

Mental health well being and economic struggles of unorganized women workers: A cross-sectional study

S. Mary Dayana¹, Anand Jerard Sebastine^{2*}

¹Department of Social Work, Periyar Maniammai Institute of Science & Technology (Deemed to be University), Thanjavur 613 403, Tamil Nadu, India.

²Science & Technology (Deemed to be University), Thanjavur 613 403, Tamil Nadu, India; anandjerry@pmu.edu (A.J.S.).

Abstract: Globally, unorganized women workers are experience informal work settings without the support of legal entities. The present study investigated the Mental Health and Economic Struggles faced by unorganized women workers in the coir processing and seafood industries in the southern coastal region of India. This study aims to examine the Mental Health Well beings and economic challenges faced by unorganized fisherwomen workers in the Thanjavur District of Tamil Nadu through a cross-sectional survey. A total of 500 women aged 18 years and above, engaged in informal labour, were included in the study. A multistage random sampling technique ensured representation from rural, semi-urban, and urban areas. Primary data were collected using a self-prepared questionnaire addressing socio-demographic details, economic challenges, and psychosocial problems, including the perceived stress scale. Data were analysed using SPSS. The average age of participants was 43.7 years, with the majority (44.4%) falling within the 40-50 years age group. Most participants earned between ₹4000-₹5000 (51.2%), worked seasonally (83.4%), and spent an average of 7.5 hours per day on work, with 59% working more than 10 hours. Over half (58.4%) reported insufficient lunchtime, which could affect their well-being. A significant relationship ($p < 0.001$) was found between age (40-50 years) and high stress levels. The study revealed that receiving extra wages was associated with increased stress ($p < 0.001$). Factor analysis identified four key components of psychosocial stress: 1) Emotional Distress, 2) Positive Outlook, 3) Personal Mastery, and 4) Coping Challenges. The study concludes with policy recommendations aimed at improving the socio-economic conditions and overall well-being of unorganized fisherwomen workers.

Keywords: Economic struggles, Fisherwomen, Stress, Psychosocial, Unorganized women.

1. Introduction

The informal economy in India, encompassing a large proportion of unorganized labour, has long been a critical but often overlooked sector. In India, women in the unorganized sector represent a significant portion of the workforce, yet their contributions often go unnoticed and undervalued. The women who are engaged in verity of informal sector like agriculture, domestic workers, handicrafts and street vendors suffer lot in the field of psychosocial and financial level.

Particularly because of the gender, lack of employment benefits and restricted access to resource women in unorganized sector face heightened vulnerabilities [1]. Despite the fact that women create a substantial contribution to both rural and urban economic areas. In the unorganized sector women are the underappreciated, underpaid and insecure [2].

Tamil Nadu Delta region is a prime example of an area that is primary dependent on informal workers in rural India, where the agriculture and related activities are the main source of income. And also, many women are employed in various unorganized sector. They face social and economic crisis like low pay, unfavourable working conditions, insufficient social security, and gender discrimination.

Furthermore, the challenges they encounter are made worse by psychosocial stressors such poor mental health, social isolation, harassment at work and at home [3, 4].

Due to ingrained societal systems that frequently assign women to inferior positions in the home and the workplace, the unorganized women workers in the Tamil Nadu Delta region face economic instability [5]. Because of their ongoing exposure to social marginalization and economic insecurity they face a psychosocial factor, such as chronic stress, anxiety, and depression [6].

This study aims to explore the Mental Health Well Being and Economic Struggles of Unorganized fisherwomen workers in the Thanjavur District of Tamil Nadu through a cross-sectional survey. By examining both the economic hardships and the mental health issues encountered by these women, the research intends to illuminate the interconnectedness of these factors and how they shape the lived experiences of workers in the unorganized sector. The findings will provide valuable insights into the multidimensional nature of labour in the informal economy and offer recommendations for policy interventions aimed at improving the well-being in terms of psychosocial and socio-economic developments.

