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A CROSS SECTIONAL STUDY ON MENTAL HEALTH AMONG HOSPITAL ASSOCIATED SOCIAL WORKERS DURING THE OUTBREAK OF CORONA VIRUS DISEASE

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ABSTRACT

Background: COVID-19 is an unprecedented situation for every nation which is rapidly spreading worldwide. The phase of crisis could have serious impact on mental health of society, health, health care workers and social workers that can affect the efficiency with which they fight against this pandemic.

Aim: COVID-19 pandemic has become a major global event which has threatened the whole mankind hampering their physical and mental health. This cross sectional study was aimed to evaluate the psychological abnormalities or mental health in social workers who are working frontline in the hospital setup during the coronavirus outbreak and to investigate the association of mental health with resilience and social support.

METHOD: 150 social workers were enrolled for the study out of which 45 participants had experience of dealing public health emergencies (experienced social workers) and 105 did not have any experience (novice social workers). The questionnaire filled by each participant include their demographic characteristics, Symptom Check-List-90 (SCL-90), Connor-Davidson resilience scale (CD-RISC) and Social Support Rating Scale (SSRS). The data was interpreted using statistical analysis.

RESULTS: The results revealed that the novice social workers showed 17.1% prevalence of psychological abnormalities than the experienced group which showed 8.9% social workers with psychological abnormal conditions. They were found to be less resilient in coping with the situation (tenacity -35.24±7.79, strength- 24.32±3.98, optimism - 9.94±2.55). The present study showed that resilience and social support are strong predictors of mental health in novice social workers.

CONCLUSIONS: The study supported that the social workers should be trained and should have professional experience to reduce the prevalence of psychological abnormality and for them to strongly battle this pandemic situation.

KEYWORDS : COVID-19, Social Workers, Pandemic, Resilience, Mental Health, Social Support.

BACKGROUND

COVID-19 is an unprecedented situation for every nation which is rapidly spreading worldwide. COVID-19 is an emerging human infectious disease caused by SARS-CoV-2 which has become pandemic and has influenced many countries all around the globe. On 31st January, World Health Organization, WHO (2020) had proclaimed a global emergency which is because of the pandemic outbreak by SARS-CoV-2.

Huang (2020) stated that in December 2019, Wuhan, Hubei Province, China had encountered series of patients suffering from acute respiratory illness of unknown origin. Lu (2020) depicted that after investigation it was ruled out that the acute respiratory illness outbreak is caused by "severe acute respiratory syndrome coronavirus 2" (SARS-CoV-2). The infection was officially renamed as coronavirus disease 2019 (COVID-19) caused by SARS-CoV-2 on February 11, 2020 by the WHO (2020). WHO (2020) has updated that till 9 July 2020 the worldwide confirmed cases are 11841326 and confirmed deaths due to this pandemic is 544739. It has affected 216 countries, areas or territories by 9 July 2020.

Ma (2020) during investigation has revealed that this pandemic outbreak has impacted the daily life to a major extent threatening mental and physical health globally. Moreover, there is a huge halt on the social and economic development of the nation and worldwide. The government and the state health departments have issued various guidelines for allocating preventive and control strategies against the COVID-19 pandemic. Every effort is been pursued globally to contain the spread of the pandemic. Social workers have a long established role and are recruited by the local authority of social services department since 1974. (Davies 1995). During this pandemic the hospitals are enrolled as a defense to prevent the large outbreak (Patrick, 2003). The phase of crisis would have serious impact on mental health of society, health, health care workers and social workers. Under these circumstances, the social workers would face unique challenges that are associated with the hospital. (Dane & Chachkes, 2001). Occupational stress amidst COVID-19 pandemic outbreak could challenge the mental health and resilience of the social workers.

Resilience refers to the capacity of an individual to cope up with adverse situation and recover quickly. (Fletcher and Sarkar, 2013). Perlman (2017) has showed in his study that can protect the individual from mental illness and adversities in life which makes it a suitable predictor to assess the mental health. Social support is a view point of individual to be in a socially involved and seek mutual support from each other (Cao et al., 2018) which includes your family, friends and relatives that probes positive association with mental health (Rothon et al., 2012). But based on highly contagious natures of the COVID-19 infection global lockdown have unyoked the in person contact with others and one has to spend time alone after work which could be a deteriorating factor for the mental health and status.

