

RELIGIOUS BEHAVIOR SHAPES ADAPTIVE FAMILY COPING INTO WELL-PREPARED IN DISASTER

Sriyono Sriyono^{1,2}, Nursalam Nursalam², Hamzah Hamzah³

¹Doctoral Student, Faculty of Medicine, Universitas Airlangga, Surabaya, Indonesia

²Faculty of Nursing, Universitas Airlangga, Surabaya, Indonesia

³Faculty of Medicine, Universitas Airlangga, Surabaya, Indonesia

ABSTRACT

Spirituality is reportedly able to be a bridge for humans to reach enlightenment in difficult times. The study purpose is to analyze how religious behavior shapes family adaptation during facing heavy ordeals such as risk of disaster. An experimental non-randomized pre- and posttest treatment only design. Twenty respondents vulnerable to the risk of disaster were recruited by a purposive sampling technique. The recruited samples were given Islamic-Based Family Resilience Training, and coping and cortisol were measured after intervention given. The coping variable was collected using a questionnaire and cortisol was measured using ELISA. Data analysis used paired t-test/Mann-Whitney U Test. Comparative statistical test results between pre and post measurements found a significant difference with a value of $p = 0.007$ ($\alpha \leq 0.05$). There was a difference between the mean and SD values from

the measurements before and after treatment. The difference was -6.251 ± 9.293 with $p = 0.007$ ($\alpha \leq 0.05$). Families with a high level of spirituality can explore the problems that are being faced. The effectiveness of family resilience training based on Islamic caring helps respondents think clearly in achieving good grades, as evidenced by the expression of normal cortisol as an effect of adequate stress feedback mechanisms.

Keywords: Coping, Cortisol, Disaster, Religion, Spirituality

Correspondence:

Nursalam Nursalam
Faculty of Nursing, Universitas Airlangga, Surabaya, Indonesia
nursalam@fkip.unair.ac.id

INTRODUCTION

An earthquake of magnitude 7 occurred in Lombok, West Nusa Tenggara on August 5, 2018, following a series of earthquakes since early July 2018. About 390 people died, along with 1447 injuries, 67,875 houses damaged, 468 schools damaged, and 352,793 people displaced (Dwidiyanti et al., 2018). The high loss suffered by the victims was related to the family preparedness (2). Additionally, mental health is at risk as well, disaster victims with bad mental health treatment are at risk for a severe mental health disorders (3). A survey regarding mental health and family adaptation was carried out in North Lombok District 1.5 years after the earthquake disaster. A total of 585 families participated in the survey. A surprising result was found in the families of victims of the earthquake. Half the families there were found to have low coping rates. Finally, more than half of the families participating in the study had a low level of preparedness (4). A victim having high gratitude, whatever the impact of disaster they have to overcome, has increase in resilience and also increase in social support. Emotional support is more influential on increasing resilience (Febriyanti, 2019).

Spirituality is reportedly able to be a bridge for humans to reach enlightenment in difficult times (6). On the other hand religiousness shapes a person into having a selfness personality. Selflessness is not a person who forgets about self-wellbeing or doesn't care about themselves. Selflessness means a high attitude of empathy so that the person shows affectionate behavior and reduces their ego. This was obtained from research conducted on patients who experienced disorders of the left hemisphere, wherein these patients experienced changes in brain function, increasing the work of the right brain. The patient depends on the right brain instead of their left brain, which is not functioning optimally. Research conducted found that besides experiencing an increase in selflessness, they also experienced an increase in religiousness. The patients were reported to be more disciplined in worshiping and carrying out religious rituals regularly than they did when they had not experienced interference with left brain (7).

There is a wide gap in explaining between spirituality and religiousness. Religiousness is reported as highly related to the environment. A group of religious worshipers is better in maintaining the faith (8). A family brings people together as one and has a high bond, or it might be said, is bonded by blood. This is supposed to have a better effect in shaping religiousness. The urgency of explaining family in shaping religiousness is related to the benefit of the intra family interaction. This influences all the family members and a good influence will spread goodness to the members, and vice versa (9). An understanding as to this process might benefit in shaping family coping so that an adaptation to ordeal can be well-promoted. In this case, the ordeal is disaster risk, which means disaster preparedness is the main goal of the study focus. The level of coping adaptation is compared with the cortisol level, since low cortisol level means less stress.

