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Self-Ruqyah Therapy as an Islamic Psychotherapy Method for Dealing with Mood Swings in Students

Alya Fadhilla Rofa¹, Aliya Rohali², Adinda Dinanti Revilina³, Pakam Juanda⁴, Lia Ananda Putri⁵, Calista⁶

- 1, 2, 3, 4, 5 Universitas Islam Negeri Raden Fatah Palembang
- ⁶ Politeknik Negeri Sriwijaya
- *Corresponding Email: alyarofa2004@gmail.com

ABSTRACT

This study examines the effectiveness of self-administered Ruqyah therapy as an Islamic psychotherapy method in overcoming mood swings and loneliness among university students. This study employs a mixed methods sequential explanatory design, combining quantitative approaches (pre-test and post-test using a standardized loneliness scale, along with statistical analyses such as the Wilcoxon Signed Ranks Test) and qualitative approaches (semi-structured interviews with thematic analysis). Quantitative results, analyzed using the Wilcoxon Signed Ranks Test, showed a statistically significant decrease in mood swing scores post-therapy. Qualitative data supported these findings, with participants reporting increased calmness, mental clarity, and improved emotional regulation. This study demonstrates the potential of self-administered Ruqyah therapy as a complementary approach in addressing mood swings and loneliness, enhancing psychological and spiritual well-being. However, further research with larger and more diverse samples is needed to strengthen these findings.

Keywords: Self-Administered Ruqyah Therapy, Islamic Psychotherapy, Mood Swings, Students, Mental Health, Spiritual Well-being, Mixed Methods

Introduction

Mood swings are often experienced by almost all teenagers. Mood swings are also referred to as changes in mood and tendencies towards anxiety and mood symptoms, poor stress management, and mood lability (Srinivasan et al., 2006). Interestingly, self-esteem lability is a better predictor of mood symptoms than trait self-esteem Butler et al., in (Bowen et al., 2004). This disorder usually involves periods of major depression, mania or hypomania, in addition to periods of relatively stable mood (Mansell et al., 2007).

Based on research conducted by (Ojezele et al., 2022) mood swings are observed as symptoms that overlap with psycho-emotional, physical, and behavioral symptoms. Underlying illnesses such as bipolar disorder, previous history of bipolar disorder, and gynecological diseases such as endometriosis, uterine fibroids, ovarian cysts, and postcystic ovary syndrome are the main causes of mood swings (Aiken & Phelps, 2017). Recent research has raised doubts about the picture of the teenage years as a period of chaos. Evidence of emotional chaos suggests that it occurs in early adolescence and is limited to girls Simmons et al., in (Larson et al., 2014).

History has generally recorded the mood swings of famous leaders. Alexander the Great is said to have murdered one of his close friends while in a depression (Fox, 1980); Martin Luther described bouts of crippling sadness; Abraham Lincoln was said to have suffered enough from depression to want to remove himself from office; Napoleon Bonaparte was known to have

struggled with unpredictable mood swings, as were Edgar Alan Poe, Winston Churchill, and Vincent Van Gogh (Bagby, 2011); Billy Graham's daughter Ruth reported polarized emotions that caused significant distress in her famous Jamison family (McClung, 2007). Ballard and colleagues found that depressive illness was associated with unemployment and low social status (Veselovski et al., 2012).

In Islamic psychology, mood disorders are not only understood as biological or psychological dysfunctions, but also as a form of spiritual test that requires a holistic approach. Jacobson, Follette, and Revenstorf assume that clinically significant changes are related to the return of normal function. This means that consumers, clinicians, and researchers often expect psychotherapy to eliminate the problems that clients bring to therapy (Jacobson & Truax, 1991). Spiritual approaches such as dhikr, prayer, and meditation play a role in calming the soul and regulating emotions. Based on a study conducted by Al-Krenawi and Graham, it was found that spiritual practices in Islamic culture, such as consultation with religious leaders and the use of prayer, have a calming effect and strengthen mental resilience (Al-Krenawi & Graham, 2000). In line with that, Khan and Watson showed that individuals who use religious coping strategies tend to have better mental health in dealing with emotional stress. The principles of tawakkul and patience function as self-control mechanisms in dealing with long-term emotional fluctuations (Khan & Watson, 2006).

