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Original Research Article

Factors associated with depression among street vendors inside Kathmandu valley

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ABSTRACT

Background: Depression is considered a common mental disorder and a major contributor to the global burden of disease. Depression is estimated to affect 3.8% of the population including 5% of adults and 5.7% among adults older than 60 years, and approximately 280 million people in the world (WHO 2021). Major symptoms of depression include depressed mood, loss of concentration, feeling of excessive guilt, dying thoughts, disrupted sleep, changes in appetite etc. Street vending is informal work that has been contributing in millions of people living status and supporting country's economy.
Methods: A cross-sectional analytical study was conducted among street vendors inside Kathmandu Valley with sample size 316. The study period was from August 2018 to April 2019. Data was collected using standard semi-structured tools using Kobo Toolbox. Data analysis was done in SPSS. Mendeley desktop and statistical package of social science software was used.
Results: Out of 316 respondents, higher number were male i.e., 52.2% whereas females were 47.8%. Respondent with age group 25-35 years was high in number. Respondents engaged in street vending for 8-16 years were found high in number. 32.6% respondents had depressive symptoms while measuring with PHQ and the prevalence of depression was 55.4% which was measured using MDI.
Conclusions: This cross-sectional study was conducted among the street vendors of Kathmandu valley. Among the respondents with low economic status, lack of physical activity, habit of alcohol and smoking had higher prevalence of depression. Respondent with basic and non- formal education, lack of job and income satisfaction showed a positive association with depression.

Keywords: Depression, Mental health, Nepal, Street vendors

INTRODUCTION

Depression is a mood disorder that leads to a consistent feeling of sadness and loss of interest. Depression is considered as a common mental disorder and a major contributor to the global burden of disease.[1] In today's world depression is being such an innovative factor that it is occupying people's mental states in such a range that it is getting out of hand. Depression is estimated to affect 3.8% of the population including 5% adults and 5.7% among adults older than 60 years. Approx. 280 million people in the world have depression (WHO 2021). Depressive episodes resulting from interaction of social, psychological and biological factors which results in significant difficulty in personal, family, social, educational, and occupational status. Depression can even worsen the condition leading to arthritis, asthma, cardiovascular disease, cancer, diabetes and obesity.[1,2]

Vending on the street is a worldwide fact and the ablest to be seen component of the casual economy characterized by low pay, ease of entrance, self-employment, and a huge number of individuals. Because of their poor level of education and abilities, street sellers are often individuals who are not capable to get usual employment in the remunerative recognized sector. They attempt to address their financial issues by relying on their own limited financial resources Street sellers are classified as micro-entrepreneurs, according to the National Policy on Urban Streets of 2009. Street sellers suffer from health issues on a regular basis as a result of their long working hours. Allergies, skin rashes, musculoskeletal diseases, cracked heels difficulty walking bending, elbow or joint pain, breathing difficulties, respiratory diseases, raw throat, cough, infectious along with behavioral issues and mental illness.[2,3]

In low-income countries with high unemployment rates, street vending is actually a source of income for poor dwellers to cover their household cost. Street vendors contribute a large share to the national economy and market stability despite having little protection and a marginalized economy, making them highly vulnerable to government restrictions. No policy, plans, and program to manage street vendors along with their health and safety are regulated till the date in the country's policy-making. Likewise, no proper research has been conducted in the similar setting. Kathmandu valley is considered as a city of economic opportunities and challenges where the working environment and hardships have brought terrific challenges to the street vendors with economic breakdown leading to the hard times.[3]

This study aimed to assess the impact of different associated factors on street vendor's mental health; depression.

METHODS

An analytical quantitative cross-sectional study was carried out among the street vendors inside Kathmandu valley. The research was conducted from August 2018 to April 2019. Ethical approval was taken from the public health department of Little Buddha College of Health Science, Purbanchal University, Nepal. All participants were well explained about the study and its objectives, and verbal consent was taken before administering the survey. The study included all the street vendors willing to participate available during the time of data collection and the participants who voluntarily co-operated to participate.

