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Original Article

Community Section

Are the Anganwadi Workers Healthy and Happy? A Cross Sectional Study Using the General Health Questionnaire (GHQ 12) at Mangalore, India

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ABSTRACT

Background: Anganwadi Workers (AWWs) are the implementers of Integrated Child Development Scheme (ICDS). It is important to obtain the worker's viewpoints on their job-description, the problems they face and the levels of stress that they encounter, to address the quality of their services. The stressed AWWs are likely to be unhealthy, poorly motivated, less productive and less efficient in implementing the ICDS scheme. Thus, there is a need to evaluate the stress levels among the anganwadi workers and to understand the factors that influence the stress in this class of the population. This study was planned to study the stress among the anganwadi workers and the factors that are related to the stress.

Method: This was a cross sectional study which was done on 82 anganwadi workers of Mangalore by using a General Health questionnaire (GHQ – 12).

Results: As their mean age increased, more was the stress which was experienced by them. The BMI, hypertension, self-reported sleep disturbance, eye strain and the perceived gastritis were related to stress and these were statistically significant.The workers were stressed to different levels due to an inadequate supply of the ICDS food resources (P=0.042). Overall, the anganwadi workers experienced stress due to their work.

Conclusion: There was stress and dissatisfaction among the AWWs who were studied. An improvement in their remuneration; a clear career path and an improved administration are also required for the better work efficiency of the anganwadi workers. There is a need to ensure both the physical and the psychological wellbeing of the workers.

Key Words: ICDS, Anganwadi workers, Stress, General Health Questionnaire (GHQ-12)

INTRODUCTION

The Integrated Child Development Services (ICDS) Scheme which was launched in 1975 has been recognized as the world's one of the largest and most unique community based outreach programme for the women and child development [1]. It provides an integrated package of early childhood services which consist of supplementary nutrition, immunization, health check-up, medical referral services, nutrition and health education for women and pregnant and nursing mothers and non-formal education of children children upto the age of 6 years,in rural, urban, slums and tribal areas. The key element of this programme was that all the services were provided under one roof at the anganwadi centre. This programme focuses on the nutrition needs of the under the age of six years children, adolescent girls and pregnant and lactating women through the Anganwadi Workers (AWWs) who were the implementers and the backbone of the ICDS [2,3]. An AWW is a woman who is selected from within the local community. Her responsibility and job function include ensuring key maternal and child services like supplementary nutrition, immunization, periodic health check-ups, referral, non-formal pre-school education, giving advice on the nutrition and the common ailments to adolescent girls and pregnant and lactating women. The job responsibilities of the AWWs were defined at the launch of programme [1]; however, their responsibilities have been redefined, considering the many new policies and programs that have evolved. Presently, the AWWs also have to be involved in the Pulse Polio Immunization programme, the house to house survey, etc. Now their responsibilities and functions include surveys and disease control programs that require door to door visits beyond the working hours, which further stress them. Performing and discharging many duties in a limited time may lead to stress and discontent among the AWWs. Stress may lead to dissatisfaction, poor motivation and a decreased efficiency. There is a lack of information on the anganwadi worker's occupational stress [4,5]. Such information would be important in improving the quality of the service and the optimal utilization of the existing anganwadi workers by taking measures to address the issues. Thus, in this study, an attempt was made to assess the level of job stress and personal efficiency and also to understand the various factors which were associated with job stress, which could be responsible for the sub-optimal performance of the anganwadi workers.

MATERIALS AND METHODS

This cross sectional study was undertaken in Mangalore, Taluk of Dakshina Kannada District in India. Mangalore has population of 0.42 million. There are 420 anganwadis in the Mangalore taluk.

With a 95% confidence level and 80% power and by keeping the reference value as 50%, the total sample size came to 100. The 100 AWWs in the sample represented the 100 ICDS centres in the Mangalore Taluk, which formed a representative sample for the study. This study was conducted among randomly selected anganwadi workers from amongst all the AWWs who attended the monthly meeting at the Child. Development Project Officers (CDPO) office Mangalore. This study was approved by the institutional ethics committee of Kasturba Medical College, Mangalore, India. After obtaining the necessary permissions and after taking the informed consent, the data was collected by one of the authors (VNK) by personally interviewing the AWWs, to ensure its reliability.

