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Enhancing Argumentative Writing in Ethiopian EFL Classrooms: A Multiple Intelligence-Informed Instructional Approach

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Abstract

This study investigated the influence of a pedagogical approach informed by Multiple Intelligence Theory (MIT) on the argumentative writing ability of students enrolled in the College of Business and Economics at Jimma University, Ethiopia. Ninety students from the Department of Accounting and Finance participated during the 2024–2025 academic years. Using a quasi-experimental mixed-methods design, participants were randomly assigned to an experimental group ($n = 45$) receiving MIT-informed instruction or a control group ($n = 45$) receiving conventional instruction. Quantitative data were collected via argumentative writing tests, and qualitative data through structured interviews. Analyses were conducted using SPSS v.28 and Atlas.ti v.28. Results from an independent-samples t-test indicated a statistically significant improvement in the experimental group's writing scores ($t(88) = 12.28, p < .001$), with mean scores increasing from pre-test ($M = 2.33, SD = 0.52$) to post-test ($M = 3.58, SD = 0.54$). Qualitative findings supported these results, suggesting that the varied and scaffolded instructional activities associated with the MIT-informed approach enhanced students' argumentative writing skills. The study recommends incorporating diversified, learner-centred instructional strategies inspired by MIT into EFL writing curricula in similar contexts.

Keywords: Multiple Intelligences, Argumentative Writing, Achievement, Pedagogical Heuristic, Ethiopia

List of Abbreviations

EFL: English as a Foreign Language

MIT: Multiple Intelligence Theory

ICC: Inter-rater Correlation Coefficient

M: Mean

SD: Standard Deviation

SPSS: Statistical Package for Social Sciences

IRB: Institutional Review Board

APA: American Psychological Association

Introduction

Background of the study

In Ethiopian higher education, English serves as the principal medium of instruction, making proficiency in academic writing a critical determinant of academic and professional success [1,2]. Despite mandatory writing courses, students frequently demonstrate persistent difficulties with advanced, genre-specific writing tasks, particularly argumentation, which is essential for critical academic engagement [3,4]. This challenge is often situated within a pedagogical environment that historically favors traditional, transmission-based models over learner-centred, differentiated approaches [5,6]. In

response to calls for pedagogical innovation, Howard Gardner's (1983) Theory of Multiple Intelligences (MIT) has been proposed as a practical heuristic for planning inclusive and engaging instruction [7]. MIT posits that individuals possess varying profiles of cognitive strengths (e.g., linguistic, logical, interpersonal, spatial). When applied to education, it encourages instructional variety to cater to diverse learning preferences [8]. Recent research in EFL contexts underscores the value of diversified instructional strategies for improving learner engagement, motivation, and writing outcomes [9,10]. Specifically, argumentative writing, with its demands on logical structure, evidence integration, and rhetorical persuasion, may benefit from instruction that provides multiple entry points and scaffolded practice through varied modalities [11].

Problem Statement

Although the potential of learner-centred pedagogies is recognized globally, their systematic implementation in Ethiopian EFL writing classrooms remains limited. A significant gap exists between national curriculum reforms advocating for differentiated instruction and the scarcity of localized, empirical research validating effective, context-sensitive pedagogical models [5,12]. While international studies suggest benefits of MIT-informed activities for writing, these findings have not been sufficiently tested in the Ethiopian higher education context. This study therefore addresses a critical gap by investigating whether an instructional approach, using MIT as a design framework, can enhance argumentative writing achievement among Ethiopian university students [13,14].

Research Objective and Hypotheses

The primary objective was to assess the impact of an MIT-informed instructional approach on the argumentative writing performance of EFL students. The study tested the following hypotheses:

The Null Hypothesis (H₀): No statistically significant difference exists in argumentative writing achievement between the control and experimental groups post-intervention.

Alternative Hypothesis (H_A): A statistically significant difference exists in argumentative writing achievement between the control and experimental groups' post-intervention.