Previous studies (Chan-Yeung & Yu, 2003; Dwosh, 2003) have observed that during the pandemic of SARS the effects of pandemic on health care professionals were well elucidated.

Including, Cai (2020) have demonstrated the effect of COVID-19 pandemic on health care workers. Henceforth, there is no research addressing impact of this pandemic situation on social workers associated with the hospital. Social worker is an integral vital element in dealing with a pandemic situation thus further researches should be conducted to elaborate the mental status of the frontline social workers. The present study was aimed to investigate the mental health among the social workers front lining the battle of COVID-19 and to assess its association with social support and resilience.

METHOD

In the present cross sectional study 150 hospital associated social workers were recruited for the present study by random sampling from the Nehru Memorial College Sullia and KVG Medical College and Hospital, Sullia. The enrolled social workers in the study were front lined in battling the COVID-19 pandemic. Among all the participants 45 social workers (experienced) had experience of working with public health emergencies and were experienced rest 105 participants (novice) were new to such environment.

The ethical clearance for the present study was obtained from the Institutional Ethics Committee. A written informed consent, in a language known to them, was obtained from all participants prior to the study. All participants were asked to fill up the Symptom Check-List- 90 (SCL-90), English version of Connor-Davidson resilience scale (CDRISC) and Social Support Rating Scale (SSRS).

The questionnaire SCL-90 (Derogatis, 1973) assessed the symptom intensity using different number of subscales. This comprises of 90 items consisting of 10 factors to assess the mental health including somatization, obsessive—compulsive, interpersonal sensitivity, depression, anxiety, hostility, photic anxiety, paranoididefition, psychotieism, and additional items. The responses by participants were measured on a 5-point Likert scale which varies from 0 (None) to 4 (Severe). The results are measured by adding the items through which subscale score and total scores are calculated. Psychological abnormality is suggested if any subscale score is higher than 2, positive items are higher than 43, or the total score is higher than 160. This is a reliable and valid predictor of mental status used in many previous studies associated with examination of mental health (Holi, 1998; Wei, 2018).

Resilience was evaluated using CD-RISC (Connor and Davidson, 2003) which is a 25 item scale distributed among three subscales including strength, tenacity and optimism. The responses by participants were measured on 5 point Likert scale which varies from 0 (not true at all) to 4 (true almost all the time). Items are added to record scores lying between 0 – 100. The higher score would denote high resilience.

The SSRS (Xiao 1999) was used to assess the social support which comprises of 10 item scale which are distributed among 3 subscales including objective support (e.g., what would be your source of financial support when you are in practical problem or any emergency situation) subjective support (e.g. How many are your close friends when you need support and help) and availability (e.g., How to ask for help in case of trouble).The scores of all items were added to record the total score which ranged from 0 – 50 and the higher score depicted social support.

STATISTICAL ANALYSIS

Data were tabulated and examined using the Statistical Package for Social Sciences Version 22.0 (IBM SPSS Statistics for Mac, Armonk, NY: IBM Corp, USA). Descriptive statistical analysis had been carried out in the present study. Continuous data was presented as Mean±SD. Categorical data was presented as frequency distribution. P-value of <0.05 was considered as significant. Demographic parameters with and without psychological abnormalities were compared using 2 test. The novice staff and experienced social workers were compared for mental health, social support and resilience. Multiple regression analysis was used to find the association between mental health, resilience and social support in experienced and novice social workers.