Muslim scholars have studied psychology extensively where many devout Muslims do not seek psychotherapy services because of the assumption that psychotherapists will not engage with their religious values in an informed and open manner Amri & Bemak, in (A. E. D. Rothman, 2019). Yet it is clear that Islamic psychotherapy is integrated with Islamic values and uses an Islamic-based approach. Developing such an approach is not an easy endeavor. One fundamental difficulty is that many of the ideas that inform the dominant discourse in secular psychology and contemporary psychotherapy differ markedly from the Islamic paradigm Badri, in (A. E. D. Rothman, 2019). One of these is that Sufism provides an important foundation for Islamic psychotherapy because it has been recognized as a life-giving core since the emergence of Islam. Sufi concepts have provided a strong foundation and approach for Islamic psychotherapy in the past and to the present (Isgandarova, 2019).

Based on a study by (Zulkurnaini et al., 2012) it was found that listening to the recitation of the Qur'an, especially Surah Yasin, increases alpha brain wave activity associated with relaxation and calmness. Compared to classical music, the recitation of the Qur'an produces a stronger neural response in creating positive emotional conditions, which can help reduce symptoms of mood swings. Research shows that listening to verses of the Qur'an, such as Ayatul Kursi, can improve working memory function and mood (Hussain, 2021). This shows that independent ruqyah is not only spiritually beneficial, but can also support emotional stability (Arifuddin & Fahmi, 2018).

Understanding individual character is one of the assessments in psychology. If the therapist works from within the conceptualization of the person and the goals of treatment that characterize the dominant principles, ethics, or even Islamic law Abdullah, Skinner, in (A. E. D. Rothman, 2019). Therapists certainly have expertise in the field and ethical codes of ethics, so individuals do not need to be afraid if they will do Islamic psychotherapy. However, psychologists or therapists should not impose Islamic religious values on adherents of other religions on the patients they are treating. According to the American Psychiatric Association, practitioners should maintain patient

commitment and avoid imposing their own spiritual values or other values, beliefs, and worldviews on their patients (A. Rothman & Coyle, 2020).

The main contention is that traditional psychology and its clinical applications have been largely ethnocentric in their orientation, training, and application based on the Anglo-Saxon, White, middle-class value system. A new paradigm is needed to be more open to multicultural diversity and more accepting of other worldviews and culturally oriented therapeutic practices. The findings of a meta-analysis of over 300 studies suggest that there is a positive relationship between spiritual or religious factors and health. With this, Islamic psychotherapy can thrive and be readily accepted by Muslims. However, this is not demonstrated in all cases. Religious involvement is generally conducive to better well-being and mental health outcomes Ano & Vasconcelles in (Rassool, 2021). Islamic psychotherapy involvement is usually approached with psychological disorders that tend to be less severe.

Independent ruqyah is a form of spiritual therapy in Islam that is carried out individually by a person to treat physical or psychological disorders that are believed to originate from disturbances of jinns, magic, or negative energy (Zittoun, 2011). In practice, independent ruqyah is carried out by reading verses of the Qur'an and prayers that have been taught by the Prophet Muhammad SAW, such as Surah Al-Fatihah, Al-Baqarah verses 1-5, verses of the Chair, Al-Ikhlas, Al-Falaq, and An-Nas. The main purpose of this ruqyah is to ask for protection and healing from Allah SWT without the involvement of outside parties such as professional ruqyah practitioners (Pitria & Puspitasari, 2025). In addition to being a form of worship, independent ruqyah also functions as a medium for self-regulation in dealing with the pressures of life. In modern psychology, self-regulation refers to an individual's ability to manage emotions, thoughts, and behavior effectively (Hasniza, 2020). The activities of reading the Qur'an, meditating, and praying in ruqyah can create a state of mindfulness that is in line with contemporary psychotherapy techniques such as mindfulness-based cognitive therapy (MBCT). This shows that spiritual practices such as ruqyah are not only religious in dimension but also in line with modern mental health principles (Al-Khuidari, 2021).

The implementation of independent ruqyah is not only a ritual, but also strengthens the individual's spiritual bond with God. Many independent ruqyah practitioners report increased inner peace, reduced anxiety, and an openness of spiritual awareness. Research shows that the activity of reading and listening to holy verses can calm the psychology, which has a positive impact on mental health. In addition, independent ruqyah is also considered a form of non-invasive therapy that has no medical side effects, as long as it is carried out with the right understanding and guidance (Azmi & Muda, 2020).

