

Mental Health Status of Sailors of Haldia Dock Complex, West Bengal

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ABSTRACT

Background: Sailors are the personnel working in all kinds of waterborne vessels. They are deprived of proper nutrition and standard living conditions. Moreover, they are prone to develop psychological problems like depression, anxiety etc. due to long separation from family members and friends.

Methods: It was an observational descriptive study with cross sectional design, conducted at Haldia Dock complex, W.B. in 2016. Total 470 sailors (total enumeration) were interviewed with predesigned and pre tested schedule. Data were analysed with SPSS version 20.

Result: All male, mostly (46.4%) in age group 50-60 yrs, Hindu (87%), passed X/XII (76%), permanent employee (63%). All belonged to upper class. Prevalence of anxiety and depression among the sailors was 43% and 20% respectively. Among sailors 83% were at risk of addiction (alcohol / tobacco).

Conclusion: Regular health check-up and counseling might be the key interventions to prevent addiction and to reduce prevalence of anxiety and depression among sailors of Haldia Dock Complex.

Key Words: Anxiety, depression, mental health, sailor

INTRODUCTION

At present, 90% of the World trade is carried out by international shipping industry. ^[1] Without shipping, the import export of food, other consumable and goods

will not be possible. Water borne vessels like barge, ship, boat, sailboat are the only means of transportation over the ocean, sea, river, lake & canal. The term Sailor can be applied to the personnel working in all kinds of waterborne vessels. Currently there are approximately 466000 officer rank sailor & 721000 supporting crew members working in international trading operation through ships. ^[2] The Philippines and India are the two major maritime labour supply nations. Sailors from these Countries are enjoying employment opportunities not only on foreign flag ships but also domestic shipping ships within the country. There are thousands of sailors working in boats, dredgers, barges, tugs or pilot vessels for dredging, piloting and berthing ships at different sea or riverine ports. Kolkata Port is the first major port as well as the only riverine port in India, commissioned in 1870. ^[3]

Kolkata Port has two dock systems. One is Kolkata Dock System (KDS) at Khidirpur and another one is Haldia Dock Complex at Haldia (HDC). ^[4] Main life line of a port is Marine operation Division. There are various categories of marine personnel working as a sailor in Marine Operation Division at HDC. ^[4]

Workers in water transportation occupation often have to work for long period on a small and cramped space and they also face difficult working conditions

like extreme weather, high noise, high temperature, shaking movements, accidental fall etc. They are deprived of proper nutrition and standard living conditions. Moreover, they are prone to develop psychological problems like depression, anxiety, due to long separation from family members and friends. [5]

Few studies were done to know the mental health problems of sailors working in Ports of India. Keeping with this view in mind, an attempt was made to assess the socio-demographic profile and mental health status of sailors.

MATERIALS AND METHODS

Out of 4178 employees working under Haldia Dock Complex (HDC), 510 employees were directly related to sailing activity at river and sea. All these sailors were considered for this study (total enumeration). Due to non-response of 40 sailors, 470 sailors were finally interviewed. It was an observational descriptive study with cross-sectional design. Study was conducted at Haldia Dock Complex at

Haldia, Purba Medinipur, West Bengal, in 2016. Study was approved by Institutional Ethics Committee. Data were collected at three different settings. One group of sailors was interviewed at their working vessels with permission from higher authority. Another group was interviewed at Port Hospital at Haldia & rest of the sailors were interviewed at their home with prior appointment. All the participants were interviewed with pre-designed and pre-tested schedules followed by physical examination after taking their informed consent. Medical records were reviewed where available. Socioeconomic status was categories according to modified BG Prasad scale. [6]

Anxiety & Depression was screened by Hamilton Anxiety Rating Scale (HAM – A) [7]

And Hamilton Depression Rating Scale (HAM – D). [8]

Statistical analysis: Data were analysed with SPSS, version 20. Results were expressed with proportions, frequencies, tables, bar diagram, venn diagrams etc.

RESULTS

Table1. Socio-demographic profile of sailors (n=470)

Socio demographic profile		Number	Percentage
Age (Years)	21 – 30	44	9.4
	31 – 40	120	25.5
	40 – 50	88	18.7
	50 – 60	218	46.4
Religion	Hindu	409	87.0
	Muslim	46	9.8
	Christian	15	3.2
Caste	General	249	53.0
	Other Backward Class(OBC)	126	27.0
	Schedule Class (SC)	72	15.0
	Schedule Tribe (ST)	23	5.0
Type of Family	Nuclear	72	15.0
	Joint	398	85.0
Literacy status (Highest examination passed)	Class VIII	28	6.0
	Class X	197	42.0
	Class XII	158	34.0
	Graduate & above	87	18.0
Per Capital monthly Income (Rupees)	5,001 – 10,000	250	53.2
	10,001 – 15,000	135	28.7
	≥ 15,001	85	18.1
Type of Employees	Permanent	298	63.4
	Contractual	172	36.6
Place of Work	Deck Department	318	67.7
	Engine Department	152	32.3

Majority (46%) were 50 – 60 years age group and all male, 87% - Hindu, 60% from Urban, 85% from Joint Family, 89%

currently married, majority (76%) passed class X / Class XII, all belong to upper

class, 63% were permanent employees and 67.7% worked in deck department of ship.

