

Evaluation of inputs, processes and products of implementing the student excellent character program in national secondary schools

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ABSTRACT

The Ministry of Education Malaysia has implemented various programs to strengthen students' character development nationwide, including the student excellent character Sahsiah Unggul Murid (SUMUR) program. This study aims to identify the levels of student input, process and product in the implementation of the SUMUR program. Guided by the context, input, process, product (CIPP) model, this quantitative survey employed questionnaire as the main instrument and involved 562 Form 4 students from secondary schools in Peninsular Malaysia, selected through stratified random sampling. Data were analyzed using descriptive statistics to assess students' perceptions of the program. The results indicate high level of SUMUR program implementation, with mean values of 3.90 for the input component, 4.01 for the process component and 4.22 for the product component. Overall, the findings suggest that the input, process and product components of the program positively influence students' personality development, particularly in enhancing discipline and the practice of noble values. The study has important implications for the development of the 2027 school curriculum, particularly in reinforcing the concept of *karamah insaniah* (human dignity), which emphasizes manners, morals and integrity in character formation. These findings provide empirical evidence to support policymakers and school administrators in strengthening effective character development programs.

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1. INTRODUCTION

Character refers to the integrated qualities of one's behavior and forms one's identity. The character concept is pivotal in creating a balanced individual character, which involves not only intellectual aspects but also emotional, social and moral development. Personality is a unique characteristic that distinguishes one individual from another [1]. Therefore, to produce students with personality, a continuous process of personality development is necessary. School culture and climate are closely related to influencing students' character development. In addition to the academic curriculum, personality development can also be implemented through hidden curriculum such as creating a good school culture and environment [2].

In the challenging era of globalization, issues of social behavior among students are increasingly acute, influenced by the development of technology and borderless media. Negative influences from social media, technology addiction and foreign culture are increasingly shaping behavior opposite of the expected

values. This study evaluates the Sahsiah Unggul Murid (SUMUR) program as a strategic initiative of the Ministry of Education Malaysia to address this challenge by integrating a holistic approach that encompasses spiritual, ethical and moral values. Using the context, input, process, product (CIPP) model, this study evaluates the practical effectiveness of SUMUR, covering input, process and product dimensions, as an innovative measure to ensure sustainable personality development.

In Malaysia, acculturation has been continuously practiced in the Malaysian education blueprint 2013-2025, which sets out elements to meet students' aspirations. The fifth aspiration, ethics and spirituality, emphasizes aspects of spirituality, ethics and civic responsibility. In the national education philosophy, the efforts of the Ministry of Education Malaysia are not only focused on intellectual, emotional and physical skills but also focused on value development, character and unity. A balanced intellectual and personal development must be ensured to form holistic individuals who are capable of facing increasingly complex social and cultural challenges. To achieve these noble aspirations, the focus on developing students' values, character and unity, which was previously only directed at co-curricular activities, has begun to be expanded comprehensively by also giving priority to strengthening existing character development programs inside and outside the classroom, as well as preparing long-term strategic plans for the development of values, character and unity.

Since character formation is an ongoing process, in 2017, the Ministry of Education Malaysia took the initiative to expand the SUMUR program implementation in national secondary schools (SMK) after finding that the SUMUR module met the student development index (IKM) in the spiritual dimension. The implementation of the SUMUR program is based on four main cores, namely identity, personal appearance, politeness and religious lifestyle. However, despite various initiatives and efforts that have been planned to foster noble values and character among students, challenges are increasing due to negative influences from the local environment and borderless social media. It is undeniable that every year, social issues and cases among students show a significant increase and are at a worrying level [3]. In this regard, the implementation of the SUMUR program has been made as one of the alternatives to address the aggravating social problems among secondary school students.

Studies on personality development programs are not new in the academic and research context. Globally, this topic is often a subject of discussion, especially in the field of education. Referring to a study by Kozina *et al.* [4], character change occurs through students' awareness of academic achievement. It is crucial to link academic learning with personality development because both influence each other in achieving overall excellence. The change refers to a positive awareness of working hard. In his study, it was found that the relationship between character and confidence had a significant impact on mathematics achievement. In this regard, emphasis on characters should be incorporated into curriculum learning, extra-curricular activities and a conducive environment, whether at home or school [5]. Meanwhile, a study by Lippolis *et al.* [6] states that emotional intelligence involves attention control, which is how an individual's emotions respond, focus and analyze information to support cognitive function in dealing with complex situations. The study also found significant differences between students who followed the music curriculum and students who followed the standard curriculum in terms of self-control.

