

MINDFULNESS-BASED COGNITIVE THERAPY INFLUENCES KNOWLEDGE OF WORK-STRESS MANAGEMENT AMONG CRACKER FACTORY WORKERS IN KEDIRI CITY

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Article info	ABSTRACT
Corresponding Author: Dyah Ayu Kartika Wulan dyah.ayu.kartika.w.s@gmail.com STIKES RS Baptis Kediri	Workers in small-scale food-processing industries, including cracker (kerupuk) factories, are at risk of work-related stress due to monotonous and repetitive production activities and daily production targets. Attention to workers' mental health in small-scale industries remains limited because business owners generally prioritize production continuity. This study aimed to assess the understanding and ability of workers at the Mulyono Cracker Factory, Sumberejo Village, Kediri Regency, to manage work-related stress through mindfulness mentoring during breaks in the production process. The implementation method comprised mental health and work-stress education, training in simple mindfulness techniques (conscious breathing, brief relaxation, and focusing on the present activity), routine mentoring for 5–10 minutes during production breaks, and evaluation using pre-test and post-test questionnaires. The activity involved 20 factory workers, consisting of 8 men (40%) and 12 women (60%). The evaluation results showed an increase in the proportion of participants with good understanding from 20% to 85%, a decrease in the sufficient category from 35% to 15%, and a decrease in the poor category from 45% to 0%. Participants also reported feeling more relaxed, calm, and focused after practicing mindfulness and considered the techniques easy to practice independently. It can be concluded that the combination of mental health education and mindfulness training improved workers' understanding and psychological well-being without disrupting the production process. Similar programs are recommended for sustainable implementation in other small-scale industries with comparable work characteristics. Keywords: <i>Mindfulness-Based Cognitive Therapy; work-stress management; factory workers</i>
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INTRODUCTION

Kediri Regency is one of the areas in East Java with considerable economic potential, particularly in the processing industry and micro, small, and medium-sized enterprise (MSME) sectors. The local government reports that the MSME sector is developing rapidly

and has become one of the main pillars of the community economy, with approximately 25,833 micro-enterprises operating across various business sectors in Kediri Regency. Small-scale industries, including food-processing industries such as cracker production, play an important role in stimulating the local economy and creating employment opportunities for local residents. (World Health Organization [WHO], 2022)

At the global level, approximately 15% of working-age adults are estimated to have a mental disorder at any given time. Depression and anxiety are also associated with an estimated 12 billion lost working days annually, highlighting the importance of integrating mental-health promotion and prevention into workplace practices (WHO, 2022; World Health Organization & International Labour Organization [WHO & ILO], 2022).

One small-scale enterprise that has developed within the local community is the Mulyono Cracker Factory, located in Sumberejo Village, Kediri Regency. The enterprise provides employment opportunities for surrounding residents and contributes to household income. However, behind this economic potential, workers in the cracker-processing industry face various challenges in their daily work. Cracker production is carried out continuously through repetitive activities, including mixing dough, molding crackers, drying, and packaging. Such monotonous activities performed over extended periods may cause both physical and mental fatigue. In addition, workers are required to meet daily production targets to ensure the continuity of product distribution and sales. (International Labour Organization [ILO], 2022; WHO, 2022)

When market demand increases, workers often have to work faster and for longer periods than usual. Such conditions may generate psychological pressure, fatigue, and work-related stress. If these conditions persist without appropriate stress-management efforts, they may lead to reduced work concentration, decreased work motivation, and diminished psychological well-being. Attention to workers' mental health in small-scale industries such as this is generally limited because business owners tend to focus more on production continuity and achievement of work targets. Consequently, workers rarely receive adequate knowledge or mentoring regarding ways to manage stress while working. (Ganster & Rosen, 2013; WHO, 2022)

