 1986; Corno & Rohrkemper, 1985 as in Pintrich & DeGroot, 1990). In the learning context, it includes students' metacognitive strategies for planning, monitoring and modifying their cognition, students' management and control of their effort on classroom academic tasks, and actual cognitive strategies that student use to learn, remember and understand the material. (Pintrich & Groot, 1990). Thus, self-regulatory students *plan* what they want to accomplish, *monitor* progress, *control* change when things don't do as planned and then *reflect* on what worked (Gaumer, Soukup, Noonan & McGurn, 2015). Apart from this, Self-regulated learners are distinguished by their capability to encourage one-self. So, without such cognitive component it is difficult for an individual to translate intention into action.

Park and Sperling (2012) found that, deficit of self-regulatory behavior is likely to show procrastination. In the similar vein Ferrari and Emmons (1995) found self-control as the significant predictor of procrastinatory behav-

ior. In addition, procrastinators are weak self-regulator (Pychyl & Flett, 2013) and thus, unable to suppress the hedonic distraction (Silver & Sabini, 1981). Consistent with these rationales, it is theorized that;

H₁: There is significant negative relationship between self-regulation and academic procrastination

Self-Efficacy

Self-efficacy or perceived self-efficacy is defined as people's beliefs about their capabilities to produce designated levels of performance that exercise influence over events that affect their lives. Self-efficacy beliefs determine how people feel, think, motivate themselves and behave (Bandura, 1994). It influences the level of goal challenge people set for themselves, the amount of effort they mobilize, and their persistence in the face of difficulties (Zimmerman, Bandura & Martinez-Pons, 1992). And, it increases when student believe that ability can grow with effort and also believe in their ability to meet specific goal or task (Gaumer, Soukup, Noonan & McGurn, 2015).

Different studies stated that, weak perceived self-efficacy likely to cause procrastinatory behavior. In the study of Bakar and Khan (2016) self-efficacy is found to be significantly negatively correlated with academic procrastination. In the similar vein, Kandemir (2014) found, meaningful negative relationship between self-efficacy and academic procrastination, however missed predictability ($\beta = 0.01$, $P > 0.05$). Prior to this study, Klaseen et al. (2008) also claimed self-efficacy as the significant negative influencer to procrastinatory behavior. In addition, people believe to be less competent on tasks are prone to procrastination (Bandura, 1977; Haycock, McCarthy and Skay, 1998; Ki-amarsi and Abloghasemi 2014; Lay, 1992; Milgram, Marshevsky & Sadeh, 1995; Wolters, 2003). So it is necessary to be self-efficacious to reduce procrastinatory behavior. In the light of above findings, it is posited as;

H₂: There is significant negative relationship between self-efficacy and academic procrastination.

Self-Efficacy for Self- Regulation

Self-efficacy for Self-regulation is a belief in one's capability that endorse the perseverance to act effectively on given task under both favorable and unfavorable environments (Kalseen, Krawchuk & Rajani, 2008; Zimmerman, Bandura & Martinez-Pons, 1992). This endorsement or staying power is a key factor for explaining the procrastinating behaviour. (Kalseen et.al. 2008).

It is a belief on oneself to be able to regulate their mental deviation towards distractions and focus on desired goals. Failure to do so, leads to the gap between intention and action (Sliver & Sabini, 1981). In the study of Zimmerman, Bandura, and Martinez-Pons (1992), "self-belief of efficacy to strategically regulated learning plays an important role in academic motivation". In the similar vein, Kalssen et al. (2008), study found self-efficacy for self-regulation as significant predictor of procrastinatory behavior. Further Liu et al. (2020), showed the mediating effect of self-control between self-efficacy and academic procrastination. Moreover, Zhang eta al. (2018) stated the need of self-efficacy for self-regulation, which is likely to reduce the academic procrastinatory behavior. Consistent with these findings it is posited that;

H₃: There is significant negative relationship between self-efficacy for self-regulation and academic procrastination.

Conceptual Framework

From the reviews of extant literature, the conceptual framework was determined and presented in Figure 1. It tries to explain the possible effect of self-regulation, self-efficacy and self-efficacy for self-regulation on academic procrastination.

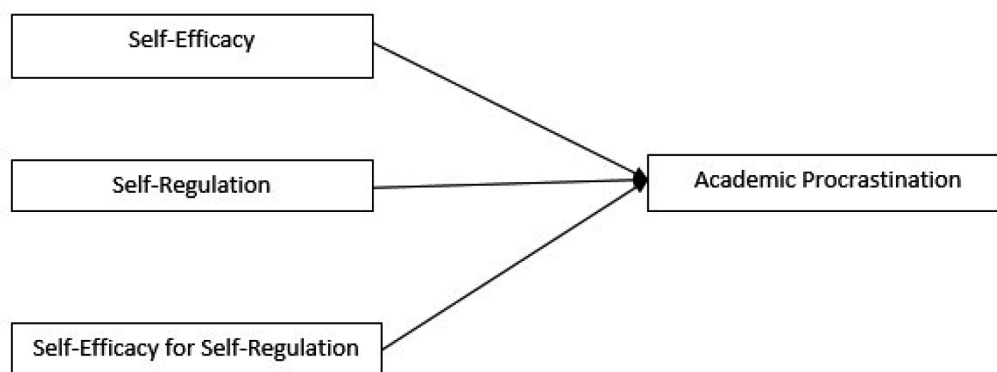


Figure 1 The relationship of predictor variables viz. Self-Efficacy, Self-Regulation and Self-Efficacy for Self-Regulation with a criterion variable i.e. Academic Procrastination.

Research Methods

Research Design

This study adopted cross sectional strategy following the retrospective research design due to difficulty to implement experimental design. Even, Waschle (2014) argued that, “academic procrastination cannot easily be investigated experimentally, because theoretically, it is defined as irrational postponing (Steel, 2007) and it would make no sense, for example, that a researcher request postponing from the participants in one experimental condition, because in that cases irrationality of the observed behaviour could not be assumed.”

The data were collected from the undergraduate students who are studying in four various management colleges in three different districts in Kathmandu Valley using convenience sampling with the response rate of 93%. Besides, to solve the problem of biased extremity and outliers under convenience sampling, the sample size was increased to 391 than the usual standard of 384 units prescribed by Cochran (1977), and is further supported by Smith (2011) who noted that, increase in sample size increases the power of convenience sampling technique.

Further, to minimize the response bias, consent was taken beforehand from the participants and briefly informed about the topic and procedure to be followed in fulfilling the questions requirement in each class. Any queries asked in the process of fulfilling the questionnaire were immediately answered. The questionnaire was subjected to complete in 30 minutes, so each participants was given adequate time in submission process.

Sample and Respondent Profile

The sample include 220 females and 171 males with a mean age of 20.69 years with the standard deviation of 1.098.

Table 1

The table presents frequency of student participants in terms of gender and district category with respect to age groups.

Items		Gender		District			Total
		Male	Female	Kathmandu	Bhaktapur	Lalitpur	
Age	18-20 years	59	111	68	71	31	170
	Above 20 Years	112	109	87	62	72	221
Total		171	220	155	133	103	391

Questionnaire

Standard questionnaires were used as the measurement tools for measuring procrastination (Lay's procrastination Scale, 1986), self-efficacy (Self-Efficacy Questionnaire, Gaumer, Soukup, Noonan & McGurn, 2016), self-regulation (Self-Regulation Questionnaire, Gaumer, Soukup, Noonan & McGurn, 2015), and self-efficacy for self-regulation (Self-Efficacy for Self-Regulation, Zimmerman, Bandura & Martinez-Pons, 1992).

Academic procrastination scale (Lay, 1986). This scale contains 20 items, self-report measure of academic procrastination. The scale was converted into 5 point scales to produce higher item variance and greater scale reliability. The items are scored on a Likert-type scale ranging from 1 (Totally false for me) to 5 (Totally true for me) with the possible maximum score of 100. Towards the direction of high procrastination, items included, “I often seem to end up my personal shopping at the last minute” and “My assignments remain undone even in its submission date”. Some items were rephrased for the better understanding to the undergraduate students. The measure has a Cronbach alpha coefficient of 0.82 (Lay, 1986) and retest reliability of 0.80 (Ferrari, 1989). Besides, Lay (1986), found that, individuals who scored high on this scale were more likely than individuals who scored low to delay the return of postage-paid surveys from an airport and from a college campus. Thus, maintaining discriminative and predictive validities. However, this study removed one question to maintain the reliability score above 0.7.

Self-Efficacy Questionnaire (Gaumer, Soukup, Noonan & McGurn, 2016). This scale is designed to measure a student's proficiency in two essential components of self-efficacy, viz. belief in ability can grow by effort and belief in own ability. The 13 items within the scale, are scored on Likert-type scale ranging from 1 (Totally false for me) to 5 (Totally true for me) with the possible maximum score of 65. Some items were rephrased for the better understanding to the undergraduate students. The items include, “If practice every day, I could develop just about any skills” and “My ability grows with effort”. The questionnaire was found to be reliable with Cronbach alpha score of 0.90 (Gaumer et al., 2016).

Self-Regulation Questionnaire (Gaumer, Soukup, Noonan & McGurn, 2015). This scale is developed to measure a student's proficiency in planning, monitoring, controlling and reflecting as the components of self-regulation. The 22 items within the scale are scored on Likert-type scale ranging from 1 (Totally false for me) to 5 (Totally true for me) with the possible maximum score of 110. The items include, "I can usually estimate how much time my homework will take to complete" and "I think about how well I'm doing as my assignment". The overall self-regulation questionnaire was found to be highly reliable with Cronbach alpha coefficient of 0.891 (Gaumer et al., 2015)

Self-Efficacy for Self-Regulation Questionnaire (Zimmerman, Bandura & Martinez-Pons, 1992). The score is designed to measure the students' beliefs in their capability to implement self-regulation strategies. The 11 items within the scale are scored on Likert-type scale ranging from 1 (Totally false for me) to 5 (Totally true for me) with the possible maximum score of 55. The item includes, "I can always finish homework assignments by deadlines" and "I can motivate myself to do college works". The items which were in question format were transformed into statements for effective understanding of undergraduates and also the scale was converted into 5 point scales to produce higher item variance and greater scale reliability. Previous studies have found the measure to display strong reliability and validity properties (Klassen, et al. 2008; Zimmerman et al., 1992). For measurement of the constructs, items were summed up after adjusting reverse items and total score was used for further analysis.

Data Analysis and Discussion

The descriptive statistics with the reliability and correlation coefficient are presented in the Table 2. The average score of the variables lies in-between 2.94 to 3.96, with the maximum score in self-efficacy. In addition, the reliability coefficient of the measures used in the study were in the range of 0.7(Nunnally, 1978).

Table 2

*The table presents the Means, Standard deviations (SD), Skewness, Kurtosis and correlation of main variables (N=391, **P<0.01). The table also shows the Cronbach alpha value with the number of items.*

Variables	Mean (SD)	Cronbach- α	1	2	3	4
1. Self-Regulation	3.475(0.480)	0.729 (19)	1			
2. Self-Efficacy	3.953(0.624)	0.795 (22)	(0.565)**	1		
3. Self-Efficacy for Self-Regulation	3.335(0.695)	0.862 (13)	(0.612)**	(0.556)**	1	
4. Academic Procrastination	2.948(0.502)	0.824 (11)	(-0.543)**	(-0.193)**	(-0.485)**	1
Skewness			0.010	-0.829	-0.032	0.199
Kurtosis			-0.222	0.649	-0.441	-0.094

Further, the Pearson bi-variate correlation was examined after confirming the normality distribution suggested by Muthen and Muthen, (2017) where, skewness and kurtosis absolute value should be less than 1.

The analysis shows that, academic procrastination is significantly negatively related to each of the three predictor variables, suggesting, student with higher self-regulation, higher self-efficacy and higher self-efficacy for self-regulation were less likely to show delay in academic behaviour.

Since the bi-variate analysis has certain limitation of being spurious, even though it is statistically significant (Sharma, 1997), hierarchical multiple regression was further used to examine the relationship and effect of predictors on criterion variable. This analysis examined how self-regulation, self-efficacy and self-efficacy for self-regulation predicted academic procrastination. In addition, it also examined whether adding of predictors step by step changes the strength of the model predictability or not. Moreover, this analysis was selected so that the ability of self-regulation, self-efficacy and self-efficacy for self-regulation could be evaluated separately.

Table 3

The table presents the hierarchical regression analysis, where variables viz. self-regulation, self-efficacy, self-efficacy for self-regulation are the influencing variables and academic procrastination is the outcome variable. The reported values are intercepts and slope coefficient of the independent variables with the t-statistics in parenthesis and ** show $P < 0.01$ level of significance with the standardized regression in italics.

Model	Intercept	Self-Regulation	Self-Efficacy	Self-Efficacy for Self-Regulation	R ²	F-Value	P-Value
1	4.919 (31.505)**	-0.567 (-12.739)** <i>-0.543</i>			0.293	162.274	0.000
2	4.732 (28.749)**	-0.665 (-12.478)** <i>-0.636</i>	0.133 (3.250)** <i>0.166</i>		0.310	88.415	0.000
3	4.677 (29.73)**	-0.511 (-9.064)** <i>-0.490</i>	0.216 (5.24)** <i>0.269</i>	-0.242 (-6.249)** <i>-0.335</i>	0.371	77.739	0.000

The predictability of the models get increased from 29.3% to 37.1% after adding the predictors one by one in final model. The result shows that all the independent variables have significant influence on academic procrastination, however, the 62.9% of variance is explained by error factors.

The following model is ascertained from the study:

Academic procrastination = $f(\text{Self-efficacy, Self-regulation, Self-efficacy for self-regulation})$, Where $f > 0$. i.e. $Y = 4.677 - 0.511 X_1 + 0.216 X_2 - 0.242 X_3 + \varepsilon$. (Where, $Y = \text{Academic procrastination}$, $X_1 = \text{self-regulation}$, $X_2 = \text{Self-efficacy}$ and $X_3 = \text{Self-efficacy for self-regulation}$ and $\varepsilon = \text{error factor}$)

The model suggested that, there is a positive significant relation between self-efficacy and academic procrastination, which means, procrastinators tend to be self-efficacious, which reject the research hypothesis (H_2). Besides, the improvement in self-regulation and self-efficacy for self-regulation minimizes the degree of academic procrastination level supporting the alternative hypotheses (H_1 & H_3). Moreover, it also suggests that, self-regulation and self-efficacy for self-regulation are the stronger and significant predictors of academic procrastination relative to self-efficacy.

Discussion

This study was conducted to examine the effect of self-regulation, self-efficacy and self-efficacy for self-regulation on academic procrastination among undergraduate students in Kathmandu Valley. The first research objective of this study is to identify the nature of academic procrastination among the undergraduate students of management, where the finding suggested that, undergraduate average procrastination level is less than procrastination scale's mid-point of 3, thus, stating as moderate procrastinators. This finding is tallied with other research studies on procrastination behavior of undergraduates conducted by scholars (Klaseen & Kuzucu, 2009). However, this finding contradicts with most of the American and European nations studies, where higher tendency of procrastinating behavior exhibit by the undergraduate students (Day, Mensink & O'Sullivan, 2000; Ferrari, O'Callaghan, & Newbegin, 2005; Harriott & Ferrari, 1996; Ferrari, Díaz-Morales, O'Callaghan, Díaz, & Argumedo, 2007 as in Bakar & Khan, 2016).

As per the second objective, the level of self-efficacy, self-regulation and self-efficacy for self-regulation are high (i.e. above the scale mid-points) among undergraduate students, suggesting that they have the strong belief in their capability and strategically utilize them for their effective academic performance.

In the case of third research objective which is the core of this research study, where the relationship between the criterion variable (academic procrastination) with predictors (self-efficacy, self-regulation and self-efficacy for self-regulation) were examined. The correlation between them, found to be strongly negative and significant. This suggested that, the degree of procrastination is highly related with the predictors and may vary with the level of self-efficacy, self-regulation and self-efficacy for self-regulation in opposite direction. This finding is consistent with the various studies of procrastination. (Bakar & Khan, 2016; Kandemir, 2014; Klaseen, et al. 2008; Park

& Sperling 2012; Steel, 2007; Wolter, 2003; Zimmerman et al., 1992).

As for the relative predictability, the study suggested that, unit standard deviation increase in level of self-efficacy will tend to increase the procrastination by 0.269 standard deviation when other things remain same i.e. confidence in students to execute the academic task may lead to the procrastinatory behaviour. However, this finding contradicts with major study findings in procrastination (Bakar & Khan, 2016; Klaseen et al., 2008; Steel, 2007; Wolter, 2003; Zimmerman et al., 1992), where they stated that, students with a greater level of self-efficacy may also start tasks in timelier manner. But, this study result suggests that, even though the level of self-efficacy is high in a student, s/he may procrastinate. Besides, Bandura (1986) stated that, “efficacy beliefs are multifaceted and contextual, but the level of generality of the efficacy items within a given domain of functioning varies depending on the degree of situational resemblance and foreseeability of the task demands” (p. 13). Therefore, it can perhaps be student confidence in their ability to study, however, deviated from intention to action process. In addition, since the study is based on self-report data, so, as the Freud (1953) stated, when individual’s ego gets threatened, s/he may show unreal or unexpected responses.

There is significant and strong negative relation between academic procrastination behaviour and self-regulation. The strongest model ($R^2 = 37.1\%$) among three models in this study, stated that, unit standard deviation increase in self-regulation likely to reduce the 0.490 standard deviation of procrastination when other things remain same. Thus, suggesting the need of self-regulation for the reduction of procrastinating behaviour in academic tasks. This finding is consistent Waschle et al. (2014), where they stated that, inability to use cognitive learning strategy induces the procrastinatory behavior. Besides, Steel (2007) in his meta-analytic review concluded that ultimate need of self-regulation by describing procrastination as “quintessential self-regulatory failure” (p. 65). However, Bandura (1993) suggested that, “Self-regulatory skills will not contribute much if students cannot get themselves to apply them persistently in the face of difficulties, stressors and competing attractions” (p. 136).

Similar to the self-regulation, self-efficacy for self-regulation also shows, strong negative relation with academic procrastination. The model suggested that, unit standard deviation increase in self-efficacy for self-regulation likely to minimize the procrastinatory behaviour by 0.335 standard deviation when other things remain same. Thus, suggesting that “staying power” in own belief and act strategically reduces the procrastination behaviour of an individual Bandura (1998). In addition, Zimmerman, et al. (1992), claimed that, student self-belief of efficacy to strategically regulate learning play an important role in academic self-motivation and are more confident about mastering academic subjects and attain higher academic performance (p. 674). Moreover, self-efficacy for self-regulation is a stronger predictor of the tendency to procrastinate than other motivation variables (Kalseen, et al. 2008).

Conclusion

Academic procrastination is a major impediment for academic and career development (Kandemir, 2014). Majority of students procrastinate at least occasionally (Ellis & Kanus, 1977). Therefore, this study tried to examine the relationship between procrastination and its possible predictors. This study exhibited the significant negative bi-variate correlation between academic procrastination and self-efficacy, self-regulation and self-efficacy for self-regulation. The strongest model under hierarchical regression equation, suggested that, 37.1% variations in criterion variable (i.e. procrastination) is explained by the predictors (i.e. self-efficacy, self-regulation and self-efficacy for self-regulation). Further, the model suggested, that, procrastination caused by the positive change in self-efficacy (contradictory to prior research studies) and negative change in self-regulation and self-efficacy for self-regulation (consistent with prior research studies). In nutshell, the findings revealed that self-efficacy, self-regulation and self-efficacy for self-regulation are significant determinants of academic procrastination among undergraduate students in Kathmandu Valley.

Future Direction

Since procrastination is ubiquitous, its effective interpretation and analysis are utmost necessary to tackle the delaying behaviour, especially in academic sectors. However, the consensus in single definition is hard to be found, but most agreed regulatory failure as one of the major causal factor of delaying behaviour. This study also tallied with the previous findings. Apart from that, this study can also be useful in determining the antecedents for developing an intervention program to overcome the procrastinatory behavior among undergraduate students. For the future researcher, it would be better to explore the self-regulation construct’s constituents under behavioral indices rather than psychometric measures for its effective operationalization. Moreover, ontological clarification and mixed methods analysis may contribute to enhance the comprehending ability of procrastinatory behaviour.

Acknowledgment

The author is grateful to Mr. Keshab Khatri Chettri for his support and also to all the anonymous referees of the journal for their valuable suggestions to improve the quality of this article.

Funding

There has been no funding for this work that could have changed its outcome.

Author's Conflict of Interest

The author of this paper has no conflict of interests associated with this publication.

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Fortifying Trust, Security, and Privacy in Online Trading Systems: Unlocking their Paramount Significance

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ABSTRACT

The purpose of the study is to examine the impact of perceived security and perceived privacy on customers trust to accept the use online trading system in an extended form of the tam model with TAM constructs. This research paper tries to study the impact of security and privacy perceptions on customer's trust, also the impact of perceived usefulness and perceived ease of use on customer's intention to use online trading system. For the purpose of the study total of 201 samples were collected through the online survey and the data so collected was analyzed descriptively in SPSS version 24, and the seven hypotheses were tested using PLS-SEM in SmartPLS. The path modeling through PLS indicated that perceived ease of use and privacy has no significant positive relation with behavioral intention and trust respectively but all others hypothesis were accepted and the research showed that trust plays an important role for customers intention to use online trading system.

Keywords: Perceived ease of Use, PLS-SEM, Behavior Intention, Trust, Perceived Usefulness, Privacy, Security, TAM

1. Introduction

The Internet has fundamentally altered the way banks and financial institutions provide online financial services. Stock market related documents issuing organization, service providers, and investing partners are progressively selling, trading, and dealing securities services through the Internet. Using Internet-based order submission protocols, investors may now buy or sell shares or stocks from anywhere. The advancement in the technology has made possible for online stock trading by enabling stock brokerages to offer financial services and products via internet at a low cost (Lee & Ho, 2003). In recent years, online trading has grown at an exponential rate.

Online trading is buying and selling of the stocks be its equity, promoter share, debentures through a brokerage's web and internet supported trading systems (Rameshbhai, 2020). Online share trading began in 1969 with the development of system known as electronic communications networks (Hur, 2016). Online brokers can offer lower fees since processing orders electronically is less expensive and more efficient (Muniandy, 2006).

Online trading services have infiltrated the stock market and are crucial in facilitating electronic trading of shares and contracts (Lee & Ho, 2003; Ramayah, Rouibah, Gopi, & Rangel, 2009). Online trading has emerged as an unquestionable choice for enhancing existing trade systems (Gopi & Ramayah, 2007). Retail investors can trade items in many financial marketplaces using online financial trading platforms. These websites provide direct access to numerous financial markets' options, futures, foreign currencies, indices, stocks, and bonds. Nowadays, online trade is fully established and highly developed.

Davis (1989) and Davis et al. (1989) developed the technology acceptance model (TAM), which has become extensively used to characterize the adoption and use of information technologies (IT). TAM believes that two variables will impact user adoption of any technology: perceived utility and perceived ease of use. TAM, which is founded on the theory of reasoned action (TRA) (Fishbein and Ajzen, 1975), claims that user perceptions of usefulness and ease of use impact behavioral intention to use the system. Researchers investigated how investors' perceived security and privacy in relation to internet trading systems influence retail investors' adoption intentions. The major goal of the study is to determine the influence of perceived security, perceived privacy, perceived simplicity of use, and perceived usefulness on customer trust, while the secondary goal is to determine the impact of trust on behavioral intention to use an online trading system.

2. Theoretical background

2.1 The technology acceptance model

The TRA (Fishbein and Ajzen 1975), a model widely employed in social psychology that asserts that a person's conduct is a result of their behavioral intention, was applied to the IS domain by Davis (1989). A development of the TRA is the theory of planned behavior (TPB; Ajzen, 1988, 1991). Similar to TRA, it contends that attitude and subjective norms both influence behavioral intention, but with the addition of perceived behavioral control. TAM (Davis, 1989) states that attitudes toward the use of a particular technology are influenced by both perceived utility and perceived ease of use, whereas attitudes and perceived usefulness predict people's behavioral intentions to utilize the technology. The most crucial criteria in IS adoption, according to TAM, are perceived usefulness and perceived ease of use. According to Davis (1989, p. 320), perceived usefulness is "the extent to which a person believes that using a particular system will improve his or her job performance," while perceived ease of use is "the extent to which a person believes that using a particular system will be free of physical and mental effort."

2.2 Literature Review

2.2.1 Perceived Security

Security is a threat that creates a "circumstance, condition, or event with the potential to cause economic hardship to data or network resources in the form of destruction, disclosure, or modification of data, denial of service, and/or fraud, waste, and abuse" (Kalakota and Whinston, 1997). Security is ability to protect data from prospective threats or to ensure that a framework can counteract attacks that might jeopardize information and administrations (Damghanian, Zarei, & Kojuri 2016).

With regard to the aforementioned definitions, the online trading system security concern can arise from the possibility of data modification by a third party, a lack of protection of the data provided to the system, and the duplication of the data provided, as well as the supplanting or replacing of the original data by new data that may be false and can be used against the customers. Furthermore, as they affect how customers perceive security, factors like encryption, guard, confirmation, and authentication need to be considered as antecedents of perceived security (Chellappa and Pavlou, 2002). With the advent of web-based commercial transactions perceived security risk problems have assumed a more significant prominence (Mann & Sahni 2013).

2.2.2 Perceived Privacy

Information privacy, according to Westin (1968), is "the ability to control how an individual's personal information is acquired and used." Many studies describe privacy in terms of information, referring to it as "the ability of the individual to personally control the information about oneself" (Awad & Krishnan, 2006). Concerns about privacy, internet data use, security, and unauthorized uses of personal information are all on the increase. Customers are hesitant to provide personal information when websites request it because they are concerned about how their data will be used as well as how information transmitted over the internet may be intercepted and used inappropriately.

Because of this, online customers are hesitant to provide any personal or financial information to firms for fear that these companies would use it inappropriately or leak it to other groups (Lim, 2003). Privacy is an essential component of online transactions, as evidenced by several reviews of m-commerce literature, since many customers have expressed worry about privacy (Au & Kauffman, 2008). Customers may be concerned about the service provider's conduct, since they may take advantage of the information offered on the web platform, resulting loss of customers' sensitive information (Xin, Techatassanasoontorn, & Tan, 2013).

Customers may find themselves in insecure situation because they lack control over financial transactions and procedures, and they may believe that their privacy is under threat due to the presence of third parties and mediating parties (Chandra, Srivastava, & Theng, 2010). Other empirical research have found that consumers' adoption of online services is influenced by perceived privacy (Doolin et al., 2005; Mukherjee and Nath, 2007). As a result, this study try to understand if privacy concerns influence the investing decisions of online trading consumers.

2.2.3 Trust

Mayer, Davis, and Schoorman (1995) assert that trust is a behavioral reaction to another person's perceptions of their qualities. Trust becomes a key factor since there is more uncertainty in a virtual transaction than there is in a regular one. One of the main reasons why customers avoid making online purchases is a lack of trust and faith in online businesses (Hoffman, Novak, & Peralta, 1999; Pavlou, 2003). For the claim that PT impacts the intention to utilize online stock trading services, Roca et al. (2009) provided empirical support. The study found that when e-investors' expectations regarding the system's perceived security are satisfied, their trust is increased and they

are more likely to use these online services, especially if the system is successful in achieving their goals.

Trust may be used as a tactical variable, in accordance with Abroud (2012), to lessen the risk associated with conducting business in an uncertain environment. Similar findings have been made by Lee (2009a), Abroud (2012), Abroud et al. (2013), Bhuvanam and Mohan (2015), and Maziriri, Mapuranga, and Madinga (2019). These studies found that investor PT had a significant positive impact on the desire to invest in online trading platforms. Based on an online trading system's reliability and predictability, Abroud (2012) and Lee (2009a) determined PT. Therefore, the goal of this study is to look at how trust affects customer behavior and motivation to utilize an online trading system.

2.3 Hypothesis Development and Research Model

The TAM model is extended in the study model shown in Figure I, which takes consumer trust into account as a factor in determining whether or not users would use the online trading service. As shown in the Figure, trust serves as an exogenous variable to assess how users' acceptance of the online trading system, as well as their perceptions of its value and usage, is influenced.