Several scientific studies have examined the effectiveness of independent ruqyah. For example, research by (Ratnasari, 2022) shows that ruqyah syar'iyyah can help reduce anxiety disorders and psychological tension in patients with mild mental disorders. Another study found that cancer patients who performed independent ruqyah experienced an increase in spiritual quality of life and a decrease in depression. This effectiveness is supported by the theory of psychoneuroimmunology which explains the relationship between spirituality and the immune system. Independent ruqyah can also increase self-efficacy, namely a person's belief in their ability to overcome life's difficulties. Individuals who feel able to access spiritual strength within themselves through independent ruqyah show higher psychological resilience in dealing with mental and physical disorders (Satrianegara et al., 2016). A study highlights that spiritual therapy

based on the Qur'an can strengthen patients' self-confidence in the process of healing chronic diseases (Haron et al., 2021). Thus, independent ruqyah not only provides a therapeutic effect but also forms a positive attitude towards the recovery process.

However, independent ruqyah still has limitations. Its success depends greatly on the level of faith, consistency in carrying out ruqyah, and understanding of the verses read (Sharifah et al., 2025). In addition, not all disorders experienced by a person can be cured with ruqyah alone, in some cases, a professional medical or psychological approach is needed. Therefore, independent ruqyah should be used as a complement, not a substitute, for conventional medical treatment.

Overall, independent ruqyah is a spiritual practice that has a strong basis in Islamic law and is increasingly attracting attention in the realm of spiritual psychology and complementary medicine. With the right approach, independent ruqyah can be a means to strengthen faith, improve mental health, and maintain emotional stability (Pitria & Puspitasari, 2025). This shows that a religious approach can contribute significantly to maintaining human well-being holistically. Independent ruqyah is a form of spiritual therapy that is carried out personally by reading verses of the Qur'an, prayers from the hadith, and dhikr to ask for protection and healing from spiritual and psychological disorders. In a psychological context, independent ruqyah is believed to have a positive impact on emotional stability and mental health, including in overcoming symptoms of "Mood Swing" or drastic changes in mood. Mood swings themselves can be triggered by various factors such as stress, hormonal disorders, trauma, and even spiritual imbalance. In this case, independent ruqyah acts as a method that calms the soul, relieves anxiety, and strengthens the individual's spiritual relationship with God (Sumarti et al., 2024).

Several studies have shown that listening to or reading the Qur'an can affect brain wave activity and reduce stress hormones such as cortisol, which has an impact on improving mood. The ruqyah process involving dhikr and prayer also functions as a form of self-healing that triggers relaxation and inner peace. In addition, independent ruqyah can help reduce psychological disorders such as anxiety or negative whispers that often trigger sudden mood swings (Azmi & Muda, 2020). Thus, independent ruqyah not only functions as a form of worship, but also as an alternative therapy to stabilize emotions and maintain mental balance. Therefore, health and religious institutions are expected to work together to provide practical and scientific guidance in the implementation of independent ruqyah (Yusuf et al., 2023).

Method

This study used a mixed methods sequential explanatory design, combining quantitative and qualitative approaches. The quantitative stage used a pretest-posttest design with a standardized loneliness measurement scale instrument to measure changes in loneliness levels before and after ruqyah therapy in a sample of students selected using a purposive sampling technique. Quantitative data analysis used the Wilcoxon Signed Ranks Test. Furthermore, a qualitative approach, through semi-structured interviews, was used to explore students' subjective experiences related to independent ruqyah therapy, changes in their mood swings and loneliness. Qualitative data analysis used thematic analysis. The integration of quantitative and qualitative data aims to provide a comprehensive understanding of the effectiveness of ruqyah therapy in overcoming mood swings

and loneliness in students. Research ethics, including informed consent and data confidentiality, will be met.

Results

Wilcoxon Signed Ranks Test

Ranks					
		N	Mean Rank	Sum of Ranks	
Post_Test - Pre_Test	Positive Ranks	15ª	8,00	120,00	
	Negative Ranks	$0_{\rm p}$,00	,00	
	Ties	0°			
	Total	15			

a. Post_Test < Pre_Test

 $b. Post_Test > Pre_Test$

 $c. \ Post_Test = Pre_Test$

Test Statistics ^a				
	Post_Test - Pre_Test			
Z	-3,419 ^b			
Asymp. Sig. (2-tailed)	,001			

a. Wilcoxon Signed Ranks Test

b. Based on positive ranks.

