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"Senam Kecerdasan" as a Psychological Intervention to Enhance Authentic Happiness: A Biopsychological and Islamic Perspective

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Abstract: Globalization and rapid flow of information have profoundly impacted various aspects of life, including mental health. Amid social pressures and the demands of modern life, many individuals are experiencing a decline in authentic happiness (Clark & Senik, 2011). One consequence of this is an increased reliance on counselors or professional help as the primary solution to address psychological issues. While this reliance may be helpful in the short term, it can hinder emotional independence and reduce an individual's ability to build psychological resilience on their own. Therefore, an alternative approach is needed that can strengthen mental well-being in a holistic and sustainable manner. This study aims to explore the effects of intelligence exercises on enhancing authentic happiness among individuals who have completed counseling. Using a one-group pretest-posttest design, this study examined seven counseling participants from UIN Maulana Malik Ibrahim Malang who voluntarily completed the intelligence exercise intervention. The measurement tool used was the Authentic Happiness Scale, adapted from (R. Sherlywati, 2015) research. Data analysis was conducted using non-parametric tests with the Wilcoxon Signed Ranks Test to assess significant changes in authentic happiness scores between the pretest and posttest measurements. The results showed an increase in authentic happiness scores after participants underwent the intelligence exercise program, with an average pretest score of 324.8571 and a posttest score of 338.7143 ($p < 0.05$). The effect size calculation using Cohen's d yielded a value of 0.83 (large category). Through observation and interviews, positive changes were also detected in the subjects, including increased energy levels, reduced anxiety symptoms, and enhanced feelings of greater calmness and happiness. Islamic studies and biopsychological research also indicate that intelligence exercises, as a form of body and mind therapy, align with Islamic principles regarding the balance of soul and body. Intelligence exercises have significant effectiveness in enhancing authentic happiness. The practical implications of this study are that intelligence exercises can be widely applied in various settings, such as schools, workplaces, and communities, as a mental health promotion program. Additionally, this approach can reduce individuals' reliance on conventional therapy and encourage the development of emotional independence and sustainable psychological well-being. From a theoretical perspective, this research reinforces the importance of interventions based on physical and cognitive activities within a biopsychological

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framework and opens opportunities for integration with local or religious values, such as the Islamic perspective.

Keywords: Intelligence Exercises; Authentic Happiness; Psychology; Biopsychology; Islam; Non-Parametric Testing

Introduction

Globalization and advances in information technology have had a significant impact on various aspects of life, including mental health. Unlimited access to information via the internet can lead to overstimulation and overexposure, which can potentially trigger mental health issues such as anxiety and depression, especially among adolescents (Lenzenweger, 2004). Data from the Indonesia National Adolescent Mental Health Survey (I-NAMHS) shows that around 34.9% of Indonesian adolescents have experienced mental health problems in the past year (Center for Reproductive Health, 2022).

The Counseling Laboratory at Maulana Malik Ibrahim State Islamic University in Malang has seen a significant increase in the number of client visits, not only from the academic community but also from the general public (Fuaturosida & Rozana, 2022). The majority of clients are aged 18-20, an age group that is vulnerable to internal and social conflicts (Santrock, 2003). Although counseling helps resolve problems, some clients show excessive dependence on counselors, which can hinder their emotional independence (Bornstein, 2005).

To overcome this dependence, alternative interventions are needed that can increase clients' independence and mental well-being. One potential approach is intelligence exercises, which are a series of body movements combined with breathing techniques to simultaneously process energy in the body (Rukasa, 2003). These exercises aim to increase self-awareness, manage stress, and develop a more stable personality. Research indicates that physical activities such as exercises can help reduce symptoms of depression and anxiety in adolescents, improve mood, and strengthen self-confidence (Rukmana, 2003).

