https://research.adra.ac.id/index.php/midwifery
P - ISSN: 3110-7877
E - ISSN: 3110-7133

The Correlation between Age and Work Stress in Ship Crew at Tumumpa Beach Fisheries Port, Manado City

Rivald Samuel Jacobs[1], Oksfriani Jufri Sumampouw[2], Ester Candrawati Musa[3]
[1]Faculty of Public Health Sam Ratulangi University, Indonesia
[2]Postgraduate Programme Sam Ratulangi University, Indonesia
[3] Faculty of Public Health Sam Ratulangi University, Indonesia

ABSTRACT

Background. Work stress is the main indication that results in physical, mental and behavioral disruption of everyone, this is due to the inability of individuals to cope with stressors. Ship crew members are a vulnerable job and are at risk of work stress. Age is one of the triggering factors for work stress which as you get older, it will increase the risk of work stress.

Purpose. The purpose of this study is to measure the relationship between age and work stress in the crew of the ship at the Tumumpa Beach Fisheries Port, Manado City.

Method. This is an observational research with a cross sectional approach. This research was carried out at the Tumumpa Beach Fisheries Port in July-November 2023. The number of samples used in this study was 156 respondents. The variables of this study are divided into 2, namely age and work stress. Primary data collection was obtained directly from the distribution of questionnaires using the self-administered questionnaire method. Data analysis was carried out univariate and bivariate.

Results. The results showed that the age of the respondents ranged from 17-64 years with an average age of 36.22 years. The results of this study show that the work stress score is in the interval of 90-119. The average work stress score was 107.23. In addition, the most respondents were distributed in the Medium category with 114 respondents (73.1%). The results of the analysis based on the Pearson Correlation test obtained a significance value of 0.311. This value shows that there is no significant relationship between age and work stress.

Conclusion. It can be concluded that age is not related to work stress in crew members at Tumumpa Beach Fisheries Port, Manado City. Further analysis can be carried out in the next research to measure which variables are the factors causing work stress in crew members so that it can be the basis for policies for work stress control in crew members.

KEYWORDS

Age, Work stress, Ship crew

Citation: Jacobs, S. R., Sumampouw, J. O., & Musa, C. E. (2024). The Correlation between Age and Work Stress in Ship Crew at Tumumpa Beach Fisheries Port, Manado City. *Journal of Midwifery History and Philosophy, 1*(1), 1–6. https://doi.org/10.17323/midwifery.v1i1.1205

Correspondence:

Received: October 12, 2024
Accepted: December 15, 2024
Published: March 20, 2025

INTRODUCTION

Work stress is an emotional state in which individuals experience tension due to various demands in the work environment, so that it can affect the behavior,

quality, and work productivity of individuals. Based on a survey conducted by the Labour Force Survey (LSF) published by Health Safety and Environment (HSE), in the 2021/2022 period it is estimated that there are 914,000 cases of stress due to work, depression and/or anxiety in the United Kingdom. (Health Safety Executive, 2022).

Work as a Crew Member or seafarer is a job that is carried out on a ship and is at risk of experiencing work stress where activities as crew members operate at sea with unpredictable working conditions and have shared demands and high potential risks and accidents. (Ali al., 2023). The Food and Agriculture Organization (FAO), stated that crew members have '3D' job characteristics, namely dangerous, dirty, and difficult, supported by uncertain weather factors and high sea waves due to global warming.

Triggers of work stress are called stressors, a person can experience work stress due to pressure experienced by workers who are sedentary and last for a long time where boredom occurs caused by the individual's limitations in dealing with stressors (Fillhumaam, et al., 2019). The impact of unaddressed work stress can result in a decrease in worker productivity and achievement, in addition to that if left untreated, it can develop in a pathological state.

There are studies that show that there are complaints of work stress in crew members with risk factors such as control of work, social support, roles, organizational changes, and family factors have a relationship with work stress (Yulius et al, 2022). In addition, another factor that can trigger work stress is individual characteristics. Age is one of the individual factors that can trigger work stress, as we age, there is a decline in individual abilities such as health conditions, memory skills and thinking skills which ultimately cause work stress (Kaunang, et al., 2019).

Research conducted on the ship's crew about work stress and its determinants. This topic is still not widely discussed in occupational health research. In addition, this research was conducted on informal workers who are at risk. The results of the initial interviews conducted by the researcher on crew members at the Tumumpa Beach Fisheries Port, 7 out of 11 crew members experienced anxiety, fatigue and overwhelm in carrying out tasks and work, this is suspected as a symptom of work stress experienced by crew members. The average age of crew members at Tumumpa Beach Fisheries Port has an age range of ≥17 years with an age range between 23-42 years. Departing from the results of the interview and initial observations, the author is interested in researching the Relationship between Age and Work Stress in Crew at the Tumumpa Coastal Fisheries Port, Manado City. The purpose of this study is to analyze the relationship between age and work stress in crew members at the Tumumpa Beach Fisheries Port, Manado City.

