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Direktorat Jenderal Pendidikan Tinggi, Riset dan Teknologi

Di-

Tempat

Berdasarkan rekomendasi persetujuan etik Nomor: 8370/UN4.14/PT.01.04/2019 oleh Dr. Lalu Muhammad Saleh, SKM., M.Kes dengan judul penelitian Model Intervensi Pengendalian Kelelahan Psikologis pada Karyawan *Air Traffic Controller* (ATC) di Indonesia untuk Meningkatkan Derajat Kesehatan, Produktivitas, dan Kualitas Hidup di Tempat Kerja tanggal 20 November 2019 menghasilkan jurnal yang berjudul "*The Application of FGD to Support Concept of National Policy on Health and Safety Work Procedures on ATC Employees in Indonesia*" adalah **Benar**. Adapun rekomendasi etik Nomor: 1957/UN4.14.1/TP.01.02/2022 tanggal 22 Februari 2022 dengan judul yang sama merupakan perpanjangan dari etik penelitian tersebut diatas. Hal ini, karena penelitian tersebut masih berjalan dari tahun 2019-sekarang.

Demikian penyampaian kami atas perhatian dan kerjasamanya diucapkan terima kasih.

Ketua Komisi Etik Penelitian,

Prof. dr. Veni Hadju, M.Sc, Ph.D

NIP. 19630625 198702 2 004

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REKOMENDASI PERSETUJUAN ETIK
Nomor : **8370/UN4.14/PT.01.04/2019**

Tanggal : 22 September 2019

Dengan ini Menyatakan bahwa Protokol dan Dokumen yang Berhubungan dengan Protokol berikut ini telah mendapatkan Persetujuan Etik :

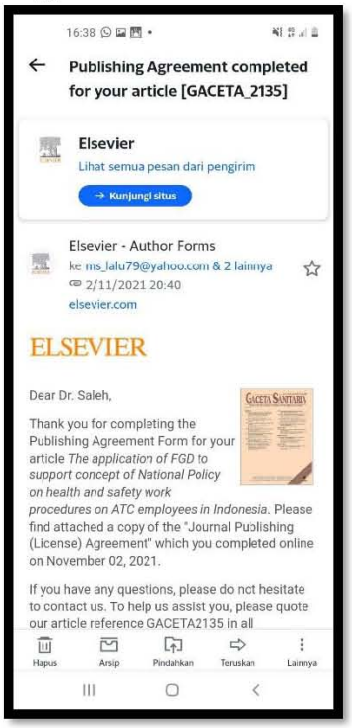
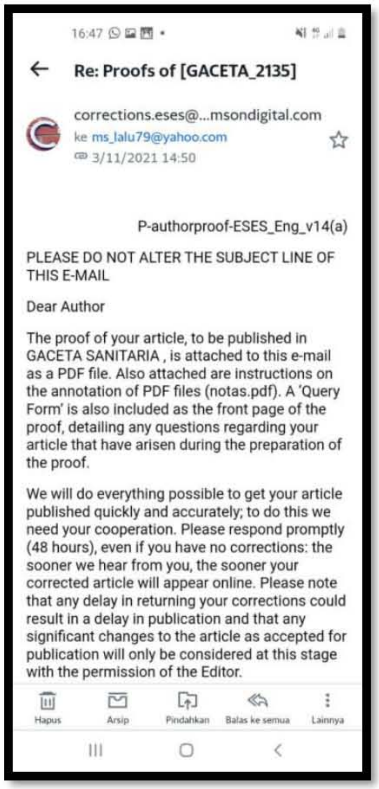
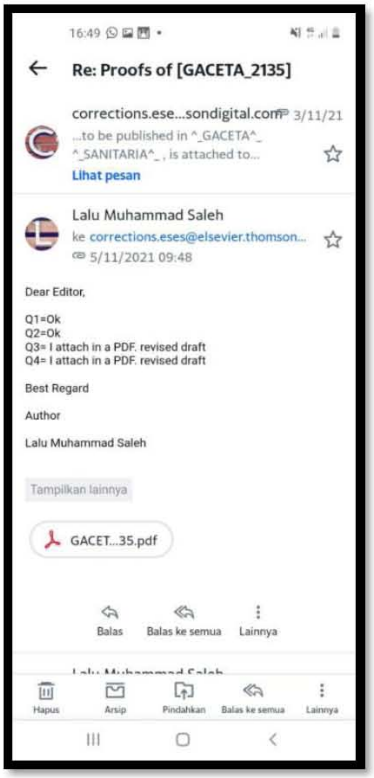
No.Protokol	14819105032	No. Sponsor Protokol	
Peneliti Utama	**Dr. Lalu Muhammad Saleh, SKM.,M.Kes**	Sponsor	**Pribadi**
Judul Peneliti	**Model Intervensi Pengendalian Kelelahan Psikologis Pada Karyawan Air Traffic Controller (ATC) Di Indonesia Untuk Meningkatkan Derajat Kesehatan, Produktivitas, dan Kualitas Hidup Di Tempat Kerja**		
No.Versi Protokol	1	Tanggal Versi	20 November 2019
No.Versi PSP	1	Tanggal Versi	20 November 2019
Tempat Penelitian	**Air Nav Indonesia Cabang Kota Makassar**		
Judul Review	☐ Exempted ☒ Expedited ☐ Fullboard	Masa Berlaku **22 September 2019 Sampai 22 September 2020**	Frekuensi review lanjutan
Ketua Komisi Etik Penelitian	Nama : Prof.dr.Veni Hadju,M.Sc,Ph.D	Tanda tangan	Tanggal 22 September 2019
Sekretaris komisi Etik Penelitian	Nama : Dr. Wahiduddin, SKM.,M.Kes	Tanda tangan	Tanggal 22 September 2019

