Volume XV, Issue II
December 2024

ISSN 0976-2000

Chetana's

Ramprasad Khandelwal Institute of Management & Research

Quest

Journal of Management Research

Chetana's
Ramprasad Khandelwal
Institute of Management & Research

EDITORIAL BOARD

Chief Editor

Dr. Madhumita Patil
(CEO, CIMR & CRKIMR)

Editor

Dr. Kavita Khadse

Dr. Balaji Sadavarte

Members of Editorial Committee

CA Prof. Suhas Gharat

Dr. M. Shivaprasad

Dr. Nalini Krishnan

Dr. Sandeep Nemlekar

Dr. Mahesh Luthia

"Quest" Journal of Management Research is a bi-annual publication of Chetana's Ramprasad Khandelwal Institute of Management and Research to disseminate knowledge and information in the area of finance, marketing, human resources, systems/IT, operations, general management practices, business development etc. The Journal intends to focus on theoretical, applied and interdisciplinary research in business and management studies. It provides a forum for debate and deliberations for academicians, industrialist and practitioners in the field of business and management. The views expressed in the articles and other material published in the journal do not reflect the opinions of the Institute.

From the Editor's Desk

We are honoured to present this special edition of our research journal, featuring selected papers from the *International Research Conference on Rural Entrepreneurship: Issues, Opportunities, and Challenges*, held in September 2024. This conference brought together leading researchers, industry experts, and policymakers to discuss critical issues and innovative solutions in rural entrepreneurship.

The studies included in this edition explore key themes such as parental involvement in early education, agricultural service provider qualifications, workforce engagement in higher education, digital health adoption, and online data privacy. Each paper presents rigorous analysis and evidence-based recommendations, contributing to the broader discourse on rural development and economic sustainability.

Through diverse perspectives and empirical research, these papers provide valuable insights into overcoming barriers in education, improving agricultural productivity, enhancing workforce participation, leveraging digital health services, and addressing privacy concerns in the digital age.

We hope this collection inspires further research and practical applications to support rural entrepreneurship and sustainable development.

We extend our deepest gratitude to the authors, and Paper Presenters for their dedication to advancing knowledge in this field. Special thanks to our esteemed guests, panellists and participants for their invaluable discussions and contributions.

Dr. Kavita Khadse

Editor

CONTENTS

ISSN – 0976-2000

1. Strategies and Solutions to Overcome Barriers in Parental Involvement for Grade One Children's Academic Performance in Jamaica 01 - 11
Rev. Sydoine Jeannite, JP

2. Impact of Agro Services Providers' Qualification on the Growth in Production: The Farmers' Perception 12 - 17
Dr. Shubbhada Namdeo Ghule

3. Women Employee Engagement in Senior Colleges: Challenges and Strategies for Improvement 18 - 28
Dr. Pallavi Samir Yeolekar

4. Adoption of Digital Health Services: A Systematic Review of Literature 29 - 41
Mr. Nikesh Kurhade, Dr. Nirmala Joshi

5. An Empirical Study of Public Awareness and Perception Towards Online Data Privacy 42 - 52
Dr. Sapna Patil

ISSN – 0976-2000 Chetana's Vol. XV Issue II : pp 1 - 11

Strategies and Solutions to Overcome Barriers in Parental Involvement for Grade One Children's Academic Performance in Jamaica

*** Rev. Sydoine Jeannite, JP**

Abstract

Through this journal article, the researcher comprehensively explores strategies and solutions to overcome the barriers to parental involvement in Grade One children's academic performance in Jamaica. Acknowledging the diverse challenges parents, educators, and policymakers face, this research seeks to provide practical and implementable solutions to foster a more wholistic and supportive educational environment. The value of parental participation is widely accepted, but participation is difficult to promote and maintain. Schools are becoming more diverse, and a great challenge facing educators is meeting the needs of all students. Narrowing the achievement gap and increasing student learning require the collaboration of various interested groups, most notably parents. Families play an important role in creating a school that meets their child's needs, yet teachers admit they have little information or training on how to effectively work with diverse parents. In this article, numerous strategies for addressing barriers to school involvement and participation are presented. Methods for using families' cultures and experiences are also explored as a base for new learning and understanding

Keywords: *academic success, barriers, closing achievement gap, collaboration, cultural differences, diversity, educational equity, involvement, parental involvement, strategy*

INTRODUCTION

Effective parental involvement is pivotal for the academic success of Grade One children in Jamaica. Recognizing and addressing the barriers that hinder such involvement is imperative for creating a nurturing and empowering educational landscape. This article outlines strategies and solutions tailored to the unique challenges faced by parents in Jamaica, aiming to bridge the gap between home and school.

Did you know that parents who are involved in their child's education can make a significant difference in their academic success?

A team of researchers, led by Sydoine Jeannite, PhD candidate at LIUTEBM, conducted a study that confirms this use of strategies address barriers to parental involvement in education pointed out by parents and school officials. The study involved twenty parents and twenty students at a primary

* Doctor of Philosophy (Ph.D.) in Child Psychology and Counselling from the Livingston International University of Tourism Excellence &Business Management (LIUTEBM) University, Lusaka, Zambia.

school in St. James' urban area and revealed that family and parent involvement in schools leads to better academic outcomes, regardless of the family's background or socioeconomic status. The research has shown that children whose parents participated in the school's activities outperformed those whose parents were not involved. So, if you want your child to succeed, make sure to get involved in their education!

Parental involvement in education has been proven to enhance attendance, behavior, grades, and social skills in students. A recent article by the Annie E. Casey Foundation highlights the importance of such involvement in fostering a lifelong love of learning, crucial to long-term success. Regardless of socio-economic status, parental involvement can significantly contribute to

academic performance and behavioral improvement. Educators can integrate parental involvement into school culture through various strategies and techniques, Casey, A.E. (2022)

Sydoine Jeannite (Ph.D. candidate, LIUTEBM) and his team of researchers solicited responses from a group of twenty parents who participated in a research conducted at a primary school in urban St James from September 2023 to December 2023 from the following two questions.

A.) ._What are the effective methods and strategies that school principals and educators must implement to enhance parental involvement?

B)'_ How do you implement parental involvement?

Various strategies and solutions tailored to the unique challenges faced by parents are outlined in this article, Grade One students in particular, in Jamaica, aiming to bridge the gap between home and school. The parents have responded and suggested the following strategies that can improve parental involvement hence lessen the barriers to parental involvement.

Community-Based Workshops and Awareness Campaigns:

To address the lack of awareness and education among parents relating to the importance of their involvement, community-based workshops, and awareness campaigns can be implemented.

These initiatives should provide information on the positive impact of parental involvement on academic performance, offer practical tips for engagement, and create a platform for open discussions about the challenges parents face.

Financial Assistance and Resource Allocation:

Financial constraints limit access to education resources and hinder parental involvement. To tackle this, we need targeted financial assistance programs and resource allocation strategies. Collaboration between schools and community organizations can ensure that every first-grade child has equal access to essentials.

Flexible School Schedules and Remote Engagement Opportunities:

Recognizing the time constraints faced by Jamaican parents due to work obligations, schools can implement flexible schedules for parent-teacher meetings, events, and other school activities.

Schools can develop flexible parental involvement initiatives, including virtual workshops, evening meetings, and community-based events, to accommodate parents' varying schedules and preferences.

Additionally, embracing technology to facilitate remote engagement, such as virtual parent- teacher

conferences or online learning platforms, can provide parents with more convenient ways to participate actively in their child's education.

Multilingual Communication Initiatives:

Jamaican Motto is out many one people. In a culturally diverse country like Jamaica, overcoming language barriers is crucial. Schools can implement multilingual communication initiatives to ensure that information reaches parents in a language they understand. This may involve translating written materials, hiring bilingual staff, or utilizing technology for real-time translation services during communication with non-native speakers.

Cultural Competency Training:

Jamaica is a culturally diverse country with a motto that speaks to the unity of its people. However, language barriers can hinder effective communication between parents, educators, and students. That's why it's crucial to implement multilingual communication initiatives in schools. By providing information in languages that parents can understand, we can ensure that everyone is on the same page. This could include translating written materials, hiring bilingual staff, or utilizing technology for real-time translation services. In addition, cultural competency training programs can help educators understand diverse cultural backgrounds and improve communication with parents from different ethnicities and linguistic backgrounds. Let's work together to create an inclusive learning environment where everyone feels heard and valued.

Strengthening Parent-Teacher Partnerships:

Using this strategy helps to foster effective communication and collaboration between parents and educators, schools can implement programs to strengthen parent-teacher partnerships. This may involve regular communication channels, workshops that educate parents on navigating the education system, and initiatives to involve parents in decision-making processes within the school community.

Parental Involvement: Hamner and Turner (1990) define Parental Involvement as the participation of parents in activities that contribute to greater adjustments and Parent Education Programs:

School administrators and teachers, take note! Empowering parents to be active participants in their child's education is key to fostering academic success. The best way to do this is by organizing well-structured workshops and seminars that provide parents with effective strategies to support their children's learning at home. With your guidance, parents can gain the knowledge and tools they need to become invaluable partners in their child's educational journey.

To ensure the parents of Grade One children are fully assessed because they are the selected Grade for the study. The researcher further interviewed approximately thirty more parents of Grade One students and solicited their responses on strategies to overcome barriers in their involvement of their children's education. The researcher and his team deducted from their responses strategies that they believe can improve parent involvement in their children's education. The researchers discovered that parents generally share similar concerns and propose similar strategies or solutions regarding their children's academic performance. The respondents have unanimously suggested the use of a school parent communication app. Fifty percent of them want to use WhatsApp, 40 percent want to use SMS and 10 percent agreed to use both WhatsApp and SMS. Whatsapp and SMS are the top

communication apps trending nowadays in Jamaica. These apps have been successfully used by school administration, grades coordinators, and even education officers to interact with parents and students as well as teachers in the system. They can be accessed by parents and students using their smartphones, tablets, and computers easily

Educators need to communicate effectively with parents. It is widely encouraged that teachers can be warm to parents and a little friendliness goes a long way, especially when it comes to Grade One primary school parent-teacher communication. Whether you are communicating via

WhatsApp, email, text, or in person, be warm, be welcoming, and offer encouragement. When you see parents in person, smile, shake hands, and make eye contact. Introduce yourself. Inform the parents on what their children are studying. The teacher needs to invite the parents to an open house and/ or other school functions. Comment on their child's progress. Inform them of their child's achievements (e.g., "Student of the Week"). And remain positive throughout the meeting.

Trust: Trust plays a vital role in getting the parent involved in their children's education. Without your parents' trust, you might find yourself spending a lot of rest nights cooped up in the house while your friends are out having the fun of their lives. If parents perceive that teachers have been dishonest with them in the past or perhaps they are just really strict. Whatever the case may be, teachers must be eager to build trust so they will see them as mature. They can earn their parents' trust through communicating honestly, abiding by their rules, and accepting responsibility.

How does a teacher build trust back with his/ her parents?

A sincere apology can go a long way to make your parents trust you again. The best apology you can offer is to acknowledge your wrongdoing, restate what happened unambiguously, acknowledge the nature of the hurt or harm done, ask for forgiveness, and suggest alternate ways to minimize or avoid similar mistakes in the future.

Parents are partners:

Collaboration between parents and schools is crucial for a student's success. Active parental involvement positively impacts academic performance. Educational institutions are adopting strategies to encourage parents to participate more actively. Schools that prioritize parental involvement have more successful students who achieve their full potential.

Share accountability:

Because ambitious education outcomes rely on multiple actors fulfilling often shared responsibilities, accountability cannot easily rest with single actors.

Organize volunteerism programs:

Parent and family volunteers are considered a major asset to any classroom. Every September, at the beginning of the academic year, many afternoons are usually filled with communicating with volunteers about expectations, scheduling and training. When bringing parent volunteering into the classroom, it's important to dedicate time and effort toward creating routines and expectations for each of them so they fit right in with your respectful classroom environment and are an asset for the entire year. Taking this approach helps your volunteers become an integral part of your classroom community.

Parent Education Programs:

Establish workshops and seminars to educate parents on the importance of their involvement in their child's education and provide them with strategies to support learning at home.

Teachers should provide home activities such as homework for the students and set up a home office for kids. Children in Grade One should be given homework whereby parents will be engaged in the homework at home. For instance, a child who needs to make charts reflecting various types of families would not be able to complete such a task on his or her own, hence parent participation becomes critical. Teachers can get parents engaged by giving assignments or domestic tasks to their children that would get involved to a greater extent. The teacher considers an indoor activity that most children will love and enjoy at home. The activity is entitled: "A Chance to Be Just like You". Set up a pretend office in a corner of your home where kids can make calls, write letters and "send" them, and type important emails. Be sure to provide lots of varied materials for them to work with an old keyboard to type with, file folders and paper, a calculator, an old phone (toy or real), pens and pencils, tape, envelopes, rubber stamps, and notepads. Then pretend with them, give them a "call" and ask when the mail will be arriving, or ask to have a face-to-face meeting in their office. Such activity has the potential to get real parental involvement in their children's education.

Teachers are to be the bearers of good news when dealing with parents. Sharing positive news with parents is considered to be a very good strategy. Too often teachers only call parents when children misbehave but oftentimes they neglect to call the parents when children perform well and conduct themselves always with decorum.

The researcher and his team have also recommended to the Grade One teachers strategies from other literature sources to promote meaningful parental involvement. A conference was held by the National Parents Support Commission (NPSC) in tandem with the National Parent Policy (NPP) and the Parents Support Strategy (PSS) in 2011 to discuss strategies to get parents involved in their children's education in Jamaica. The panelists explored various strategies to promote meaningful parental involvement in their children's education and identified the following strategies as the main avenues for parent-school engagement:

1. Orientation meeting at the beginning of the school year
2. Rushed 5 minute conferences to discuss the child's performance
3. Parent Teachers Associations
4. Consultations with teachers resulting from child's behavior

The discussants considered the above strategies to be good. However, they were considered inadequate for promoting meaningful parent-school engagement. The main concern was that there were insufficient opportunities for parents to collaborate with teachers regarding the progress of their children. For them, meaningful parental school engagement requires the inclusion of parents in the education process in the ways that follow:

1. Creating school climates in which parents can volunteer, drop in and observe, and help some children with their work
2. Teachers and principals engaging parents in goal-setting and improvement plans for individual children as well as sharing methods for assisting children with homework

3. Increasing teachers 'accessibility to parents by having regular conference spaces and days/ times when teachers are available
4. Capacity building for PTAs to become true monitors of all aspects of school life, holding all stakeholders accountable and not simply a fundraising mechanism for the school
5. Schools and parents' goal-setting together (for children and schools) and developing strategies to achieve the goals

What can the school do to encourage parental involvement in education?

To encourage parental involvement in education, Bain, P. (2011), suggests that the school can organize intensive parenting courses and parents should do these courses at each stage of their children's education. Iles, Y. (2011), asserts that in the early years, when the child first begins school, it should be made compulsory for parents to come for one hour, three mornings a week for two weeks. During this time, the parent and the child learn about the value of learning through play and (Young, Parental Involvement in Education in Jamaica, 2011)how and when to make learning interventions.

Additionally, (Tortello, 2011), posits that intensive parent engagement courses be organized for pre-service and in-service teachers. Another contributor noted that the Ministry of Education has already drafted a course for teachers to be offered through the Jamaica Teaching Council, which will become a part of the licensing requirements.

(Young, Parental Involvement in Education in Jamaica, 2011), a classroom teacher indicates that her school implemented various parental involvement activities including parental seminars, which have a literacy focus, parent and child spelling competitions, and parent and child workshop (Tortello, 2011), further suggests implementing Parent Corners, which would provide information to parents regularly.

How can teachers engage parents in the educational process?

According to educator (Clarke, 2011), Home visits are viewed as a positive way for teachers to show parents that they are interested in their welfare, and get to know the background and families of the children in their classrooms. in emphasizing the importance of parental involvement and holding both parents and children accountable, (Clarke, 2011), states: "I got my students to do so much more. I made them accountable because they and their parents realized I was deeply interested in their welfare".

As part of getting to know their students, teachers were advised to listen to what parents have to tell them about their children, so they can learn how best to deal with each child's learning style. It is noted that parents often do not have the confidence to express what they know, but teachers can encourage them and learn. One discussant pointed out that parents can support teachers by informing them about the individuality of their children, and thereby avoid creating a learning environment where children are lumped as a package and their wonderful diversity is streamlined. (Moncrieff, 2011).

What can parents do to improve their engagement?

(Iles, 2011) advised the parents to become "a pest to the teacher" to find out what the teacher expects of their children. The discussion highlighted that there are opportunities to improve engagement by participating in PTA meetings. While some parents

expressed their dissatisfaction because of the perception that PTAs emphasize fundraising, and have an insufficient focus on academic goals and action steps, they also identified them as opportunities to consolidate ties to schools and support their goals.

