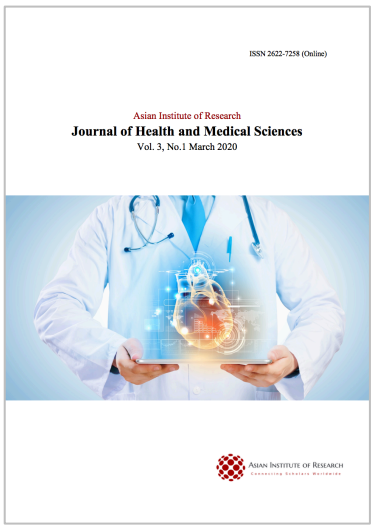

Journal of Health and Medical Sciences

Saha, Madhusudan, Mamun, Md Abdullah Al, Paul, Siddhartha, Perveen, Irin, Shil, Bimal Chandra, Abir, Habib Ullah, Mahbub, Imteaz, and Sengupta, Rupam. (2020), Anxiety and Depression Among Migrant Workers of Bangladesh Presenting with Gastrointestinal Symptoms. In: *Journal of Health and Medical Sciences*, Vol.3, No.1, 33-40.

ISSN 2622-7258

DOI: 10.31014/aior.1994.03.01.94

The online version of this article can be found at:
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The Asian Institute of Research
Journal of Health and Medical Sciences
Vol.3, No.1, 2020: 33-40
ISSN 2622-7258

DOI: 10.31014/aior.1994.03.01.94

Anxiety and Depression Among Migrant Workers of Bangladesh Presenting with Gastrointestinal Symptoms

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Abstract
Introduction: This study was designed to see prevalence of anxiety and depression among migrant workers presenting with gastrointestinal symptoms. Material and method: Consecutive subjects working in middle-east countries attending at gastroenterology outpatient department were included. Psychiatric assessment of them was done using Hospital Anxiety and Depression Scale (HADS) by trained interviewer under supervision of a senior psychiatrist. Statistical analysis was done using SPSS 20. Chi square test was done to see differences. Result: Total 426 patients, age from 18 years to 61 years (mean 36.96), 364 (85.44% from rural community, 353 (78.64%) married, and 390 (91.54%) working as laborer were included. Among them 66 (15.5%) and 45 (10.6%) had symptoms score consistent with anxiety and depression respectively. Anxiety was more prevalent among workers with lower level of education, higher age, shorter duration of migration and single marital status. Depression was more prevalent among married people, of lower educational and economic background and of older age. Abdominal pain, anorexia, loose motion, abdominal fullness, weight loss, constipation and incomplete bowel evacuation are common presenting symptoms. Conclusion: Anxiety and depression are common among Bangladeshi migrant workers in middle-eastern countries. Level of education, marital status, economic background and older age affect mental health. Depression was associated with higher numbers of physical complaints. Migrant workers are playing a vital role in our economy. So, issues of their mental health and psychiatric morbidity which might adversely affect their overall activity and foreign remittance, should not be neglected.

Keywords: Anxiety and Depression, Migrant Workers, Gastrointestinal Symptoms

Introduction

Migration is a very common phenomenon of human history (Bhugra D. & Gupta S., 2010). About 192 million people (3% of world' population) in world are living outside of their own country (Ghent A., 2008). Migration for economic reason is common in developing countries and it arises due to lack of prospect of a person in his own country (Castle S, 2010). In 2014, about 500,000 people from Bangladesh were working abroad as temporary migrant. Among them about 17% were female. More than 50% of them were working in middle-eastern countries (BMET database, 2015) and remittance from these workers constituted about 08% of gross domestic product (GDP) in 2015- a major source of foreign exchange earning second to ready-made garments (ADB briefs,2016). Till April, 2018 about 273,304 workers left our country for different countries as migrant workers (Stillman S, McKenzie D & Gibson J, 2007).

Studies among migrants to New Zealand (Kirmayer L.J. et al., 2011) and Canada (Warffa N, 2006) showed improvement of mental health. But study with Somali migrants (El-Hilu SM, 1990) showed association of poor mental health. Psychiatric morbidity was found to be two to five times higher among women working in middle east countries than in their native country (Zahida MA et al, 2004; Bhugra D,2004).