2.3.1 Perceived Security and Perceived Privacy

Perceived protection is defined as "a measure of the degree to which consumers defend themselves from these risks" (Yousafzai, Pallister, & Foxall, 2003). In their study titled "Trust, Risk, Privacy, and Security in e-Commerce," Pennanen, Kaapu, and Paakki (2006) found that security had a direct impact on trust. Customers worry that their private financial information may be exposed online and used for illegal purposes. Gervy and Lin (2000) determined that security was only one factor in customers' willingness to trust e-commerce transactions.

Amoroso and Magnier-Watanabe (2012) found in case of mobile wallets, the privacy element has the upper hand in creating trust. According to Kelly and Erickson (2005), the introduction of new technologies and the changing nature of business transactions have made privacy a significantly more essential issue. Many works on privacy have emphasized the importance of privacy in preserving consumer trust. For example, Belanger, Hiller, and Smith (2002) established a link between trust and privacy policy and vendor privacy statements.

H_1 : Perceived security has a positive effect on perceived trust.

H_2 : Perceived privacy has a positive effect on perceived trust.

2.3.2 Perceived Ease of Use and Perceived Usefulness.

Ajzen and Fishbein (1980) assert that perceived usefulness develops when an investor believes that using a certain online stock trading will be beneficial. According to Abroud (2012), investors would make the most of technology to the fullest extent if they realize how internet trading may help them and improve their productivity. The majority of studies found evidence in favor of a positive considerable impact of PU of technology on the propensity to embrace online stock trading (Muniandy, 2006; Hemalatha, 2019).

Many studies have discovered that the PEOU of the system or technology has a favorable considerable effect on investors' adoption intention of online stock trading (e.g., Loh & Ong, 1998; Abroud et al., 2013; Bhuvanam & Mohan, 2015; Hemalatha, 2019). The key benefits of online stock trading, according to Bhuvanam and Mohan (2015), are lower trading fee charges, quicker trade execution, and more flexibility in the types of transactions investors choose to do. An earlier study that looked at the relationship between PEOU and intention in the context of online stock trading came up empty.

Perceived utility and trust in social media connections are connected, according to earlier empirical studies (Mallat, 2007). Similar correlations exist between perceived utility and inclination to adopt technology (Dewan & Chen, 2005; Au & Kauffman, 2008). Perceived usability and trust are linked, as well as perceived usability and intention to use (Zhang & Mao, 2008; Schierz, Schilke, & Wirtz, 2010), according to prior research (Schepers & Wetzels, 2007; Bauer, Reichardt, Barnes, & Neumann, 2005: 189). Such collaborations have also received support from the UTAUT (Venkatesh & Davis, 2000).

H_3 : Perceived usefulness has a positive effect on intention to use online trading services.

H_4 : Perceived ease of use has a positive effect on intention to use online trading services.

H_5 : Perceived ease of use has a positive effect on perceived trust.

H_6 : Perceived usefulness has a positive effect on perceived trust.

2.3.3 Trust

Trust is a behavioral reaction to another person's perceptions of their qualities, claim Mayer, Davis, and Schoorman (1995). Because there is more uncertainty in a virtual transaction than there is in a regular one, trust becomes

essential. One of the main reasons why customers avoid making online purchases is a lack of trust and confidence in online businesses (Pavlou, 2003). According to earlier research, PT is closely related to the uptake of internet stock trading.

For the claim that PT affects the intention to utilize online stock trading services, Roca et al. (2009) provided empirical support. Using a modification of the TAM model that includes trust, Setyanti and Kusuma (2012) explored the impact of trust on the intention to use online banking in the case of Indonesia and found that trust is the main driver of this intention. The majority of research (Mngongose, 2017; Karma & Ibrahim, 2014; Liu, Min, & Ji, 2009) have found that adoption intention has a positive impact on trust.

H₇: Perceived trust has a positive effect on intention to use online trading services.

2.3.4 Research Model

The current study's model was informed by earlier research (Carlos Roca et al., 2009), which examined the effects of trust on behavioral intentions to utilize online trading systems.

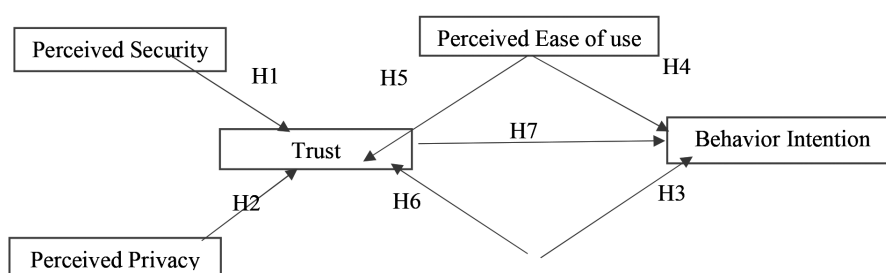


Figure 1 Research Model

3. Research Methodology

3.1 Instrument Development

In this analysis, we employed previously validated scales to verify the validity and reliability of the instruments used in our research model. All concepts were scored on a seven-point Likert scale that ranged from “strongly disagree” to “strongly agree.” All of the elements were culled from earlier studies. Davis (1989)’s earlier work served as the inspiration for the items measuring evaluated usefulness and perceived ease of use. The perceived security and privacy scales were measured using items taken from Cheung and Lee (2001), O’Cass and Fenech (2003), and Flavia’n and Guinal’u (2006). Both Koufaris and Hampton-Sosa (2004) and Jarvenpaa et al. (2000) provided the trust scales. Bhattacharjee’s (2001) earlier work served as the basis for the items assessing continuing intention. All the items for the constructs were modified to match them according to the sense of online trading system.

3.2 Data collection

With the use of Google Forms, a survey was performed online for the study’s purposes, and some data were also gathered offline by asking participants to rate a topic on a 7-point Likert scale. The internet platform was used to gather 201 samples in total, while physical form filling was used to acquire 40 samples. The research questionnaire was divided into two sections, the first of which asked about the respondents’ age, gender, education, and age group as well as their demographics, and the second of which asked about the study’s constructs (trust, perceived security, perceived privacy, perceived ease of use, and perceived usefulness).

3.3 Data Analysis Method

The seven hypotheses were investigated using PLS-SEM in SmartPLS, and the data from the respondent surveys was analyzed descriptively in SPSS version 24. For the purpose of researching theory creation and causal model prediction, PLSSEM is based on a composite factor model (Hair et al., 2011). The structural model and the measurement model make up the PLS-SEM model. In the first, latent variable dependability and validity are examined (Ringle et al., 2020). In the latter, latent variable path analysis is necessary to examine the impact and interactions of latent variables (Hair et al., 2017).

PLS-SEM is a causal-predictive method that is comparable to SEM and is more effective at determining the causes of target structures (Hair et al., 2017). While requiring a lower sample size, it allows for a more thorough knowledge of intricate structural measures and route models (Hair et al., 2017).

4. Data Analysis and Result

4.1 Demographic Characteristics

Table 1. *Demographic profile of the respondents*

Demographic variable	Category	Frequency (n = 223)	%
Gender	Male	115	51.6
	Female	108	48.4
Age Group	18-25	77	34.5
	26-35	96	43.0
	36-45	38	17.0
	46-55	12	5.4
Education	High School	50	22.4
	Bachelors	98	43.9
	Masters	67	30.0
	Above Masters Level Education.	8	3.6
Employment Status	Student	58	26.0
	Employed	79	35.4
	Self Employed	44	19.7
	Unemployed	42	18.8
Average Investment			
	up to 2 lakhs	94	42.2
	2 to 5 lakhs	79	35.4
	5 to 10 lakhs	43	19.3
	Above 10 Lakhs	7	3.1

4.2 Measurement Model

Using SmartPLS 4.0, structural and measurement models were both tested. The measuring model's convergent and discriminant validity was examined. Factor loadings, Cronbach's alpha, composite reliability, and average variance extracted were used to assess convergent validity (Fornell and Larcker, 1981; Tenenhaus et al., 2005). According to Hair et al. (2017), convergent validity requires that the outer loading of all items be greater than 0.7, the composite reliability be greater than 0.7, and the average variance extracted (AVE) be bigger than 0.5.

The results fulfilled the required standard, as shown in Table 2. Two items from the areas of Behavior Intention (BI) and Privacy (PRV) were also removed. When evaluating measurements that are not intended to be connected with one another and are unrelated, the heterotrait-monotrait (HTMT) criterion is utilized (Hair et al., 2017). The HTMT criterion is more stringent when calculating the average correlations of the indicators across constructs than other popular techniques, such as cross-loading (Hair et al., 2017). Henseler et al. (2015) said that discriminant validity must be less than 0.90 to be considered acceptable, and Table 3 demonstrates that discriminant validity is really established.

Table 2. *Convergent validity test results*

Variables	Outer Loading	CA	CR	AVE
BI1	0.892			
BI2	0.795	0.748	0.788	0.664
BI3	0.752			
PEOU1	0.863			
PEOU2	0.882	0.822	0.827	0.738

PEOU3	0.83			
PRV1	0.88			
PRV2	0.915	0.808	0.914	0.716
PRV4	0.732			
PU1	0.892			
PU2	0.828	0.871	0.88	0.721
PU3	0.847			
PU4	0.829			
SEC1	0.898			
SEC2	0.892			
SEC3	0.856	0.901	0.904	0.771
SEC4	0.865			
TRU1	0.868			
TRU2	0.861	0.868	0.877	0.715
TRU3	0.818			
TRU4	0.836			

Table 3 Discriminant validity heterotrait-monotrait (HTMT) criterion

Variables	BI	PEOU	PRV	PU	SEC	TRU
BI						
PEOU	0.463					
PRV	0.201	0.091				
PU	0.567	0.492	0.175			
SEC	0.055	0.045	0.533	0.067		
TRU	0.458	0.257	0.202	0.334	0.377	

4.3 Structural Model

Prior to analyzing the study's hypotheses, we first investigated the issue of collinearity in the research regression to ensure that it was free of bias and that the independent variables in the regression model were not connected. The variance inflation factor (VIF) scores must be checked before assessing the structural model as a consequence. According to Table 4, which shows that all of the VIF scores for the variables are less than 3.3, multicollinearity is not a possibility (Hair et al., 2017).

Table 4. Variance inflation factor (VIF) results

	BI	PEOU	PRV	PU	SEC	TRU
BI						
PEOU	1.225					1.21
PRV						1.293
PU	1.269					1.232
SEC						1.264
TRU	1.108					

Table 5. Structural Model and Hypothesis Testing

Hypothesis	β	Standard deviation	T statistics	P values	Decision
PEOU \rightarrow BI	0.174	0.067	2.589	0.010	Supported
PEOU \rightarrow TRU	0.121	0.066	1.836	0.066	Rejected
PRV \rightarrow TRU	-0.093	0.07	1.333	0.182	Rejected
PU \rightarrow BI	0.327	0.065	5.023	0.000	Supported
PU \rightarrow TRU	0.251	0.068	3.698	0.000	Supported
SEC \rightarrow TRU	0.284	0.067	4.241	0.000	Supported
TRU \rightarrow BI	0.255	0.063	4.038	0.000	Supported

Table 5 concluded the structural model and hypothesis testing, where security has positive impact on the trust ($H1: SEC \rightarrow TRU, \beta: 0.284$ and $p\text{-value}: 0.000$), at the same time there is no significant impact of privacy aspect on the trust of the users of the online trading system ($H2: PRV \rightarrow TRU, \beta: -0.093$ and $p\text{-value}: 0.182$), similarly ($H3: PU \rightarrow BI, \beta: 0.327, p\text{-value}: 0.000$) reflected the fact that perceived usefulness has significant positive relation on the Behavior Intention. Again, ($H4: PEOU \rightarrow BI, \beta: 0.174, p\text{-value}: 0.010$) signifies the positive impact of PEOU on BI. Likewise, ($H5: PEOU \rightarrow TRU, \beta: 0.121, p\text{-value}: 0.066$), is not supported which implies there is no significant positive relation of PEOU on TRU. ($H6: PU \rightarrow TRU, \beta: 0.251, p\text{-value}: 0.000$) is supported shows that PU has significant positive impact on TRU. And, at the end ($H7: TRU \rightarrow BI, \beta: 0.255, p\text{-value}: 0.000$) supported implies significant positive relation with BI.

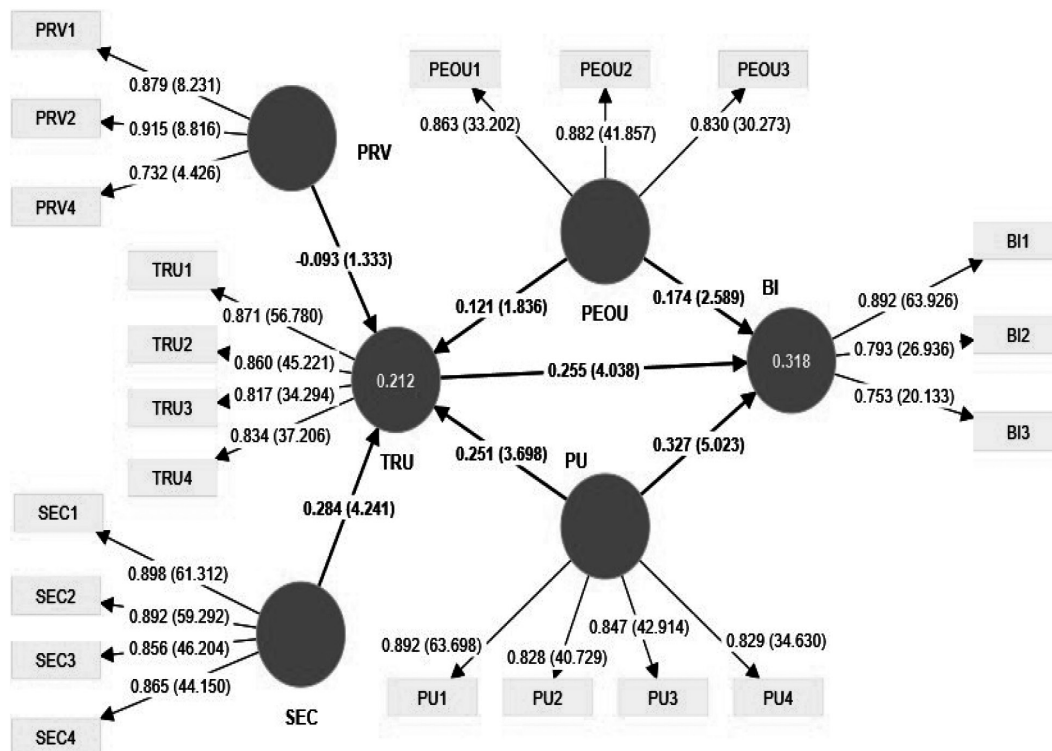


Figure 2: Structural Model

5. Conclusion

With the increase of the internet usage and increase of investors the use of the online stock trading has gradually increased with time and thus the issues related to the security and privacy factors has also been surfaced. With respect of the rising security and privacy factors trust of the investors towards the online trading system plays a crucial role towards behavior intention of the investors to use the online trading system. Thus the privacy and security factors of the online trading system should be taken in to consideration and should be maintained to the greater standard to ensure the safe guard of the important information of the customers. In this research among two of the main important factors regarding trust of the customers towards the online trading system, privacy has no significant positive relation towards the trust of the individuals whereas security do have significant positive

relation towards the trust of the users on the online trading system.

Thus keeping in mind with reference to this research security of the online trading system needs to be more strengthen and should be kept intact. The result of this study indicates that trust of the online trading system plays an important role towards the intention to use the system. In the same way perceived ease of use has no significant relation on the trust but in contrary perceived usefulness do have significant positive relation on the trust, it indicated that perceived usefulness creates trust among the users. Thus the system needs to be developed in the way that it creates the sense of usefulness among the users. Again PU and PEOU both have positive relation with BI that indicates that PU and PEOU both factors are important for maintaining the intention of usage of the individual towards the system.

In this research we witness factors impacting the trust and BI of the individuals towards the online trading system. With regard to this increasing case of the data breach and data theft people are more concerned towards the security of data. And thus the broker and broker house should take steps to maintain more secured system to the users. Thus we respect to this research we can see that system providers are responsible to maintain the safe and secured system as many factors impact the BI of the users.

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A Descriptive Study to Assess Knowledge Regarding Breast Cancer Screening among Reproductive Age Women of Bharatpur-12 , Chitwan

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ABSTRACT

Background: Incidence of breast cancer in Nepal has increased in recent years. Screening helps in early detection of cancer and early diagnosis and timely treatment of breast cancer lead to better prognosis.

Methodology: Cross sectional study on “Knowledge Regarding Breast Cancer Screening among Reproductive Aged women of Bharatpur-12 Chitwan” was carried out to identify the knowledge regarding breast cancer screening. Non- probability purposive sampling technique was used to select the sample and sample size was 50. Data was collected by using structured questionnaire. Collected data was entered in SPSS version 22 and analysis was done using descriptive statistics.

Findings: Findings of the study reveals that respondent's mean age was 33.50 ± 8.734 . Regarding the religion, majority (90%) were hindu, similarly 52% were Bhramin. More than half (52%) had secondary education and 44% were engaged in business. In regard to marital status, 76% were married. Study findings summarized the level of knowledge in to three categories where, majority (52%) of the respondents had poor level of knowledge, less than half (44%) had moderate level of knowledge and only 4% had good level of knowledge. Conclusion majority of women in community are unaware about the use of different methods of breast cancer screening so awareness program for the breast cancer screening is essential.

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Introduction

Breast cancer is the top cancer in women in both the developed and developing countries. Breast cancer is a major public health challenge worldwide, as it is the leading cause of cancer- related deaths among women, particularly in developing countries. There were 2.3 million cases diagnosed in 2020 and 685,000 breast cancer deaths worldwide in 2020(Globocan ,2020).Breast cancer is the second most common malignancy among Nepalese women. Breast cancer places a substantial burden on the Nepalese healthcare system, but information regarding the number of women living with breast cancer is not well recorded. In countries with lower levels of resources such as Nepal, breast cancers are commonly diagnosed at late stages and women may receive inadequate treatment, pain relief or palliative care. Socioeconomic disparities and insufficient financial resources hinder prevention of breast cancer in Nepal (Giri et al., 2018)

Breast cancer screening is an effective prevention strategy to reduce breast cancer burden. Mammography (MMG), clinical breast examination (CBE), and breast self-examination (BSE) are three widely practiced screening tests. MMG is recommended as a standard screening test globally, however considering the cost- effectiveness CBE and BSE are also recommended for low-resource settings. Breast cancer awareness is a movement that aims to increase awareness and reduce the stigma linked to the symptoms and treatment of breast cancer. If breast cancer is found early, there are more treatment options and a better chance for survival. Women whose breast cancer is detected at an early stage have a 93 percent or higher survival rate in the first five years.

Although there has been immense progress in the treatment of breast cancer, prognosis remains poor in developing countries . An important reason for the poor prognosis could be a delay in diagnosis. When breast cancer is diagnosed at an early stage, prognosis is believed to be good with reduced morbidity and mortality (Davidson et al., 2013). Therefore, steps should be taken to ensure early detection and timely treatment. Two vital strategies for early detection include early diagnosis and screening. Although in recent international guidelines, which focus on developed countries, the timeframes for screening have been questioned, this may not apply to the developing

countries like Nepal where the awareness is very low and patients routinely present at advanced stage of breast cancer (Smith et al., 2017)

For effective screening and early diagnosis, adequate knowledge and awareness are of utmost importance (Mandal & Basu , 2018). Several studies have been conducted in other developing countries to assess the knowledge and practices of breast cancer screening both in the general population as well as specifically in healthcare professionals (Akpınar, Y. Y et al, 2011) . However, the number of studies conducted in general populations are limited , therefore, this study was conducted to assess the knowledge, related to breast cancer screening among female general population.(Heena et al., 2019)

Objectives of the Study

To assess the knowledge regarding breast cancer screening among women at Bharatpur-12, Chitwan

Design

A cross sectional study was conducted to assess the knowledge on breast cancer screening among the women.

Study Population

In this study, population was those women who lived in Bharatpur-12, Chitwan.

Sampling Method

Non- probability convenient sampling technique was used to collect data.

Sample Size

Total sample size was 50.

Inclusion Criteria

Those women who are between the age of 18-49 years.

Research Instrumentation

A structured interview questionnaire was developed by the researcher after reviewing the literature and consulting the subject experts to assess the awareness regarding breast cancer screening.

Instruments consisted in to two parts

Part I: Related to Demographic Variables

Part II: Related to knowledge on breast cancer screening

The knowledge of breast cancer screening was measured by using structured questionnaire. Total questions were 30 and was measured on yes / no and multiple choice question. Each correct answerer was given 1 score and for wrong answer 0 score was given. Level of knowledge was measured by calculating the total score and converted in percentage. Further, level of knowledge was classified in to three categories on the basis of Bloom cut of points

Good knowledge (>80%)

Moderate knowledge (60-80%)

Poor knowledge (<60%)

Data Analysis

The collected data was encoded and entered in Microsoft office excel and Statistical Package for Social Science (SPSS) version 22. Descriptive statistics (Mean, standard deviation, frequency and percentage) were used to analyze the data and presented in tables.

Ethical Consideration

Data was collected after getting approved by the Institutional Research Committee (IRC) of B.P Koirala Memorial Cancer Hospital. Data was collected after written permission was obtained from concern authority of Bharatpur 12, Chitwan. The researcher have explained the objectives of the study to participants. Verbal and written permission was taken from each participant. Privacy and confidentiality was maintained. Information was used for only study purposes.

Findings of the Study

Table 1: Socio-Demographics Characteristics of Respondent: Age, Religion & Ethnicity

n=50

Variables	Frequency	Percentage
Age group		
18-28	12	24.0
29-39	16	32.0
40-50	22	44.0
Mean \pm SD	33,50 \pm 8.734	
Religion		
Hindu	45	90.0
Buddhist	2	4.0
Kirat	2	4.0
Christian	1	2.0
Ethnicity		
Brahmin	26	52.0
Chhetri	6	12.0
Dalit	1	2.0
Janjati	13	26.0
Newar	4	8.0

Table 1 shows that, out of 50 respondents, 12 (24%) respondents were in the age of 18-28 years, 16 (32%) were in the age group of 29-39, and 22 (44%) were in the age group of 40-50 years. Concerning to the religion, 90% were Hindu, Regarding ethnicity, majority 52% of the respondents were Brahmin

Table 2: Socio- Demographic Variables: Literacy, Occupation status

N=50

Educational level	Frequency	Percentage
Basic education		
Basic education	1	2.0
Secondary education	26	52.0
Higher secondary	12	24.0
Bachelor and above	11	22.0
Occupational status of Respondent		
Homemaker	13	26.0
Business	22	44.0
Labor	1	2.0
Student	10	20.0
Teacher	4	8.0

Table 2 shows that majority of respondents 26 (52%) had secondary education. Regarding occupational status, 22 (44%) respondents were involved in business, 13 (26%) respondents were homemaker, likewise 10 (20%) respondents were student, 4 (8%) respondents were teacher and 1 (2%) respondents were labor.

Table 3: Respondent's Knowledge on Meaning and Methods of Screening

n=50

Knowledge variables	Correct Response	
	Frequency	Percentage
Breast cancer can be detected early	48	96.0
Breast cancer screening is examination of breast before the symptoms occur	39	78.0
Knowledge on methods of screening for breast cancer		
Self-breast examination	36	72
Clinical breast examination	46	92.0
Mammogram	13	26.0
Ultrasound	40	80.0

Table 3 shows that majority of respondents 48 (96%) had given the right answer that is breast cancer screening is done for early detection of breast cancer and 39(78%) knew about examination of breast before the symptoms occur as a screening. Likewise 46 (92%) respondents had knowledge about clinical-breast examination is a method of breast cancer screening, 40(80%) respondents had heard about ultrasound is a test done for screening. Similarly, 36(72%) had heard about breast self-examination as a procedure of screening and very few 13(26%) respondents had heard about mammogram.

Table 4: Knowledge on Meaning of Breast Self-Examination

n=50

Knowledge variable	Yes %	No %
Breast self-examination is done to identify abnormal changes in breast	20.0	80.0
Breast self-examination is done to detect breast lump	66.0	34.0
Breast self-examination is done to find out any discharge on breast	84.0	16.0
Breast self-examination is done to detect an abnormal lymph node	52.0	48.0

Table 4 shows that 84% of respondents answered correctly the meaning of breast self-examination i.e. finding out any discharge in breast and (66%) of them answered correctly that breast self-examination is done to detect breast lump. Moreover, 52% of respondents answered breast self-examination is to detect an abnormal lymph node and only 20% of the respondents answered correctly about purpose of breast self-examination that is done to identify abnormal changes in the breast.

Table 5: Knowledge on Age and Time for Breast Self-Examination

Knowledge variable	Correct response	
	Frequency	Percentage
Age to start breast self-examination is after 20 years	24	48.0%
Best time to do breast self-examination is 7-10 days after menstruation	12	24.0%

Table 5 illustrate that less than half 24 (48%) of them were known about the age to start breast self-examination that is after 20 years. Only 12 (24%) of them answered best time to do breast self-examination that is 7-10 days after menstruation.

Table 6: Knowledge on Meaning, Age, Place and Frequency of Clinical Breast Examination

n= 50

Knowledge Variables	Correct Answer	
	Frequency	Percentage
A physical exam of the breast done by health personnel to check lump or other changes in the breast	37	74.0
Appropriate age of clinical breast examination is 25yrs	5	10.0
Appropriate place for clinical breast exam is hospital	45	90.0
Frequency of clinical breast exam for 25-39 years women is one to three years interval	24	48.0
Frequency of clinical breast exam for above 40 years women is annually	13	26.0

Table 6 shows that most of the respondents 37 (74%) had given the right answer about the meaning of Clinical Breast Examination i.e, a physical exam of the breast done by health worker to check lump or other changes in the breast, very less respondents 5 (10%) knew about appropriate age of clinical breast examination that is 25 years. Similarly, 45 (90%) respondents had given right answer about appropriate place for performing clinical breast exam that is hospital. Regarding frequency of clinical breast examination less than half of the respondents 24 (48%) had given the right answer i.e between the age of 25-39 years, clinical breast examination is done in one to three years interval, whereas 13 (26%) respondents had given correct response on clinical breast exam for above 40 years women that is annually.

Table 7: Knowledge on Meaning of Mammogram, Person Performing Mammogram and Starting Age of Mammogram

n= 50

Knowledge variables	Correct Response	
	Frequency	Percentage
Mammogram is a machine for examination of women's breast and to locate tumor of breast	13	26
Mammogram is done by radiological technologist	21	42
Appropriate age for performing mammogram is 40 yrs onwards	14	28

Table 7 shows that few of the respondents 13 (26%) knew about meaning of mammogram, and 21 respondents (42%) had heard about person performing mammogram. More over few respondents 14(28%) had heard the appropriate age for performing mammogram that is 40 years on ward.

Table 8: Knowledge on Reason for Mammogram and Frequency of Performing Mammogram

n=50

Variables	Correct Response	
	Frequency	Percentage
Mammogram is done to find out abnormal changes in the breast	31	62
Frequency of performing mammogram 40-54 years is annual	24	48
Frequency of performing mammogram above 55 years is every two years	18	36

Table 8 shows that 31 (62%) respondents answered correctly about reason for doing mammogram i.e, to find out abnormal changes in the breast Moreover 24 (48%) of the respondents had given correct response about the frequency of performing mammogram between age of 40-54 years is annually, and 18(36%) respondents had given correct response about the frequency for the age above 55 years is every two years.

Table 9: Level of Knowledge

n= 50		
Level of knowledge	frequency	percentage
Good level knowledge	2	4.0%
Moderate level knowledge	22	44.0%
Poor level knowledge	26	52.0%

Table 9 shows that majority of respondents had poor level of knowledge i.e, 26 (52%), 22 (44%) respondents had moderate level of knowledge and only 2 (4%) had good level of knowledge.

Discussion

The study findings revealed that majority of the respondents(96%)were aware regarding the meaning of screening. Likewise, majority of the respondents had knowledge about the different types of breast cancer screening method namely 92%knew the clinical breast examination as screening methods, 80% new ultrasound as a method of screening, 72% knew BSE as a method of screening whereas only 26 %knew Mammogram as a method of breast cancer screening. This study is consistent with the study conducted by Ayoub et al. (2021) reported that community pharmacists surveyed were aware of the different screening methods of breast cancer. Findings of the study further reveled that, only 20% of the respondents had given the right answer as the meaning of breast self-examination . The findings of the study is similar with findings from Khan et al. (2015) which revealed that only 7% of the respondents were aware of BSE (purpose, when and how to perform) and mammogram (purpose, when to perform, advantages and disadvantages) separately.