Based on the results of our research, there is a positive influence on ruqyah therapy in overcoming mood swings caused by loneliness in students. The data collected were obtained from the results of the pre-test and post-test conducted before and after the independent ruqyah therapy intervention. In this study, the existing data showed a significance value of > 0.05, which indicates that there is a high level of effectiveness of independent ruqyah therapy. Therefore, we used the non-parametric Wilcoxon Signed Rank Test to test the difference in pre-test and post-test scores. In the Ranks section table, it can be seen that there was a positive change in the pre-test and post-test results in the 15 students who had undergone independent ruqyah therapy. In addition, in the Test Statistics section table, it can be seen that the Asymp. Sig. (2-tailed) value is 0.001, which indicates that there is a significant difference between the pre-test and post-test scores. In other words, there was a significant decrease in the level of mood swings in the 15 students after being given independent ruqyah therapy.

Discussion

This study aims to see the effectiveness of independent ruqyah therapy for students. This is done by approaching the subject through interview and observation methods. The subject was given

an explanation of independent ruqyah therapy and the stages that must be carried out. In an in-depth interview conducted with a student with the initials "C", it was found that he experienced unpredictable mood swings, especially when facing academic pressure and personal problems. This student admitted that he often felt suddenly sad, easily offended, and lost his enthusiasm for activities. After undergoing independent ruqyah therapy routinely for one week, the subject stated that there were positive changes in his emotional condition. He felt calmer, his mind was clearer, and he was able to manage his emotions better. The subject also said that during the one-week ruqyah process, especially when listening to the reading of the verses of the Qur'an, he felt an inner peace that he had never felt before.

Furthermore, the subject explained that ruqyah therapy not only had an impact on the psychological aspect, but also strengthened his spirituality. He became more diligent in worship, increased dhikr, and felt closer to Allah. This shows that the Islamic psychotherapy approach through ruqyah also forms spiritual awareness and provides a sense of inner security. According to him, independent ruqyah helped him to be more patient (\$\sigma abr)\$ and surrender (\$tawakkal\$), which are important provisions in dealing with emotional turmoil. This student's experience confirms that independent ruqyah can function as an effective Islamic psychotherapy method in overcoming mood swings with a holistic approach that touches on the psychological and spiritual aspects at the same time.

After that, a questionnaire was distributed to students regarding the mood swings and loneliness they experienced. This distribution aims to find out how many students experience this. Based on the results of the periodic distribution of the questionnaire, it was found that many students experience mood swings and loneliness. With this, we conducted a webinar to introduce and explain more about independent ruqyah therapy. We provided treatment to the subjects in the form of a checklist to carry out independent ruqyah therapy periodically. After that, we conducted a post-test to determine the effectiveness of independent ruqyah therapy. With this, independent ruqyah therapy as a form of Islamic psychotherapy in dealing with symptoms of mood swings and loneliness in students has a positive influence on students. Independent ruqyah therapy has a positive impact on the emotional stability of the subjects.

The data analysis that we did after the pre-test and post-test that we did. We took 15 participant samples from the pre-test and post-test results that we had distributed. There are data results that show a significance value of > 0.05, which indicates that there is a high level of effectiveness of independent ruqyah therapy. We also use the non-parametric Wilcoxon Signed Rank Test to test the difference in pre-test and post-test scores. In the pre-test and post-test results, the 15 students who had undergone independent ruqyah therapy had positive results. In addition, in the Test Statistics section table, it can be seen that the Asymp. Sig. (2- tailed) value is 0.001, which indicates that there is a significant difference between the pre-test and post-test scores. It can be concluded that there was a significant decrease in the level of mood swing in the 15 students after being given independent ruqyah therapy.

Conclusion

This study proves the effectiveness of self-administered Ruqyah therapy in reducing mood swings and loneliness in college students. Quantitative analysis of the Wilcoxon Signed Ranks Test showed a statistically significant difference between pre-test and post-test scores (p = 0.001).