Although people migrate for better quality and prospect of life, yet they have to pass through a stressful process. They have to cope with new culture, language, working environment. Majority of them like ours, are leaving their families behind in their country (Bhugra D. & Becker M.A., 2005) which are potential factors for disruption of mental health of migrants and also their family members (Zigmond A.S. & Snaith R.P., 1983).

Literature shows mental disorder especially anxiety and depression are much higher among patients with gastrointestinal symptoms (GI symptoms) than those without GI symptoms (Mussel M., 2008) and this psychiatric morbidity may interfere quality of life and thereby interfere their working performances.

With this background this study was designed to see psychiatric morbidity namely anxiety and depression among Bangladeshi people working abroad mainly Middle-eastern countries presenting with gastrointestinal symptoms.

Material and Methods

Consecutive subjects working abroad, coming home to meet relatives, attending gastroenterology outpatient department were included. Study period was from January 2015 to January 20017. In addition to evaluation of gastrointestinal symptoms, mental status was assessed using Hospital anxiety and depression scale (HAD) (Mussel M., 2008) by trained personnel under supervision of a senior psychiatrist. Those who were known patient of psychiatric disorder and those who were not agreed to participate in the study were excluded. We also did not include migrant workers who had returned home permanently. Socio-demographic data were recorded in a predesigned data sheet.

Statistical analysis

Data were analyzed using soft-wire statistical package for social science (SPSS version 20). Chi square test was done to see relations of categorical data and p value <0.05 was taken as significant. Score of mental state up to 07, 8-10 and more than 10 were taken as normal, border line and confirmed cases for both anxiety and depression. Univariate logistic regression analyses were carried out to find out the associations between anxiety/depression, socio-demographic, economic, health related variables and duration of migration. Multivariate analysis was done with variables that were associated with anxiety or depression in univariate analyses. Odds ratios were used to determine the strength of association in selected variable.

Result

A total of 426 patients, all are male, age ranging from 18 years to 61 years (mean 36.96 and SD 9.2) were included. Among them 364(85.44%) and 62(14.55%) were from rural and urban community respectively.

Table-1

variables	*Anxiety*				*Depression*			
	Normal (%)	*Borderline (%)*	*Confirm (%)*	*P value*	*Normal (%)*	*Borderline (%)*	*Confirm (%)*	*P value*
Rural(364)	236 (64.83)	71 (19.5)	57 (15.65)	0.69	262(71.9)	67(18.40)	35(9.61)	0.231
Urban (62)	38(61.29)	15(24.19)	9(14.51)		39(62.9)	13(20.96)	10(16.12)	
Married(353)	228 (64.58)	73(20.68)	52(14.7)	0.594	242(68.5)	74(20.96)	37 (10.48)	0.038
Single (73)	46(63.01)	13(17.8)	14(19.1)		59(80.82)	6(8.21)	8(10.96)	
Age group								
Up to 30 y(134)	91(67.91)	23(17.16)	20(14.9)	0.28	107(79.9)	15(11.19)	12(8.95)	0.052
>30-40 y (147)	85(57.82)	35(23.81)	27 (18.36)		97(65.98)	35(23.80)	15(10.2)	
>40 y (145)	98 (67.58)	28 (19.31)	19 (13.10		97 (66.89)	30(20.69)	18(12.41)	
Education								
Illiterate (39)	21 (52.84)	6(15.38)	12 (30.76)	0.014	19(48.71)	8(20.51)	12(30.76)	0.000
Primary (281)	171 (60.85)	64 (22.77)	46 (16.37)		192(68.3)	58(20.64)	31(11.03)	
SSC (58)	42 (72.41)	11 (18.96)	5(8.62)		47(81.03)	11(18.26)	0	
HSC (38)	30 (81.08)	4(10.81)	3(8.1)		34(91.89)	2(5.4)	1(2.7)	
Above (11)	10 (90.90)	1(9.09)	0		9(81.8)	1(9.09)	1(9.09)	
Duration of stay								
Up to 2y (27)	20(74.07)	4(14.81)	3(11.11)	0.95	19(70.37)	4(14.81)	4(14.81)	.363
>2-5y (71)	45(63.38)	13(18.30)	13(18.3)		50(70.42)	10(14.08)	11(15.49)	
>5-10 y(93)	60(64.51)	19 (20.43)	14(15.1)		67(72.04)	21(22.58)	5(5.37)	
>10-15 y (101)	66(65.34)	22(21.78)	13(12.8)		76(75.24)	15(14.85)	10(9.9)	
>15	83(61.94)	28(20.89)	23 (17.16)		89(66.41)	30(22.38)	15(11.19)	
Economy								
Poor (13)	9 (69.23)	0	4(30.76)	0.089	3(23.07)	5(38.46)	5(38.46)	0.000
Middle class (378)	237(62.70	80 (21.16)	61(16.1)		264(69.8)	74(19.57)	40(10.58)	
Rich (35)	28(80)	6(17.14)	2(2.85)		34(97.4)	1(2.85)	0	
Number of symptoms								
One (220)	151(69.1)	38(17.27)	30(13.6)	0.34	167(75.9)	32 (15.0)	20(9.09)	0.002
Two (129)	80(62.01)	26(20.15)	23(17.8)		91(70.54)	27(20.93)	11(9.2)	
Three (64)	35(54.68)	18(28.12)	11(17.2)		39(60.93)	16(25.0)	9(14.06)	
Four (11)	5(45.45)	4(36.36)	2(18.18)		3(27.27)	3(27.27)	5(45.45)	
Five (2)	2(100)	0	0		1(50)	1(50)	0	