Findings further showed that, less than half (48%) repondents knew the correct age to start Breast self examination. Similarly very few (24%) respondents answered in correct response about the best time to do breast self exam. The findings of the study is contrast with findings from S Khan et .al, 2015 which revealed that only 7% of the respondents were aware of BSE (purpose, when and how to perform) and mammogram (purpose, when to perform, advantages and disadvantages) separately years. Similar findings was reported by Altunkurek& Hassan Mohamed in Somaliya (2022) , which reported that only 35.4% of participants had information about breast cancer, 37.8% had heard about breast self examination and 25.2% knew about breast self examination. Similar findings was reported by Sathian (2019) on the meta analysis of Knowledge regarding breast self-examination among the women in Nepal, which revealed that the vast majority of females in the developing nations are unaware about performing regular breast self-examination (BSE) and thus have a lower rate of BSE. This could be attributed to the fact that women in the developing countries are afraid of finding that they have breast cancer, inappropriate knowledge in performing BSE and ignorance about the measures if a lump is identified.

Findings further revealed that most of the respondents 37 (74%) had given the right answer about the meaning of Clinical Breast Examination i.e, a physical exam of the breast done by health worker to check lump or other changes in the breast, very less respondents 5 (10%) knew about appropriate age of clinical breast examination that is 25 years. Similarly, 45 (90%) respondents had given right answer about appropriate place for performing clinical breast exam that is hospital. Regarding frequency of clinical breast examination less than half of the respondents 24 (48%) had given the right answer i.e between the age of 25-39 years clinical breast examination is done in one to three years interval, whereas 13 (26%) respondents had given correct response on clinical breast exam for above 40 years women that is annually.

Findings shows that few of the respondents 13 (26%) had heard about meaning of mammogram, and 21 respondents (42%) had heard about person performing mammogram. More over few respondents 14(28%) had heard the appropriate age for performing mammogram. Findings further reported that 31 (62%) respondents answered correctly about reason for doing mammogram i.e, to find out abnormal changes in the breast Moreover 24 (48%) of the respondents had given correct response about the frequency o of performing mammogram between age of 40-54 years is annually, and 18(36%) respondents had given correct response about the frequency for the age above 55 years is every two year . Similar finding was reported by Al-Wassia et al,2017 , which reaveled that mammography utilization and knowledge are low in Saudi Arabia . The level of awareness of mammography was poor among women attending outpatient clinics in a teaching hospital of Ibadan South West Nijeria in 2013, which was reported by Obajimi, et al. Findings shows that majority of respondents 26 (52%) had poor level of knowledge, 22 (44%) respondents had moderate level of knowledge and only 2 (4%) had good

level of knowledge regarding breast cancer screening.

Conclusion:

Breast cancer screening is very important for the early diagnosis of breast cancer, where breast cancer is curable disease if diagnosed earlier. Findings of the study shows that majority of women in the community are unaware about the different methods of breast cancer screening technique as evidenced by poor level of knowledge. So awareness program for breast cancer screening is essential in community setting and initiation has to be done by both government sector and private sector.

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Evaluation of antimicrobial activity of Crude Ethanolic Extracts of Selected Spices

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ABSTRACT

Infectious diseases and food poisoning caused by microbial pathogens continue to pose significant threats to global public health. In this context, the antimicrobial properties of certain spices have garnered attention due to their historical use not only for culinary purposes but also for their medicinal value. This study aimed to assess the antimicrobial activity of crude ethanol extracts obtained from a selection of spices, including clove, cinnamon, cardamom, fenugreek, cumin, and ajowan against several pathogenic bacteria, namely *Klebsiella pneumoniae*, *Staphylococcus aureus*, *E. coli*, and *Pseudomonas aeruginosa*.

Results indicated that among the six tested spices, clove exhibited the highest antimicrobial efficacy, with notable inhibition zones of 23mm against *E. coli*, 20mm against *Klebsiella pneumoniae*, 32mm against *Staphylococcus aureus*, and 16mm against *Pseudomonas aeruginosa*. Cumin demonstrated considerable antimicrobial activity with inhibition zones of 22mm, 14mm, 29mm, and 20mm against *E. coli*, *Klebsiella pneumoniae*, *Staphylococcus aureus*, and *Pseudomonas aeruginosa*, respectively. Ajowan, cardamom, and cinnamon also displayed varying degrees of antimicrobial efficacy against the tested bacterial strains.

On the other hand, fenugreek showed weak antimicrobial activity, as it failed to inhibit the growth of any of the four bacterial isolates. The findings suggest that spices such as clove, cumin, and cinnamon possess promising potential as natural remedies against pathogenic bacteria, providing a safer alternative to traditional antibiotics. Additionally, these spices could serve as natural preservatives in various food and healthcare applications.

Keywords: Spices, Ethanol extract, Antimicrobial activity, Antibiotics.

INTRODUCTION

Spices have been treasured for millennia across diverse cultures for their ability to enhance the flavor and aroma of food. Besides their culinary appeal, ancient societies recognized the medicinal and food preservation properties of spices (Ali B et al., 2015). In recent years, modern science has started to unveil the anti-microbial effects of various spices, adding to their appeal as potential remedies for combating bacterial pathogens (Ceylan and Fung, 2004).

The widespread use of antibiotics has led to a concerning rise in bacterial resistance. As a result, traditional medicine has garnered renewed interest as a viable alternative for treating various diseases while avoiding the side effects associated with conventional treatments (Saeed and Tariq, 2007). At present, it is estimated that about 80% of the world's population relies on botanical preparations as medicines to meet their health needs (WHO 2002). Spices are eventually considered safe and proved to be effective against certain pathogenic bacteria. It is only in recent years that modern science has started paying attention to the properties of spices (Chaudhry and Tariq 2006). They are also extensively used mainly in many Asian, African and other countries. In recent years, because of their beneficial effects, the use of spices has been increasing in developed countries also (Indu et al. 2006).

In the realm of food safety, microbial pathogens pose a significant threat to both food spoilage and foodborne illnesses. The rise of multidrug-resistant bacteria like *Pseudomonas aeruginosa* and *Escherichia coli* has escalated morbidity and mortality rates (Miladi et al., 2016). To address this growing concern, there is a shift towards using natural products, such as spices and their extracts, as substitutes for synthetic chemical preservatives in the food industry. These natural alternatives offer better tolerability in the human body and exhibit superior properties for food preservation (Silva et al., 2017).

In light of the alarming impact of infectious diseases, particularly due to antibiotic resistance, it becomes crucial to explore effective and safe alternatives for treatment. Spices and their extracts present a promising avenue,

displaying anti-microbial activity attributed to various bioactive compounds, including alkaloids, flavonoids, tannins, and phenolic compounds (Hoque et al., 2008). Phytochemicals, or secondary metabolites, found in spices further enhance their antimicrobial properties, serving as protectants against harmful organisms and responding to environmental changes (Avato et al., 2002).

This research aims to investigate the anti-microbial activity of selected spices—Clove, Cinnamon, Cardamom, Ajowan, Fenugreek, and Cumin—against pathogenic bacteria like *Escherichia coli*, *Staphylococcus aureus*, *Pseudomonas aeruginosa*, and *Klebsiella pneumoniae*. By exploring the potential of these spices in combating bacterial pathogens, this study contributes to the broader understanding of their applications in enhancing food safety and possibly addressing antibiotic resistance challenges.

Methodology

3.1 Study Duration and Laboratory Settings

This study was conducted over a period of three months, from Feb - Apr 2022. The extraction phase took place in the chemistry laboratory of Birendra Multiple Campus, while the anti-microbial activity testing was carried out in the Microbiology laboratory of Balkumari College, Chitwan.

3.2 Sample Selection and Collection

Six commonly used spices (clove, cumin, cardamom, cinnamon, ajowan, fenugreek) were randomly sampled from Bharatpur's market, Chitwan, based on traditional medicinal use.

3.3 Sample Processing

The collected samples were thoroughly cleaned and subjected to shade drying on blotting paper in a dark room until completely dry. After drying, the sample was packed in waterproof bags and stored at room temperature away from direct sunlight. The dried samples were ground to obtain fine powder using a grinder.

3.4 Soxhlet Extraction with Dehydrated Ethanol

The Soxhlet extraction process was performed in the Department of Chemistry, Birendra Multiple Campus, Chitwan. Dried plant powder was weighed and loaded into a clean and dried thimble of the Soxhlet extractor. A round-bottom flask, previously weighed and labeled, was fitted with the thimble. Ethanol (150 ml) was slowly poured into the soxhlet extractor, and the setup was fitted with a condenser. The flask was heated with a heating mantle, allowing the solvent vapors to reach the spices powder and dissolve the soluble compounds. The condensed solvent dropped back into the flask, resulting in a colored solvent solution. The process ran for 8-15 hours or until the desired extract was obtained.

3.5 Removal of Solvent

After extraction, the solvent was removed from the round-bottom flask using a rotatory vacuum evaporator under negative pressure. The flask was constantly heated in a rotating condition using a water bath below 55°C. The solvent was completely evaporated, collected in a separate round-bottom flask, and stored in a sterile bottle. The extract's yield was determined by weighing the flask before and after extraction.

3.6 Preparation of Working Solution

One gram of crude ethanol extract from each spice was aseptically transferred into a sterile 20 ml screw cap test tube. 9 ml of sterile distilled water was added to each tube, and the mixture was vortexed to obtain a homogenous solution of 100 mg/ml working suspension, which was stored in a refrigerator at 2-8°C.

3.7 Collection of Bacterial Cultures

Four different human pathogenic bacteria were selected for the study, namely *Escherichia coli* ATCC 25922, *Staphylococcus aureus* ATCC 25923, *Klebsiella pneumonia* ATCC 200603, and *Pseudomonas aeruginosa* ATCC 27853. The bacterial cultures were obtained from the Department of Microbiology, Balkumari College, Chitwan. After obtaining the cultures, they were streaked on nutrient agar plates and incubated at 37°C for 24 hours. Gram staining and biochemical tests were performed to confirm the purity of the isolates.

3.8 Preparation of Standard Culture Inoculums

Standard culture inoculums were prepared by transferring three to five colonies of the selected organism into a tube containing sterile nutrient broth. The turbidity of the broth was adjusted to the turbidity of the broth was then adjusted to match the McFarland standard.

3.9 Preparation of Media

The media used in the study were prepared according to the manufacturer's recommendations.

3.10 Qualitative Screening and Determination of Anti-Bacterial Activity

The anti-bacterial activity of the crude spice extracts was determined using the agar well diffusion method (Dingle et al., 1953). Sterile Muller-Hinton Agar (MHA) plates were prepared with a thickness of approximately 4 mm. The plates were inoculated with the prepared inoculum and wells were made using a sterile cork borer. Working suspensions of the spice extracts were added to the wells, and the plates were incubated at 37°C for 18-24 hours. After incubation, the plates were observed for the presence of a zone of inhibition (ZOI) as a clear area without bacterial growth around the well. The ZOI was measured using a scale, and the mean value was recorded.

Result

4.1 Ethanolic extract of spices yield

The percentage yields of the ethanol extract of spices as obtained by Soxhlet extraction processes as shown in figure 1. Among the spices, clove exhibited the highest yield, with an impressive extraction efficiency of 40.7%. On the other hand, ajowan showed the lowest yield, with only 9.8% of the crude extract obtained during the extraction procedure. The amounts of crude extracts varied significantly across the different spices studied.

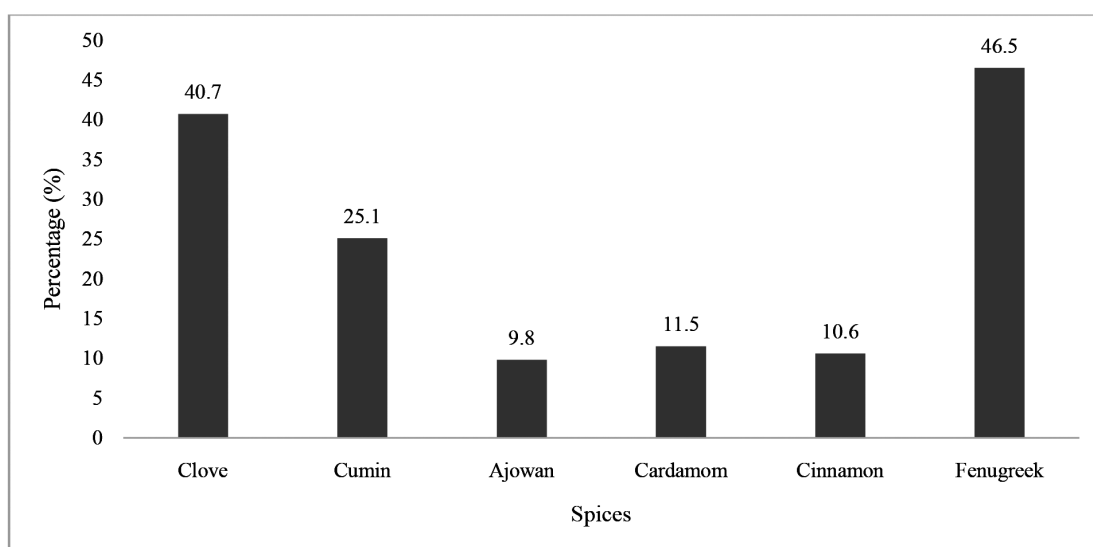


Figure 1: Percentage yields of ethanol crude extracts of spices.

4.2 Screening of spices for anti-bacterial activity

Table 1 displays the data concerning the antimicrobial efficacy of spice extracts. Among the six spices investigated (clove, cumin, cardamom, ajowan, and cinnamon), five exhibited significant effectiveness against all the tested pathogenic bacteria. These spices, namely clove, cumin, cardamom, ajowan, and cinnamon, demonstrated potent antimicrobial properties, indicating their potential as natural agents for combating pathogenic bacterial infections.

Table 1: Anti-bacterial properties of ethanolic extracts of different spices against tested bacteria.

S.N.	Spices	<i>E. coli</i>	<i>Klebsiella pneumoniae</i>	<i>Staphylococcus aureus</i>	<i>Pseudomonas aeruginosa</i>
1	Clove	+	+	+	+
2	Cumin	+	+	+	+
3	Ajowan	+	+	+	+
4	Cardamom	+	+	+	+
5	Cinnamon	+	+	+	+
6	Fenugreek	-	-	-	-

Note: Positive (+) sign indicates the ethanolic extracts of the particular spices inhibited the growth of microorgan-

isms and thus produce zone of inhibition. Absence of zone of inhibition was denoted as negative (-) sign.

4.3 Evaluation of antibacterial activity of spices

The anti-bacterial activities of medicinal plants were evaluated by measuring the zone of inhibition. The diameter of the zone of inhibition (ZOI) produced by spice extract and particular bacteria was measured for the estimate of potency of spice extracts. The mean diameter of zone inhibition of different spices which showed significant zone of inhibition (>8mm) during the qualitative screening process as indicated by the '+' sign is shown in figures below.

4.3.1 Anti-bacterial activity of cloves

The anti-bacterial activity of cloves was found to be remarkably robust, as it displayed effectiveness against all the tested bacterial isolates. This impressive result suggests that cloves may possess broad-spectrum antibacterial properties, meaning it has the ability to target and inhibit the growth of a wide range of pathogenic bacteria.

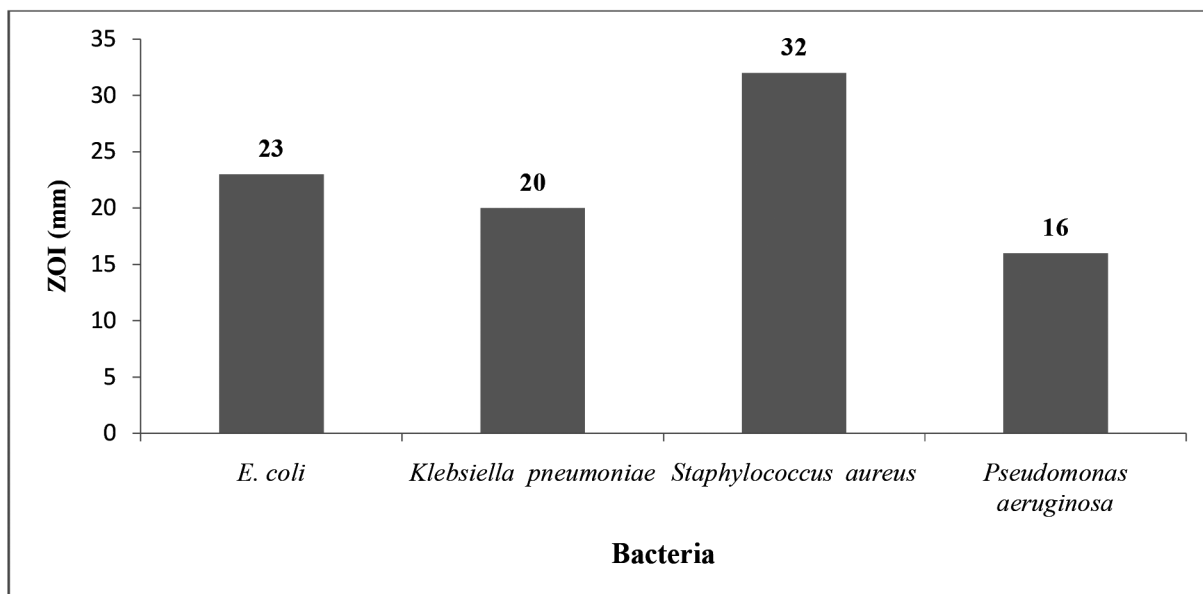


Figure 2: Zone of inhibition (ZOI) given by cloves against tested bacteria.

4.3.2 Anti-bacterial activity of cumin

Cumin demonstrates broad-spectrum antibacterial activity as it was found to inhibit the growth of four out of the tested bacterial organisms. This suggests that cumin's antibacterial properties are effective against a diverse range of pathogenic bacteria.

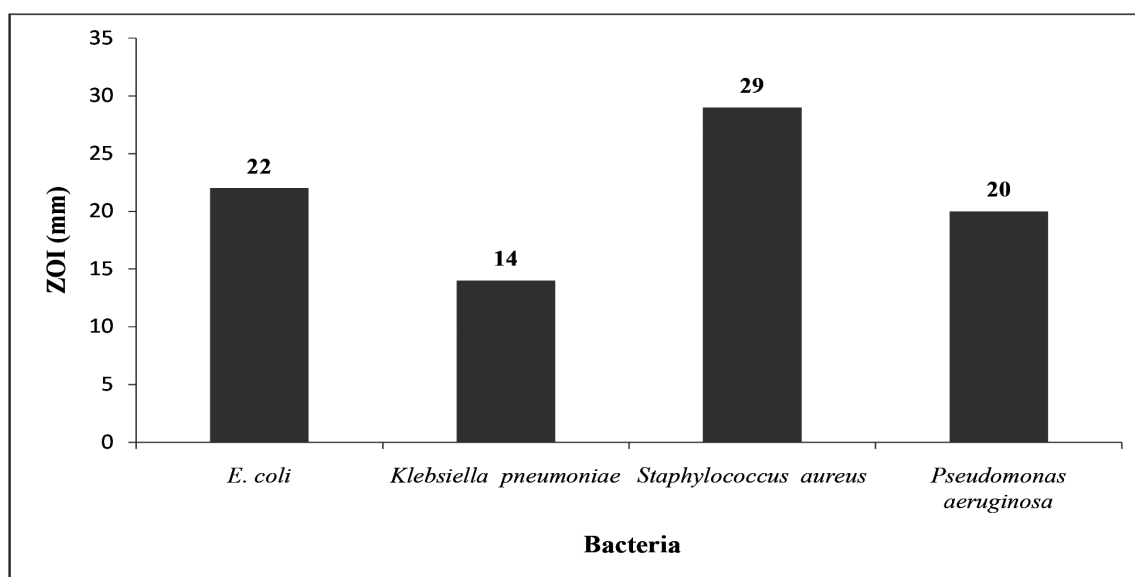


Figure 3: Zone of inhibition (ZOI) given by Cumin against tested bacteria.

4.3.3 Anti-bacterial activity of ajowan

The anti-bacterial activity of ajowan was observed to be limited, as it exhibited an inhibitory effect against only three out of the tested pathogenic bacterial isolates. The zone of inhibition (ZOI) for ajowan extract against *Pseudomonas* was relatively small, measuring only 7mm. This indicates that ajowan’s inhibitory action was less pronounced against *Pseudomonas* compared to other bacterial isolates.

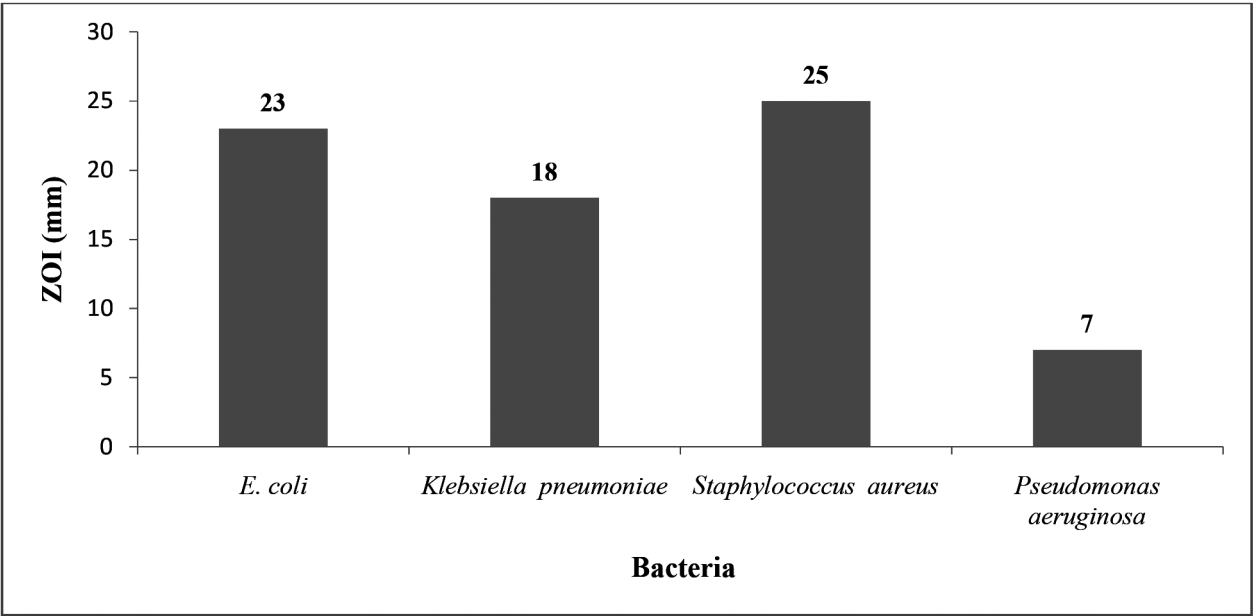


Figure 4: Zone of inhibition (ZOI) given by ajowan against tested bacteria.

4.3.4 Anti-bacterial activity of Cardamom

The anti-bacterial activity of cardamom was observed to be relatively limited, as it inhibited the growth of only three of the tested bacterial isolates. Among the bacteria tested, cardamom extract showed a zone of inhibition (ZOI) of only 6 mm against *Pseudomonas*, indicating not good inhibitory effect against this particular bacterium.

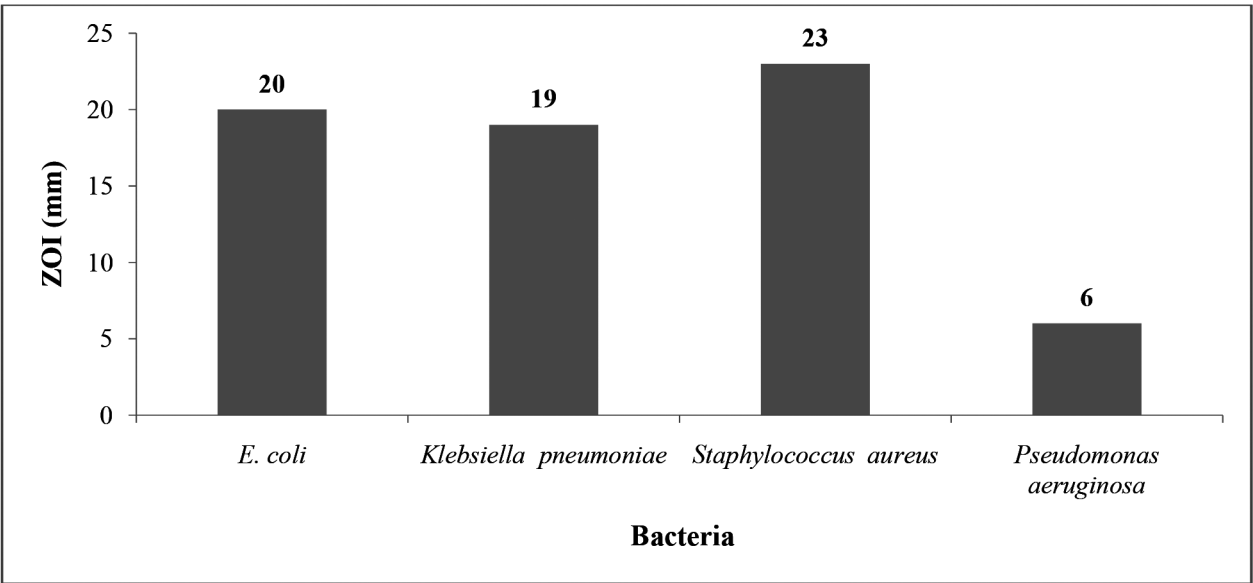


Figure 5: Zone of inhibition (ZOI) given by cardamom against tested bacteria.

4.3.5 Anti-bacterial activity of cinnamon

Cinnamon inhibited the growth of 3 isolates thus may be considered to have less Anti-bacterial activity.

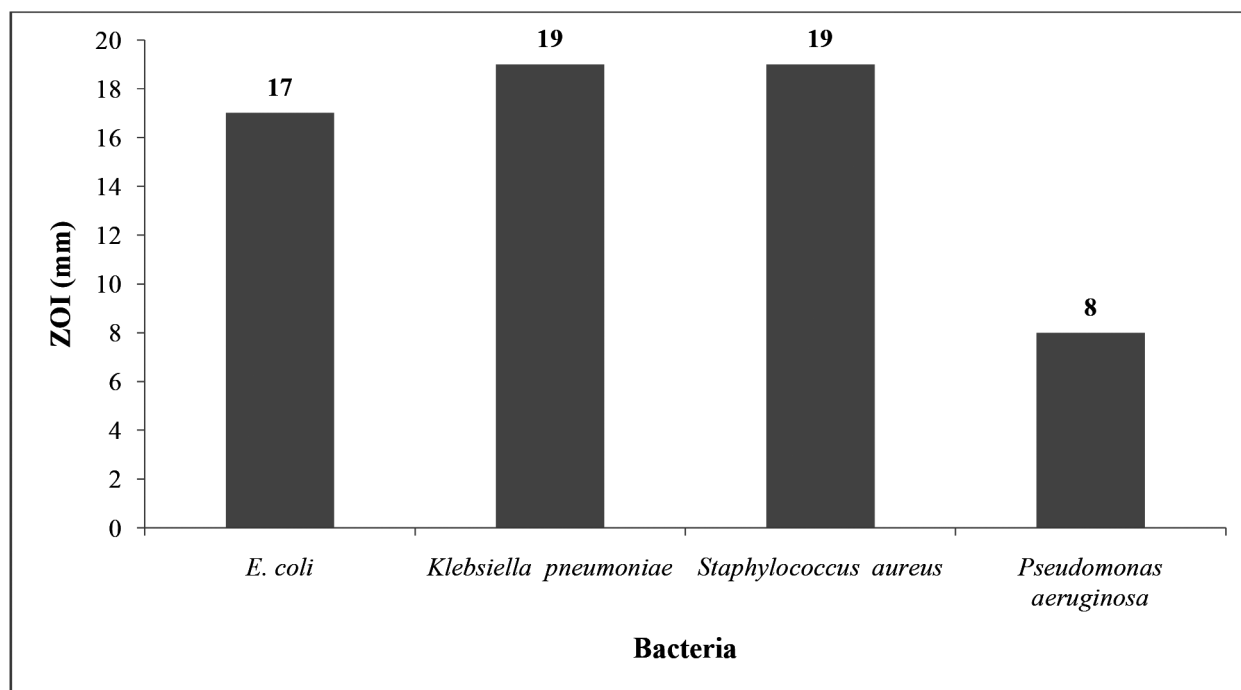


Figure 6: Zone of inhibition (ZOI) given by Cinnamon against tested bacteria.