RESEARCH METHODOLOGY

This study uses observational research with a cross sectional approach. The research site is the Tumumpa Beach Fisheries Port located in the city of Manado and its implementation will be carried out in the period of July-November 2023. The sample in this study is crew members who work at the Tumumpa Beach fishing port, Manado City. The number of samples in this study was 156 respondents, where to take samples in this study an accidental sampling technique was used. The research variables were age and work stress. The instruments that will be used in this study are questionnaires, HSE indicator tools, writing stationery and cameras to do documentation. Primary data collection was obtained directly from the distribution of questionnaires using the self-administered questionnaire method. Data analysis was carried out univariate and bivariate.

RESULT AND DISCUSSION

Univariate analysis is an analysis method used to describe the characteristics of each variable in the study. In the univariate analysis, the distribution of respondents based on working period and education level was explained. This can be seen in Table 1.

Table 1. Distribution of respondents based on employment and education level

Characteristics of Respondents	Category	n	%
Working Period	New (< 5Years)	44	28,2
	Long (≥ 5Years)	112	71,8
	Total	156	100,0
Education Level	Elementary School / Equivalent	65	41,7
	Junior High School/Equivalent	57	36,5
	High School/Equivalent	31	19,9
	College	3	1,9
	Total	156	100,0

Table 1 shows that the dominant respondents are in the category of long service period (≥ 5 years) as many as 112 respondents (71.8%), followed by respondents with new service period (<5 years) as many as 44 respondents. Based on education, the highest were 65 respondents (41.7%), then respondents with junior high school education (36.5%), respondents with high school education (19.9%) and respondents with higher education (1.9%). Furthermore, the research variables were explained based on descriptive statistics for stress and age. This can be seen in Table 2.

Tabe 2. Descriptive statistics of age & work stress

Variable	N	Minimum	Maximum	Mean	Std. Deviation
Work Stress	156	90	119	107,23	4,830
Age	156	17	64	36,22	12,347

Table 2 shows that the highest score of work stress score is 119 and the lowest is 90. The highest age of respondents was 64 years old and the lowest was 17 years old. The average work stress score was 107.23 and the age was 36.22 years old. The results of this study show that the age of the respondents ranged from 17-64 years with an average age of 36.22 years. As a workforce, the age of respondents is categorized as productive age. The results of this study also show that the work stress score is in the interval of 90-119 with an average work stress score of 107.23. In addition, the most respondents were distributed in the category of moderate work stress with a percentage of (73.1%). Furthermore, the categories of respondents' work stress are explained in Table 3.

Table 3. Distribution of respondents by category of work stress

Total Individual Work Stress Score	Category	n	%
140-175	Low	0	0,0
105-139	Keep	114	73,1
70-104	Tall	42	28,9
35-69	Very High	0	0,0
Total		156	100,0

Table 3 shows that the most respondents are distributed in the Medium category as many as 114 respondents (73.1%). None of the respondents were distributed in the low and very high categories. The results of this study show that the age of the respondents ranged from 17-64 years with an average age of 36.22 years. Research from Hermawan & Christiawan (2018), where the profession as an ABK is dominated by men in the age range of 20-39 years, then (Rossana et al, 2021), states that individual factors such as gender, age and working period can be the cause of work stress. The crew at PPP Tumumpa has been in the adult age category, this is marked by an Identity Card (KTP) which is one of the requirements to work as a crew member. According to Goma et al (2016), the productive age is in the range of 15-64 years, based on this statement, the age of the Tumumpa PPP crew is at the productive age. Zulkifli et al (2019) stated that younger workers tend to have better health conditions compared to older workers so that they are less likely to suffer from work stress. In addition, according to Hidayat et al (2019), workers with a young age tend to have good work productivity, this is reviewed in terms of physical, memory, mental, and social. Meanwhile, Anggraeni (2017) in his research stated that as workers get older, they have more experience and the ability to adjust more stably. According to Munandar (2012), work stress can be influenced by individual factors, one of which is age.

