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Perceptions of evidence-based practice among Vietnamese psychology students



 My-Tien Nguyen-Thi¹
 Vu Hoang Anh Nguyen²
 Huyen-Trang Luu-Thi³
 Vinh-Long Tran-Chi⁺⁺ Vietnam HIV Addiction Technology Transfer Center, University of Medicine and Pharmacy at Ho Chi Minh City, Ho Chi Minh City, Vietnam.
Email: <u>nguyenthimytien1191@gmail.com</u>
Department of Psychosomatic Medicine, Thu Duc City Hospital, Thu Duc City, Ho Chi Minh City, Vietnam.
Email: <u>hoanganhvu.psy@gmail.com</u>
Department of Psychology, Asia University, Taichung, Taiwan.
Email: <u>luutrang.247@gmail.com</u>
Faculty of Psychology, Ho Chi Minh City University of Education, Ho Chi Minh City, Vietnam.
Scientific Management Department, Dong A University, Da Nang City, Vietnam.
Email: <u>longtev@hcmue.edu.vn</u>



ABSTRACT

Article History

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Keywords

Attitudes toward EBPP Evidence-based practice in psychology Exposure to EBP and EBTs Internship programs Psychology students University. Evidence-based practice in psychology (EBPP) improves public health and makes it easier for psychologists to do their jobs well by using case formulation, intervention, and therapeutic relationship principles that have been shown to work in the real world. The utilization of evidence-based practice in the field of psychology has been widely regarded as the most effective approach for researchers and practitioners to incorporate current data into their therapeutic practice and decision-making processes. The objective of this study was to investigate attitudes towards EBPP and assess the level of exposure to evidence-based practice and evidence-based therapies in the corresponding training program among students. A cohort of 250 undergraduate students pursuing a degree in psychology were enlisted to participate in the survey. The research employed quantitative methodologies, specifically one-way ANOVA, Pearson correlation, and regression analysis, to examine and interpret the collected data. The favorable influence of students' judgments of the sufficiency of training in different components of clinical expertise and exposure to evidence-based practice (EBP) and evidence-based treatments (EBTs) in their respective training program can be observed in students' experiences and attitudes towards EBP in psychology. The findings derived from the present study provide compelling evidence supporting the imperative of implementing educational interventions aimed at enhancing the research knowledge and skills of psychology students, as well as their ability to effectively utilize research in their academic pursuits.

Contribution/ Originality: This study is Vietnam's first investigation into the implementation of evidencebased practice in psychology among Psychology students. This will serve to enhance the theoretical underpinnings of evidence-based Psychology. The adjustment of training curricula in psychology training schools in Vietnam is facilitated by the incorporation of empirical research.

1. INTRODUCTION

The evidence-based practice (EBP) movement has become an integral part of healthcare policies and systems. In the twenty-first century, evidence-based practice is regarded as the gold standard of health care. By providing a

Journal of Asian Scientific Research, 2023, 13(4): 168-177

shared language and methodology, the EBP framework facilitates communication between diverse healthcare professionals. In addition to education, mental and behavioral health care, and criminal justice, evidence-based practice (EBP), which was established and promoted in medicine, is now being implemented in other health service systems [1, 2]. In recent years, there has been a growing emphasis on evidence-based practice in psychology, and organized psychology has endorsed the evidence-based movement as the primary strategy for promoting the efficacy of psychological treatments.

Evidence-Based Practice (EBP) is an approach utilized in numerous professions that emphasizes the quality of evidence when making decisions and taking action. Its distinguishing characteristics emphasis the quality of evidence and the use of the best evidence available [3]. EBP is a method that integrates the conscientious, explicit, and judicious use of the best available evidence when making decisions regarding the care of individual patients [4]. In addition, EBP is a decision-making process for a practice that includes five steps: developing an answerable clinical question; locating the best research evidence; critically examining the evidence for validity and applicability; applying appraised evidence to practice; and evaluating the outcome [1, 5].