4.3.6 Anti-bacterial activity of Fenugreek

Fenugreek didn't inhibit the growth of any four isolates thus may be considered to have weak Anti-bacterial activity.

Discussion

During our study, clove demonstrated remarkable effectiveness against all tested bacteria. The crude ethanol extracts of clove exhibited the highest antibacterial activity, effectively targeting bacteria such as *E. coli*, *Klebsiella pneumoniae*, *Staphylococcus aureus*, and *Pseudomonas aeruginosa*. Our findings are consistent with previous research by Agaoglu (2006) and Angihotri and Vaidya (1995), further supporting the well-established antimicrobial properties of clove. The active compound responsible for this antimicrobial action was identified as eugenol, as reported by Rana et al. (2011).

Ajowan also displayed significant antibacterial activity against the four tested bacteria, including *E. coli*, *Klebsiella pneumoniae*, *Staphylococcus aureus*, and *Pseudomonas aeruginosa*. The antimicrobial activity of ajowan was attributed to the presence of thymol, as reported by Maharjan (2008).

Among the spices studied, cinnamon showed remarkable effectiveness. The ethanol extracts of cinnamon exhibited strong antibacterial activity against all tested bacteria. The antimicrobial activity of cinnamon was attributed to the combined action of trans-cinnamaldehyde and eugenol, as reported by Dal Pozzo et al. (2012).

Similarly, cumin demonstrated notable antimicrobial properties. The ethanol extracts of cumin displayed potent antibacterial activity against all tested bacteria, with a significant effect on *E. coli*, *Klebsiella pneumoniae*, *Staphylococcus aureus*, and *Pseudomonas aeruginosa*. The active compound responsible for this antimicrobial action was identified as cumin aldehyde (27.10%), as reported by Wongkattiya et al. (2019).

Cardamom also exhibited considerable effectiveness among the studied spices. Ethanol extracts of cardamom displayed antimicrobial activity against three tested bacteria, namely *E. coli*, *Klebsiella pneumoniae*, and *Staphylococcus aureus*. The active compound responsible for this antimicrobial action was identified as 1,8-cineole, as reported by Kapoor et al. (2008).

However, fenugreek displayed the weakest antimicrobial activity among the spices studied. The ethanol extracts of fenugreek showed limited effectiveness against all tested bacteria. The active compound responsible for this antimicrobial action was identified as diosgenin, as reported by Sharma et al. (2016).

It is worth noting that the difference between our results and those of previous researchers may be attributed to various factors such as test environments, methodologies, the quantity and age of spices used, and other variables. The antimicrobial activity of spices can also be influenced by farming practices, harvesting methods, storage conditions, and extraction procedures. Additionally, the volatility and poor solubility of certain essential oils can present challenges in diffusion and dilution within a microbiological medium.

CONCLUSION

In conclusion, the findings of the present study reveal that cumin, clove, and cinnamon extracts demonstrated significant antimicrobial activity. These spices, in the form of crude ethanol extracts, exhibited strong inhibitory effects against certain bacteria, indicating their potential as effective remedies against diseases caused by these microorganisms. Furthermore, the effectiveness of spices against spoilage bacteria suggests their potential as preservatives, offering an alternative to chemical additives that can compromise the quality of food and impact consumer health.

However, it is important to conduct additional studies to understand the specific mechanisms of action and evaluate the safety and effectiveness of these spice extracts in various contexts. Proper dosage, formulation, and application methods need to be explored to ensure their practical use in medicine and food industry.

Overall, this study underscores the valuable role of natural compounds found in spices and their potential as alternatives to traditional antimicrobial agents and chemical additives. Further exploration of these natural remedies may offer significant benefits in improving public health and food safety.

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Narrative Tools and Strategies: Representation of Trauma in Bista's The Andhi Khola

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ABSTRACT

This article explores the post-traumatic journey of the central character Gangi in the story *The Andhi Khola* by Daulat Bikram Bista. The aim of this study is to analyze Gangi's journey and investigate the deep effects of trauma on her psyche and experiences. The methodology is a close reading and textual analysis of Bista's work, examining key passages and themes related to Gangi's trauma. Through this analysis, the article uncovers the emotional trajectory of Gangi, highlighting themes of loss, separation, and longing, as well as the continuing impact of trauma on her sense of self and her hope for her lover's return. The findings of this study contribute to a deeper understanding of the transformative power of trauma and promote empathy for individuals who carry its burden. By revealing Gangi's narrative, this research highlights the need for sensitivity and support in addressing the psychological effects of trauma in individuals' lives.

Keywords: Trauma, narrative, psychological impact, loss, separation

Introduction

During the Anglo-Nepal War (1814-16), brave young Nepalese soldiers impressed the British with their courage. The war started on November 1, 1814, when the East India Company declared war on Nepal. The British faced difficulties in Butwal, Parsa, and Jaithak, but they managed to win in Kumaon and Garhwal during the first part of the war. In the second part, Nepal lost in Hariharpur Gadhi and Makawanpur and had to sign the Sugauli Treaty. This war is called the Anglo-Nepal War in Nepal's military history. It had a permanent impact on Nepal's politics, economy, and society. It is important to understand how these changes occurred. As a result of the Sugauli Treaty, the British began recruiting Nepali youths into their own army. Throughout the 20th century, these soldiers served in different locations where the British Empire was involved in expanding or defending its territories. Even after India gained independence, the youths continued to be recruited not only in the British Army but also in the Indian Army, the Singapore Contingent, and the Brunei Reserve. (Republica, 2019).

Despite the tragic loss of nearly 45,000 Nepali soldiers during different wars, fighting in places like Flanders Field, Gallipoli, Monte Cassino, and the jungles of Burma, the aspiration to serve in the foreign military remained strong among young Nepali boys. After that, thousands of them apply at recruitment centers with dreams of joining the armed forces. After the British Afghan Campaign in 1848, when new recruits were sent to Lahore for training, those who joined the British Army became known as "Lahures" in their home country Nepal. These Lahures left their families and friends behind to work in a foreign land and fight for foreign powers. Their experiences of traveling, living independently, and engaging in numerous battles profoundly impacted these young men. In the villages, when they came from *Lahur*, the Lahures were seen as symbols of progress and were admired for their bravery. Additionally, the money they brought back home gave them a special position in their own society. Later on, "they were also called Gurkhas." In many parts of Nepal, Gurkha veterans played a pivotal role in driving development and progress (Aryal, 2023).

The legend of the Lahures has become deeply rooted in Nepali fiction, folklore, and songs, often portraying themes of love, longing, and the fleeting moments spent at home. In recent times, the term *Lahure* has expanded its meaning beyond the military context to encompass all Nepalese who leave their homeland to work abroad.

In the twenty-first century, trauma theory has become an important way to understand various modern events like wars and conflicts that have profoundly impacted societies. This theory looks at how literature helps people deal with painful experiences from the past. It also tries to analyze how traumatic events are shown, dealt with, talked

about, and expressed in many books and historical texts, which serve as evidence.

The story sets in the beautiful rural areas of Syangja district on the terrain of the Andhi Khola region. The story starts with the nostalgia of Gangi. It touches her psyche, bringing her back to the situation of twenty-five years ago. Gangi's narrative opens the dark sides of human experiences of conflict, displacement, and personal loss, while simultaneously highlighting the flexibility of the human spirit.

The story acknowledges the situation and the deeply inflicted traumatic impact on individuals and communities. According to Jean-Martin Charcot, a prominent figure in the field of psychology says, "Trauma can manifest itself in a variety of ways, disrupting an individual's sense of self and inducing a profound sense of helplessness and distress (Charcot, 1893)." Similarly, Cathy Caruth argues that traumatic experiences are often inexpressible and fragmentary, leading to a fragmented narrative structure in literary works. This fragmentation allows the author to depict the dissonance and confusion experienced by traumatized individuals, providing readers with a more authentic understanding of their psychological state. Drawing upon these scholarly perspectives, this research article aims to closely examine the traumatic state of Gangi's journey in the story *The Andhi Khola*. It also provides clear answers regarding how Bista portrays trauma through the character of Gangi. It will uncover valuable insights into the psychological and emotional effects of traumatic experiences as revealed through this portrayal.

Objectives

The objectives of the research article are as follows:

- To examine the narrative tools and strategies used by Bista to depict the trauma and its aftermath experienced by Gangi in *The Andhi Khola*.
- To investigate how trauma shapes Gange's identity, memory, and relationships in the story *The Andhi Khola*.

Research Questions

- What narrative tools and strategies does Bista use to represent the trauma and its aftermath experienced by Gangi in *The Andhi Khola*?
- How does trauma affect Gangi's sense of self, memory and relationships in the story and what narrative techniques does Bista employ to convey them?
- How does the story explore the themes of loss, separation and survival in relation to Gangi's trauma and its impact on her life?
- How does Gangi's narrative contribute to a deeper understanding of the transformative power of trauma and the need for sensitivity in addressing its psychological effects?

Methodology

This paper will adopt a qualitative approach to analyze the representation of trauma in the narrative of *The Andhi Khola*, focusing on the central character of Gange. The paper will conduct a close reading of the story and examine how Gange's psychological trauma is expressed through various narrative features, based on the framework of narrative theory.

The story vividly portrays Gangi's traumatic narrative which shows the complex web of emotions entangling her. This research aims to describe the transformative power of trauma, its deep effects on individual lives, and the resilience and vulnerability of those burdened by its weight. Exploring Gangi's story, it is hoped to deepen the understanding of the impact of trauma on the human psyche.

Theoretical Implication

This study aims to explore how trauma is represented in Bista's *The Andhi Khola*, a Nepali short story that depicts the lives of villagers affected by a devastating flood. To do so, it employs narrative theory or narratology, which is the field of scholarship that examines and analyzes narratives, paying attention to their "form and functioning" (Prince 7). Narratology emerged as a distinct discipline with Todorov (1969), who coined the term "narratology" to refer to "a systematic study of narrative based on the Russian and Czech formalism of the early twentieth century and the French Structuralism and semiotics of the sixties" (O'Neill 12). The research approach employed in this study is "library research, involving an exploration of a wide range of books, journal articles, and other available resources within the library" (Rys et al. 2014). The textual analysis serves as the tool to examine *The Andhi Khola*, as this method focuses on the study of literary texts. Primary sources include Bista's *The Andhi Khola*,

translated by Michael James Hutt. Secondary sources consist of books and journal articles related to Bista's writings and psychoanalytic theory (Sinha 2015).

Trauma refers to an emotional or psychological response to an event or experience that is deeply distressing or disturbing, often involving a threat to one's physical or emotional well-being. Trauma can also cause a psychological process called dissociation, where an individual detaches or disconnects from their thoughts, emotions, sensations, or memories as a means of self-protection. Dissociation can serve as a temporary coping mechanism during and after traumatic events, allowing individuals to psychologically distance themselves from the overwhelming or painful aspects of their experiences. The examination of the relationship between trauma and literature has gathered increasing interest from theorists across various disciplines. Notably, Cathy Caruth, a prominent figure, says "Psychoanalysis and trauma argue that this interdisciplinary work can be traced back to the early days of psychoanalysis (Caruth 1995). Even Sigmund Freud himself turned to literature to elucidate the symptomology observed in his patients. For Caruth, the fusion of psychoanalysis and literature is a natural fit, as she asserts: If Freud resorts to literature to articulate the experience of trauma, it is because both literature and psychoanalysis explore the intricate connections between knowing and not knowing. It is precisely at the juncture where knowledge and ignorance intersect that the language of literature and the psychoanalytic theory of traumatic experience converge. He says:

If Freud resorts to literature to articulate the experience of trauma, it is because both literature and psychoanalysis explore the intricate connections between knowing and not knowing. It is precisely at the juncture where knowledge and ignorance intersect that the language of literature and the psychoanalytic theory of traumatic experience converge. (Caruth, 1995)

It is important to mention that some scholars in the social sciences have criticized how other disciplines, particularly in the humanities, have misrepresented or oversimplified Freud's views on trauma. Sociologist Jeffrey C. Alexander, for instance, singles out Caruth as a proponent of what he terms "lay trauma theory" (Alexander, 2004). Alexander argues that as humanities scholars explore Freud's theories on "trauma deeper", they often paid insufficient attention to his ideas and approached them with a selective focus (Alexander, 2004). Sociologists Michael Lambek and Paul Antze echo this sentiment:

Contemporary debates about memory cannot be addressed without reference to Freud. However, it is challenging to do so in a way that does justice to Freud or psychoanalytic thought. We must not allow popular misrepresentations of Freud to substitute for Freudian thought itself. (Lambek and Antze, 2016)

The main idea in the social sciences is that Freud, especially in his early writings, suggested that in order for a traumatic event to greatly affect a person in adulthood, they must have already suppressed and kept hidden an earlier sexual trauma from their childhood. However, as Neil J. Smelser points out, "[t]his formulation soon proved limited and inadequate for Freud himself [... and subsequently, he developed two separate models of trauma]". (Smelser, 2004)

Therefore, this study will use Caruth's framework of trauma theory to analyze how Bista's *The Andhi Khola* portrays the traumatic experiences of its characters and how they cope with them through narrative tools and strategies.

REVIEW OF LITERATURE

The Andhi Khola as a typical village life representation story continues to hold the attention of scholars and researchers for describing *Laure* culture and tradition (Budhathoki, 2022). He exposed "*the pre-service, in-service and post-service conditions, thoughts and experiences of lahures, and unveils the psychological motives, intentions, and personality of lahure*" (Budhathoki, 2022). Researchers have explored its diverse themes. Researchers like Sharma (2015), Chidi (2019), Biswas (2016), Gurung (2015) and Shrestha, Pradhan, and Sakya (2002) have discussed how both the literary and non-literary elements of the graphic retellings of the surrounding of Andhi Khola area help represent its diverse themes.

The research reviewed has explored diverse socio-cultural and political issues of *The Andhi Khola*. However, the boundless dimensions of the story still invite serious research on its various unexplored aspects. Discussion of psychological trauma and its representation through the narrative of *The Andhi Khola* happens to be one such aspect that this paper attempts to explore.

ANALYSIS AND DISCUSSION OF *THE ANDHI KHOLA*

This paper uses some of the narrative components and techniques mentioned above for the discussion of the representation of trauma in *The Andha Khola*. It will, amongst all, utilize components like plot (event) and character to examine how these components help portray the theme of trauma in the story. It will also use narrative techniques like flashbacks, flash-forward, frame story, events in a parallel, narrative shift, multi-perspectives, repetitive designation, epiphany, amplification, imagery, tone, use of repetitive sentence structure, hamartia, perpetual, eloquent long-expression, and comparison. It will examine how these components and techniques help represent the psychological trauma of the selected characters of Andha Khola. This paper will also discuss how both the components and techniques merge and function together for the task of communicating and representing trauma in the story. Specifically, we will examine how characters and events merge together to communicate the theme of trauma and how the representation of trauma is done through the character-event relationship.

In the story, the writer portrays the character of Gangi, a woman haunted by the memories of her past and the traumatic journey of her beloved Laures. The story offers an exploration of the traumatic experiences of the central character Gangi throughout her journey and the narrative techniques employed by the author to convey the trauma. It also explores the narrative elements and themes presented in the story, giving the picture of the hilly region typical women's emotional and psychological impact of Laures' departure for war on Gangi.

The story begins with Gangi observing a group of young men from the Andhi Khola region heading toward Gorakhpur for enlistment in the military. As she listens to their song "Mother, mother, do not weep so, My letters will come to you time after time, Just like the sentries patrolling." (Bista, 1968) memories of Laures resurface in her mind. The narrative switches between past and present, Gangi remembers the situation when her husband left her and his house to join the armies twenty-five years ago and the song is echoing from the past to the date.

Gangi's experiences in Daulat Bikram Bista's *The Andhi Khola* are marked by deep emotional pain and longing due to the departure of her love. As she watches a group of young men from Andhi Khola embark on a journey to join the war effort, their song resonates with her. The lyrics, "Mother, mother, do not weep so, My letters will come to you time after time, Just like the sentries patrolling," touches her heart and evokes memories of her past love. Despite the sadness, the song brings her some comfort and reassurance, reminding her of the connection she desires for. This theme of longing and the emotional journey depicted in the narrative reflects Gangi's traumatic state, highlighting the psychological and emotional impact of her experiences. (37)

Gangi's trauma is connected to the departure of her love, who left without bidding her farewell. The suddenness of his departure and the absence of closure leaves Gangi in a state of shock and despair "but at the moment she can't recall it. She gazes up at the mountain peak, which seems to be fixed to the clouds, but a strange uneasy feeling persists." The narrative portrays her enduring longing for him over the span of twenty-five years, as she watches the hillside where he disappeared. This relentless watching symbolizes her inability to move on and perpetuates her trauma, highlighting the profound impact of separation, loss, and unhealed emotional wounds. (38)

Gangi's gaze follows the diminishing figures of the young men climbing the hill, their shadows growing smaller, and she feels herself shrinking, becoming as small as a seven-year-old girl. Memories of their childhood pranks and quarrels flood her mind, and she vividly recalls "consoling him after their fight." These memories touched with a blue hue, make her stroke her cheek tenderly. With tears welling in her eyes, she looks towards the distant hills, wondering what lies beyond. Her heart aches as she remembers the evening he sat silently, weighed down by thoughts, and announced his decision to join the war. Gangi, desperately seeking to bring him solace, is gripped by fear and uncertainty. "Gangi did not understand at all. She simply laid her head on his chest and sobbed, choked with grief. She hugged him tightly as if she hoped that he would not go and desert his wife like" Gautam Buddha. She had a fear of losing him but does not lose him in her dream. As the river roars in the night, she falls asleep and dreams of water rising, submerging the places where they once played until she fears being consumed by the engulfing hills. (40)

Memories play a crucial role in Gangi's traumatic narrative. Flashbacks and recollections of joyful moments with her love are intertwined with the pain of his departure, intensifying her emotional wounds:

Next morning, she found that he was gone from her arms. Chilled, she rushed to open a window and look outside. The sun had already risen over the peaks beyond the river. She went out, still fastening her clothes, but she could not see him anywhere: not on the steps or in the yard. She ran to the village, but he was not there. Nor did she find

him beside the Andhi Khola. Standing by the resting place, she looked up at the mountainside. (41)

The narrative vividly depicts Gangi's attempts to remember a particular incident, reflecting the fragmented nature of traumatic memories and the haunting quality they possess. These memories contribute to Gangi's longing and serve as a source of both comfort and pain throughout her journey.

Gangi's regressive behavior serves as a coping mechanism in response to her trauma. She retreats into a state of vulnerability and helplessness, referring to herself as becoming as small as a seven-year-old girl. This regression reflects her desire to escape the harsh realities of her trauma and find consolation in memories of a simpler time. The narrative portrays the complex ways in which trauma can shape one's identity and coping mechanisms.

To sum up, the story effectively portrays the deep effects of trauma on the central character, Gange. It vividly depicts the consequences of loss, abandonment, and unresolved emotional wounds arising from traumatic experiences. The narrative also explores broader themes like sacrifice, socio-economic disparities, the enduring power of memory, and the profound impact of trauma on one's mental well-being. Gange's enduring longing, the repetitive cycle of trauma, the significance of memories, and her regressive behavior collectively offer a comprehensive portrayal of the psychological and emotional state caused by trauma. Through Gange's story, the narrative sheds light on universal themes of longing, suffering, and resilience when confronted with traumatic events. A thorough examination and analysis of this narrative would undoubtedly contribute to a greater understanding of trauma and its wide-ranging effects on individuals.

Conclusion

In conclusion, Bista's *The Andhi Khola* is a powerful narrative that portrays the representation of trauma in Nepali literature. The story uses various tools and strategies, such as symbolism, imagery, flashback, and repetition, to convey the emotional and psychological impact of war and migration on the characters and their relationships. The story also reflects the historical and cultural context of Nepal, where many young men enlist in foreign armies to escape poverty and debt, leaving behind their wives and families. The story challenges the glorification of war and heroism and exposes the harsh realities and consequences of violence and displacement. Bista's *The Andhi Khola* is a compelling example of how literature can capture and communicate the human experience of trauma in a nuanced and empathetic way.

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Practice of Business Intelligence System in Nepalese Small and Medium Enterprises

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ABSTRACT

Everywhere, competition has increased in the digital age. Modern technology makes small business management difficult as well. Customers are aware of the international market. The most recent advancement in management is business intelligence. A data-driven decision to address the challenge encountered by any corporate organization is the current dilemma in management, as opposed to an intuitive or constrained logical decision. Any corporate organization should be concerned with decoding the message from data via scientific analysis. The analysis in this study included 504 Nepalese SMEs. We questioned companies in the manufacturing, service, wholesale, and retail industries on how they used business intelligence in their operations. The survey found that Nepalese SMEs are only just beginning to use business intelligence. For Nepalese businessmen, technological literacy is of the utmost importance. The major worry of Nepalese SMEs is the fear of losing sensitive data.

Keywords: Business intelligence, Managerial aspects, Data security, Technological aspects, Data driven decision.

1. Introduction

Management identifies, develops, and chooses the optimum solution. Management has recently adopted data-driven decision-making or machine learning. Globalization has increased rivalry among businesses of all sizes. Data-driven decision-making to solve corporate problems is a current management topic. Business intelligence (BI) has many benefits for companies (Papachrisdoulou, E., Koutsaki, & Kirkos (2017). Data-driven machine learning completes tasks. Machine learning (ML) uses probability theory and linear algebra to learn and perform tasks automatically. Luhn coined business intelligence in 1958, according to Yeoh (2008). Technology advancement takes time. Technology advancement leads to new accomplishments. In the 1990s, data warehousing, on-line analytical processing, and business intelligence calmed the information era. During those years, data was collected, modified, integrated, stored, and accessed to assure its accuracy, relevance, and usability. From data warehousing to the early 2000s, the focus has been on the technologies and processes needed to make information accessible and valuable. This technology has mostly benefited highly competent computer users who can utilize their tools to navigate massive, often difficult databases. In 2006, Robert S. Kaplan and David P. Norton introduced the Balanced Scorecard, a new management method that uses key performance indicators (KPIs).

Technological advancement and its accessibility already merged different bodies of knowledge. Business, Mathematics, statistics, Technology, and behavioral science are coming together. Understanding those bodies of knowledge by the management of a firm allows developing appropriate strategies to govern employee towards goal achievement behavior.

The convergence of information technology with functional areas of business organization and their interactions with business strategies have become crucial to incorporate agenda over the past two decades (Del at.el.,2018). Business Intelligence(BI) is an integrated system of information technology to collect, analyze, and interpretation of actionable information. Assembly of different equipment (computer hardware and software), collection of data from both internal and external sources through a computer application, processing the data using different mathematical and statistical procedures and supply of necessary information on real-time to the different users as per their necessity builds business intelligence in an organization (Davenport,2014).

The four components of BI (Infrastructure, Data management, Data analyses, and Information Delivery) are integrated as sufficient infrastructure captured all necessary information from both internal and external sources,

data management technology supports data analysis and information delivery system (dashboard) supplies those analyzed data to the decision-makers (Troyansky et.al.,2015).

In terms of usability, data management, including data type, the sophistication of analytical techniques, and visualization/reporting capabilities, business intelligence (BI) is the development of decision support systems (DSS), executive information systems (EIS), and management information systems (MIS) (Chen et al., 2012). The essential goal, however, remains the same: to better managers' decision-making through data collection, processing, and analysis.

Business intelligence (BI) tools make it easier to gather data, analyze it, and communicate information. They are made to help with decision-making. In business, technology, data, and analytics are viewed as a transformative force. To enhance reporting and decision-making, many firms are thus implementing business intelligence (BI) technology. Quality data in well-designed data stores, along with software tools that give users fast access, efficient analysis, and intuitive presentation of their right information, enabling them to take the right actions or make the right decisions, are the components of a business intelligence system (Popovic et.al.2012). The architecture of BI depends on its applications.

The business intelligence system (BIS) generates, analyses, and supplies actionable information to assists decision-makers. BI system consists of :1) Infrastructure, 2) data management, 3) data analysis, and 4) supply of actionable information (Rikhardsson & Yigitbasioglu, (2018). The digitalization of the organization has changed the decision-making style from judgmental to a data-driven decision. As big data analytics search the truth, the insightful judgment of a manager is no longer required.

SMEs are characterized as having relatively modest industries. SMEs are heavily reliant on internal sources of capital to fund their expansion because they are: (a) actively managed by their owners; (b) highly personalized; (c) generally local in their region of operations; and (d) highly customized (Faitira et al., 2012). Countries define SMEs differently (ILO, 1997). Employees, turnover, fixed asset value, ownership, energy use, and other factors are used to classify businesses (Agyei-Mensah, 2011).

Nepal has micro, small, medium, and large businesses:

- a) Micro industry: A micro-enterprise has a fixed capital of less than two million rupees, excluding house and land; the entrepreneur runs and manages the industry; a maximum of nine workers, including the entrepreneur; and an annual transaction of less than ten million rupees.
- b) Cottage industry: A cottage industry is based on traditional skills and technology, labor-oriented, uses local raw materials, technology, arts, and culture, and can use up to 50 KW of electricity to power engines, equipment, and machines.
- b) Small industry: Any industry with a fixed capital under 150 million rupees, excludes micro companies and cottage industries.
- d) A medium industry has fixed capital of 150–500 million rupees.
- e) Large industries have fixed capital beyond 500 million rupees (Industrial Enterprise Act 2020).

The Nepali government's Department of industrial compiles and publishes industrial statistics.

Table No.1: Types and numbers of industries in Nepal

Size	Number
Micro enterprises	41,099
Cottage industries	23,374
Small industries	4,88,239
Medium scale industries	1,846
Large scale industries	1,162
Total	5,55,720

Source: Statistics of SMEs, Nepal, Department of Industry 2022

Table No.1 showed that most Nepalese industries are small ($488,239 / 555,720 * 100 = 87.85\%$), whereas only 1,162 are huge (0.209%).

Sector-wise distribution of Nepalese SMEs

Table No. 2: Sector wise distribution on Nepalese SMEs

Areas of industrial activities	Number of industries
Manufacturing industries	114,484
Energy based industries	589
Agriculture -forest product-based industries	178,931
Tourism industries	54,795
Mining industries	486
Service industries	192,888
Infrastructure sector	10,021
Information technology-based industries	518
Total	5,52,712

Source: Statistics of SMEs, Nepal, Department of Industry 2022.

Table 2 groups Nepalese industries into eight categories. Services, agriculture-forest product, and manufacturing are the largest industrial sectors. Nepal has few IT industries.

SMEs are essential for creating independent jobs, leveraging local resources, and raising rural inhabitants' incomes. In 2001, SMEs made up 96% of industrial firms, created 83% of the sector's jobs, and contributed 80% to the country's GDP (Dahal& Sharma., 2004). SMEs rely on family savings for equity financing, but their creditworthiness inhibits expansion. The company's leader depends on entrepreneurial skills and ignores managerial qualifications. Recruiting without job descriptions is common. Staff are rarely allowed to make decisions on their own, even if they are capable. Locally developed, inefficient, and prone to breakdowns, the technology wastes a lot. Few SMEs export; most produce for local markets. Export-oriented enterprises cannot grow due to inherent limits. Private entrepreneurs cannot provide equity capital or collateral security; hence SMEs cannot obtain institutional credit (Dahal et al., 2004).

Technology (BI) boosts staff efficiency by providing accurate, timely information for good decisions (Burgess, 1997). SME has limited human resources, cannot hire IT expertise, and uses manual decision-making with sluggish data processing and human errors. SMEs struggle with data volume, information, and understanding. Thus, SME managers rely on their experience to make timely judgments, which increases the risk of failure. Nepalese SMEs gain from business intelligence (BI). Nepalese SMEs use outdated industrial methods and technology, have limited financial resources, and lack marketing and commercial experience (Dahal et al., 2004). This study examines whether Nepalese SMEs have sufficient infrastructure to adopt Business Intelligence. SMEs need accurate, reliable, and timely information to make the right decisions and grow and expand. Manual information systems cannot provide this information. Lack of accurate and reliable information affects the planning function of Nepalese SMEs, contributing to their misery. Nepalese SMEs suffer with data overload, lack of information, and illiteracy. Thus, SME managers rely on their experience to make timely judgments, which increases the risk of failure. This study aimed to examine whether Nepalese SMEs have sufficient business intelligence infrastructure to adopt business intelligence, functional areas where business intelligence systems are used and to disclose the reasons behind the non-adoption of business intelligence.