In addition, students who obtain excellent scores are considered to have achieved superior cognitive abilities. Due to this excellence, they are made into role models because of their qualities and values [7]. However, cognitive ability is not measured solely through academic excellence. Individual ability is also assessed through specific treatment and remedial programs as stated by Debenham *et al.* [8] and McKay *et al.* [9]. Although the effects may only be seen in the long term, individual capabilities are still considered as an effort to reflect existing experiences [10], [11]. In addition, the internalization of religion also plays a role in shaping moral character. In Islam, behavioral conduct is closely related to the approach of Prophet Muhammad SAW, who imparted Islamic values through practice and exemplary conduct. In schools, this pattern of behavior is demonstrated through the personality of the *ustaz* (teacher), who provides direct examples to students [12]. Islamic education plays an important role in the formation of personality and noble character. It guides individuals to have faith in Allah SWT, to obey religious commandments, to perform acts of worship and to avoid religious prohibitions. Increased piety and the appreciation of noble morals can shape positive behavior in daily life [13]. Therefore, spiritual elements also play an important role in personal development. In reality, character development is closely related to the behavioral, emotional, cognitive and social change of an individual.

Although character development has been widely researched both globally and locally, it remains essential for such studies to be pursued continuously. The issue in this study is the evaluation of personality development programs and the relationship of surrounding environmental factors that have not been comprehensively studied. The implementation of program evaluation is very important, especially for policymakers to identify the effectiveness of a program. In addition, this study offers a new perspective and differs from previous studies in that student participation in character development programs at school is an alternative to fill the existing gap. In this regard, the SUMUR program can provide additional input toward

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character building indirectly. This study also unravels that the process of personality development not only involves academic improvement but also includes treatment and rehabilitation programs related to psychology such as behavioral, emotional, cognitive and social control of the individual.

Various articles related to personality development and character education have been published in indexed and reputable journals [1]–[13]. For example, many studies evaluate student personality development, but no study has examined the effectiveness of implementing student personality evaluation programs in secondary schools. In this context, the main research question is: how the implementation of the SUMUR program influences the personality development of students in secondary schools? The main objective of this study is to identify the needs of an institution, the strengths and weaknesses of the SUMUR program and to propose improvements to enhance its effectiveness.

The novelty of this study lies in the use of the CIPP evaluation model to assess the effectiveness of the SUMUR program holistically and comprehensively. Unlike previous studies that only focused on the outcomes or impact of the program generally, this study evaluates the implementation of SUMUR in terms of input used, implementation process and resulting product. In addition, this study also discusses the role of SUMUR in forming the four main cores of character, namely self-identity, personal appearance, politeness and religious lifestyle. This approach offers a new perspective in assessing character development programs in Malaysia and can serve as a basis for policymakers to improve character education programs more effectively and with high impact. Based on the flexibility of the CIPP evaluation model, the researcher does not consider the context component. This is because the Ministry of Education Malaysia has set the goals and objectives of the SUMUR program, given that the Ministry acts as a stakeholder in the program. This aligns with the purpose of the context component, where such evaluation is more appropriate at the early stage of program design. Therefore, this study aims to evaluate the implementation of the SUMUR pilot program in SMK among students in Peninsular Malaysia by adapting the CIPP evaluation model from the aspects of input, process and product [14].

2. METHOD

2.1. Research design

This study used a quantitative research design to explore and analyze student input, process and product by adapting the CIPP assessment model. This study was in the form of a survey using a questionnaire as the main instrument. Input evaluation is the process of describing, collecting and providing useful information to decision-makers in implementing improvements. Process evaluation refers to the implementation of the SUMUR program at the school level, including the management of activities and student involvement in the planned program. Meanwhile, product evaluation involves measuring the expected results of the program. The aspects evaluated are detailed in Table 1.