After medicine $\lceil 4 \rceil$, nursing $\lceil 6 \rceil$, social work $\lceil 7 \rceil$, and public health $\lceil 8 \rceil$, psychology joined the evidence-based practice movement later than other disciplines. Evidence-based practice in psychology (EBPP) was developed as a primary evidence-based practice (EBP) to provide a comprehensive decision-making framework to guide practice. In the context of patient characteristics, culture, and preferences, EBPP integrates the finest available research with clinical experiences. Clinical expertise is the ability that comes from education, training, and experience to find and combine research evidence with clinical data about a client's characteristics. This lets clinicians provide services that have the best chance of helping clients reach their therapy goals [9]. Client characteristics, preferences, and culture refer to the clients' problems, personalities, strengths, values, beliefs, and sociocultural context, all of which can influence treatment goals and decisions. Clinical expertise is characterized as the competence attained from education, training, and experience to identify and integrate research evidence with clinical data in clients' characteristics, allowing clinicians to give services with the highest possibility of accomplishing therapy goals [9]. EBPP refers to evaluating the best evidence, possessing clinical expertise, and respecting clients' preferences [10, 10]117. EBPP relies on research in decision-making and patient characteristics to provide the best services in practice $\lceil 12 \rceil$. EBPP emphasizes the importance of informing patients about viable assessment, intervention, and prevention options based on the best available research evidence $\lceil 13 \rceil$. Clinicians should be trained in EBP in order to evaluate the variety of evidence regarding the efficacy of different types of psychotherapy. Clinicians can also be trained to recognize the advantages and disadvantages of clinical intuition, the importance of patient preferences and values, and the sociocultural context when working with clients [9, 14]. Vietnam has a relatively high mental health demand and illness burden $\lceil 15, 16 \rceil$. However, it has inadequate treatment capacity in conjunction with insufficient research capacity to develop effective treatments [17]. Therefore, the implementation of EBP in treatment is significant, especially the implementation of EBPP in mental health treatment. While implementing EBPP in professional practice has received little attention from graduated psychologists in Vietnam. According to studies conducted in the United States, graduate psychology students and psychologists have misconceptions regarding the EBPP definition and frequently mistake EBPP for an abbreviation for empirical treatments [11, 18]. According to some academicians, insufficient knowledge, skill, and capacity for research utilization impeded the implementation of evidence-based practice in clinical practice. Therefore, it is crucial to investigate how practicing psychologists perceive EBPP. In addition, it is essential to understand how the next generation of professionals views this initiative. Additionally, it would be effective to assist students in better preparing to maintain a scientific foundation for their clinical work, especially considering the present demands of practice. With rising tensions within and increasing mental health care systems and patient care expenditures, third-party payers have begun to demand evidence of treatment efficacy for psychological interventions. Practitioners are becoming more accountable for their professional practice, which has increased the desire to integrate research into health care procedures,

including clinical application. For that reason, our research aims to investigate current psychology students' experiences with and attitudes towards EBPP. In addition, we investigate how current psychology students plan to utilize evidence-based practice in their prospective career goals. Finally, we investigate the extent to which evidence-based practice is integrated into training programs. The present study will allow us to gain a greater understanding of how to shape future training experiences to help students integrate research and practice. The knowledge level of undergraduate students in Vietnam was of research interest. Accordingly, the answers to the following questions were sought:

What are current psychology students' experiences with and attitudes towards EBPP?

What factors influence attitudes towards EBPP among students?

2. METHODS

2.1. Participants

The current study sample consisted of 250 students majoring in psychology from three universities in Vietnam. Among these, a total of 49 volunteers were males (19.6%) and 201 females (80.4%). In this study, the participants consisted of freshman students (2%), sophomore students (52.8%), junior students (22.4%), and senior students (22.8%). In examining demographic variables, the study also explored students' internship programs, including 9.6% of students with internship programs and 90.4% without internship programs, as shown in Table 1.