One approach that can be used to address this problem is mindfulness practice. Mindfulness-Based Cognitive Therapy is a simple approach commonly implemented through breathing techniques, brief relaxation, and awareness of the activity being performed, with the aim of helping individuals become calmer, focus on the task at hand, and become more aware of their physical and mental states. Mindfulness exercises can be implemented between production activities without disrupting work, for example, during brief rest periods or before starting work. Based on these circumstances, a research program entitled "Mindfulness-Based Cognitive Therapy Education for Work-Stress Management Knowledge among Cracker Factory Workers" was designed as a mentoring intervention for workers at the Mulyono Cracker Factory. The program aimed to help workers understand simple ways to manage work-related stress so that they could work more calmly, remain focused, and maintain productivity while improving psychological well-being without disrupting the ongoing production process. (Bishop et al., 2004; Shapiro et al., 2006)

The objectives of this research activity were: (1) to create a mentally healthier work environment in which workers could work calmly, remain focused, and maintain productivity while achieving daily production targets; (2) to increase workers' awareness of the

importance of maintaining psychological well-being and applying simple work-stress management strategies; and (3) to improve the psychological well-being and work comfort of factory workers.

METHOD

This research activity was conducted at the Mulyono Cracker Factory, located on Jl. Nusa Indah, Joho Hamlet, Sumberejo Village, Ngasem District, Kediri Regency, East Java Province, over a three-month period (April–June 2026). The target population comprised 20 workers at the Mulyono Cracker Factory. The program was implemented by a research team consisting of two lecturers and seven students from the Hospital Administration Study Program, Sekolah Tinggi Ilmu Kesehatan RS. Baptis Kediri. Their roles were divided among activity coordination, health education delivery, mindfulness-training assistance, administration, monitoring and evaluation, and documentation. (WHO, 2022)

The approach used in the program consisted of four stages: (Bishop et al., 2004; Creswell, 2017)

1. Education and counseling: providing participants with an understanding of work-related stress and the benefits of mindfulness.
2. Mindfulness practice training: training participants in simple techniques, including conscious breathing (breathing exercises), brief relaxation, and focusing on the present activity.
3. Routine mentoring: conducting mindfulness practice regularly during production breaks for approximately 5–10 minutes.
4. Evaluation and reflection: measuring changes in participants' level of understanding and responses.

The activity was conducted through four procedural stages. The preparation stage involved coordination with factory management, identification of workers' needs, and preparation of the materials and activity schedule. The implementation stage included program socialization for workers, mindfulness technique training, and routine mindfulness practice during production breaks. The mentoring stage involved monitoring implementation and providing direct guidance and assistance. The evaluation stage included administering questionnaires before (pre-test) and after (post-test) the activity, analyzing changes in participants' understanding of mental health and work-related stress, and preparing the activity report. (Michaelsen et al., 2023)

The evaluation instrument was a questionnaire assessing participants' understanding of mental health, work-related stress, and mindfulness techniques. Understanding was classified into three categories: good, sufficient, and poor. Respondent characteristics and pre-test–post-test results were analyzed descriptively using frequency distributions and percentages. (WHO, 2022)

RESULT AND DISCUSSION

Finding

Respondent Characteristics

The research activity involved 20 respondents who were workers at the Mulyono Cracker Factory. Respondent characteristics by sex are presented in Table 1.

Table 1. Respondent Characteristics by Sex

Sex	Frequency	Percentage (%)
Male	8	40
Female	12	60
Total	20	100

Based on Table 1, most participants were female, comprising 12 participants (60%), while 8 participants (40%) were male.

Participants' Level of Understanding Before and After the Activity

The activity began with completion of an initial questionnaire (pre-test), followed by delivery of materials on mental health and work-related stress, simple mindfulness training, breathing-relaxation practice, and a final evaluation (post-test). The results of participants' level of understanding before and after the activity are presented in Table 2.