The study was based on purposive sampling and the total sample size was 316. Standard tools were used for data collection. The tools used to assess depression of street vendors were major depression inventory (MDI) and patient health questionaire-9 (PHQ-9). Data was collected using self-administered structured, semi-structured questionnaire using KoBo toolbox and the participants were guided while answering the questions. The questionnaire was divided into three major parts. The first section deals with the sociodemographic characteristics addressing pertinent variables, including age, gender, marital status, education level, work experience, family size, and current work status and income level. The second section of the questionnaire revolved around supplemental variables (e.g., type of problems faced). The third and main section contained questions focusing on depression. The ten-item questionnaire (MDI) major depression inventory was employed to assess the overall depressive symptoms as the tools validity was well elucidated in various studies. Depressive episodes were assessed using PHQ-9 (patient health questionnaire).

The data collected and entered in KOBO was first thoroughly checked and verified. Then, the data were exported into Statistical Package for Social Science (SPSS) IMB26 and processed, re-checked and verified. Errors for inconsistency or insufficiency of responses connected to the questionnaire questions were verified and later corrected before labeling and analysing them. A chi-square test and odds ratio were used to show an association between variables.

RESULTS

Socio-demographic and socio-economic information

More than half respondents 52.2% (165) were male and 47.8% (151) were female respondents. The distribution of age group showed minority of respondent 3.2% (10) respondents were in the age group (>25 years), and majority 59.2% (187) were in age group 25-35 years. A maximum respondent 93.7% (296) lived in a nuclear family and 6.3% (20) of respondents lived in a joint family. Most of the respondents were married 93.9% (295) and others 3.8% (12) were unmarried. 4/5th i.e.,88% (278) followed Hindu religion and Christian number of respondents 3.5% (11). Moving onto the educational status majority of the respondents 54.1% (171) attended non-formal schooling remaining 36.7% (116) attended basic education and the least number that was 9.2% (29) completed their secondary level education.

Among 316 respondents, the majority 169 (53.5%) had their earning between 15000-20000 and the least number of respondents 18 (5.7%) had their earning above 20000. Similarly, 174 (55.1%) of the respondents had their family income between 18000-38000 which was the highest and the least 24 (7.6%) had their family income above 38000. Likewise, the family expense of 161 (50.9%) respondent was above 25000 which was the highest and 16 (5.1%) of the respondent has their family expense below 15000 which was the minority. Among 316, more than 3/5 of respondent 201 (63.6%) responded that they were satisfied with their income whereas 115 (36.5%) said they were not satisfied with their earning.

Table 1: Socio-demographic and socio-economic characteristics.

Characteristics	Frequency	Percentage
Gender		
Male	165	52.2
Female	151	47.8
Age		
<25	10	3.2
25-35	187	59.2
>35	119	37.7
Family type		
Nuclear	296	93.7
Joint	20	6.3
Marital status		
Married	295	93.9
Unmarried	12	3.8
Separated	10	3.2
Religion		
Hindu	278	88
Buddhist	27	8.5
Christian	11	3.5
Educational status		
Non-formal education	171	54.1
Basic education	116	36.7
Secondary education	18	9.2
Individual income/month		
<15000	129	40.8
15000-20000	169	53.7
>20000	18	5.7
Family income/month		
<18000	118	37.3
18000-38000	174	55.1
>38000	24	7.6
Family expenses/month		
<15000	16	5.1
15000-25000	139	44.0
>25000	161	50.9
Income satisfaction		
Yes	201	63.6
No	115	36.4

Behavioral characteristics

Only 58 (18.4%) of the respondent's smoke. Likewise, 121 (38.3%) of the respondents consumed alcohol. Among the 121 participants who consumed alcohol 21 (6.6%) consumed in a regular basis and 79 (25%) consumed occasionally. Only 88 (27.8%) and 30 (9.5%) performed yoga and exercise. Moving onto their working years 200 (63.3%) of respondent were been working for 8-16 years and more than a half 52 (16.5%) were working for less than years. Likewise, 296 (93.7%) of the respondent worked for 5-10 hours a day. Almost all 313 (99.1%) did not have any alternate job beside street vending and 272 (86.1%) were satisfied with their work.

Table 2: Behavioral characteristics.

