HEALTH INTERVENTION PROGRAM ON STRESS AMONG COMMUNITY IN MUKIM SG PELEK, SEPANG, SELANGOR, MALAYSIA

[1]MUHAMMAD NAQUIB HASIEF B., [2]NORHAKIMATUL AMIRAH Z., [3]NADZIRAH Z, [4]MARDIYAH Z, [5]SABARIAH AH.

Faculty of Medicine, Cyberjaya University College of Medical Sciences, Selangor

Abstract- Introduction: Stress is stated as a physical, mental, or emotional factor that causes bodily or mental tension and can be divided into good and bad stresses. Bad stresses may directly affect a person's health, reducing the productivity of their daily routine. Thus, people should learn stress coping skills to reduce stress related problems effectively.
Objective: An intervention has been done aimed to improve knowledge on stress coping skills among the community in Mukim Sg Pelek, Selangor.
Methodology: A cross sectional study was conducted during the launching of health intervention program in Mukim Sungai Pelek, Sepang, Selangor. A convenient sampling has been done among Malaysian visitors who at least 18 years old and visited the mental health booth. Data was collected by using a set of quiz questions pre and post intervention on stress coping skills. Paired T-test was performed to determine the significant difference on stress coping skill before and after intervention.
Result: Overall, 83% of respondents of Mukim Sungai Pelek, who participated in the intervention have good knowledge on stress coping skills after the intervention. It was statistically significant in difference between the knowledge status on stress coping skills before and after intervention ($p<0.005$).
Conclusion: Provision of knowledge on stress especially on coping skill to public is very important in improving knowledge and prevalence on stress among community.

Keywords- stress, coping skills, knowledge, intervention

I. INTRODUCTION

Stress is stated as a physical, mental, or emotional factor that causes bodily or mental tension (Lazarus, 2006). Stresses can be divided into good and bad stresses, both having an effect to oneself physically, mentally and emotionally (Spielberger et al. 2010). Bad stresses may directly affect a person's health, reducing the productivity of their daily routine (Jon K.Z., 2009).

The prevalence of stress among community in Hulu Langat, Selangor is 33.6% (Jamsiah et al., 2010), whereas the prevalence of stress in the community of Mukim Sg. Pelek is 20.8% (Amirah, et al., 2016). Uncontrolled stress may affect directly unto routine activities (Kutamba, Siegrist & Rödel, 2010) and higher mental distress can lead to a lower quality of life (Norfadillah et al., 2015).

As there is currently no curative treatment for stresses, people should primarily be avoiding getting into problems that may induce stress (Lily S., 2014). People also should learn stress coping skills in reducing stress related problems effectively (Newell et al. 2010). A variety of possible approaches (Ahsan et al. 2009) and proactive measures should be taken into prioritized in order to reduce the prevalence of stress (Taelman et al. 2009).

Knowledge is the insights, understandings, and practical know how that we all possess, which is the fundamental resources that allow us to function intelligently. Therefore, the knowledge on coping with stress is important as it may reflects the stress coping skill (Kimiz D, 2005).

This study aimed to determine the knowledge on stress coping skills among community, who attended the Health Intervention Program at Taman Sri Sungai Pelek, Sepang, Selangor, Malaysia. Thus, we could plan the appropriate strategy / activity for the community in reducing their stress.

II. METHODOLOGY

Following a study in Taman Sri Sg. Pelek, Sepang, Selangor, a Health Intervention Program Launching was planned at the area to present the community diagnoses of the study. Many booths were set up and one of the booth was a Mental Health booth.

A cross sectional study was conducted using a convenient sampling among all Malaysian visitors who was at least 18 years old and visited the mental health booth during the launching of Health Intervention Program. Estimated sampling size was 62.

Data was collected by using a set of quiz questions, which was given before and after intervention. The questions consist of five questions from 10B stress coping skill and another five questions adopted from 'Garis Panduan Pelaksanaan Program Minda Sihat' (MOH, 2014). During the intervention, respondents were given a short health education on stress coping skills by using posters, illustration, short video, and demonstration related to coping skills. Respondents were allowed to visit other health booths before coming back again for post intervention quiz.

All correct answers were given one point (1), whereas zero (0) for wrong answers. The total knowledge

scores of the participants were calculated by adding up the scores for each question in the test, ranging from 0 to 10. Participants with a total score of less than 6 were considered as having poor knowledge and those with scores from 7 to 10 were considered as good knowledge.