Table 1. Research Indicators

No	Component	Indicator	Sub-indicator
1	Input	Resources	Information dissemination Facilities Activity content Support Behavior
2	Process	Implementation	Cognitive Emotional Interpersonal skills Activity management Teacher guidance
3	Product	Effectiveness	Core of politeness Core of self-appearance Core of identity Core of religious way of life

2.2. Participations and procedure

The population in this study consists of students in the SUMUR pilot school from the SMK. The location of the study population only involved Peninsular Malaysia and did not include the states of Sabah, Sarawak and the Federal Territory of Labuan. The discussion of the geographical limitation is crucial, as it provides an insight into the limitations of generalizing the study findings. Sampling was carried out through stratified random sampling according to the states in Peninsular Malaysia. The respondents involved 562 Form 4 secondary school students, consisting of 161 male students (28.6%) and 401 female students (71.4%).

A stratified random sampling method was used to ensure fair representation according to state zones in Peninsular Malaysia. Before the study was conducted, the questionnaire instrument was reviewed by educational experts to ensure content validity and the reliability values were recorded at a high level. In addition, it is important to state whether a pilot test or pilot study was conducted to ensure the questionnaire was relevant to the local context. Based on religion, 519 students (92.2%) were Muslim, 21 students (3.7%) were Buddhist, 15 students (2.7%) were Hindu and 7 students (1.2%) were Christian.

2.3. Instrument

The researcher adapted the previous researcher's questionnaire with minor modifications. In this study, a five-point Likert scale was used to evaluate input, product, and process components. For the input and product components, the scales consist of: (i) strongly disagree, (ii) disagree, (iii) less agree, (iv) agree, (v) strongly agree. Meanwhile, for the process component, the scale categories are: (i) never, (ii) rarely, (iii) occasionally, (iv) often, and (v) always.

To establish the validity of the research instrument, the researcher conducted three types of instrument validation: face validity, content validity and construct validity. The questionnaire was reviewed by nine expert reviewers, comprising professionals in the fields of Islamic education, program evaluation, SUMUR program desk officers and certified Malay language experts (*Munsyi Bahasa*). To determine the content validity of the instrument, the researcher calculated the item-content validity index (I-CVI) for each item. The overall I-CVI score was 0.96, which exceeds the acceptable threshold of ≥ 0.83 . As for construct validity, the findings from the Kaiser-Meyer-Olkin (KMO) and Sphericity Bartlett test index indicated that all constructs met the minimum criteria, as shown in Table 2.

Table 2. Results of the Kaiser-Meyer-Olkin and sphericity Bartlett test

Construct	Kaiser-Meyer-Olkin	Bartlett's test of sphericity
Input	0.831	<0.001
Process	0.927	0.000
Product	0.872	0.000

The reliability of the questionnaire was analyzed using Cronbach's alpha coefficient. As shown in Table 3, the Cronbach's alpha values for the input, process and product dimensions all exceeded the minimum acceptable value of 0.70. Therefore, all variables demonstrated reliable internal consistency.

Table 3. Reliability test: Cronbach's alpha analysis and overall variable values

Variable	Cronbach's alpha	Number of items
Input	0.870	17
Process	0.951	30
Product	0.905	25
Overall	0.960	72

2.4. Data collection and data analysis

The researcher distributed a set of questionnaires to 12 pilot SMK. After all the questionnaires were collected, the analysis process was carried out using the statistical package for the social sciences (SPSS) software version 27.0. Descriptive data analysis was used to obtain frequencies, percentages, mean scores and standard deviations.

3. RESULTS AND DISCUSSION

3.1. CIPP evaluation model for SUMUR program

This evaluation model is decision-management-oriented and is a comprehensive and popular framework, extensively used worldwide, especially in educational institutions [15]. The CIPP evaluation model provides a robust framework for measuring program effectiveness through four key components: context, input, process and product. Emphasis is placed on the input, process and product dimensions to understand the direct relationship between these elements and the outcomes of student character development. Context evaluation aims to determine, identify and address the needs of the target population, identify problems and assess whether the goals formulated have the potential to meet the desired needs. Input evaluation provides information and determines the use of resources to achieve program goals. Process evaluation focuses on the program implementation, while product evaluation involves measuring the

expected results of the program. In this study, the researcher only focused on the input, process, and product dimensions. This focus allowed the researcher to deeply assess the effectiveness of the program through these components, without having to get caught up in the broader contextual analysis.