Variable	Total	EBPP-EA	EBPP-T	EBPP-E			
	(n=250)	(n=250)	(n=250)	(n=250)			
	n (%)	Mean ± SD	Mean ± SD	Mean ± SD			
Gender							
Male	49 (19.6)	2.62 ± 0.83	2.84 ± 0.93	2.33 ± 0.90			
Female	201(80.4)	2.52 ± 0.86	2.89 ± 0.89	2.33 ± 0.94			
School year	•						
Freshman	5(2)	2.47 ± 0.65	3.02 ± 0.58	1.89 ± 0.74			
Sophomore	132(52.8)	2.53 ± 0.92	2.91 ± 0.98	2.20 ± 0.97			
Junior	56(22.4)	2.49 ± 0.83	2.80 ± 0.77	2.43 ± 0.85			
Senior	57(22.8)	2.62 ± 0.76	2.90 ± 0.84	2.58 ± 0.91			
Internship programs							
Yes	24(9.6)	2.79 ± 0.98	3.13 ± 0.85	2.81 ± 0.79			
No	226(90.4)	2.51 ± 0.84	2.86 ± 0.90	2.28 ± 0.94			
Hours of internship per week							
Below 8H/W	13(5.2)	2.60 ± 1.03	3.29 ± 0.93	2.87 ± 0.70			
8H-16H	10(4.0)	2.62 ± 0.81	3.03 ± 0.95	2.94 ± 0.86			
16H-24H	5(2.0)	2.96 ± 1.18	2.78 ± 0.67	2.53 ± 0.55			
Above 24H	2(0.8)	2.78 ± 0.00	2.64 ± 0.90	2.67 ± 0.31			
Never	220 (88)	2.52 ± 0.85	2.86 ± 0.90	2.26 ± 0.94			

Table 1. Participants' characteristics.

2.2. Ethical Aspects

This study adhered to the ethical principles of the American Psychological Association. The survey began with an introduction to the study, a description of the objectives of the study, the inclusion criteria, and a brief discussion of research ethics. Participants were informed that this study was anonymous and voluntary and that they would receive no monetary or other compensation.

2.3. Measurement

2.3.1. Evidence-Based Practice in Psychology: Experiences and Attitudes

Luebbe, et al. [18] created the Evidence-Based Practice in Psychology: Experiences and Attitudes Questionnaires (EBPP-EA) with ten items to assess knowledge, opinions, experiences, and attitudes regarding

EBPP. On a five-point Likert scale, respondents rated the following five statements: (1) Not at all; (2) A little bit; (3) Somewhat; (4) Quite a bit; and (5) a great deal. Cronbach's alpha = 0.889 indicated that the questionnaires had satisfactory internal reliability. Hair [19] asserts that the Confirmatory Factor Analysis (CFA) measurements utilized in this investigation provided a satisfactory fit, as evidenced by the following values: CMIN/df = 3.235 (p < 0.001), CFI = 0.969, GFI = 0.941, TLI = 0.950, RMSEA = 0.095, and 90% Confidence Interval (CI: 0.071, 0.120).

2.3.2. Evidence-Based Practice in Psychology: Training

Luebbe, et al. [18] developed the Evidence-Based Practice in Psychology: Training Questionnaires (EBPP-T), consisting of eleven items. The purpose of this questionnaire was to determine the proportion of students who believe that their training programs adequately prepare them to develop particular aspects of clinical expertise. This scale was evaluated using a Likert 5-point scale: 1 (not at all), 2 (a little bit), and 3 (somewhat), 4 (quite a lit), and 5 (very much). 0.951 was the value of the internal consistency coefficient (Cronbach's α). The following Confirmatory Factor Analysis (CFA) numbers showed that the measurement fit well in the current study: CMIN/df = 3.231 (p 0.001), GFI = 0.918, TLI = 0.949, CFI = 0.966, RMSEA = 0.095, and 90% Confidence Interval (CI: 0.076, 0.114) [19].

2.3.3. Evidence-Based Practice in Psychology: Exposure

Exposure Questionnaires (EBPP-E): Evidence-Based Practice in Psychology (EBPP-E) Evidence-Based Practice in Psychology: Exposure Questionnaires On a 5-point Likert scale, Luebbe, et al. [18] devised nine items for measurement: (1 = Not at all, 2 = A little bit, 3 = Somewhat, 4 = Quite a bit, and 5 = Very much). The questionnaires contained inquiries pertaining to the self-reported level of exposure that students had to various evidence-based practice treatments (EBTs) during their training programs. Cronbach's alpha = 0.928 indicated that the questionnaire had acceptable internal reliability. Hair [19] asserts that the Confirmatory Factor Analysis (CFA) measurement in this investigation provided a satisfactory fit, as evidenced by the following values: CMIN/df = 4.822 (p < 0.001), GFI = 0.909, CFI = 0.941, TLI = 0.911, RMSEA = 0.124, and 90% Confidence Interval (CI: 0.102, 0.147).