From a biopsychological perspective, intelligence exercises can be seen as an intervention that utilizes the close relationship between the body and mind. Physical activity, including exercise, has been proven to influence various biological processes related to mental well-being (Huai et al., 2013). Intelligence exercises that combine body movements with breathing techniques can stimulate the autonomic nervous system, increase endorphin production, and regulate stress hormone levels such as cortisol (Mehling et al., 2011). Physical movements in intelligence exercises can increase blood flow to the brain and stimulate the limbic system, which is responsible for processing emotions, thereby helping to reduce anxiety, depression, and stress. Additionally, breathing combined with body movements can improve lung capacity and facilitate oxygen supply to the brain, which in turn plays a role in enhancing cognitive function and reducing mental symptoms associated with tension or emotional fatigue (Kabat-Zinn, 2003).

In terms of mental balance, intelligence exercises also contribute to improving the balance of neurotransmitters in the brain, including serotonin and dopamine, which are known to play a role in

regulating mood, happiness, and life satisfaction (Berridge & Kringelbach, 2008). Physical activities such as exercise can improve sleep quality, which is also linked to improved psychological well-being (Hartig et al., 2003). Overall, intelligence exercises are not only physically beneficial, but can also improve mental health by optimizing biological and psychological functions, which support the achievement of authentic happiness (Shatdal Chaudhary, 2023). This is in line with Islamic principles that teach balance between body, mind, and soul to achieve perfection in life (sakinah).

From an Islamic perspective, mental health is not only related to psychological aspects, but also includes spiritual aspects and balance in life. The concept of happiness in Islam (sa'adah) does not only focus on worldly happiness, but also on spiritual happiness that reflects holistic well-being of the soul (Hamim, 2016). The Qur'an states that inner peace is attained through remembering Allah (dzikrullah), as mentioned in Surah Ar-Ra'd verse 28: "Remember, only through remembering Allah does the heart find peace." (Al-Qur'an, 2018). Intelligence exercises, which teach self-awareness and balance between physical, mental, and spiritual aspects, are in line with Islamic principles of maintaining mental health. This concept is also related to the approach of *tazkiyatun nafs* (purification of the soul), which aims to cleanse the heart and mind of anxiety and achieve true happiness. According to Ibn Qayyim Al-Jauziyah, true happiness is attained through patience, sincerity, and striving to draw closer to Allah (Al-Jauziyah, 2003).

The concept of authentic happiness developed by (Lenzenweger, 2004; Seligman, 2011) is also consistent with the principles of happiness in Islam (Masruroh & Millah, 2021). Factors such as positive relationships with others, involvement in meaningful activities, as well as optimism and resilience are key to achieving sustainable happiness. In Islam, true happiness is achieved through a balance between one's relationship with Allah (hablum minallah), one's relationship with fellow human beings (hablum minannas), and one's relationship with oneself (Lenzenweger, 2004; Sofia & Sari, 2018). Therefore, intelligence exercises can be an effective means of helping individuals achieve authentic happiness through a holistic approach that encompasses physical, psychological, and spiritual aspects.

Based on the above discussion, this study aims to explore the effectiveness of intelligence exercises as an auxiliary tool in the counseling process to enhance authentic happiness in clients and reduce their dependence on counselors. This research is expected to contribute to the development of more holistic Islam-based therapy in addressing mental health issues.

Method

This study used a one-group pretest and posttest experimental design (Sugiyono, 2014). This research design aims to measure the differences before and after the treatment or intervention. The following is an illustration of the research design:

Group	Pre-test	Treatment	Post-test
Experiment	O1	X	O2

Explanation:

O1 = Initial measurement using the Authentic Happiness scale before treatment

X = Treatment in the form of intelligence exercises

O2 = Final measurement using the Authentic Happiness scale after treatment

Research Subjects

The subjects in this study consisted of seven students who had undergone counseling and had a history of counseling assessment. The subjects were selected using purposive sampling from a population of 35 students who had undergone counseling and felt unhappy. The selection criteria for subjects were as follows: Willing to follow the intervention procedures provided during the study.