Characteristics	Frequency	Percentage
Smoke		
Yes	58	18.4
No	258	81.61
Alcohol consumption		
Yes	121	38.3
No	195	61.7
Consistency of consumption		
In a regular basis	21	6.6
Twice a week	17	5.4
Twice a month	4	1.3
Occasionally	79	25.0
Yoga practice		
Yes	88	27.8
No	228	72.2
Exercise		
Yes	30	9.5
No	286	90.5
Working years		
<8 years	52	16.5
8-16 years	200	63.3
>16 years	64	20.3
Working hours		
5-10 hours	296	93.7
>10 hours	20	6.3
Sleeping hours		
6-8 hours	77	24.4
>8 hours	239	75.6
Alternate work		
Yes	3	0.9
No	313	99.1
Job satisfaction		
Yes	272	86.1
No	44	13.9
Losing of job		
Yes	303	95.9
No	13	4.1
Losing family members during COVID-19		
Yes	57	18
No	259	82
Problems faced in workplace		
Municipality		
Yes	316	100
Consistency in problems face due to municipality		
Always	178	56.3
Twice a week	89	28.2
Twice a month	49	15.5
Police		
Yes	95	30.1
No	221	69.9
Consistency in problem faced due to police		
Once in a month	96	30.4
Never	220	69.6
Pedestrian's		
Yes	230	72.8
No	86	27.2
Misbehavior of people		
Yes	165	52.2
No	151	47.8

Out of 316, 303 (95.9%) of the respondent were jobless during the time of COVID-19 and 57 (18%) of the respondents lost their family member during the pandemic All the 316 respondents replied yes to the problem faced due to the municipality along with 95 (30.1%) faced problems due to police, 230 (72.8%) with pedestrians and 165 (52.2%) faced problems due to misbehavior of people at workplace. Among 316 respondents, 178 (56.3%) always faced problems due to municipality with 96 (30.8%) said they faced problems due to police once a month.

Disease history and types

Out of 316 more than a quarter of respondents 89 (28.2%) had previous disease history with arthritis 25 (7.9%), 12 (3.8%) with heart and lung disease and 52 (16.5%) had other disease such as blood pressure and sugar.

Table 3: Disease history and types.

Characteristics	Frequency	Percentage
Disease history		
Yes	89	28.2
No	227	71.8
Disease types		
Arthritis	25	7.9
Heart/lung disease	12	3.8
Others	52	16.5

Prevalence of depressive episodes with PHQ-9

Out of 316 participants 213 (67.4%) which was 2/3 of 100% did not show any sign of symptoms of depression while 66 (20.9%) showed mild depression, 21 (6.6%) showed moderately severe depression and 13 (4.1%) showed severe depression.

Prevalence of depression with MDI

prevalence of depression with the help of major inventory depression (MDI). Out of 316 respondents 144 (45.6%) had no depression, 150 (47.5%) showed mild depression, 11 (3.5%) showed moderate and severe depression.

Table 4: Depressive episodes with patient health questionnaire.

Characteristics	Frequency	Percentage
None (0-4)	213	67.4
Mild depression (5-9)	66	20.9
Moderate depression (10-14)	21	6.6
Moderately severe depression (15-19)	3	0.9
Severe depression (20-27)	13	4.1

Table 5: Prevalence of depression with major depression inventory (MDI).

Characteristics	Frequency	Percentage
No depression (0-20)	144	45.61
Mild depression (21-25)	150	47.5
Moderate depression (26-30)	11	3.5
Severe depression (31-50)	1	3.5

Analytical study

Depressives' episodes, depression, and socio demographic characteristics (PHQ-9)

Age of the respondent was statistically significant to depressive episodes. Meanwhile, gender, religion and education status were statistically insignificant. In reference to people of age group >35 years, people of age group <25 years were 3.766 (CI=1.009-14.015, p=0.04) times more likely to have depressive episodes than that of people with age >35 years followed by 25-35 years 2.408 (CI=1.417-4.090, p=0.001) times, and both were statistically significant.

Similarly, age, gender, family type, and marital status were statistically insignificant. Where, respondent with basic education was highly significant with (95% CI= 1.478-3.939, p=0.000) times more likely to have depression than those with non-formal schooling. Again, the respondent with secondary level education were (95% CI=1.814-12.072, p=0.001) times more likely to have depression.

Table 6: Association of depression and depressive episodes with socio-demographic characteristics.

Characteristics	Depressive episodes absent (0-4)	Depressive episodes present (5-27)	P value	OR (95% CI)
	N (%)	N (%)		
Gender				
Male	117 (70.9)	48 (29.1)		1
Female	97 (64.2)	54 (35.8)	0.165	1.396 (0.871-2.239)
Age (in years)				
<25	5 (50)	5 (50)	0.049	3.766(1.009-14.015)
25-35	114 (61)	73 (39)	0.001	2.408 (1.417-4.090)
>35	95 (79.8)	24 (20.2)	-	1
Family type				

Continued.