Significance

This study provides empirical evidence on the potential of diversified, MIT-informed instruction in an Ethiopian EFL setting. Findings may inform educators, curriculum designers, and policymakers interested in learner-centred pedagogical reforms. The research also contributes to the broader discourse on adaptive teaching strategies in under-resourced educational contexts.

Scope and Limitations

The study was conducted with Banking and Finance students enrolled in the Basic Writing Skills course at Jimma University during 2024–2025 academic years. The dependent variable was argumentative writing achievement. It is acknowledged that observed improvements may be attributable to various instructional factors embedded in the MIT-informed design, such as increased scaffolding, peer interaction, and the process genre-based practice. The limitations include restriction to one college, which may affect generalizability. Further, the quasi-experimental design's inherent constraints regarding control and cost.

Literature Review and Theoretical Framework

Argumentative Writing in EFL: Challenges and Imperatives

Argumentative writing is a high-stakes academic genre requiring the sophisticated integration of claim, evidence, reasoning, and refutation [15]. It is a demanding genre essential for academic success. It requires thesis development, evidence integration, counter argumentation, and logical conclusion [15]. Ethiopian students often find it challenging due to its rhetorical and structural complexity. Instructional scaffolding through varied activities informed by MIT can help learners develop these skills [16]. For EFL learners, challenges are compounded by linguistic limitations and unfamiliarity with Western rhetorical conventions [17]. Recent studies emphasize that successful instruction must move beyond grammatical accuracy to explicitly teach rhetorical structure and critical thinking through sustained, scaffolded practice [18,19]. This aligns with a genre-based pedagogy that demystifies academic writing conventions for learners.

Multiple Intelligence Theory as a Pedagogical Heuristic

It is crucial to position MIT accurately within contemporary educational discourse. This study does not treat MIT as a validated, causal model of cognitive ability—a point of on-going critique in psychological literature [20]. Instead, it aligns with its application in applied linguistics and education as a powerful heuristic for instructional design [7,21]. By suggesting a spectrum of potential learning preferences (e.g., verbal, visual, social, kinesthetic), MIT provides a practical checklist for teachers to diversify classroom activities, thereby increasing the likelihood of engaging a wider range of learners [22].

Synthesizing MIT with Social Constructivism: A Scaffolded Approach

The theoretical foundation of this study is social constructivism, which posits that learning is mediated by social interaction, cultural tools, and targeted scaffolding within the Zone of Proximal Development [23]. MIT is integrated as

a complementary design tool within this framework. The synergy is clear: social constructivism emphasizes the how of learning (through scaffolded interaction), while MIT offers a framework for the what (the variety of activities used to provide that scaffolding). This combined approach facilitates a multi-modal, interactive, and learner-sensitive writing pedagogy that can support the complex process of argumentative composition [24].

Conceptual Framework

The framework integrates the conventional structure of argumentative essays with instructional activities informed by MIT. The goal is to help teachers design lessons that incorporate a range of activity types: linguistic, logical-mathematical, kinaesthetic, spatial, interpersonal, etc., to make writing more accessible and engaging [8]. The framework links each stage of essay writing (Introduction, Body, Conclusion) with diverse pedagogical strategies, such as role-play for thesis development, graphic organizers for the writing planning, and peer feedback for revision [25]. This approach shifts focus from a one-size-fits-all model to a scaffolded, multi-activity pedagogy, aiming to democratize writing instruction [26].