2. Review of Literature

This literature review denotes the main issues of unorganized women worker's job satisfaction, stress, income security, gender-based wage disparity and work place inequality.

In the unorganized sector women workers face a numerous mental health challenge because of their poverty in the working conditions and also facing structural violence [7]. Studies have shown that women in unorganized sectors face high levels of psychological stress due to job insecurity, lack of social protection, and the nature of their work. Research by Chandran, et al. [8] emphasizes that unorganized women workers, especially in informal employment, experience elevated stress levels, which result from long working hours, low pay, and the absence of legal safeguards. Stress also arises from the multiple roles women play in their homes and workplaces, leading to role conflict and burnout [9].

In addition to stress, unorganized women workers are vulnerable to mental health issues like anxiety and depression. Das and Sharma [10] highlight that mental health concerns among women workers in the informal economy are often overlooked, and the lack of access to healthcare exacerbates these issues. The absence of job security and the constant threat of economic instability further contribute to the mental strain.

2.1. Economic Struggles and Income Security

Economic vulnerability is a core issue for unorganized women workers. Many works in sectors such as domestic labour, agriculture, and construction, where wages are low, irregular, and often unpaid. According to Sundaram and Chakraborty [11] women in the informal economy face significant income insecurity, and most of them earn less than their male counterparts for similar work. Their earnings are not sufficient to meet basic needs, and many women are forced to take on multiple jobs to sustain their families.

2.2. Gender-Based Wage Disparities and Discrimination

One of the most prominent issues faced by unorganized women workers is gender-based wage discrimination. Siddiqui [12] discusses how women in unorganized sectors are often subjected to lower wages, lack of benefits, and poor working conditions, compared to their male counterparts. Discriminatory practices such as paying women less for the same work persist in many informal sectors, exacerbating their economic and social marginalization. Nanda and Prakash [13] find that even in sectors where women have a significant presence, such as domestic work or agriculture, their wages are systematically lower than men's, contributing to their continued economic vulnerability.

The literature clearly highlights that unorganized women workers face significant psychosocial and economic struggles. These include high levels of stress, job dissatisfaction, economic insecurity, and

pervasive gender-based wage disparities. To address these issues, there is a need for stronger policy measures, better access to social protections, and initiatives aimed at improving gender equality in the workplace.

3. Methodology

This research employs a cross-sectional study design to assess the psychosocial and economic struggles faced by Fisherwomen in Thanjavur district of Tamil Nadu. These places are known for a significant proportion of unorganized women workers involved in fisherwomen and informal sector activities. The target population consists of unorganized fisherwomen workers engaged in various kind of occupation like daily wage labourers, street vendors, etc. Women aged 18 years and above, involved in informal or unorganized labour, were included in the study. Exclusion criteria include women in formal employment or those unwilling to participate. A total of 500 unorganized women workers were selected for this study. The sample size was determined using a standard formula for cross-sectional studies to ensure a confidence level of 95% and a margin of error of 5%. A multistage random sampling technique was employed: A random selection of villages Thanjavur District was made, ensuring representation from rural, semi-urban, and urban settings. From each selected village, women workers were randomly chosen fisherwomen working as labour, including daily wage labourers, street vendors, etc. A self-prepared semi structured questionnaire was used to collect primary data on Socio-demographic details (age, marital status, education, household size, etc.) Economic challenges (income levels, job stability, financial dependency, access to credit, etc.) and Psychosocial challenges (perceived stress levels). The questionnaire was pre-tested with 15 participants and the questionnaire was suitably modified and avoided all technical jargons in the questionnaire. The questionnaire was translated into vernacular language (Tamil). Prior to data collection, informed consent was obtained from each participant, ensuring confidentiality and the voluntary participation in the research study. Data were analysed using descriptive statistics (frequencies, percentages for categorical variables and mean and standard deviations for continuous variables) to summarize socio-economic characteristics and psychosocial conditions. Inferential statistics, such as Chi-square tests, was used to assess associations between socio-demographic factors and psychosocial/economic outcomes. Factor analysis was done to identify the factors that contribute to the perceived stress level of women in unorganised sector.