Characteristics	Depressive episodes absent (0-4)	Depressive episodes present (5-27)	P value	OR (95% CI)
	N (%)	N (%)		
Nuclear	204 (68.9)	92 (31.1)		1
Joint	10 (50.0)	10 (50.0)	0.093	2.183(0.787-5.424)
Religion				
Hindu	187 (67.3	91 (32.7)		1
Buddhist	22 (81.5)	5 (18.5	0.128	0.467 (0.171-1.273)
Christian	5 (45.5)	6 (54.5)	0.145	0.246 (0.733- 8.294)
Educational status				
Non-formal schooling	115 (67.3)	56 (32.7)	0.760	1.081 (0.656-1.179)
Basic education	76 (66.1)	39 (33.9)	0.200	0.536 (0.206-1.390)
Secondary level	23 (79.3)	6 (20.7)		1
Characteristics	**Depression absent (0-20)**	**Depression present (21-50)**	**P value**	**OR (95%CI)**
Gender				
Male	81 (49.1)	63 (41.7)		1
Female	63 (41.7)	88 (58.3)	0.322	1.252 (0.512-1.246)
Age				
<25	5 (50.0)	5 (50.0)		1
25-35	81 (43.3)	106 (56.7)	0.818	1.309 (0.366-4.613)
>35	55 (46.2)	64 (53.8)	0.618	1.164 (0.320-4.231)
Family type				
Nuclear	131 (44.3)	165 (55.7)	0.618	1.260 (0.509-3.117)
Joint	10 (50.0)	10 (50.0)		
Marital status				
Married	129 (43.7)	166 (56.3)	0.727	1.252 (0.355-4.417)
Unmarried	5 (45.5)	6 (54.5)	0.835	1.200 (0.216-6.676)
Separated	5 (50.0)	5 (50.0)		1
Educational status				
Non-formal	94 (55.0)	77 (45.0)		1
Basic education	39 (33.9)	77 (66.4)	0.000	2.410 (1.478-3.930)
Secondary	6 (20.7)	23 (79.3)	0.001	4.680 (1.814-12.072)

Depressive episodes, depression and socio-economic characteristics

Here, in reference to people with income <15,000 people with income 15,000-20,000 were 2.322 (95% CI=1.387-3.886, p=0.001) times more likely have depressive episodes than that of participants with income <15000 and was statistically significant. Similarly, respondents with their family income 18000-38000 were 1.74 (95% CI=1.044-2.930, p=0.034) times more likely to have depressive episodes than people with their family income <18000 and was statistically significant.

Following, in reference to income <15000, respondents with the monthly income 15000-20000 2.658 (95% CI=1.657-4.263, p=0.000) times more likely to have depression showing high statistically significant relation. Here, in reference to family income per month <18000, respondents having their monthly family income 18000-38000 were 2.007 (1.248-3.226, p=0.004) times more likely to suffer from depression. It showed a significant relation with depression. While, family expenses did not any significant relation with depression.

Table 7: Association of depressive episodes with socio-economic characteristics.

Characteristics	N (%)	N (%)	P value	OR (95% CI)
	Depressive episodes absent (0-20)	Depressive episodes present (21-50)		
Income (per month)				
<15000	100 (77.5)	29 (22.5)		1
15000-20000	101 (59.8)	68 (40.2)	0.001	2.322 (1.387-3.886)
>20000	12 (66.7)	6 (33.3)	0.315	1.724 (0.595-4.994)
Family income				
<18000	88 (74.6)	30 (25.4)		1
18000-38000	109 (62.6)	65 (37.4)	0.034	1.749 (1.044-2.930)
>38000	17 (70.8)	7 (29.2)	0.704	1.208 (0.457-3.195)

Continued.

