



***Chin Tuck* Exercise Education for Neck Pain Batik Workers Across Jambi City**

Wanti Hasmar ^{1*} , Putra Hadi²
STIKes Baiturrahim Jambi

ABSTRACT : Neck pain is a common problem that two out of three people will experience during their lifetime, 10% of all people will experience neck pain within one month. Injury/disease process to neck structures will result in muscle spasm and loss of movement function. Community service activities were carried out in June 2022 by giving leaflets about neck pain and chin tuck exercises, carried out 8 times. This PKM aims to be used as a source of knowledge and chin tuck exercises can be practiced on batik workers in Seberang Jambi City. The results of the evaluation both through questions and answers and demonstrations of the chin tuck exercise are that all batik workers can do these exercises independently so that they can reduce neck pain, muscle tension and increase cervical functional activities in batik workers.

Keywords : Batik Worker, Neck Pain, Chin Tuck Exercise

Submitted: 02-07-2022; Revised: 10-07-2022; Accepted: 17-07-2022

Corresponding Author: wanti.cemar@gmail.com

INTRODUCTION

The impact of working for a long time with a fixed or the same position either standing, sitting or looking down will cause discomfort. Working standing positions that are too long will make workers always try to balance their body position, causing a static workload on the back and leg muscles, this condition also causes blood to collect in the lower limbs, while sitting positions for too long without any adjustment can result in curvature of the spine and low back pain, looking down or looking up for too long will also result in a change in the natural position of the cervical spine so that it can cause neck pain. ¹

Neck pain is a common problem that two out of three people will experience in their lifetime. The human neck is a complex structure and is very susceptible to irritation, even 10% of all people will experience neck pain within one month. Potential pain generators include bones, muscles, ligaments, joints and intervertebral discs. Almost any injury or disease process to the neck or adjacent structures will result in muscle spasm and loss of movement function. ²

Neck pain is one of the diseases whose prevalence is increasing in the world. This disease has a profound impact on individuals, families, communities, and even in business life. According to The Global Burden of Disease Study in 2015, more than 500 million people worldwide suffer from low back pain and more than 250 million people worldwide suffer from neck pain for more than 3 months. Lower back pain and neck pain are the leading causes of disability in the lives of people around the world and in all age groups. ³ The total population who have experienced pain in the neck area in the past 6 months in Canada is 54%. ⁴

There are several factors that affect *neck pain* such as work environment factors consisting of room layout, room temperature, lighting, and body tension. In addition, there are also individual factors such as age, gender, education level, and work attitude. A good work attitude when doing work can reduce the risk of musculoskeletal disorders. All work should be done with a good work attitude especially in sewing work. ⁵

Handling the problem of neck pain can be done by giving exercise therapy. Exercise therapy is body movement, posture or physical activity that is carried out in a systematic and planned manner in order to provide benefits to improve, restore and increase physical function. Exercise therapy can also prevent or reduce health-related risk factors. ⁶

Chin tuck exercise is a form of strengthening exercise used for deep cervical flexor muscles consisting of longus capitis and longus colli muscles. Strengthening exercises are useful for improving muscle function and performance. The location of the muscle in the neck is responsible for stabilizing and maintaining the cervical spine. The presence of disturbances in the forward head posture causes these muscles to experience weakness. To increase muscle

strength in the deep cervical flexor area, *chin tuck exercise can be given.* ⁷

Education *chin tuck exercise* on batik worker this is solution for reduce neck pain and neck muscle tension and increase functional activity, for that required socialization in the form of education *chin tuck exercise*. Destination devotion Public this is reduce pain and increase functional activity in the cervical spine. Method which used is gift *chin tuck exercise* leaflet on elderly batik workers in across the city of Jambi, then elderly provide responses and discussion of the result expected in the implementation of service Public this is so that elderly could do every movement with Correct so that get results which good.

METHODOLOGY

Activity Devotion Public held on March -June 2022 with the target of batik workers across the city of Jambi. Activity Devotion To Public This is done by giving leaflets about the *chin tuck exercise*, namely pushing/pulling the chin back independently, doing 1 x repetition with 8 repetitions, then demonstrating to batik workers, and correcting if the movement is not right. Evaluation of this community service with a question and answer discussion related to *chin tuck exercises* and neck pain. Activity devotion Public this expected could increase knowledge of batik workers and can do *chin tuck exercises* independently at home with the aim of reducing neck pain, neck muscle tension and improving cervical function of batik workers in Seberang Jambi City.