Qualitative findings support these results, with participants reporting improved psychological and spiritual well-being. However, further research with larger and more diverse samples is needed to generalize the findings to a wider population. Self-administered Ruqyah therapy has the potential to be a promising complementary approach in managing mood swings, especially for college students seeking spiritual and religious-based solutions. It is important to note that self-administered Ruqyah therapy should be used as a complement, not a substitute, for conventional medical care when needed.

References

- Aiken, C., & Phelps, J. (2017). Bipolar, Not So Much: Understanding Your Mood Swings and Depression. In *Understanding Depression*. WW Norton & Company.
- Al-Khuidari, M. F. (2021). Ethical and Clinical Considerations in the Use of Ruqyah as Complementary Therapy in Psychiatric Practice. *Journal of Religion and Health*, 60(3), 1852–1865.
- Al-Krenawi, A., & Graham, J. R. (2000). Culturally Sensitive Social Work Practice with Arab Clients in Mental Health Settings. *Health & Social Work*, 25(1), 9–22.
- Arifuddin, Y. W., & Fahmi, A. Y. (2018). The Effect of Ruqyah Syar'iyyah Therapy on Anxiety, Stress and Depression Among Health Science Students. *Holistic Nursing and Health Science*, 1(2), 68. https://doi.org/10.14710/hnhs.1.2.2018.68-76
- Azmi, N., & Muda, M. (2020). The Effectiveness of Ruqyah Therapy in Treating Mental Disorders: A Qualitative Review. *International Journal of Academic Research in Business and Social Sciences*, 10(3), 526–536. https://doi.org/10.1145/3613904.3642642
- Bagby, D. K. (2011). Mood Swings: Pastoral Care for People with Bipolar Disorder. In *The Church Leader's Counseling Resource Book: A Guide to Mental Health and Social Problems: Vol. VIII* (Issue I). Oxford University Press.
- Bowen, R., Clark, M., & Baetz, M. (2004). Mood swings in patients with anxiety disorders compared with normal controls. *Journal of Affective Disorders*, 78(3), 185–192. https://doi.org/10.1016/S0165-0327(02)00304-X
- Haron, S., Yusof, H., & Aziz, A. (2021). Qur'anic Healing and Self-Efficacy among Muslim Patients with Chronic Illnesses in Malaysia. *Journal of Spirituality in Mental Health*, 23(1), 42–56. http://www.ukm.my/hadhari/wp-content/uploads/2015/09/ISICAS-2014-Proceedings.pdf#page=281
- Hasniza, H. (2020). The Integration of Spirituality and Psychology in Treating Anxiety: A Ruqyah-Based Approach. *Journal of Religion and Health*, *59*(5), 472–486. https://doi.org/10.4324/9781003344827
- Hussain, M. H. (2021). The Effect of Quran as a Stimulus in Enhancing Working Memory and Mood. *International Journal of Islamic Psychology*, 4(1), 1–11.
- Isgandarova, N. (2019). Muraqaba as a Mindfulness-Based Therapy in Islamic Psychotherapy. *Journal of Religion and Health*, *58*(4), 1146–1160. https://doi.org/10.1007/s10943-018-0695-y
- Jacobson, N. S., & Truax, P. (1991). Clinical significance: a statistical approach to defining meaningful change in psychotherapy research. *Journal of Consulting and Clinical Psychology*, 59(1), 12–19. https://doi.org/10.1063/1.1770301