RESULTS

Parameters	Variables	Total Population	Positive Population	Frequency of Psychological Abnormality	$\chi 2$ test	P value
Gender	Male	67	9	13.4	0.10	0.740
	Female	83	13	15.6	9	
Age Group	18-30	76	12	15.7	0.11	0.733
	31-40	74	10	13.5	5	
Educational Levels	Graduate	101	15	14.8	0.00	0.936
	Postgraduate	49	7	14.2	6	
Marital Status	Married	80	12	15	0.01	0.915
	Unmarried	70	10	14.2	1	
Off Springs	Yes	77	11	14.2	0.01	0.907
	No	73	11	15.1	4	
Length of Service	Less than 5	54	9	16.6	0.65	0.883
	5-10	41	6	14.6	8	
	10-20	32	5	15.6		
	More than 21	23	2	8.7		
Public Health Emergency Experience	Yes	45	2	8.9	4.22	0.03*
	No	105	20	17.1		
Total		**150**	**22**	**14.67**		

Table 1. Demographic Characteristics of the Population and Significance of the Total and Positive Cases for Psychological Abnormality

*P value significant below 0.05

Mental Health Subscales	Novice Social Worker (n= 105)	Experienced Social Worker (n = 45)	t	P Value
Somatization	1.16 ±0.34	1.15±024	0.845	0.398
Obsessive-Compulsion	1.41±0.52	1.35±0.41	1.678	0.09
Interpersonal Sensitivity	1.28±0.39	1.23±0.28	2.102	0.03*
Depression	1.24±0.44	1.21±0.31	1.512	0.145
Anxiety	1.19±0.33	1.13±0.29	1.684	0.09
Hostility	1.23±0.33	1.21±0.27	0.512	0.634
Photic Anxiety	1.18±0.36	1.12±0.27	2.412	0.01*
Paranoididefition	1.16±0.32	1.15±0.27	0.133	0.912
Psychotieism	1.17±0.33	1.14±0.28	1.161	0.254
Additional items	1.23±0.34	1.22±0.33	0.422	0.712

Table 2. Table Depicting Mental Health of Novice and Experienced Social Workers

*P value significant below 0.05

	Novice social worker (n= 105)	Experienced social worker (n = 45)	t	P value
Tenacity	35.24±7.79	39.43±6.65	5.765	<0.001*
Strength	24.32±3.98	26.76±4.12	6.543	<0.001*
Optimism	9.94±2.55	11.14±2.89	5.876	<0.001*
CD-RISC	69.78±15.67	77.65±14.12	4.977	<0.001*

Table 3. Resilience of Novice social workers and experienced social workers

*P value significant below 0.05

	Novice Social Worker (n= 105)	Experienced Social Worker (n = 45)	T	P value
Objective Support	10.43±3.70	11.45±3.80	2.713	0.008*
Subjective Support	25.56±4.98	26.75±4.34	2.945	0.004*

Availability	8.32±2.13	8.33±2.12	-0.087	0.897
SSRS	44.67±8.97	46.45±8.12	2.998	0.005*

Table 4. Social Support of Novice Social Workers and Experienced Social Workers

*P value significant below 0.05

Items	Beta	SE	95%CI	T	P value
Experienced social worker					
Tenacity	-0.278	0.467	-1.743-0.051	-1.884	0.06
Strength	-0.056	0.923	-1.987-1.483	-0.276	0.774
Optimism	-0.018	0.945	-1.97-1.765	-0.162	0.886
Objective support	-0.087	0.553	-1.56-0.564	-0.998	0.345
Subjective support	-0.098	0.489	-1.453-0.523	-0.976	0.356
Availability	-0.071	1.134	-2.987-1.178	-0.868	0.437
Novice social worker					
Tenacity	--0.128	0.192	-0.823-0.089	-2.425	0.01*
Strength	-0.117	0.328	-1.345-0.043	-2.112	0.03*
Optimism	-0.051	0.413	-1.347-0.269 -1.031-	-1.199	0.213
Objective support	-0.079	0.239	-0.15	-2.767	0.01*
Subjective support	-0.097	0.183	-0.936--0.0.215	-3.143	0.003*
Availability	-0.118	0.513	-2.554--0.865	-3.984	<0.001*

Table 5. Multiple Regression Analysis Predicting Association of Mental Health by Resilience and Social Support in Novice and Experienced Social Workers

*P value significant below 0.05

The frequency of psychological abnormality in the present study was 14.67%. Frequency of psychological abnormality was significantly more among subjects with no public health emergency experience as compared to subjects having public health emergency experience as $p<0.05$. (Table 1)

Table 2 shows the comparison of mental health between experienced and novice social workers in relation to all the 10 subscales. Photic anxiety and interpersonal sensitivity was found to have statistically significant difference between the experienced and novice social workers. (p value = 0.03 and p value = 0.01 respectively). Obsessive compulsion and anxiety had almost marginal statistically significant difference between the groups (p value = 0.09 and p value = 0.09 respectively).

