
**FACTORS AFFECTING EYE FAILURE ON WRITERS IN KAMPUNG BARU, BAITURAHAMAN
DISTRICT BANDA ACEH CITY THE YEAR 2021**

MHD. Hidayattullah

Student of the Faculty of Public Health, University of Muhammadiyah Aceh (mhd.hidayattullah95@gmail.com)

Submitted: 24/07/2022

Accepted: 26/07/2022

Published: 30/07/2022

ABSTRACT

Introduction one of the industrial sectors that are experiencing rapid development is the convection industry. Sewing work is currently done more using machines, in this case, sewing machines compared to hands, in 2016 WHO estimates that 153 million people in the world experience eye viruses or eye disorders. In 2016, 61% of Americans were very serious about work-related eye problems. workers admitted that they do work for 4 to 11 hours a day and the time for rest is not determined, the chairs used are not suitable, causing fatigue, ergonomics that do not match the tailor's body posture and the way he works, and stress that causes eye fatigue when the tailor has to work. focus on small objects when sewing. This type of research is quantitative research. Results, there is a relationship between age, length of work, chair, stress and ergonomics with eye fatigue with p-value 0.040, p-value 0.020, p-value 0.044, p-value 0.018, p-value 0.019. Based on these results, it can be concluded that there is a relationship between these factors and eye fatigue in tailors.

Keywords: Eye Fatigue Long Work, Chair, Stress, Ergonomics

One of the industrial sectors that are experiencing rapid development is the convection industry. People's consumption patterns that continue to change by the development of fashion make the convection industries also adapt to the needs of consumers so that they can continue to grow. As is known convection is a type of business in the manufacture of clothing or clothing needs en masse. In the process, convection requires a lot of workers¹.

Sewing is a job that requires high concentration to see continuously small objects. The eye organs that are used continuously to see small objects can cause the eye muscles to tighten and can cause eye fatigue complaints. Eye fatigue can be characterized by eye strain, blurred vision, double or double vision, red eyes, sore eyes, watery eyes, itchy or dry eyes, and headaches².

Fatigue is a condition in which a person experiences a decrease in vitality and decreased productivity due to a lack of lighting in the workspace, resulting in eye health problems which are characterized by soreness in the eye area, red eyes, dry eyes, blurred vision, and headaches, neck and neck disorders. shoulder (Siswanto, 2010). Complaints of eye fatigue can be influenced by many factors, namely environmental factors, human factors, and occupational factors. The intensity of lighting is an environmental factor that exists in the workplace. Insufficient lighting intensity can cause impaired visibility and eyestrain. On the other hand, excessive lighting intensity can cause glare, reflections, excessive shadows, visibility, and eyestrain³.

Factors that can affect eye fatigue are working period, length of work, age, visibility, and lighting level. Another factor that affects eye fatigue is the average length of time doing sequin work in one day, the length of time a person works well in a day is generally 6-10 hours⁴.

Data from the World Health Organization (WHO) shows the incidence of eye fatigue is 40% to 90%, WHO also adds data that in 2016 it is estimated that 153 million people in the world experience eye virus disorders or eye disorders. In 2016 61% of Americans were very serious about work-related eye problems⁵.

Riskesdas 2016 data shows that in Indonesia the prevalence of eye disorders is increasing rapidly in the population aged over 45 years with an average increase of about two to three times every 10 years. The highest prevalence and blindness are determined in the population group above 75 years according to the increase in the degenerative process⁶.

Based on the report of the Baiturrahman Health Center in 2018, said some people worked as tailors in the new village who had complained of experiencing symptoms of eye fatigue such as blurred vision, watery eyes, and headaches due to working too long, then checked by officers and given medicine. Kampung Baru, which is located in Baiturrahman District, Banda Aceh City, is one of the villages where 70 tailors work to sew clothes and pants with various types of clothing, and also receive sequins to compliment the beauty of the clothes.

Research purposes

This study aims to determine the factors that affect eye fatigue in tailors in Kampung Baru, Baiturrahman District, Banda Aceh City.

Methods

The type of research conducted is descriptive-analytic and uses a cross-sectional design that is trying to study the dynamics of the relationship or correlation between risk factors and their impact (Nazir, 2010). Meanwhile, in terms of the type of data, the research approach used in this study is quantitative. The population is a generalization area consisting of objects/subjects that have certain qualities and characteristics determined by the researcher to be studied and then drawn conclusions To determine the size and size of the sample in this study, the population used is 70 tailors in Kampung Baru, Baiturrahman District, Banda Aceh City in 2021.