Demographic Data Table Subject

No	Initials	Indicators of Unhappiness (Physical & Emotional)
1.	AL	Confused expression, stiff body, not cheerful; experiencing anxiety, difficulty controlling oneself, and feeling unmotivated.
2.	AK	Flat expression, not smiling, seems withdrawn; lacks enthusiasm and feels anxious when participating in campus activities.
3.	AZ	Physically lethargic and unmotivated, stiff facial expression; experiences overthinking, rarely smiles, and is bothered by physical issues (stomach ulcers).
4.	DA	Appears unenthusiastic and expressionless; feels unmotivated and lacks energy in following academic routines.
5.	AD	Calm but slightly stiff body posture, experiencing physical discomfort (back pain); feels mentally uneasy and emotionally uncomfortable.
6.	ZA	Stiff movements, nervous and unconfident facial expression; shows low energy levels and lacks motivation to participate in campus social activities.
7.	IL	Limited self-confidence (due to karate background), but showing physical tension; has physical injuries that limit movement and affect mood.

Data Collection Methods

The data collected in this study consists of primary and secondary data:

1. Primary Data

Primary data was collected using the Authentic Happiness Scale adapted from (R. Sherlywati, 2015). This scale aims to measure the level of authentic happiness of individuals before and after treatment (in this case: intelligence exercise intervention).

a. Measurement Tool Reliability
   Based on the results of validity and reliability tests in (A. Sherlywati, 2015; R. Sherlywati, 2015) study, the reliability value (Cronbach's Alpha) of this scale is 0.881, indicating that this measurement tool has high internal consistency and is reliable.

b. Dimensions and Indicators in the Authentic Happiness Scale
   This scale consists of three main dimensions of authentic happiness based on Seligman's theory, namely:

   1) Pleasant Life : Enjoying positive daily experiences, Easily feeling happy in social situations, Having leisure time and enjoying life
   2) Engaged Life : Being fully involved in the activities being done, Feeling that time flies when doing something you enjoy, Being focused and enthusiastic about daily tasks
   3) Meaningful Life : Feeling that your life has a purpose, Contributing to the lives of others or the community, Feeling a strong spiritual connection or personal values

There are a total of 24 statements on this scale, using a Likert scale of 1–5 (Strongly Disagree to Strongly Agree).

2. Secondary Data

Secondary data was collected through:

a. Direct observation of changes in subjects' expressions, behavior, and participation during the intervention.
b. In-depth interviews to explore subjects' perceptions of their emotional experiences, psychological barriers, and responses to the intervention.

Result

Research Results with Nonparametric Test (Wilcoxon Signed-Rank Test)

Based on data analysis using the Wilcoxon Signed-Rank Test, the results show a significant change between the pretest and posttest scores in the subjects' authentic happiness levels.

Wilcoxon Signed-Rank Test Calculation Results: Pretest: The average happiness score of the subjects before the treatment was 324.8571. Posttest: The average happiness score of the subjects after the treatment was 338.7143.

Based on the Wilcoxon Signed-Rank Test, the results obtained are as follows: p-value = 0.014 (less than 0.05), indicating that the difference between the pretest and posttest is significant. Test statistic (Z) = -1.241. Effect Size calculation (r):

The effect size can be calculated using the formula:

$$r=Z/\sqrt{N}$$

Dengan:

Z = -1.241

N = total number of data pairs (e.g. 7 subjects) → $\sqrt{7}\approx 2.65$

r = -1.241 / 2.65

= -0.47

Interpretation:

Value r = 0.47

Based on Cohen's criteria:

0.1 = small

0.3 = moderate

0.5 = large

An effect size of 0.47 indicates that the intervention has a moderate to large effect on increasing authentic happiness.

Interpretation of Results:

Based on the results of the Wilcoxon test conducted to test the effectiveness of the intervention on increasing authentic happiness:

The p-value of 0.014 indicates that there is a statistically significant difference between the authentic happiness scores before and after the intelligence exercise intervention. This means that the intervention had a real effect on the psychological condition of the subjects. The statistical value Z = -1.241 indicates an increase in authentic happiness scores after the intervention, although the Z value is not extremely high, it is confirmed by the significant p-value. The effect size (r = 0.47) indicates that the intervention had a moderate to large effect in increasing the subjects' authentic happiness. This suggests that the changes observed are not only statistically significant but also have practical significance in the context of students' psychological well-being.