Data was analyzed using Statistical Package Social Sciences (SPSS) version 20. Paired T-test was performed to determine the significant difference on stress coping skill before and after intervention.

III. RESULT

A total of 41 respondents have participated in this study, which gave to 66% of response rate.

Intervention	Knowledge status		P value
	Good n (%)	Poor n (%)	
Pre	3 (7.3)	38 (92.7)	0.000
Post	34 (82.9)	7 (17.1)	

Table 1. Knowledge status on stress coping skills pre and post intervention (N=41)

Majority of respondents have poor (92.7%) knowledge on stress coping skill before intervention. However after the intervention, only 17% have poor knowledge. Statistically, it was significant ($p < 0.05$) (Table 1).

Question statement	Pre n (%)	Post n (%)	Diff (%)
Knowledge on 10B	3 (7.3)	39 (95.1)	87.8
Ways to use 10B effectively	3 (7.3)	36 (87.8)	80.5
Time to use 10B	2 (4.9)	33 (80.5)	75.6
Place to use 10B	3 (7.3)	34 (82.9)	75.8
People involved in 10B	2 (4.9)	38 (92.7)	87.8
Deal with stress by keeping away from others	23 (56.1)	30 (73.2)	17.1
Deal with stress by sharing problems	36 (87.8)	39 (95.1)	7.3
Deal with stress by using relaxation technique	35 (85.4)	37 (90.2)	4.8
Deal with stress by ignoring the problem	27 (65.9)	31 (75.6)	9.7
Deal with stress by comparing self with others	28 (68.3)	34 (83.0)	14.7

Table 2. Prevalence of knowledge on stress coping skills pre and post intervention, based on correct answer

Table 2 showed the knowledge of 10B as ways to cope with stress as recommended by Ministry of Health Malaysia among residence have increased more than 50% after the intervention. Whereas, in terms of method of coping, there were not much different (less than 20%).

Majority of respondents coped stress by using relaxation technique and sharing problems.

	Paired Diff		t	Sig
	Mean	SD		
Pre	1.93	0.264	11.136	< 0.005
Post	1.17	0.381		

Table 3. Comparison of knowledge status on stress coping skills pre and post intervention

Table 3 showed that there was a significant increase in the scores of knowledge on stress coping skill after the intervention (M=1.17, SD=0.38) than before the intervention (M=1.93, SD=0.26); t=11.1, p=0.000.

DISCUSSION

Poor stress coping skills may lead to unhealthy behaviour thus might affect the health status of the community, where unhealthy behaviors and high stress levels are each associated with increased mortality (Patrick and Varginia, 2008). In developing countries, most people may have lack of knowledge on stress and also are not aware of the importance of dealing with work-related stress (Masoud, Namaitijiang & Noor Hassim, 2014). Furthermore, lack of awareness on the nature of stress and coping skills makes the situation more volatile (Kadhivaran & Kumar, 2012).

However, during the last decade, knowledge of stress management interventions has increased substantially (Ivancevich et al., 2015). Greater perceived stress management skills also associated with less distress and higher quality of life ratings (Faul et al., 2010).

Many studies have shown that subjects participating in coping skills training displayed better coping skills and they relied upon dysfunctional coping strategies less often (Cristina et al., 2007; Mary & Christyn, 2008). In our study, result showed that there was an increase in knowledge status on stress coping skills among respondents after the intervention. This might be due to the effectiveness of the intervention done, 'assisted' with the demonstration using posters, videos, relaxing music and candles, as showed by Audet et. al. (2013), where there is an increase in knowledge score post intervention because of inexpensive, viable, cost-effective method. Kadhivaran & Kumar (2012) has also revealed that students who participated in the coping skills training significantly differ from the control group in proactive coping, reflective coping, preventive coping and perceived self-efficacy.

The health intervention conducted among the community was done in a short period of time. However this study was a success as it showed a significant difference between pre and post

intervention. According to Barnett W.S (2011), a broad range of short time educational interventions are found to produce meaningful, lasting effects on cognitive and social. Ruth et al. (2010) in their study on effectiveness of physical activity, report that most of the reviews found some evidence of moderate effectiveness in the short term intervention (less than three months) in increasing physical activity. These findings are also supported by reviews of interventions for the older population, which found an effectiveness of a small but short-lived effect of home-based, group-based and educational physical activity interventions on increasing physical activity (Conn et al., 2006).