Characteristics	N (%)	N (%)	P value	OR (95% CI)
Income satisfaction				
Yes	160 (79.6)	41 (20.4)	0.000	4.565 (2.763-7.543)
No	53 (46.1)	62 (53.9)		
	Depression absents (0-20)	**Depression present (21-50)**		
Individual income/per month				
<15000	75 (58.1)	54 (41.9)		1
15000-20000	58 (34.3)	111 (65.7)	0.000	2.658 (1.657-4.263)
>20000	11 (56.2)	7 (43.8)	0.54	2.778 (0.981-7.863)
Family income				
<18000	65 (55.1)	53 (44.9)		1
18000-38000	66 (37.9)	108 (62.1)	0.004	2.007 (1.248-3.226)
>38000	8 (33.3)	16 (66.7)	0.057	2.453 (0.975-6.173)
Family expenses				
15000	9 (56.3)	7 (43.8)		
15000-250000	74 (53.2)	65 (46.8)	0.819	1.129 (0.398-3.203)
>25000	56 (34.8)	105 (65.2)	0.097	2.411 (0.852-6.818)
Income satisfaction				
Yes	96 (47.8)	105 (52.2)		
No	45 (39.1)	70 (60.9)	0.138	1.422 (0.893-2.226)

Depressive episodes, depression, and behavioral factors

Here, respondents who had a smoking habit and consumed alcohol showed insignificant relation with depressive episodes. People who did not practiced yoga were 0.472 (95% CI=0.266-0.830, p=0.010) times more likely to suffer from depressive episodes and was statistically significant. The respondents who do not practice exercise are 0.875 (95%CI=0.386-1.985) times more likely to have depressive episodes with previous disease history showing insignificant relation.

The respondents who smoke were 1.485 (CI=0.824-2.676) times more likely to have depression as compared to those who did not smoke and was not statistically significant. Similarly, alcohol consumption also did not show significant relation. Similarly, disease history, sleeping hours, yoga and exercise practice of respondents showed insignificant relation with depression.

Table 8: Association of depressive episodes, depression with behavioral factors.

Characteristics	N (%)	N (%)	P value	OR (95% CI)
	Depressive episodes absent (0-5)	**Depressive episodes present (5-27)**		
Smoking habit				
Yes	33 (56.9)	25 (43.1)	0.61	1.74 8(0.975-3.134)
No	180 (69.8)	78 (30.2)		
Alcohol consumption				
Yes	74 (61.2)	47 (38.8)	0.063	1.576 (0.976-2.546)
No	139 (71.3)	56 (28.7)		
Yoga practice				
Yes	69 (78.4)	19 (21.6)		
No	144 (63.2)	84 (36.8)	0.010	0.472 (0.266-0.830)
Exercise				
Yes	21 (70)	9 (30)	0.750	0.875 (0.386-1.985)
No	192 (67.1)	94 (32.9)		
Disease history				
Yes	61 (68.5)	28 (31.5)	0.788	0.930 (0.550-1.574)
No	152 (67)	75 (33.0)		
Characteristics	**Depression absent (0-20)**	**Depression present (21-50)**	**P value**	**OR (95%CI)**
Smoking habit				
Yes	21 (36.2)	37 (63.8)	0.188	1.485 (0.824-2.676)
No	118 (44.1)	140 (54.3)		
Alcohol consumption				
Yes	53 (43.8)	68 (56.2)	0.958	1.012 (0.641-1.599)
No	86 (44.1)	109 (55.9)		

Continued.

Characteristics	N (%)	N (%)	P value	OR (95% CI)
Disease history				
Yes	45 (50.6)	44 (49.4)		
No	94 (41.4)	133 (58.6)	0.141	1.447 (0.884-2.368)
Sleeping hours				
5-10 hours	46 (59.7)	31 (40.3)		
>10 hours	93 (38.9)	146 (61.1)	0.309	0.623 (0.251-1.549)
Yoga				
Yes	44 (50.0)	44 (50.0)		
No	95 (41.7)	133 (58.3)	0.182	1.400 (0.854-2.294)
Exercise				
Yes	17 (56.7)	131 (43.3)		
No	122 (42.7)	164 (57.3)	0.145	1.758 (0.823-3.756)

Depressive episodes, depression, and working years, working hours and job satisfaction

The respondents who had <8 years' experience had 1.208 (CI=0.569-2.565) times more likely to have depressive episodes in reference to people who had >16 years of experience in reference, and statistically insignificant. Likewise, working hours had no relation with depressive episodes. The respondents who were not satisfied with your income were 4.565 (CI=2.763-7.543, p=0.000) times more likely to suffer from depressive episodes and was statistically significant (p<0.05).

