Behavioural Profiling of Rural Working Women in an Industrial Estate, Madurai

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Abstract
Working women in rural areas are essential for the sustained growth of the nation. The Ministry of Labour and Employment reports that while the number of women in the workforce is good at the national level, it is still low globally. Despite these obstacles, rural working women encounter stress, anxiety, and depression due to a lack of employment possibilities, gender inequality, safety concerns, and mental and physical health issues. The methodical process of identifying the reasons behind women's reactions is called behavioural profiling. To promote teamwork, increase employee performance, and involve people in change management, organisations can use human resource activities such as training, performance reviews, and career development opportunities. Therefore, this study investigated the behaviour profiling (emotional, cognitive, and motivational components) of rural working women in a South Indian industrial estate. The study follows a descriptive research design using a survey method and has employed an interview schedule to collect data from 41 employees working in three industries. Analytical tools include Garrett ranking for the employee's skill assessment, T – tests, and One-way ANOVA to understand the mean difference and correlation analysis to identify the relationships between the behavioural components. The tests revealed that 68.3% of employees preferred non-monetary benefits. Garrett ranking reveals that problem-solving skills, emotional stability and adaptability are found high among these working women. There is a difference between rural working women preferring the type of benefit with their emotional state (p = 0.022). There was a moderate positive correlation between emotion and motivation (r = 0.438) and between cognition and motivation (r = 0.433) at the 0.05 level. Researchers planned a way forward by conducting an intervention through exercises and discussions, providing awareness sessions, laughter therapy which affects stress, and how to manage stress. Researchers helped employees to set goals, overcoming self-doubt and shared strategies to handle stress in day-to-day life
Keywords: Behavioural, Profiling, Emotional, Cognitive, Motivational, Rural, Working Women, Industrial Estate.

Introduction

Behavioural profiling involves exploring and understanding human behaviour, motivations, and patterns. By analysing human emotions, thoughts, and motivations, organisations can support their employees, especially rural working women. It helps to foster a better relationship among the employees, increase productivity and overall well-being (Murphy, Assessment of Employee Well-Being on Organisational Effectiveness & Productivity: A Literature Review, 2024) for both the employees and the organisation. By gaining different insights into human behaviour, organisations can create a more supportive and productive work environment (Anand Kumar, et al., The Influence of Emotional Intelligence on Employee Engagement and

Productivity, 2025). Employee behaviour involves analysing three key components: Emotional, Cognitive and Motivational.

First, the emotional component examines employees' emotional states and well-being, which impact their productivity and work engagement (Sharmin, Faham Ahmed Kalam, & Rezwan Ul Haque Aubhi, 2024). The second, the cognitive component, assesses employees' awareness of their job duties and responsibilities, identifying gaps between the job description and understanding (Subhash C. Kundu, Sandeep Kumar, & Kusum Lata, Effects of perceived role clarity on innovative work behaviour: a multiple mediation model (2020). Third, the motivational component evaluates what drives employees to perform, aiming to improve job satisfaction, productivity, and retention (Locke, Edwin A, & Gary P. Latham, 2002). By analysing these three components, organisations can better support employees and enhance overall performance.

Multiple studies have discussed behavioural profiling in organisations, but they have focused on urban workplaces instead of rural working women and their workplaces. This research evaluates the emotional, cognitive, and motivational dimensions of employee behaviour individually. However, there is a lack of empirical evidence on how behavioural profiling can be systematically applied to address the unique socioeconomic, cultural, and workplace challenges faced by rural women employees. The research gap indicates a limited understanding of how behaviour affects the work performance, well-being, and job satisfaction of rural working women. Thus, this gap highlights the need for research that focuses specifically on rural working women and examines their behaviour in a more complete and integrated manner. They need support for rural working women to be highly effective through this research.