Business intelligence as a decision-support system in businesses emerged in the late 1990s as a result of developments in information technology. It takes a lot of time, effort, and organizational resources for the management to manually gather the information that is required. Management, statistics, and technology are all combined in a business intelligence system. The management's attempts to gather, store, and analyse the massive amount of data, information required to unlock the secret message concealed in raw data, are supported by BI.

The advantages of BI to an organization include systematic management of structured and unstructured data, massive data gathering and analysis, knowledge discovery from the data, and providing the analytical answer to decision makers (Wieder&Ossimitz, 2015; Yoon et al., 2014). The business intelligent system (BIS), which enables organizations to recognize and sensibly use data to stabilize or strengthen their position on the market, is

one of the greatest tools for combining the many internal and external data sources into a solution with significant business value.

The problems of the traditional file environment of data management are:

- The same data may be saved in multiple files and may take on different meanings for various users.
- Possibilities of losing the original data if just one person has to make changes to the data
- It could be challenging to search the data.
- Inadequate data security.
- Difficulty in assessing the complete data.

The foundation of business intelligence is a solid data warehouse. A data warehouse houses the organization's history and present data from internal and external sources.

The components of a data warehouse are presented in figure No 1.

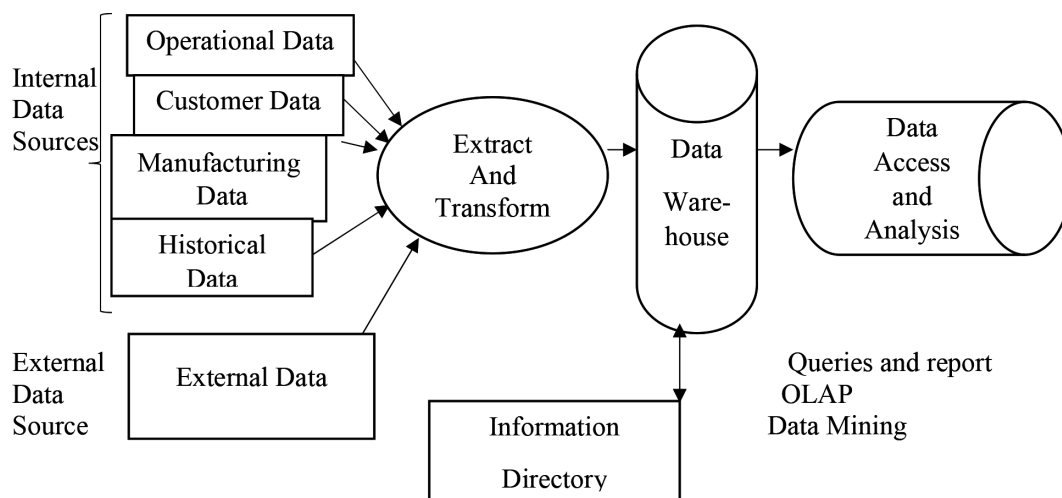


Figure No. 1: Data warehouse

Source; Laudon et.al. Management Information System, 11th Edition.

To design information systems, analyze structured and unstructured data, handle big data, and give management useful information for better decision-making, business intelligence makes use of advanced methods and technologies(Grover et al.2018).

Business Intelligence combines management, technology, statistics, and arithmetic.Graphically, it is presented in figure No. 2.

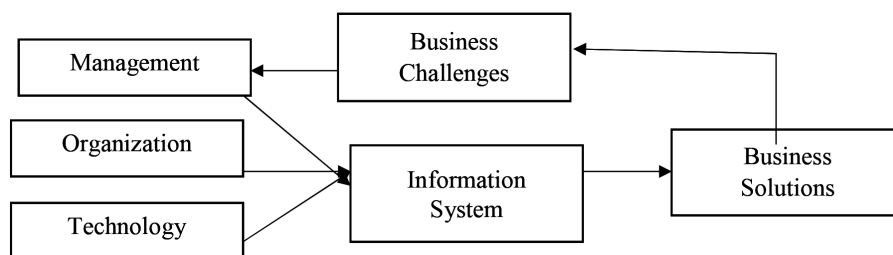


Figure No.2: Business Intelligence System

Figure No.2 depicts the basic components of business intelligence. An organization is a group of individuals working together to achieve common objectives inside a purposefully created framework. An organization is divided into three levels by a hierarchy of power and responsibility: the top level, the intermediate level, and the operation level. Top-level management develops long-term strategies for the entire company, whereas middle-level management executes top-level management's plans and policies, and operational-level management is in charge of managing the firm's daily operations.

For supporting the various levels and types of decisions, there are four systems. Middle and operational level managers receive routine reports and summaries of transactional-level data from management information systems (MIS) to help them solve structured and semi-structured decision problems. For middle level managers who are faced with semi-structured decision scenarios, decision support systems (DSS) give analytical models or tools for processing vast amounts of data. Executive support systems (ESS) are organizations that offer external data and high-level summaries of company performance to senior management, which makes mostly unstructured decisions (Laudon et.al.2010).

Resource Based View

The acquisition of resources is one of the main areas of competitiveness in the corporate world. In addition to being purchased, an organization's resources are also created through its experiences, which are distinctive and impossible for rivals to replicate. The Resource-Based View (RBV) examines and evaluates an organization's resources to determine how it develops a sustained competitive advantage. Because resources differ, there are variations in organizational performance. Human, financial, physical, structural, and informational resources are all types of organizational resources (Barney 1991). Employees that are capable, committed, motivated, and loyal are an organization's greatest asset and what sets it apart from its rivals. Competitive advantages come from advanced technology, a suitable organizational structure, and ample financial resources. Information collecting, analysis, and data-driven decisions made by the company all contribute to strengthening its position in a cutthroat market. According to RBV, it's important to identify the organization's resources, the firm's capabilities, the areas in which the company can outperform its rivals, the strategy to use the resources to their fullest potential, and the resource gaps that need to be filled.

Enterprise Resource Planning (ERP)

Organizations generally have a wide variety of information systems that were each developed to support unique tasks, hierarchies, and lines of business but are incapable of exchanging data automatically. Organizational efficiency and commercial effectiveness suffer when data is spread across hundreds of different platforms. Enterprise Resource Planning (ERP) solutions address this issue by aggregating and storing information from multiple critical corporate operations, including production and manufacturing, finance and accounting, sales and marketing, and human resources. One process's data is immediately available to another process after being updated.

The components of ERP are presented in figure No.3.

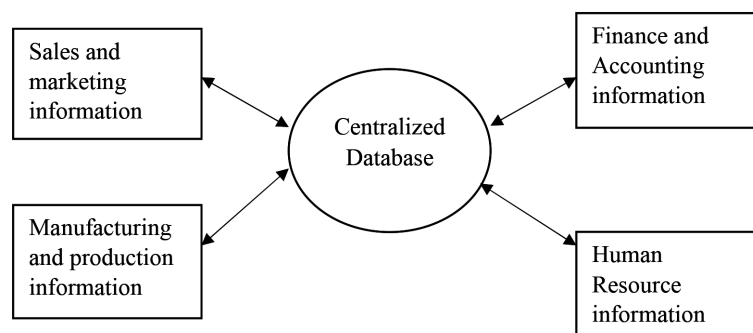


Figure No.3: Enterprise Resource Planning

Technological Aspect

BI is considered as a set of tools for gathering, analyzing, and accessing data for use in decision-making. The internal network, data bank, and storage of data gathered from various data sources are all aspects of BI technology. Whether or not Nepalese business owners are prepared to implement BI in their operations depends on the organization's access to appropriate hardware, user-friendly software, and internal networking systems. The technological infrastructure that Nepalese SMEs have at their disposal will determine how well they can adapt BI (Chau & Tam, 1997).

The internet and web are used in electronic commerce, also known as digital marketing, to conduct business transactions. It is the contemporary model for retail. The technology components of the virtual market include wireless internet connections, potent handheld mobile devices, and web-based computing. The eight distinguish-

ing characteristics of e-commerce technology that Laudon et al. listed are:

- I. Ubiquity: Internet and Web technology are accessible anytime, anywhere, on mobile devices, including at work, at home, and anywhere.
- II. Global reach: The technology is applicable everywhere on earth, regardless of country boundaries.
- III. Universal standards: There is just one set of technological standards, called the internet standards.
- IV. Richness: Text, audio, and video messages are all feasible.
- V. Interactivity: The technology functions through user engagement.
- VI. Information Density: The technology improves information quality while lowering information costs.
- VII. Customization: The technology enables the delivery of customized messages to both individuals and groups.
- VIII. Social Technology: User content generation and distribution are made possible by new internet social and business models, which also support social networks.

The degree to which an idea is deemed to be superior to the notion it replaces is known as its relative benefits. The degree of complexity at which an invention is deemed to be beyond human comprehension and use. It has to do with how new technology, like BI, is seen as being rather difficult to understand and use. The degree to which an idea is thought to be in line with values, previous perceptions, and requirements for future execution is referred to as its compatibility. Therefore, it is the degree to which an IT system is in line with the practices and beliefs already present in a particular firm. The ability to monitor innovation and its effects is known as observability. It indicates the degree to which people may perceive the impact of technology adoption before the adoption. The extent to which potential users have the opportunity to test an innovation is its trialability. It is the capacity of an organization or an individual to test, utilize, and practice new technologies or services before acquiring or making use of them.

2. Materials and Methods

To gather the information required for the study, semi-structured interviews were held. The units of information were the owners and managers of Nepalese SMEs, and the units of analysis were the SMEs themselves. 504 SMEs from Nepal were specifically chosen as a sample for the study. Each responder had 30 minutes of time to complete the survey. In order to do a descriptive analysis and come to conclusions regarding the study, the collected data were entered into the SPSS program. The respondents were given a standardized questionnaire that covered the various facets of business intelligence.

Gender wise distribution of the respondent is presented in Table No.3.

Table No.3: Gender

Gender	Frequency	Percent	Cumulative percent
Male	226	44.8	44.8
Female	278	55.2	100
Total	504	100	

Table No. 3 disclosed that the ratio of male and female participants is 44.8:55.2, which implies that more females are involved in Nepalese SMEs than males.

The education level of the respondents is presented in Table No. 4.

Table No.4: Education Level

Education	Frequency	Percent	Cumulative percent
Graduate	320	63.5	63.5
Graduate & above	184	36.5	100
Total	504	100	

Table No. 4 revealed that the ratio of undergrad and graduate and above respondents in the study is 63.5:36.5. The ratio of education levels among respondents indicates that the majority of undergrad Nepalese are involved in SMEs.

Types of SMEs is presented in Table No.5.:

Table No.5: Types of Business

Types	Frequency	Percent	Cumulative percent
Manufacturing	63	12.5	12.5
Service	69	13.7	26.2
Wholesale	79	15.7	41.9
Retail	293	58.1	100
Total	504	100	

Table 5 depicts the types of Nepalese SEMs selected as the sample for the study. Among the types of SMEs selected for the study, the majority are retail businesses.

3. Results

a. Business Intelligence Infrastructure

The study's objective was to look at the business intelligence infrastructures that are available to SMEs in Nepal. The study's respondents were questioned about their access to business intelligence software, cell phones, internet, and computer hardware. In table No. 6, the participants' responses are compiled.

Table No. 6: Business Intelligence Infrastructure

Types	Number	Desktop		Laptop		Cello phone		Internet		software	
		Yes	No	Yes	No	Yes	No	Yes	No	Yes	No
Manufacturing	63	63	0	63	0	63	0	63	0	63	0
Service	69	69	0	69	0	69	0	69	0	69	0
Wholesale	79	79	0	36	43	79	0	79	0	79	0
Retail	293	56	237	0	293	293	0	293	0	56	237
Total	504	267	237	168	336	504	0	504	0	267	237

According to Table 6, 52.97% of SMEs have desktop computers, while 33.33% of SMEs have laptop computers. There are computer software facilities in 52.97 percent of SMEs. Only 23.62 percent of retail establishments have access to computer hardware. The technology that SMEs have access to will determine the technological context of BI adoption.

b. Information System in Functional Areas

The study's goal was to identify the commercial activities where Nepalese SMEs employ information systems. Whether respondents used business intelligence systems in operations, marketing, finance & accounting, social networking, and top-level management was a question that was posed to them. In table No. 7, the respondents' responses are compiled.

Table 7: Adaptation of Business Intelligence

Types	Manufacturing		Service		Wholesale		Retail	
	Yes	No	Yes	No	Yes	No	Yes	No
Operation	61	2	28	41	0	79	0	293
Marketing	61	2	28	41	0	79	0	293
Finance & Accounting	63	0	30	39	34	45	0	293
Social net working	0	63	0	69	0	79	0	293
Management	0	63	0	69	0	79	0	293

According to Table 7, 96.28 percent of SMEs engaged in manufacturing in Nepal are using business intelligence systems for operations and marketing. Business intelligence systems are being used in finance and accounting processes by all SMEs engaged in manufacturing in Nepal. Business intelligence systems are not being used in social networking and top-level management by Nepalese manufacturing SMEs.

Business intelligence is used by 59.42 percent of Nepalese SMEs operating in the service sector for operations and marketing, and by 76.92 percent of these companies for finance and accounting. Social networking and top-level management do not employ any business intelligence systems. Only the finance and accounting sectors of Nepalese wholesale SMEs use business intelligence systems (75.55%). Nepalese retail enterprises do not employ any business intelligence solutions. More Nepalese SMEs use business intelligence systems in the finance and accounting departments than in other departments.

c. Perception on Business Intelligence System

The purpose of the study was to reveal how Nepalese SEMs felt about the business intelligence system. The statement “Business Intelligence system helps to achieve efficiency and effectiveness” was put to the test with the respondents. In table No. 8, the respondents’ responses are compiled.

Table 8: Respondents opinion on Business Intelligence

Yes		Business Intelligence system helps to achieve efficiency and effectiveness.			Total
		No	Undecided		
Type of Business	Manufacturing	63	0	0	63
	Service	57	0	12	69
	Wholesale	22	0	57	79
	Retail	21	6	266	293
Total		163	6	335	504

Table 8 showed that 32.34 percent of respondents agreed that business intelligence plays a crucial role in maximizing productivity and effectiveness. The majority (66.46 percent) of Nepalese SEMs are unaware of the use of business intelligence for the efficient running of their enterprises. SMEs working in the service and manufacturing sectors are aware of the value of information system.

d. Opinion on Problems to adopt Business Intelligence System

- Lack of Skilled Manpower

With the owners and managers of Nepalese SMEs, business intelligence-related issues for these businesses were explored. We questioned respondents if they agreed that there is a shortage of competent personnel to operate business intelligence systems. The responses’ thoughts on this topic are summarized in Table 9.

Table 9: Opinion on Lack of skilled manpower

Yes		Lack of skilled manpower		Total
		No		
Type of Business	Manufacturing	0	63	63
	Service	6	63	69
	Wholesale	49	30	79
	Retail	293	0	293
Total		348	156	504

According to Table 9, 69.04 percent of owner/ managers of Nepalese SMEs concur that there is a shortage of competent labor that can operate business intelligence systems. The skilled labor, according to Nepalese SMEs in the manufacturing (100%) and service (91.3%) sectors, is not a barrier to the adoption of business intelligence. 37.97 percent of SMEs in the wholesale sector believe that manpower is not a problem for them.

We questioned respondents if they agreed that there is a shortage of competent personnel to operate business intelligence systems. The responses' thoughts on this topic are summarized in Table 9.

- Unavailability of Easy Software

We questioned respondents if they agreed that there is unavailability of easy software to operate business intelligence systems. The responses' thoughts on this topic are summarized in Table 10.

Table 10: Unavailability of easy software

Yes		Unavailability easy software		Total
		No		
Type of Business	Manufacturing	0	63	63
	Service	6	63	69
	Wholesale	55	24	79
	Retail	291	2	293
Total		352	152	504

Table 10, revealed that 69.84 percent of owner / managers of Nepalese SMEs are agreed that the reason of non-practice of Business Intelligence is unavailability of easy software. Unavailability easy software, according to Nepalese SMEs in the manufacturing (100%) and service (91.3%) sectors, is not a barrier to the adoption of business intelligence. 30.37 percent of SMEs in the wholesale sector believe that unavailability of easy software is not a problem for them.

- Limited Information

We questioned respondents if they agreed that there is Limited Information to operate business intelligence systems. The responses' thoughts on this topic are summarized in Table 11.

Table11: Limited Information

Yes		limited information		Total
		No		
Type of Business	Manufacturing	0	63	63
	Service	6	63	69
	Wholesale	40	39	79
	Retail	291	2	293
Total		337	167	504

Table 11, revealed that 66.86 percent of owner / managers of Nepalese SMEs are agreed that the reason of non-practice of Business Intelligence is limited information are there with them. Limited information with Nepalese SMEs, according to Nepalese SMEs in the manufacturing (100%) and service (91.3%) sectors, is not a barrier to the adoption of business intelligence. 49.36 percent of SMEs in the wholesale sector believe that Limited information with Nepalese SMEs is not a problem for them to adopt Business Intelligence.

- Small Turnover

We questioned respondents if they agreed that there is small amount of turnover to operate business intelligence systems. The responses' thoughts on this topic are summarized in Table 12.

Table 12: Small Turnover

Yes		Small turnover		Total
		No		
Type of Business	Manufacturing	0	63	63
	Service	6	63	69
	Wholesale	40	39	79
	Retail	291	2	293
Total		337	167	504

According to Table 12, 66.86 percent of the owners and managers of Nepalese SMEs concur that their low turnover is the reason they don't use business intelligence. According to Nepalese SMEs in the manufacturing (100%) and service (91.3%) sectors, a little quantity of turnover in SMEs is not a barrier to the adoption of business intelligence. The little quantity of turnover in Nepalese SMEs, according to 49.36 percent of SMEs in the wholesale sector, is not a barrier to their adoption of business intelligence.

- Concern for data security

We asked respondents if they agreed that using business intelligence solutions raises concerns about data security. Table 13 presents an overview of the participants' opinions on this subject.

Table 13: Concern for data security

Yes		Concern for data security		Total
		No		
Type of Business	Manufacturing	13	50	63
	Service	24	45	69
	Wholesale	65	14	79
	Retail	293	0	293
Total		395	109	504

According to Table 13, 78.37 percent of the owners and managers of Nepalese SMEs concur that a concern over data security prevents them from using business intelligence. According to Nepalese SMEs in the manufacturing (79.63%) and service (65.21%) sectors, worry over data security is not a barrier to the adoption of business intelligence. Concern for data security in Nepalese SMEs, according to 17.72 percent of SMEs in the wholesale sector, is not a barrier to their adoption of business intelligence.

4. Discussion and conclusions

The competition from a local to a global level is becoming more intense due to economic globalization. Regardless of the size and type of corporate organization, data-driven decision making is currently of utmost importance. Because of the accessibility of computer hardware and software, the conventional methods of data collecting, storage, and analysis are becoming obsolete. This study aimed to reveal how Nepalese SMEs saw the incorporation of business intelligence into their operations. The study's main objective was to determine whether or not different types of industries have different perceptions of business intelligence. Out of 504 SMEs, 12.5% were manufacturing companies, 13.69% were service companies, 15.67% were wholesale companies, and 58.13%

were retail companies. Business intelligence in Nepalese SMEs is at the development stage, based on the infrastructure that is now available for it. The manufacturing, service, and wholesale business sectors in Nepal have access to computer hardware and software facilities. All SMEs in Nepal have access to mobile phones and the internet. According to the study's findings, Nepalese retail enterprises lack a strong business intelligence infrastructure. The primary issue of the SME in implementing BI is whether the technology is supported (Chau & Tam, 1997). When making adaptation decisions, the comparison of benefits, additional benefits of new technology, desire, and relevance of BI to the organization are taken into account. Does BI give the business a competitive edge? Does BI satisfy the firm's requirements? Are the quarries of decision-maker's (Prem Kumar & Roberts, 1999).

The qualities of external and internal technologies that could have an impact on companies or people are defined by the technological element of adoption (Khayer, Talukder et al., 2020). The technological background, according to Tornatzky and Fleischer (1990), includes both internal and external technologies that are relevant to businesses. The organizations' external technologies are those that are easily accessible on the market but are not currently adopted by a specific firm; these technologies can have an impact on innovation "by defining the boundaries of what is possible as well as by demonstrating to firms how technology can enable them to evolve and adapt" (Baker, 2012). The decision to adopt innovation must take into account the organization's internal technologies, which include its current tools and procedures. These technologies set a firm's tolerance for the extent and speed of technological change (Baker, 2012).

In the area of technology adoption, Roger (1995) recognized the five technological variables as relative benefit, complexity, compatibility, trialability, and observability. The components in Rogers theory of diffusion of innovation (DOI) are the most frequently researched factors used to study the impact of technological factors on technology adoption by SMEs, according to Banapour et al. (2020) and Pipitwanichakarn and Wongtada (2019). These technological traits have been the subject of numerous studies that evaluated the degree of company IT adoption using these criteria (Khayer, Talukder et al., 2020). As a result, S. Z. Ahmad et al. (2019) used these characteristics to investigate how SMEs in the UAE are using social media. Additionally, Hiran and Henten (2020) studied the adoption of cloud computing in the Ethiopian higher education industry using these factors. According to Teixeira et al (2018). 's theoretical analysis of 41 papers, which focused on 45 characteristics connected to organizational digital marketing adoption, adoption of innovations is likely to be influenced by relative advantage, compatibility and complexity, observability, and trialability. Additionally, the findings of Hameed and Counsell's (2012) meta-analysis support the notion that these components play a significant role in the adoption of IT innovations.

Information technology adaptation is popular in Nepalese SMEs' finance and accounting departments. 96.28 percent of manufacturing companies and 59.42 percent of service companies use information technology in their operational and promotional activities. In the retail industry of Nepal, there is no business intelligence system. Top management in Nepalese SMEs uses a traditional approach of decision-making. It implies that the business intelligence system in SMEs in Nepal is still developing. Lack of skilled labor, a lack of simple software, a lack of information, a little turnover, and concerns about data security are reasons why Nepalese SMEs do not use business intelligence, however manufacturing and service enterprises disagree with these explanations.

5. Implications of Study

The digitalization of commercial organizations makes it easier to manage large volumes of data. Data protection is a top priority because they are an organization's most valuable assets. Gaining competitive advantages is essential in a highly competitive corporate climate, and real-time information can help. More Nepalese SMEs are interested in implementing BI in their operations. The software developer can adapt the BI for Nepalese SMEs with the help of this study. The idea of business intelligence will be enhanced by additional study using different moderators and mediating variables, as well as research in different contexts. Technological literacy is the main issue in Nepalese business sector. Nepal government announced information and communication technology policy in 2015 with aim achieve the goal of "Digital Nepal". This policy is meant to lay the foundations for a larger "Digital Nepal" goal. This vision calls on Nepal to increase its pursuit of equality and sustainable progress through the use of information and communication technology, which will help change Nepali society into a knowledge and information-based society.

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Distribution Nature of Foreign Exchange (FOREX) Rates in Nepal

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ABSTRACT

The economy of Nepal is based on the inflow of remittances sent by the Nepalese who have gone abroad for foreign employment. The trend started after the start of the Maoist insurgency and has been going on due to a lack of employment opportunities within the nation. Other than remittance, tourism and a certain amount of foreign aid have been the sources of foreign exchange earnings for Nepal. These sources of FOREX have been able to maintain the balance of payments in Nepal. One unique feature of FOREX rates in Nepal is that the Nepalese rupee (NPR) is pegged with the Indian rupee (INR), the currency of the neighboring nation, India. The central bank of Nepal, Nepal Rastra Bank, publishes FOREX rates for 21 different countries on a daily basis, though exchange rates for 16 currencies have been publishing buying and selling rates for the past decade. Hence, the paper analyzed the distribution nature of 16 countries FOREX buying and selling rates and found that INR FOREX rates have no randomness as they are pegged. The most concerned currencies, like USD, SAR, QAR, and AED, were fitted with beta distribution capabilities to reflect the future trend of the exchange rate. At the same time, the GBP buying rate, JPY, and KRW buying and selling rates were best-fitted in general extreme value (GEV), reflecting the risky nature of currencies. The exchange rate distribution seems to be a concern to the exporter and importer, as the nature of the distribution could help to categorize the level of FOREX risk with a specific currency.

Keywords: Distribution nature, Exchange rate, FOREX, Nepal.

1. Introduction

Foreign exchange refers to the currency (or interest-bearing bonds) of another country. In other words, the money of one nation held by citizens of another nation, either as currency or as deposits in banks, is called foreign exchange. Similarly, a FOREX market is a meeting platform for buying, selling, and speculation on currency conversion rates.

A foreign exchange, or FOREX, transaction involves the purchase of one currency against the sale of another currency for settlement or delivery on a specified date. The rate of exchange is the price per unit of one of the currencies expressed in units of the other currency (Roth, 1996). In other words, the foreign exchange rate is the rate at which one country's money can be turned into another's. The foreign currencies are exchanged or transferred in the foreign exchange market. Thus, an exchange rate is simply the rate at which one currency can be exchanged for another currency (Adhikari et al., 2017).

Exchange-market places with flaws would be ineffective. One prevalent claim is that FOREX markets are unstable when exchange rates are floating because speculators enter the market to distort normal and realized values, as opposed to interest rate parity. Others contend that the increased risk of a flexible system leads to higher trade prices. To obtain a temporary trading advantage, several nations may devalue their currencies during a time of domestic strife.

A symmetric stable distribution, rather than a normal distribution, provides a fair explanation of exchange rate movements under fixed and floating rate regimes, according to Westerfield (1977). Extreme ramifications result from this discovery. For instance, the sample variance is probably useless as a risk indicator if fluctuations in exchange rates obey a stable probability law. This suggests that mean-variance models have little application to describing economic issues in global finance.

From a nonlinear approach, Li and Miller (2015) looked into the inefficiency of the FOREX market and found that this is consistent with a number of confusing facts about the market. Kitamura (2017) acknowledged the effectiveness of the FOREX markets and provided efficiency metrics for them. In their study of the efficiency of the FOREX market, Levich et al. (2019) showed how these markets occasionally displayed excess predictability and inefficiency, such as during the global financial crisis. Similar findings were made by Han et al. (2020) about the multifractal structure and inefficiencies of the foreign currency market. Technically speaking, it is possible to forecast and evaluate exchange rate movements, which opens up the market to arbitrage.

In general, an economy's inefficiency is implied by a FOREX market that is flawed. Due to the effects of exchange rate volatility on trade flows, models of foreign currency transaction costs, mean-variance analyses of international portfolios, or studies of FOREX market efficiency, the distribution pattern or statistical features of FOREX are therefore of great concern, especially to nations like Nepal, whose trade dependency is extremely high with a single neighboring nation, India, as well as having a pegged FOREX rate with its currency, Indian Rupees (INR).

2. Literature Review

Historical Background of FOREX Regime

Historically, a concept of FOREX was conceived in 1694 during the period of English King William III, who urgently needed money to finance the war against France, popularly known as the Battle of Beachy Head, and then established the Bank of England. Further, until 1832, the Bank of England lost its monopoly, and foreign banks also emerged in England to provide banking services. Then, after the incident, the concept of the gold standard emerged in the market (Roth, 1996).

After World War II, the turning point came in the international foreign exchange regime. The United Nations Monetary and Financial Conference held at Bretton Woods, New Hampshire, on July 22, 1944, sought to reconstruct the world monetary system by designing an adjustable peg system of foreign exchange rates and by establishing the International Monetary Fund (IMF) and the International Bank for Reconstruction and Development, the World Bank (Roth, 1996). A financial pact known as Bretton Woods was signed on July 22, 1944, in Bretton Woods, New Hampshire. After World War II, the agreement was intended to stabilize currencies and advance global trade. The Bretton Woods agreement required each signatory nation to peg its currency to gold and set a limit on how much might deviate from the peg. Currencies from around the world were pegged against the U.S. dollar, which was in turn pegged against the value of gold, in an attempt to bring stability to global economic events. In 1971, this act finally failed. However, it did manage to stabilize major economies around the world, including those within the Americas, Europe, and Asia (Martinez, 2022).