Table 2. Participants' Level of Understanding Before and After Education

Category	Before (%)	After (%)
Good	20	85
Sufficient	35	15
Poor	45	0

Table 2 demonstrates an improvement in participants' understanding after the activity. The good-understanding category increased from 20% to 85%, the sufficient category decreased from 35% to 15%, and the poor category decreased from 45% to 0%. These findings indicate that after participating in the education and mindfulness training, all participants achieved at least a sufficient level of understanding.

Because this evaluation used a pre-test–post-test design without a comparison group and relied on descriptive percentages, the observed improvement should be interpreted as an association with the program rather than definitive causal evidence. This cautious interpretation is consistent with systematic reviews showing beneficial average effects of workplace mindfulness interventions alongside substantial heterogeneity across interventions, populations, and follow-up periods (Janssen et al., 2018; Michaelsen et al., 2023).

Discussion

Mental Health and Work-Stress Education

The educational materials covered the definition of work-related stress, factors contributing to stress in the workplace, the effects of stress on physical and mental health, and the importance of maintaining psychological well-being. Participants actively engaged in discussions and shared their experiences of work-related pressure associated with daily production targets. The shift in participants' understanding from poor and sufficient categories toward the good category indicates that the education provided increased their awareness of the importance of mental health in supporting work productivity. This finding is consistent with the initial condition identified, namely limited knowledge among workers in small-scale industries regarding mental health and stress management, given that business owners generally place greater emphasis on production continuity than on workers' psychological well-being. (WHO, 2022; Ganster & Rosen, 2013)

Mindfulness Implementation

Participants received mindfulness training involving conscious breathing (breathing exercises), brief relaxation, and focusing on the present activity for 5–10 minutes, practiced

directly during breaks in production activities. Based on observations, most participants felt more relaxed, calmer, and more focused after practicing mindfulness. Several participants also reported that the exercises were easy to perform and could be practiced independently while working. These findings indicate that simple mindfulness techniques can be integrated into work routines without disrupting production and can serve as a practical strategy for workers to manage work-related pressure arising from daily production targets. (Michaelsen et al., 2023; Janssen et al., 2018)

Program Impact on Workers' Psychological Well-Being

The combination of mental health education and mindfulness training in the KRUPUK program demonstrated positive effects consistent with the objectives of the activity, namely creating a mentally healthier work environment, increasing workers' awareness of the importance of psychological well-being, and improving the psychological well-being and work comfort of factory workers. The substantial increase in the proportion of participants in the good-understanding category, from 20% to 85%, indicates that an educational approach combined with direct mindfulness practice may provide greater practical benefits than theoretical information delivery alone. In addition, adapting the activity to the factory's work rhythm—by conducting 5–10-minute sessions between production activities—was a supporting factor because it did not burden workers or interfere with achievement of the partner's daily production targets. (Michaelsen et al., 2023) Nevertheless, the sustainability of the program's benefits depends considerably on workers' consistency in independently applying mindfulness techniques after the mentoring period ends, as well as on support from business owners in providing time and space for workers to engage in brief relaxation during working hours. Therefore, active partner involvement and program sustainability are important aspects that should be considered in the implementation of similar research programs in the future. (WHO, 2022; Shapiro et al., 2006)

CONCLUSION

Based on the mental health education and mindfulness activities conducted among workers at the Mulyono Cracker Factory, Sumberejo Village, Kediri Regency, it can be concluded that the KRUPUK program (Kreativitas Upaya Psikis Untuk Kesejahteraan; Creative Psychological Efforts for Well-Being) had a positive impact on participants. Education concerning mental health and work-related stress successfully increased participants' understanding of stress-related factors, their effects on physical and mental health, and the importance of maintaining psychological well-being in the workplace, as demonstrated by the increase in the good-understanding category from 20% to 85%. Mindfulness training through conscious breathing, brief relaxation, and focusing on the present activity helped participants feel more relaxed, calm, and focused while performing their work and was considered easy to practice independently, indicating its potential as a simple strategy for managing daily work-related stress.

Thus, the combination of mental health education and mindfulness training may serve as an effective effort to improve workers' psychological well-being, reduce work-related stress, and support better productivity and work quality in small-scale industries.