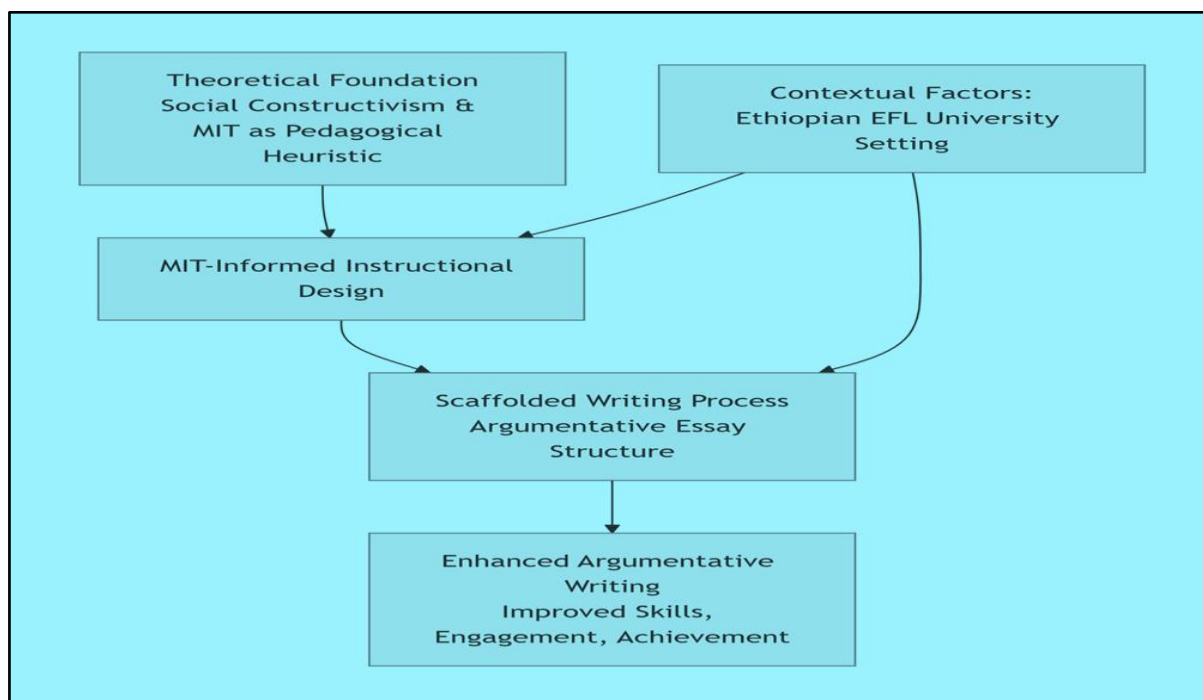


Figure 1: MIT as a Pedagogical Heuristic for Writing

This conceptual framework (Figure 1) presents a pedagogically integrated model where Social Constructivist principles and Multiple Intelligence Theory, employed not as a causal theory but as a practical heuristic for instructional design, converge to inform a responsive teaching approach [7,23,27]. This approach is explicitly situated within and shaped by the specific contextual realities of Ethiopian EFL higher education [1,6]. Within this context, MIT-inspired strategies generate a repertoire of diversified and scaffolded learning activities, which are systematically applied to demystify and support each stage of the argumentative essay writing process [15]. This deliberate scaffolding of genre structure through varied modalities aims to enhance learner engagement, self-efficacy, and metacognitive awareness, thereby fostering improved writing performance, an outcome supported by research on differentiated instruction in EFL writing contexts [14,28]. Thus, the framework visually articulates a mediated and context-sensitive application of MIT, positioning it as a generative tool for designing inclusive pedagogy rather than as a direct explanatory mechanism for learning gains.

Methodology

Research Design and Participants

A mixed-methods quasi-experimental design was employed. Participants were 90 first-year undergraduate students from the Department of Accounting and Finance at Jimma University, Ethiopia, randomly assigned to an experimental (n=45) or control (n=45) group. All were enrolled in a compulsory "Basic Writing Skills" course during the 2024-2025 academic years.

Instructional Intervention

The 14-week intervention contrasted two pedagogical models: Experimental Group (MIT-Informed) received an instruction followed the argumentative essay structure but was delivered through a cycle of activities designed to engage different intelligences, which includes concept mapping (spatial) for planning, structured debates (interpersonal/linguistic) to explore viewpoints, role-play (bodily-kinesthetic/intrapersonal) to understand counterarguments, and peer-review workshops (interpersonal) for revision. Control Group (Conventional) received an instruction followed a traditional,

teacher-centred model focusing on lecture-based explanation of essay structure, analysis of model texts, and individual writing practice with teacher-led feedback.