The respondents were well aware that sharing their problems with others can be effective in coping with their stress. This was consistent with a study by Sarah, Heejung & Batja (2014), in which one of the effective way to manage stress is to have healthy relationships, where people can talk and hang out with their friend and share their problems, discussing problems with people in similar situations can reduce cortisol levels and relieve tension. The community should know that by keeping away from others is not good for them because loneliness had a significant incremental effect on depression after the effect of stress was accounted for (Rumaya et. al., 2009), and a lack of social support can augment feelings of hopelessness (Landis et al., 2007). Sontag et al. (2008) in their study also show that one dysfunctional coping strategy that is often used is disengagement.

Other than health education talk on stress coping skills, during the launching of Health Intervention Program, respondents were also given a compact disc which contains diaphragmatic breathing mechanism with calming background music. Hierarchical linear modeling reveals that both meditation and somatic relaxation groups (diaphragmatic breathing method) experienced significant decreases in distress as well as increases in positive mood states over time, compared with the control group ($p<0.05$ in all cases) (Jain et al., 2007). Respondents could practice this breathing technique with combination of aromatherapy as part of 10Bs coping skills i.e. "Bernafas dengan dalam" (Taking a deep breath). The significant of using aromatherapy is showed in a study, where the mean anxiety score of a study group that has exposed to lavender inhalation is lower than that of the control group. The difference between the groups is statistically significant (Kutlu et al., 2008). Studies also report 32.9% and 82% of participants show reduction in stress on meditation and aromatherapy study; and on relaxing music, respectively. (Redstone, 2015) and (Myriam et al. 2013). In Malaysia, study among sedentary women in Malaysia shows a reduction of stress to 3.57% by doing low impact aerobic dance within two to three months duration (Mastura J. et al. 2011).

For how long respondents will maintain this intervention program is subject to long term follow up. Nursing students who received the intervention for eight weeks showed 51.6% less stressful compared to students who did not receive intervention (Paul et al. 2012). Hofer et al. 2015 in their study show that the intervention by self-help book for three months has improved significantly (30%) more on perceived stress when compared to pre-intervention. Whereas Paul and Saki, (2012) report from baseline to the 3-month post treatment follow-up, participants in the intervention group had fewer perceived stress symptoms by 2 % than participants in the control group. However, Holm et. al. (2007) did a three months follow up sessions after interventions and found that the self-development groups have a beneficial effect on stress among the students in a three months follow-up, and intervention done by Katarina et. al. (2007) found that massage and mental training for adolescents helped to maintain their well-being related to stress for one academic year.

One of the limitations in this study is that the respondents' ability to recall their knowledge on stress coping skills during pre-intervention quiz and the small number of visitors to the program.

CONCLUSION

The respondents of Taman Sri Sg. Pelek statistically have good knowledge on stress coping skills after attending the Health Intervention Program. The community should continue practicing a good stress coping skill in order to reduce the prevalence of stress among community.

We would like to suggest a study on how long the intervention should be done in order to see the effectiveness of the intervention, and whether the respondents are still keeping up with the long term coping skills.

ACKNOWLEDGEMENT

This study was supported by the Cyberjaya University College of Medical Sciences (CUCMS) under the Community Medicine Programme. The authors thank the residents of Taman Sri Sg Pelek, Sepang, Selangor for their cooperation & support. We also acknowledge all members of Group 4 Class 2013 in the Department of Community Medicine, CUCMS, for helping in the data collection.

REFERENCES

[1] Ahsan, N., Abdullah Z., Fie, D. G., Alam, S. S. 2009. A study of job stress on job satisfaction among university staff in Malaysia: Empirical study. European Journal of Social Sciences, 8(1): 121-131

[2] Amirah Shahirah M, Chut Kartika B, Gaushinee V, Mohd Amirul Adli M, Lily Alma Nadirah AJ, Muhammad Abdullah MS, Nur Syahirah MT, Rafaee R, Sabariah AH. 2016. Prevalence of Stress and Coping Skills in the Community of Taman Sri Sungai Pelek, Sepang, Selangor, Malaysia.

International Journal of Health Science & Research. 6(3): 32-35.

[3] Audet CM, Salato J, Blevins M, Amsalem D, Vermund SH, Gaspar F. 2015. Educational intervention increased referrals to allopathic care by traditional healers. 1;8(8):e70326. doi: 10.1371/journal.pone.0070326. http://www.ncbi.nlm.nih.gov/pubmed (3 December 2015).