3.1.1. Input evaluation of the SUMUR program in secondary schools

Table 4 shows a summary of the mean scores and standard deviations for the input components of the SUMUR program implementation among students, which were at a moderately high level (mean=3.90, sd=0.532). The construct with the highest mean score was support (mean=4.09, sd=0.643), followed by content of program activity (mean=4.07, sd=0.604), information dissemination (mean=3.79, sd=0.652), and facilities (mean=3.70, sd=0.708). Based on the findings of the student input questionnaire, the support construct obtained the highest score, which shows the pivotal role of teachers in motivating and encouraging students with 92.3% of students (mean=4.33, sd=0.689) stating that teachers are very helpful in encouraging them to always practice admirable character. This shows that teachers are the main catalyst in the formation of students' character. A total of 86.8% of students (mean=4.19, sd=0.789) stated that teachers praise students who show commendable character. This positive praise and recognition fortify the reinforcement theory, which states that behavior that is appreciated is more likely to be repeated. In addition, 77.5% of students (mean=3.97, sd=0.900) reported that their parents encouraged them to participate in the SUMUR program, while 73.3% of students (mean=3.89, sd=0.959) stated that their teachers also held special awards as recognition.

Table 4. Input components

No	Input	Mean	Standard deviation
1	Information dissemination	3.79	.652
2	Facilities	3.70	.708
3	Activity content	4.07	.604
4	Support	4.09	.643
	Overall	3.90	.532

This finding supports reinforcement theory, which states that behavior can be controlled through positive reinforcement such as praise and rewards, which increase the likelihood that the same behavior will be repeated [16]. In another study related to the level of teacher and parental involvement, it was found that parents' approaches to specific education and their methods of involvement vary according to social class, resources, and school culture. However, the relationship between parent associations and school administration is generally governed by the specific school's social and cultural history [17]. This indicates that the role of schools and parental approaches to specific programs and modes of involvement vary according to social class, culture, and the historical context of the school [18].

Meanwhile, the information dissemination construct includes direct and indirect announcements of teachers to students, whether verbally, setting schedules, preparing SUMUR modules, and using social media platforms. This clear and comprehensive announcement is important to ensure that students get an accurate picture of the program objectives and goals. This study found that the majority of students (88.2%, mean=4.24, sd=0.794) agreed that the information dissemination about the SUMUR program implementation involved four core elements, namely politeness, personal appearance, identity and religious lifestyle, which were informed by the teacher. It is important to ensure that all information is conveyed efficiently to ensure the effectiveness of the program implementation. In principle, the content construct of the SUMUR program activities is designed to meet the program's goals and objectives. Students' understanding of the activities' content is crucial to ensure that the program has a positive impact on their characters. However, it is vital to delve further into how this understanding can be measured and improved through more effective activities.

The facility construct shows a need for improvement. A total of 68% of students (mean=3.77, sd=0.851) reported that they were calm during the activities. Although most students felt comfortable with the existing facilities, the main challenge for teachers is to ensure a conducive physical learning environment, given that the old and overcrowded school infrastructure is often an issue [19]. The provision of quality infrastructural facilities is vital to ensure that program inputs are at an optimal level.

In addition, the effectiveness of the program also depends on the extent to which technology is used in student learning. This finding indicates that the use of technology needs to be improved to ensure students have a better and more engaging learning experience. Throughout the program, students were exposed to a variety of technologies. This finding is consistent with technology acceptance theory [20], which states that the usefulness and ease of use of technology influence behavioral tendencies to use it.

3.1.2. Process evaluation of the SUMUR program in secondary schools

Table 5 shows the summary of mean scores and standard deviations for the process components of the SUMUR Program implementation. The findings showed that the level of student achievement was at a high level (mean=4.01, sd=0.594). The construct that recorded the highest mean score was teacher guidance (mean=4.10, sd=0.671), followed by cognitive (mean=4.08, sd=0.698), activity management (mean=4.05, sd=0.726), interpersonal skills (mean=4.00, sd=0.689), behavior (mean=3.98, sd=0.723), and emotion (mean=3.79, sd=0.780).