Here, working hours of respondent was statistically significant. People working for >10 hours had 2.330 (95% CI=1.379-3.936, p=0.002) times more likely to have depression than that of people working 50-10 hours and was statistically significant. Following, participants job satisfaction and losing of job during COVID pandemic had no relation with depression.

Table 9: Association of depressive episodes, depression with working years, working hours and job satisfaction.

Characteristics	Depressive episodes absent (0-4)	Depression present (5-27)	P value	OR (95% CI)
Working years				
<8 years	31 (59.6%)	21 (40.4%)	0.624	1.208 (0.569-2.565)
8-16 years	141 (70.5%)	59 (29.5%)	0.334	0.746 (0.412-1.351)
>16 years	41 (64.1%)	23 (35.9)		1
Working hours				
5-10 hours	203 (68.6%)	93 (31.4%)	0.093	2.183 (0.878-5.424)
>10 hours	10 (50.0%)	10 (50.0%)		
Job satisfaction				
Yes	196 (72.1%)	76 (27.9%)	0.000	0.244 (0.126-0.473)
No	17 (38.6%)	27 (61.4%)		
Characteristics	**Depression absent (0-20)**	**Depression present (21-50)**	**P value**	**OR (95% CI)**
Working years				
<8 years	17 (32.7%)	35 (67.3%)	0.296	1.502 (0.701-3.221)
8-16 years	97 (48.5%)	103 (51.5%)	0.379	0.775 (0.439-1.368)
>16 years	27 (42.2%)	37 (57.8%)		1
Working hours				
5-10 hours	128 (43.2%)	168 (56.8%)	0.002	2.330 (1.379-3.936)
>10 hours	11 (55.0%)	9 (45.0)		1
Job satisfaction				
Yes	124 (45.6%)	148 (54.4%)		
No	17 (38.6%)	27 (61.4%)	0.390	1.331 (0.693-2.554)
Losing of job during COVID				
Yes	133 (43.9%)	170 (56.1%)	0.219	2.045 (0.654-6.396)
No	8 (61.5%)	5 (38.5%)		

Depressive episodes and problems faced by street vendors at workplace

Participants with problem due to municipality and having depressive episodes were statistically significant (p<0.05). Following, participants who were facing problem due to pedestrians were 3.490 (95% CI=0.171-0.481, p=0.000) times more likely to have depressive episodes than those who were not facing the problem and was highly significant. Similarly, respondent facing the problem due to misbehaviour had a significant relation with depressive episodes (95% CI=0.353-0.912, p=0.019).

Problem faced due to police; pedestrians were statistically significant to depression. Here, people facing problems due to police were equally significant as compared to those who weren't (95% CI= 0.979-2.575, p=0.041) and was statistically significant. Respondent who faced problem due to pedestrians were 1.866 (CI=1.113-3.127, p=0.018) time more likely to suffer from depression and was statistically significant.

Table 10: Association of depressive episodes with problems faced by street vendors at workplace.

Characteristics	Depressive episodes absent (0-4)	Depressive episodes present (5-27)	P value	OR (95% CI)
Municipality				
Yes	213 (67.4%)	103 (32.6%)	0.000	4.84
Police				
Yes	70 (73.7%)	25 (26.3%)		1
No	143 (64.7%)	78 (35.3%)	0.120	1.527 (0.384-1.116)
Pedestrians				
Yes	173 (75.2%)	57 (24.8%)	0.000	3.490 (0.171-0.481)
No	40 (46.5%)	46 (53.5%)		
Misbehaviour of people				
Yes	121 (73.3%)	44 (26.7%)	0.019	1.764 (0.353-0.912)
No	92 (60.9%)	59 (39.1%)		
Characteristics	**Depression absents (0-20)**	**Depression present (21-50)**	**P value**	**OR (95% CI)**
Municipality	141 (44.6%)	175 (55.4%)	0.056	1.24
Police				
Yes	91 (41.2%)	130 (58.8%)	0.041	1.587 (0.979-2.575
No	50 (52.6%)	45 (47.4%)		1
Pedestrians				
Yes	29 (33.7%)	57 (66.3%)	0.018	1.866 (1.113-3.127)
No	112 (48.7%)	118 (57.3%)		1
Misbehaviour of people				
Yes	68 (45.0%)	83 (55.0%)	0.888	
No	73 (44.2%)	92 (55.8%)	0.888	1.033 (0.662-1.610)

*p values less than 0.05 are significant.