4. Results and Discussions

The findings related to the women in the unorganised sector, their stress levels, job and income satisfaction, wage disparities, and other socio-economic factors that contribute to their overall well-being were analysed and presented in Table 1.

Table 1.
Personal Profile of the Respondents.

S. No	Study Parameter	Frequency (N = 500)	%
1	Age in Years		
	Mean \pm SD	43.7 \pm 9.1	
	Max – Min	61 – 20	
	< 30	57	11.4
	30 – 40	93	18.6
	40 – 50	222	44.4
	> 50	128	25.6
2	Income (Based on Days)		
	Mean \pm SD	5300 \pm 600	
	Max – Min	6800 – 2500	
	< 3000	7	1.4
	3000 – 4000	125	25.0
	4000 – 5000	256	51.2
	> 5000	112	22.4
3	Work engagement status		
	Regular	83	16.6
	Seasonal	417	83.4
4	Working hours per day		
	Mean \pm SD	7.5 \pm 2.56	
	Max. – Min.	11 to 3	
	< 4	37	7.4
	4 to 8	168	33.6
	> 10	295	59.0
5	Adequate lunch time		
	Yes	208	41.6
	No	292	58.4

The study participants have a mean age of 43.7 years, with most falling between 40–50 years (44.4%). Income varies, with the majority earning between 4000–5000 (51.2%). Most participants are engaged in seasonal work (83.4%) and work an average of 7.5 hours per day, with 59% working more than 10 hours. Over half (58.4%) report inadequate lunch time, which may impact well-being. These results suggest a middle-aged, moderately high-income workforce, predominantly in seasonal employment with long working hours and limited breaks, potentially affecting work-life balance and health.

Table 2.
Chi-square test between Perceived Stress Scale and personal profile.

Study parameter	Perceived Stress Scale			P value *
	Low stress (< 13)	Moderate Stress (14 -26)	High stress (27 - 40)	
	n = 102 (%)	n = 248 (%)	n = 150 (%)	
Age in years				
< 30	0 (0.0)	57 (23.0)	0 (0.0)	<0.001
30 - 40	2 (2.0)	91 (36.7)	0 (0.0)	
40 - 50	0 (0.0)	72 (29.0)	150 (100.0)	
> 50	100 (98.0)	28 (11.3)	0 (0.0)	
Income per month				
< 3000	0 (0.0)	7 (2.8)	0 (0.0)	<0.001
3000 - 4000	100 (98.0)	25 (10.0)	0 (0.0)	
4000 - 5000	0 (0.0)	106 (42.7)	150 (100.0)	
> 5000	2 (2.0)	110 (44.4)	0 (0.0)	
Marital Status				
Married	2 (2.0)	182 (73.4)	0 (0.0)	<0.001
Unmarried	0 (0.0)	16 (6.5)	0 (0.0)	
Separated/Widow	100 (98.0)	32 (12.9)	150 (100.0)	
Working hours per day				
< 4	0 (0.0)	37 (14.9)	0 (0.0)	<0.001
4 to 8	0 (0.0)	18 (7.3)	150 (100.0)	
> 10	102 (100.0)	193 (77.8)	0 (0.0)	
Work engagement status				
Regular	1 (1.0)	82 (33.1)	0 (0.0)	<0.001
Seasonal	101 (99.0)	166 (66.9)	150 (100.0)	

Note: *Chi square test.

The above table presents the association between various demographic and work-related factors and perceived stress levels across three groups: low stress ($p < 13$), moderate stress (14-26) and high stress (27-40). The significance of these relationships is assessed using the Chi-square test, with the p-value indicating statistical significance. The result shows that younger individuals (30-40 years) have moderate stress, while older individuals ($p > 50$ years) predominantly experience low stress. Those aged 40-50 years exclusively high stress, suggesting a clear age-related distribution of stress levels ($p < 0.001$). With regard to income, those earning between 3000-4000 per month predominantly report moderate stress while those earning 4000-5000 show high stress, particularly in the high-stress group ($p < 0.001$). Those working more than 10 hours per day report high stress, while those working less (especially under 4 hours) are in the low-stress category ($p < 0.001$). With regard to Seasonal workers are more likely to report high stress across all categories, while regular workers report moderate stress ($p < 0.001$).