The results of this study show that the work stress score is in the interval of 90-119. The average work stress score was 107.23. In addition, the most respondents were distributed in the Medium category with 114 respondents (73.1%). Research by Badriansyah & Febriayanto (2023), obtained the result that workers experienced more moderate work stress as much as 69.4%. According to Munandar (2012), stressors consist of workload, individual roles in organizations, career development, relationships at work, organizational structure and climate, job demands and individual characteristics. The responses that can be seen when workers experience work stress are fatigue, boredom, fatigue, lack of enthusiasm and depression that can occur if work stress is left for a long time (Kaswan, 2015).

The crew of the Ship at the Tumumpa Beach Fisheries Port tends to have a short working time with a long break where the fishing process is usually carried out at dawn until morning, related to the work system, the crew members are given a briefing before going to sea by the Ship Captain and have been given their respective duties and roles, the time to go to sea is carried out for a week. Based on the results of the interview, most respondents stated that they often experience work stress when the income from going to sea decreases, which affects the income of the crew members. Declining ocean yields can be caused by bad weather, strong ocean currents, and wind direction.

Research from Wahyono et al (2014) which states that unpredictable waves make nets unable to stock, besides that nets are at risk of being rolled up due to strong sea currents so that it affects fishermen's catch. In addition, this job has a high risk where there is limited space to work, slippery floors due to water or oil spills, limited lighting, cold air temperatures and so on that are at risk of causing work accidents, in addition research from Rizki et al (2016) states that the work environment has a significant relationship with work stress. Furthermore, the relationship between age and work stress is explained.

Table 4. The correlation between age and work stress

		Age	Work Stress
Age	Pearson Correlation	1	-0,078
	Sig. (2-tailed)		0,331
	N	156	156

Table 4 shows that based on the results of the Pearson correlation test, a significance value of 0.331 (> 0.05 was obtained. This value means that age is not related to work stress. The results of this study are in line with research from Dearsya (2024) which states that there is no relationship between age and work stress. Research from Adiba & Bahri (2022) states that when workers enter the age of 41, workers are quite experienced and have enough knowledge in the world of work, which is directly proportional to the percentage of respondents aged ≥41 years as many as 64 people (41%) and the average working period of Tumumpa PPP crew members who have worked more than ≥5 and have been classified as long-term workers.

Hansson et al (2001) stated that older workers are more experienced and tend to be better able to manage stress compared to younger workers. The results of this study showed that there was an insignificant relationship between age and work stress. The work stress data of the Tumumpa PPP crew is mostly classified as moderate work stress, with the age category of 17-25 years old (26.5%), 26-35 years old (24.5%), 36-46 years old (20.5%), 46-55 years old (23.2%) and 56-65 years old (8%). It can be seen that the difference between age categories is not too far. These results show that young and old people have the same chance of experiencing work stress.

Work stress is not always bad, on the contrary, a healthy and positive stress response (eustress) can trigger a person to become passionate and enthusiastic at work. However, work stress can have bad consequences if workers have low resistance to stressors and the demands they bear exceed the capacity of the workers themselves. Working as a crew member has high risks and requires expertise, skills, and experience, which goes hand in hand as workers get older and begin to adapt to the work environment.

CONCLUSION

The conclusion of this study is that the age of crew members at Tumumpa Beach Fisheries Port, Manado City ranges from 17-64 years with an average age of 36.22 years. The crew work stress score at the Tumumpa Beach Fisheries Port, Manado City is in the interval of 90-119. The average work stress score was 107.23. In addition, the most respondents were distributed in the Medium category. age is not related to work stress in crew members at the Tumumpa Beach Fisheries Port, Manado City.

AUTHORS' CONTRIBUTION

Author 1: Data curation; Investigation.
Author 2: Conceptualization; Project administration; Methodology; Writing - original draft.
Author 3: Writing - review and editing; Validation

REFERENCES

Adiba, H, Bahri, S. (2022). Faktor-Faktor yang Berhubungan dengan Stres Kerja PadaPekerja Bagian Produksi di PT. Teguh Manunggal Sejati Kota Tanggerang. *Prepotif Jurnal Kesehatan Masyarakat*, 6(2), 1554-1565. https://doi.org/ 10.31004/prepotif.v6i2.4562

Ali, SNM, Cioca, L-I, Kayati, RS, Saputra, J, Adam, M, Plesa, R. (2023). A Study of Psychometric Instruments and Constructs of Work-Related Stress amongSeafarers: A Qualitative Approach. *International Journal of Environmental Researchand Public Health*, 20(4), 1–22. https://doi.org/10.3390/ijerph20042866

Anggraeni, AD, Setyaningsih, Y & Suroto. (2017). Hubungan Antara Karakteristik Individu dan Intrinsik dengan Stres Kerja pada Pekerja Sandblasting. *Jurnal Kesehatan Masyarakat*, 6(3), 226-233. https://doi.org/10.14710/jkm.v5i3.17214

Badriansyah, AFA, Febriyanto, K, (2023). Hubungan Lingkungan Kerja Non Fisik dengan Stres Kerja pada Anak Buah Kapal di Pelabuhan Samarinda. (Skripsi) Universitas Muhammadiyah Kalimantan Timur.