Of them 353 (78.64%) were married and 73 (17.13%) were unmarried. Of this respondents 390 (91.54%) were in service mostly labor type job and remainder were involved in business. Sixty six (15.5%) and 45 (10.6%) had symptom scores consistent with anxiety and depression respectively.

Table 2

	Anxiety		*OR (95% confidence)*		*value*	*Depression*		*OR (95% confidence)*		*value*
	Present	*Absent*	*Lower*	*upper*		*Present*	*absent*	*lower*	*upper*	
Age ≤ 30	20	114	.603	1.88	1.066	12	122	.647	2.59	1.29
>30	46	246				33	259			
Rural	57	307	.427	1.95	.915	35	329	.844	3.87	1.808
Urban	09	53				10	52			
married	52	301	.715	2.638	1.37	37	316	.468	2.36	1.05

Single	14	59				8	65			
Poor & middle	65	326	0.2	1.09	.148	45	346	.854	.917	.88
Rich	01	34				0	35			
≤ primary	58	262	.170	.800	.369	43	277	.29	.521	.124
above	8	98				02	104			
≤2	53	296	.584	2.204	1.134	31	318	1.147	4.529	2.28
>2	13	64				14	63			

In this series 24 (5.3%) people had combined anxiety and depression. Anxiety was found slightly more among people of rural origin than that of urban origin (15.65% vs14.51%, P value 0.696). Incidence of anxiety was higher among unmarried people than that of married group (19.17% vs 14.73%). But difference was not significant (P=0.594).Anxiety symptoms were more prevalent among age group more than 30 to 40 years (18.367%) followed by up to 30 years age group (14.82%) with p value 0.289. Anxiety symptoms were found to be significantly more prevalent (P=0.014) among subjects with lower educational background. Anxiety was more prevalent among subjects staying abroad for 2-5 years followed by those staying more than 15 years, but difference was not statistically significant (P=0.95).

In this series symptom score consistent with depression was higher among subjects of urban origin than that of rural origin (16.12 vs 9.61%) and difference was not statistically significant (P=0.231). Prevalence of depression was higher among married workers than that of unmarried workers (10.95% and 10.48% respectively) with P value 0.038. Prevalence of depression was found to be 30.76% and 11.03% among illiterate people and people with education up to primary level (P=0.00). Depression was found to be more prevalent in poor economic group in comparison to people having higher economic status (38.46% vs 10.58%) (P=0.000). Subjects more than 40 years group were found to suffer from depression more (12.4%) than subjects of >30 y to 40 years group (10.20%) (P=0.052). It was also seen that number of physical symptoms were higher among depressed persons (P=0.002).

Both univariate (table-3 & 4) and multivariate (table-5 & 6) logistic regression models are presented.