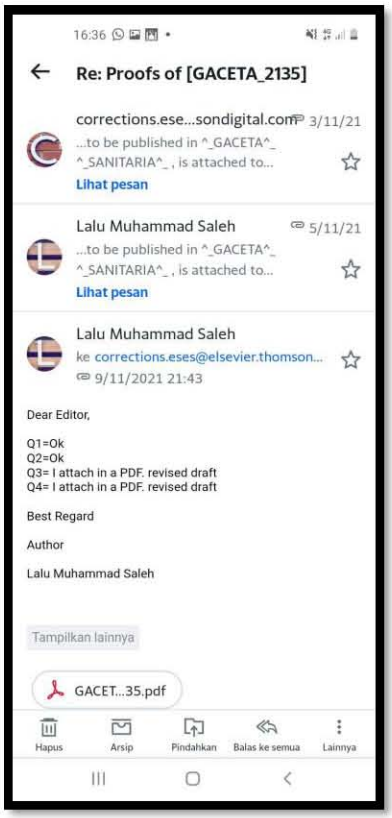
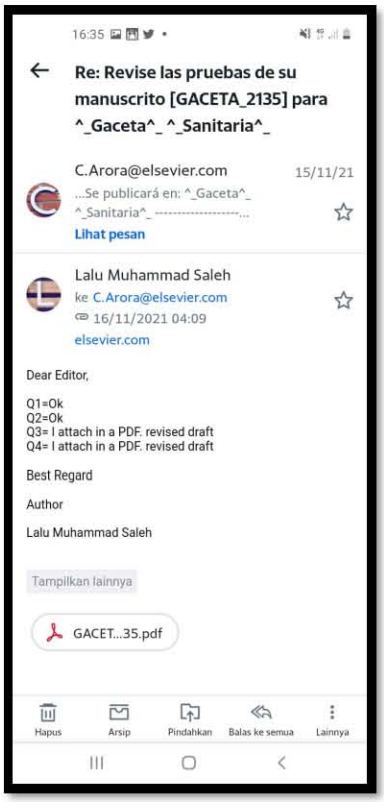
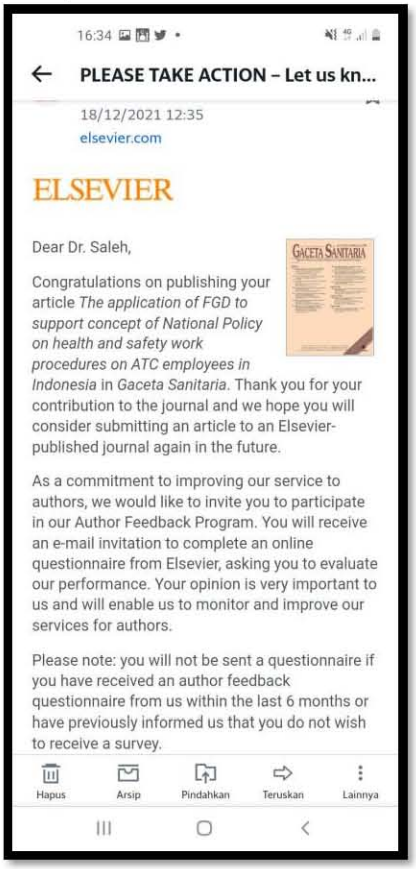
Kewajiban Peneliti Utama :