This is a training aimed to increase family resilience, coping, and disaster preparedness. The training combines family resilience strengthening, coping enhancing, and disaster preparedness confidence and is done by providing education, hands on practice, and increasing faith. The uniqueness of this training is encouraging the subject (family) to perform ibadah, an Islamic ritual of worshiping Allah (God in Islam). The enhanced ibadah of a family is expected to increase the family submission to the will of Allah. Submission to Allah's will means an increase in positivity of any hardness encountered by the family (6). An enhanced positivity leads the family into managing and taking precautions in case the ordeal continues. In this study, the highlighted ordeal is the disaster impact risk (10). The family management expected by the training is a good coping mechanism (11). On the other hand, the precaution is a means of family preparedness toward disaster (12). The highlighted problem is the process of religiousness in promoting a stress free and well-adapted family. The family's freedom from stress is analyzed from the low cortisol level. The study purpose is to analyze how religiousness shapes family adaptation during facing a heavy ordeal such as risk of disaster.

METHODS

A quantitative study was employed. The design was a non-randomized pre and posttest treatment only design. The sample was recruited by a purposive sampling technique. The research population was families vulnerable to the risk of disaster. The eligibility criteria for sample recruitment were experienced trauma in the past six months, head of household/the spouse, able to read and write, and Muslim as the inclusion criteria. Then a handicapped person, a person suffering mental illness, and senile were the exclusion criteria. The recruited samples were given Islamic-Based Family Resilience Training. There were 20 families recruited as the research samples. A normality and homogeneity test was conducted to fulfil the assumption to conduct inferential analysis. The inferential analysis was done by comparing the pre and posttest data, whether using paired t-test/Mann-Whitney U test based on the fulfilled assumption. The independent variable was Islamic-Based Family Resilience Training and the dependent variables were coping and cortisol. The coping variable was collected using a valid and reliable questionnaire (Sriyono, 2020b). The cortisol was measured using ELISA.

RESULTS

The normality test results obtained that the coping

variable is normally distributed while the cortisol variable is not normally distributed. On the other hand, homogeneity test results obtained both homogeneous variables. Thus, the inferential test on coping variables used paired t-test while the cortisol variable used the Mann-Whitney U test (Table 1).

Effect of treatment on coping and cortisol

The coping variable in this research is divided into self-control, seeking social support, accepting responsibility and positive reappraisal. After treatment, the mean and SD values increased from (30.95 ± 2.564) to (36 ± 2.575). Comparative statistical test results between pre and post measurements found a significant difference with a value of $p = 0.007$ ($\alpha \leq 0.05$). Therefore, it can be concluded that the treatment gives a significant change in coping (Table 1).

After treatment, the mean and SD decreased where the cortisol ELISA test was smaller (17.68 ± 5.653) µg/dl compared to the measurement before treatment (23.93 ± 9.872) µg/dl. There is a difference between the mean and SD values from the measurements before and after treatment. The difference was -6.251 ± 9.293 with $p = 0.007$ ($\alpha \leq 0.05$). Therefore, it can be interpreted that there is a significant decrease in the value of cortisol after treatment is given (Table 1).

Table 1. Test results for normality, homogeneity and statistical analysis

Dependent variable	Pre / Post	Mean	SD	Uji Normality			Means	Uji Homogeneity		Paired t-test		
				Shapiro-Wilk				Levene's test Sig.**	Means	T score	df	p
				Statistic	df	Sig.*						
Coping Mechanism	Pre	30.95	2.564	0.967	4	0.289	Normal	0.914	Homogent	-9.609	19	0.007
	Post	36	2.575									
Cortisol	Pre	23.93	9.872	0.848	4	0.000	Not Normal	0.083	Homogent	0.007	-2.354	0.019

DISCUSSION

Spirituality affects the increase in coping to be adaptive

Families who live in disaster-prone locations show profound psychic misery. They try to seek help because they feel unable to face the risk of disaster. It may be that the characteristics of individuals living in remote locations and aspects of their surrounding environment promote greater resilience or better ways of coping with hardship and, thus, help to minimize the adverse mental health consequences. The prior analysis of individual hardship items showed that residents in remote locations were more likely to report seeking financial assistance from community and welfare organizations than those living in regional locations (13). Families who live in locations that are far from health access and meeting logistical needs tend to seek help from the government, parties, or from organizations that provide.