Table 3

Parameter	*P-value*	*OR*	*95% CI*
Age	.449	.989	.961-1.018
Lower economic condition	.062	6.779	.912-50.409
Lower education level	.012	2.712	1.250-5.885
Rural residence	.818	1.093	.511-2.340
Laborer type job	.781	1.150	.430-3.073
Single	.341	.728	.379-1.399
Duration of stay at foreign country	.825	.996	.964-1.029
Symptoms > 2	.710	.881	.454-1.712

Table 4

Parameter	*P-value*	*OR*	*95% confidence interval*
Age	.233	1.020	.987-1.054
Urban residence	.127	.553	.258-1.184
Lower economic condition	.998	2.101	
Lower education level	.004	8.072	1.921-33.920
Married	.904	.951	.423-2.317
Duration of stay at foreign country	.551	.988	.950-1.028
Symptoms > 2	.019	.439	.221-0.872

Table 5

Parameter	*Significance*	*Exp B*	*95.0% C.I. for Exp B*	
			Lower	*Upper*
Lower Education	.035	2.354	1.063	5.216
Lower Economic Condition	.106	5.557	.695	44.453
Laborer type job	.467	.677	.236	1.936
Rural Residence	.849	.927	.426	2.019
Constant	.001	.027		

Table 6

Parameter	*Significance*	*Exp B*	*95.0% C.I. for Exp B*	
			Lower	*Upper*
Age	.310	1.018	.984	1.053
Laborer type job	.532	.659	.179	2.434
Lower education	.012	6.426	1.506	27.426
Lower economic condition	.998	1.347	.000	
Constant	.997	.000		

In univariate analyses lower economic condition (OR 6.779), education level primary or less (OR 2.712), rural residence (OR 1.093) and laborer type job (OR 1.150) were positively associated with anxiety in migrant workers. In multivariate analysis with the above mentioned factors, lower economic condition and lower education level appeared as independent predictors for anxiety in migrant workers.

Lower economic condition (OR 2.101), education level primary or less (OR 8.072), increasing age (OR 1.020) and laborer by occupation (OR 1.328) were positively associated with depression in migrant workers in univariate analyses. Multivariate analysis with the above mentioned factors showed lower economic condition, lower education level and increasing age appeared as independent predictors for depression in migrant workers.

Table 7

	Anxiety				*Depression*			
symptom	*No*	*borderline*	*confirm*	*P value*	*no*	*borderline*	*confirm*	*P value*
Abdominal pain (169)	107	35	27		121	34	14	
Vomiting(34)	18	9	7		25	4	5	
Loose motion (52	35	10	7		31	14	7	
Weight loss (66)	33	21	12	0.018	38	20	8	0.022
Anorexia (73)	42	20	11		42	18	13	0.017
Bloating (54	37	11	6		40	13	1	
Constipation (45)	29	8	8		30	7	8	
Chest pain (25)	13	6	6		17	4	4	
Incomplete bowel evacuation(56)	36	11	9		39	10	7	
Heart burn (28)	14	9	5		16	6	6	
Abd fullness (57)	36	9	12		31	14	12	0.005
No of symptom								
1	152	30	30		167	33	20	
2	80	26	23	0.343	91	27	11	0.002

3	35	18	11		39	16	9	
4	5	4	2		3	3	5	
5 and more	2	0	0		1	1	0	
Up to 3 symptoms	267	82	64	0.615	297	76	40	0.001
>3 symptoms	7	4	2		4	4	5	

Presenting symptoms of the people in this series were one or combination of several complaints. Common presenting symptoms of patients with both anxiety and depression were abdominal pain (27, 40.9% and 14, 31.1%), anorexia (11, 16.7% and 13, 28.9%), loose motion (7,10.6% and 7, 11.1%) , incomplete bowel evacuation (9, 13.6% and 7, 15.6%), abdominal fullness (12, 18.2% and 12, 26.7%), weight loss (12, 18.2% and 13, 8, 17.8%) and constipation (8, 12.1% and 8, 17.8%) etc (Table No. 6).

Discussion

In our study all participant were male which reflects the social scenario that males usually sought foreign jobs to improve economic condition of family which is consistent with reports from Nepal (Gaudel Y.S., 2006). In our study majority of people are from rural community which is also consistent with report from Nepal (Hyangwa P.M., 2009). Both anxiety and depression were more prevalent among people with lower educational background in our study. In our series about 75% of workers had lower educational background. Bangladesh Bureau of Statistics Survey in 2013 also revealed that most of Bangladeshi migrant workers' education levels were below secondary level.