1. Menyerahkan Amandemen Protokol untuk persetujuan sebelum di implementasikan
2. Menyerahkan Laporan SAE ke Komisi Etik dalam 24 Jam dan dilengkapi dalam 7 hari dan Lapor SUSAR dalam 72 Jam setelah Peneliti Utama menerima laporan
3. Menyerahkan Laporan Kemajuan (progress report) setiap 6 bulan untuk penelitian resiko tinggi dan setiap setahun untuk penelitian resiko rendah
4. Menyerahkan laporan akhir setelah Penelitian berakhir
5. Melaporakn penyimpangan dari protocol yang disetujui (protocol deviation/violation)
6. Mematuhi semua peraturan yang ditentukan

KORESPONDENSI JURNAL

JUDUL ARTIKEL "THE APPLICATION OF FGD TO SUPPORT CONCEPT OF NATIONAL POLICY ON HEALTH AND SAFETY WORK PROCEDURES ON ATC EMPLOYEES IN INDONESIA"

1	Jurnal berhasil disubmit pada bulan Oktober 2021 16:39 Hemos iniciado la producción de su artículo [GACETA_2135] para ^_Gaceta^_ ^_Sanitaria^_ Elsevier Lihat semua pesan dari pengirim Kunjungi situs C.Arora@elsevier.com ke ms_lalu79@yahoo.com & 1 lainnya 26/10/2021 14:29 elsevier.com ---------- Nuestra referencia: GACETA 2135 Referencia del artículo: Título del artículo: The application of FGD to support concept of National Policy on health and safety work procedures on ATC employees in Indonesia Se publicará en: Gaceta Sanitaria ---------- Estimado/a Dr. Saleh: Gracias por elegir publicar en Gaceta Sanitaria. Por favor, lea este mensaje detenidamente ya que contiene información importante. FINALIZAR LA PUBLICACIÓN DE SU ARTÍCULO: Hapus Arsip Pindahkan Teruskan Lainnya	2	Jurnal mendapat respon dari editor jurnal pada tanggal 02 November 2021  16:38 Publishing Agreement completed for your article [GACETA_2135] Elsevier Lihat semua pesan dari pengirim Kunjungi situs Elsevier - Author Forms ke ms_lalu79@yahoo.com & 2 lainnya 2/11/2021 20:40 elsevier.com ELSEVIER Dear Dr. Saleh, Thank you for completing the Publishing Agreement Form for your article *The application of FGD to support concept of National Policy on health and safety work procedures on ATC employees in Indonesia*. Please find attached a copy of the "Journal Publishing (License) Agreement" which you completed online on November 02, 2021. If you have any questions, please do not hesitate to contact us. To help us assist you, please quote our article reference GACETA2135 in all Hapus Arsip Pindahkan Teruskan Lainnya
3	Proofs oleh jurnal pada tanggal 03 November 2021  16:47 Re: Proofs of [GACETA_2135] corrections.eses@...msondigital.com ke ms_lalu79@yahoo.com 3/11/2021 14:50 P-authorproof-ESES_Eng_v14(a) PLEASE DO NOT ALTER THE SUBJECT LINE OF THIS E-MAIL Dear Author The proof of your article, to be published in GACETA SANITARIA , is attached to this e-mail as a PDF file. Also attached are instructions on the annotation of PDF files (notas.pdf). A 'Query Form' is also included as the front page of the proof, detailing any questions regarding your article that have arisen during the preparation of the proof. We will do everything possible to get your article published quickly and accurately; to do this we need your cooperation. Please respond promptly (48 hours), even if you have no corrections: the sooner we hear from you, the sooner your corrected article will appear online. Please note that any delay in returning your corrections could result in a delay in publication and that any significant changes to the article as accepted for publication will only be considered at this stage with the permission of the Editor. Hapus Arsip Pindahkan Balas ke semua Lainnya	4	Author merespon email editor jurnal pad tanggal 05 November 2021  16:49 Re: Proofs of [GACETA_2135] corrections.ese...sondigital.com 3/11/21 ...to be published in ^_GACETA^_ ^_SANITARIA^_ , is attached to... Lihat pesan Lalu Muhammad Saleh ke corrections.eses@elsevier.thomson... 5/11/2021 09:48 Dear Editor, Q1=Ok Q2=Ok Q3= I attach in a PDF. revised draft Q4= I attach in a PDF. revised draft Best Regard Author Lalu Muhammad Saleh Tampilkan lainnya GACET...35.pdf Balas Balas ke semua Lainnya Hapus Arsip Pindahkan Balas ke semua Lainnya