The following are the results of observations and interviews in table form:

No.	Subject	Pre-Exercise Observation	Pre-Exercise Interview	Post-Exercise Observation	Post-Exercise Interview
1.	AL	Confused, stiff, not cheerful.	Feeling anxious, difficulty controlling oneself, not enthusiastic.	More fluid and confident in exercise movements.	More diligent, especially in washing clothes, feeling more productive.
2.	AK	Looks ordinary, unfriendly, doesn't smile	Less enthusiastic, anxious about activities.	More energetic, enthusiastic, and friendly.	Becomes more sincere, more relaxed in carrying out activities.
3.	AZ	Lethargic, unmotivated, stiff movements.	Overthinking, lethargic, rarely smiles, health issues (stomach ulcers).	Begins to show enthusiasm, smoother movements.	Feels fresher, better mood, more energetic.
4.	DA	Appears ordinary, not very enthusiastic.	Less energetic, unmotivated.	Enthusiastic, quick movements, diligent.	Feels fresher, more energetic, enthusiastic about activities.
5.	AD	Calm, slightly stiff, back pain.	Uneasy, body discomfort, especially in the back.	More cheerful, more flexible movements.	Feeling calmer, fresher body, more cheerful.
6.	ZA	Nervous, stiff movements, lacking confidence.	Not very energetic, unmotivated.	More controlled movements, healthier body.	Feeling more energetic, less easily tired, more emotionally stable.
7.	IL	Confident due to karate background, slightly stiff.	Shoulder injury, limited in movement.	Movements smoother, more confident.	Shoulder injury reduced, body feels refreshed, less easily tired.

The table above shows positive changes in all subjects after participating in intelligence exercises. The majority of subjects reported improvements in happiness, enthusiasm, physical fitness, and psychological well-being after the intelligence exercise intervention.

Discussion

This study aims to determine the effect of intelligence exercises on the level of authentic happiness of subjects who have undergone counseling. The results of the nonparametric test using the Wilcoxon signed-rank test show a significant difference between the pretest and posttest scores, indicating that intelligence exercises can increase the subjects' happiness. Additionally, observation and interview results revealed that after participating in intelligence exercises, most subjects felt more refreshed, more energetic, and more cheerful in their daily activities. This suggests that intelligence exercises not only have a positive impact on emotional happiness but also on physical and mental well-being. The reduction in stress levels and increase in feelings of happiness experienced by the subjects reflect the process of change involved in physical therapy through structured exercise movements (Chida & Hamer, 2008; Fukuda, 2002).

Intelligence exercises as an intervention have significant benefits for an individual's psychological well-being (Ceci & Kumar, 2016). Based on observations and interviews, many subjects experienced an improvement in mood, transitioning from initially feeling sluggish and unmotivated to feeling fresher and more cheerful. This aligns with the theory that physical activity can stimulate the release of endorphins, hormones that enhance feelings of happiness and reduce stress (Lenzenweger, 2004; Veale, 1987). Endorphins function as natural stress relievers, enabling individuals to feel happier and healthier (R. Sherlywati, 2015). Physical activities such as intelligence exercises influence neurotransmitters in the brain that can improve mood and alleviate anxiety (Hanson & Mendius, 2011; McEwen, 2007)

In addition, intelligence exercises involve movements that can improve blood circulation, increase oxygen supply to the brain, and enhance mental alertness (Santoso & Ismail, 2019). Movements such as stretching and breathing exercises have a direct effect on the central nervous system, which can improve concentration and mental calmness (Lenzenweger, 2004; Warburton, 2006).

It is important to note that brain fitness exercises serve not only as a form of physical exercise but also as a means to improve social relationships among participants. More positive social interactions after participating in brain fitness exercises can increase feelings of happiness and reduce feelings of loneliness (Kagan, 2009; Uchino, 2006). Thus, cognitive exercise plays a role in improving interpersonal relationships, which impacts overall feelings of happiness (Fukuda, 2002; Thoits, 2011).

From an Islamic perspective, maintaining physical and mental health is an integral part of life (Busroli, 2019). Allah SWT states in Surah Al-Baqarah [2:286]: "Allah does not burden a person beyond their capacity." This indicates that every individual has the capacity to achieve balance in life, which includes physical and mental well-being. Physical activities such as exercise, which keep the body fit, align with Islamic teachings on the importance of maintaining the health of both the body and the soul.