Implementation Activity

Stage implementation activity devotion to Public this is as following :

Preparation

This stage is the initial stage of implementation Devotion Public, previously team devotion Public conduct a survey by discussing with the chairman of the Kajang Lako cooperative across the city of Jambi. , after that send letter in the form of permission from chairman of the Kajang Lako cooperative in April 2022. After obtaining permission, next team devotion Public doing a little discussion again with one of the batik workers across the city of Jambi regarding Devotion Public which will held.

Stage next in preparation devotion Public this is material design and leaflet making about neck pain in batik and *chin tuck exercises* with the technique of pushing/pulling the chin back independently, performed 1 x repetition with 8 repetitions, then gift explanation about the benefits and, and demonstration of how to do a *chin tuck exercise* with movement correction if there was an error in the movement to batik workers in Seberang Jambi City.

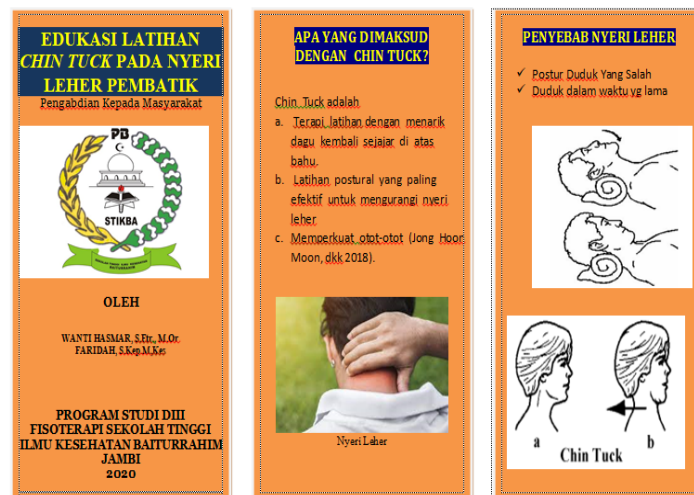


Figure 1. Leaflet Gymnastics Brain

Implementation

At this stage, socialization begins and education related to *chin tuck* exercises across Jambi City by giving leaflets for *chin tuck exercises* and demonstration movement to batik workers across the city of Jambi, with hope batik can do *chin tuck* exercise movements independently and correctly with the aim of reducing neck pain, neck muscle tension and increasing cervical functional activity, then conducted ask answer.



Figure 2. Explanation of the material



Picture 3. *Chin tuck* Practice Demonstration

Monitoring and Evaluation

Monitoring and evaluation (monev) done directly to target. Scope monev in activity this cover monev planning and implementation and evaluation results. Evaluation (monev) done directly to target. Monitoring and evaluation is carried out with give discussion/question answer and results demonstration on batik workers across Jambi City. Evaluation this aim for knowing the understanding and knowledge of batik

workers regarding neck pain and *chin tuck exercises*

RESULTS AND DISCUSSION

Activity Devotion Public this theme "Education on *chin tuck* exercise for batik in Seberang Jambi City" by giving leaflets on *chin tuck exercise* for batik workers on month June 2022 which the target is a batik worker in Seberang Jambi City. Devotion Public this conducted by 1 person person team lecturer from program studies D-III Physiotherapy and helped by 3 Students Program Studies D-III Physiotherapy STIKes Baiturrahim Jambi, attended by batik workers across the city of Jambi.

This community service shows that home industry workers know to work 8 hours per day. The minimum working time is 8 hours and the maximum working time is 9 hours. Home industry workers know that those who work 8 hours or > 8 hours have a risk of experiencing neck pain compared to workers who have long hours of work without rest, the ability of the body will decrease and can cause pain in the limbs (Icsal, Sabilu & Pratiwi, 2010). 2016). The length of work with complaints of neck pain, the batik makers with a length of work 4-7 hours (17%), 8 hours (65%), and more than 8 hours (18%) complained of neck pain. The higher the working time of the batik maker, the higher the risk of the batik maker experiencing neck pain. ¹²

The length of work affects neck pain because of the high length of work coupled with the characteristics of workers who have to bend down continuously which will cause the muscles in the neck area to contract continuously which can result in fatigue in the neck muscles. If this condition is repeated, it can cause muscle spasms and can lead to neck pain. Unnatural work attitudes occur because the characteristics of task demands, work tools, work areas are not in accordance with work abilities and limitations. Static loads are caused by muscles in a tense state without producing movement and body postures in unnatural conditions, in this case it will cause neck pain. Workers who work 41-48 hours / week or an average of 7-8 hours per day cause reduced rest time and heavier muscle work so that the risk of neck pain will increase. ¹³

Skeletal muscle complaints generally occur due to excessive muscle contraction due to too heavy work or static movements with a long duration of loading. Unnatural posture occurs when a body part moves away from its natural position, such as a raised head and a lowered neck for too long. Static posture is a posture during physical work in the same position where the movement that occurs is very minimal or the movement is maintained for more than 10 seconds. Long maintaining a work posture can also be interpreted as the length of time or duration of exposure to risk factors for injury that will occur, if the work lasts for a long time, the body's ability will decrease and cause complaints to the body. ¹⁴

The longer a person's working period, the longer the exposure to the time and type of work carried out by workers, so that it will cause various physical

complaints due to their work. Working period > 5 years had a higher risk of neck pain 4,444 times higher than working period < 5 years. ¹⁴

CONCLUSIONS AND RECOMMENDATIONS

After team doing activity devotion Public on batik workers across the city of Jambi with gifts leaflets and demonstrations *chin tuck* exercise could done correctly by batik workers and increase the understanding and knowledge of batik workers about neck pain and the benefits of *chin tuck exercises* .

ACKNOWLEDGMENT

The Service Team would like to thank STIKes Baiturrahim Jambi for the moral and material support so that this activity can be carried out properly.

REFERENCES

- Niswaton Fauziah, Darwin Karim, SU Relationship between Body Position and Musculoskeletal Complaints in Rice Farmers in Silongo Village, Lubuk Tarok District, Sijunjung Regency. *J. Online Mhs.* **5** , 10 (2013).
- Permana, A. . The Relationship Between Long Sitting Bus Driver Against The Risk Of Neck Pain Conditions. 111 (2017).
- Hurwitz, EL *et al.* The Global Spine Care Initiative: A Systematic Review Of Individual And Community-Based Burden Of Spinal Disorders In Rural Populations In Low- And Middle-Income Communities. *eurospine J.* **27** , 802–815 (2018).
- Yang, H. *et al.* Workplace Psychosocial And Organizational Factors For Neck Pain In Workers In The United States. *Am. J. Ind. Med.* **59** , 549–560 (2016).
- Tunwattanapong, P., Kongkasuwan, R. & Kuptniratsaikul, V. The Effectiveness Of A Neck And Shoulder Stretching Exercise Program Among Office Workers With Neck Pain: A Randomized Controlled Trial. *Clin. Rehab.* **30** , 64–72 (2016).
- Kisner, C. & Colby, LA *Basic Exercise Therapy And Techniques* . (Medical Book Publisher (EGSC), 2017).
- Deep Gupta, B., Aggarwal, S., Gupta, B., Gupta, M. & Gupta, N. Effect Of Deep Cervical Flexor Training Vs. Conventional Isometric Training On Forward Head Posture, Pain, Neck Disability Index In Dentists Suffering From Chronic Neck Pain. *J. Clin. Diagnostic Res.* **7** , 2261–2264 (2013).
- Kage, V., Patel, NY & Pai, MP To Compare The Effects Of Deep Neck Flexors Strengthening Exercise And Mckenzie Neck Exercise In Subjects With Forward Neck Posture: A Randomized Clinical Trial. *int. J. Physiother. res.* **4** , 1451–1458 (2016).
- Alberto Asali, Baju Widjasena, BK The Relationship between Lighting Levels and Work Posture with Complaints of Neck Pain of Sewing Operators Po. Seventeen Glory Salatiga. *J. Health. Masy.* **5** , 10–19 (2017).
- Jun, D., Zoe, M., Johnston, V. & O'Leary, S. *Physical Risk Factors For Developing Non-Specific Neck Pain In Office Workers: A Systematic Review And Meta-Analysis* . *International Archives Of Occupational And Environmental Health* Vol. 90 (Springer Berlin Heidelberg, 2017).
- Pereira, M. *et al.* The Impact Of Workplace Ergonomics And Neck-Specific Exercise Versus Ergonomics And Health Promotion Interventions On Office Worker Productivity: A Cluster-Randomized Trial. *scan. J. Work. environment. heal.* **45** , 42–52

Hasmar, hadi

(2019).

Yani, F., Anniza, M. & Priyanka, K. Relationship between tenure and length of work with neck pain in batik at the Giriloyo Batik Center. *J. Ergon. Indonesia. (The Indonesians. J. Ergon.* **6** , 31 (2020).

Utami, U., Karimuna, SR & Jufri, N. Relationship of Length of Work, Work Attitude and Workload with Musculoskeletal Disorders (Msds) in Rice Farmers in Ahuhu Village, Meluhu District, Konawe Regency, 2017. *Jimkesmas J. Ilmah Mhs. health. Masy.* **2** , 1-10 (2017).

Wijayati, EW Long Risk of Maintaining Work Posture Against Subjective Complaints of Neck Pain in Leather Craft Industry Workers in Selosari. *JUMANTIK (Journal of Scientific Research. Health)* **5** , 56 (2020).