Background

Madurai is a secondary industrial hub that depends on the rural workforce. With the rise in women's participation in the industrial sector, there has been a shift from agriculture to the manufacturing sector. Various studies have focused on the impact of industrial employment, and it has been found that behavioural profiling remains less explored. Understanding rural populations' motivations, pain points, stress coping strategies, communication, and decision-making patterns helps understand rural women's identities that can be reshaped by industrial exposure. Studies have revealed that external motivation plays a strong role in financial needs and dissatisfaction with existing employment in the entrepreneurial behaviour of rural women in Oman. In addition, some studies have identified various factors that contribute to rural women's behaviours, including internal attitudinal factors, which were found towards self-employment, reflecting self-efficacy and perceived social support (Omar Durrah, 2024). Informed decision-making and employee monitoring provide a better mechanism for overseeing digital behaviour which is observed from behavioural profiles to enhance organisational management (Xiaochun Ni et.al. 2017). A positive work environment and sustained employee engagement will manage the cognitive and behavioural factors, but as a core organizational priority, it is essential to improve overall employee motivation and sustain a competitive advantage (Patangiya, 2023). Employee emotions are the central mechanism for successful organizational innovation adoption, influencing employee perceptions of management involvement and innovation training and changing the perception of employees' emotions to adopt innovation (Choi et al., 2010). However, motivation, emotion, and attention do not serve as mediating links between cognitive exertion and physical self-control failure (Inzlict et al., 2014). Thus a study is intitated with an aim to

- Study the level of emotions, cognition, and motivation experienced by rural working women.
- Examine the order of thinking, emotional intelligence, and social skills experienced by rural working women.
- Test the difference between behaviour profiling (Emotional component, Cognitive component and Motivational component) and the prevalence of dreams (with a dream and without a dream)
- Test the difference between behaviour profiling (Emotional component, Cognitive component and Motivational component) and the preference of rural working women towards benefits (Monetary and Non-monetary benefits)

- Study the relationship between components of behaviour profiling (Emotional, Cognitive, and Motivational components) experienced by rural working women.

This research addresses the urban – rural gap, focusing specifically on rural working women. Integrated behavioural mapping offers a complete and integrated examination of behavioural components. Researchers plan to design a practical intervention framework related to self-awareness and goal-setting exercises to improve the effectiveness and mental well-being of the rural workforce.

Research Methods

A descriptive research design was used with no control over the variables. A survey method was used to collect data. Three organisations were identified from an industrial estate in South India that were willing to participate in the study, and all the rural working women under these entrepreneurs were considered as samples. A total of 41 women were identified, and the researchers adopted a purposive sampling technique within the selected industries, where all eligible working women were considered in the survey. This collection of data represents a study of a specific industrial microenvironment and provides high internal validity for industrial settings. Entrepreneurs and researchers ensured that participants had the free will to participate in the research study; as a result, their identities were not obtained, and they were allowed to withdraw from the research at any point without any financial obligation. A structured questionnaire that included open- and closed-ended questions was used. Ranking-based questions were included to understand employees' skill levels (thinking, emotional, and social skills). A scale was developed based on the existing literature to measure the behaviour profiling of employees. An interview schedule was adopted to collect data. The Garrette ranking technique was used to measure thinking, emotional intelligence, and social skills. The mean and standard deviation were used to understand the descriptive analysis of the study variables. T-test and one-way ANOVA were used to understand the mean difference, and correlation was used to understand the relationship between variables. Tables and Bar diagrams were used to present the data. Jamovi open-source software version 2.6.2 was used to analyse the data.

Table 1 Sample Description

Variable	Frequency	Percentage
Age	17 years of age - 60 years of age	
Education Qualification		
• Illiterate	6	15
• School Education	30	73
• Degree Holders	5	12
Years of Experience	1 month to 16 years	
Skill level		
• High	15	37
• Moderate	24	58
• Low	2	5

Analysis and Discussion

Diagram 1 Prevailance of Dreams and Goals among Rural Working Women

It can be inferred that the majority of the workforce dream for a stable employment and live a life with financial independence

**Diagram 2 Preference for
Benefits Rural Working Women Receive**

It can be inferred that the majority of the workforce shows a stronger preference for non-monetary benefits than for monetary benefits for long-term financial independence.

**Diagram 3 Thinking Skills Measured based on
Garrett Ranking Method**

It can be inferred that problem-solving skills play a major role in the workforce, indicating that the workforce has a stronger ability in practical problem-solving, while analytical and logical thinking skills are moderate.
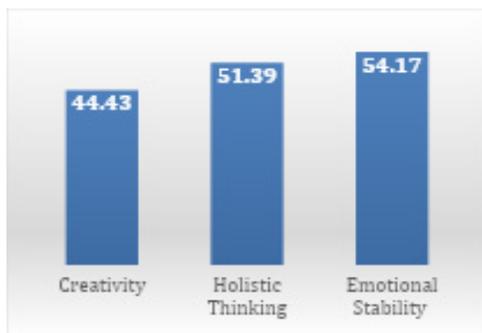

**Diagram 4 Emotional Intelligence Skills
Measured based on Garrett Ranking Method**

It can be inferred that emotional stability holds a majority position, possessing strong emotional control and balanced thinking among the workforce. While holistic thinking and creativity hold the least majority position that differ from each other respectively.

**Diagram 5 Social Skills Measured based on
Garrett Ranking Method**

It can be inferred that adaptability ranks first, as the workforce is more flexible and adaptable in social situations, whereas their time management skills are comparatively weaker.

**Table 2 Result of Descriptive Analysis of
Study Variables**

	Emotional Component	Cognitive Component	Motivational Component
N	41	41	41
Mean	38.5	38.3	37.1
Standard Deviation	3.26	3.42	3.44
Skewness	-1.57	-1.09	-0.855
Kurtosis	3.17	1.5	0.609

Table 2 shows the descriptive analysis of the study variables, as Skewness and Kurtosis are found within the permissible limit of ± 1 and ± 2, respectively; thus, the data are considered normally distributed.

It is inferred through the calculated mean and standard deviation values that 14.6% of the employees experience pleasant emotions as they spend time with friends during breaks, receiving gifts and incentives, using the amenities provided by the company, doing the same job daily, and while coming for work and leaving the organisation,

whereas 12.2% of the employees experience unpleasant emotions when they handle deadlines in work, when the factory declares a holiday, when the supervisor keeps on checking the work, and when the job is given from other departments.

It is observed that 24.4% of the employees are well aware of the 9 working hours (including break), welfare provided by the company, reporting the supervisor immediately when accidents occur, maintaining the workplace neat and tidy, cooperating and collaborating with other departments for work, working with safety precautions, medical kit provided in the organisation, and procedure to take leave, whereas 17.1% of the employees are not aware of the standard output to be completed on a day-to-day basis, extra work given in the absence of other employees, and work schedule to be followed.

Results indicate that 12.2% employees are highly motivated as they experience good work environment, likeliness towards the job, the trust that company has on the employee, pride of being employed in the organisation and the recognition from the supervisor, whereas 17.15% of the employees are lowly motivated, and required motivation for creating a dream and importance of goal setting in life, motivation from friends and neighbours and to work by target assigned by the company

H03: There is no difference in behavioural profiling (emotional, cognitive, and motivational components) between rural working women with dreams and those without dreams.

Table 3 T- Test Showing the Role of Dreams in Behavioural Profiling (Emotional Component, Cognitive Component and Motivational Component) of Rural Working Women

Components	Dreams	N	Mean	S. D.	t- value	p- value
Emotional Component	Woman with dreams	24	38.0	3.79	-1.183	0.244
	Woman without dreams	17	39.2	2.24		
Cognitive Component	Woman with dreams	24	38.6	3.03	0.641	0.525
	Woman without dreams	17	37.9	3.97		
Emotional Component	Woman with dreams	24	38.0	2.96	1.912	0.063
	Woman without dreams	17	35.9	3.80		

An independent sample t-test was conducted to show the psychological components (emotional, cognitive, and motivational) experienced by respondents with their socio-demographic profile (employees with and without dreams). There was no difference in the scores of the emotional (p = 0.244, t =-1.183), cognitive (p = 0.525, t = 0.641), and motivational (p = 0.063, t = 1.912) components.

In the motivational component, the p-value was slightly above 0.05, suggesting that women with dreams are highly motivated. Hence, the hypothesis was accepted.

$H0_4$: There is no difference in behavioural profiling (emotional, cognitive, and motivational components) between rural working women preferring monetary and non-monetary benefits.

Table 4 T- Test Showing the Role of Preference of Monetary and Non-monetary Benefits in Behavioural Profiling (Emotional Component, Cognitive Component and Motivational Component) of Rural Working Women

Components	Dreams	N	Mean	S. D.	t- value	p- value
Emotional Component	Non- monetary benefits	13	36.8	4.19	-2.395	0.022
	Monetary benefits	28	39.3	2.44		
Cognitive Component	Non- monetary benefits	13	37.8	3.03	-0.663	0.511
	Monetary benefits	28	38.5	3.62		
Emotional Component	Non- monetary benefits	13	37.8	3.80	0.918	0.364
	Monetary benefits	28	36.8	3.27		

An independent sample t-test was conducted to show the psychological components (emotional, cognitive, and motivational) experienced by respondents with their socio-demographic profile (women who prefer monetary and non-monetary benefits). There was no difference in the scores for the cognitive and motivational components. There was a difference in the score of the emotional component, as the p-value was less than 0.05 (p=0.022, t=-2.395), while the cognitive component had (p=0.511, t=-0.633) and the motivational component had (p=0.364, t=0.918). However, employees who prefer monetary benefits have better emotional stability than those who prefer non-monetary benefits.

Ho8: There is no correlation between the emotional, cognitive, and motivational components of behavioural profiling among rural working women.

Table 5 Correlation Showing the Relation between Emotional Component, Cognitive Component and Motivational Component of Behavioural Profiling among Rural Working Women

Component	Emotional Component	Cognitive Component	Motiva-tional Component
Emotional Component	-		
Cognitive Component	0.299	-	
Motivational Component	0.438**	0.433**	-

Note. * p < .05 level, ** p < .01 level, *** p < .001 level

Table 5 shows the correlation matrix between the emotional, cognitive, and motivational components. A positive moderate correlation was observed between the emotional and motivational components (p = 0.438) and between the cognitive and motivational components (p = 0.433) at the 0.05 level.

A Way Forward

Based on the findings, three sessions for each of the behavioural profiling components emotion, cognition, and motivation. Each session incorporated sharing video clips, exercises, and discussions with employees. To 10-15 employees participated in each session, who lacked each of the components.

Researchers conducted a session of self-awareness, incorporating the need for self-care, ways to handle emotions, relaxation, and mindful exercises. Laughter therapy was introduced to manage stress. Researchers have demonstrated the need for walking as a physical exercise to stay physically and emotionally healthy.

The second session was designed to provide a deeper understanding of the importance of teamwork, coordination, and discussion on the impact of being attentive at the workplace.

The third session focused on motivating employees by setting goals and making efforts to achieve these goals. The importance of self-improvement in the workplace for constant learning was a key idea in this session. Employees were also taught how to overcome self–doubt and stay motivated in the workplace.

Future Research Directions

Future Research can focused on

1. Examining the impact of behavioural training programs related to employees emotional management, to increase motivation levels and cognitive skills in the long term. Researchers may conduct a study to determine whether continuous training sessions help employees manage stress effectively, improve decision-making skills, and maintain consistent motivation in the workplace.

2. Evaluating individual personality traits, working and learning styles which affect how employees respond to emotional, cognitive, and motivational situations. Understanding these variations can help industries design more personalised behavioural development programs that suit diverse employee needs.

Conclusion

Behavioural Profiling is a powerful tool encompassing the emotional, cognitive, and motivational components of rural working women in an industrial estate. It is used to understand and forecast human actions based on their patterns of behaviour and psychological traits. The primary and

ultimate goal of behavioural profiling is to create a psychological and behavioural map of individuals or groups to anticipate future actions and improve decision-making. Following a descriptive research design, the study utilised an interview schedule to collect data from 41 female employees across three different industries using purposive sampling. According to the Garret ranking method, problem-solving skills are the most prominent thinking skills among the workforce. This study found a moderate positive correlation between the emotional component and motivation(r=0.438) and between the cognitive component and motivation(r=0.433). The study's focus on a specific geographical area may limit the applicability of its findings to other regions. Respondents may provide answers that they believe are expected or socially acceptable, leading to a bias known as self-reporting bias. Owing to time constraints, the research was limited to a few companies in the industrial estate. This study reveals that rural working women with unclear life goals and dreams are restricted from working efficiently. Thus, an action plan was designed to engage them in activities. This strengthens the relationship between women and the organisation. We extend our heartfelt thanks to Ms. Gayathri K, Ms. Meharunisha S, Ms. Sakthimari M, Ms. Sandhiya V, Ms. Shenbaga Harishni R, Ms. Shri Subiksha S, Ms. Sindhiya K, Ms. Vaishali S, Ms. Yamuna Ambika S K and all those who took part in this study. This is a Life Frontier Project work for these students.

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