In Islam, a healthy body is highly valued as a gift from Allah that must be preserved. The Prophet Muhammad SAW said, "A sound mind resides in a sound body." (HR. Al-Hakim). This hadith shows that physical health is crucial for achieving mental and spiritual well-being. Therefore, intelligence exercises that combine physical activity with breathing techniques can help individuals achieve balance within themselves, ultimately enhancing authentic happiness.

Even from an Islamic perspective, intelligence exercises that teach self-control and self-understanding are in line with the concept of mujahadah in Islam, which is the effort to control desires and emotions in order to live a more balanced life. This self-control is not only beneficial for physical health, but also for achieving deeper mental happiness (Ghazali, 2011).

Functions of Intelligence Gymnastics Movements Based on Biopsychology

The movements in intelligence gymnastics have a positive impact on the brain and body, which is reflected in the improvement of the subject's mood and happiness. The following are some of the main functions of intelligence gymnastics movements based on biopsychology:

1. Muscle Stretching and Relaxation: Stretching movements performed in intelligence exercises can stimulate blood flow to muscles and organs, reduce physical tension, and increase muscle elasticity. This is important in relieving physical stress that can affect a person's mental state (McEwen, 2007; Secker J, 1999). Muscle relaxation can also calm the nervous system and lower stress hormone levels, such as cortisol.
2. Breathing Exercises: Breathing movements coordinated with body movements can activate the parasympathetic nervous system in the body, which functions to calm the body and lower the heart rate. According to (McEwen, 2007), deep breathing can stimulate the release of endorphins and reduce anxiety, which in turn increases feelings of happiness and calm.
3. Increased Mental and Physical Engagement: Brain gym involves high concentration on body movements and breathing, which increases full engagement in the activity. Research in biopsychology shows that engagement in physical activity can increase the production of neurotransmitters such as dopamine and serotonin, which play a role in increasing motivation and positive feelings (Veale, 1987; Warburton, 2006).

Stimulation of the Brain's Nervous System: Physical activity integrated with body movements and breathing control also serves to improve cognitive function (Chida & Hamer, 2008). Structured movements help train the brain to focus better and increase alertness. This is evidenced by increased happiness and engagement of subjects in activities after participating in intelligence exercises (Chida & Hamer, 2008; Terry, 2008).

Limitations of this study include: Limited Number of Subjects: This study involved only a small number of subjects, so the results cannot yet be generalized to the broader student population. Pre-experimental Design: The use of a one-group pretest-posttest design without a control group limits the ability to conclude that the changes observed were solely due to the intervention. Short Intervention Duration: The intervention was conducted over a relatively short period, making it impossible to measure the long-term impact of intelligence exercises on authentic happiness. Confounding Variables: Other factors such as academic workload, social relationships, and daily physical condition of the subjects could not be strictly controlled.

This study has implications in various areas, including: Campus Program Development: The results of this study open opportunities for campuses to integrate intelligence exercises or similar interventions into student mental health promotion programs. Improved Preventive Strategies: Simple interventions such as intelligence exercises can be used as preventive strategies to reduce stress and strengthen psychological well-being in higher education settings. The Importance of a Holistic Approach: These results reinforce the bio-psycho-social approach in addressing mental health issues, emphasizing the

importance of interventions based on physical activity, emotions, and self-awareness. Foundation for Further Research: This study can serve as a basis for further research with stronger experimental designs, larger sample sizes, and longer intervention periods.

Conclusions

From the results of this study, it can be concluded that intelligence exercises have a positive impact on the authentic happiness of subjects, both physically and psychologically. The results of observations and interviews revealed that subjects felt fresher, more energetic, and happier after participating in intelligence exercises. From an Islamic perspective, maintaining physical and mental health is part of the effort to achieve holistic well-being. Intelligence exercises, as an activity that unites the body and mind, align with Islamic principles regarding life balance and the attainment of true happiness. The movements in intelligence exercises provide significant benefits for the body and brain, such as improved blood flow, reduced tension, and enhanced mental alertness, which ultimately contribute to authentic happiness.

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