Concern about disaster risk becomes a burden on the family in living their daily lives. Difficulties are increasingly felt by families due to financial shortages, which add to the difficulties of families to adapt. Financial hardship is positively associated with distress, and several different aspects of religious life buffer against these deleterious influences. Specifically, religious attendance and the belief in an afterlife moderate the deleterious effects of financial hardship on both objective and subjective financial hardship, while meditation serves

this function only for objective hardship (14). In addition to the problem of significant disaster risk, the family is also faced with the problem of meeting the inadequate needs due to financial shortages.

Families with a high level of spirituality are able to explore the problem and return the problem to Allah SWT. As such, the family can feel inner relief, which is similar to the concept of transcendence. Faith traditions often promote selflessness as an exemplary human trait, and as a behavior necessary for achieving salvation or enlightenment. Individuals from various faith traditions throughout history have described spiritually transcendent experiences in which they feel union with God or oneness with the universe, often involving a reduction in a sense of the self. The transcendence model suggests that this form of spiritual transcendence appears to be in part related to the reduction of the specific neuropsychological process of self-orientation associated with the RH/RPL. Thus, the concept of selflessness, when considered from neurologic, neuropsychological, and religious perspectives, provides a bridge to connect the sciences and the humanities in the study of spiritual transcendence (7). The ability of the family to surrender to Allah SWT plays a role in increasing family coping.

Spirituality affects the decrease in cortisol

The effect of the treatment of FRCI training on disaster prone families shows promising results. Statistical test

results of the effect of treatment on changes in cortisol expression showed significant differences. The average cortisol expression before treatment in the treatment group was higher than after treatment was given. It can be concluded that the treatment of FRCI training shows a significant effect on changes in cortisol expression in disaster-prone families. The accumulation of distress from the impact of disasters and the pressure of the family's vulnerability condition has been going on for a long time in vulnerable families. The combination of these two conditions explains that vulnerable families experience chronic distress (15). Stress improvement enables the family able to get up, be strong and take good care of themselves, to accept the patient's condition, and give patients activities that help the patient's psychological improvement. This combination of improved family capabilities reduces the incidence of schizophrenia patients relapsing. This means that increasing family resilience will increase family capabilities so that distress can be overcome (11).

Islamic caring adds to the effectiveness of FRCI training through the path of helping respondents think clearly in achieving good grades. A pre-experimental study of 25 mothers who cared for children with cancer about the acceptance of the child's condition, reported that psychoreligious intervention strengthened the mother's acceptance of the child's condition. Psychoreligious interventions consist of prayer and dhikr rituals. The significance of the influence of psychoreligious on increasing maternal acceptance was $p = 0.001$ ($\alpha < 0.05$). This means that psychoreligious intervention influences the change in maternal coping to acceptance, where, before the treatment of maternal coping mechanisms, were denial and bargaining (16).

Improvement of normal cortisol expression is an effect of an adequate stress feedback mechanism, as evidenced by the existence of a significant influence on the results of statistical tests before and after treatment in the treatment group. This is in accordance with the physiological function of the HPA axis in responding to stress. As an effect of FRCI training, the emotional condition of the respondents became stable so that coping became positive. Positive coping stimulates the body to provide feedback to the hypothalamus to reduce CRF secretion, which, in turn, will signal the pituitary to reduce ACTH secretion. Normal levels of ACTH secretion make the adrenal glands secrete the hormone cortisol in normal levels. The conclusion is that the change in cortisol expression to normal is the effect of improving the coping mechanism to be positive, which is mediated by adequate coping and the clear mind of the respondent.