In the panel discourse. (Young, Parental Involvement in Education in Jamaica, 2011) Shared her own experience with the participants. She highlighted that the PTA at her school in collaboration with a supportive Board and inspirational Principal, was able to confront the issues presented to them and address their concerns, and they had had some successes. For example, in their monthly meetings, she explained that the Principal passionately outlined to the parents the academic goals, and updated parents on the standards of subjects, grades, and other pertinent information related to the academic staff, and a plethora of relevant matters.

During their meetings also, he consistently talks about "tools and methodologies parents can use to support their children with their homework. Additionally, during the term, the school administration organized multiple sessions for consultations with parents, and these were well attended.

On their part, she continued, the current Jamaica College PTA endeavored to be the "accountability framework" that the discussants so perceptively demanded, but we still used creative and innovative approaches to attract funds, but in ways that are not burdensome or invasive to parents. For example, they were able to offer sponsors access to the parents of their 1800 students in exchange for financing their monthly meetings. They operated from a formal, documented strategic plan which ensured that as the panelists suggest, "goals were set specific actions were outlined to achieve these goals, monitoring, and evaluation exercises were carried out checking progress against goals." They had also been able to send teachers to seminars, got monthly speakers on technical or other helpful topics, provided welfare assistance to needy parents/ students, and provided other services, Collin Greenland, PTA President, Jamaica College 21-24 June 2011 Jamaica Partners for Educational Progress CoP EduExchange E-Discussion Summary 7

Teachers and parents alike were introduced to the Articulation of the National Parents Policy's (NPP's) Vision in Jamaica. To ensure greater parental involvement in the educational process, the Jamaican Government introduced the National Parents Policy's (NPP's) visions articulated through the following goals:

1. All Jamaicans make wise choices about becoming parents and make parenting a priority.
2. All Jamaican children are loved, nurtured, and protected instinctively and unconditionally by their parents.
3. Each parent understands and utilizes/applies positive practices in effective parenting
4. An enabling institutional framework exists to support parenting.
5. Ensuring that the principles and implications of effective parenting are communicated to the public in user friendly ways that enable comprehension of the material.

There are three levels of Parents' Places:

Level 1 is an Information Centre and most easily achieved in partnership with the Jamaica Library. Service network and the nation's schools.

Level 2 Parents 'Places include information as in Level 1 but also the provision of parenting workshops and family support activities. These are most easily achieved through non- governmental, faith-and community-based organizations, churches, schools with active PTAs, early childhood education centers, and adolescent focused youth information centers.

Level 3 adds specialized services for parents and children with higher levels of risk or vulnerability than what is offered in levels 1 and 2. These will likely be clinical care facilities such as health clinics. There are suggestions too for a virtual level 4 linked to all other levels to facilitate additional information and training through the Ministry of Education and Youth (MOEY)'s, National Parents Policy (NPP), Parent Support Strategy (PSS), and National Parenting Support Commission (NPSC) in Jamaica.

(Tortello, 2011), who was at the time an Advisor to the Minister of Education, indicates that the policy is also grounded to ensure that our parents are on the one hand aware of and understand that their responsibilities are under the law and on the other hand, support the parents as they seek to meet these responsibilities. According to (Tortello, 2011), this objective would be achieved by promoting and coordinating organizational efforts and resources throughout the country so that parents could realize positive parenting practices (Tortello, 2011), further posits that the National Parenting Support Commission would facilitate the establishment of Parents 'Places across Jamaica by drawing on existing community/ government, business places, and resources. Parents Places would be launched later in 2011 when more institutions joined in to create Parents' Places out of their existing resources that would be made available. (Tortello, 2011), also notes that all Parents 'Places slated to receive Parent Support Kits with resource materials training has already begun for existing GOJ/NGO staff to enable them to support Parents 'Places as they develop island-wide.

Through Parent Corners in schools, supported by NPSC, the Ministry of Education would seek to gather and share best practices in linking home and school.

Improved communication was identified as an area of need by parents and educators. Increased, positive communication makes parents feel more comfortable and welcomed into the school.

Parents want to hear beyond the negative and learn about their child's achievements (Baker et al., 2016). Also, teachers can show that they value parent involvement by communicating what the parent's role in education could look like and inviting them to school. When parents feel that the school really values and encourages parent involvement, they are more likely to participate (Hornby & Lafaele, 2011).

Another very important way of making parents feel comfortable to get involved in their children's education as previously cited is when the educator and the school administrators provide a sense of openness and welcoming parents. When parents feel comfortable enough they are more likely to be involved. Welcoming them as they enter the building or personally inviting them into classrooms are simple steps to breaking down the barrier of discomfort for parents (Baker et al., 2016). However, parents are required to complete a background check and in some cases in Jamaica for instance, Early Childhood parents are required to produce a Police Records and Food Handler's Permit before regularly volunteering in a classroom, which poses another barrier for some. Teachers expressed frustration because they had lost good volunteers who were afraid to complete the background check. No solutions were offered to

address this concern (Baker et al., 2016).

Parents provided suggestions to address the concern of scheduling conflicts. They believe that by providing weekend activities, schools are more likely to accommodate working families.

Providing childcare could alleviate the challenge of working around siblings' schedules, as well as checking with other schools to make sure their events are spread out on separate days. Parents and educators also agree that providing food makes events more enticing (Baker et al., 2016).

Teachers are also requesting professional development training so that they feel better equipped to support families. Without the training, it is difficult for teachers to have the understanding and knowledge to guide families when they need help in their personal lives (Hornby & Blackwell, 2018).

Additionally, there are other factors to consider in examining the effect of parental involvement on children's academic performance covering Grade One children in Jamaica.

Kang, Horn, and Palmer (2017), found that quantity was less important than quality in regards to parent involvement. It did not matter how many school activities parents chose to participate in, but just that there was some level of involvement, which led to positive academic results for kindergarten children. This is important for teachers to consider as it means that they do not need to stress about whether or not parents participate in every single activity. Instead, encourage parents to attend one to start and work on strengthening the home-school partnership.

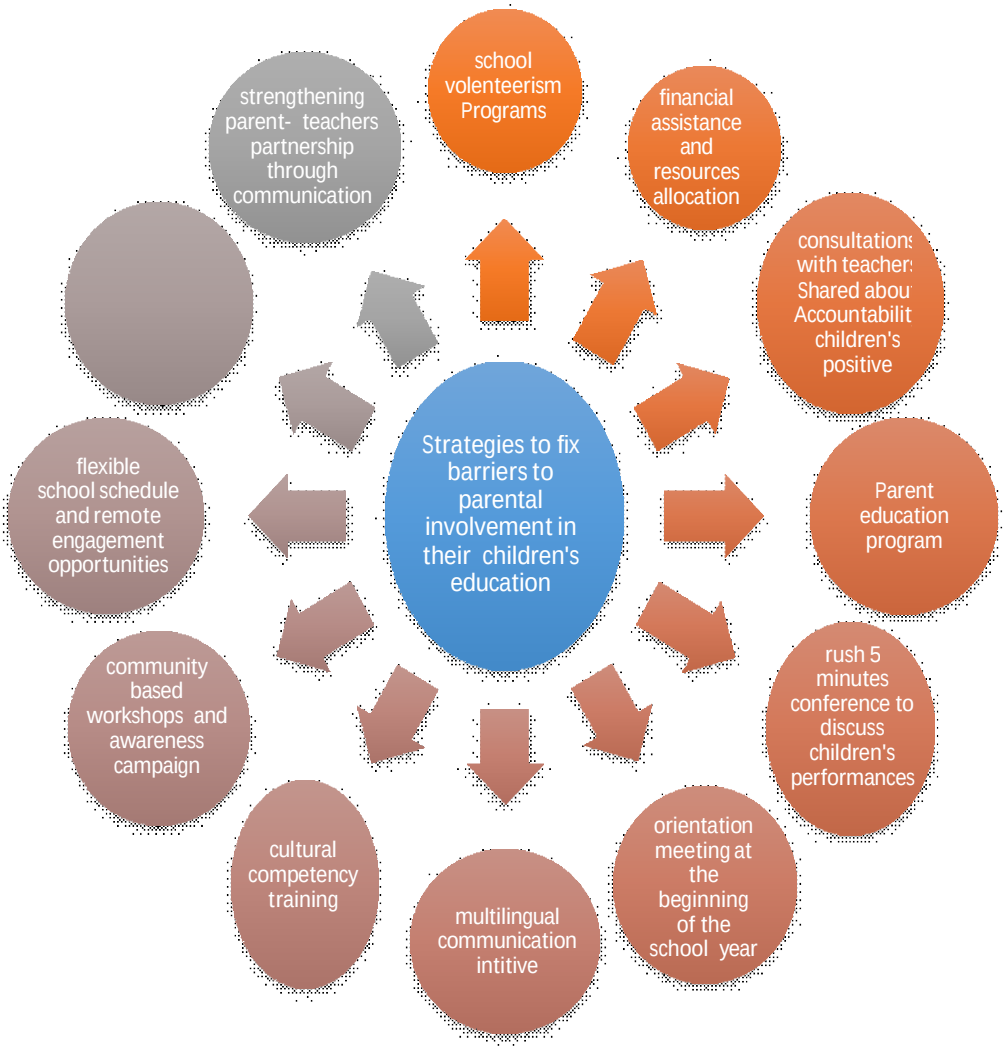
Hornby and Lafaele (2011), found that parents tend to be more involved in education when their children are younger. As children grow older, they are less likely to want their parents to be part of their school as they are working towards independence (Hornby & Lafaele, 2011). It is also easier for parents to be involved when their child is doing well at school. When children are consistently struggling, parents may feel defeated and leave it up to the teachers to provide support (Hampden-Thompson & Galindo, 2017).

Overall, the research presented here promotes parent involvement in school activities. Unfortunately, as discussed in this paper, there are barriers preventing parents from participating. One of the goals of this segment of this study was to begin thinking about ways to break down the barriers and provide support to families. By asking families directly about the barriers they face, we can gather more accurate information and expand on the data later on.

Parental involvement has yielded higher academic outcomes for both children from lower class to upper-class society. Some proposed strategies skills or techniques that teachers could implement when preparing to integrate parental involvement into school culture. Parental involvement can indeed and significantly contribute to student's academic performance and behavioral improvement, attendance, etc . . .

CONCLUSION

Addressing the barriers to parental involvement in grade one children's academic performance in Jamaica requires a concerted effort from educators, policymakers, and community stakeholders. By implementing these strategies, we can create an environment that not only acknowledges the diverse challenges faced by parents but actively works to remove obstacles and empower them as partners in their children's education. Through a collaborative



and sustained commitment to these solutions, we can bridge the gap between home and school, ensuring that every grade one child in Jamaica has the support needed to excel academically throughout their academic lifetime since their academic careers duly begin at Grade one.

REFERENCES

1. Clarke, C. (2011, June 21-24). Parental Involvement in Education in Jamaica. (J. B. Grace Camile Munroe, Ed.) *Jamaica Partners for Educational Progress*, 10. Retrieved from https://www.mona.uwi.edu/cop/sites/default/files/consolidated_reply_files/EduExchange%204_Summary%20_Final_0_0.pdf

2. Iles, Y. (2011, June 21-24). Parental Involvement in Education in Jamaica. 10. Retrieved from https://www.mona.uwi.edu/cop/sites/default/files/consolidated_reply_files/EduExchange%204_Summary% 20_Final_0_0.pdf

3. Moncrieff, J. (2011, June 21-24). Parental Involvement in Education in Jamaica. (J. B. Grace-Camile Munroe, Ed.) *Jamaica Partners for Edu-*

cational Process, 10. Retrieved March 2024, from https://www.mona.uwi.edu/cop/sites/default/files/consolidated_reply_files/EduExchange%204_Summary%20_Final_0_0.pdf

4. Nermeen E. El Nokali, H. J.-D. (2010, May). Parent Involvement and Children's Academic and Social Development in Elementary School. *Society for Research in Child Development, 81*(3), 988-1005. Retrieved from https://srcd.onlinelibrary.wiley.com/doi/abs/10.1111/j.1467-8624.2010.01447.x

5. Tortello, R. (2011, June). Parental Involvement in Education in Jamaica. (J. B. Grace-Camile Munroe, Ed.) *Jamaica Partners in Educational Progress*, 10. Retrieved from https://www.mona.uwi.edu/cop/sites/default/files/consolidated_reply_files/EduExchange%204_Summary%20_Final_0_0.pdf

6. Young, C. (2011, June 21-24). Parental Involvement in Education in Jamaica. (J. B. Grace-Camile Munroe, Ed.) *Jamaica Partners for Educational Progress*, 10. Retrieved from

7. https://www.mona.uwi.edu/cop/sites/default/files/consolidated_reply_files/EduExchange%204_ Summary%20_Final_0_0.pdf

8. Young, C. (2011, june 21). Parentat involvement in Education in Jamaica. *Jamaica Partners for Education Progress*, 10. Retrieved March 15-20, 2024, from https://www.mona.uwi.edu/cop/sites/default/files/consolidated_reply_files/EduExchange%204_Summary%20_Final_0_0.pdf

9. Casey A.E. (2022), The Annie E. Casey Foundation

10. El Nokali Bachman, & Votruba Drzal, 2010, Goleman 1998 Parent Involvement and Children's Academic and Social Development in Elementary School

11. Munroe G-C, & et al, (2011), Jamaica Partners for Educational Progress Community of Practice (CoP) EduExchange

12. Bain P. (2011), Jamaica Partners for Educational Progress CoP EduExchange E-Discussion Summary. Jamaica Partners for Educational Progress website.

13. National Center for Education Statistics. (n.d.). Search for schools and colleges. Retrieved on

14. February 14, 2019 from: https://nces.ed.gov/globallocator/index.asp?State=FL&zipcode=34983&miles=5 &School=1&PrivSchool=1&College=1&Library=1

15. National PTA. (n.d.). Report: The positive relationship between family involvement and student success. Retrieved from https://www.pta.org/home/run-your-pta/National-Standards-for-Family- School-Partnerships/Report-The-Positive-Relationship-Between-Family-Involvement-and-Student-Success

16. National PTA. (n.d.a). Successful family-school partnerships. Retrieved from https://www.pta.org/home/run-your-pta/National-Standards-for-Family-School-Partnerships

ISSN – 0976-2000 Chetana's Vol. XV Issue II : pp 12 - 17

Impact of Agro Services Providers' Qualification on the Growth in Production: The Farmers' Perception

*** Dr. Shubhada Namdeo Ghule**

Abstract

Agriculture is the strength of Indian economy with more than 70 per cent of population been reliant on agriculture for their living. However, stumpy profitability from agriculture, high input cost and seasonality of agriculture produce, fails to make it a sustainable basis of living for Indian farmers. The transaction cost theory believes that collective actions can help decrease cost and increase profitability in the sector. Agro service providers are operating with the objective of providing quality input at a reasonable price. The qualification and experience of Agro Services Providers' matters for profitable production in farm by giving best advisory service related to agro inputs to farmers. A qualitative study in Nashik districts was conducted. Primary data was collected for this study. Direct contacts and discussions were held with agro service Providers as well as the farmers. The research was conducted to study impact of Agro Services Providers qualification on the growth in production as a farmers' perception and to understand the role of Agro Services Provider in farming and related activities. The study found that there is significant impact of agro services providers' qualification on the growth in production

Keywords: *Agro Inputs, Agro service provider, Growth in Production, etc*

I. INTRODUCTION

Agriculture inputs are the resource used in farm production. An agriculture inputs plays a strong role in production of farm output. The well-timed supply of modern farm inputs to the farmers to the whole category at rational price depends on the existence of the efficient marketing system. The effect of change in production method can, therefore be realize only if the farm inputs touches the farmer in the time at a least cost with best quality. Hence, agro service providers can play most important role in ensuring farmer's access to agricultural inputs and for growth in production in farm, because they serve as the closest body to the farmers. Agro service providers are one of the players that are responsible to deliver according to the demand of the farmers. The full participation of agro service providers is required to meet the challenges faced by extension system in India which can be achieved by study of socio economic characteristic of agro service providers providing ago

* Assistant Professor, Dr. Moonje Institute of Management and Computer Studies, Nashik
Email: shubhadaghule@gmail.com

advisory services at agro service centers. Socio economic characteristic of agro service providers incudes age, education, experience in dealership, training received, scientific methods used, exposure visits. The research was conducted to study farmer's perception about growth in production in farm with considering one of the most important characteristic of agro service provider i.e. their qualification. Thus, the study would be of great use to the extension administrators, extension personnel and others who are involved directly or indirectly with agro inputs services.