Table 2 : Prevalence of Anxiety and Depression among the Sailors(n = 470)

Mental Disorder	Number	Percentage
Anxiety (ICD-F41)	201	43.0
Depression (ICD-F32)	92	20.0

* Multiple Response

Among the study participant 43% had score suggestive of anxiety and 20% had score suggestive of depression. 68 sailors (14.5%) were suffering both from anxiety and depression. There were no statistically significant difference in median HAM – A score among permanent and contractual employees (Mann Whitney U Test).But there was statistically significant difference in median HAM – D score among the permanent and contractual employees (Mann Whitney U Test).

Table3: Level of anxiety among the sailors (n = 470)

HAM – A Score	Anxiety Level	Number	Percentage
0 – 13	Normal	269	57.0
14 – 17	Mild	91	20.0
18 – 24	Moderate	72	15.0
25 – 56	Severe	38	8.0
TOTAL		470	100

Score suggestive of anxiety was found in 43% of the sailors. Among them 20% had score suggestive of mild anxiety. Corresponding figures for moderate and severe anxiety in the study participants was 15% and 8% respectively.

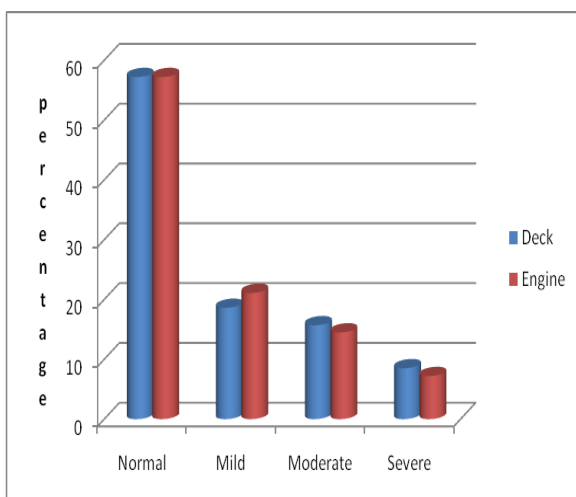


Figure1. Level of anxiety among different job profile.

Sailors are working in two areas-deck and engine room. Score suggestive of mild, moderate and severe anxiety level in

deck department are 18.6%,15.7%and 8.5% and corresponding figures in engine department are 21.1%,14.5% and7.2% respectively.

Table 4 . Level of Depression among the Sailors (n = 470)

HAM – D Score	Depression Level	Number	Percentage
0 – 7	Normal	378	80.0
8 – 13	Mild	41	9.0
14 – 18	Moderate	30	6.0
19 – 55	Severe	21	5.0
TOTAL		470	100

Similarly, Score suggestive of depression was found in 20% of the sailors. Among them 9% had score suggestive of mild depression. Corresponding figures for moderate and severe depression was found in 6% and 5% of the study participants.

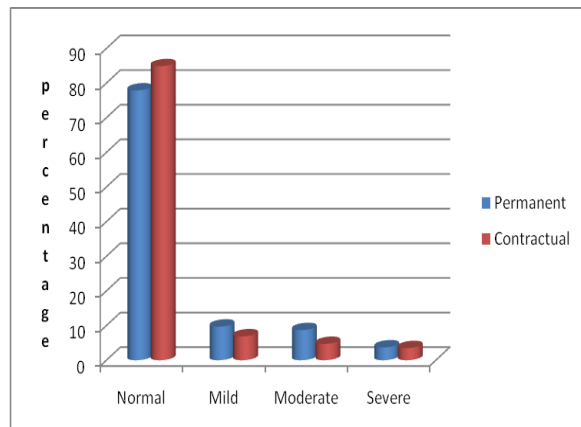


Figure 2. Bar diagram showing level of depression among different employment status

Score suggestive of mild, moderate and severe depression among permanent sailors was 9.7%, 8.7% and 3.7% and corresponding figures in contractual workers was 6.9%, 4.7% and 3.5% respectively.

Among the sailors 83% were in the risk of addiction. Among the sailors 73 % were using tobacco and 75% were using alcohol and 66% were using both.

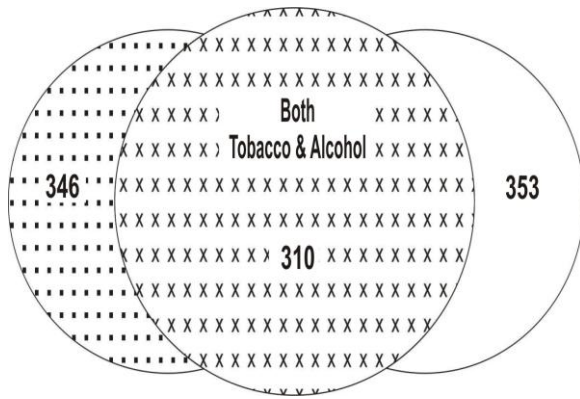


Figure 3. Venn Diagram showing interaction between tobacco and alcohol addiction.