For factory owners, greater attention to workers' mental health is recommended as part of efforts to improve well-being and work productivity. This may include providing brief periods for relaxation or mindfulness during working hours, creating a comfortable work

environment, establishing open communication, and providing regular mental health education. Future research is recommended to conduct periodic evaluation and mentoring to determine the program's long-term effectiveness and to develop similar programs in other small-scale industries with comparable work characteristics.

BIBLIOGRAPHY

- American Psychological Association. (2023). Stress in America 2023: A nation recovering from collective trauma. American Psychological Association.
- Baer, R. A. (Ed.). (2015). Assessing mindfulness and acceptance processes in clients: Illuminating the theory and practice of mindfulness. New Harbinger Publications.
- Bishop, S. R., Lau, M., Shapiro, S., Carlson, L., Anderson, N. D., Carmody, J., Segal, Z. V., Abbey, S., Speca, M., Velting, D., & Devins, G. (2004). Mindfulness: A proposed operational definition. *Clinical Psychology: Science and Practice*, 11(3), 230–241. <https://doi.org/10.1093/clipsy.bph077>
- Creswell, J. D. (2017). Mindfulness interventions. *Annual Review of Psychology*, 68, 491–516. <https://doi.org/10.1146/annurev-psych-042716-051139>
- Ganster, D. C., & Rosen, C. C. (2013). Work stress and employee health: A multidisciplinary review. *Journal of Management*, 39(5), 1085–1122. <https://doi.org/10.1177/0149206313475815>
- International Labour Organization. (2022). Psychosocial risks and stress at work. International Labour Organization.
- Janssen, M., Heerkens, Y., Kuijer, W., van der Heijden, B., & Engels, J. (2018). Effects of mindfulness-based stress reduction on employees' mental health: A systematic review. *PLoS ONE*, 13(1), e0191332. <https://doi.org/10.1371/journal.pone.0191332>
- Kabat-Zinn, J. (2013). Full catastrophe living: Using the wisdom of your body and mind to face stress, pain, and illness (Revised ed.). Bantam Books.
- Lazarus, R. S., & Folkman, S. (1984). Stress, appraisal, and coping. Springer.
- Matousek, R. H., Dobkin, P. L., & Pruessner, J. (2010). Cortisol as a marker for improvement in mindfulness-based stress reduction. *Complementary Therapies in Clinical Practice*, 16(1), 13–19. <https://doi.org/10.1016/j.ctcp.2009.06.004>
- Michaelsen, M. M., Graser, J., Onescheit, M., Tuma, M. P., Werdecker, L., Pieper, D., & Esch, T. (2023). Mindfulness-based and mindfulness-informed interventions at the workplace: A systematic review and meta-regression analysis of RCTs. *Mindfulness*, 14, 1271–1304. <https://doi.org/10.1007/s12671-023-02130-7>
- Segal, Z. V., Williams, J. M. G., & Teasdale, J. D. (2013). Mindfulness-based cognitive therapy for depression (2nd ed.). Guilford Press.
- Shapiro, S. L., Carlson, L. E., Astin, J. A., & Freedman, B. (2006). Mechanisms of mindfulness. *Journal of Clinical Psychology*, 62(3), 373–386. <https://doi.org/10.1002/jclp.20237>
- World Health Organization. (2022a). WHO guidelines on mental health at work. World Health Organization. <https://doi.org/10.26719/2022.1>
- World Health Organization. (2022b). Mental health at work: Policy brief. World Health Organization & International Labour Organization. <https://doi.org/10.26719/2022.1>
- World Health Organization. (2024). Mental health at work. World Health Organization.
- World Health Organization. (2025). Guidance on policy and strategic actions for mental

health and the employment sector. World Health Organization.
World Health Organization, & International Labour Organization. (2022). Mental health at
work: Policy brief. World Health Organization. <https://doi.org/10.26719/2022.1>