2.4. Procedure

A Google Form survey was distributed using non-probability convenient sampling to university students of different levels in Vietnam. The students joined the survey completely voluntarily and could withdraw at any time. Before conducting the questionnaires, volunteers were supplied with information in terms of confidentiality and anonymity. Participants could contact the research team if they had any questions during the survey by phone or email. The survey took about 20 minutes to finish. The questionnaire consisted of two parts. In the first part, a series of socio-demographic questions were designed, including age, gender, school year, etc. In the second part, participants self-reported their perceptions and experiences of EBPP.

In the present study, three questionnaires have been translated in both directions. An English-fluent native Vietnamese speaker initially translated the English version into Vietnamese. The Vietnamese version was then back-translated into English by an English-native speaker with Vietnamese proficiency. Ultimately, the research team evaluated the veracity of the content and the differences between the original and the two versions.

2.5. Research Analysis

The version of Statistical Package for Social Sciences (SPSS) 20.0 was used for data processing. The study used descriptive statistics to analyze the characteristics of the participants. The one-way analysis of variance (ANOVA) was used to examine any statistical differences between gender, school year, internship programs, hours of practice, students' experiences and attitudes towards EBPP, students' perceptions of adequacy of training in various clinical

areas of expertise, and students' exposure to EBP and EBTs in the corresponding training program. Pearson correlation was used to evaluate the relationship between students' experiences and attitudes toward's EBPP and independent variables (students' perceptions of adequacy of training in various clinical areas and students' exposure to EBP and EBTs in the corresponding training program). Multiple linear regression analysis explored the association between the predictor variables (students' perception of the adequacy of training in various clinical expertise and students' exposure to EBP and EBTs in the corresponding training program) and the dependent variable (students' exposure to EBP and EBTs in the corresponding training program) and the dependent variable (students' experiences with and attitudes toward's EBPP).

2.6. Research Hypothesis

Hypothesis 1: Senior students would be more likely to be exposed to EBP and EBTs in the corresponding training program than other students.

Hypothesis 2: Students with internship programs would be more likely to be exposed to EBP and EBTs in the corresponding training program than students without internship programs.

Hypothesis 3: Students' attitudes towards and experiences with EBPP would be positively correlated with students' perceptions of adequate training in various clinical expertise and exposure to EBP and EBTs in the corresponding training program.

Hypothesis 4: Students' perception of the adequacy of training in various clinical expertise and students' exposure to EBP and EBTs in the corresponding training program would be predictors of students' experiences with and attitudes towards EBPP.

3. RESULTS

A one-way ANOVA was conducted to examine significant differences between school year and internship programs regarding students' exposure to EBP and EBTs in the corresponding training program as presented in Table 2.

Dependent variables	-	F	Df	P-value
EBPP-E	School year	2.834	3/246	< 0.05
	Internship programs	7.242	1/248	< 0.05

Table 2. Results of one-way ANOVA.

Note: EBPP-E evidence-based practice in psychology: Exposure.

Levene's test of equality of error variances was used to examine the assumption in ANOVA that the variances for each variable are equal across the groups. If Levene's test is significant, the homogeneity of variance assumption needed for an ANOVA is met. The outcome of Levene's Test showed significant difference between school years [F(3,246) = 2.834, p < 0.05] and internship programs [F(1,248) = 7.242, p < 0.05] according to EBPP-E. The findings showed that senior students had higher exposure to EBP and EBTs in the corresponding training program than other students. Individuals with internship programs had higher exposure to EBP and EBTs in the corresponding training program than individuals without internship programs. This finding provides support for our first and second hypothesis.

Table 5. Conclations for study variables.						
Variable	EBPP-EA	EBPP-T	EBPP-E			
EBPP-EA	_					
EBPP-T	0.349^{**}	_				
EBPP-E	0.418^{**}	0.423^{**}	_			

Table 3. Correlations for study variables

Note:EBPP-EA evidence-based practice in psychology: Experiences and attitudes, EBPP-T evidence-based practice
in psychology: Training, EBPP-E evidence-based practice in psychology: Exposure. **, $p \le 0.01$.