5	Author mengirimkan revisi pada tanggal 09 November 2021  16:36 Re: Proofs of [GACETA_2135] corrections.ese...sondigital.com 3/11/21 ...to be published in ^_GACETA^_ ^_SANITARIA^_ , is attached to... Lihat pesan Lalu Muhammad Saleh 5/11/21 ...to be published in ^_GACETA^_ ^_SANITARIA^_ , is attached to... Lihat pesan Lalu Muhammad Saleh ke corrections.eses@elsevier.thomson... 9/11/2021 21:43 Dear Editor, Q1=Ok Q2=Ok Q3= I attach in a PDF. revised draft Q4= I attach in a PDF. revised draft Best Regard Author Lalu Muhammad Saleh Tampilkan lainnya GACET...35.pdf Hapus Arsip Pindahkan Balas ke semua Lainnya	6	Author mengirimkan revisi pada tanggal 16 November 2021  16:35 Re: Revise las pruebas de su manuscrito [GACETA_2135] para ^_Gaceta^_ ^_Sanitaria^_ C.Arora@elsevier.com 15/11/21 ...Se publicará en: ^_Gaceta^_ ^_Sanitaria^_ ----------... Lihat pesan Lalu Muhammad Saleh ke C.Arora@elsevier.com 16/11/2021 04:09 elsevier.com Dear Editor, Q1=Ok Q2=Ok Q3= I attach in a PDF. revised draft Q4= I attach in a PDF. revised draft Best Regard Author Lalu Muhammad Saleh Tampilkan lainnya GACET...35.pdf Hapus Arsip Pindahkan Balas ke semua Lainnya
7	Revisi dari editor jurnal pada tanggal 11 November 2021 16:49 Revise las pruebas de su manuscrito [GACETA_2135] para ^_Gaceta^_ ^_Sanitaria^_ Elsevier Lihat semua pesan dari pengirim Kunjungi situs s.bofill@elsevier.com ke ms_lalu79@yahoo.com & 1 lainnya 11/11/2021 09:01 elsevier.com ---------- POR FAVOR, NO MODIFIQUE EL TEXTO DEL ASUNTO DE ESTE MENSAJE ---------- Nuestra referencia: GACETA 2135 Referencia del artículo: Título del artículo: The application of FGD to support concept of National Policy on health and safety work procedures on ATC employees in Indonesia Se publicará en: Gaceta Sanitaria ---------- Estimado/a Dr. Saleh: Recientemente le enviamos las pruebas del artículo mencionado arriba. Nuestros registros Hapus Arsip Pindahkan Teruskan Lainnya	8	Jurnal dipublish di Gaceta Sanitaria  16:34 PLEASE TAKE ACTION – Let us kn... 18/12/2021 12:35 elsevier.com ELSEVIER Dear Dr. Saleh, Congratulations on publishing your article *The application of FGD to support concept of National Policy on health and safety work procedures on ATC employees in Indonesia* in *Gaceta Sanitaria*. Thank you for your contribution to the journal and we hope you will consider submitting an article to an Elsevier-published journal again in the future. As a commitment to improving our service to authors, we would like to invite you to participate in our Author Feedback Program. You will receive an e-mail invitation to complete an online questionnaire from Elsevier, asking you to evaluate our performance. Your opinion is very important to us and will enable us to monitor and improve our services for authors. Please note: you will not be sent a questionnaire if you have received an author feedback questionnaire from us within the last 6 months or have previously informed us that you do not wish to receive a survey. Hapus Arsip Pindahkan Teruskan Lainnya