Determination of FOREX Rate

The FOREX market deals with the buying, selling, and speculation of foreign currencies. The FOREX market includes both spot markets for immediate dealing and future markets for delivery on future dates at pre-arranged prices. The foreign exchange rate is an important determinant of the prices of exports and imports in international trade. The change in FOREX rate has a direct impact on the external trade balance and domestic economy (Adhikari et al., 2017). There are mainly two systems or regimes for determining the exchange rate. There are floating or flexible exchange rate systems and pegged or fixed exchange rate systems.

Flexible (Floating) Exchange Rate System

An exchange rate with no government or central bank action to keep it stable is known as a floating exchange rate. This is also known as a flexible exchange rate. In a pure or clean float, there is no government or central bank intervention at all in the FOREX market, and the determination of the exchange rate is left to the market force.

When there is no official intervention in the forex market, the rate is freely floating and will rise or fall to the equilibrium rate determined by the supply of and demand for that currency. The system of exchange rate determination in which the value of currency is allowed to adjust freely or to float as determined by demand for and supply of FOREX is called the flexible (floating) exchange rate system (Adhikari et al., 2017).

The combination of currency supply and demand on the market determines this exchange rate. A high exchange rate may result from increased demand, and a low rate may result from increased supply. Independent float and controlled float are the two types of floating exchange rates.

Because there is no involvement by the government or central bank in the demand and supply of the currency, an independent float is also known as a clean float. While in the managed floating exchange rate regime, central banks intervene in the market to limit the volatility of the currency market so that it has no impact on the stability of the economy or the price of currency, there is still a risk of abrupt currency appreciation and depreciation (Dwivedi, 2010).

Pegged (Fixed) Exchange Rate System

A system in which a country's exchange rate remains constant is called a fixed exchange rate. Before 1971 AD, the industrial world was on a fixed exchange rate system called the Bretton Woods System.

A fixed exchange rate exists when authorities (central banks) specify the rate at which their currency will exchange against other currencies. The central bank then intervenes as and when necessary, as buyer or seller, to maintain the specified exchange rate. The objective of intervention is to neutralize changes in supply or demand for currency on the FOREX market so that the exchange rate neither appreciates nor depreciates against other countries (Adhikari et al., 2017).

Inflation is controlled, trade and investment are stabilized, and the currency system is kept stable under this exchange rate regime. A nation with a low GDP may choose a fixed exchange rate regime. Even in cases of surplus currency supply and demand, the rate will be controlled in accordance with the previous decision (Dwivedi, 2010). Nepal has followed a fixed exchange rate with Indian currency, and the Bretton Woods system accepted this system until 1971.

Review of Empirical Studies

Rogalski and Vinso (1978) looked into how exchange rates behaved. Empirical studies show that during fixed rate periods, the distribution of the underlying stochastic process for changes in foreign exchange rates was constant proportionally, whereas a student model offers a relatively better explanation of floating rates.

McFarland et al. (1982) investigated the nature of price changes in a variety of major and minor foreign exchange markets. The findings revealed that a non-normal stable distribution function appears to govern the log of price movements over intervals of one trading day.

Boothe and Glassman (1987) argued that the FOREX rates have fatter tails than the normal distribution, which leads to a fit on non-normal distributions. Using maximum likelihood parameter estimates and chi-square goodness-of-fit tests, the paper examined the empirical fits of three non-normal candidates and the normal distribution for daily variations in the logarithms of exchange rates. The student and mixture of two normal offered the best fits; however, there is evidence that the parameters of the distribution could change with time.

Johnston and Scott (1999) stated that much of the existing research on the distribution of exchange rates suggests that high-frequency data are not independent and identically distributed. However, their paper concluded that models that assume independence should not be overlooked since existing models of dependence do not dominate the alternatives that assume independence.

Rimarčík (2006) concentrated on specific statistical aspects of the logarithmic returns of the three most significant currencies for Slovakia: the euro, dollar, and Czech koruna. Despite the SKK/USD returns having an almost normal distribution, none of the three currencies exhibited a normal distribution of returns. They are all non-stationary return time series.

Blau (2017) found that exchange rate volatility is associated with greater kurtosis and more negative skewness. Similarly, the fluctuation pattern in the FOREX market was also found to be associated with the fluctuation of the stock market in the nation.

Han et al. (2020) hypothesized that multifractal features occur at various levels in the subsamples, demonstrating how these events have an impact on the efficiency of the foreign exchange market from both a statistical and fractal perspective. According to the study, empirical findings have implications for the effectiveness and nonlinear mechanism of the foreign exchange markets, which could aid investors in

efficiently managing market risks and in maintaining a stable global economy.

Charfi and Mselmi (2022) examined exchange rate volatility using GARCH models with a new innovation distribution, the Normal Tempered Stable. The study discovered that the effectiveness of GARCH models with a normal-tempered-stable distribution helps to improve risk measure accuracy, which is crucial for international traders and investors.

Luanglath (2022) analyzed the extreme devaluation of currencies in ten ASEAN countries. The concept of extreme value theory (EVT) was adopted to analyze the distribution pattern of the devaluation of currencies. The paper found that the Weibull distribution perfectly predicted the devaluation of currencies in the ASEAN region.

3. Methodology

The paper tried to find out the statistical properties or distribution nature of the FOREX rates prevailing in the Nepalese FOREX market. Hence, a descriptive research design has been followed to explain the facts and characteristics related to the issue raised by the paper.

The paper has used secondary data related to the foreign exchange rates between the Nepalese rupees (NPR) and other foreign currencies that are eligible to exchange as directed by the central bank of Nepal, the Nepal Rastra Bank (NRB). All the published buying and selling rates by the NRB are considered population for the study.

Nevertheless, the paper has taken a sample of the foreign currencies, which have been regularly published by the NRB since the last decade. Though, the central bank has been publishing buying and selling rate for twenty-one (21) different foreign currencies, the paper has considered the published daily buying and selling rates of sixteen (16) currencies from July 16, 2013 to July 16, 2023, covering 3,653 days.

The paper has used descriptive statistics to determine the basic distribution nature of the FOREX rates. Similarly, the paper has also used the Kolmogorov-Smirnov Test (KS Test) and the Anderson Darling Test (AD Test) to find out the significance of the fitted distribution.

4. Findings

This section illustrates the results of the data analysis. The descriptive statistics of the FOREX rates and distribution nature of the FOREX rates of major foreign currencies exchanged in Nepalese market are being presented in this section.

Table 1: Descriptive Statistics of FOREX

Statistic	USD (Buying)	USD (Selling)	EUR (Buying)	EUR (Selling)	GBP (Buying)	GBP (Selling)	CHF (Buying)	CHF (Selling)
Mean	111.03	111.63	127.81	128.50	151.41	152.23	116.61	117.24
SD	10.01	10.00	9.30	9.31	9.95	9.99	11.97	11.99
Sk.	+0.41	+0.41	-0.14	-0.15	-0.48	-0.48	+0.79	+0.79
Ku.	-0.70	-0.70	-0.88	-0.88	-0.82	-0.83	-0.49	-0.49
Var.	100.17	100.17	86.42	86.71	98.95	99.78	143.38	143.65
Range	39.28	39.28	42.18	42.22	45.04	45.09	55.70	55.81
Statistic	AUD (Buying)	AUD (Selling)	CAD (Buying)	CAD (Selling)	SGD (Buying)	SGD (Selling)	JPY* (Buying)	JPY* (Selling)
Mean	83.09	83.55	87.33	87.81	82.12	82.56	9.82	9.88
SD	5.15	5.17	6.45	6.46	6.70	6.70	0.81	0.81
Sk.	+0.17	+0.17	+0.22	+0.22	+0.75	+0.75	-0.03	-0.03
Ku.	-0.99	-0.98	-1.10	-1.10	-0.19	-0.19	-0.66	-0.67
Var.	26.56	26.77	41.62	41.74	44.93	44.91	0.65	0.65
Range	29.53	29.72	28.99	29.15	28.67	28.70	3.56	3.48

Statistic	CNY (Buying)	CNY (Selling)	SAR (Buying)	SAR (Selling)	QAR (Buying)	QAR (Selling)	THB (Buying)	THB (Selling)
Mean	16.81	16.90	29.60	29.76	30.46	30.62	3.36	3.38
SD	1.17	1.17	2.66	2.66	2.72	2.72	0.33	0.33
Sk.	+0.62	+0.61	+0.40	+0.40	+0.40	+0.40	+0.14	+0.14
Ku.	-0.79	-0.79	-0.71	-0.71	-0.71	-0.71	-1.54	-1.53
Var.	1.36	1.36	7.07	7.08	7.38	7.38	0.11	0.11
Range	4.67	5.11	10.42	12.08	10.79	10.79	1.14	1.14
Statistic	AEB (Buying)	AED (Selling)	MYR (Buying)	MYR (Selling)	KRW* (Buying)	KRW* (Selling)	INR (Buying)	INR (Selling)
Mean	30.23	30.39	27.55	27.70	9.60	9.66	1.60	1.615
SD	2.74	2.73	1.86	1.87	0.49	0.49		
Sk.	+0.41	+0.41	-0.36	-0.34	+0.32	+0.32		
Ku.	-0.70	-0.70	-0.39	-0.38	-0.73	-0.72		
Var.	7.43	7.43	3.46	3.49	0.24	0.24		
Range	10.69	10.70	9.99	9.95	2.44	2.44		

Note: USD=United States Dollar, EUR=Euro, GBP=Great Britain Pound, CHF= Confoederatio Helvetica franc (Swiss Franc), AUD= Australian Dollar, CAD=Canadian Dollar, SGD= Singapore Dollar, JPY=Japanese Yen, CNY=Chinese Yuan, SAR= Saudi Riyal, QAR= Qatari Riyal, THB= Thai Baht, AED=United Arab Emirates Dirham, MYR= Malaysian Ringgit, KRW= South Korean Won, INR= Indian Rupees

*JPY exchange rate is for 10 JPY and KRW exchange rate is for 100 KRW

Source: Nepal Rastra Bank and Author's Calculations

The average buying and selling rate for the respective currencies is determined by various economic factors and the economic condition of the respective country and of Nepal. Similarly, especially in the context of Nepal, the composition of trade, the geographical position of the nation, and the possibility of capital flight enhance the level of confidence in the local currency. Nepal is also bound to peg its FOREX rate with the neighboring nation, India. Historically, it was found that on June 6, 1966, the Government of India substantially devalued its currency. Nepal's involvement was minimal because the Nepalese rupee was already linked to the Indian rupee. However, as a result of the pegging effect, the Nepalese currency automatically increased in value relative to the Indian currency. The new exchange rate between the two currencies was set from 101 Nepalese rupees to 100 Indian rupees as a result.

The last time the two currencies were changed was on February 1, 1993, when the previous exchange rate of 160 Nepalese rupees to 100 Indian rupees was reinstated. Thus, despite the Foreign Exchange Regulation Act of 1962 allowing the convertibility of Nepalese rupees with all other currencies, the exchange rate between the Nepalese and Indian rupees has mainly remained the same for a very long time. Hence, the buying-selling rate with INR has remained the same and there has been no fluctuation in the exchange rate. The data shows that the exchange rate between NPR and INR has been revised eight times and has remained at the exchange rate of NPR 1.60 for INR 1.00 (Maskey, 2001).

However, the remaining currency exchange rate is determined by the Nepal Rastra Bank (NRB) and addressed time-to-time through monetary policy. Table 1 shows that the exchange rate for different foreign currencies varies and has different exchange rates determined by the NRB. The buying and selling rates are varied at a very minimal rate. Similarly, only the exchange rates for EUR, GBP, JPY, and MYR are negatively skewed, while the others are positively skewed. At the same time, a distribution that has a lower or negative kurtosis value than the normal distribution is said to have lighter tails. Hence, all buying or selling exchange rates are found to have a negative kurtosis, reflecting lighter tails.

Table 2: Fitted Distribution of FOREX

Currency	Fitted Distribution	Parameter	KS Test	AD Test
USD (B)	Beta	$\alpha_1=1.4614, \alpha_2=1.9519, a=93.244, b=135.4$	0.0491	18.38
USD (S)	Beta	$\alpha_1=1.4614, \alpha_2=1.9519, a=93.844, b=136.0$	0.0491	18.38
EUR (B)	Beta	$\alpha_1=2.4691, \alpha_2=2.0288, a=104.02, b=147.28$	0.0284	4.758
EUR (S)	Beta	$\alpha_1=2.4692, \alpha_2=2.0206, a=104.65, b=147.95$	0.0275	4.823
GBP (B)	General Extreme Value	$k=-0.5327, \sigma=10.986, \mu=149.1$	0.0559	34.65
GBP (S)	Triangular	$m=160.44, a=125.79, b=172.78$	0.0569	21.90
CHF (B)	General Pareto	$k=-0.2635, \sigma=18.683, \mu=101.82$	0.09831	332.15
CHF (S)	Lognormal (3P)	$\sigma=0.58531, \mu=2.8649, =96.51$	0.12296	70.387
AUD (B)	General Pareto	$k=-0.8277, \sigma=15.27, \mu=74.75$	0.0479	326.73
AUD (S)	General Pareto	$k=-0.8277, \sigma=15.27, \mu=74.75$	0.0478	326.73
CAD (B)	General Pareto	$k=-0.8277, \sigma=15.27, \mu=74.75$	0.0479	326.73
CAD (S)	General Pareto	$k=-0.8277, \sigma=15.27, \mu=74.75$	0.0479	326.73
SGD (B)	Beta	$\alpha_1=1.7047, \alpha_2=5.2794, a=71.69, b=114.55$	0.0580	20.99
SGD (S)	General Pareto	$k=-0.4041, \sigma=12.593, \mu=73.592$	0.0361	339.49
JPY (B)	General Extreme Value	$k=-0.28684, \sigma=0.81414, \mu=9.5395$	0.0369	8.0736
JPY (S)	General Extreme Value	$k=-0.28646, \sigma=0.81598, \mu=9.5922$	0.03643	8.0925
CNY (B)	Gamma (3P)	$\alpha=3.3733, \beta=0.6506, =14.616$	0.0966	46.842
CNY (S)	Rayleigh (2P)	$\sigma=1.9018, =14.478$	0.0976	70.193
SAR (B)	Beta	$\alpha_1=1.4661, \alpha_2=1.9439, a=24.856, b=36.044$	0.04941	18.262
SAR (S)	Beta	$\alpha_1=3.623, \alpha_2=6.584, a=23.305, b=41.516$	0.05543	20.154
QAR (B)	Beta	$\alpha_1=1.4816, \alpha_2=1.9871, a=25.606, b=37.116$	0.04812	16.42
QAR (S)	Beta	$\alpha_1=1.4739, \alpha_2=1.9738, a=25.775, b=37.264$	0.04833	16.46
THB (B)	Uniform	$a=2.80, b=3.94$	0.12452	194.85
THB (S)	Uniform	$a=2.81, b=3.95$	0.1233	194.25
AED (B)	Beta	$\alpha_1=1.463, \alpha_2=1.957, a=25.386, b=36.871$	0.04955	18.342
AED (S)	Beta	$\alpha_1=1.468, \alpha_2=1.967, a=25.546, b=37.047$	0.04946	18.269
MYR (B)	Weibull	$\alpha=18.152, \beta=28.367$	0.04642	352.09
MYR (S)	Weibull	$\alpha=18.172, \beta=28.52$	0.046	17.51
KRW (B)	General Extreme Value	$k=-0.68995, \sigma=1.2684, \mu=8.8531$	0.0581	19.271
KRW (S)	General Extreme Value	$k=-0.1391, \sigma=0.4501, \mu=9.452$	0.05714	18.515

Source: Nepal Rastra Bank and Author's Calculations

The distributions for the USD buying and selling rate, EUR buying and selling rate, SGD buying rate, SAR buying and selling rate, QAR buying and selling rate, and finally AED buying and selling rate were best-fitted on the beta distribution. This nature reflects that the uncertain future exchange rate could be estimated using two parameters, 'a' and 'b', and similarly, the Markov Chain Monte Carlo (MCCM)

model could be used to predict the future rate for the respective foreign currencies.

At the same time, the GBP buying rate, the JPY buying and selling rate, and finally the KRW buying and selling rate best fit the generalized extreme value (GEV) distribution. This shows that these exchange rates are fitted under Extreme Value Theory (EVT), i.e., a combination of the Gumbel, Fréchet, and Weibull families. The risk associated with GBY, JPY, and KRW can be determined through a VaR calculation.

The general Pareto distribution was fitted for the AUD buying and selling rate, the CAD buying and selling rate, the CHF buying rate, and the SGD selling rate. This reflects that the exchange rates for AUD, CAD, CHF, and SGD will reach certain extreme levels in the near future, or at the same time, there is a chance of extreme losses from FOREX trading for these currencies.

The FOREX trading for THB brings equal probability of profit or loss as it's buying and selling rates, both best-fitted in uniform distribution. In context to the MYR buying and selling rate, the best-fitted distribution is the Weibull distribution. This shows that the MYR is in a weakening condition, and the devaluation of the MYP is still going to take place in the coming days.

The selling rate of CHF followed log-normal (3P), reflecting that the flow of CHF in the market could be easily determined, as well as that the peak of the selling rate for CHF could also be determined as it was fitted to the respective distribution.

The GBP selling rate best fits the triangular distribution, which shows the rate is backed by less information about the exchange rate fluctuation. Similarly, the CNY buying rate and CNY selling rate best fit the Gamma (3P) distribution and the Rayleigh (2P) distribution. This shows that the CNY buying rate is determined by the various economic or political events that might take place in the future, while the CNY selling rate will reflect a significant high value in the coming future.

5. Conclusion and Implication

Economic expansion is the only appropriate means of raising people's quality of life. In the context of Nepal, remittances and tourism are related to economic growth. Foreign currencies can be used as productive capital to improve economic activities, which will both increase economic growth and help earn more foreign currency.

Remittances are a more dependable source of foreign currency for developing countries than other capital inflows. Export, tourism, and remittance profits in foreign currencies are inversely correlated with the country's economic growth.

The inflow of foreign currencies in Nepal can be categorized into four parts: first, from the Arab countries, i.e., the amount remitted by Nepalese for foreign employment; second, from a few amounts from Southeast Asian countries; third, from the tourism sector; fourth, from foreign trade; and finally, the fourth sector is foreign aid to Nepal. Since the beginning of the millennium, remittances from foreign employment have been the main source of foreign currency inflow in Nepal.

The distribution nature of the exchange rate for the currencies of Arab nations followed the same nature. The distribution of the SAR buying and selling rate, the QAR buying and selling rate, and finally the AED buying and selling rate were best-fitted on the beta distribution, reflecting the prediction that the future exchange rate could be feasible and could manage the FOREX balance for trade with the Arab nations. Similarly, two major foreign currencies, USD and EUR, also followed the beta distribution. Two currencies, mainly USD and EUR, are used to maintain the balance of payments for the nation. Demand and supply for USD and EUR are determined by the foreign trade position of Nepal. Hence, after the INR, these two currencies play a vital role in the Nepalese economy.

The exchange rate for JPY, MYR and KRW is of huge concern as large number of Nepalese have gone for foreign employment. Hence, weakening of these currencies also make inverse impact on Nepalese economy. All these currencies exchange rate is fitted on EVT-based distribution reflecting that the exchange rate reaches at certain peak threshold and fall in future, which is risky.

Above all distribution patterns, the pegged exchange rate of NPR with INR and absence of randomness in exchange rate brought no distribution pattern for the buying rate or selling rate of INR. The central bank, the NRB, also needs to peg the exchange rates of NPR and INR to stabilize the local currency. Although it is bordered on the northern side of Nepal, the concern about CNY in the Nepalese economy is limited, and Nepalese are just expecting the need in the coming future, while THB was seen having equal chances

of profit or loss from FOREX trade, though Nepal has limited level of trade with Thailand.

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Students' Perception on Power Point Use in Classroom

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ABSTRACT

This paper presents students' perception on PowerPoint use in the classroom in Balkumari College. This study aimed at finding out students' perception on PowerPoint use in the classroom and to determine association of students' perception on PowerPoint use and variable (of faculty). This paper was a cross-sectional survey based on self-administered 180 sets of questionnaire, 20 sets for each faculty incorporating demographic and five Likert scale questions through purposive sampling method covering nine faculties of Balkumari College. This study concluded student's memory enhancement and overall students' perception on PowerPoint use in the classroom was statistically significant ($r = 0.362$, $P < 0.001$). The study showed if students memory was enhanced their overall perception remained positive on PowerPoint use.

Keywords: Students' Perception, PowerPoint, Classroom, Memory Enhancement

Introduction

The use of technology in classes has developed new ways of teaching and learning. It enhances learning by providing a better understanding of the topic as well as motivating students (Lari, 2014). Similarly, PowerPoint presentation aids to meet students' needs, as well as the professor's needs, by shifting from a passive, teacher-centered classroom to an interactive, student-centered classroom (Smith, 2015). At the same time, the use of PowerPoint in the classroom gives the impression to be comprised by instructors at institutions nationwide. Instructors are spending hours in the preparation of PowerPoint presentations to go with lecture material. Similarly, textbook companies are approaching instructors to design textbook-specific slide shows to enhance the marketability of their textbooks (Vyas & Sharma, 2014). As one of the Microsoft Office applications, Microsoft PowerPoint was technologically advanced by Microsoft since 1990 and has been used widely for disseminating information and presenting reports. Power Points are generally produced in slides to be projected on the screen or whiteboard for teaching learning purposes (Osman, Noor, & Rouyan, 2022).

Moreover, along with the adaptation of new modern tools in teaching learning activities even the covid-19 pandemic also makes the urgency of virtual learning. (Khanal, 2021). Use of PowerPoint either in virtual or in physical class Teachers however, should carefully plan and create presentation that are visually stimulating and grab the attention of the students in order to convey knowledge to the students (Ismail & et.al, 2017).

In this context, PowerPoint slides have been most whereas, inefficiency of PowerPoint slides can result from their improper usage by instructors, based on a lack of basic technical skills in using the software, or a lack of information on how to prepare effective course materials rooted with multimedia etc. (Uzun & Kilis, 2019). PowerPoint presentation is an excellent instructional medium for facilitating effective teaching and learning.

The research article entitled 'Undergraduate Students' Perception and Attitude towards the Use of PowerPoint for Lecture Delivery in Tertiary Institution' revealed that undergraduate students in tertiary institutions, especially at Nnamdi Azikiwe University Awka have positive perceptions toward using PowerPoint in lecture delivery. PowerPoint can increase students' engagement and bridge the gap between abstract and concrete concepts. Also, it was exposed that PowerPoint has no relationship with students' genders (Igwe & et.al., 2022).

As an innovative tool the PowerPoint has been one of the growing trends of teaching and learning in the sector of

education. The application of technology in education has overcome the traditional methods of teaching. In this regard, for the effective educational process, making good use of the technology in preparing students, teachers, curriculum development and the diversity of teaching methods is essential. Therefore, this study aimed to find out students' perceptions on the PowerPoint use in classroom for teaching learning activities and determine the co-relation between students' perception and their faculty in bachelor and master level of Balkumari College. Specifically, the following research questions will be addressed: How do students perceive their teachers' practice and behavior in the use of PowerPoint in the class? In what way does PowerPoint presentation assist to student-centered teaching learning activities? This study will be supportive for the students who are using PowerPoint to study and for their presentation as a scaffolding tool to make concept clear by integrating graphs, pictures, diagrams easily. It can be also equally fruitful for those who want to study further in this field in future.

Research Methods

This study was quantitative in design. It was a cross-sectional survey based on self-administered 180 sets of questionnaire, 20 sets for each faculty incorporating demographic and five Likert scale questions through purposive sampling method covering all the faculties of Balkumari College: BBS, BBA, BSC, BHM, BIM, BICTE, MBA, MBS, and B.Ed. The data were analyzed in frequency table and cross table using statistical tool like mean, standard deviation, and co-relation.

Result and Discussion

A. Demographic Presentation

Table no. 1: Demographic presentation of gender, age and faculty of students

Gender	Number	Percentage
Male	73	40.6
Female	107	59.44
Age		
18-20	49	27.2
21-24	107	59.4
25 and above	24	13.3

In table no.1 demonstrates among 180 respondents 73(59.44%) are female. It projects age group of 21-24 is highest in number 107(59.4%). The age group of 18-20 is 49(27.2%). This shows majority of students were from bachelor degree. There is increment in the number of female students due to changes in Nepalese society (Shankar & et.al., 2012). Purposively sampled 20(11.1%) students from each nine faculties were there.

B. Students' Perception on the use of PowerPoint

Table no: 2 Presentation of students' perception on PowerPoint

Variables	Yes Number (Percentage)	No Number (Percentage)
All teachers use PowerPoint in the class	59(32.8)	121(67.2)
Prefer decorative background in PowerPoint	49(27.2)	131(72.8)
Prefer light-colored background in PowerPoint.	140(77.8)	40(22.2)
Teachers show slides in bullet	74(41.1)	106(58.9)
Teachers show long-text slides	135(75)	45(25)

The above table no. reflects out of 180 respondents, majority of students 121(67.2%) respond all teachers do not use PowerPoint in the class. In the same way, 131(72%) students do not prefer decorative back-

ground whereas, majority of students 140(77.8%) prefer light colored background. Likewise, 106(58.9%) students says no on the point teachers show slides in bullet and even majority 135(75%) says teachers show long text-slides not shorter one.

C. PowerPoint enhances memory of students

Table no: 3 Presentation of students' responses

Attitude Scale	Strongly agree (%)	Agree (%)	Not sure (%)	Disagree (%)	Strongly disagree (%)
PowerPoint stimulates my thinking	7.8	75.6	16.1	6	—
I participate more when PowerPoint(PP) is used	18.3	67.2	11.7	2.8	—
It helps me to concentrate on the lesson better	19.4	67.8	11.7		1.1
I find various resources like visual elements like animation, picture, charts, videos, helpful in PP	57.2	34.4	3.9	3.3	1.1

The above table no.3 displays out of 180 respondents, 75.6% agrees that PowerPoint stimulates their thinking. Majority of students (67.2%) agree that they participate more when PP is used and only 2.8 disagree on that. Similarly, 67.8% students agree that PP help to concentrate on the lesson better whereas only 1.1% strongly disagree on that. In the same way, high percentage 57.2% strongly agree and 34.4% agree that various resources like visual elements like animation, picture, charts, and videos, helpful in PP. PowerPoint is a boon and effective tool for teaching and presentations in the classrooms because it allows the user to implement all forms of visuals incorporating images, sound clips and other visual media with a single click (Yadav & Jabeen, 2013).

D. Overall students' perception on PowerPoint use in the class

Table no: 4 Students' perception PowerPoint use in the class

	Strongly agree (%)	Agree (%)	Not sure (%)	Disagree (%)	Strongly disagree (%)
The lesson is more interesting with PP	37.8	58.3	3.3	6	—
Find easy to follow the lesson with PP	11.7	78.3	7.2	2.8	—
Helps to take notes during lesson	21.1	67.2	6.1	5.0	6
Find it boring when teachers say same thing on PP	28.9	36.7	16.1	17.8	1
Find it too fast	36.7	31.1	18.3	13.9	—
It makes dependent	10.0	51.7	20.0	18.3	—
It makes teachers lazy	11.1	38.3	30.0	18.9	1.7
Teachers prepare the slides using 6x6 principles	1.7	13.3	35.6	42.2	7.2

The table no. 4 shows majority of students agree (58.3%), strongly agree (37.8%) and disagree (6%) that lesson is more interesting with PP. Similarly, highest percentage (78.3%) finds easy to follow the lesson with PP. 67.2% agree, 21.1% strongly agree whereas 6% strongly disagree that PP helps to take notes during lesson. At the same time, 36.7% students agree, and 28.9% strongly agree that it is boring when teachers say same thing on PP. In the same way, 36.7%, 31.1%, 18.3%, 13.9% respectively strongly

agree, agree, not sure, and disagree that it is too fast.

51.7% agreement shows PP makes them dependent. Even 38.3% agree and 11.1% strongly agree shows PP makes teachers lazy. 42.2% disagree that teachers prepares the slides using 6x6 principles and 35.6% students are not sure on that. Students agree that PowerPoint is effective in facilitating learners' understanding during their learning process (Obaidullah, 2019).