Fillhumaam, FM, Nurcholis, G & Nurahaju, R. (2019). Hubungan Stres Kerja dan Kepribadian dengan Burnout pada Anak Buah Kapal (ABK) KRI "X" TNI Angkatan Laut Surabaya. *Jurnal Sains Psikologi*, 8(2), 199–207. https://doi.org/10.17977/um023v8i22019p199

Goma, EI, Sandy, AT, Zakaria, M. (2021). Analisis Distribusi dan Interpretasi Data Penduduk Usia Produktif Indonesia Tahun 2020. *Jurnal Georafflesia*, 6(1), 20-27. https://scholar.archive.org/work/isyhjb67g5hmrd4mvl2n2iv4vu

Hansson, R. O., Robson, S. M., & Limas, M. J. (2001). Stress and coping among older workers. *Work*, *17*(3), 247-256.

Health Safety and Environtment (HSE). (2022). HSE Publishes Annual Work- Related Ill-Health and Injury Statistics for 2021/22. *Artikel*, dilihat 20 Juni 2023 https://press.hse.gov.uk/222/11/23/hse-publishes-annual-work-related-ill- health and-injury-statistics-for-2021-22/

Hermawan, DJ, & Christiawan, PI. (2018). Analisis Perilaku Mobilitas Anak Buah Kapal (ABK) Pelabuhan Perikanan Nusantara (PPN) Pengamben Desa Pengambengan Kecamatan Negara Kabupaten Jembrana. *Jurnal Pendidikan Geografi Undiksha*, 6(3), 105-114. http://doi.org/10.23887/jjpg.v6i3.20697

Kaswan. (2015). Sikap Kerja: Dari Teori dan Implementasi Sampai Bukti. Alfabeta, Bandung.

Kaunang, V. D., Buanasari, A., & Kallo, V. (2019). Gambaran tingkat stres pada lansia. *Jurnal Keperawatan*, *7*(2).

Munandar, AS. (2012). Psikologi Industri dan Organisasi. Universitas Indonesia (UI- Press) Jakarta.

Riset Kesehatan Dasar (Riskesdas). 2013. Hasil Utama Riset Kesehatan Dasar. Kementrian Kesehatan Republik Indonesia dilihat pada 10 Mei 2023 https://dinkes.bantenprov.go.id/read/hasil-riskesdas-2013.html

Riset Kesehatan Dasar (Riskesdas). (2018) Hasil Utama Riset Kesehatan Dasar. Kementrian Kesehatan Republik Indonesia dilihat pada 10 Mei 2023

Rizki, M, Hamid, D & Mayowan, Y. (2016). Pengaruh Lingkungan Kerja Terhadap Stres Kerja Karyawan (Studi pada Karyawan PT Persero Distribusi Jawa Timur Area Pelayanan Malang. *Jurnal Administrasi Bisnis* 41(1), 9-15 https://administrasibisnis.studentjournal.ub.ac.id/index.php/jab/article/vie w/1626

Wahyono, A, Imron, M, Nadzir, I. (2014). Resilensi Komunitas Nelayan dalam Menghadapi Perubahan Iklim: Kasus di Desa Grajangan Pantai, Banyuwangi, Jawa Timur. *Jurnal Masyarakat dan Budaya.* 16(2), 259-274. https://karya.brin.go.id/id/eprint/16833/

Yulius, L. P. E. D. A., Rochmah, L. F. H. P. N., TP, I. A., Novie, S. A. S. S. D., & Arta, C. (2022). Faktor Determinan Kinerja Karyawan (Studi Kasus Pada Rumah Sakit Swasta Berbasis Korporat di Jakarta). *Jurnal Kewarganegaraan*, *6*(2).

Zulkifli, Shinta, TR, Akbar, SA. (2019). Hubungan Usia, Masa Kerja dan Beban Kerja dengan Stres Kerja pada Karyawan Service Well Company PT. ELNUSA TBK Wilayah Muara Badak. *Jurnal Kesehatan Masyarakat*, 5(1), 11-15.

Copyright Holder :
© Rivald Samuel Jacobs et.al (2024).

First Publication Right :
© Journal of Midwifery History and Philosophy

This article is under:

