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The Role of Multi-Function Furniture in the Pandemic Era

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ABSTRACTS

Measuring how effective multifunctional furniture is in the industry, knowing the benefits of multi-functional furniture for activities and interior design issue, ensuring that multi-functional furniture has been made based on ergonomic principles, and researching the positive impact of multi-functional furniture on the community. The objective of this study is to identify the role of the multi-functional chair as a new solution in the creation of facilities to support e-learning and remote work. The qualitative method was tested on 100 respondents from the general public with various professional backgrounds. The results of the efficiency of multi-functional furniture based on ergonomic considerations and design principles show that multifunctional furniture has a very high level of efficiency. Most people are satisfied with the availability of multi-functional furniture that can help them in their daily activities. Having multi-functional furniture can simplify daily activities and can be a solution for interior problems.

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1. INTRODUCTION

Indonesia's pandemic period is in its second year. 'A new normal' way of life affecting all aspects of human life. Not only activities that pay attention to health protocols, but also the community labor system must also adapt to the situation in this pandemic era. One example of the implementation of this policy is the implementation of a work from home system known as Work From Home (WFH) and an online learning system in all educational institutions in Indonesia (Fivanda & Ismanto, 2021). Therefore, the need for facilities for the community is becoming more diverse.

Interior designers are increasingly innovating in creating solutions that can help today's society. The interior designers began to apply the principle of multifunctional furniture consisting of 2 or more functions in one object (Rashdan & Ashour, 2017). Of course, the development of this idea cannot be separated from the principles of Anthropometric and Ergonomic theory which are important factors in creating comfort for humans in their activities. In the book "Human Dimensions & Interior Space" by Julius Panero and Martin Zelnik written the definition of Anthropometric theory which is a science that studies the measurement of the human body as a guide for calculating the size differences in each individual human being, as well as how it relates to the design of furniture and interior circulation of the room. In the results of the analysis of the development of multifunctional furniture innovations that have been carried out by other interior designers, it is explained that the role of multifunctional furniture can minimize the need for a large amount of

space, so that multifunctional furniture can make it easier for users to manage the amount of available land area. Based on some of the notes from the analysis, we can find out what innovations can be reference ideas which are then adapted to the current pandemic era. The purpose of this study is to determine the role of a multifunctional chair designed with the 'New Normal' as a new solution in creating supporting facilities for WFH and online learning.

2. METHOD

This research method uses descriptive analysis method and qualitative method approach. Qualitative descriptive analysis is a method used to analyze data by describing the state of the subject and object of research based on the facts in the field (Kim et al., 2017). Researchers describe the information obtained through data obtained from interviews with sources, observations, and documents that support the research.

3. RESULTS & DISCUSSION

Prior to the Covid-19 pandemic, the function of residential housing was limited to providing shelter from sunlight and rainwater. The comfort of a home is not measured by its luxury. Home comfort can be seen from the fulfillment of the needs and activities of residents. However, for now, home office activities have not been fully implemented, and home office policies have become the company's choice.

Based on data from research by Nugroho et al., (2020) it is stated that the demographics of male students are 5 (20%) respondents, female 20 (80%). The median age was 19.96 years. The majority

of respondents (80%) who started SFH on March 20 completed SFH in less than 8 hours per day, with 15 (60%) and 10 (40%) taking more than 8 hours. A total of 9 (36%) respondents did not use the backrest. Demographics obtained from workers were 9 (36%) respondents to 16 (64%). The mean age was 27.76 years. The majority started SFH on March 18 (72%) of respondents. A total of 10 (40%) respondents did SFH with a duration of less than 8 hours during the day and 15 (60%) respondents for more than 8 hours. A total of 12 (48%) respondents used a chair with a high backrest.

This shows that the work from home has an impact on comfort in working and studying. Students and workers sometimes experience pain. To minimize the pain, students and workers do stretch, massage, and rest. Muscle complaints from students and employees during the pandemic must be handled properly. To maintain a good level of fitness. The demographics associated with muscle problems represent an uncomfortable disease. The status of employees who do WFH and students engaged in SFH have a significant effect on the occurrence of neck pain complaints, which can be influenced by different workloads, different ages, and static activities that have an impact on the occurrence of muscle complaints, thereby increasing the risk of neck pain. Muscle ache. Complaints of pain before the pandemic became one of the important factors that influenced the occurrence of muscle complaints.

Sitting facilities that are useful for the community in the "new normal" are urgently needed because community activities are based on the principle of work from home (WFH). In addition, this chair is a class of furniture that can be

adapted to the land area owned by the individual (can be placed in a narrow place). The benefits of this product are very strong because it allows people to remain productive even though the space for movement is limited by the current situation (Kurniati & Kusuma, 2014). In addition to being professional, multifunctional furniture is very suitable for students and students. As long as the learning system takes place online, students can continue their work while relaxing (Grahara & Setiawan, 2021). This reduces the pain that students and students often experience from sitting in front of the laptop for too long. With this product, they can easily lean back without forgetting the task.

Furniture can be in the form of tables, chairs, and others. Furniture that is very close, namely chairs. Chairs are included in the category of furniture which are usually placed in public areas, as well as in homes. Furniture is made in such a way according to the rules of ergonomics and aesthetics so that it has a functional design without forgetting the element of beauty (Tarmawan et al., 2021). Ergonomics rules in the manufacture of furniture are very concerned because ergonomic rules are used as an effort to adapt the work environment to the needs of users or humans. The purpose of these adjustments is to increase productivity and reduce discomfort at work (Ajoudani et al., 2020).