Result and Discussion

Table 1.1 Frequency Distribution of Sewing Workers' Stress in Kampung Baru, Baiturrahman District Banda Aceh City in 2021

No.	Stress	f	%
1	No Stress	15	21,4
2	Stress	55	78,6
Amount		70	100

Primary data : 2021

Table 1.1 shows that of 70 respondents in Kampung Baru, Baiturrahman District, Banda Aceh City, the percentage of respondents who experience stress (78.6%) is greater than the percentage of respondents who do not experience stress (21.4%).

Table 1.2 Ergonomic Frequency Distribution of Tailors in Kampung Baru, Baiturrahman District Banda Aceh City in 2021

No.	Ergonomics	F	%
1	In accordance	20	28,6
2	It is not in accordance with	50	71,4
Amount		70	100

Table 1.2 shows that of the 70 respondents in Kampung Baru, Baiturrahman District, Banda Aceh City, the percentage of respondents who did not fit ergonomics (71.4%) was greater than the percentage of respondents who had appropriate ergonomics (28.6%).

Table 1.3 Frequency Distribution Of Sewarder's Eyes Fatigue Distribution In Kampung Baru Baiturrahman District, Banda Aceh City Year 2021

No.	Eye Fatigue	f	%
1	Not tired	18	25,7
2	Tired	52	74,3
Amount		70	100

Primary data : 2021

Table 1.3 shows that of 70 respondents in Kampung Baru, Baiturrahman District, Banda Aceh City, the percentage of respondents who experience eye fatigue (74.3%) is greater than that of respondents who do not experience eye fatigue (25.7%).

Table 1.4 Relationship Of Age With Sewarder's Eyes Fatigue In Kampung Baru Baiturrahman District Banda Aceh City The Year 2021

No	Age	Eye Fatigue				Total		P value (95% CI)
		Not tired		tired		f	%	
		f	%	f	%			
1	No Risk	6	26,1	17	73,9	23	100	0,040
2	at risk	12	25,5	35	74,5	47	100	
Total		18	25,7	52	74,3	52	100	

Primary data : 2021

From table 1.4 above, it is known that the proportion of respondents who do not experience eye fatigue is higher in respondents who are not at risk (26.1%) compared to those at risk (25.5%). Meanwhile, the proportion of respondents who experience eye fatigue is higher in respondents who are at risk (74.5%) compared to those who are not at risk (73.9%). The results of the Chi-Square test obtained P-value = 0.040. This shows that there is a relationship between age and eye fatigue in tailors in Kampung Baru, Baiturrahman District, Banda Aceh City in 2021, which means that the older the tailor, the more at risk of eye fatigue.

Table 1.5 Long Working Relationship With Sewing Worker Fatigue In Kampung Baru, Baiturrahman District, Banda Aceh City The Year 2021

No	Length of work	Eye Fatigue				Total		P value (95% CI)
		Not tired		tired		f	%	
		f	%	f	%			
1	Not long	13	76,5	4	23,5	17	100	0,020
2	Long	5	9,4	48	90,6	53	100	
Total		18	25,7	52	74,3	52	100	

Primary data : 2021

From table 1.5 above, it is known that the proportion of respondents who do not experience eye fatigue is higher in respondents who do not work for long (76.5%) compared to those who have long (9.4%). Meanwhile, the proportion of respondents who experience eye fatigue is higher in respondents who have worked for a long time (90.6%) compared to those who have not worked for long (23.5%). The results of the Chi-Square test obtained P-value = 0.020. This shows that there is a relationship between the length of work and eye fatigue for tailors in Kampung Baru, Baiturrahman District, Banda Aceh City in 2021, which means that the longer the tailor works, the more risky the eye is.

Table 1.6 the Relationship Of Chairs With Sewer's Eyes Fatigue In The Kampung Baru, Baiturrahman District, Banda Aceh City, 2021

No	Chair	Eye Fatigue				Total		P value (95% CI)
		Not tired		Tired		f	%	
		f	%	f	%			
1	Sesuai	12	85,7	2	14,3	14	100	0,044
2	Tidak Sesuai	6	10,7	50	89,3	56	100	
Total		18	25,7	52	74,3	52	100	

Primary data : 2021

From table 6.9 above, it is known that the proportion of respondents who do not experience eye fatigue is higher in respondents whose work chairs are suitable (85.7%) compared to those who are not suitable (10.7%). Meanwhile, the proportion of respondents who experience eye fatigue is higher in respondents whose work chairs are not suitable (89.3%) compared to those who are appropriate (14.3%). The results of the Chi-Square test obtained P-value = 0.044. This shows that there is a relationship between the chair and eye fatigue in tailors in Kampung Baru, Baiturrahman District, Banda Aceh City in 2021, which means that the less suitable the tailor's chair, the more risky the eyes are.