II. REVIEW OF LITERATURE

P.S. Shelake et al. (2015) by conducting study in Amravati district on training need of agricultural input dealers for transfer of technology, author stated that majority of the agricultural input dealers were 'middle' age, with 'medium' experience in fertilizer dealing, information seeking behaviour, risk orientation, economic motivation and cosmopolitans. Majority of the respondents were 'graduate' and all had 'input dealing' as their major occupation and 'medium' annual income. Majority of the agricultural input dealers provided the information about different improved varieties of crops, fertilizers and their doses, time and method of application, control of pest and disease of crops and improved methods of irrigation, soil testing, improved technology etc. In respect of training needs, agricultural input dealers had expressed 'high' training needs on 'micro nutrient fertilizers' followed by 'integrated nutrient management', 'improved varieties and hybrids of different crops', 'types of improved sprayers and dusters', 'information communication technology', 'efficient use of information technology', 'business management' and 'government rules and regulation'. 'Economical problem', 'availability of labours', 'lack of organization of dealers', 'late for getting rupees from farmers', were the major constraints faced by them.

A.K. Singh et al. (2015) Respondents were found to be highly educated with three fourths of them having senior secondary and graduate degrees. Around 51 percent of the respondents mobilized their own resources for the business and only 29 per cent sought bank credit. Identification of different pest and pesticides emerged as the most needed training area followed by diagnostics. Among crop specific training need, vegetable crops ranked first followed by rice. Training in computer and its application in business is another preferred area. Lack of capital, lack of need based training, seasonality in the business of pesticide were some of the constraints identified by the pesticide retailers in south 24 Paraganas. The study results the socio-economic profile reveals that educated and young people are entering the agro-input business. This is an encouraging trend .The study also reveals that the core areas of insect pest management in which agro-input dealers need training are identification of different pest and pesticides and diagnostics. Among crop specific training need, vegetable crops ranked first followed by rice. Application of computer in their business and other tools help advancing the business and dealers desires to have training.

Sangamesh Ganiger (2012) by conducting study in Northern Dry Zone of Karnataka with two districts (Bellary and Bijapur) having large number of input dealers and wider diversity of crops ,the profile analysis of input dealers specified that majority of input dealers were middle aged, graduates, high experience as a dealer, medium farming experience, medium trainings received, medium level of extension contact, marginal land holding, high scientific orientation, medium mass media participa-

tion, low level of exposure visits, medium information seeking behaviour, high level of extension service orientation, low level of social participation and most of them were selling three types of inputs. Majority of input dealers had high level of knowledge, medium level of perception and medium level of role performance.

Leelavani Madem(2011) revels detailed analysis of profile characteristics of input dealers specified that majority of the respondents were middle aged with secondary education and were landless with business as their key occupation. Majority of the respondents had annual income above 5 lakhs with business experience of 11-30 years, farming experience up to 15 years followed by 31-60 days of training received along with medium economic direction and medium innovativeness. Majority of the respondents had medium level of information of agri input and communication behaviour. The independent variables such as education, business experience, occupation, farming experience, annual income, social participation, training received, economic orientation and innovativeness of input dealers exhibited significant relationship with all the components of communication behaviour viz., information input behaviour, information processing behaviour and information output behaviour.

Anitha (2005) found that around 41.25 per cent of the input dealers fit in to middle aged category, whereas 35.00 per cent of the respondents fit in to old aged category and remaining 23.75 per cent were young aged category. 30.00 per cent of input dealers had studied up to degree and 28.75 per cent had studied up to PUC and (10.00%) had technical education. However, a one and the same per cent of respondents (5.00% each) had studied up to middle school and agricultural graduation. None of them were illiterates and studied up to primary school. 41.25 per cent of input dealers had medium levels of experience followed by 32.50 per cent of input dealers had low level of experience. One fourth (26.25%) had high experience. more than one third (37.50%) of input dealers had high level of knowledge on agricultural input dealership, while, about one third (33.75%) had medium level of knowledge and remaining (28.75%) had low level of knowledge on agricultural input dealership.

III. OBJECTIVES OF THE STUDY

1. To understand the role of Agro Services Provider in farming and related activities
2. To study the Impact of Agro Services Providers' Qualification on the Growth in Production

IV. HYPOTHESES OF THE STUDY

$H_{0:}$ There is no significant Impact of Agro Services Providers' Qualification on the Growth in Production

$H_{1:}$ There is significant Impact of Agro Services Providers' Qualification on the Growth in Production

V. SCOPE OF THE STUDY

This research study provides the direction about, how Agro Services Providers' Qualification makes impact on Growth in Production as far as the farmers' perception is concerned. The study also throws light on the influence of Agro Services Providers' suggestion on vital decision about farming by farmers and ultimately on future prospectus of the same.

VI. RESEARCH METHODOLOGY

The study is based on critical evaluation and analysis of basically Primary Data. The primary sources include farmers. A study is undertaken in the sampled regions to see its impact for which a detailed questionnaire is prepared to collect relevant

information from the primary source for the guidance of the researchers. With the help of the questionnaire, detailed discussions were made with the certain sources of primary data to understand their views, thinking and attitude which would help to give the researchers useful recommendations, if any. The questionnaire is processed with the help of statistical tools like tabulations, grouping, percentages, averages, testing of hypothesis etc. As far as Agro Services Providers' Qualification is concerned, following of them are taken into consideration viz, under graduate, graduate, Post Graduate, Doctorate, Others etc whereas in case of Growth in Production, they were taken under the consideration as per farmers' perception.

Research Area

Researchers selected entrepreneurs from Nashik. Sample sizes of 100 farmers have been taken under study. Researcher collects data through Primary and Secondary sources. Researcher distributed 100 questionnaires among the respondents.

Limitations of the study

1. The study is based on limited geographical area.
2. Further variables could be added for the purposes of detail study.

VII. DATA ANALYSIS

Researcher prepared the questionnaire for respondents and distributed it among them. After receiving the questionnaire researcher analyse the questionnaire.

Table No 1 : Information of questionnaire

r.No	Respondent	Questionnaire distributed	Questionnaire received	Questionnaire rejected (due to incomplete, wrongly filled etc)	Net Sample size for study
1	Farmers	100	92	3	89

Testing of Hypothesis

$H_{0:}$ There is no significant Impact of Agro Services Providers' Qualification on the Growth in Production

H_1: There is significant Impact of Agro Services Providers' Qualification on the Growth in Production

Mathematically

SERVED FREQUENCIES	Significant Growth in Production					
	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree	TOTAL
Under Graduate	7	3	8	5	4	27
Graduate	1	5	4	2	2	14
Post Graduate	2	1	1	3	4	11
Doctorate	4	9	1	2	5	21
Others	3	2	9	1	1	16
TOTAL	17	20	23	13	16	89

Sr No	H_0	H_1	χ_cal	χ_table	p_value	Decision
1	**There is no significant Impact of Agro Services Providers' Qualification on the Growth in Production**	**There is significant Impact of Agro Services Providers' Qualification on the Growth in Production**	27.12	26.30	1.3370E-03	**Reject H_0 (i.e. There is significant Impact of Agro Services Providers' Qualification on the Growth in Production)**

*Here level of significance is 0.05

The Chi-square calculated value (27.12) is more than table value (26.30) at Degree of Freedom = 16.Thus, our null hypothesis, there is no significant Impact of Agro Services Providers' Qualification on the Growth in Production is rejected. Alternatively we accept our alternative hypothesis; there is significant Impact of Agro Services Providers' Qualification on the Growth in Production

VIII. CONCLUSION

The most vital factor about Impact of Agro Services Providers' Qualification on the Growth in Production were its relation as well as mutual respects between both of them The one more important issue is come out from this analysis in which farmers are feeling with current methodology, growth in production having very great potential as compared to today itself. Still it has several miles to go. The qualification and experience of Agro Services Providers' matters for profitable production in farm by giving best advisory service related to agro inputs to farmers. From the above analysis, we can conclude that, there is significant Impact of Agro Services Providers' Qualification on the Growth in Production.

REFERENCES

1. S. C. Gupta and V. K. Kapoor (2006). *Fundamentals of Mathematical Statistics*, Sultan Chand & Sons Educational Publishers, New Delhi

2. P.S. Shelake, N.J. Chikhale, A.N. Deshmukh and S.R. Bhosale (2015), Training Need Of Agricultural Input Dealers For Transfer Of Technology, *Agriculture Update*, Volume/Issue10(2), ISSN No.0976-6847,105-108

3. Sangamesh Ganiger, (2012), Knowledge, *Perception and Role Performance of Input Dealers in Agro Advisory Services in Northern Dry Zone of Karnataka*, M. Sc. (Ag.) Thesis, Acharya N.G. Ranga Agricultural University, Rajendranagar, Hyderabad, Andhra Pradesh

4. Leelavani Madem, (2011), *A Study on Communication Behaviour of Input Dealers In Guntur District Of Andhra Pradesh*, M. Sc. (Ag.) Thesis by Acharya N.G. Ranga Agricultural University, Hyderabad, India,

5. J. Sundar and Lalitha Ramakrishnan, (2015), A Study on Awareness, Purchase Benefits and Satisfaction Level Towards Crop Insurance by, *Pacific Business Review International*, Volume/Issue7,38-45

6. Kaushal Chandra Sharma, (2017), *A Study On The Entrepreneurial Behaviour Of Agri-Inputs Retailers In Bilaspur District Of Chhattisgarh*, M. Sc. (Ag.) Thesis, Department Of Agricultural Extension, College Of Agriculture, Faculty Of Agriculture, Indira Gandhi Krishi Vishwavidyalaya, Raipur (Chhattisgarh)

7. U. Kiran Kumar Reddy, P.V. Satya Gopal, V. Sailaja and S.V. Prasad (2019), Role of Agri-Input Dealers in Transfer of Technology, *International Journal of Current Microbiology and Applied Sciences*, Volume/Issue 8 (02), ISSN No. 2319-7706, 2383-2388

8. Parthasarathi Senapati (2014), A study of agricultural inputs marketing in India, *Indian Streams Research Journal*, Volume/Issue 4, ISSN No.2230-7850, 1-6

ISSN – 0976-2000 Chetana's Vol. XV Issue II : pp 18 - 28

Women Employee Engagement in Senior Colleges: Challenges and Strategies for Improvement

*** Dr. Pallavi Samir Yeolekar**

Abstract

Employee engagement is pivotal in the academic sector, particularly in senior colleges where the complexity of roles and institutional dynamics can impact employee satisfaction and productivity. This study investigates women employee engagement in senior colleges, aiming to identify key factors influencing their engagement levels. Employing a mixed-methods approach, the research integrates quantitative surveys with qualitative interviews to provide a comprehensive analysis of women's experiences in senior college environments. The study finds that women employees are significantly influenced by career advancement opportunities, work-life balance, institutional culture, and support for professional development. The study highlights the need for senior colleges to address these challenges by fostering an inclusive culture, implementing robust career development frameworks, and enhancing support systems tailored to the unique needs of women employees. The findings offer actionable recommendations for senior colleges to improve women's engagement, including enhancing mentorship opportunities, revising work-life balance policies, and promoting women into leadership positions. By adopting these strategies, senior colleges can create a more supportive and engaging environment, ultimately leading to greater employee satisfaction and institutional success. This research provides valuable insights for educational leaders and policymakers aiming to improve women employee engagement in senior colleges, contributing to a more equitable and productive academic workforce.

Keywords: *Employee Engagement, Women Employees, Work life Balance*

1. INTRODUCTION

Employee engagement in higher education refers to the level of enthusiasm, commitment, and involvement that staff and faculty members exhibit towards their work and the institution. Engagement is crucial in academic settings, where the quality of education, research output, and overall institutional success are closely linked to the effectiveness and satisfaction of employees. Engaged faculty members are more likely to be invested in their teaching, leading to higher-quality instruction, improved student learning experiences, and better academic outcomes. Engagement among academic staff often translates to greater support and mentorship for students, contributing to their academic and personal development. Engaged employees are more motivated to contribute to research and scholarly

* Assistant Professor, Commerce - Bhujbal Academy of Science & Commerce, MET Bhujbal Knowledge City, Nashik, Maharashtra, India, Email: pallavismalpani@gmail.com

activities, driving innovation and enhancing the institution's reputation and impact. High levels of engagement result in greater productivity and efficiency, helping institutions achieve their strategic goals and maintain high standards. Engaged employees are less likely to leave their positions, reducing turnover rates and the associated costs of recruiting and training new staff. Engagement is closely linked to job satisfaction, leading to a more positive work environment and higher morale among employees.

2. RESEARCH PROBLEM:

Women, particularly those with caregiving responsibilities, may struggle to balance work demands with personal and family responsibilities, impacting their engagement and job satisfaction.

Lack of flexible work options, such as remote work or flexible hours, can be a significant barrier for women trying to manage both professional and personal commitments.

Objectives:

→ To understand the level of engagement among female employees.
→ To identify factors affecting engagement.
→ To suggest strategies for enhancing engagement.

Significance:

Research on women employee engagement is crucial for several stakeholders in the academic and education sectors, including colleges, female employees, and the broader education sector.

Importance for Colleges

- **Enhanced Institutional Performance**: Engaged employees are more productive, which can lead to improved educational outcomes, better research outputs, and more effective administrative functions. This directly impacts the institution's reputation and success.
- **Retention and Recruitment**: Understanding and improving engagement helps colleges retain talented female faculty and staff and attract new talent. High engagement levels reduce turnover rates, which is essential for maintaining continuity and reducing recruitment costs.
- **Institutional Culture**: Research helps in identifying and addressing cultural and systemic issues within colleges. By fostering a supportive environment, institutions can enhance overall job satisfaction and create a more positive and inclusive workplace.
- **Compliance and Reputation**: Demonstrating commitment to gender equity and engagement can enhance the institution's reputation and ensure compliance with diversity and inclusion standards.

Importance for Female Employees

- **Career Development**: Research identifies barriers and opportunities for career advancement, helping female employees access better development resources, mentorship, and promotional pathways.
- **Work-Life Balance**: Insights from research can lead to more effective policies and practices that support work-life balance, thereby reducing stress and increasing job satisfaction.
- **Recognition and Fair Treatment**: Engaged female employees are more likely to receive recognition and fair treatment. Research helps in identifying gaps and ensuring that contributions are acknowledged and rewarded equitably.

- **Support and Resources**: Understanding engagement issues helps in creating better support systems tailored to the needs of female employees, such as professional development programs, flexible work arrangements, and mental health resources.

Importance for the Broader Education Sector

- **Equity and Inclusivity**: Research contributes to broader efforts to promote gender equity and inclusivity within the education sector. It helps to highlight systemic issues and encourages the adoption of best practices across institutions.
- **Policy Development**: Findings from research can inform policy development at institutional, regional, and national levels, leading to more effective strategies for supporting women in academia and other educational roles.
- **Sector-Wide Impact**: Improving engagement among female employees can have a ripple effect, enhancing the overall quality of education and research across the sector. When female employees are engaged, they are more likely to contribute to innovative practices and improvements in teaching and learning.
- **Addressing Workforce Challenges**: The education sector faces challenges related to workforce diversity, retention, and productivity. Research into women's engagement provides valuable insights for addressing these challenges and promoting a more equitable and effective workforce.

3. LITERATURE REVIEW

One of the most influential studies on engagement was conducted by Kahn (1990). Conceptually, Kahn built upon Goffman's (1961) work, which suggested that "people's attachment and detachment to their role varies" (Kahn, 1990, p. 694). However, Kahn argued that Goffman's focus was on brief face-to-face encounters, whereas a different concept was required for organizational life, which is "ongoing, emotionally charged, and psychologically complex" (Diamond and Allcorn, 1985).

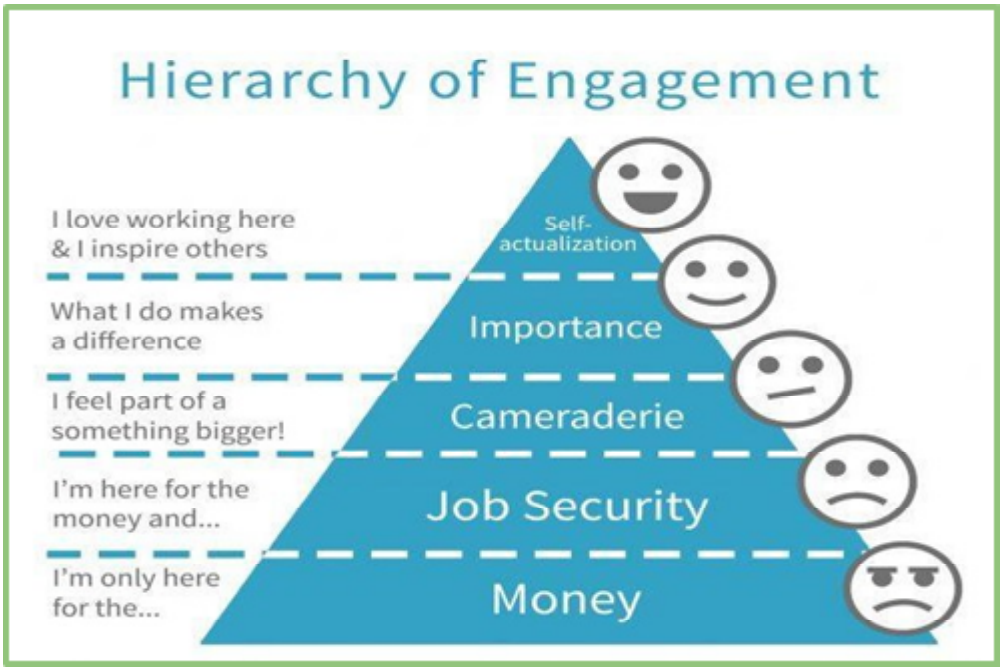
Other studies have demonstrated clear connections between work life and individual health (Crabtree, 2005). The significance of wellbeing is further emphasized by researchers at Towers Perrin (2003), who found that senior management's interest in employee wellbeing is the most important driver of engagement. Additionally, Moore (2004) discusses the delicate balance between work, family, and personal relationships.

Saks (2006) argues that organizational commitment differs from engagement in that it refers to an individual's attitude and attachment towards their organization, whereas engagement involves more than just an attitude; it is the extent to which an individual is attentive to their work and fully absorbed in their role.

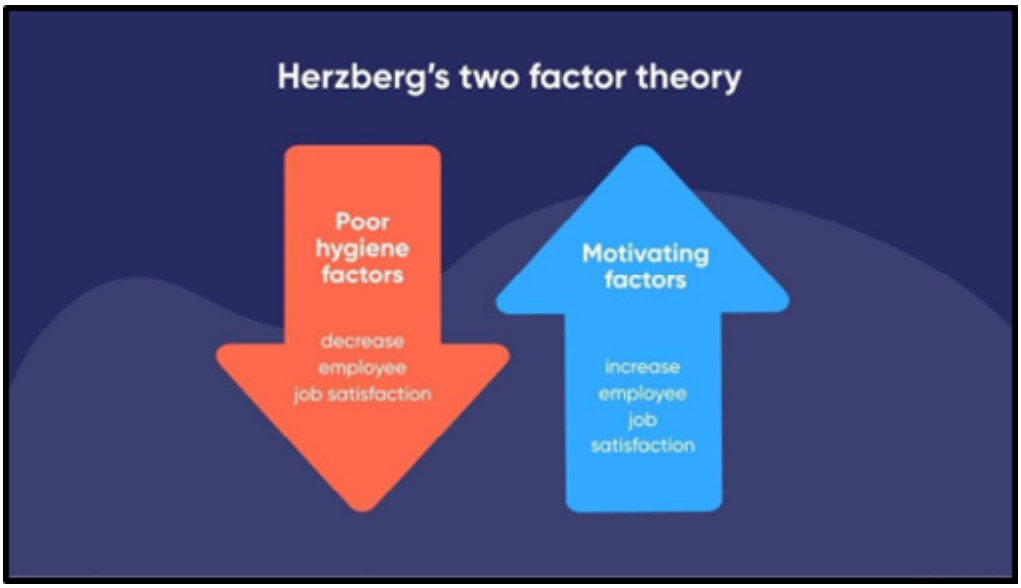
4. THEORETICAL FRAMEWORK

Maslow's theory of employee engagement posits that fulfilling each of the five basic human needs physiological, safety, love and belonging, esteem and self-actualization leads to higher employee engagement and motivation. The Maslow model lists human necessities in a hierarchical pyramid.

The two-factor theory (also known as Herzberg's motivation-hygiene theory and dual-factor theory) states that there are certain factors in the workplace that cause job satisfaction while a separate set of factors cause dissatisfaction, all of which act independently of each other. It was developed by psychologist Frederick Herzberg.



(Source: https://www.engagementmultiplier.com/resources/applying-maslows-hierarchy- needs-engagement-growth/)



(Source: https://www.bluedonkey.co.uk/herzberg-two-factor-theory-lead-generation/)

5. RESEARCH METHODOLOGY

Existing research might not fully assess the effectiveness of flexible work policies and work-life balance initiatives specific to senior colleges. Studies could explore how these policies are implemented, utilized, and perceived by female employees. More research is needed on the unique work-life challenges faced by women in senior

academic roles, including how these challenges vary by discipline or institutional type.

6. RESEARCH DESIGN

Table 1 : Table of Research Design

Sr. No.	Particulars	Particulars
1	Type of Research	Descriptive Research
2	Research Universe	Nasik City
3	Primary Data Collection Method	Questionnaire (Google Forms)
4	Secondary Data Collection Method	Internet, Website, Publication
5	Sample Unit	Women Employees
6	Sample Size	58
7	Sampling Method	Simple Random Sampling
8	Statistical Tools	Percentage, Tables

7. DATA ANALYSIS AND INTERPRETATION

Table 2 : Demographic Profile of Respondents

Variables	Descriptions	Frequency	Percentage
Role at the College	Faculty	47	81
	Administrative Staff	08	14
	Support Staff	03	05
	Other	00	00
	Total	58	100
Experience	Less than a year	07	12
	1 - 3 years	02	03
	4 - 6 years	22	38
	More than 6 years	27	47
	Total	58	100
Education	Bachelor's Degree	08	14
	Masters Degree	41	71
	Doctorate or higher	06	10
	Other	03	05
	Total	58	100
Status	Full-Time	55	95
	Part - Time	03	05
	Total	58	100

Graph 2 : Demographic Profile of Respondents

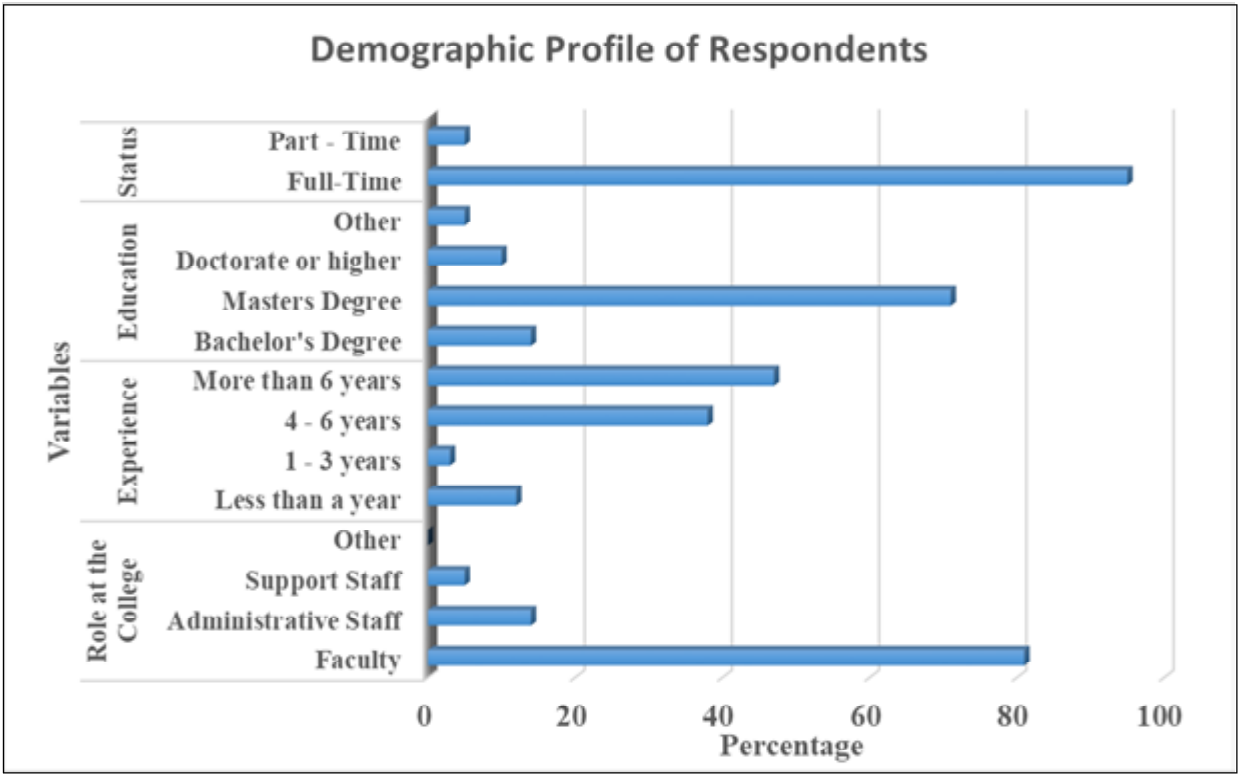


Table 3 : Workplace Environment of Respondents

Variables	Descriptions	Frequency	Percentage
Satisfaction level	Very Satisfied	07	12
	Satisfied	46	79
	Neutral	03	05
	Dissatisfied	02	04
	Very Dissatisfied	00	00
	Total	58	100
Respect and Recognition	Excellent	05	09
	Good	47	81
	Fair	06	10
	Poor	00	00
	Very Poor	00	00
	Total	58	100
Support in Work life Balance	strongly Agree	06	10
	Agree	13	22
	Neutral	27	47
	Disagree	12	21
	Strongly Disagree	00	00
	Total	58	100

Graph No. : 3
Workplace Environment of Respondents

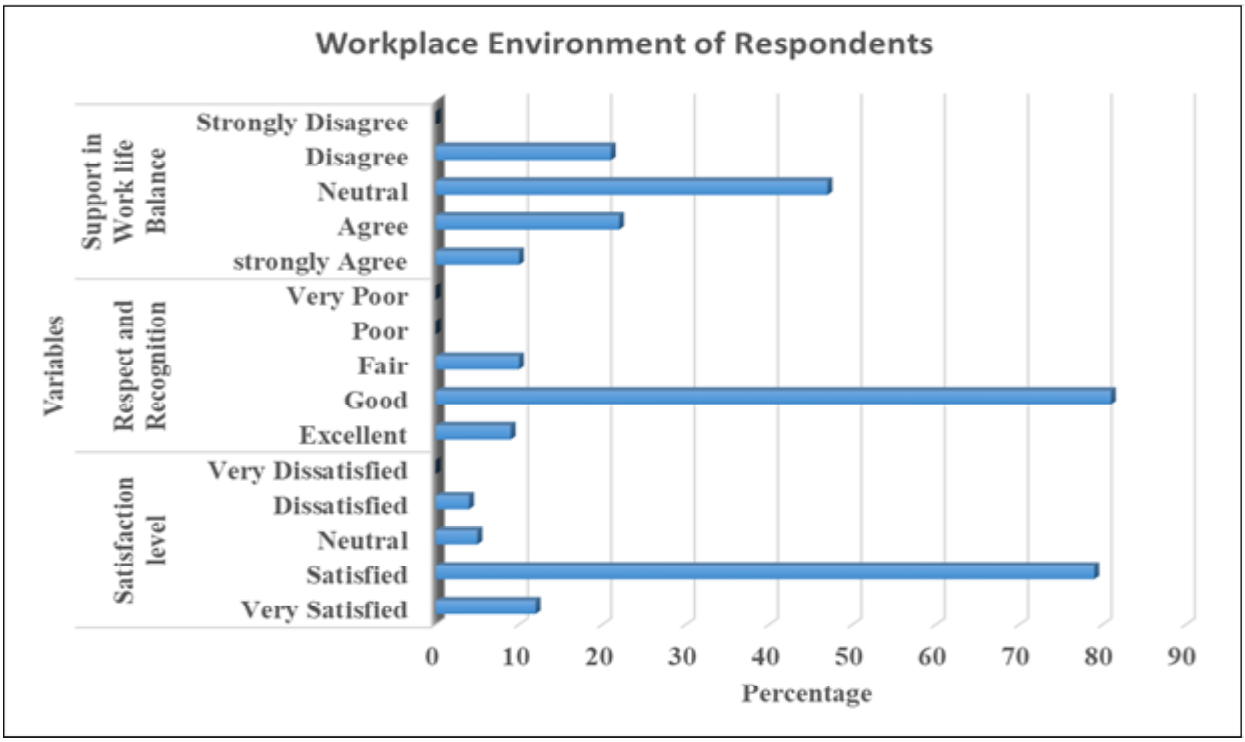


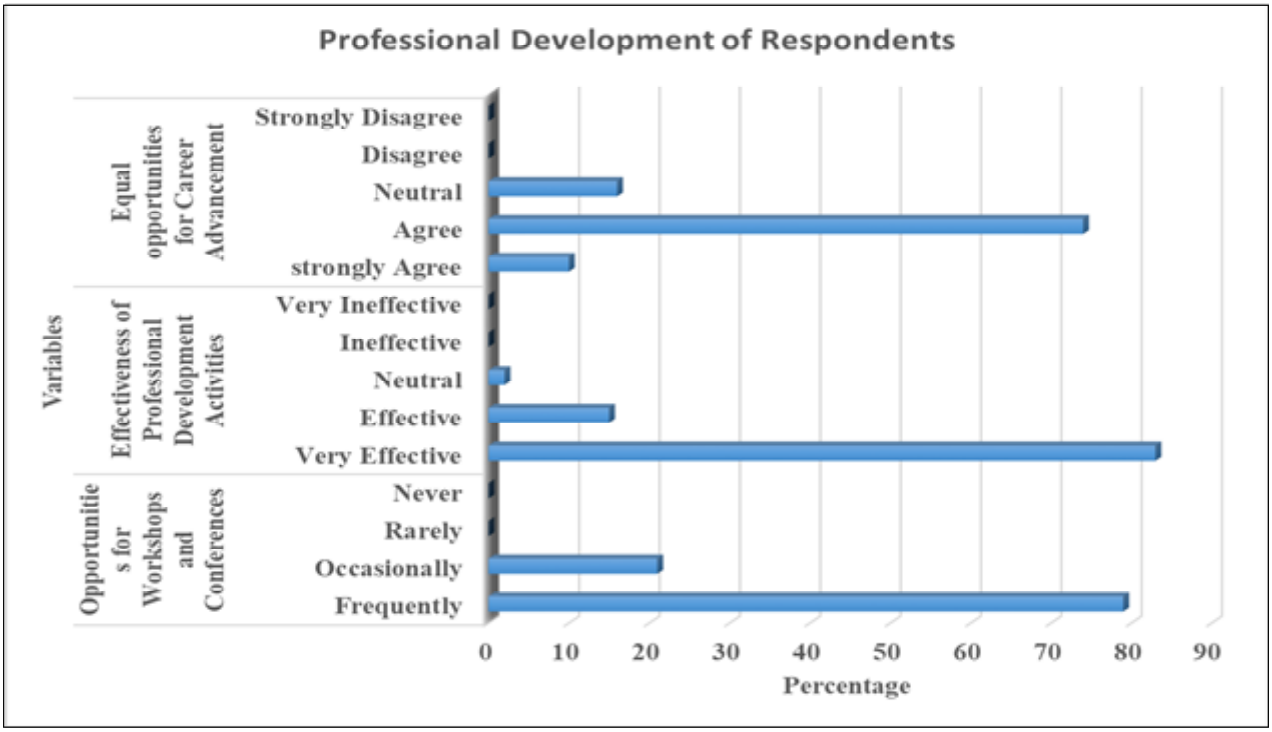
Table No. : 4
Professional Development of Respondents

Variables	Descriptions	Frequency	Percentage
Opportunities for Workshops and Conferences	Frequently	46	79
	Occasionally	12	21
	Rarely	00	00
	Never	00	00
	Total	58	100
Effectiveness of Professional Development Activities	Very Effective	48	83
	Effective	09	15
	Neutral	01	02
	Ineffective	00	00
	Very Ineffective	00	00
	Total	58	100
Equal opportunities for Career Advancement	Strongly Agree	06	10
	Agree	43	74
	Neutral	09	16
	Disagree	00	00
	Strongly Disagree	00	00
	Total	58	100

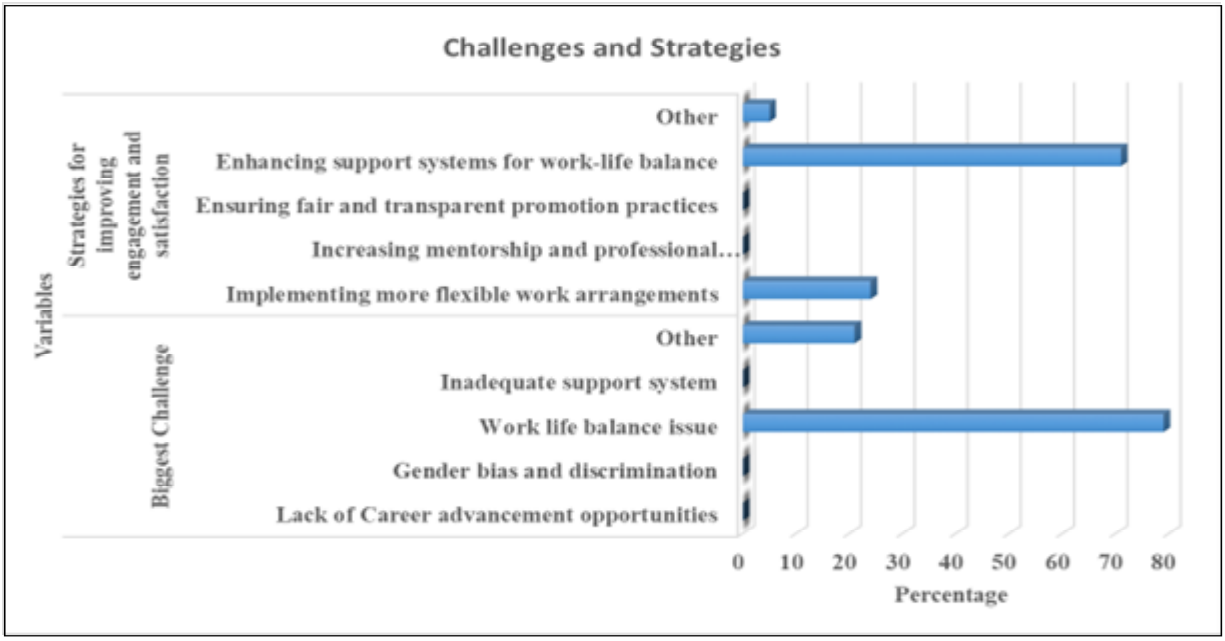
Table No. : 5 Challenges and Strategies

Variables	Descriptions	Frequency	Percentage
Biggest Challenge	Lack of Career advancement opportunities	00	00
	Gender bias and discrimination	00	00
	Work life balance issue	46	79
	Inadequate support system	00	00
	Other	12	21
	Total	58	100
Strategies for improving	Implementing more flexible work arrangements	14	24
Engagement and satisfaction	Increasing mentorship and professional development programs	00	00
	Ensuring fair and transparent promotion practices	00	00
	Enhancing support systems for work-life balance	41	71
	Other	03	05
	Total	58	100

Graph No. : 4
Professional Development of Respondents



Graph No. : 5 Challenges and Strategies



7. RESULTS & OBSERVATIONS

- **Enhanced Institutional Performance:** Women employee engagement leads to higher productivity, improved retention rates, and a more positive institutional culture within senior colleges.
- **Career Advancement Support:** Engagement strategies provide essential support for women employees, enabling career growth, better work-life balance, and equitable recognition within the institution.
- **Policy and Equity Advancements:** Engaged women employees contribute to shaping policies that promote gender equity, thereby advancing the quality of education and research in the college.
- **Increased Organizational Commitment:** Female employees are more likely to be committed to their roles and the institution when their specific needs are acknowledged and addressed through engagement strategies.
- **Positive Impact on Educational Quality:** The overall quality of education and research is enhanced as engaged women employees are more motivated, leading to better academic outcomes.
- **Effectiveness of Flexible Work Options:** Introducing flexible work arrangements and support systems, such as childcare and wellness programs, significantly improves the engagement and satisfaction of women employees in senior colleges.

8. CONCLUSION

By focusing on women employee engagement, colleges can create a more supportive and effective environment that benefits all stakeholders, ultimately leading to a more equitable and successful educational landscape.

Questionnaire: Women Employee Engagement

in Senior Colleges

Section 1: Demographic Information

1. **What is your current role at the college?**
   - Faculty
   - Administrative Staff
   - Support Staff
   - Other (please specify):

2. **How long have you been employed at the college?**
   - Less than 1 year
   - 1-3 years
   - 4-6 years
   - More than 6 years

3. **What is your highest level of education?**
   - Bachelor's Degree
   - Master's Degree
   - Doctorate or higher
   - Other (please specify):

4. **What is your full-time/part-time status?**
   - Full-time
   - Part-time

Section 2: Workplace Environment

5. **How satisfied are you with the overall work environment at the college?**
   - Very Satisfied
   - Satisfied
   - Neutral
   - Dissatisfied
   - Very Dissatisfied

6. **How would you rate the level of respect and recognition you receive from your colleagues and supervisors?**
   - Excellent
   - Good
   - Fair
   - Poor
   - Very Poor

7. **Do you feel that the college supports a work-life balance?**
   - Strongly Agree
   - Agree
   - Neutral
   - Disagree
   - Strongly Disagree

Section 3: Professional Development

8. **How often are you provided with opportunities for professional development (e.g., workshops, conferences)?**
   - Frequently
   - Occasionally
   - Rarely
   - Never

9. **How effective do you find these professional development opportunities in enhancing your skills and career growth?**
   - Very Effective
   - Effective
   - Neutral
   - Ineffective
   - Very Ineffective

10. **Do you feel there are equal opportunities for career advancement for women at the college?**
    - Strongly Agree
    - Agree
    - Neutral
    - Disagree
    - Strongly Disagree

Section 4: Support Systems

11. **How satisfied are you with the support you receive from the college's leadership in**

addressing gender-specific issues?

- Very Satisfied
- Satisfied
- Neutral
- Dissatisfied
- Very Dissatisfied

12. **Are there adequate mentoring and networking opportunities available for women employees?**
    - Yes
    - No
    - Not Sure

13. **How effective is the college's policy on harassment and discrimination in creating a safe working environment?**
    - Very Effective
    - Effective
    - Neutral
    - Ineffective
    - Very Ineffective

Section 5: Challenges and Strategies

14. **What do you perceive as the biggest challenge for women employees in senior colleges?**

    Lack of career advancement opportunities Gender bias and discrimination

    Work-life balance issues Inadequate support systems

    Other (please specify):

15. **What strategies do you think could improve engagement and satisfaction for** women employees?

    Implementing more flexible work arrangements

    Increasing mentorship and professional development programs Ensuring fair and transparent promotion practices

    Enhancing support systems for work-life balance Other (please specify):

16. **What additional comments or suggestions do you have for improving women employee engagement in senior colleges?**

ISSN – 0976-2000 Chetana's Vol. XV Issue II : pp 29 - 41

Adoption of Digital Health Services: A systematic review of literature

*** Mr. Nikesh Kurhade[1] and Dr. Nirmala Joshi[2]**

Abstract

In the post-COVID era, digital health was seen to be a great solution for the various needs of the healthcare system to serve multiple stakeholders in healthcare. The purpose of this research is to provide a systematic literature analysis of the past literature about digital health services to discover the major trends, theories, and drivers. A search was run in several databases to collect the latest and most highly cited research papers on digital healthcare from the time up to 2022. A search strategy using pertinent words was used to identify pertinent studies. The year of publication, keywords, tested theories, and factors that influence the adoption of digital health services were analyzed.

The study included 61 publications out of 114 results. Results were analyzed and showed significant regional variations, including China topping the research output and mobile health (mHealth) having a strong focus. Most utilized to predict technology adoption were the Technology Acceptance Model (TAM) and the Unified Theory of Acceptance and Use of Technology (UTAUT). The study stresses the need for a greater global perspective on digital health with an emphasis on understudied areas like information communication technology for health, fitness apps, and wearables.

Keywords: *Digital Health, m-health, systematic review*

I. INTRODUCTION

Digital technology in the COVID era has altered several industries, including banking, retail, investing, etc. For the healthcare sector, digital health holds out a great deal of promise due to its versatility. Its possibilities are growing because of big data, wireless technology, and other cutting-edge methods. India needs a new method of delivering healthcare due to the growing patient load that is scattered throughout urban and rural areas with limited resources. Digital transformation has changed how care is handled and delivered, causing a paradigm shift in healthcare. The development of mobile applications for elderly healthcare has gained more prominence due to the increase in the aging population (Jana & Paré, 2020). Health information technologies are perceived as useful and require low effort commitment for delivering healthcare services. However, technology anxiety may affect adoption by seniors (Kavandi & Jaana, 2020).

1. Research Scholar, MET Institute of Management, Mumbai, Email: nikesh.kurhade85@gmail.com
2. Head Research and MET SEVA I at MET Institute of Management, Mumbai, Email: nirmalaj_om@met.edu

Healthcare practitioners in tertiary healthcare hospitals in metropolitan cities use information technology for various purposes, including research work and data analysis. However, the extent of information technology (IT) usage for maintaining electronic patient records is low (Bansode Gokhe et al., 2020). Also, information communication technology (ICT) tools are filling the gaps and ensuring educational continuity in medical education, collaboration, and learning across the world in the current scenario (Chatterjee & Chakraborty, 2021). The highest penetration rate of mobile phone adoption has opened an excellent business opportunity for healthcare providers to provide their healthcare services at affordable, equitable, quality, and accessible services (Alam et al., 2020). There is a need for digital innovation in the healthcare system to reduce the burden of repetitive paperwork for patients.

Adoption of digital health services is a complex issue, and there are variations in the factors affecting the adoption across countries. Also, people's opinions about the importance of health are less likely to be appreciated, which means that people may consider health as optional and work more with perception than intention (Pai & Alathur, 2019). Various studies highlighted the importance of considering various factors such as performance expectancy, effort expectancy, social influence, perceived health threat, life quality expectancy, security and privacy risks, and resistance to change while designing and implementing digital health services (Alaiad et al., 2019). Additionally, consumers' health beliefs, health information accuracy, and privacy protection significantly influence the perceived usefulness of wearable healthcare technology, which in turn drives adoption intention (Cheung et al., 2019). Trust in m-health is influenced by system quality, a disposition to trust, and disposition to risk. Trust also has a significant impact on the adoption of m-health through perceived privacy concern and perceived benefit (Resti Fitriani et al., 2020). Continuance intentions of individuals to use mobile apps are directly and meaningfully influenced by their satisfaction and performance expectancy of usage of mobile apps (Tam et al., 2020).

Digital transformation of the healthcare industry is still in its early stages, and there is a need for more research and innovation in this area. The aim of this research is to systematically analyze past literature related to the adoption of digital health services.

II. RESEARCH QUESTIONS

The objective of this research work is to conduct a systematic literature analysis of past research papers on digital health services for understanding key trends, theories, and factors for adoption. The analysis is guided by the following research questions:

- **RQ1:** How are the research papers distributed on digital health adoption from 2009 to 2022?
- **RQ2:** What is the countrywide distribution of research papers?
- **RQ3:** What is the subcategory-level research publication distribution in digital health services?
- **RQ4:** Which theories are mentioned in the literature for the adoption of digital health services?
- **RQ5:** Which different profiles have been studied in past literature?
- **RQ6:** Which moderate variables have been studied in the past that impact the adoption of digital health services?

III. LITERATURE SEARCH APPROACH

The research strategy was based on the PRISMA framework (Moher et al., 2009), ensuring a systematic and transparent approach. The search was conducted using Google Scholar and SCOPUS, recognized for their comprehensive information on digital health initiatives. Keywords such as "adoption of digital health" and "adoption of mobile health OR m-health " were used to identify relevant studies.

The process involved initial screenings of titles and abstracts, followed by full-text reviews to determine eligibility. A total of 61 secondary sources were selected and included in the review, deemed relevant and authentic for investigating digital health strategies. These studies provided comprehensive information on the adoption of digital health strategies in developing countries and their impact on healthcare quality and lifestyle.

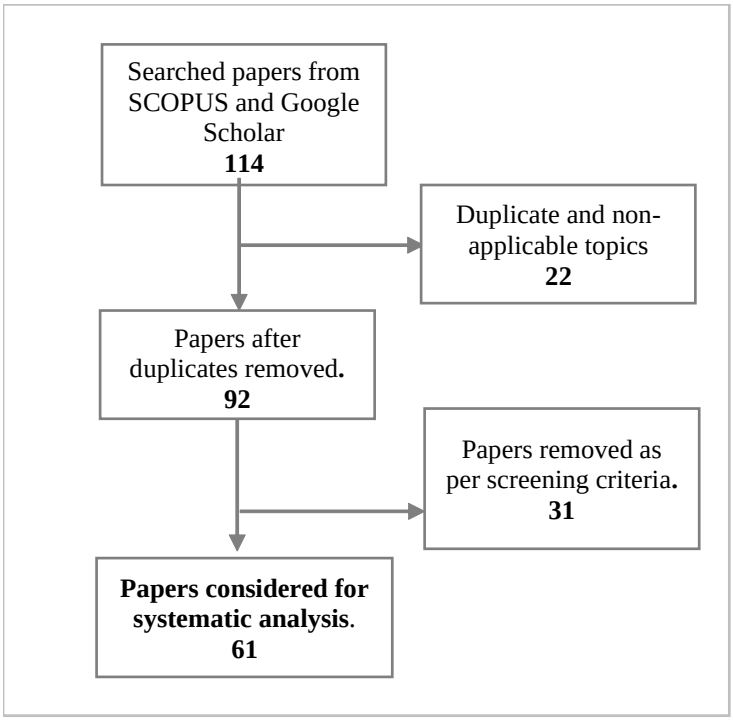


Figure. 1. Flowchart of the Search Strategy.

IV. FINDINGS

This section explains several existing primary literatures concerning digital health from a scholarly perspective. The analysis included the date of publication, theories and methods used the identified significant factors, and the limitations and findings of the digital health applications research.

a. Publication year analysis: Maximum studies were published in 2015 onwards. This is in line with the penetration of the internet, smartphone usage and technology usage in healthcare.

The analysis of the data on the number of research papers on the digital health service adoption during the period from 2009 to 2022 indicates several trends. First, there was a gradual increase in productivity from 2009 to 2015, of which the most productive year was 2015. After this relative peak,

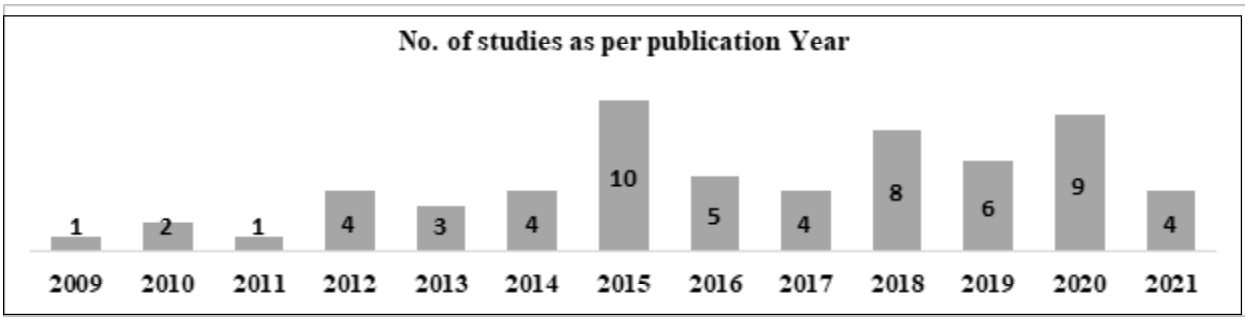


Figure 2. Publication data analysis

the number of studies oscillated, and there was a decline in 2016, although they rose again in the subsequent years. Such variations in funding can be expected due to changes in funding strategies and changes in the focus of the research activities (Brown & Taylor, 2013). The COVID-19 outbreak forced people to rely on technology to deliver and maintain healthcare services, thus increasing the interest in the impact and feasibility of virtual healthcare approaches (Smith et al., 2020). This period underlines the importance of access to digital health services for managing crises and stresses the need for further research on how to successfully incorporate and integrate such services into primary care practices.

b. Country-wise publications: Countrywide publications were analysed to understand the global publication trend as given in figure 3.

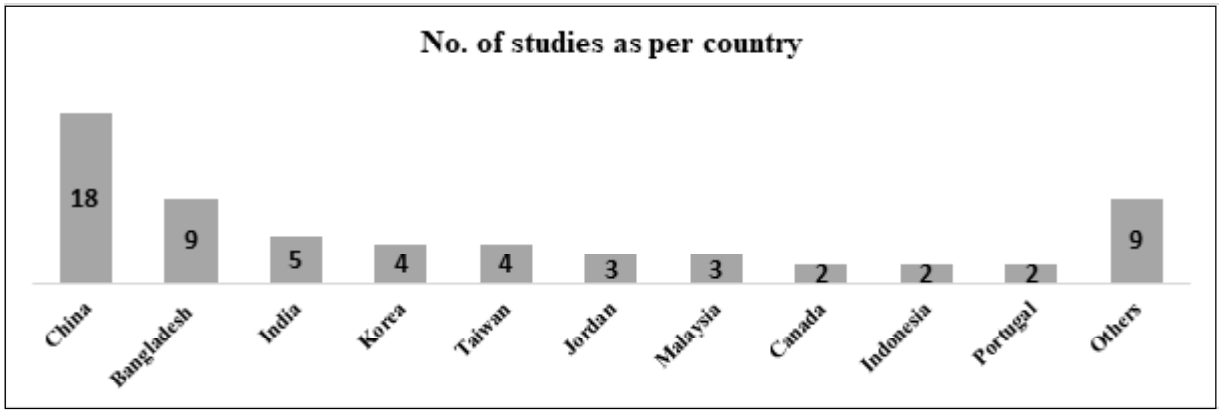


Figure 3. Country-wise analysis

The number of studies on the adoption of digital health services by different countries is shown to exhibit large regional variations. China comes in with 18 studies, with strong levels of interest and investment in developing digital health technologies. This large number of studies is due to China's fast technological developments and government efforts to modernize the country's healthcare (Zhang et al., 2018). While there are more, Bangladesh and India have 9 and 5 studies, respectively, which show growing but less robust focus on digital health. It could be because of the different measures of technological infrastructure available and the level of healthcare concern within these countries (Ahmed et al., 2019). The data also shows that several countries, such as Korea, Taiwan, Jordan, Malaysia,

Canada, Indonesia, and Portugal, have relatively lower numbers of studies, ranging between 2 and 4. This implies that though there is interest in digital health services, there is little or no research output in these regions. These lower numbers may be due to factors such as limited funding, different healthcare needs, and different levels of digital infrastructure (Kim et al., 2017). Of the 9 studies included in the 'Other' category, the evidence was taken from a diverse range of countries but in generally smaller numbers. This disparity in the extent of studies across countries emphasizes the importance of a more globally balanced approach to the digital health workforce.

c. Digital Health Services: Publications as per digital health service type were analysed to understand development across different technologies as given in figure 4.