More than three fourth of our subjects were married and having family in country and prevalence of depression was found significantly higher among them. This can be explained by mental stress of leaving family in country in addition to adaptation with unfamiliar environment abroad (Gaudel Y.S., 2006). On the basis of occupation at home before going to job, majority were farmer and day laborer followed by unemployed in our series. This might affect their skills, attitude and mental health in work abroad. Majority of our workers are from middle and lower middle class family which is consistent with report from Nepal (Gaudel Y.S., 2006). Duration of stay abroad for work was not found to have significant influence on both anxiety and depression. In our series people with depression had more physical symptoms for consultation with physicians.

Most of our study subjects were involved in low income jobs like construction work, cleaning, farming and labor of factory which are considered as difficult, dirty and dangerous. Most of our people stay in group like messes or labor camp with poor facilities of entertainment. All these make them vulnerable for psychiatric morbidity (Bhattarai P., 2005) .Reports from United Arab Emirates (UAE) showed high prevalence of depression and suicidal tendency among migrant workers and which was related to lower income, high cost of living, unfriendly working condition and also environment (Joshi S, Simkhada P. & Prescott G.J., 2009).In our study prevalence of anxiety was higher than depression. Prevalence of anxiety was higher in Nepal, but both mental illness - anxiety and depression was found higher than our report (Joshi S, Simkhada P. & Prescott G.J., 2009). Report on migrant people working in UAE (Al-Maskari F. et al., 2011) showed prevalence of depression was higher than anxiety and both are about two times higher than our report. This can be explained by difference in method of study. In Nepal they included repatriated and hospitalized people (Joshi S., Simkhada P. & Prescott G.J.,2009) and survey from UAE (Al-Maskari F. et al, 2011; Bhui K., 2005) included all types of migrant workers in their country. But in our study only people while at home in leave attending gastroenterology OPD were included.

In UK higher rate of mental disorders among immigrant workers were associated with unfavorable environment both within and outside the working places (Habtamu K., Minaye A. & Zeleke W.A., 2017). Mental disorders were about 27.6% among Ethiopian migrant returnees from middle-eastern countries and South Africa (Anbesse B. et al, 2009). These people had to experience sexual, physical and emotional abuse, starvation, imprisonment and difficulty in adaptation to different culture in their expatriate working life (Chapagai M. et al, 2017).

In univariate analysis lower socioeconomic condition, low level of education, rural residence and labor type job were found to be associated with anxiety among migrant workers. In multivariate analysis lower economic condition and lower education level appeared as independent predictors for anxiety in migrant workers.

Lower economic condition, lower education level, increasing age and labor by occupation were positively associated with depression in migrant workers in univariate analyses. In multivariate analysis lower economic condition, lower education level and increasing age appeared as independent predictors for depression in migrant workers.

Migrant workers have dissatisfaction as they are unable to actively participate in their family events including well-being of family members and education of children.
Study (Al-Maskari F. et al, 2011) showed that premigration factors, including preparation before migration, cross cultural awareness, knowledge and skills may be determinants of mental distress than stressors encountered in the destination country. Therefore the study group recommends that native country should design training and awareness creation program for potential migrant workers. This is applicable for our country as well.

Limitations

It is not a community based survey. So we cannot comment on true prevalence of anxiety and depression among migrant workers. Our study included only males mostly working in middle-eastern countries and interviewed while staying at home during leave. Our sample size was also small. Although a number of pre-migration, migration and post-migration factors are associated with adverse mental status of migrant workers .We were to able measure only selected factors. We did not assess experiences of migrant workers while travelling to destination country. We did not include permanent migrant returnees and migrant workers who have established psychiatric illness. This may affect true prevalence of mental disorders among migrant workers.

Conclusion

Prevalence of anxiety and depression among Bangladeshi migrant workers in middle-eastern countries were found 15.5% and 10.6% respectively. Level of education, marital status, economic condition and higher age affect mental health. Depressed persons usually have higher numbers of physical complaints. Migrant workers are playing a vital role in our economy. So, issues of their mental health and psychiatric morbidity which might adversely affect their overall activity and foreign remittance, should not be neglected.

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