CONCLUSION

The effectiveness of family resilience- training based on Islamic care helps respondents think clearly in achieving good grades, as evidenced by the expression of normal cortisol as an effect of an adequate stress feedback mechanism. Families with a high level of spirituality can explore the problems being faced by each individual. Problems in individuals when considered from a neurological, neuropsychological and religious perspective, provide a bridge to connect science and humanities in the study of spiritual transcendence.

REFERENCES

- Dwidiyanti M, Hadi I, Wiguna RI, Ningsih HEW. Gambaran Risiko Gangguan Jiwa pada Korban Bencana Alam Gempa di Lombok Nusa Tenggara Barat. *Holist Nurs Heal Sci*. 2018;1(2):82–91.
- Sherchan S, Samuel R, Marahatta K, Anwar N, Van Ommeren MH, Ofrin R. Post-disaster mental health and psychosocial support: Experience from the 2015 Nepal earthquake. *WHO South-East Asia J public Heal*. 2017;
- Chen CY, Xu W, Dai Y, Xu W, Liu C, Wu Q, et al. Household preparedness for emergency events: a cross-sectional survey on residents in four regions of China. *BMJ Open*. 2019 Nov;9(11):e032462.
- Sriyono, Nursalam, Hamzah. Family Resilience, Coping, and Disaster Preparedness In The Coastline Area: One and A Half Years Post-Earthquake In Lombok. *Syst Rev Pharm*. 2020;(July).
- Febriyanti F. Pengaruh Dukungan Sosial Terhadap Resiliensi Dimoderasi Oleh Kebersyukuran Pada Penyintas Gempa Bumi Di Lombok. Universitas Muhammadiyah Malang; 2019.
- Kurniawati ND. Pengaruh Asuhan Keperawatan Mind-Body-Spiritual (MBS) Terhadap Kecerdasan Spiritual, Ekspresi Hsp 70, eNOS, VCAM-1, dan MCP-1 Pada Pasien Penyakit Jantung Koroner. Universitas Airlangga; 2018.
- Johnstone B, Cohen D, Konopacki K, Ghan C. Selflessness as a Foundation of Spiritual Transcendence: Perspectives From the Neurosciences and Religious Studies. *Int J Psychol Relig*. 2016;26(4):287–303.
- Hussein JW. The social-psychological and phenomenological constructs of spirituality in the culture of dhikr in Eastern Ethiopia. *Cult Psychol*. 2018;24(1):26–48.
- O'Brien S. Families of Adolescents with Autism: Facing the Future. *J Pediatr Nurs*. 2016;31(2):204–13.
- Bakar A, Nursalam, Adriani M, Kusnanto, Qomariah SN, Efendi F. The development of islamic caring model to improve psycho-spiritual comfort of coronary disease patients. *Indian J Public Heal Res Dev*. 2018;
- Fitryasari R, Nursalam, Yusuf A, Hargono R. Family resilience model escalating the family ability to prevent recurrent of patient with schizophrenia. *Int J Psychosoc Rehabil*. 2020;24(Special Issue 1):1123–30.
- Sriyono, Nursalam, Hamzah. The resilience of families who live in a disaster-prone location in terms of disaster preparedness: A scoping review. Vol. 24, *International Journal of Psychosocial Rehabilitation*. Hampstead Psychological Associates; 2020. p. 9215–25.
- Butterworth P, Kelly BJ, Handley TE, Inder KJ, Lewin TJ. Does living in remote Australia lessen the impact of hardship on psychological distress? *Epidemiol Psychiatr Sci*. 2018;27(5):500–9.
- Bradshawa M, Ellison CG. Financial hardship and psychological distress: Exploring the buffering effects of religion. *Soc Sci Med*. 2010;71(1):196–204.
- Dawson K, Joscelyne A, Meijer C, Steel Z, Silove D, Bryant RA. A controlled trial of trauma-focused therapy versus problem-solving in Islamic children affected by civil conflict and disaster in Aceh, Indonesia. *Aust N Z J Psychiatry*. 2018;52(3):253–61.
- Krisnana I, Kurnia ID, Purweni ND. Psychoreligy strengthens the parent Self-Acceptance on children suffering cancer. *Indian J Public Heal Res Dev*. 2018 Oct;9(10):567.