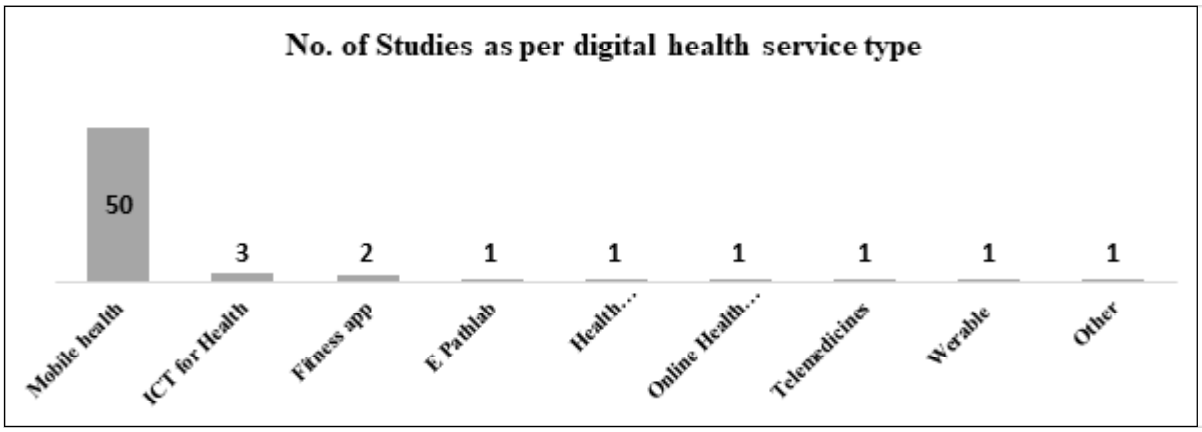


Figure 4. Digital health service type analysis

Bar graph analysis of published studies on different digital health services reveals a strong preference towards mobile health (m-Health) and suggests that both the direction of current research and potential new areas of exploration are to be found. The focus of research between these two extremes spectacularly contrasts with the dynamic nature of digital health adoption and its impact on healthcare delivery. With 50 studies, mobile health is the preeminent research area, indicating significant interest and commitment to understanding and exploiting mobile technologies for healthcare applications. This focus is aligned with broader market trends, including the growing mobile device penetration along with the versatility of mobile devices as health service delivery platforms. Given the widespread recognition of mobile health technologies with the advantage of being able to collect real-time data, engage patients, and be accessible, there is also recognition as to their failings. For example, Free et al. (2013) performed a systematic review of the effectiveness of mobile health interventions about health outcomes for various ailments. The m-health arena holds so much potential as it could revolutionize the way healthcare patients are provided with by maximizing access, reducing costs, and improving patient. However, other categories, such as ICT for health (3 studies), fitness apps (2 studies) and single study categories (E Pathlab, Health information systems, Online health communities, Telemedicine, Wearables, other) indicate a gap in research attention. This asymmetry demonstrates possible unexploited chances to improve healthcare by means of novel technologies that do

not include experience gained from similar healthcare IT demonstrations. As an example, Health information systems that are essential for efficient data management and making decisions are relatively understudied (Adler-Milstein, Jha, 2017). Just like Wearables, which are used more and more to monitor personal health, the limited focus on wearables looks to warrant more investigation of their efficacy and integration into health care systems (Piwek et al., 2016).

d. Theories tested in the Past: Various theories tested in the past were analysed.

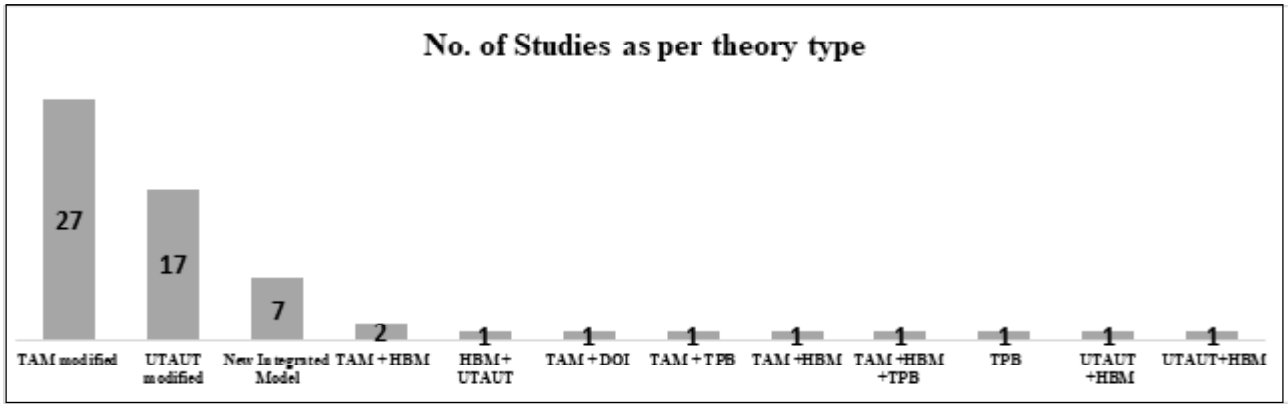


Figure 5. Theories tested in the past

Analysis of published studies on theoretical frameworks used in digital health research indicates that the predominant framework used and observed in adapted form is the Technology Acceptance Model (TAM) and the Unified Theory of Acceptance and Use of Technology (UTAUT). In this respect, the frameworks' focus emphasizes their flexibility and utility in enabling understanding of digital health adoption but also presents future opportunities for more integrative and rich theoretical perspectives. The modified Technology Acceptance Model (TAM) was dominant. With 27 studies, the modified Technology Acceptance Model (TAM) comes out on top and proves its resilience among a variety of digital health contexts. Perceived usefulness and ease of use of TAM provide a solid model for predicting technology adoption, becoming a cornerstone model in digital health research. This consistency with Davis (1989) seminal work in establishing the TAM model as a foundational framework for studying technology acceptance across diverse domains is consistent with the prevalence. The model is also shown to be adaptable for separate contexts, including the adaptation of specific counterpoints for use with digital health technologies (Holden & Karsh, 2010). 'TAM' has been used as a vehicle of research to explore the determinants of acceptance of the electronic health records, mobile health applications, and tele-medicine. The modified Unified Theory of Acceptance and Use of Technology (UTAUT) promoted. In line with 17 studies, the modified UTAUT framework is close to following, and its popularity is evident in digital health research. UTAUT, with its multidimensions such as performance expectancy, effort expectancy, social influence, and facilitating conditions, has proven to be a valuable tool to study technology adoption (Venkatesh et al., 2003). Its flexibility of modification makes it possible to tailor the model to relevant digital health

situations, suggesting its relevance and applicability. UTAUT was used in studies for the adoption of mobile health technologies and telemedicine, confirming UTAUT as a valid instrument to understand the structured and informal part of the technology adoption (Venkatesh et al., 2012).

Each of these combines TAM with other models, such as the Health Belief Model with two studies, or with UTAUT, Diffusion of Innovation, and Theory of Planned Behavior, all with one study, imply a growing interest in multi-theoretical approaches. These combinations create synergistic combinations to harness the strengths of each model to gain insight into the complex process of adoption of digital health. For instance, putting together TAM and HBM gives researchers the ability to combine health related beliefs with technology acceptance factors, enhancing the research insight regarding digital health behaviours (Gordon and Hargraves, 1991). Increasingly, such integrative approaches are being viewed for the potential to provide nuanced insights yielded by considering multiple technology acceptance dimensions (Venkatesh et al., 2016).

e. Target Population: Target group profiles were analysed from the past literature

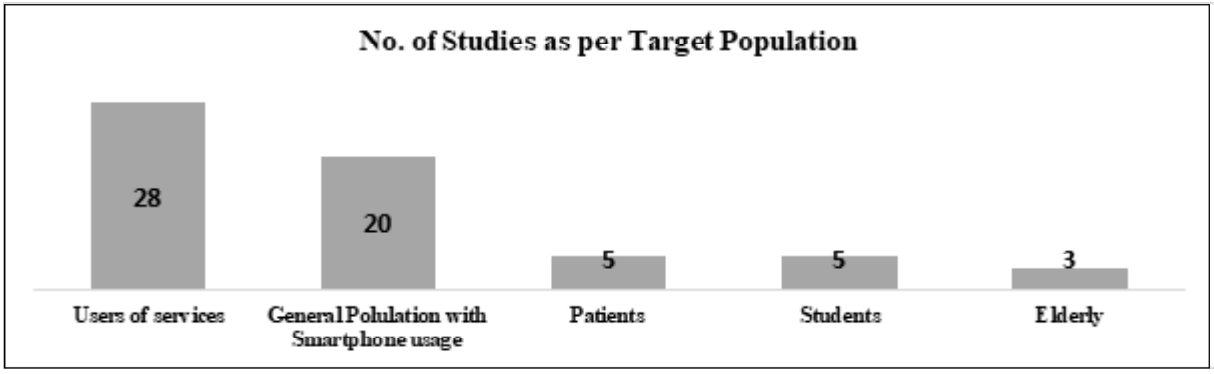


Figure 6. Target Population Analysis

The data on the adoption of digital health services grouped by target respondents clearly shows that 28 studies are focused on users of services. This emphasis points to an intense interest in wanting to understand what the experiences and needs of those that actively use digital health services are. Research in this area is often examining user satisfaction, barriers to adoption, and the effects of digital health interventions on service utilization (Smith et al. 2020). The second biggest category, general population, with smartphone performance, has 20 studies. The development of digital and mobile health services has increased remarkably, and so has the prevalence of smartphone use, and this focus responds to both. This area of research often studies the feasibility and efficacy of mobile health (m-Health) applications and the factors affecting users' engagement with mobile health tools (Jones & Smith, 2014). This interest in this group points to the potential of smartphones as a delivery platform for health interventions to a large audience and helps public health outcomes. The lack of studies in these categories, however, indicates a need for more research to ensure that digital health services are available to and work well for a variety of population groups.

f. Factor Tested: Various factors tested in past publications were analysed.

Table 1: No. of studies as per various factors tested in past studies

Factors Tested	No. of Studies
Perceived Usefulness	52
Perceived Ease of Use	46
Social Influence	22
Facilitating conditions	19
Health Habit/ Belief	16
Price Value	16
Self-Efficacy	14
Privacy / Security	13
Social Norms	12
Trust	10
Attitude	8

Data on the tested factors from relevant studies regarding digital health services adoption segmentation exhibited a dominance of 'perceived usefulness' and 'perceived ease of use' (52 and 46 studies, respectively). These findings are consistent with the Technology Acceptance Model (TAM), depicting that 'perceived usefulness' and 'perceived ease of use' are the major determinants of the adoption of technology (Davis, 1989). 22 and 19 studies address social influence and facilitating conditions. However, for all these factors, the studies are less intensive: health habit/belief, price value, self-efficacy, privacy/security, social norms, trust, and attitude. Adoption can be related to individuals' characteristics and behaviors regarding health habit/belief and self-efficacy and economic and security concerns such as price value and privacy/security (Ajzen, 1991). Social and inter-personal factors, such as social norms, trust and overall disposition towards digital health services represented by attitude, highlight the role that factors unique to society.

g. **Moderating Variables:** Various moderating variables were analysed.

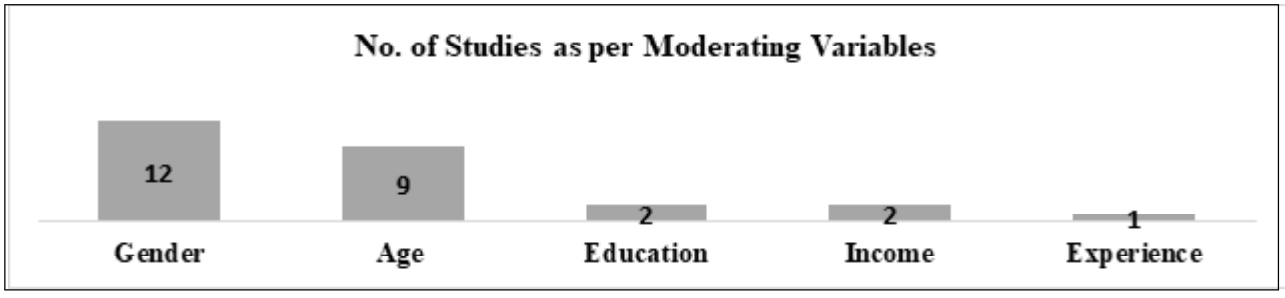


Figure 7. Moderating variables

Twelve studies on data concerning moderating variables in digital health adoption studies are focused on gender. This indicates that the researchers realize that the ways men and women see and connect with digital health technologies may differ. Social influence, ease of use, and

perceived usefulness are crucial to adoption, as they are gender differentiated (Venkatesh and Morris, 2000). The large number of gender studies indicates dedication to this specific understanding and optimization of digital health interventions for men and women. 9 studies are also another important variable, this time of the moderating variable of age. Both levels of technological literacy and health needs may vary by age, and age can have a strong impact on digital health service adoption (Czaja et al., 2006). This focus on age brings the attention to the fact that researchers are also looking into how digital health technologies can be, by and large, designed and implemented to address the diversity in age demographics. This is important for digital health services to be usable and useful to all age groups from younger populations to the elderly. What is less researched on education, experience, income, and other moderating variables is that these variables have been given less attention in the studies of digital health adoption. Adoption of digital health services can be influenced by education and income, but education and income thereby affect the access to technology or the affordability of digital health solutions (van Deursen & van Dijk, 2019).

V. DISCUSSION

Publication dates analysis shows that research on digital health service adoption increased substantially in 2015 and onwards. This mirrors broader uptake of internet usage and the use of smartphones as well as increasing digitalization in healthcare. The high of 10 studies in 2015, for instance, may place us in the early innings of the digital health technology adoption, supported by technological advances and early policy rollouts (Jones & Smith, 2014). Of particular interest is the large increase in research output in 2020 (9 studies), a spike due to the COVID-19 pandemic and the need for quick uptake of digital health services for continued care (Smith et al., 2020).With 18 studies, China has not only a strong interest but also a strong investment in digital health technologies. Such a large number of studies can be traced back to China's swift technological advancements and the country's efforts to modernize its healthcare system (Zhang et al., 2018). Such differences in levels of technological infrastructure and healthcare priorities in these countries (Ahmed et al. 2019) can also be attributed to the reason. Published studies on various digital health services were analysed and 50 out of 61 studies reported on mobile health (m-health). This dominance shows high interest and assiduity in understanding and exploiting mobile components for healthcare purposes. Such asymmetry speaks of unexploited opportunities to raise healthcare using novel technologies devoid of previous experience from similar healthcare information technology (IT) demonstrations. Like wearables, which are more and more used for monitoring personal health, their efficacy and integration into healthcare systems need to be researched more (Piwek et al., 2016).

The Technology Acceptance Model (TAM) and its variants are the most predominant frameworks used in digital health research, with 27 studies. By focusing on perceived usefulness and ease of use, the modified TAM remains a good model for predicting technology adoption as a cornerstone model in digital health research (Davis, 1989; Holden & Karsh, 2010). The growing interest in multi-theoretical approaches that combine TAM with the Health Belief Model (HBM), UTAUT, the Diffusion of Innovation, and Theory of Planned Behaviour (TPB), it is apparent the complexity of digital health adoption processes is being recognized further. These combinations allow these synergistic insights to surface from the strengths of each model in order to gain a more finely tuned understanding

of digital health behavior (Gordon & Hargraves, 1991; Venkatesh et al., 2016). However, there is more work to be done refining these combinations and developing our understanding of the behaviors associated with digital health, and the effective implementation of digital health technologies.

In terms of data on the adoption of digital health services by target respondents, there is a lot of emphasis on users of services, with 28 studies. By emphasizing this, it seems as though there is a real interest in understanding the people who work with digital health services. Research in this area frequently considered user satisfaction, barriers to adoption, and the impact of digital health interventions on service utilization (Smith et al., 2020). More research is needed to ensure that digital health services are available and effective for the widest range of population groups, particularly the lower numbers of studies in these categories.