Table 3.

Chi-square test between Perceived Stress Scale and Other parameters.

	Perceived Stress Scale			P value *
	Low stress (< 13)	Moderate Stress (14 -26)	High stress (27 - 40)	
	n = 102 (%)	n = 248 (%)	n = 150 (%)	
Level of satisfaction in your current job				
Satisfied	101(99.0)	28 (11.3)	0 (0.0)	<0.001
Don't know	0 (0.0)	7 (2.8)	0 (0.0)	
Dissatisfied	1 (1.0)	112 (45.2)	0 (0.0)	
Highly dissatisfied	0 (0.0)	110 (40.7)	150 (100.0)	
Level of satisfaction in your income				
Satisfied	101 (99.0)	28 (11.3)	0 (0.0)	<0.001
Don't know	0 (0.0)	8 (3.2)	0 (0.0)	
Dissatisfied	1 (1.0)	141 (56.9)	0 (0.0)	
Highly dissatisfied	0 (0.0)	71 (28.6)	150 (100.0)	
Minimum wage fixed by the government for the work you are engaged now				
Yes	0 (0.0)	2 (0.8)	0 (0.0)	0.361
No	102 (100.0)	246 (99.2)	150 (100.0)	
Disparity in the wages based on gender				
Yes	1 (1.0)	179 (72.2)	150 (100.0)	<0.001
No	101 (99.0)	69 (27.8)	0 (0.0)	
Get an extra wage when you work				
No	1 (1.0)	110 (44.4)	0 (0.0)	<0.001
Yes	101 (99.0)	138 (55.6)	150 (100.0)	
Note: * Chi square test.				

Note: * Chi square test.

The above table shows that low stress individuals are mostly satisfied with their job (99%), while moderate and high stress individuals show significant dissatisfaction. The high stress group is entirely highly dissatisfied ($p < 0.001$) indicating job satisfaction is strongly associated with stress levels. With regard to satisfaction of income low stress individuals are mostly satisfied with their income (99%), while moderate and high stress individuals report significant dissatisfaction, especially in the high stress group (100% highly dissatisfied) ($p < 0.001$). There is no significant difference in responses regarding whether a minimum wage is fixed by the government and the stress level. ($p < 0.361$). High stress individuals overwhelmingly report wage disparity based on gender (100%), while moderate stress individuals report a high prevalence (72.2%). The low stress group reports much less disparity (1%). This relationship is highly significant ($p < 0.001$), suggesting gender-based wage disparity is strongly associated with higher stress. The high stress group reports a significantly higher percentage of receiving extra wages (100%) compared to the low stress group (1%). Moderate stress individuals also report receiving extra wages (55.6%). This finding is statistically significant ($p < 0.001$), indicating a relationship between receiving extra wages and stress levels.

5. Perceived Stress Scale

This part of the analysis attempts to identify the factors determining perceived stress of women workers in the unorganized sector. The 10 items of the perceived stress scale were analysed for the total sample using a principal component factor analysis with varimax rotation. The eigenvalues are presented in the Table 4 and although four factors had eigenvalues greater than 1, suggested that it contributes 52.9% of total variance.

Table 4.
Total Variance Explained.

Total Variance Explained									
Initial Eigenvalues				Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
Component	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	1.702	17.023	17.023	1.702	17.023	17.023	1.573	15.732	15.732
2	1.263	12.628	29.652	1.263	12.628	29.652	1.288	12.877	28.609
3	1.17	11.696	41.347	1.17	11.696	41.347	1.228	12.28	40.89
4	1.159	11.588	52.936	1.159	11.588	52.936	1.205	12.046	52.936
5	0.983	9.834	62.769						
6	0.891	8.912	71.682						
7	0.793	7.931	79.613						
8	0.737	7.373	86.986						
9	0.689	6.886	93.872						
10	0.613	6.128	100						

Extraction Method: Principal Component Analysis.