Table 3 indicates how EBPP-EA is correlated with EBPP-T and EBPP-E. The results showed that there was a statistically significant and moderately positive correlation between EBPP-EA and EBPP-T (r (248) = 0.349, p <0.01) and EBPP-EA and EBPP-E (r (248) = 0.418, p <0.01). This implied that an increase in students' perceptions of the adequacy of training in various clinical areas and students' exposure to EBP and EBTs in the corresponding training program would lead to higher experiences with and attitudes towards EBPP in students. This finding provides support for our third hypothesis.

N	Iodel	-	ndardized fficients	Standardized coefficients	t	р	F	R²	Adjusted R ²
		В	Std. error	Beta					
1	(Constant)	1.255	0.174		7.216	0.000	33.046	0.211	0.205
	EBPP-T	0.201	0.060	0.210	3.368	0.001			
	EBPP-E	0.302	0.057	0.329	5.280	0.000			

Table 4. Multiple regression results of students' experiences with and attitudes toward EBPP.

Note: EBPP-T evidence-based practice in psychology: Training, EBPP-E evidence-based practice in psychology: Exposure.

A multiple regression analysis was performed in order to investigate the presence of multicollinearity and homoscedasticity. The correlation coefficients among the independent variables were all below 0.8, indicating the absence of multicollinearity [20]. All variance inflation factor (VIF) values were less than 2, indicating that multicollinearity was not an issue [21, 22]. Furthermore, the Durbin-Watson (DW) value of 1.88 suggests that there are no significant correlations among the residuals [23]. The residual scatter plots revealed that the scores were randomly dispersed about a horizontal line and concentrated in the center (0 points), indicating that the homoscedasticity assumption was not violated. The statistical significance of the regression model is demonstrated in Table 4 (F (2, 247) = 33.046, p < 0.001, R2 = 0.211). EBPP-T (β = 0.210, p < 0.01) and EBPP-E (β = 0.329, p < 0.01) were significant predictors of students' attitudes and experiences with EBPP, respectively, according to the findings. This result lends credence to our fourth hypothesis.

4. DISCUSSION

The current study supplements existing research on applying evidence-based practice in professional psychology training programs by investigating how psychology students view the evidence-based practice movement in psychology. Specifically, we examined students' experiences with and attitudes towards EBPP. Besides, we also examined the applicability of EBPP to students' training and professional experiences. This study highlighted some significant findings. First, senior students and students with internship programs were more likely to be exposed to EBP and EBTs in the corresponding program than others. Other findings were that students' experiences with and attitudes towards EBPP positively correlated with and influenced by students' perceptions of the efficacy of training in a variety of clinical expertise and with exposure to EBP and EBTs in the corresponding training program.

It is noteworthy that individuals with internships had higher exposure to EBP and EBTs in the corresponding training program than others. The internship programs provide an ideal environment for developing EBP skills and clinical theory because they present realistic patient problems and offer the opportunity to examine and reflect on clinical outcomes. The clinical internship aims to implement the knowledge and skills gained during theoretical coursework and practical work. The EBPP elements appear to be incorporated at different levels via the internship experience. Prior scholars reported that clinical experiences in the internship programs assist students in understanding the meaning of EBP and building their applications with clients and their clinical reasoning. In internship programs, students are observed, instructed, guided, and mentored in a collaborative, realistic way. Junior students with more fieldwork experience indicated more confidence in their ability to use EBP and higher levels of understanding about EBP than freshman and sophomore students. Consistent with hypothesis 2 and the

findings of DeCleene Huber, et al. [24], we discovered that the more clinical experience students had, the more EBP knowledge they possessed. McQuaid and Spirito [25] came to a similar conclusion, indicating that psychology students have reported encountering EBP primarily through their internship experiences. This implied that advanced undergraduate students were exposed to EBP throughout their field placement.

There have not been specific studies examining the association between psychology students' perceptions, exposure to EBP and EBTs related to the training program, and attitudes towards EBPP. Nevertheless, studies with social work students [26], nurses [27], and mental health professionals [28, 29] found that previous knowledge and exposure to EBP were positively associated with the attitude towards the EBPP process. This result was consistent with the current studies: students who had been adequately trained and exposed to EBP and EBTs in their training program had positive experiences with and attitudes towards EBPP.