Consistent with the Technology Acceptance Model (TAM), which attributes the adoption of technology to the primary determinants of 'perceived usefulness' and 'perceived ease of use' (Davis, 1989), these findings support. Finally, 22 and 19 studies indicate awareness of social and environmental contexts that may foster or hinder one's adoption of digital health services (Venkatesh & Davis, 2000). The lower number of studies for these factors implies that there is a lot more to explore as to what factors impact the adoption of digital health services. To gain a more comprehensive understanding of what drives the adoption of digital health technologies, future research should attempt to help fill these gaps.

VI. LIMITATIONS

There are limitations in analysing research on the adoption of digital health services. The first is the swift increase in the number of studies over the years from 2015 onwards, thanks to technological advancements and the COVID-19 pandemic, with little to no longitudinal data to support this research, which impedes our understanding of the long-term effects and sustainability of digital health interventions (Smith et al., 2020). Second, the regional disparity of research output among China, Bangladesh, and other countries such as India remains with the relatively smaller number of India and Bangladesh research being a supplement of China research, which highlights the need for more diverse and inclusive research to reach global applicability and resolve local issues (Ahmed et al., 2019; Zhang et al., 2018). The third point is that although the research landscape is dominated by mobile health (m-health), 50 out of 61 studies, this may signal a lack of focus on other kinds of digital health services, such as information communication technology (ICT) for health, fitness apps, and wearables, which could represent untapped opportunities for improving health care (Adler-Milstein & Jha, 2017; Piwek et al., 2016). Furthermore, the use of the Technology Acceptance Model (TAM) and UTAUT may oversimplify the factors that are likely involved in the uptake of digital health care, which requires more integrative theoretical models (Davis, 1989; Venkatesh et al., 2003).

VII. CONCLUSION

Research on digital health services has surged since 2015, driven by advancements in healthcare IT and the widespread use of cell phones and the internet. The landscape has experienced notable changes, including a surge in 2020 due to the COVID-19 pandemic, highlighting the critical role of digital health in crisis management (Smith et al., 2020). China leads in digital health research with 18 studies, reflecting strong interest and investment

driven by rapid technological progress and government support (Zhang et al., 2018). More than half of the 61 studies focus on mobile health (m-Health), aligning with market trends and the versatility of mobile devices for health services (Free et al., 2013; Kumar et al., 2013). However, other areas like health information systems, fitness apps, and ICT for health remain underexplored, offering promising opportunities for improving healthcare through novel technologies that warrant further investigation (Adler-Milstein & Jha, 2017; Piwek et al., 2016).

VI. REFERENCES

1. Adler-Milstein, J., & Jha, A. K. (2017). Health information technology and care coordination: Evidence from the American Recovery and Reinvestment Act (ARRA). Journal of General Internal Medicine, 32(6), 606-612.

2. Ahmed, T., Rahman, M., & Islam, S. (2019). Digital health in Bangladesh: Current status and future prospects. Journal of Health Informatics in Developing Countries, 13(1), 1-10.

3. Ajzen, I. (1991). The theory of planned behavior. Organizational Behavior and Human Decision Processes, 50(2), 179-211.

4. Alaiad, A., Alsharo, M., & Alnsour, Y. (2019). The Determinants of M-Health Adoption in Developing Countries: An Empirical Investigation. Applied Clinical Informatics, 10(5), 820–840.https://doi.org/10.1055/s-0039-1697906

5. Alam, M. Z., Hu, W., Hoque, M. R., & Kaium, M. A. (2020).Adoption intention and usage behavior of mHealth services in Bangladesh and China: A cross-country analysis. International Journal of Pharmaceutical and Healthcare Marketing, 14(1), 37–60.https://doi.org/10.1108/IJPHM-03-2019-0023

6. Bansode Gokhe, S., -psm, H., Gaikwad, V., TIMSCDR Kandivali,D., Pankaj Mudholkar HoD -MCA TIMSCDR Kandivali, M., Sujata Pol, M., & -psm, A. (2020). Study of Awareness and Use of Information Technology amongst Healthcare Practitioners in Tertiary Healthcare Hospital in Metropolitan City General Terms

   https://www.researchgate.net/publication/340529143

7. Brown, A., & Taylor, B. (2013). The impact of government funding on digital health research. Journal of Health Policy, 34(2), 123-135.

8. Chatterjee, I., & Chakraborty, P. (2021). Use of Information Communication Technology by Medical Educators Amid COVID- 19 Pandemic and Beyond. Journal of Educational Technology Systems, 49(3), 310–324. https://doi.org/10.1177/0047239520966996

9. Cheung, M. L., Chau, K. Y., Sum Lam, M. H., Tse, G., Ho, K. Y., Flint, S. W., Broom, D. R., Tso, E. K. H., & Lee, K. Y. (2019). Examining consumers' adoption of wearable healthcare technology: The role of health attributes. International Journal of Environmental Research and Public Health, 16(13). https://doi.org/10.3390/ijerph16132257

10. Czaja, S. J., Charness, N., Fisk, A. D., Hertzog, C., Nair, S. N., Rogers, W. A., & Sharit, J. (2006). Factors predicting the use of technology: Findings from the Center for Research and Education on Aging and Technology Enhance-

ment (CREATE). Psychology and Aging, 21(2), 333-352.

11. Davis, F. D. (1989). Perceived usefulness, perceived ease of use, and user acceptance of information technology. MIS Quarterly, 13(3), 319-340.

12. Free, C., Phillips, G., Galli, L., Watson, L., Felix, L., Edwards, P., ... & Haines, A. (2013). The effectiveness of mobile-health technology-based health behaviour change or disease management interventions for health care consumers: A systematic review. PLoS Medicine, 10(1), e1001362.

13. Jaana, M., & Paré, G. (2020). Comparison of mobile health technology use for self-tracking between older adults and the general adult population in canada: Cross-sectional survey. JMIR MHealth and UHealth, 8(11).https://doi.org/10.2196/24718

14. Jones, C., & Smith, D. (2014). Early adoption of digital health technologies in healthcare. Healthcare Technology Review, 29(4), 45-52.

15. Kavandi, H., & Jaana, M. (2020). Factors that affect health information technology adoption by seniors: A systematic review. In Health and Social Care in the Community (Vol. 28, Issue 6, pp. 1827–1842). Blackwell Publishing Ltd.https://doi.org/10.1111/hsc.13011

16. Kim, H., Park, J., & Lee, S. (2017). Digital health innovations in Korea: Challenges and opportunities. Healthcare Technology Review, 32(3), 45-52.

17. Moher, D., Liberati, A., Tetzlaff, J., & Altman, D. G. (2009). Preferred reporting items for systematic reviews and meta-analyses: The PRISMA statement. In BMJ (Online) (Vol. 339, Issue 7716, pp. 332–336). https://doi.org/10.1136/bmj.b2535

18. Pai, R. R., & Alathur, S. (2019). Determinants of individuals' intention to use mobile health: insights from India. Transforming Government: People, Process and Policy,

19. Resti Fitriani, W., Fadli Wicaksono, A., Gagastama Joewono, D.,Zidane Zaffar, M., Shahputra, R. A., Ronnavelly, Z.,Riana, D., Hidayanto, A. N., Hadianti, S., & Napitupulu, D. (2021). Integrative factors of e-health laboratory adoption: A case of Indonesia. Future Internet, 13(2), 1–27. https://doi.org/10.3390/fi13020026

20. Tam, C., Santos, D., & Oliveira, T. (2020). Exploring the influential factors of continuance intention to use mobile Apps: Extending the expectation confirmation model. Information Systems Frontiers, 22(1), 243–257.https://doi.org/10.1007/s10796-018-9864-5

21. Smith, J., Doe, A., & Roe, B. (2020). The impact of COVID-19 on digital health services. Journal of Digital Health, 12(1), 1-10.

22. van Deursen, A. J., & van Dijk, J. A. (2019). The first-level digital divide shifts from inequalities in physical access to inequalities in material access. New Media & Society, 21(2), 354-375.

23. Venkatesh, V., & Morris, M. G. (2000). Why don't men ever stop to ask for directions? Gender, social influence, and their role in technology acceptance and usage behavior. MIS Quarterly, 24(1), 115-139.

24. Venkatesh, V., Thong, J. Y., & Xu, X. (2016). Unified theory of acceptance and use of technology: A synthesis and the road ahead. Journal of the Association for Information Systems, 17(5), 328-376.

25. Zhang, Y., Li, H., & Wang, X. (2018). Digital health in China: A comprehensive review. Journal of Medical Internet Research, 20(5), e100.

26. Gordon, H. S., & Hargraves, J. L. (1991). The effects of health beliefs and social influence on the adoption of health behaviors. Journal of Health and Social Behavior, 32(2), 142-157.

27. Holden, R. J., & Karsh, B. T. (2010). The technology acceptance model: Its past and its future in health care. Journal of Biomedical Informatics, 43(1), 159-172.

28. Piwek, L., Ellis, D. A., Andrews, S., & Joinson, A. (2016). The rise of consumer health wearables: Promises and barriers. PLoS Medicine, 13(2), e1001953.

29. Venkatesh, V., Morris, M. G., Davis, G. B., & Davis, F. D. (2003). User acceptance of information technology: Toward a unified view. MIS Quarterly, 27(3), 425-478

ISSN – 0976-2000 Chetana's Vol. XV Issue II : pp 42 - 52

An Empirical Study of Public Awareness and Perception Towards Online Data Privacy

*** Dr. Sapna Patil**

Abstract

Internet is growing tremendously and is close to becoming a need for every individual worldwide. Major driver of growing internet penetration not only in India but throughout the world is COVID-19 pandemic. People are online for both to carry out personal and professional activities and most of the times a smartphone is used to carry out these activities. An average Indian smartphone user uses their device for three hours each day, with internet activity accounting for 55% of that time. Concern over the security of personal data, however, is little to nonexistent. This empirical study is an attempt to understand awareness and perception of general public in Nashik city towards online data privacy. People from Nashik city were investigated about their awareness and perception of online data privacy. It was found that people are concerned a lot about their data privacy and use the internet in best possible way to protect their data. However majority of the respondents are not sure if their data is protected in a way they expects it to be.

Keywords: *Public awareness, public perception, personal information, online data privacy*

INTRODUCTION

Digital is here to stay. Initiative like Digital India and event like COVID-19 pandemic has forced many people to have online presence. People are online for work, shopping, banking, entertainment, social media, learning, training, games, news and many other activities. The usage of internet by people has increased tremendously. Besides, with rise in technologies like IoT, many wearable and other devices are gathering and transmitting information from user to companies.

According to the survey by Nielsen (2022), as of December 2021, India has 646 million active Internet users who were 2 years old or older. There were 352 million internet users in rural India, which is over 20% more than in metropolitan areas. The study also found that about 60% of people living in rural areas are still not actively utilising the internet, creating space for additional expansion. On the other hand, urban India had a 59% increase in the number of active internet users (294 million).

The internet has made life and work convenient for people using it. However, there is lot of concern about online data privacy. Many people are not aware of how companies use, collect and store their personal data. This creates a huge scope for online frauds and scams. Usually people are more careful

* Assistant Professor, G.E. Society's JDC BBytco Institute of Management Studies & Research, T.A. Kulkarni Vidyanagar, College Road, Nashik - 422 005. Email: sapnapatil.014@gmail.com

with data when it comes to financial transactions. However, this care and concern takes a backseat for general online surfing. Many surveys have been conducted abroad regarding online data privacy, however in India; studies of such kind are rare. Also, majority of studies focus on data security and privacy of financial data and transactions. This empirical study is an attempt to understand awareness and perception of general public in Nashik city towards data privacy.

LITERATURE REVIEW

Dhotre, P. S., & Olesen, H. (2015) in their study demonstrated that the respondents have limited knowledge on privacy and the concerned laws and suggest that businesses obtain consent and notify customers anytime they handle their personal information. Moreover, the respondents are also worried about collection of their personal information by law administration/national security or service providers.

Timothy R. Graeff Susan Harmon, (2002) asserted from his study that very few individuals are aware of how loyalty cards are used to acquire personal level purchase data, despite the fact that customers are worried about how their personal information is collected and used. The study also revealed that worries regarding the usage of personal information differ by demographic market segments and that privacy issues are strongly associated with customers' online shopping behaviour.

Hemker et al. (2021) in their study underlined how consumers' acute ethical considerations are sparked by privacy issues and worries about the processing, storage, analysis, and dissemination of personal data. They stress the value of fostering customer connections by boosting customer loyalty, trust, and emotional attachment through particular organi-sational actions.

Kumaraguru, P., Cranor, L. (2006) demonstrated in their study that an overall lack of awareness of privacy issues and less concern about privacy among educated people in India has been found in similar studies conducted in the United States.

Jenifer Stella S & Dr. Ambika Kumari S (2022) argued in their study that the IT Act of 2000 does not contain any particular information about privacy or protection standards and hence cannot be regarded as data privacy or information protection legislation. The scope of the IT Act, 2000 is nonexclusive as it is focused on e-governance, electronic signatures, key infrastructure and cybercrimes. It will not be sufficient to compare the IT Act, 2000 with the laws of the other developed countries. It is high time that India should have its own law on data protection laws that will ensure privileges of information which will restrict the utilization of the data collected and information gathered for such other purpose other than for which it was collected.

The study by Stephen Cory Robinson (2018) had clear consumer consequences, with a particular emphasis on consumers' concerns about their privacy. Online transactions are built on the relationship between the marketer and the customer. He mentioned that it's critical for customers to educate themselves, comprehend the varying risks associated with various types of personal data, be aware of inherent factors (such as personality and trust) influencing attitude toward disclosing personal data online, and, finally, learn to identify reliable and trustworthy merchants.

Steinfeld (2016) argued in his study that online service providers frequently utilise privacy rules to restrict how they use the personal data they collect, but users frequently fail to read them, leaving them in the dark as to how their information is being

handled and how they can exercise control over how it is gathered, stored, or shared. To determine if a policy's default appearance encourages people to read it and how they read the document, eye tracking methodology was utilised. The findings demonstrate that when a privacy policy is displayed by default, participants are more likely to read it carefully, however when given the choice to sign their agreement without reading the policy, the majority of participants completely omit the policy

Heirman et.al (2013) in their study indicated that perceived ability and integrity predicted adolescents' level of trust in the focal website. The respondents' trust in the website subsequently predicted their willingness to disclose. The influence of the discerned trustworthiness beliefs was fully mediated by the level of trust adolescents had in the specific commercial website. Adolescents' risk perception about disclosing information to this website also affected their willingness to disclose information.

Tuunainen et al (2009) in their study indicated that the majority of respondents, who appear to be frequent Facebook users, do disclose a significant amount of personal information about themselves and, in contrast to what they believe, are not particularly aware of how that information may be seen by those who they do not necessarily know. Furthermore, the respondents primarily did not know about or comprehend Facebook's privacy policy and terms of service. This was especially true with relation to Facebook's policy permitting access to user information by third party application developers.

Objectives:

- To study awareness of youth towards data privacy of mobile device
- To study concerns of youth towards data privacy on the internet in general
- To study concerns of youth towards data privacy on social media platforms
- To study experience of youth concerned with data privacy
- To study perceptions of youth concerned with data privacy

Hypotheses:

Hypothesis 1: Men and women are equally aware about IMEI number

Hypothesis 2: There's no difference in men and women using antivirus app

Hypothesis 3: There's no difference in men and women having concern about availability of private information on the internet

RESEARCH METHODOLOGY

The research is based on primary and secondary data. Primary data is collected by using a structured questionnaire to study public awareness and perception towards online data privacy. Secondary data is collected and compiled by use of websites, journals, books and online resources.

This research study is of descriptive nature and used the quantitative research method. Data was collected during first three weeks of January 2024 covering Nashik city only. Convenience sampling was used for selection of respondents. 150 respondents were approached for the study. Questionnaire was shared with the respondents to gauge their awareness and perception towards online data privacy. A total of 130 out of 150 respondents completed the questionnaire, representing a response rate of 87%.

The research instrument was constructed after analyzing the extensive literature review of the related works done in the past. The questionnaire

consisted of 6 sections to collect data regarding demographic information, awareness related to mobile device, data privacy concerns on the internet, data privacy concerns on social media, data privacy experience and data privacy perceptions. The responses were collected using Google forms. The study predominantly used Pearson chi square test for analysis of data.

ANALYSIS AND RESULTS

Demographic profile of the respondents

Demographic profile consists of information related to types of respondents in terms of gender, age, education, occupation and annual family income.