DISCUSSION

Sailors working at Haldia Dock Complex (HDC) were male. Health problems of female sailors were estimated in some scientific literature. [9] Mean age of Sailors was 46.35 (SD 10.9) years. Most of sailors (46.4%) were 51 – 60 years age group as they were recruited between late 1970 and early 1980 during commissioning of HDC. But later recruitment procedures became irregular. Most of them Hindu, currently married and living in a joint family. All of them belonged to upper class as per modified B.G. Prasad's socio-economic scale. Most of them passed Class X or Class XII. 63% were permanent employees and 68% sailors worked in Deck Dept. Screening for suffering from anxiety and depression showed that 43% of sailors were suffering from anxiety and 20% were suffering from depression. Prevalence of depression among the sailors working in Indian navy was found to be 26% to 36.7% which was higher than the prevalence of depression among the sailors in this study. [10] Total 68 (14.5%) sailors were suffering both from anxiety and depression. In a questionnaire based study 25% of seafarers had scores suggesting depression and 17% of seafarers were defined as seafarers with anxiety. This rate was higher than the rate of other occupational group and general population. [11] Health related behavior among the sailors showed that 83% of them were at risk of addiction to either alcohol or tobacco & 66% were addicted to both alcohol & tobacco. This behavior might be

due to separation from home and relatives for prolonged period. Prevalence of addiction among European Sailors was found to be 72%. [12] A review of addictive substance in mariners had reported that 63.1% (range 38.4–96.3%) of seafarers smoked tobacco. 14.5% (range 8.8–75%) of seafarers drank alcohol. [13]

CONCLUSION

Sailors are one of important pillar of shipping industries and port sector. They not only suffer from various life style diseases but also suffer from various mental health problems like anxiety, depression, addition etc. So, regular counseling session and health check-up might be the key interventions not only to prevent addiction but also to reduce prevalence of anxiety and depression among sailors.

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REFERENCES

1. ICS. Shipping Facts (Internet). [Cited 2019, Sept, 20]. Available from – <http://www.ics-shipping.org/shipping-facts>
2. ICS. Number and nationality of world's seafarers (Internet) Available from : <http://www.ics-shipping.org/shipping-facts/shipping-and-world-trade/number-and-nationality-of-world's-seafarers>
3. Brief History of KOPT – Kolkata Port Trust (Internet). [Cited 2019, Sept, 20 Available from : <https://kolkataporttrust.gov.in/index1.php?layout=1&lang=1&level=1&sublinkid=1429&lid=563>
4. Marine Services – Kolkata Port Trust (Internet). [Cited 2016, Sept, 19] Available from: <http://www.kolkataporttrust.gov.in/index1.php?layout=3&lang=1&level=1&sublinked=822&lid=734>
5. International Labour Standards on Seafarers (Internet). [Cited 2016, Sept, 19] Available from: <http://www.ilo.org/global/standards/subjects-covered-by-international-labour-standards/seafarers/lang-en/index.htm>.
6. Suryakantha A.H, Community Medicine with recent advances, 4th Edition 2017. New

- Delhi; The Health Sciences Publisher (Jaypee); 2017
7. Hamilton M. The assessment of Anxiety states by Rating. *Br J Med Psychol.* 1959 March 1; 32(1):50-55
 8. HAM D (Internet). [cited 2016, Sept 19], Available from – <http://healthnet.umassmed.edu/mhealth/HAMD.pdf>
 9. Grunfeld EA, Price C, Goadsby PJ, Gresty MA. Motion sickness, migraine, and menstruation in mariners. *Lancet.* 1998; 351(9109):1106.
 10. Pawar AA, Rathod J, Occupational Stress in Naval Personnel, *Med J Armed Forces India,* 2007 ; 63(2):154-156
 11. Lefkowitz RF, Martin D. Slade MD. Seafarer Mental Health Study. London. ITF SEAFARERS' TRUST & YALE UNIVERSITY. 2019. Cited 30 August 2020. Available from:
[https://www.seafarerstrust.org/wp-content/uploads/2019/11/ STMentalHealthReport_Final_Digital-1.pdf](https://www.seafarerstrust.org/wp-content/uploads/2019/11/STMentalHealthReport_Final_Digital-1.pdf)
 12. Salyga J, Kusleikaite M. Factors influencing psycho-emotional strain and fatigue, and relationship of these factors with health complaints at sea among Lithuanian Seafarers. *Med Kaunas Lth.* 2011; 47(12): 675-681.
 13. Pougnet R, Pougnet L, Loddé B, Canals L, Bells, Lucas D et al. Consumption of addictive substances in mariners. *Int Marit Health* 2014; 65(4):4 199–204

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