The application of FGD to support concept of National Policy on health and safety work procedures on ATC employees in Indonesia☆

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ARTICLE INFO

Article history:
Received 28 June 2021
Accepted 30 July 2021

Keywords:
ATC
FGD
Health
Policy
Safety

ABSTRACT

Objective: This study aims to conduct a focused discussion regarding the concept of a national policy on health and safety work procedures for ATC employees in Indonesia.
Methods: The research is a qualitative study with case study design. Data was collected through Focus Group Discussion (FGD) method. A total of 11 informants participated in this study. Data were analyzed with content analysis method.
Results: It was found that all informants have positive perception to this model and agree to support the ATC employee's policy development.
Conclusion: It can be concluded that in general, all informants support the concept of a national policy on health and safety work procedures for ATC employees in Indonesia. Therefore, it is hoped that a policy will be formed that focuses on improving ATC performance so that it can work healthy and safely.

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Introduction

Indonesian aviation Industry has been developed rapidly in the last 10 years. According to International Air Transport Association (IATA), Indonesia has enormous potential in the aviation sector and it is estimated that in 2034 Indonesia will be one of the big six in air travel market in the world.[1,2] It is also expected that there will be 270 million domestic and international passengers who will across Indonesia airspace.[1,2] Therefore, to anticipate this situation, the government airline companies and flight attendants should find the best solution in preventing flight accidents. The occupational health and safety (OHS) aspect are important to identify the hazards and risks which potentially causing flight accidents. Prevention and control of occupational accidents and diseases in aviation world should be implemented and should be the responsibilities of airline companies, employees, and passengers.

Air traffic controller (ATC) plays important roles in airplane flights due to their function in driving and guiding the pilot during the airplane operation which starts from take-off until landing process. However, these responsibilities are burdening since there was an enormous number of airplane which crossing the airspace in the expeditious speed at the same time.[3] In other words, the ATC working procedure requires a high level of professionalism, concentration, velocity, accuracy, and dexterity.[4] Therefore, occupational health and safety of ATC officer should be a main priority and should receive sufficient attention in which will optimize the working performance of ATC officer.[5]

Relaxation and wellness program play important role in reducing fatigue and stress.[6] Payne (2000) in Sudram et al. (2016) states the most effective and commonly used strategy in relieving stress and creating deep relax condition, especially in muscle relaxation is the progressive muscle relaxation techniques.[6] In addition, a study by Alexopoulus et al. (2014) shows that simple relaxation training (respiration and progressive muscle relaxation) leads to a significant decrease in stress and cortisol level among professional workers after eight weeks.[7] This study aims to conduct a focused discussion regarding the concept of a national policy on health and safety work procedures for ATC employees in Indonesia.