DATA COLLECTION

A pre tested, structured and standardized questionnaire was used for the data collection .The questionnaire which was used, consisted of two different schedules .(i) The General Health Questionnaire (GHQ12) [6] was used to measure the stress levels among the anganwadi workers (ii). The General Health Status and the Work Environment Proforma carried details on the personal information like age, educational qualification, marital status, socio-economic status, medical complaints, a family history of diabetes and hypertension, height, weight, body mass index and blood pressure and work related information like work experience , the number of working hours, inter personal relationships, job satisfaction and work family interference.

THE MEASUREMENT OF HEIGHT, WEIGHT AND BLOOD PRESSURE

The height was measured in centimeters by using a measuring tape. The subjects were asked to stand bare feet on a flat floor against a wall with their feet parallel and with the heels, buttocks, shoulders and the occipital touching the wall. The head was held erect with the eyes aligned horizontally and the ears vertically, without any tilt (The Frankfurt plane).The topmost point on the vertex was identified on the wall by using a plastic ruler and the distance from the ground was measured.

The weight was measured in kilograms by using a corrected bathroom type of weighing scale.

A digital blood pressure recording apparatus was used to record the blood pressure from the left arm of the subjects while they were in the sitting position.

DATA ANALYSIS

The data were tabulated and analysed by using the SPSS version 17.0. The Chi square test was carried out to check the association of the various socio-demographic factors with the presence of stress. A p value of < 0.05 was considered as significant.

RESULTS

A total of 100 AWWs participated in the study. However, due to insufficient information, the questionnaires from 18 AWWs were not considered for the final analysis. Thus the final analysis was done on the information which was received from 82 AWWs. The socio demographic characteristics of the study population have been depicted in [Table/Fig-1]. Nearly three-fourths (71%) of the anganwadi workers were in the age group of 21-40 years and a majority (81.7%) of them were married. A majority (58.5%) of them had a work experience of 1-10 years [Table/Fig-1]. Ten

	Factors	Number	Percentage
1	**Age (Years)**		
	21-30	27	32.9
	31-40	31	37.8
	> 40	24	29.3
	Total	**82**	**100**
2	**Work Experience (Years)**		
	0-10	48	58.5
	11-20	24	29.3
	.> 20	10	12.2
	Total	**82**	**100**
3	**Education**		
	SSLC Pass	36	43.9
	SSLC Fail	20	24.4
	2ND PUC	17	20.7
	Degree	9	11
	Total	**82**	**100**
4	**Marital Status**		
	Single	15	18.3
	Married	67	81.7
	Total	**82**	**100**

[Table/Fig-1]: Sociodemographic characteristics of the Anganwadi workers surveyed

(12%) anganwadi workers were stressed and 3 (4%) of them were distressed. The ages of the anganwadi workers and their stress levels were related. As the age increased, more was the stress perceived and reported by them. The Body Mass Index (BMI) was also found to be related to the stress. Among the stressed, 66.6% were overweight and 33.3% were obese, whereas among the distressed, 20% were overweight, 10% were under weight and 70% were normal. Among the anganwadi workers who had hypertension, one third (33.3%) were stressed and 11.1% were distressed. Greater than one third (35%) of the anganwadi workers complained of disturbed sleep, which they claimed to have developed after their joining the service; however, 11% of them had been having sleep disturbances before they had joined the service as AWWs. Among the anganwadi workers with sleep disturbances, more than a quarter (27.6%) were distressed and 3.4% were stressed. Among the other complaints, 38% of the anganwadi workers who were studied, complained of eye strain; of these, 32% claimed to have developed eye strain after joining the service, while 6% had eye strain before they had joined the service itself. Among those who had developed eye strain after joining the service, 4% were stressed and 34.6% were distressed [Table/Fig-2]. Some anganwadi workers also complained of the symptoms of gastritis, among which 32% felt that it had been noticed only after they had joined the service. Nearly 38% of the AWWs were dissatisfied with the supply of the food resources that they were getting and most felt that the supply was inadequate. This was reported as a cause of worry and stress by some subjects. On analysis, we found a statistically significant association between the dissatisfaction with the inadequate supply of the food resources for the anganwadi workers and the stress among the anganwadi workers. [Table/Fig-3].