DISCUSSION

The study was done to identify the association of depression and symptoms of depressive episodes and its various related factors. During the data collection, it was quite hard to convince the vendors to give their time but they presented voluntarily, and the result was impressive. For the validity of the study, a proper interaction with the participants along with their keen involvement was done. Standard, structured and semi-structured questionnaire had been finalized and developed from literature review. To be mentioned very few literatures is available on this topic here in Nepal even though the mental health status of street vendors needs Prioritization and could not review the national data. The study limitation was recalling bias and attention bias. The study provided similar as well as different output as per the variables to various studies conducted in different countries in a similar setting. This study concluded 20.9% of respondents with mild depressive episodes and 4.1 with severe depressive episodes using patient health questionnaire. With the use of major inventory depression, we found out 47.5% respondent with mild depression, 3.5% with moderate and 3.5% with severe depression which showed similar result to this finding. A cross-sectional study in coffee vendors was conducted in Harar town, Ethiopia which shows one in five street coffee vendors suffered from depressive symptoms. In line with the findings, the prevalence of depression (PHQ-9) with score ≥10 in Honkong was 16.8% among the general population which was similar to our study with depression >10 was 11.6%. Similarly, a study done in the Republic of Ireland showed the prevalence of depression to be 23.8%. Likewise, our finding for prevalence of depression was 32.6% according to PHQ

and 55.4% with MDI.[4,5] The study explained a significant relation of depression in relation to gender (female), age group, educational status, economic status, and income satisfaction.

People with only average earning per month had higher prevalence of depression 40.2% and was statistically significant. A cross-sectional study conducted in turkey reported 28.4% depression among informal worker whereas this study also showed a similar range of 32.6% prevalence of depression. Higher prevalence of depressive symptoms was seen in respondent living in joint family while measuring with PHQ-9. This fact was supported by a meta-analysis done among the general population in Canada. A study done in South-Africa showed that economic costs in case of large family-size had positive and significant association with depression. Likewise, a study conducted in Brazil stated a positive association between depression and lower educational status. Where, this study also concluded a significant relation with educational status. It showed a higher prevalence and significant relation in those who only had basic education (CI=1.478-3.930, p=0.000). One of the largest population-based studies conducted in India regarding mental disorder (urban south India) among 26001 participants showed that depression was seen higher among women (i.e. 28.3%) whereas in male it was 21.8% which was similar to this study with higher prevalence of depression among female (35.8%). Though, studying each socio-economic class in reference to gender, it reported women from middle and lower classes had positive relation with depression and higher prevalence of moderate depression than that of men.[6]

In our study, it showed an overall significant relation of depressive symptoms with people earning <15,000 (CI=1.387-3.886, p=0.001). A cross-sectional study showing association between informal employment and depressive symptoms in 11 cities of Los Angeles found out that individual involved in informal job had 27% depression and higher prevalence in both men and women, whereas our study concluded higher prevalence of depression among women.[7,8] A study conducted to find out the depression among working population in Nepal showed mild depression to be 18% and reported higher prevalence in men and more in respondent following Hinduism which was similar to this finding showed 20.9% mild depression with PHQ-9.[6] But religion did not show any significant relation with depressive episodes and depression among vendors. A cross-sectional study showing association between Informal employment and depressive symptoms in 11 cities of Los Angeles found out that individual involved in informal job had 27% depression and higher prevalence in both men and women.[7,9] Similarly, a cross-sectional study among 303 participants showing prevalence of depressive symptoms in working age reported 26.7% mild depression and a clear association with demographic, social support and physical well-being whereas this finding also showed 32.6% of respondent with depression withPHQ-9 and significant relation with depressive episodes (CI=1.009-14.015, p=0.004).[10]

CONCLUSION

Mental health and its associated factors should be closely acknowledged. Though depression, anxiety and stress are overrated topic; it has not met the need considering every possible host. Street vendors are the neglected population in terms of their health and safety. Out of 316 respondents 55.4% of the respondent had depression as per major inventory depression and 32.6% had depressive symptoms as per patient health questionnaire. The study explained a significant relation of depression in relation to gender (female), age group, educational status, economic status, and income satisfaction. After the multi-variate analysis respondent with low economic status, lack of physical activity, habit of alcohol and smoke had higher prevalence of depression. Respondent with non-formal and basic education, lack of job and income satisfaction showed a positive association with depression.

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