The present study have shown statistically significant difference between all three subscales of assessing resilience including tenacity (p value = 0.001), strength (p value = 0.001) and optimism (p value = <0.001). The novice social worker group had lower CD-RISC scores in comparison to experienced social worker. When CD-RISC scores was compared statistically between novice and experienced social worker, it was found to be statistically significant (p value<0.001) showed in Table 3.

Table 4 shows the social support of novice social workers and experienced social workers While comparing the social support between novice and experienced social worker, objective support (p value= 0.008) and subjective support (p value= 0.004) had statistically significant difference among the two groups. The SSSR total score was found to be significantly lower in novice social worker group (p value= 0.005).

Table 5 shows the multiple regression analysis to find the association of mental health with resilience and social support in novice and experienced social workers. There were no factors found that were significantly associated among resilience and social support which could predict the mental health among experienced social workers. Tenacity, strength, objective support, subjective support and availability of support were the factors which could significantly predict the mental health in novice social workers.

DISCUSSION

Su (2007) have stated that the psychiatric symptoms were associated with younger age and lack of family support. The present study could not establish a significant association with age of the participants. The present study has shown that a statistical significant association could be established between psychological abnormality and previous public health emergency experience of the participants.

The social workers with no public emergency experience had demonstrated worsening mental health, resilience and social support. Interpersonal sensitivity and photic anxiety were found to be good predictors of mental health among the experienced and novice social workers. Government guidelines for COVID-19 outbreak suggest social distancing and quarantine for the hospital set up health care workers. Including, the high risk of cross infection and rising mortality rate could increase the level of anxiety and fear. Thus, mental health could be influenced especially in high risk work conditions.

In the present study the experienced social workers were found to be resilient in coping up with the present pandemic situation. The experienced social workers who have previously dealt with similar situation were competent in dealing with the present COVID-19 outbreak with minimal influence on mental health. Plaisier (2007) have stated in their research that lack of social support has a strong influence on depression and anxiety especially in those who are working in high risk conditions. Lock down and social distancing have created lack of family support for the social workers as they have to stay elsewhere away from their family which could be a reason for psychological abnormality among the social workers working in hospital set up.

The present study was intended to shed light on the need of creating constructive peer-support (Banerjee, 2020), effective online mental health service(Yao et al., 2020) and early screening and interventions (Zandifar and Badrfam, 2020) to address the mental health needs of the social workers for working efficiently in a depressing environment without family support.

Another finding of the present study is that the subscales of resilience (tenacity, strength and optimism) and social support (objective support, subjective support and availability of support) were the factors which could strongly predict the mental health in novice social workers. The social workers with no psychological abnormality were found to show great courage and did not quit this medical battle and are still standing tall. Thus, it seems crucial to assign high levels of training and professional experience to the social workers to endure and thrive in this critical situation without hampering their mental health especially for the novice staff.

The limitations of the study could be the small sample size which needs further interventions and investigations to evaluate the mental health and to predict the potential factors which could influence the social workers at this point of time when pandemic outbreak prevails. Another limitation could be the lack of consideration of sleep deprivation and its influence on mental health which could be a confounding factor.

Chen (2006) had stated that public health emergencies could

have a long term effect on anxiety, depression and sleep quality among the health care workers. Thus, further investigations are needed to rule out the predictors of metal health in social workers during these public health emergencies.

CONCLUSIONS

The findings of the present study had revealed that social workers with no public emergency experienced had encountered psychological abnormalities. They have strong influence on mental health due to the COVID-19 outbreak. Resilience and social support could be a strong predictor to assess mental health. The study had shed light on the lost aspect of training and providing professional experience to social workers associated with the hospital set up.

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