E. Co-relation between students' memory enhancement and overall perception on PowerPoint use

Table no: 5 Presentation of co-relation between two variables

Variable	Co-relation	p-value
Memory enhancement and overall perception	0.362	P<0.001

The above table no. 5, findings reveals that there was positive relationship between students' memory enhancement and overall use of PowerPoint in the classroom which was statistically significant ($r = 0.362$, $P < 0.001$). It is proved if students' memory is enhanced their overall perception on PowerPoint remained positive.

F. Relation of students' memory enhancement & overall perception with faculty

Table no: 6 Presentation faculty wise relation

Faculty	Relation between memory enhancement & overall perception	P-value
BBS	0.030	0.900
BBA	0.016	0.946
BSC	0.705	<0.001
BHM	0.256	0.275
BIM	0.624	0.003
BICTE	0.281	0.230
MBA	0.351	0.130
MBS	0.090	0.707
B.Ed.	0.502	0.024

Findings reveals that in the faculty BSC, BIM, B.Ed. P – value <0.001, 0.003 and 0.024 respectively shows the significant relation with memory enhancement and overall perception on PowerPoint use in classroom. The P –value 0.900, 0.946, 0.275, 0.130, 0.707 of faculties BBS, BBA, BHM, BICTE, MBA, MBS respectively demonstrates that it is not significant. That means there is no positive impact of PowerPoint use in those faculties.

Conclusion and Suggestion

Based in the findings and discussion, it is concluded that students' overall perception on PowerPoint use in the classroom is positive though there were majority of teachers still not using PP slides applying 6x6 principles. Majority of students found PP as helping tool to enhance memory and when memory was enhanced their overall perception on PP use in the classroom remained positive. It is seen from the result of $r = 0.062$, $P < 0.001$.

The results of this study may be useful for institutional administrators and program director to best prepare and support teachers for teaching by using PowerPoint in the classroom. It can be supportive for the students who are using PowerPoint to study and for their presentation as a scaffolding tool to make concept clear by integrating graphs, pictures, diagrams easily. It can be also equally fruitful for those who want to study further in this field in future.

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Exploring Discrimination Experienced by Secondary Level Students in ELT Classroom: A Narrative Inquiry

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ABSTRACT

This study aims at examining the experiences of discrimination in English language classrooms from the perspective of secondary level students. The research adopted a narrative inquiry approach, conducting individual face-to-face interviews with participants to explore their personal experiences and observations regarding discrimination. We selected four secondary level students from two government schools in the Kathmandu district purposively. We used semi-structured interviews allowing for open-ended questions and follow-up probes to gain deeper insights into participants' responses. The analysis of the collected data followed a thematic approach. The researchers carefully reviewed the transcribed interview recordings to identify recurring patterns, themes, and key insights related to discrimination in English language classrooms. The findings revealed instances of unequal treatment by teachers, including favoritism based on gender, academic performance, and subjective factors. Participants expressed how such unequal treatment affected their motivation and engagement in the English language classroom. Discrimination based on physical appearance, skin colour, and linguistic competence was also highlighted, demonstrating the negative impact on students' self-esteem and sense of belonging. Additionally, social hierarchies among peers contributed to exclusion and marginalization, affecting students from less privileged backgrounds.

To minimize discrimination in ELT classrooms, the study suggests fostering an inclusive and supportive environment where all students are treated equally and valued for their individual strengths and contributions. Teacher training programs are recommended to promote cultural sensitivity, awareness of biases, and inclusive teaching practices. The importance of creating gender-inclusive curricula and encouraging positive gender socialization is emphasized. The research contributes to the understanding of discrimination in English classrooms by centering on students' perspectives. The insights gained can inform educational policies and practices aimed at reducing discrimination and promoting equity in English language teaching classrooms.

Keywords: Discrimination, academic achievement, English Language Teaching, secondary-level students, narrative inquiry

Introduction

Wikipedia defines discrimination as an act of unfairly or discriminatorily distinguishing individuals based on the groups, classes, or other categories to which they belong or are perceived to belong, such as race, gender, age, or sexual orientation. Discrimination is generally experienced in various contexts and through multiple perspectives. Discrimination in education has been attributed to institutional or individual actions, attitudes and ideologies, or procedures that systematically discriminate against students from diverse racial/ethnic groups (Mickelson, 2003 as cited in Gracia 2020).

To foster pleasant and rewarding learning experiences for every student, classrooms should ideally operate an

inclusive, safe spaces (Ladson-Billings, 1995). Unfortunately, there is growing evidence that discrimination still occurs in classrooms and has a negative impact on students' educational experiences, particularly those who come from marginalized groups (Howard, 2001). The study focuses on secondary level English language teaching (ELT) classrooms with the goal of examining the nuanced dynamics of prejudice and how it profoundly affects students' educational experiences.

Discrimination within classrooms can manifest in various forms, such as biases based on gender, race, ethnicity, socio-economic status, or language proficiency (Gorski & Pothini, 2018). It can occur through overt acts of prejudice or through more subtle and implicit behaviors, creating an atmosphere that continues unequal treatment and restricts opportunities for some students (Solórzano & Yosso, 2002). Understanding the nuances and lived experiences of discrimination within ELT classrooms is crucial for developing effective strategies to address these issues and promote equitable educational practices.

The focus of this study lies in employing narrative inquiry as a research methodology, allowing for a deep exploration of the experiences and perspectives of secondary-level students who have encountered discrimination in their ELT classrooms (Clandinin & Connelly, 2000). Narrative inquiry enables researchers to capture the complex interplay of individual stories and lived experiences, providing valuable insights into the ways in which discrimination unfolds and affects students' engagement, self-esteem, and learning outcomes (Riessman, 2008). The purpose of the study is to explore the discrimination in English language classrooms faced by secondary-level students. The following research questions were set to meet the objectives of the study:

1. What are the discriminatory forms prevalent in English language classrooms?
2. How do peers and teachers discriminate against students in English language classrooms?

Literature Review

In the realm of education, the concept of equality has often been viewed as a matter of distributing educational resources more fairly (Lynch, 2000 as cited in Lynch & Baker, 2005). The term "equity" emerged in 1990 when many countries began combining the principles of equity and quality in education. This movement has gained momentum since 2004, with numerous nations joining the cause (Moreno-Guerrero, 2020). Similarly, the Education for All initiative in Nepal began as a project in 2004 and was completed in 2009 (World Bank Group [WBG], 2016). Currently, the government of Nepal wants to ensure equitable access to excellent education for all Nepalese school-aged children by 2030 in accordance with the United Nations' Sustainable Development Goal 4 (United Nations, Nepal, 2023). Since the adoption of Nepal's first constitution in 1948, every child has had the right to a free and compulsory education devoid of bias. Article 31 of the 2015 constitution expressly calls for equal access to education for everyone emphasizing the obligation of the state to offer free and compulsory primary and secondary education.

These goals are further reinforced in the National Education Act of 2019, which defines "basic education" as schooling from grades one through eight, and "secondary education" as grades nine through twelve. Despite the constitutional provisions and educational policies seemingly guaranteeing equal access to education, the reality on the ground tells a different story.

Critical pedagogy, developed by theorists like Paulo Freire, offers valuable theoretical insights to the study on discrimination in ELT classrooms. It highlights the importance of unveiling power dynamics and oppressive structures, encouraging educators to critically examine and challenge discriminatory practices. This perspective helps analyze the unequal treatment and power dynamics between teachers and students, as well as among students themselves. By understanding the underlying systems of power, critical pedagogy provides a pathway for challenging and transforming discriminatory practices.

The encouragement of critical consciousness among students is one of the major contributions of critical pedagogy. It challenges students to examine their own experiences, challenge prevailing narratives, and acquire a critical awareness of societal concerns. Critical pedagogy supports students in identifying and analysing discriminatory practices in the context of the study. Students who are equipped with critical thinking abilities are better able to fight against prejudice and promote equality and social justice in their learning settings. The value of conversation and practice as transformational tools for social change is also emphasized by critical pedagogy. It promotes honest communication between students and teachers, enabling the sharing of knowledge and experiences. In the study, this approach facilitates communication and collaboration, enabling students and teachers to collectively work towards creating inclusive and equitable classroom environments. By engaging in dialogue, they can ad-

dress discrimination and promote social change.

In addition, critical pedagogy promotes learners' empowerment and agency, encouraging their active engagement in the learning process and their function as social change agents. It motivates students to take charge of their education, develop critical thinking skills, and actively engage in their communities. According to the research, critical pedagogy helps educator empower students by respecting their opinions, including them in decision-making and instilling in them a sense of accountability for fostering inclusive and equitable learning environments. By incorporating critical pedagogy, the study on discrimination in ELT classrooms gains a theoretical framework to understand the complexities of power, oppression, and social justice in education. It provides guidance for analysing the underlying structures and dynamics that contribute to discrimination and offers practical approaches for addressing these issues and promoting inclusive and equitable learning environments.

Despite constitutional guarantees of equal access to education, discrimination is still prevalent in English language classrooms. Students experience discrimination from their teachers and peers in various ways. Research conducted by Khanal (2018) highlights how discrimination in school attendance contributes to gender inequality in Nepal.

Inequality persists despite an increase in female's participation rates in all grade levels. The study shows that boys are more likely to attend private schools than girls, which is a serious kind of discrimination. In addition, Neupane's research (2022) examines gender-based injustices experienced by female teachers and girls in the context of Nepal, such as psychological and emotional abuse, sexual harassment, unequal roles and responsibilities, discrimination in hiring, wage disparities, disrespect, gender bias in grading, and the absence of gender-inclusive textbooks and curriculum. These findings show the need for further initiatives to promote equality and eradicate discrimination in English language classes by illuminating the persistence of discriminatory practices within educational settings. Contrary to the findings in the study by Shahi (2017), which focused on Dalit students in the Kalikot district, discrimination was not observed in the English language classroom. The study reported that the situation for Dalit students in ELT classrooms is positive and improving. However, policy-makers should still formulate policies that encourage stakeholders to further increase Dalit students' access to education in English language classrooms.

On an international scale, discrimination in English language classes has been documented. Marlon et al. (2016) found that oppressive perspectives, whether from teachers or peers, can significantly impact academic performance. Unfair attitudes lead to feelings of isolation, anxiety, and fear, which hinder class participation, the quality of relationships, the assimilation of new ideas and information, and motivation towards the language and the course. As a result, students exhibit low engagement in teaching and learning activities, leading to poor academic achievements.

Furthermore, Tamimi Sa'd and Eames (2021) conducted a study that revealed instances where instructors openly oppressed students, engaging in behaviors such as mocking, neglecting to involve them in class participation, and unfairly evaluating students and their accomplishments. These discriminatory practices contribute to a negative learning environment and hinder students' academic success.

Discrimination in the class is not just fostered by professors and teachers, but it can also result from fellow students' perceptions and attitudes. According to Rojas et al. (2016), when students receive criticism and judgement from their peers, their academic performance suffers dramatically. High achieving students, in particular, tend to cast judgement on lower-achieving students' communication abilities, emphasizing on grammatical faults and pronunciation (Rojas et al., 2016; as cited in Matson, 2019).

The classroom serves as a microcosm of society, bringing students from all socio-economic and educational backgrounds together. Students' diverse experiences and view points have a significant influence on the classroom atmosphere. According to Cummins (1988, as cited in Matson, 2019), power dynamics and status relations between minority and majority groups greatly influence academic performance within schools.

To determine the level of discrimination in education, particularly in English language classes, a significant number of studies have been conducted. These studies have shown a number of facets of prejudice, including unequal access to educational opportunities, gender-based disparities, oppressive viewpoints held by classmates and teachers, and the effects on academic achievement. Studies that especially look at the unfair treatment encountered by secondary-level students within the Nepalese ELT context are conspicuously lacking, nonetheless. Our study, which explores the experiences and narratives of secondary-level students in ELT courses, tries to fulfil

this gap by addressing it. Through this study, we hope to learn more about the unfair practices and disparities that exist in these context.

Research Method

The researchers employed a narrative inquiry approach to explore the discrimination experienced by secondary level students in ELT classrooms. We collected information from four secondary level English language teachers teaching in two different government schools in Kathmandu. To get information, we used semi-structured interviews with open-ended questions and follow-up probes (Jones et al., 2022). We obtained informed consent from the participants and recorded the interviews with their permission (Smith et al., 2021). We used purposive sampling to select four participants who had first hand experience of discrimination in ELT classroom (Brown & Johnson, 2020). The sample size was determined based on data saturation, ensuring that an adequate number of participants were included in the study (Jones et al., 2022).

During the interviews, we encouraged participants to share their personal experiences and observations regarding discrimination in the ELT classroom. The researchers transcribed the interview recordings verbatim and analyzed the data thematically, identifying recurring patterns, themes, and key insights related to discrimination (Smith et al., 2021). Coding and categorization techniques were applied to organize the data and identify common themes across the participants' narratives (Brown & Johnson, 2020).

Analysis and Findings

The collected data were analyzed thematically. The researcher transcribed the interview recordings and carefully reviewed the data to identify recurring patterns, themes, and key insights related to discrimination in English language classrooms. Coding and categorization techniques were employed to organize the data and identify common themes across the participants' responses.

Unequal Treatment by Teachers

Favoritism: Participants reported instances where teachers showed favoritism towards certain students, often based on gender, academic performance, or other subjective factors. When teachers give priority to the needs of good-looking students, boys/men, and non-disabled students they create barriers to students of color, girls and women, and students with disabilities (Soika, 2020). This unequal treatment affected the students' motivation and engagement in the English language classroom. Student 4 expressed,

during class discussions, teachers often focus their attention on students sitting in the front rows, neglecting those at the back. Additionally, teachers may not ask questions or check the homework of all students, which creates an unequal learning environment. These practices can leave some students feeling overlooked and marginalized.

Gender-based discrimination: The data revealed that some teachers tend to favor girls over boys in ELT classrooms. Girls are given more opportunities to speak, take leadership roles, and receive attention, while boys are often overlooked or ignored. This unequal treatment based on gender perpetuates a discriminatory environment, where boys may feel marginalized and their participation hindered. To address this issue, it is essential for teachers to promote equal opportunities and fair treatment for all students, regardless of their gender.

Discrimination on physical appearance and colour complexion: Students are treated unfairly due to their physical appearance and skin colour. Student 1 shared *When I tried to share this problem with teachers, they couldn't understand our feelings and advised us to let it go. During group activities, the teacher doesn't listen to my voice and always favors the "good-looking" students.*

Lack of Recognition: Participants felt that their strengths and achievements were often overlooked or overshadowed by their mistakes. Teachers' focus on errors without acknowledging positive contributions hindered the students' confidence and self-esteem. Student 3 shared

When the teacher consistently focuses on my mistakes and doesn't acknowledge my efforts or achievements, it can be demotivating. It feels like my good work goes unnoticed, and the emphasis is solely on what I have done wrong. This can hinder my confidence and enthusiasm in learning English. Students are discriminated in terms of their competency and intelligence in English Language class. Similarly, student 2 expressed,

'Yes, I have experienced one incident where a teacher asked me to do the work which I was not able to do, while another student who was better than me on that subject was allowed to avoid it. It frustrated me to learn that I was being singled out and given additional work, which made me feel bored, demotivated and disengaged.'

The theme of unequal treatment by teachers, as identified in the study, aligns with critical pedagogy theory by

highlighting the power dynamics and inequalities present within educational contexts. Critical pedagogy emphasizes the importance of critically examining the social, cultural, and political contexts of education to identify and challenge oppressive practices (Freire, 1970). In the case of the study, the unequal treatment reported by participants, such as favoritism based on gender, physical appearance, and academic performance, reflects the power imbalances and biases that critical pedagogy seeks to address.

The findings related to favoritism based on subjective factors, gender-based discrimination, discrimination based on physical appearance and skin color, and lack of recognition for students' strengths and achievements resonate with critical pedagogy's focus on unveiling power dynamics and promoting social justice. These discriminatory practices perpetuate unequal treatment and hinder students' motivation, engagement, confidence, and self-esteem, which are crucial aspects of their learning experiences. Critical pedagogy recognizes the detrimental impact of such practices on marginalized students and emphasizes the need for equal opportunities and fair treatment for all learners (Freire, 1970).

Moreover, the findings in the study are consistent with previous research supporting critical pedagogy. Studies by Soika (2020) and Rojas et al. (2016) highlight the barriers created by discrimination based on factors such as gender, physical appearance, and skin color. These studies align with critical pedagogy's aim to challenge oppressive structures and promote social justice. Research by Khanal (2018), Neupane (2022), and Marlon et al. (2016) further emphasize the unequal treatment experienced by girls, the negative impact of appearance-based bias and colorism, and the consequences of differential treatment based on perceived ability, all of which align with critical pedagogy's concerns about equity and inclusivity in education.

Peer Interactions and Social Dynamics

Social Hierarchies: Participants observed social hierarchies within the classroom, where students with higher social status or economic privilege received preferential treatment from their peers. This resulted in the exclusion and marginalization of students from less privileged backgrounds. Regarding the unequal treatment due to class hierarchy in the class, student 2 shared

When I bring money and give it to my friends, they treat me well and want to be friends with me. However, when I don't have money to give, they don't want to make friends with me anymore. This affects my interactions with them in the English classroom because they don't speak with me and don't offer any help. It creates a sense of isolation and makes it difficult for me to engage and receive support in my English studies.

Discrimination based on physical appearance and complexion: Participants shared experiences of discrimination, such as mocking, teasing, or exclusion based on physical appearance, ethnicity, or socio-economic status. These discriminatory behaviors created a hostile and unwelcoming environment in the English classroom.

Students belonging to marginalized racial or ethnic backgrounds reported experiencing discrimination based on their skin color. Student 1 shared *'In the computer lab, students laughed at me because of my skin color. Even when I read while standing up, they would laugh at me. These incidents made me feel frustrated.* They described instances of differential treatment, biased assumptions about their abilities, and even ridicule or laughter. Additionally, social status was found to play a role in how students are treated in the ELT classrooms, with students from higher socio-economic backgrounds enjoying better friendships and social connections. In this regard, student 1 further shared that *when I asked a friend for money to buy a copy, she gave money to other friends and not to me.*

The theme of peer interactions and social dynamics identified in the study aligns with critical pedagogy principles by highlighting the social hierarchies, discrimination, and exclusion that occur within the classroom. Critical pedagogy seeks to unveil power dynamics and challenge oppressive structures, not only in teacher-student relationships but also in student-student interactions (Freire, 1970).

The findings of other studies are consistent with the theme of peer interactions and social dynamics identified in the study. Research on social hierarchies and discrimination based on socio-economic status supports the finding that students from higher social status or economic privilege receive preferential treatment from their peers, while those from less privileged backgrounds may face exclusion and marginalization (Freire, 1970). Similarly, discrimination based on physical appearance, complexion, and racial or ethnic backgrounds has been well-documented in the literature, with students experiencing ridicule, biased assumptions, and differential treatment (Rojas et al., 2016). These studies provide further evidence of the hostile and unwelcoming environments

that can emerge due to discriminatory behaviors and social hierarchies.

Ways to Minimize the Discrimination in ELT Classroom

The students experienced being discriminated by the teachers and peers in the ELT class and such unequal treatment impacted the academics of the suppressed students. Marlon et. Al(2016) discovered that academic performance is impacted by a wide range of oppressive perspectives, either by teachers or cohorts. Therefore it is crucial for teachers and school authorities to foster an inclusive and supportive environment where all students are treated equally and valued for their individual strengths and contributions. In the same vein, Neupane (2022) suggested the purpose of language instructing like ELT isn't just to foster citizens who are capable in language skills yet additionally to advance social skills so they can be dynamic agents of social change.

Peer discrimination can be minimized by teaching the students social values and norms. Student 2 suggested *'It's important for teachers to treat students equally and not favour certain individuals based on their abilities or other factors'*.

Student 3 shared, *the teachers and administration treat all students equally and do not physically harm or discriminate against them. However, I believe they could do more to create an inclusive learning environment. For example, giving equal opportunities for students to participate, encouraging and recognizing their strengths, and not favoring certain individuals over others.*

Student 4 suggested,

it is crucial for teachers to understand and empathize with students' feelings. Teachers should receive training and support in creating an inclusive and equitable classroom environment. It is essential to encourage open dialogue, where students can share their concerns and experiences without fear of judgement. Teachers should actively address instances of discrimination, promote respect and understanding among students and ensure that all voices are heard and value

Overall, the finding on ways to minimize discrimination in the ELT classroom is consistent with critical pedagogy theory and supported by previous research. Critical pedagogy emphasizes the need to challenge oppressive perspectives and behaviors, promote social justice, and create inclusive learning environments (Marlon et al., 2016; Neupane, 2022). The recommendations provided by the students align with these principles, highlighting the importance of treating all students equally, fostering empathy and understanding, and creating an inclusive and equitable classroom environment.

The finding is consistent with the study conducted by Marlon et al. (2016), which emphasizes the impact of oppressive perspectives on academic performance. It underscores the need to create an inclusive and supportive environment that values the diverse strengths and contributions of all students. Similarly, Neupane (2022) emphasizes the purpose of language instruction, such as ELT, in advancing social skills and empowering students to be agents of social change.

The recommendation to teach social values and norms to minimize peer discrimination aligns with critical pedagogy's emphasis on promoting positive social interactions and cultivating a sense of community among students (Neupane, 2022). By fostering empathy, respect, and understanding, teachers can help create a supportive environment where students value and appreciate one another.

The suggestion to give equal opportunities for participation and recognize individual strengths reflects the principles of equity and inclusivity in critical pedagogy (Marlon et al., 2016). Providing equal opportunities ensures that all students have a voice and feel included, while recognizing individual strengths fosters a positive learning environment where students' abilities and achievements are acknowledged and valued.

Lastly, the recommendation for teachers to understand and empathize with students' feelings and actively address instances of discrimination aligns with critical pedagogy's goal of creating a respectful and supportive learning environment (Marlon et al., 2016). Open dialogue and the promotion of respect and understanding among students can help create a safe space where students feel comfortable sharing their experiences and concerns.

Conclusion

The findings of this research highlight the presence of discrimination in English language teaching (ELT) classrooms at the secondary level. The narrative inquiry approach employed in this study provided valuable insights into the experiences of students who faced discrimination. The research revealed instances of unequal treatment

by teachers, including favouritism based on subjective factors, gender-based discrimination, discrimination based on physical appearance and colour complexion, and a lack of recognition for students' strengths and achievements.

The research also uncovered discriminatory peer interactions and social dynamics within the classroom. Social hierarchies, often based on economic privilege, resulted in the exclusion and marginalization of students from less privileged backgrounds. Discrimination based on linguistic competence, physical appearance, and skin colour further contributed to a hostile and unwelcoming environment for students.

To minimize discrimination in ELT classrooms, it is crucial for teachers and school authorities to foster inclusive and supportive environments where all students are treated equally and valued for their individual strengths and contributions. This can be achieved through promoting equal opportunities, recognizing students' achievements, and addressing instances of discrimination promptly. Peer discrimination can be reduced by teaching social values and norms that promote empathy, equality, and respect among students. The implementation of critical pedagogy, which aims to promote social justice and emancipation for all students, can also contribute to creating more equitable classroom environments.

Additionally, stakeholders and teachers should work towards gender-inclusive curricula and positive gender socialization to promote gender equality in schools. Providing training and support for teachers in creating inclusive classrooms and facilitating open dialogue where students can share their concerns and experiences without fear of judgement is essential.

Overall, these findings contribute to the existing body of knowledge on discrimination in education and emphasize the importance of interventions and inclusive teaching practices to address discrimination and promote equity in ELT classrooms.

This research contributes to the understanding of discrimination in the English classroom by centering on the experiences and perspectives of students. The findings highlight the presence of unequal treatment by teachers and the impact of peer interactions on students' experiences of discrimination. It underscores the importance of creating an inclusive and supportive learning environment that promotes equal opportunities for all students. It highlights the importance of creating inclusive and equitable learning environments where all students feel valued and respected, regardless of their gender, skin colour, or socio-economic background.

The research emphasizes the need for teacher training programs to promote cultural sensitivity, awareness of biases, and inclusive teaching practices. By addressing the issues of favoritism, lack of recognition, and discriminatory behavior, educators can work towards fostering a classroom environment that values diversity, promotes empathy, and encourages respectful interactions among

g students. The insights gained from this research can inform educational policies and practices aimed at reducing discrimination and promoting equity in English language teaching classrooms.

Since this is a small-scale study, the results can not be applicable in other contexts. Therefore, for greater applicability of the findings, a large scale study is needed including a large sample size of students. Teachers and administrators.

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Purchase Decision Factors of Residential Real Estate in Kathmandu Valley

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ABSTRACT

This research paper aims to examine the associations of residential real estate factors with individuals purchase decisions. The research follows correlational research design to examine the association between the variables (recreational facilities, physical utility, basic amenities, safety and security, and proximity) with purchase decision. It identifies and analyses the attributes customers consider while buying residential real estate and the study was carried out among prospective buyers and owners of houses currently residing in the Kathmandu Valley. The findings reveal that there exist positive association between all the independent variables and dependent variable, where physical utilities, basic amenities and proximity show stronger association where the coefficient of physical utilities is the highest.

Keywords: residential real estate, home, house, purchase decision, recreational facilities, physical utilities, basic amenities, safety and security, proximity

Introduction

Homebuyers typically conduct extensive research, visit open houses, and work with real estate agents to find properties that meet their criteria and fit within their budget. The purchase decision of a house is not just a financial investment, but also an emotional one, as it involves finding a place that feels like home. In this context, it is crucial to consider both practical and emotional factors when making the purchase decision of a house. Housing shortages in many developing countries have reached severe levels as global population numbers continue to climb (Ali & Chua, 2022). Citizens consider real estate to be one of the most essential aspects of their lives, and their decision to purchase a home can have psychological as well as other significant impacts on their lives (Noonan & Watson, 2017). Due to the inherent, permanent, and long-term features of real estate, house-buying decisions differ from other purchase decisions. It's a highly differentiated offering, with each place being distinct and fixed.

John, (2020) highlighted the fact that analysis of client buying behavior and attitudes is unavoidable to attract customers, ensure customer satisfaction, and ensure the industry's long-term sustainability. Therefore, it is necessary to comprehend the components and variables that stoutly affect clients to acquire a property to understand their wants. Thus, this research study focuses on the elements such as Recreational Facilities, Basic Amenities, Physical Utilities, Safety and Security, and Proximity that have an association with the Purchase Decision of the buyers of residential real estate in Kathmandu Valley.

Statement of the problem

The purchase decision of residential real estate refers to the process of evaluating and ultimately deciding to buy a property for the purpose of living in it. This decision involves a series of factors such as location, price, size, features, and amenities of the property, as well as personal preferences and financial considerations. Major studies found the antecedents like location (Mang, et al., 2018), house price (Zhang, 2019) (Northcraft & Neale, 1987), application of Vastu Shastra (Chawla, 2017), population size (Zhang, et al., 2020) as the affecting factors on the purchase decision of real estates. In addition, loan facilities (Si, 2012) ,sports area (Solangi, et al., 2020), interior

and exterior design (Gajera & Malek, 2018), safety facilities (Kanexfire, 2022) and proximity from workplace (Rachmawati, et al., 2019) are also considered as significant factors in other studies. However, most of the studies show differences in factors that have an influence on real estate purchasing decisions. Apart from that, there are scant studies on real estate factors, especially in underdeveloped and low-financial-strength countries like Nepal. Nevertheless, the precise characteristics that support conclusions relating to the most important influencers of customer's residential real estate buying decisions have not been identified yet, especially in Kathmandu valley limiting the certainty of future housing business expansion. So, this study tries to determine the linkage of recreational facilities, physical utilities, basic amenities, safety and security, and proximity on purchase decision in context of Nepalese customers residing in Kathmandu Valley by using mean, standard deviation, correlation alongside descriptive statistics.

The study thus attempts to answer the following broad research question.

To what extent do the factors like recreational facilities, physical utilities, basic amenities, safety and security and proximity are linked with an individual's purchase decision on residential real estate in Kathmandu Valley?

Literature Review

Hassan, Ahmad and Hashim, (2021) claimed that, physical utilities as the most significant variable considering purchasers financial capacity when it comes to purchase decision of residential real estate. In addition, Smektała & Narozny, (2022) highlighted consideration of spacious living room and balconies for maintaining privacy and enhancing the quality of life. Further, Eden (2018) argued that, if a house is well-ventilated, has ergonomic interiors, good quality materials, ceiling height 10-12 feet, spacious living rooms, and quality fittings it is considered to be a house with good quality and a good quality home plays a big role in a family's decision to live somewhere (PK, 2015) which affects purchase decision. Furthermore, the physical utilities like, size and type of house, quality of basin, interior and exterior design, are the major players in a purchase decision (Singh, Gupta and Dash, 2018; Gajera & Malek, 2018; (Shahriar & Sajib, 2021). So, in the light these explorations the study posited:

H1: There is a significant relationship of physical utilities on purchase decision.