Work chairs are closely related to ergonomics issues, which have started to become a major problem and an important consideration in work chairs. Because work chairs typically work for long periods of time, ergonomic work chairs are designed to support the correct sitting position to minimize damage to the body caused by sitting for long

periods of time (Fivanda & Ismanto, 2021). The effects of an improper sitting position on ergonomics include discomfort, pain, tingling, stiffness, swelling, irritation, and difficulty sleeping. The tension of the muscular system caused by static muscle loads and incorrect working postures, if continued unnoticed, can cause nerve damage and even deformity of the spine, the main support for the human body (Nugroho et al., 2020).

According to Sharifi et al., (2015), a work chair is a chair designed to add comfort when carrying out work activities. Technically, the work chair has common features such as; wheels on chair legs, waist support, and gas springs. All of that is designed to get comfort and health when sitting. Based on the research of Prasetyo et al., (2020), stated that multifunctional furniture can be designed and applied to work chairs. Some of these opportunities include providing comfort and ergonomics in the backrest, armrest, and seat cushions because the majority of workers do their work for 3 hours or more.

The furniture produced in the research of Prasetyo et al., (2020) is a chair that gives the user the choice to use a high work desk or a low table so that the legs of the chair change the mechanism in the form of a folding mechanism that allows the chair to be used flat. In this study, Prasetyo et al., (2020) designed a more appropriate form of work chair to support work activities and provide user comfort when used Prasetyo et al., (2020).



Fig. 1. Chair sketch (Prasetyo et al., 2020)



Fig. 2. Final sketch multi-function chair (Prasetyo et al., 2020)



Fig. 3. Final sketch Lesehan chair
(Prasetyo et al., 2020)

Therefore, it can be said that the workspace is also an important aspect of this WFH that needs to be improved or maintained. In addition, the layout of office equipment which includes the placement of equipment such as tables and chairs is one of the ergonomic standards (Kemenkes, 2016). Kurniati & Kusuma (2014) also emphasize that regional changes aim to improve services for activities within the region. Therefore, an essential part of the transformation in creating a work/study space is related to work/study. This includes functional sections, more precisely work/study

objects, and work/study areas (Kemenkes, 2016).

4. CONCLUSION

Based on the results of the research, it can be concluded that the concept of interior design for workspaces and the use of multifunctional furniture in residential areas is no longer the same as after the Covid-19 pandemic. Before the pandemic, working space in a residence was not a primary need. However, because people tend to do work outside the home. Workspace "new normal" has the same view as workers who usually work in offices. The "new normal" for homes and workspaces can only be created by rearranging the layout and design concepts.

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REFERENCES

- Ajoudani, A., Albrecht, P., Bianchi, M., Cherubini, A., Del Ferraro, S., Fraisse, P., ... & Wischniewski, S. (2020). Smart collaborative systems for enabling flexible and ergonomic work practices [industry activities]. *IEEE Robotics & Automation Magazine*, 27(2), 169-176.
- Fivanda, F., & Ismanto, A. Analisis Pengaruh Konsep Interior Ruang Kerja Di Rumah Tinggal Pasca Pandemi Covid-19. *Jurnal Muara Ilmu Sosial, Humaniora, dan Seni*, 5(1), 251-260.
- Grahara, R. M., & Setiawan, S. (2021). Desain Kursi Kerja Penunjang Kegiatan Work From Home Bagi Karyawati Hamil. *FAD*.
- Kementrian Kesehatan. (2016). Standar Keselamatan dan Kesehatan Kerja Perkantoran. Jakarta: Peraturan Menteri Kesehatan Republik Indonesia Nomor 48 Tahun 2016

- Kim, H., Sefcik, J. S., & Bradway, C. (2017). Characteristics of qualitative descriptive studies: A systematic review. *Research in nursing & health*, 40(1), 23-42.
- Kurniati, F., & Kusuma, H. E. (2014). Adaptasi Perilaku dan Modifikasi sebagai Proses Menciptakan Hunian Ideal Bagi Penghuni Perumahan Massal. *Prosiding Temu Ilmiah IPLBI*, 33-38.
- Nugroho, B. Y. S., Widianawati, E., & Wulan, W. R. (2020). Gambaran Keluhan Otot antara School From Home dan Work From Home dalam Pandemi Covid-19. *VISI KES: Jurnal Kesehatan Masyarakat*, 19(2).
- Prasetyo, F. S., Pambudi, T. S., & Sadika, F. (2020). Perancangan Kursi Kerja Untuk Menunjang Aktivitas Work From Home Freelance Designer. *eProceedings of Art & Design*, 7(2).
- Rashdan, W., & Ashour, A. F. (2017). Criteria for sustainable interior design solutions. *WIT Transactions on Ecology and the Environment*, 223, 311-322.
- Sharifi, Z., Osqueizadeh, R., & Tabatabai Ghomshe, S. F. (2015). Ergonomic redesign of industrial chair. *Iranian Journal of Ergonomics*, 3(1), 1-9.
- Tarmawan, I., Fauzi, W. L., Mardiana, D., & Widianti, W. (2021). Furniture Design as a Means to Support Children's Learning Interest and Motivation. *International Journal of Design (INJUDES)*, 1, 57-64.