Methods

This study is a qualitative study with a case study design. Data were collected by Focus Group Discussion (FGD) which was conducted on 14–15 November 2019. A total of 11 respondents were applied in this study, including Manager for Control and Evaluation of AirNav Indonesia Personnel, GM of Lombok branch, GM of Surabaya branch, Operations Manager of Surabaya branch, GM of Denpasar branch, Chairman and Member of the Central International Air Transport Association (IATCA), Manager Safety, Security and Standardization of MATSC branch, Chairman and Member of the IATCA Branch Management Council of MATSC Branch and ATC Employee.

In the implementation of focus group discussion, questions to informants were in the form of open-ended questions. Informants can freely express opinions regarding the draft national policy draft on health and safety work procedures for ATC employees in Indonesia. Data was analyzed with content analysis approach. A content

☆ Peer-review under responsibility of the scientific committee of the 3rd International Nursing, Health Science Students & Health Care Professionals Conference. Full-text and the content of it is under responsibility of authors of the article.

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https://doi.org/10.1016/j.gaceta.2021.10.067
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analysis approach was done to draw conclusions by identifying FGD results. As for the data collection instruments used were FGD guidelines, audio recorders, cameras, and stationery.

Result

A total of 11 respondents participated in this study. From the FGD, it was found that all of the respondents have a positive perception to this research and show their willingness to support the study.

"...relaxation as one of the outputs from this research is very good and I will fully support this research since no academician has ever focused on ATC. In our company, there are various regulations targeting the operational aspect. However, the regulation related to humanist aspects is limited..."
(GM of Lombok branch)

"Hopefully, it will give a positive output for us, the government should develop a national policy regarding how to handle stress so that the ATC officers will have a longer life, are prevented from stroke, and not lose their job due to stress. Me, personally really support it..."
(GM of Denpasar branch)

"Basically we very support it, sir and maybe the implementation can be seen after three years. Is not it sir? Maybe after three years we will involve you guys to see the safety aspects."
(Manager for Control and Evaluation of AirNav Indonesia Personnel)

Some informants give their support to this research since it is a new idea in the aviation industry and important for creating a solution, however, it is often forgotten.

"...we fully support this event, if it possible we should do it continuously because we as a board of trustee feel that these aspects have not been done to any people in this organization..."
(Chairman of the Central International Air Transport Association)

"I am really interested because it is a new idea, relaxation as an output of this research. One of them is very good and I really support it because previously the academician never focus on ATC officers."
(GM of Lombok branch)

In this FGD, some informants give their suggestions related to research location which revealed that high stress level does not only occur in a location with high traffic but also among ATC officers in low traffic.

"what Ms. Minke said is right, in some cases break down observation does not only occur during high traffic but also in low traffic, such as two. It means that if we see the relation of productivity and stress, stress not only occurs because of busyness but also could occur due to jobless."
(Manager Safety, Security and Standardization of MATSC branch)

Some ATC officers also participated in this study and shared their perception related to one month of relaxation.

"Personally, what I felt in that one month is that when I have a night shift previously I feel tired and directly fall asleep. But after relaxation, I feel fresh, especially on a hard night shift and in the morning I have some activities. During this time the office has a lot of activities and I was very busy but unexpectedly I feel good."
(TA-ATC Employee)

"my testimony in the 30 days of accompaniment, it was really relaxed. When I want to go for work I feel I have new spirit."
(RH-ATC Employee)

It is expected that this research will result in more professional policy to ensure ATC officer wellness that will create a better working environment, accuracy, emotional intelligence, concentration, and healthy mind in which will create better information to the pilot.