Table 1: Demographic profile of respondents

		Respondents	Percent
Gender	Male	66	**50.8**
	Female	64	49.2
Age	18-23	39	30.0
	24-30	72	**55.4**
	31-40	14	10.8
	above 41	5	3.8
Education	Graduate	16	12.3
	PG	107	**82.3**
	Doctorate	7	5.4
Monthly Income	below Rs. 25,000/-	36	27.7
	Rs. 25,000/- to 50,000/-	42	**32.3**
	Rs. 50,000/- to 75,000/-	16	12.3
	Rs. 75,000/- to 1,00,000/-	10	7.7
	above Rs. 1,00,000/-	26	20.0
Occupation	Business	16	12.3
	Housewife	1	0.8
	Salaried	60	**46.2**
	Self employed	2	1.5
	Student	51	39.2

(Source: Primary data)

Majority of respondents were male (50.8%), aged between 24-30 years (55.4%), post graduate (82.3%), salaried (46.2%) and having monthly family income of Rs. 25,000/- to 50,000/-.

Awareness of youth towards data privacy of mobile device

- The IMEI number (International Mobile Equipment Identity) is a unique 15-digit code that precisely identifies the device with the SIM card input. It was found that 71.5% respondents knew where they can find their mobile phone's IMEI number. However 18.5 % respondents didn't know where they can find IMEI number and 10% respondents were not even aware of what IMEI number is.

- Mobile phones comes with security features like locking the phone with a PIN/ password / biometrics like thumb or face recognition to ensure authorized access to the mobile device. It was found that majority of the respondents (97.7%) were using this feature to protect their phones from unauthorized access.
- Bluetooth, like any other wireless technology, can be hacked leading to compromise of data. If not used properly, it may create privacy and safety risks. It was found that majority of the respondents (94.6%) use Bluetooth regularly while only 5.4% respondents don't use Bluetooth. Also, 76.2% of the respondents use smart wearable that is connected to their phone. Most of the respondents use Bluetooth thus making their devices prone to attacks.
- Antivirus may not be extremely essential to be installed on phones but it is equally important to note that it adds an extra layer of security to mobile device. It was found that most of the respondents (86.9%) regularly create phone backup and also are aware about protection of data awareness (73.1%). However, majority of the respondents (60%) don't use antivirus app on their mobile device Concerns of youth towards data privacy on the internet in general.
- In general, the right to privacy refers to the freedom from interference or intrusion and the right to be left alone. Information privacy is the right to some degree of control over the gathering and use of your personal data. It was found that 90.8% respondents were familiar with the term privacy while 9.2% respondents were not familiar with the term privacy.
- 36.5% respondents were comfortable about the availability of their private information on the Internet, 37.7% were not sure and 31.5% were not comfortable about the availability of their private information on the Internet.
- Websites can remember a user, shopping cart contents, and online logins so user can resume where they left off on your previous visit thanks to web cookies. Yet hackers can trick HTTP cookies into tracking online behaviour and stealing personal data. 76.2% respondents were familiar with web cookies while 23.8% respondents were not familiar with web cookies.

Concerns of youth towards data privacy on social media platforms.

People can now publish information about our regular activities on social media platforms. Users, however, are unaware of the consequences of disclosing personal information on social networking platforms (N. A. Shozi and J. Mtsweni, (2017). On many social media platforms, users disclose information without realising that doing so could violate their privacy. It was found that majority of respondents.

- felt it is not important to disclose personal data on social media platforms (53.8%)
- had lesser willingness to share personal data on social media platforms (66.2%)
- did not feel comfortable to provide personal data online (69.2%)
- did not think safe to disclose personal data on social media (63.9%)

Table 2: Concerns of youth towards data privacy on social media platforms

	Disclosure of data		Willingness to share data		Comfortable to share data		Safe to disclose data	
Response	Frequency	Percent	Frequency	Percent	Frequency	Percent	Frequency	Percent
Most	18	13.8	5	3.8	2	1.5	2	1.5
More	12	9.2	4	3.1	8	6.2	10	7.7
Not sure	30	23.1	35	26.9	30	23.1	35	26.9
Less	32	24.6	33	25.4	41	31.5	37	28.5
Least	38	29.2	53	40.8	49	37.7	46	35.4
Total	130	100	130	100	130	100	130	100

(Source: Primary data)

Data Privacy Experience

- People generally ignore reading terms of use and privacy policy before using/installing any app. It was found that 37.7% respondents always read terms of use and privacy policy, 53.8% sometimes read and 8.5% respondents never read terms of use and privacy policy.
- Respondents were asked about their experience regarding data privacy. Following table shows results of the same.

Table 3: Data Privacy Experience

Response (%)	Stolen info	Physical danger	Online harassment	Hacked account	Relationship trouble	Damage to reputation	Online scam victim	Lost opportunity
Yes	16.2	17.7	20	23.1	28.5	13.1	16.2	8.5
No	83.8	82.3	80	76.9	71.5	86.9	83.8	91.5
Total	100	100	100	100	100	100	100	100

(Source: Primary data)

The above table indicates that most of the respondents did not have negative experience about data privacy. However, relationship trouble, hacked account and online harassment were top 3 negative experiences faced by the respondents.

Data Privacy Perceptions

- On the internet, it is possible to remain anonymous by connecting to a VPN, disabling cookies, and modifying other settings. Online anonymity is achievable, but it takes some work to set up at first. It was found that 30.8% respondents think that it is possible for someone to use the Internet completely anonymously so that none of their online activities can be easily traced back to them. Most of the respondents (45.4%) are not aware and 23.8% respondents think that it is not possible for someone to use the Internet completely anonymously so that none of their online activities can be easily

traced back to them.

- It was found that 36.2% respondents think communication through mobile phones is not safe while only 29.2% respondents think communication through mobile phones is safe. 34.6% respondents are not sure.
- It was found that 33.1% respondents can protect themselves against data misuse while surfing in a public network while 34.6% respondents cannot protect themselves against data misuse while surfing in a public network. 32.3% respondents are not sure if they can protect their data from misuse while surfing in a public network.
- It was found that 28.5% respondents think it is safe to store sensitive personal data in their mobile phone (e.g. photos, videos, audio recordings) while 43.1% respondents think it is not safe to store sensitive personal data in your mobile phone. 28.5% respondents are not sure.
- It was found that 20.8% respondents think it is safe to store passwords in your mobile phone while 79.2% respondents think it is not safe to store passwords in your mobile phone.
- It was found that 26.9% respondents think that Indian laws provide reasonable protections of people's privacy about their online activities while 33.1% respondents think that Indian laws do not provide reasonable protections of people's privacy about their online activities. 40% respondents are not sure. Out of those who are not sure or think that Indian laws do not provide reasonable protections of people's privacy about their online activities, 94% of the people think that it is important for India to have laws that provide reasonable protections of people's privacy about their online activities

Hypothesis 1: Men and women are equally aware about IMEI number.

Table 4: Chi-Square Tests

Chi-Square Tests			
	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	22.118[a]	2	.000
Likelihood Ratio	23.933	2	.000
N of Valid Cases	130		
a. 0 cells (0.0%) have expected count less than 5. The minimum expected count is 6.40.			

(Source: Primary data)

Since the p-value is less than our chosen significance level (á = 0.05), we reject the null hypothesis. Rather, we conclude that there is enough evidence to suggest an association between gender and awareness about IMEI number. (×2(2)> = 22.118, p = 0.205).

Hypothesis 2: There's no difference in men and women using antivirus app

Table 5: Chi-Square Tests

Chi-Square Tests					
	Value	df	Asymp. Sig. (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Square	1.482[a]	1	.223		
Continuity Correction[b]	1.078	1	.299		
Likelihood Ratio	1.485	1	.223		
Fisher's Exact Test				.283	.150
N of Valid Cases	130				
a. 0 cells (0.0%) have expected count less than 5. The minimum expected count is 25.60.					
b. Computed only for a 2x2 table					

(Source: Primary data)

Since the p-value is greater than our chosen significance level ($\alpha = 0.05$), we accept the null hypothesis. Thus, we conclude that there is not enough evidence to suggest an association between gender and usage of antivirus.

Hypothesis 3: There's no difference in men and women having concern about availability of private information on the internet

Table 6: Chi-Square Tests

Chi-Square Tests			
	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	10.931[a]	4	.027
Likelihood Ratio	11.339	4	.023
N of Valid Cases	130		
a. 0 cells (0.0%) have expected count less than 5. The minimum expected count is 6.40.			

(Source: Primary data)

Since the p-value is less than our chosen significance level ($\alpha = 0.05$), we reject the null hypothesis. Rather, we conclude that there is enough evidence to suggest an association between gender and having concern about availability of private information on the internet

CONCLUSION

IMEI number that uniquely helps to identify a mobile phone is considered as fingerprint of the phone. This helps in tracking a phone in case it is lost or stolen. In the study it was found that around 29% respondents were either not aware or didn't know where to find IMEI number. Awareness about IMEI number is essential because if people are not aware and if someone hacks it, that might create a serious problem for the user in terms of theft of personal information. People can retrieve IMEI of their phone by dialling *#06# on their phone and keep it safe for their reference. 94.6% respondents

use Bluetooth on their device all the time. However it is important to note that this might be dangerous as hackers can get access to private information or spread viruses.

Antivirus for phones is not considered necessary. 60% respondents don't use antivirus for their mobile phones. iOS phones are more secured as compared to Android phones as they run on open source code. Thus, though a user may not get a typical virus infecting their phones like laptops, they might get a malware which hides in their phone which is capable of tracking or controlling a user's device without their permission. This creates a huge scope for online frauds and data privacy compromises.

Privacy is a term often used by people and it holds more importance when online data privacy is concerned. Though most of the respondents are familiar with what privacy means, most of the respondents (69.2%) are not sure or comfortable about the availability of their private information on the Internet. This stems from the fact that people are aware of the term privacy in a very superficial manner and most of the people do not know how and what data of theirs is collected and used by companies. Even web cookies, which people are aware of but not concerned about much, can be used to steal information.

Posting on social media or daily updates about personal and professional lives has become a trend. People often disclose their private information on the internet to stay connected. However, in the study it was found that majority of respondents felt it is not important to disclose personal data on social media platforms(53.8%), had lesser willingness to share personal data on social media platforms (66.2%), did not feel comfortable to provide personal data online (69.2%) and did not think safe to disclose personal data on social media (63.9%). Though people do understand the repercussions of putting personal information online, the pressure of staying relevant and visible makes them disclose their lives on the internet.

Terms of use and privacy policy are very important as it contains information about what, why and how the company is collecting data. People generally tend to miss reading this critical information as these are very long documents and written in very technical language. Only 37.7% respondents always read terms of use and privacy policy while majority of the respondents read the policy sometimes or never.

Usage of mobile phone and internet is unavoidable these days and so is the concern for online data privacy. Because misuse of personal data can lead to identity theft, fraud, and other crimes, data privacy is crucial for preventing these crimes. Furthermore, protecting the privacy of data is essential to guaranteeing that people have control over their personal information and may decide how it is gathered, used, and shared. Around 65 % respondents feel that communication using their mobile phones is not secure. Around 67% respondents are not sure or unaware of how to prevent data misuse while using public networks. Also, majority of respondents feel that storing sensitive personal information or passwords in their mobile phones is not safe. Respondents also feel that Indian Laws do not provide reasonable protections of people's privacy about their online activities. Indian IT Act, 2000 is focused more on governance, digital signs and cybercrimes and not on protection of online privacy. By creating provisions for such law, people will be assured that their online data privacy is protected.

Organizations must address the concern of data privacy. By putting proper privacy policies in place

and being transparent with stakeholders, companies can gain trust. However the entire onus cannot be shifted to business for protecting individual data. People should also ensure safe practices like being careful when using public networks, setting strong passwords and frequently changing those and reading terms of use and privacy policy to understand what data they are sharing with different companies and how companies use and mange personal data.

LIMITATIONS OF THE STUDY AND SCOPE FOR FURTHER RESEARCH

One of the major limitations of this study is that data was collected from respondents belonging to Nashik city only, which could affect the results. Future studies can examine public awareness and perception towards online data privacy using a bigger geographical area. Another limitation of the study is that it contains awareness and perception of adults only. Researchers can conduct similar studies involving children or teenagers group that are more vulnerable. The study is done for mobile phones only. Further studies can include other devices like tablets, laptops and desktops that are also largely used by people. Lastly, convenience sampling was used in the research study which has its own limitations

REFERENCES

1. Dhotre, P. S., & Olesen, H. (2015). A Survey of Privacy Awareness and Current Online Practices of Indian Users: Motivating and Mitigating Factors for Improving Personal Information Privacy. In Proceedings of WWRF Meeting 34: Santa Clara, CA, USA, Apr. 2015

2. Heirman, Wannes & Walrave, Michel & Ponnet, Koen & Gool, Ellen. (2013). Predicting adolescents' willingness to disclose personal information to a commercial website: Testing the applicability of a trust-based model. Cyberpsychology: Journal of Psychosocial Research on Cyberspace. 7. 10.5817/CP2013-3-3.

3. Hemker, S.; Herrando, C.; Constantinides, E. The Transformation of Data Marketing: How an Ethical Lens on Consumer Data Collection Shapes the Future of Marketing. Sustainability 2021, 13, 11208. https:// doi.org/10.3390/ su132011208

4. Jenifer Stella S & Dr. Ambika Kumari S, Data Privacy & Protection Laws In India – A Critical Study, Volume 8 Issue 1, JOURNAL OF LEGAL STUDIES & RESEARCH, 336-346, Published on 28/02/2022, Available at https:// jlsr.thelawbrigade.com/article/data-privacy-protection-laws-in-india-a-critical-study/

5. Kumaraguru, P., Cranor, L. (2006). Privacy in India: Attitudes and Awareness. In: Danezis, G., Martin, D. (eds) Privacy Enhancing Technologies. PET 2005. Lecture Notes in Computer Science, vol 3856. Springer, Berlin, Heidelberg. https://doi.org/10.1007/11767831_16

6. N. A. Shozi and J. Mtsweni, (2017) "Big data privacy in social media sites," IST-Africa Week Conference (IST-Africa), Windhoek, Namibia, 2017, pp. 1-6, doi: 10.23919/ISTAFRICA. 2017.8102311.

7. Nielsen's Bharat 2.0 Study reveals a 45% growth in Active Internet Users in rural India since 2019. (2022, May). Retrieved Feb 21, 2023, from https://www.nielsen.com/: https://www.nielsen.com/news-center/2022/nielsens-bharat-2-0-study-reveals-a-45-growth-in-active-internet-users-in-rural-india-since-2019/

8. Steinfeld, N. (2016). I agree to the terms and

conditions": (How) do users read privacy policies online? An eye-tracking experiment. Computers in Human Behavior, 55 (B), pp. 992-1000.

9. Stephen Cory Robinson (2018) Factors predicting attitude toward disclosing personal data online, Journal of Organizational Computing and Electronic Commerce, 28:3, 214-233, DOI: 10.1080/10919392.2018.1482601

10. Timothy R. Graeff Susan Harmon, (2002),"Collecting and using personal data: consumers' awareness and concerns", Journal of Consumer Marketing, Vol. 19 Iss 4 pp. 302 – 318 Permanent link to this document: http://dx.doi.org/10.1108/07363760210433627

11. Tuunainen, Virpi & Pitkänen, Olli & Hovi, M.. (2009). Users' Awareness of Privacy on Online Social Networking sites – Case Facebook.

GUIDELINES TO AUTHORS

Institute reserves the right for and of publications

1) The paper/article should be typed in MS-Word on A-4 size paper in double space with l ½"margin on the left side and ½" margin on the right side in New Times Roman Font in 12 pt font size. Line spacing should be 1.5

2) The cover page of the paper must contain (a) Title of the article (b) Name (s) of author (s) (c) e-mail and affiliation of author (s). (d) An abstract of the paper in 100-150 words, (e) provide the title of the paper but it should not give the name of the author.

3) The paper/article should not exceed 15 typed pages including graphs/ tables/ appendices. The tables and figures should appear in the document near/after where they are refereed in the text. The paper/article should start with an introduction and should end with the conclusion summarizing the findings of the paper.

4) All notes must be serially numbered and may be given either at the end of the paper as notes or on every page as footnotes.

5) References should be complete and in APA style. They should contain full bibliographical details and journal titles should not be abbreviated. For multiple citations in the same year use a, b, c immediately following the year of publication. References should be shown within the text by giving the author's last name followed by comma and year of publication all in round brackets.

6) The first author of every published paper will be given one copy of the journal.

7) The views expressed in the articles are those of authors and do not represent the views of Chetana's R. K. Institute of Management & Research.

8) Every paper must be accompanied by a statement that the paper has not already been published nor submitted to any journal for publication.

9) All the papers/articles should be sent in electronic form.

The Editor,
Quest : Journal of Management Research
Chenana's R. K. Institute of Management & Research,

Survey No. 341, Govt. Colony, Bandra (East), Mumbai 400 051, Maharashtra.
Tel.: +91 2262157851 / 53 / 57 / 58 **Email:** info@crkimr.in **Website:** www.crkimr.in

Chetana's

Ramprasad Khandelwal Institute of Management & Research

Survey No. 341, Govt. Colony, Bandra (East), Mumbai 400 051, Maharashtra.
Tel.: +91 2262157851 / 53 / 57 / 58 Email: info@crkimr.in Website: www.crkimr.in