[4] Barnett W.S., 2011. Effectiveness of Early Educational Intervention, Science Magazine, Vol. 333 no. 6045 pp. 975-978. (online) http://www.sciencemag.org/content (7 December 2015)

[5] Christina B., Denise T. D. de Ridder, Roeline G. Kuijer and Jozien M. Bensing. 2007. Effect of an intervention promoting proactive coping competencies in middle and late adulthood. Gerontologist. 47:42-51. (29 November 2015).

[6] Conn VS, Minor MA, Burks KJ, Rantz MJ, Pomeroy SH. 2005. Integrative review of physical activity intervention research with aging adults. US National Library of Medicine National Institutes of Health, 51(8):1159-68 (online) http://www.ncbi.nlm.nih.gov/pubmed (7 December 2015).

[7] Faul L.A., Jim H.S., Williams C., Loftus L. and Jacobsen P.B. 2010. Relationship of stress management skill to psychological distress and quality of life in adults with cancer. Psychooncology, 19: pp. 102-109 (27 November 2015).

[8] Ivancevich, John M. Matteson, Michael T. Freedman, Sara M. Phillips, James S. 2013. Worksite stress management interventions, American Psychologist, Vol 45(2), 252-261. (Online) http://psycnet.apa.org/journals/amp (27 November 2015).

[9] Hofer, P. D., M. Waadt, R. Aschwanden, M. Milidou, J. Acker, A. H. Meyer , R. Lieb, A. T. Gloster. 2015. The Effectiveness of an ACT Self-help Intervention for Stress and Burnout: An Exclusively Online Randomized Controlled Trial, Department of Psychology, Division of Clinical Psychology and Epidemiology. (online) https://contextualscience.org/files (31 October 2015).

[10] Holm M., Tysssen R., Haver B. 2007. Prevention of mental health problems among future doctors: A controlled group intervention study among medical students in Bergen. European Psychiatry. 22 (2007) S221eS341. (6 December 2015).

[11] Jain S., Shauna L., Summer S., Scott C.R., Paul J.M., Iris B., Gary E. R. S. 2007. A randomized controlled trial of mindfulness meditation versus relaxation training: Effects on distress, positive states of mind, rumination, and distraction. Annals of Behavioral Medicine. Volume 33, Issue 1, pp 11-21. Available from: http://link.springer.com/article (3 December 2015).

[12] Jamsiah M, Rosnah S, Noor Hassim. 2010. Stres Dalam Kalangan Penduduk Dewasa Luar Bandar Daerah Hulu Langat Selangor. Journal of Community Health. 16 (1).

[13] Jon Kabat-Zinn. 2009. Full catastrophe living, using the wisdom of your body and mind to face stress, pain, and illness. 33(3): 70-89 (online) https://books.google.com.my/books

[14] Kadhivaran S., Kumar K. 2012. Enhancing Stress Coping Skills among College Students. Journal of Arts, Science & Commerce, (Online) http://www.researchersworld.com/vol3/issue4/vol3_issue4_1/Paper_07 (28 November 2012)

[15] Katarina S. H., Eva-Carin M. L., Bengt G.A. F., Amir M.A.E. B., Marie C. L., Bertil R.G. M. 2007. Evaluation of a school-based health promotion programme for adolescents aged 12–15 years with focus on well-being related to stress. Public Health. 2008-01-01, Volume 122, Issue 1, Pages 25-33 (6 December 2015).

[16] Kimiz D. 2005. Knowledge Management in Theory and Practice. Elsevier Butterworth-Heinemann. pp 5.

[17] Kutamba, E., Siegrist, J., Rödel. A. 2010. Work Stress and Health Risk Behavior, Scandinavian journal of work, environment & health. 32(6): 473-481 (online) http://www.sjweh.fi/show_abstract.php (30 October 2015).

[18] Kutlu, A.K., Yilmaz, E., Çeçen D. 2008. Effects of aroma inhalation on examination anxiety. Teaching and Learning in Nursing. Volume 3, Issue 4, October 2008, Pages 125–130. http://www.sciencedirect.com/science/article (3 December 2015)

[19] Landis, D., Gaylord-Harden, N. K., Malinowski, S. L., Grant, K. E., Carleton, R. A., & Ford, R. E. 2007. Urban adolescent stress and hopelessness. Journal of Adolescence. 30:1051-1070. doi:10.1016/j.adolescence.2007.02.001 (30 November 2015)

[20] Lazarus, R.S. 2006. Stress and emotion: A new synthesis. 2(2): 9-13 (online) https://books.google.com.my (30 October 2015).