Table 1.7 The Relationship Of Stress With Sewer's Eyes Failure In The Kampung Baru, Baiturrahman District, Banda Aceh City The Year 2021

No	Stress	Eye Fatigue				Total		P value (95% CI)
		Not tired		Tired		f	%	
		f	%	f	%			
1	Not Stress	6	40	9	60	15	100	0,018
2	Stress	12	21,8	43	78,2	55	100	
Total		18	25,7	52	74,3	52	100	

Primary data : 2021

From table 1.7 above, it is known that the proportion of respondents who do not experience eye fatigue is higher in respondents who are not stressed (40%) compared to those who are stressed (21.8%). Meanwhile, the proportion of respondents who experienced eye fatigue was higher in respondents who were stressed (78.2%) compared to those who were not stressed (60%). The results of the Chi-Square test obtained P-value = 0.018. This shows that there is a relationship between stress and eye fatigue in tailors in Kampung Baru, Baiturrahman District, Banda Aceh City in 2021, which means that the more stressed the tailor, the more at risk of eye fatigue.

Table 1.7 Relationship Between Ergonomic Eligibility With Sewarder's Eye Failure In Kampung Baru Baiturrahman District, Banda City, Banda Aceh In 2021

No	Ergonomi	Eye Fatigue				Total		P value (95% CI)
		Not tired		Tired		f	%	
		f	%	f	%			
1	In accordance	13	65	7	35	20	100	0,019
2	It is not in accordance with	5	10	45	90	50	100	
Total		18	25,7	52	74,3	52	100	

Primary data : 2021

From table 1.8 above, it is known that the proportion of respondents who do not experience eye fatigue is higher in respondents who are ergonomically appropriate (65%) compared to those who are not suitable (10%). Meanwhile, the proportion of respondents who experience eye fatigue is higher in respondents whose ergonomics are not suitable (90%) compared to those who are appropriate (35%). The results of the Chi-Square test obtained P-value = 0.019. This shows that there is a relationship between ergonomics and eye fatigue for tailors in Kampung Baru, Baiturrahman District, Banda Aceh City in 2021, which means that the more inappropriate the ergonomics of the tailor, the more risky eye fatigue is.

Based on the results of the study, there was a relationship between age and eye fatigue in tailors in Kampung Baru, Baiturrahman District, Banda Aceh City in 2021 with a p-value = 0.040. Based on the results of the study, there was a relationship between age and eye fatigue in tailors in Kampung Baru, Baiturrahman District, Banda Aceh City in 2021 with a p-value = 0.040. Based on the results of the study which showed that there was a relationship between chairs and eye fatigue in tailors in Kampung Baru, Baiturrahman District, Banda Aceh City in 2021 with a p-value = 0.044. Based on the results of research showing that there is a relationship between stress and eye fatigue in tailors in Kampung Baru, Baiturrahman District, Banda Aceh City in 2021 with a P value = 0.018. Based on the results of research showing that there is a relationship between ergonomics and eye fatigue in tailors in Kampung Baru, Baiturrahman District, Banda Aceh City in 2021 with a p-value = 0.019.

Conclusion

The results obtained from some of the variables above are: There is a relationship between age and eye fatigue in tailors, There is a relationship between the length of work and eye fatigue in tailors in Kampung Baru, Baiturrahman District, Banda Aceh City, There is a relationship between chairs and eye fatigue in tailors, There is relationship stress and eye fatigue on tailors, There is a relationship between ergonomics and eye fatigue on tailors in Kampung Baru, Baiturrahman District, Banda Aceh City in 2021.

References

1. Azuma, Pengaruh Intensitas penerangan Terhadap Kelelahan mata Pada Karyawan Bagian Produksi Pelintingan Manual, Surakarta: Universitas Muhammadiyah Surakarta, 2014.
2. Jumiati, Pengaruh Pencahayaan dan Masa kerja Berdasarkan Waktu Kerja Terhadap Kelelahan Mata Pada Pengrajin Sulaman, Ggorontalo: Universitas Negeri Gorontalo, 2013.
3. Mahwati, Pengembangan Sistem Informasi Laboratorium. Kesehatan untuk Mendukung Evaluasi Pelayanan Laboratorium (Studi. Kasus di Laboratorium Kesehatan Kabupaten Purbalingga. Tesis. Universitas Diponegoro Semarang. 2011.
4. Suma'mur, Hiegiene Perusahaan dan Keselamatan Kerja. Jakarta : CV. Sagung Seto.2012.
5. Siswanto, Manajemen Tenaga Kerja Indonesia, edisi. 2, Jakarta: Bumi Aksara ,2010.
6. Tarwaka, Ergonomi Industri. Surakarta : HARAPAN PRESS ,2013.
7. WHO, Data Kelelahan Mata Pada Pekerja Konveksi, 2016.
8. Riskesdas, Laporan Kelelahan Mata Pada Pekerja, Jakarta, 2017.