Four factors were extracted shown in the above table based on the factor loadings and cumulative % of variance each factor account for explanation. The factors have the Eigen values of 1.159, which is also consider has factor. Thus, the factors extracted in the study are four in number and altogether contribute 52.9% of total variance. It has a good percentage of variance of factor analysis. Hence extracting four factors from total 10 items for measuring the perceived stress by all means.

Table 5.
Component Matrix.

Component Matrix	Component			
	1	2	3	4
Q9How often have you been angered	0.658	-0.136		-0.168
Q1How often you have been upset	0.599	0.258		
Q4How often have you felt confident	0.581		0.34	0.104
Q2 How often you were unable to control	0.496		0.397	0.128
Q7How often have you been able to control irritations in your life		0.64	0.254	0.437
Q8How often have you felt that you were on top of thief	-0.148	0.406	-0.329	0.263
Q6How often have you found that you could not cope	-0.358	-0.395	0.349	-0.35
Q3 How often you felt Nervous and Stressed	0.4		-0.637	-0.291
Q10How often have you felt difficulties		-0.542		0.576
Q5How often have you felt that things were going your way		0.381	0.43	-0.543

Extraction Method: Principal Component Analysis.
4 components extracted.

The Component Matrix from Principal Component Analysis (PCA) reveals how each survey item relates to four underlying components. Component 1: Emotional Distress includes items about emotional distress, such as anger and being upset. Component 2: Positive Outlook reflects perceived control and coping, with items about handling irritations and difficulties. Component 3: Personal Mastery is associated with confidence and emotional regulation, including difficulties and stress. Component 4: Coping Challenges suggests a blend of stress management and emotional control, focusing on coping abilities and feeling on top of challenges. Overall, the components highlight emotional regulation, stress, and coping mechanisms, thus this result identifies key factors impacting stress levels.

6. Limitations

This study design being cross-sectional, does not establish causal relationships and geographically limited to a district in Tamil Nadu, which may not be representative of all unorganized women workers in Tamil Nadu or India. There may be response bias, as some participants may underreport sensitive issues like financial challenges or domestic abuse.

7. Policy Recommendations

Based on the findings of the study on the psychosocial and economic struggles of unorganized women workers, the following policy recommendations are made:

1. Legal Protection and Rights: Extend labour laws to include unorganized women workers including fisherwomen, ensuring access to benefits like minimum wages, healthcare, maternity leave, and protection from exploitation.
2. Income Support and Fair Wages: Establish and enforce minimum wage standards across all sectors, ensuring equitable pay for women workers, with specific attention to addressing gender-based wage gaps.
3. Skill Development and Financial Literacy: Provide training in financial management and skill development to enhance employment opportunities, income stability, and empowerment.
4. Social Security and Welfare Programs: Introduce social security schemes and unsecured loan and health insurance options for unorganized workers, improving financial security and healthcare access.

These policies would significantly improve their socio-economic conditions and overall well-being.

8. Conclusion

The study on the psychosocial and economic struggles of unorganized women workers reveals significant challenges faced by this demographic, particularly in relation to stress, job satisfaction and income. The findings of this study have important implications for policy development and implementation. Results show that low job and income satisfaction, combined with high levels of stress, are prevalent among these workers, particularly in the moderate and high stress categories. The study underscores the need for targeted interventions to improve the working conditions, economic security, and mental well-being of unorganized women workers. Addressing the challenges faced by unorganised women workers requires holistic approach that combines policy reforms, social support systems, and economic empowerment initiatives. Through such comprehensive interventions we can hope to improve the working conditions and overall well-being of this vulnerable important workforce.

Transparency:

The authors confirm that the manuscript is an honest, accurate, and transparent account of the study; that no vital features of the study have been omitted; and that any discrepancies from the study as planned have been explained. This study followed all ethical practices during writing.

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