- Khan, Z. H., & Watson, P. J. (2006). Construction Of The Pakistani Religious Coping Practices Scale: Correlations With Religiosity And Mental Health. *Journal of Muslim Mental Health*, *I*(1), 31–47. https://doi.org/10.25217/igcj.v5i2.2696
- Larson, R., Csikszentmihalyi, M., & Graef, R. (2014). Mood variability and the psychosocial adjustment of adolescents. *Applications of Flow in Human Development and Education: The Collected Works of Mihaly Csikszentmihalyi*, *9*(6), 285–304. https://doi.org/10.1007/978-94-017-9094-9_15
- Mansell, W., Morrison, A. P., Reid, G., Lowens, I., & Tai, S. (2007). This is the accepted version of the following article: Palmier-Claus, J., Dodd, A., Tai, S., Emsley, R., & Mansell, The Interpretation Of, And Responses To, Changes In Internal States: An Integrative Cognitive Model Of Mood Swings And Bipolar DisordersW. . *Behavioural and Cognitive Psychotherapy*, *35*(5), 515–539. https://doi.org/10.1111/bjc.12081/full.Appraisals
- McClung, C. A. (2007). Circadian Genes, Rhythms And The Biology Of Mood Disorders. *Pharmacology & Therapeutics*, 114(2), 222–232.
- Ojezele, M. O., Eduviere, A. T., Adedapo, E. A., & Wool, T. K. (2022). Mood Swing during Menstruation: Confounding Factors and Drug Use. *Ethiopian Journal of Health Sciences*, 32(4), 681–688. https://doi.org/10.4314/ejhs.v32i4.3
- Pitria, N., & Puspitasari, L. (2025). Development of Syar'iyyah Ruqyah in Treatment Diseases from the Time of the Prophet to the Contemporary Era. *International Journal of Islamic and Complementary Medicine*, 6(1), 15–20. https://doi.org/DOI:10.55116/IJICM.V6I1.102
- Rassool, G. H. (2021). Re-Examining the Anatomy of Islamic Psychotherapy and Counselling: Envisioned and Enacted Practices. *Islamic Guidance and Counseling Journal*, 4(2), 132–144. https://doi.org/10.25217/igcj.v4i2.1840
- Ratnasari, R. (2022). Ruqyah Psychotherapy: A Healing Therapy for Physical Illnesses and Psychiatric Disorders. *International Journal of Multicultural and Multireligious Understanding*, 9(1), 1–10.
- Rothman, A., & Coyle, A. (2020). Conceptualizing an Islamic psychotherapy: A grounded theory study. *Spirituality in Clinical Practice*, 7(3), 197.
- Rothman, A. E. D. (2019). Building an Islamic Psychology and Psychotherapy: A Grounded Theory Study. June, 341.
- Satrianegara, M. F., Hadju, V., Amiruddin, R., & Faisal Idrus, M. (2016). The Role of Religious Psychotherapy with Independent Ruqyah in Reducing Depression and Improved Spiritual Quality of Life of Cancer Patients at Hospital of Hasanuddin University Makassar 2016. International Journal of Sciences: Basic and Applied Research (IJSBAR) International Journal of Sciences: Basic and Applied Research, 27(1), 1–9. http://gssrr.org/index.php?journal=JournalOfBasicAndApplied
- Sharifah, N., Syed, B., & Alqodsi, A. S. A. (2025). The Practice of Healing Using Ruqyah Shar 'iyyah During the Time of Prophet Muhammad for the Treatment of Physical and Spiritual Illnesses. 15(01), 1617–1629. https://doi.org/10.6007/IJARBSS/v15-i1/24656
- Srinivasan, V., Smits, M., Spence, W., Lowe, A., Kayumov, L., Pandi-Perumal, S., Parry, B., & Cardinali, D. (2006). Melatonin in mood disorders. *World Journal of Biological Psychiatry*, 7(3), 138–151. https://doi.org/10.1080/15622970600571822

- Sumarti, H., Tasyakuranti, A. N., Zulfikah, P., & Edison, R. E. (2024). The influence of Istighfar Dhikr on brain wave activity: An EEG-based study on anxiety management. *Multidisciplinary Science Journal*, *6*(11). https://doi.org/10.31893/multiscience.2024236
- Veselovski, A., Grujić, Z., Grahovac, M., & Brestovački, B. (2012). Mood swings at mothers after childbirth. *Soth Eastern Europe Health Science Journal*, 2(1), 15–21.
- Yusuf, R., Abdullah, N., & Rahman, A. (2023). Holistic Health Model: Integrating Ruqyah Therapy in Islamic Mental Health Practice. *International Journal of Social Psychiatry*, 69(1), 17–25. https://doi.org/10.1136/bmj.2.3388.1091-c
- Zittoun, T. (2011). Meaning and Change in Psychotherapy. *Integrative Psychological and Behavioral Science*, 45(3), 325–334. https://doi.org/10.1007/s12124-011-9166-7
- Zulkurnaini, N. A., Kadir, R. S. S. A., Murat, Z. H., & Isa, R. M. (2012). The comparison between listening to Al-Quran and listening to classical music on the brainwave signal for the alpha band. *Proceedings 3rd International Conference on Intelligent Systems Modelling and Simulation, ISMS 2012*, 181–186. https://doi.org/10.1109/ISMS.2012.60