The results of the current study investigated whether students who had been adequately trained and exposed to EBP and EBTs in training programs predicted positive attitudes towards EBPP. This study found that students' perceptions of the efficacy of training in a variety of clinical expertise and exposure to EBP and EBTs in the training program significantly affected their attitudes towards EBPP, consistent with Aarons [30] and Gray, et al. [31]. Our findings might indicate how attitudes are affected by having experience delivering EBPPs, including assessment, diagnosis, treatment planning, treatment implementation, and so on, in training programs. Additionally, the discovery that psychology students had more favorable attitudes toward EBPPs than they had ever encountered suggests the importance of the depth of exposure to EBPPs and EBTs for influencing attitudes.

4.1. Limitations

One potential constraint of the current study is that the survey employed a self-administered online questionnaire as the means of data collection. Consequently, it is possible that the responses obtained may not provide a completely precise depiction of student views and openness towards Evidence-Based Practice in Psychology (EBPP). One further constraint pertains to the varying professional orientations of participants as well as any discrepancies in their training program experiences, which could have influenced the outcomes of the present investigation. Moreover, how our data were collected limits us from comparing programs. It is unclear if the various orientations of students reflect individual differences or different training experiences in programs that may impact their views and exposure to EBPP.

4.2. Implications

The present finding supports prior studies highlighting the significance of teaching and training EBPP and research findings in clinical settings to encourage knowledge, skills, and attitudes towards EBPP among psychology students. Future research could assess the impact of EBPP's incorporation into the training program. Bearman, et al. [32] demonstrated the changes in student attitudes prior to and following a required EBP course.

Regarding implications for clinical practice, our results suggest training programs related to EBPP for psychology students should be developed and implemented in universities. Integration of practice and research should be woven into students' training experiences, especially clinically relevant research efforts and scientifically based clinical services. Prior findings also showed that students' confidence in applying the EBPP rose as they gained more knowledge. The information and confidence students receive about EBP during their educational training and clinical experiences can influence how they use and apply EBP as clinicians. Without this knowledge, students cannot implement EBP concepts in a changing and demanding healthcare setting. So, research literature documents and information resources should inform students widely, enhancing professional information.

Furthermore, the development of journal clubs would allow students to share their knowledge and perceptions and apply research findings to clinical practice. Participating in journal clubs could enhance reading habits among psychology students; specifically, journal clubs have been known as an effective strategy for bringing educators and psychology students together and addressing the gap between theory and practice. Forming a local psychology association may provide an opportunity for appropriate mentoring programs while also helping psychology student's network with other research-qualified psychology students/educators and creating valuable opportunities for students to learn and apply EBPP skills.

According to the current study, students have positive attitudes towards EBPP, but their knowledge appears to be limited. As previously stated, knowing and applying EBPP is ethical, so clinicians must deliver the finest services to clients. To be effective in EBPP, one must incorporate clinical experience, the best available evidence, culture, features, and preferences. Students should strengthen a scientific foundation for their clinical work, considering contemporary clinical practice needs. Clinical psychology programs at universities should also look for ways to widen training in multicultural problems, interpersonal skills, and working with client-specific data for students.

5. CONCLUSION

Evidence-based practice in psychology is a worldwide healthcare initiative and is crucial for professional clinicians. EBPP improves healthcare services and keeps providers current with best practices. However, in the Vietnam context, no recent studies examined attitudes towards EBPP or knowledge of EBPP among psychology students. This study found that students had more positive attitudes towards EBPP, but their knowledge appears to be limited. Therefore, the management and education systems should be changed to implement EBP. Some suggestions for facilitating EBPP use in the future clinical professions of students include improving academics and continuing education to enhance the acknowledgment and application of research and technical and professional English words. Making EBPP mandatory in theory and practical courses and instituting journal clubs is an efficient way to create a favorable environment for debating and applying evidence.

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Institutional Review Board Statement: The Ethical Committee of the Ho Chi Minh City University of Education, Vietnam has granted approval for this study on 16 September 2018 (Ref. No. CS2018.19.47). Transparency: The authors state that the manuscript is honest, truthful, and transparent, that no key aspects of the investigation have been omitted, and that any differences from the study as planned have been clarified. This study followed all writing ethics. **Competing Interests:** The authors declare that they have no competing interests.

Authors' Contributions: All authors contributed equally to the conception and design of the study. All authors have read and agreed to the published version of the manuscript.

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Journal of Asian Scientific Research, 2023, 13(4): 168-177

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Journal of Asian Scientific Research, 2023, 13(4): 168-177

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