Based on the findings of the student process questionnaire, the teacher guidance construct is at a high level, showing the crucial role of teachers in guiding students not only academically but also in the formation of their characters. Apart from ensuring that the curriculum is fully implemented within the stipulated period, teachers are also responsible for guiding students with noble values. Teachers need to practice teaching values and ethics to develop soft skills and noble values in students. For example, through the implementation of a character development program. The effectiveness of this guidance depends on how the teacher integrates character values into each learning activity. The role of teachers as guides and motivators has a significant impact on the process of forming students' character. However, the formation of students' character is not limited to ethics and moral education alone but rather crosses various subject areas indirectly [21]. This is because learning activities, methods, and resources influence student behavior through the integration of knowledge [22].

The construct of emotional management also shows that each student has a different personality, which requires a tailored approach by the teacher. The teacher's role is to create a conducive learning environment that values the uniqueness of each student [5]. The implementation of character programs in schools aims to foster self-reflection on individual life skills [12]. This character-building is not only focused on mainstream students but also involves students at risk. For example, Debenham *et al.* [8] emphasized the importance of emotion management in reducing alcohol consumption and increasing knowledge about the dangers of cannabis use. A study by McKay *et al.* [9] also showed the effectiveness of the Alfi virtual reality (VR) method on adolescents with attention deficit hyperactivity disorder (ADHD) in improving focus ability through emotional management. In this regard, although adolescent thinking is exposed to risks and emotional disturbances, it is also receptive to positive influence through role models, dynamic classroom strategies, whole-school innovations and the learning environment both at home and in school [23], [24].

Cognitive constructs refer to students' ability to use ideas and experiences to deal with complex situations and master challenging skills. For example, students can apply the knowledge they learned, demonstrate creativity, achieve good results, complete assignments, collaborate, and take responsibility for the topic or module being taught. In other words, cognition plays a central role in individual functioning: from managing daily life to more structured learning processes. In the learning process, most cognitive activities are carried out consciously and voluntarily, such as paying attention and focusing. This ability to pay attention is also influenced by individual interest, level of motivation and self-control capacity. Therefore, an individual's ability is also assessed through specific treatment and rehabilitation programs. Although the effects may only be evident over the long term, an individual's abilities and capabilities are still regarded as efforts to reflect on existing experiences [8]–[12].

Social constructs refer to the foundation of students' social skills that begin through interactions, whether at home or school. These interactions are expected to meet the behavioral norms of the local culture and society [4], [25]. In addition, social engagement in extracurricular activities involving collaboration between students from diverse backgrounds also plays an important role in strengthening their social skills. For example, the attitudes of earnestness, thoroughness, responsibility, patriotism and tolerance [20]–[22]. To change unhealthy behaviors, the environment plays a crucial role in promoting healthy lifestyles [25]. Personality programs can combine mental health and social well-being strategies. Raga *et al.* [26] found that the effectiveness of meditation programs in schools had a positive impact on interpersonal relationships. This suggests that the character program can strengthen social relationships between students, teachers and the school community as a whole. In addition, the development of positive relationships between teachers, students and all school staff can be optimized through guidance and counseling [27].

Table 5. Process components

No	Process	Mean	Standard deviation
1	Behavior	3.98	.723
2	Cognitive	4.08	.698
3	Emotional	3.79	.780
4	Interpersonal skills	4.00	.689
5	Activity management	4.05	.726
6	Teacher guidance	4.10	.671
	Overall	4.01	.594

3.1.3. Product evaluation of the SUMUR program in secondary schools

Table 6 shows the summary of the product components' mean score and standard deviation for the SUMUR program implementation among students was at a high level (mean=4.22, sd=0.489). This finding indicated that students on the whole recorded satisfactory achievement in their character formation through this program. The aspect with the highest mean score was the religious lifestyle core (mean=4.47, sd=0.508), followed by the politeness core (mean = 4.22, sd = .536), the self-appearance core (mean=4.16, sd=0.587) and the identity core (mean=4.11, sd=0.653).