DISCUSSION

The stress among the anganwadi workers was studied by

Age Group	Stress levels			
	No Stress	Stressed	Distressed	Total
Body Mass Index (BMI)				
Obesity(>30)	2 (66.7%)	0 (0%)	1 (33%)	3 (100 %)
Over weight(23.1 -29.9)	21 (84%)	2 (8%)	2 (8%)	25 (100%)
Normal (18.5 -23)	27(79.4%)	7(20.6%)	0(0%)	34(100%)
Under weight (<18.5)	19(95%)	1(5%)	0(0%)	20(100%)
Total	**69 (84.1%)**	**10(12.2%)**	**3(3.7%)**	**82(100%)**
				X2=3.02 p=.388 ns (d.f. = 3)
Hypertension				
Present	5 (55.6%)	1 (11.1%)	3 (33.3%)	9 (100%)
No hypertension	64 (87.7%)	9 (12.3%)	0	73 (100%)
Total	**69 (84.3%)**	**10 (12.2%)**	**3 (3.7%)**	**82 (100%)**
				2=6.19 p=0.013 (df=1)
Sleep disturbance				
Present before joining	7 (77.8%)	1 (11.1%)	1 (11.1%)	9 (100%)
Started after joining	20 (68.9%)	8 (27.6%)	1 (3.5%)	29 (100%)
No sleep disturbance	42 (95.4%)	1 (2.3%)	1 (2.3%)	4 (100%)
Total	**69 84.1%**	**10 12.2%**	**3 3.7%**	**82 100 %**
				2=9.502 p=0.009 (df=2)
Gastritis				
Symptoms of gastritis present before joining	3 (60%)	0	2 40%	5 100%
Symptoms of gastritis appeared after joining	16 (61.5%)	9 (34.6%)	1 (3.8%)	26 (100%)
No symptoms suggestive of gastritis	50 (98%)	1 (2%)	0	51 (100%)
Total	**69 (84.1%)**	**10 (12.2%)**	**3 (3.7%)**	**82 (100%)**
				x2 = 19.52=0.001 (df = 2)

[Table/Fig-2]: Various factors and Stress levels

Icds Food	Stress Levels					Total
Resources Supply	No tress	Mildly Stressed	Stressful	Highly Stressed	Extremely Stressed	
Adequate	2(3.9%)	21(41.2%)	23(45.1%)	1 (2%)	4 (7.8%)	51(100%)
Inadequate	2(6.5%)	5(16.1%)	15(48.4%)	5(16.1%)	4 (12.9%)	31(100%)
Total	**4(4.9%)**	**26(31.7%)**	**38(46.3%)**	**6 (7.3%)**	**8 (9.8%)**	**82(100%)**

[Table/Fig-3]: Various factors and Stress levels

using the General Health Questionnaire Score (GHQ12). The GHQ comprised of 12 questions which asked the informants about their general level of happiness and the experiences of depressive and anxiety symptoms and sleep disturbances over the last four weeks. The mean ages of the anganwadi workers who were stressed and distressed were 48 years and 35 years respectively. The association between body mass index and work stress was found to be significant. This was in conformity with the findings of a previous study, where the participants with a higher BMI were found to have more stress at work [7]. The blood pressure and stress were related to each other. The relationship was found to be statistically significant. A previous study had found that job strain was associated with a heightened blood pressure response [8]. The association was found to be statistically significant (P=0.044). Sleep disturbances and stress were assessed among the anganwadi workers and they were found to have an association (P=0.008). A study which was done by other authors, concluded that the stress and the social situation at work were strongly linked to a disturbed sleep [9,10]. As per their perception, many of the anganwadi workers had developed a feeling of eye strain after they had joined the service. This was associated with their stress levels and it was found to be statistically significant (P<0.001). It could be hypothesized that sleep disturbances which were compounded by stress led to eye strain. Further, this could be related to the age related changes and the development of presbyopia among the AWWs. The stress levels and gastritis were very significantly associated (P=0.001). The ICDS food resource supply and the stress at the job were studied and they were found to be associated with each other. The supply of the ICDS food resources was found to be inadequate. This had led to a lot of stress among the anganwadi workers and the stress levels varied from highly stressed to mildly stress on the Likert scale. This association was statistically significant (P= 0.042). This was in conformity with the findings of other studies [11].

CONCLUSION

There were stress and dissatisfaction among the AWWs who were studied. There is a need to ensure both the physical and the psychological wellbeing of the workers. This would help in an improved efficiency and the implementation of the ICDS.

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