"if the findings of this research show good benefit I would say that it is needed. I could say that this research is needed . . . I will support this research because it highly needed."
(Member of the Central International Air Transport Association)

"...this tools is required since we do not have it yet. How is the simple relaxation in working place? But if it compulsory it can be regulated with standard operational procedure (SOP). Just adjust it with the needs. But this is good recommendation, relaxation should be done based on the needs, is not it?"
(GM of Lombok Branch)

"If there is a good perception towards relaxation why not put it into policy so that it will have regulation. So we will work will regulation but in organizational aspect for me, if we see it as a good thing maybe we will inform the member that it is good and instruct the member to do it."
(Chairman of the Central International Air Transport Association)

Related to the input of the draft and academic script, informants gave some inputs related to the words redaction, additional reference related to the aviation regulation, and regulation related to ATC's authority. In addition, the determination of relaxation time among ATC members should be flexible since all airports have different control time.

"I just have a short look, just redactional suggestion, ... just add task and authority of ATC adjusted with the regulation."
(Manager for Control and Evaluation of AirNav Indonesia Personnel)

"...in my opinion, it will be better if it is flexible. For example, it does not have to be 08.30... for me, it is better if there is no time because it for all of us. So in the morning shift, just write on rest, do not have to mention the time. Because in every airport there is an arrangement. Maybe there is airport which starts at 8, does not necessarily 7 o'clock. There are which start at 6, in every branch is different. So just adjust with the rest hours..."
(Member of the IATCA Branch Management Council of MATSC Branch)

Discussion

Based on this research, generally informants have a positive perception of the research among ATC office since their work requires a high level of accuracy in controlling the airplane during take-off and landing. According to the informant, it is highly possible for ATC officers to have high level of stress because ATC working unit is very complex and systematic since they have to ensure flight safety. Informants suggest that stress among ATC officers is caused by several factors such as high traffic. Some studies revealed factors that affect mental health of ATC officers. A study by Jou and Tang (2013) in Taiwan revealed that workforce in Taiwan is inadequate, therefore the work pressure and workload is significantly higher and causing stress.[4] Stress among ATC officers will give a negative impact on the officer's work which could cause a human error as well as flight accidents.

According to Susanti (2017), to prevent mental health disorders and fatigue as well as minimizing human error caused by ATC officer's workload, the availability of policy to ensure and

optimize flight safety is important.[8] In 2018, Saleh et al. found a safety performance model for ATC officer, which is progressive muscle relaxation technique.[5] In our study, two ATC officers who already perform relaxation in one month gave positive reactions regarding the changes they experienced.

The purpose of relaxation is to reduce stimulation and bring the psychological and physiological relax atmosphere In psychological aspect, relaxation could stimulate healthy, relax, and peaceful feeling as well as reducing tension and anxiety.[9] In addition, the physiological benefit of relaxation is to reduce blood pressure, and to improve respiration and heart rate. There is a significant difference in work stress between pre-test and post-test in the intervention group with a value of $z = -2670$ and a value of $p = 0.008$ ($p < 0.05$) so that there is a significant reduction in work stress after being given relaxation therapy.[10]

All of air space activities, flight navigation, airplanes, flight security and safety as well as the supporting and general facilities have been regulated in Government Regulation no. 77 in 2012 about General Company of Indonesian Flight Navigation Services Institute and Law no. 1 in 2009 about aviation.[11–13] However, those regulations have not fully optimized for the reduction of flight accidents as well as security and safety of aviation workers. Therefore, it is necessary to develop national policy related to health and safe working procedure for ATC officers which include management model of psychological fatigue that will increase ATC officers' health status.

Conclusion

It can be concluded that in general all informants view positively and support the concept of a national policy on health and safety work procedures for ATC employees in Indonesia. Informants are aware of the workload borne by ATC officers and on the other hand, they have to maintain performance to stay focused on controlling flight safety so that solutions are needed to reduce the workload, besides that this research is seen as a new idea because eventually things are forgotten. So far it can be noticed by academics. The existence of this national policy is expected to have a good impact on ATC officers. Therefore, it is hoped that a policy will be formed that focuses on improving ATC performance so that it can work healthily and safely, either as a national policy or as one of the Standard Operating Procedures (SOP) for ATC officers.

Conflicts of interest

The authors declare no conflict of interest.

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