In another research, (Khan, et al., 2017) stated that the most crucial decision-making process for home buying is a playground, sports areas, and a few other socialized cultures which is also considered pleasing facilities by (Solangi, et al., 2020). Also, Recreational facilities like public space, parks, open green areas, playground, sport facilities are the integral part of a livable city (Wash & Mohamed, 2019) which influences customers buying decision. Thus, the study hypothesized:

H2: There is a significant association between recreational facilities and purchase decisions.

Basic amenities like plumbing facilities, water quality and water pressure, drainage system, and quality of commode are some of the factors considered by buyers before buying the property (Kamal & Pramanik, 2015). As there is a need for a dependable, quiet, and efficient source of backup power for delivering electricity to appliances (Sabry, et al., 2018) energy backup also plays a vital role while making purchase decision of residential real estate. Thus the relationship between basic amenities and purchase decision is hypothesized as:

H3: There is a significant association between basic amenities and purchase decisions.

When it comes to safety home fire extinguishers are a minor but crucial component of any fire protection plan (Kanexfire, 2022). One of the primary defenses to keep the home physically secure is a door (Andres, et al., 2019) and the reason for living in gated and guarded properties is the factors of safety and less crime (San, 2016). (Gajera & Malek, 2018) supports this idea by describing safety and security as the major factor for residential real estate purchase decision. Thus, the present study posited:

H4: There is a significant association between safety and security and purchase decision.

In case of proximity, as a convenient location adjacent to daily activities will make it easier for clients to go to the place field (Rachmawati *et al.*, 2019) it plays a major role in houses buying decisions. Moreover, Location is also a very significant factor affecting any property investor's purchase decision making process and this was indicated in a number of recent studies showing a huge impact on investing in the houses and also observed that the proximity factor would have a big impact for real estate investment (Arslan1 & Howells, 2021). Furtehr, (San, 2016) clarifies the idea of distance from work place is main consideration for homebuyers. Based on these findings, the study proposed:

H5: There is a significant relationship between proximity on the purchase decisions of customer.

Conceptual framework

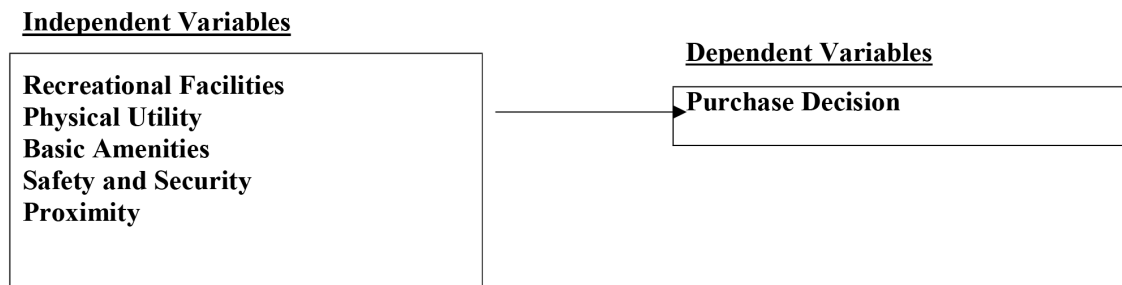


Figure 1: Figure representing conceptual framework.

Research Methodology

Research Design

The research has adopted correlational research design to examine the association between purchase decision and other purchase decision factors, where in the relationship between variables are investigated without manipulating or controlling the variables. Simple statistical tools such as descriptive and correlation coefficients were used in the study. The participants in the study are from Kathmandu, Bhaktapur and Lalitpur that included prospective customers as well as owners who have purchased houses from real estate companies. Convenience sampling method was used, however attempt was made to acquire data from people from all walks of life. The primary data was collected using Google Forms where structured questionnaire was used to collect respondents' attitudes. Out of 150 questionnaires distributed, 131 responded out of which 126 responses were taken for the study as per the availability of the complete information. The reliability test was conducted using Cronbach's alpha to examine the inter-item consistency of the questionnaire and the variability of data around the mean was tested using coefficient of variation.

Respondents' profile

The demographic profile of the respondents is presented in Table 1. Participants for the study included a total number of 131 people who either have already purchased a house or were planning for it. The study included 53 females, 71 males and 7 people lying under other gender categories. The table shows that 54% of the participants were single followed by 32% of the married people. Moreover, a minority of people (9%) were divorcees and 8% had a different relationship status. As per the availability of the complete information only 126 responses are analyzed.

Table 1: Table representing the demographic profile of the respondents

Demographic variables	Category	Frequency	Percent (%)
Gender	Female	53	40.5
	Male	71	54.2
	Others	7	5.3
Age	26 to 35 years	16	12.2
	36 to 45 years	16	12.2
	Above 45 years	29	22.1
	Less than 25 years	70	53.4
Marital Status	Divorced	9	6.9
	Married	43	32.8
	Others	8	6.1
	Single	71	54.2

Income	<15000	59	45
	>100000	25	19.1
	15000-35000	14	10.7
	35000-75000	17	13
	75000-100000	16	12.2
Professional Background	Corporate	8	6.1
	General Investors	16	12.2
	Others	26	19.8
	Self employed	21	16
	Students	60	45.8
Demographic variables	Category	Frequency	Percent (%)
Gender	Female	53	40.5
	Male	71	54.2
	Others	7	5.3
Age	26 to 35 years	16	12.2
	36 to 45 years	16	12.2
	Above 45 years	29	22.1
	Less than 25 years	70	53.4
Marital Status	Divorced	9	6.9
	Married	43	32.8
	Others	8	6.1
	Single	71	54.2
Income	<15000	59	45
	>100000	25	19.1
	15000-35000	14	10.7
	35000-75000	17	13
	75000-100000	16	12.2
Professional Background	Corporate	8	6.1
	General Investors	16	12.2
	Others	26	19.8
	Self employed	21	16
	Students	60	45.8

The highest number of respondents (45%) were earning income below NRP 15,000 and most of them were students.

Questionnaire

The primary data was collected through a survey using a structured questionnaire. The questionnaire was divided into two parts. The first part comprised 6 questions to extract general demographic information about the respondent. Part two consisted of 4 items to measure the Purchase decision; 3 items to measure Recreational Facilities; 5 items to measure Physical Utility; 5 items to measure Basic Amenities; 4 items to measure Safety and Security and 4 items to measure Proximity. Each item was on a 5-point Likert scale to measure respondents' attitudes towards the influence of social media usage on restaurant choice making and the response ranged from 1 (Strongly Disagree) to 5 (Strongly Agree). The literary sources of the variable choices are presented in Table 2. The draft questionnaire was consulted with a panel of academicians and researchers before finally being distributed among the respondents.

Table 2: Table representing data collection tools and measurement scales

Variables	Sources of variables	Variables mapping
Recreational Facilities	(Khan, et al., 2017) (Wash & Mohamed, 2019) (Eden, 2018) ,	. Swimming pool, Gym and Playgrounds
Physical Utility	(Singh, Gupta and Dash, 2018) (Shahriar & Sajib, 2021)	Design and Decorations, and Quality of Utilities
Basic Amenities	(Kamal & Pramanik, 2015) (Sabry, et al., 2018)	Plumbing facility, Drainage system and Electricity
Safety and Security	(Kanexfire, 2022). (Andres, et al., 2019) (Gajera & Malek , 2018)	Gated and Guarded properties, Strong Doors and Effective Security Systems
Proximity	(Arslan1 & Howells, 2021) (San, 2016)	Location

Variability of responses and inter-item reliability checks

The coefficient of variance (CV) is around 20% and less that assures lower spread of data values around the mean. The Cronbach alpha (α) of the variables are more than 0.6 confirming reliability of inter-items in the questionnaire (Aronhime, et.al, 2014; Salkind, 2007).

Table 3: Table representing Cronbach's alpha (α).

Variables	Items	CV	α
Purchase decision	4	0.158	0.743
Recreational Facilities	3	0.204	0.805
Physical Utility	5	0.096	0.680
Basic Amenities	5	0.092	0.723
Safety and Security	4	0.105	0.709
Proximity	4	0.121	0.725

Results***Descriptive statistics***

Table 4 presents the results of descriptive statistics of the variables under study. The average scores of all the responses for the factors under study are observed to lie between 3.0 and 5.0. The negative skewness value in all the variables indicated that greater number of responses lie in the higher scale of the 5-point Likert scale.

Table 4: Table representing descriptive statistics

Variables	Min.	Max.	Mean	Skewness	Kurtosis
Purchase Decision	1.75	4.25	3.309	-1.003	0.124
Recreational Facilities	1.67	5	3.926	-0.701	0.145
Physical Utility	3	5	4.377	-0.843	0.712
Basic Amenities	3.2	5	4.525	-1.191	1.195
Safety and Security	3.25	5	4.356	-0.248	-0.623
Proximity	2.75	5	4.375	-0.620	-0.228

Correlation Analysis

Since, the data was not normally distributed; Spearman's Rank Row correlation was used, where the significant positive correlations were shown by physical utilities, basic amenities and proximity with purchase decision having the correlation coefficient (r) values of 0.486, 0.372 and 0.485 respectively at 1% level of significance.

Table 5: Table representing correlation analysis

** Correlation is significant at the 0.01 level (2-tailed).

Variables	X1	X2	X3	X4	X5	X6
Purchase Decision (X1)	1	.218*	.486**	.372**	.185*	.485**
Recreational Facilities (X2)		1	.330**	-0.032	.193*	0.101
Physical Utilities(X3)			1	.443**	.487**	.345**
Basic Amenities (X4)				1	.572**	.422**
Safety and Security (X5)					1	.403**
Proximity (X6)						1

* Correlation is significant at the 0.05 level (2-tailed).

However, recreational facilities and safety and security exhibited weaker significant relationships with Purchase Decision having the correlation coefficient values 0.218 and 0.185, respectively at 5% level of significance. In addition, all the alternative hypotheses from H1 to H5 are accepted suggesting that, there will be positive change in purchase decision, if any changes occur in other predicting variables.

Discussion and limitations

The findings of the study reveal that, there are significant positive relationship between all the impact variables with purchase decision in regard to real estate. The results of physical utilities and basic amenities positive relations align with the findings of Singh, Gupta and Data (2018) ; Hassan, Ahmand and Hashim, (2021) and Kamal & Pramanik (2015), who claimed that house size, basin quality, internal and external design, ventilation, balcony and overall quality determined the buying decision of houses. In addition, the findings of Gajera & Malek (2018) also support the finding of positive association of safety and security with the purchase decision. Further, Arslan & Howells (2021) and San (2016) studies support the claim of association of proximity with the purchase decision. The positive association of recreational facilities with purchase decision is supported by (Wash & Mohamed, 2019) where they highlighted the need of recreational facilities like public space, parks, open green areas, playground, sport facilities are the integral part of a livable city and do influence the purchase decision.

Although the findings of the present study may give a faint idea on the indicators of purchase decision, the generalization of the findings may demand the work on larger sample. The research was carried out on buyers' preferences in relation to the suburbs of Kathmandu valley (Kathmandu, Bhaktapur, and Lalitpur) with the small sample size of 126 people using just descriptive and correlation analyses. Besides, the study has taken only five independent variables to understand the purchasing behavior on real estate. Further, average opinion was considered for the study, irrespective of the differences in the level of incomes among the respondents.

Conclusion and future directions

The present study was undertaken to identify the association between different impact variables and the purchase decision on real estate. 126 respondents that included house owners and prospective buyers were considered as sample and the information on their opinion was collected using questionnaire. Among the variables recreational facilities, physical utilities, basic amenities, safety and security, and proximity, the variables physical utilities, basic amenities and proximity are observed to have strong significant positive association with the purchase decision of real estate. The other variables such as recreational facilities, and safety and security also associate positively with the buying decision but are less strong than other three. Overall, the findings imply that real estate buyers do consider these factors affirmatively to decide whether to buy the real estate.

MoUD (2016) stated the vision for 2030 for urban development strategy in Nepal that indicates for 15% of the total housing requirement to come from organized housing (both private and public sector) and 50% of new residential area to be developed through land readjustment process. The plan for which aims for encouraging the private sector through initiatives like reviewing and creating a suitable incentive and facility package, such as land or infrastructure, in order to offer homes for stratum who are economically weaker (Nakarmi, et al., 2021). This report might be very useful for the urban developers in Nepal who are aiming for 2030 project as a guide in planning their need modules to prioritize various attributes and improve on them to maximize customer satisfaction and purchase rate by pinpointing the factors influencing their purchase decision. In addition, policy makers, regulators, buyers and sellers around the globe can also refer to this report for future projection of housing markets.

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Problems Faced by Cancer Patients due to COVID 19 at Tertiary Cancer Hospital, Chitwan, Nepal

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ABSTRACT

Background: The corona virus disease (COVID 19) Pandemic has had a global impact on health care. Patients with cancer have been affected by the COVID 19 Pandemic and faced various psychosocial problems.

Materials and Methods: A descriptive cross-sectional study on title “Problems Faced by Cancer Patients due to COVID 19 at Tertiary Cancer Hospital, Chitwan, Nepal” was conducted at B.P. Koirala Memorial Cancer Hospital, Chitwan to assess problems faced by cancer patients. Non- probability purposive sampling technique was used to select the sample and sample size was 50. Data was collected by using structured interview schedule and distress thermometer.

Findings: In this research 50 respondents were included for the study. Among them 72% respondents faced treatment related problems where 27.7% respondents faced unavailability of chemo medicine, nearly half of respondents (48%) faced the transportation related problems and unavailability of transportation service was the key transportation problems faced by 58.3% respondents. Similarly, nearly half of the (46%) faced the accommodation problems and more than two fifth (42%) had economic related problems during COVID 19 pandemic situation.

Conclusion: Cancer patients have faced several problems during COVID 19 pandemic such as unavailability of chemo medicine, treatment delay, lack of transportation services, accommodation problem, financial problems and psychological distress. So, cancer hospital should make strategic planning of health care services by means of alternative solutions like telemedicine, home-based palliative care services, and ensuring the availability of essential cancer drugs.

Keywords: Words: Problems, Covid -19, Cancer Patients

Introduction

Corona virus disease – 2019 (COVID – 19) is an acute febrile respiratory illness caused by a novel corona virus or Severe Acute Respiratory Syndrome Corona virus 2 (SARS – COV – 2). It was first reported to the World Health Organization (WHO) on December 31, 2019. There have been 532,201,219 confirmed cases of COVID 19, including 6,305,358 deaths, reported to WHO Globally till 10 June 2022. In Nepal there were 979,242 infections and 11,952 corona virus related deaths reported since the pandemic began till 13 June, 2022 (Qu, Kang & Cong, 2020). A wide range of clinical features of COVID 19 from asymptomatic to mild symptoms to serious illness have been reported with an incubation period of 2 – 14 days. According to the report of the Centers for Disease Control and Prevention (CDC, 2020), the WHO declared it as a public health emergency on January 30, 2020.

Initial reports suggested that patients with a history of or acute malignancy might be several complications (Li-ang et al., 2020). Additionally, patients with cancer are often older (i.e. aged ≥ 60 years) with one or more major co morbidities, putting them at increased risk for COVID 19 related morbidity and mortality (CDC, 2020). The unprecedented worldwide occurrence of the COVID – 19 pandemic is not like any other seasonal infection and is having a profound effect on the entire oncology community by impacting patients with cancer and reducing health care activities for a duration that cannot yet be accurately estimated. The unprecedented burden of COVID 19 on health systems worldwide has important implications for cancer care (Forner, 2021).

First, although the data remain limited, patients with cancer appear to be more vulnerable to worse outcomes from the infection, including greater need for ventilator support. The immunosuppressed status of some cancer patients (Whether caused by the disease itself or the treatment) increased their risk of infection compared with the general

population. Immunosuppression may also expose cancer patients to serious complications from an infection, which may result in treatment delay and unnecessary hospitalizations that could negatively affect disease prognosis (Forner, 2021). Delay in surgery for patients with cancer during the COVID 19 pandemic resulted in psychosocial distress. Several patients have been asking for help to reach the hospital. As a result of the lockdown, a lot of documentation process and financial planning of patients have been placed on hold (Hanna, Evans & Booth, 2020).

Division of Cancer Prevention and Control (2020) reported that mortality rate of cancer patients who contracted COVID 19 virus was 6% in comparison to 1% for healthy people in China. COVID 19 had severe impact on cancer control and prevention services like cancer screening (Richards et al., 2020). In addition, many patients have been fearful of exposure to COVID 19 or overburdening healthcare services and thus have been less likely to present to healthcare services for cancer screening and diagnosis (Shrestha & Mulmi, 2020).

Routine screening of patients without symptoms plays an important role in the early diagnosis of various cancers, including breast, colorectal, oral and cervical cancers. However, the COVID 19 pandemic has caused many institutions to pause their screening activities (Spychalski, Blazynska-Spychalska & Kobiela, 2020).

Materials and Methods

A descriptive cross sectional study design was used to assess the problems faced by cancer patients due to COVID 19 at BPKMCH. The study population was all the cancer patients who visited for chemotherapy cycle at BPKMCH. Fifty cancer patients who visited BPKMCH for chemotherapy at day care unit and medical oncology ward I and II were selected as sample by using non probability purposive sampling technique. The Structured Interview Schedule and Distress Thermometer were used as a research instrument.. The instrument was developed in English and translated into simple Nepali languages.

The instrument consisted of three parts: Part-I: Questions related to socio-demographic variables. Part-II: Questions related to problems faced by cancer patient due to COVID 19. Part-III: NCCN Distress Thermometer to assess level of psychological distress. Before collection of data, ethical approval for the study was obtained from the Institutional Review Committee of BPKMCH. The objectives of the study were explained and verbal/written informed consent was obtained from each respondent before data collection and ensured the confidentiality. The data was collected by using structured interview schedule through face-to-face interview method. The interview was taken for 20 to 30 minutes. Privacy was maintained by interviewing with the respondents in a separated and quite place. Patients' distress level was measured by NCCN Distress Thermometer which was first created in 1997 by psycho-oncology pioneer Jimmie C. Holland, MD. The collected data was checked for completeness then encoded and entered in Microsoft office excel and analyzed by using descriptive statistics, statistical package for social science (SPSS) version 22.

Findings of the Study

Table 1:Socio-demographic Characteristics of the Respondents: Age, Gender, Ethnicity

N=50

Variables	Frequency	Percent
Age Group		
19-39	12	24
40-59	27	54
60-80	11	22
Mean \pm (SD)	47.94 \pm (14.724)	
Gender		
Male	22	44
Female	28	56
Ethnicity		
Brahmin/Chhetri	20	40
Janjati	18	36
Dalit	2	4
Madhesi	9	18
Muslim	1	2

Table 1 reveals that, among 50 respondents, more than half of them 27 (54%) were from 40-59 years age group followed by 19-39 age group 12(24%) and 60-80 age group 11 (22 %) with mean age 47.94 and SD was 14.72. Regarding gender, majority were female 28 (56%). Likewise, regarding ethnicity Brahmin/Chhetri were 20 (40%) followed by Janjati 18 (36%), Madhesi 9 (18%) respectively and only 1 (2%) of respondent was Muslim.

Table 2: Socio-demographic Characteristics of the Respondents: Religion, Education, Occupation, Marital status, Place of residence

n-50

Variables	Frequency	Percent
Religion		
Hindu	42	84
Buddhist	5	10
Muslim	1	2
Christian	2	4
Education		
Uneducated	28	56
Primary education	16	32
Secondary education	5	10
Bachelor and above	1	2
Occupation		
Agriculture	23	46
Homemaker	13	26
Business	10	20
Service	4	8
Marital Status		
Married	49	98
Divorced/Separated	1	2
Place of Living		
Rural area	31	62
Urban area	19	38

Table 2 presents that, more than two third respondents 42(84%) were Hindu. Regarding educational status, more than half of the respondents were uneducated 28 (56%), 16 (32%) had primary education and only 5 (10%) and 1 (2%) had secondary and bachelor level education respectively. Likewise, nearly half of the respondents were engaged in agriculture 23(46%) followed by homemaker 13 (26%), business 10 (20%) and service 4 (8%) respectively. Most of the respondents were married 49 (98%) and from rural area 31 (62%).

Table 3: Treatment Related Problems

n-50

Variables	Frequency	Percent
Treatment related problems		
Yes	36	72
No	14	28
Problems (n- 36)		
Unavailability of chemo medicine	10	27.7
Treatment delay	8	22.2

Self-COVID positive	5	13.8
Family got COVID positive	8	22.2
Not meeting doctor in time	5	13.8

Table 3 depicts that, out of 50 respondents, 36 (72%) respondents faced treatment related problems because of various reasons. Regarding treatment related problems out of 36 respondents, 10 (27.7%) had problems of unavailability of chemo medicine, 8 (22.2%) respondents faced treatment delay and 8 (22.2%) respondents had problem of family COVID positive. Likewise, five (13.8%) respondents had self-COVID positive and same percent of them complained about not meeting doctor in time at OPD

Table 4: Transportation Related Problems

n=50

Variables	Frequency	Percent
Transportation related problems		
Yes	24	48
No	26	52
Problems (n-24)		
Unavailability of transport services	14	58.3
Cost of transportation	10	41.6

Table 4 presents that, out of 50 respondents nearly half of the respondents 24 (48%) had transportation related problems during COVID 19 situation. Among 24 respondents who faced the transportation problems, nearly two-third faced unavailability of transportation services during COVID pandemic 14 (58.3%) because most of the respondents were from rural areas and 10 (41.6%) respondents faced the problem of high cost of transportation.

Table 5: Accommodation related Problems

n=50

Variables	Frequency	Percent
Accommodation related problems		
Yes	23	46
No	27	54
Problems (n-23)		
Problem while searching accommodation	8	34.78
Unavailability of accommodation near hospital	6	26.08
Cost of accommodation	9	39.13

Table 5 depicts that, out of 50 respondents, nearly half of respondents 23 (46%) faced accommodation related problems during COVID-19 pandemic situation. Out of twenty-three respondents 9 (39.13%) respondents faced the problem of cost of accommodation and 8 (34.7%) respondents found difficulty in searching accommodation and more than one fourth respondents 6 (26.08%) complained that they didn't get accommodation near hospital during COVID 19 situation.

Table 6: Economic Related Problems

n=50

Variables	Frequency	Percent
Economic related problems		
Yes	21	42
No	29	58
Problems (n-21)		
Lack of financial support	11	52.3
Loss of own job	4	19.04
Loss of family member's job	6	28.5

Table 6 reveals that, among fifty respondents, more than two fifth of respondents 21 (42%) faced transportation related problems during COVID 19 situation. Out of twenty-one respondents who faced the transportation related problems more than half of them 11 (52.3%) didn't get any financial support for treatment. Similarly, 6 (28.5%) respondents' family member lost their job due to COVID 19 and nearly one fifth of respondents 4 (19.04%) lost their own job due to COVID 19.

Table 7: NCCN Distress Thermometer Tool

n-50

Distress level	Frequency	Percent
3	4	8
4	11	22
5	12	24
6	16	32
7	5	10
8	2	4
Mean \pm (SD)	5.26 \pm (1.259)	

Table 7 shows that, the distress level of respondents from 0-10 where 0 indicates no distress and 10 indicates extreme distress. In distress level assessment, range of distress level was assessed from 3-8 with mean 5.26 and standard deviation of 1.25. Regarding distress level of respondents most of them had distress level 6 (32%) followed by 5 (24%), 4 (22%), 7 (10%), 3 (8%) and 8 (4%) respectively.

Discussion

The demographic findings of the study revealed that, among 50 respondents, more than half of them were from 40-59 years age group (54%) followed by 19-39 age group (24%) and 60-80 age group (22 %), whereas mean age was 47.94 and SD was 14.72. Regarding gender, female was (56%) and regarding ethnicity Brahmin/Chhetri were (40%), followed by Janjati and Madhesi (36%, 18%) respectively and only 2% of respondents were Muslim and 84% respondents were Hindu. Regarding educational status, more than half of the respondents were uneducated (56%), 32% had primary education and only 10% and 2% had secondary and bachelor level education respectively. Likewise, nearly half of the respondents were engaged in agriculture (46%) followed by homemaker (26%), business (20%) and service (8%) respectively. Most of the respondents were married (98%) and from rural area (62%).

Out of 50 respondents, 72% respondents faced treatment related problems because of various reasons. Regarding treatment related problems, out of 36 respondents, 27.7% respondents had faced the problems of unavailability of chemo medicine, 22.2% respondents faced treatment delay and 22.2% respondents had problem of family COVID positive. Likewise, 13.8% respondents had self-COVID positive and same percent of them complained about not meeting doctor in time at OPD. This finding of the study is similar to the research study conducted by Kumar and Dey (2020) at Chandigarh, India concluded that treatment delay has the key problem faced by cancer patients due to COVID 19.

Among 50 respondents, nearly half of the respondents (48%) faced problem of transportation during COVID 19 situation. Among the respondents who had faced the problem of transportation, nearly two third faced unavailability of transportation services during COVID pandemic (58.3%) because most of the respondents were from rural areas and 41.6% respondents faced the problem of high cost of transportation. This finding of the study is similar to the study done by Singh, Rai and Ishan (2021) at North Bihar, India which showed transportation problem was one of the causes for missed chemotherapy during the pandemic.

In relation to accommodation related problems, out of 50 respondents, nearly half of respondents (46%) faced accommodation related problems during COVID-19 pandemic situation where out of 23 respondents 39.13% faced the problem of cost of accommodation and 34.7% respondents found difficulty in searching accommodation and more than one fourth respondents (26.08%) didn't get accommodation near hospital during COVID 19 situation. This study revealed that respondents found more difficulty while searching accommodation and to get vacant room at affordable price near hospital during COVID 19 situation. This finding of the study is supported by the study done by Rosenthal (2020) at UK which revealed that patient faced accommodation related problems where patients rarely had ability to self-isolate and adhere to social distancing.

Concerning economic related problems, nearly two fifth of respondents (42%) faced transportation related problems during COVID 19 situation. Out of 21 respondents more than half of them (52.3%) didn't get any financial support for treatment, nearly one third (28.5%) respondents' family member lost their job due to COVID 19 and nearly one fifth of respondents (19.04%) lost own job due to COVID 19. This study revealed that respondents didn't get any financial support from others like relatives, friends etc. for treatment so it also created more psychological distress. This finding of the study is consistent with the finding of the study of Dalal (2020) conducted at Tata Memorial Hospital, Mumbai which revealed that many financial planning of patient have been placed on hold and not getting access to timely treatment due to COVID 19.

During assessment of NCCN distress thermometer tool, range of distress level was assessed from 3-8 with mean 5.26 and standard deviation of 1.25. Regarding distress level of respondents, most of them had distress level of 6 (32%) followed by 5 (24%), 4 (22%), 7 (10%), 3 (8%) and 8 (4%) respectively. This finding is closely consistent with the result of cohort study conducted in gynecological cancer patients at the University of Minnesota which showed 30% respondents had a distress thermometer score of 4 or more than 4, indicating clinically meaningful distress (Jewett, 2020).

Conclusion

Most of the cancer patients had treatment related problems comparison to other problems during COVID 19. They found more problems to get chemo medicine because of unavailability in hospital pharmacy and there was also shortage of chemo medicines in others pharmacy due to COVID 19 situation. Majority of respondents found difficulty to get transportation services to reach hospital. Regarding accommodation, respondents found more difficulty while searching accommodation and to get vacant room at affordable price near hospital and they were unknown about accommodation facility provided by hospital. During assessment by NCCN distress thermometer tool, majority of respondents had distress level 6 so it clearly shows that cancer patients had moderate level of distress and there was no one without feeling of distress.

Recommendation

It would be better to provide access to detail information about hospital and its facilities for treatment. Hospital should make strategic planning of health care services for patients with cancer during the current pandemic situation by means of alternative solutions such as telemedicine consultation, home-based palliative care services, and ensuring the availability of essential cancer drugs.

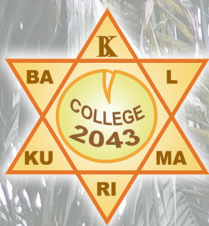
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