Based on the findings of the student product questionnaire, the item construct of the religious lifestyle core that obtained the highest score was "I believe in the existence of God" (mean=4.73, sd=0.560). This finding clearly shows that the religiosity aspect among students is very high. This finding reinforces the principle contained in the *Rukun Negara* (Malaysian Declaration of National Philosophy), namely belief in God. In addition, the high acceptance of students on the item "I respect the beliefs of other religions" (mean=4.53, sd=0.701) reflects Malaysia's context as a multi-racial and multi-religious society. This demonstrates the program's success in fostering unity and tolerance among students from various religious backgrounds. This aspiration is in line with the National Education Philosophy, which states that "Education in Malaysia is a continuous effort towards developing individual potential in a comprehensive and integrated manner to produce individuals who are balanced and harmonious intellectually, spiritually, emotionally, and physically based on faith and obedience to God." Through a review of previous studies in the cultural context, it was found that emotional and spiritual intelligence have direct, positive and significant effects on school culture as well as direct, positive and significant effects on the strengthening of students' character [28]. This means that the higher the implementation of emotional and spiritual intelligence and work culture, the stronger the reinforcement of students' character.

Furthermore, according to the implementation of the secondary school standard curriculum at the secondary school level in the Islamic education context, the exposure to moral education is not only concentrated in one part of the Islamic education subject, namely Islamic morality but is also applied in an integrated manner in the teaching of other fields in Islamic education and is also applied to other subjects and co-curricular activities in schools [29]. This study shows that the SUMUR program successfully integrates moral values into various areas of the curriculum as well as co-curricular activities, which enhances the understanding and application of moral values in students' daily lives. The implementation of the SUMUR program is categorized as an extra-curricular activity carried out outside of classroom hours.

Therefore, this product evaluation would determine the program improvement decision whether to continue, stop, modify, or change program activities which produce a clear record of expected and unexpected effects, positive and negative effects, as well as compare the interpretation of needs with goals, and interpret the results. These results will provide clear guidance for future modifications and continuous improvements in program implementation. To function effectively, any system requires some form of validation process. Evaluation can be seen as a strategic roadmap, providing important guidance and direction to decision-makers. Without such controls, even the most carefully crafted program cannot guarantee that it is in line with the goals and objectives set. It is pivotal to establish a continuous review mechanism that can effectively monitor program implementation. Therefore, this review is essential in ensuring the success of program implementation and execution [30]. On the whole, the SUMUR module, which includes the politeness core, the appearance core, the identity core and the religious way of life core, succeeded in achieving the expected objectives and goals.

Table 6. Product components

No	Product	Mean	Standard deviation
1	Core of politeness	4.22	.536
2	Core of self-appearance	4.16	.587
3	Core of identity	4.11	.653
4	Core of religious way of life	4.47	.508
	Overall	4.22	.489

The findings of this study have several practical implications for the development of the 2027 school curriculum, in which the concept of *karamah insaniah* (human dignity) emphasizes the formation of manners, morals and integrity in shaping students' character. Therefore, this study provides a framework and reference for policymakers to ensure the continuity of the existing Malaysian Education Development Plan 2013-2025 (PPPM 2013-2025) in achieving student aspirations. This study also highlights the importance of effective character education in supporting the development of students' personal values.

4. CONCLUSION

In conclusion, the findings of this study demonstrate that the SUMUR program has a positive impact on the development of students' character through changes in behavior, emotional, cognitive and social aspects. Environmental factors such as teacher support and parental cooperation are key elements in the effectiveness of this program. Furthermore, the implementation of well-structured activities can influence student outcomes. In line with the increasingly challenging global environment, there is a need to implement holistic programs and continuous improvement to ensure the program remains relevant. However, there are several limitations in this study. The study focused on the perceptions of national secondary school students regarding the implementation of the SUMUR program, which was limited to only one education level. The sample limitation, involving only Form 4 students from secondary schools in Peninsular Malaysia, may not reflect the views of students from rural areas or private schools. Therefore, the researcher recommends that further studies be conducted on the population of primary school students. Selecting primary schools as the study population is appropriate because character education should begin at the early stages of child development, where children are more receptive to the formation of values and character.

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C : **C**onceptualization

M : **M**ethodology

So : **S**oftware

Va : **V**alidation

Fo : **F**ormal analysis

I : **I**nterpretation

R : **R**esources

D : **D**ata Curation

O : **O**riginal Draft

E : **E**xperimentation

Vi : **V**isualization

Su : **S**upervision

P : **P**roject administration

Fu : **F**unding acquisition

CONFLICT OF INTEREST STATEMENT

Authors state no conflict of interest.

INFORMED CONSENT

The authors confirm that informed consent was obtained from all individuals included in this study.

DATA AVAILABILITY

The data that support the findings of this study are available from the corresponding author, [MIH], upon reasonable request.

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