[21] Lily Sharon. 2014. Habitual physical activity and the risk for depressive and anxiety disorders among older men and women, International Psychogeriatrics. 23(2): 292-298 (online) http://journals.cambridge.org/action (30 October 2015).

[22] Mary, S., & Christyn, D. 2008. Evolution of a resilience intervention to enhance coping strategies and productive factors and decrease symptomatology. Journal of American College Health. 56:445-453. (29 November 2015)

[23] Masoud Lotfizadeh, Namaitijiang Maimaiti, Noor Hassim Ismail. 2014. Occupational Stress among White Collar Employees in Esfahan Steel Company, Iran, Malaysian Journal of Public Health Medicine, Vol. 14 (1): 79-81. (Online) http://www.mjphm.org.my/mjphm/journals (27 November 2015).

[24] Mastura J., Omar Fauzee M.S., Bahaman A.S., Rashid S. Abd., Somchit M.N. 2011. Effect of Low-impact Aerobic Dance Exercise on Psychological Health (Stress) Among Sedentary Women In Malaysia, Biology of Sport. 29(1); 63-69.

[25] Ministry of Health (MOH), Malaysia. 2014. Garis Panduan Pelaksanaan Program Minda Sihat

[26] Myriam V.T., Roberto L.M., Rebecca B., Linda F., Ulrike E., Urs M.N. 2013. The Effect of Music on the Human Stress Response. Zurich Open Repository and Archive 8(8): e70156. (online) http://journals.plos.org/plosone/article (22 October 2015).

[27] Newell, Jason M., MacNeil, Gordon A. 2010. Professional Burnout, Vicarious Trauma, Secondary Traumatic Stress, and Compassion Fatigue. Best Practices in Mental Health, pp. 57-68(12).

[28] Norfazilah A, Azmawati MN. Madihah M. Quality of life among young adults in rural Selangor: a cross-sectional study. Malaysian Journal of Public Health Medicine. 2015, Vol. 15 (1): 53-61.

[29] Patrick M. Krueger, Virginia W. Chang. 2008. Being Poor and Coping With Stress: Health Behaviors and the Risk of Death, Am J Public Health. May; 98(5): 889–896. (Online) http://www.ncbi.nlm.nih.gov/pmc/articles (27 November 2015).

[30] Paul R., Nop R. and Duangrat K. 2012. Biofeedback Intervention for Stress and Anxiety among Nursing Students: A Randomized Controlled Trial, International Scholarly Research Network ISRN Nursing Volume 2012. (online) http://www.heartmathbenelux.com/doc (31 October 2015).

[31] Paul M.G. and Saki F.S. 2012. Mindfulness-Based Stress Reduction (MBSR), U.S. department of health and human services. (online) http://www.nrepp.samhsa.gov/ViewIntervention (31 October 2015).

[32] Redstone L. 2015. Mindfulness Meditation and Aromatherapy to Reduce Stress and Anxiety. Archives of Psychiatric Nursing 29(3): 192–193. (online) http://www.psychiatricnursing.org/article (21 October 2015).

[33] Rumaya Juhari, Siti Nor Yaacob, Mansor Abu Talib, Ikechukwu Uba. 2009. Loneliness, stress, self esteem and depression among Malaysian adolescents, Jurnal Kemanusiaan. Bil.14. (30 November 2015).

[34] Ruth G.J., Fiona M.H., Stephen P., Carol T. 2010. The effectiveness of interventions to change six health behaviours: a review of reviews, BMC Public

Health, 10:538 (online) http://www.biomedcentral.com (7 December 2015).
[35] Sarah S.M.T., Heejung S.K., and Batja M. 2014. Emotional Similarity Buffers Stress. Social Psychological and Personality Science. (online) http://www.sarahsmtownsend.com/uploads (30 November 2015)
[36] Sontag, L. M., Graber, J. A., Brooks-Gunn, J., & Warren, M. P. 2008. Coping with social stress: Implications for psychopathology in young adolescent girls. Journal of Abnormal Child Psychology. 36:1159–1174. doi:10.1007/s10802-008-9239-3 (30 November 2015).
[37] Spielberger, Charlse D., Wiley, J Sons, C. D. 2010. Job Stress Survey. The Corcini Encylopedia of Psychology 69-72.
[38] Taelman, J., Vandeput, S., Spaepen, A., Van Huffel. S. 2009. 4th European Conference of the International Federation for Medical and Biological Engineering: ECIFMBE 2008 23-27 November 2008 Antwerp, Belgium: Influence of Mental

★★★