Data Collection and Instruments

Quantitative: Pre-test and post-test argumentative essays were scored using a validated analytic rubric adapted from, assessing thesis clarity, argument development, organization, evidence, counterargument, and language use. Inter-rater reliability was excellent (ICC = .92) [29].

Qualitative: Semi-structured interviews were conducted with 15 purposively selected students from the experimental group post-intervention to explore their perceptions of the instruction and its impact.

Data Analysis

Quantitative data were analyzed using SPSS v.28. Independent and paired-samples t-tests were used to examine between-group and within-group differences. Effect size was calculated using eta-squared (η^2). Qualitative interview data were transcribed and subjected to thematic analysis using Atlas.ti v.28, following the systematic process outlined by [30].

Findings

Quantitative data were analyzed using SPSS v.28 (descriptive statistics, paired and independent t-tests). Cronbach's Alpha and Inter-Rater Reliability (ICC) were calculated to ensure consistency. Qualitative interview data were analysed thematically using Atlas.ti v.28.

Quantitative Findings

Group	N	Mean	SD
Control	45	2.58	0.49
Experimental	45	2.59	0.49

Table 1: Pre-test Homogeneity

The results of the statistical analysis of the groups' mean scores on their experiences in writing argumentative essays are shown in the results under Table 1, where the mean scores for the control (M=2.58, SD =0.49) and experimental (M = 2.59, SD =0.49) groups are shown. This may suggest that prior to the treatment of the independent variables (MI-OI), students from the college of business and economics at Jimma University, assigned to the control and experimental groups were homogenous in their argumentative essay writing abilities and performed comparable argumentative writing activities. Pre-test scores confirmed initial homogeneity between groups ($p > .05$).

	Mean	SD	t (44)	P
Pre	2.27	0.59	3.546	.061
Post	2.29	0.59		

Table 2: Control Group Pre–Post Comparison

Table 2 shows the results of the paired samples t-tests for the achievement Pre-test and post-test for producing argumentative essays in the control groups. The group's performance on the accomplishment test for writing argumentative essays was assessed using a paired samples t-test, and $t(44) = 3.59$, $p = .061$ was found for the students' essay grades before (M=2.27, SD=0.59) and there was no discernible shift in the ability to compose an argumentative essay. This leads one to the conclusion that, when it comes to teaching writing in general and argumentative essays in particular and in the context of the current research, the traditional way of argumentative essay training did not fully develop the writing talents of the targeted students.

Mean	SD	SD	t(44)	P	η^2
Pre	2.33	0.52	12.287	.001	0.72
Post	3.58	0.54			

Table 3: Experimental Group Pre–Post Comparison

The paired samples t-test findings for the effect of MI-OI on the experimental groups' achievement test scores in writing argumentative essays are displayed in Table 3. The post-test findings demonstrated that the students' essay scores had significantly improved from before ($M = 2.33$, $SD = .52$) to after ($M = 3.57$, $SD = .54$), with a $t(44) = 12.287$, $p < .001$. The students' argumentative essay writing achievement was better after participating in the MI-focused instruction. Following the MI-OI program's intervention, the eta-squared statistic showed a bigger effect size of (η^2) = .72. The results and the intervention programs are highly supported by the interpretation of effect size of 0.72 for a bigger effect caused by the intervention [31].

			Levene's Test for Equality of Variances		
Achievement test		Groups	<i>F</i>	<i>t</i> (88)	<i>p</i>
	Equal variances not assumed	CG	4.72	12.28	.053
	Equal variances assumed	EG			.001

Table 4: Post-test Between-Group Comparison

Table 4 shows the outcomes of a post-test on argumentative essay writing that was given to ninety students into two groups: the experimental group (MI-OI) and the control group. To find out if there were statistically significant differences ($p < .05$) between the two groups' argumentative essay quality, an independent-sample t-test was used and the results showed that there were statistically significant differences between students' skills to produce argumentative essays by the experimental group during post-test session. As a result, it was discovered that there were statistically significant changes based on the MI-OI intervention program, where an independent t-test confirmed significantly higher scores for the experimental group ($t(88) = 12.28$, $p < .001$) (see Table 4).

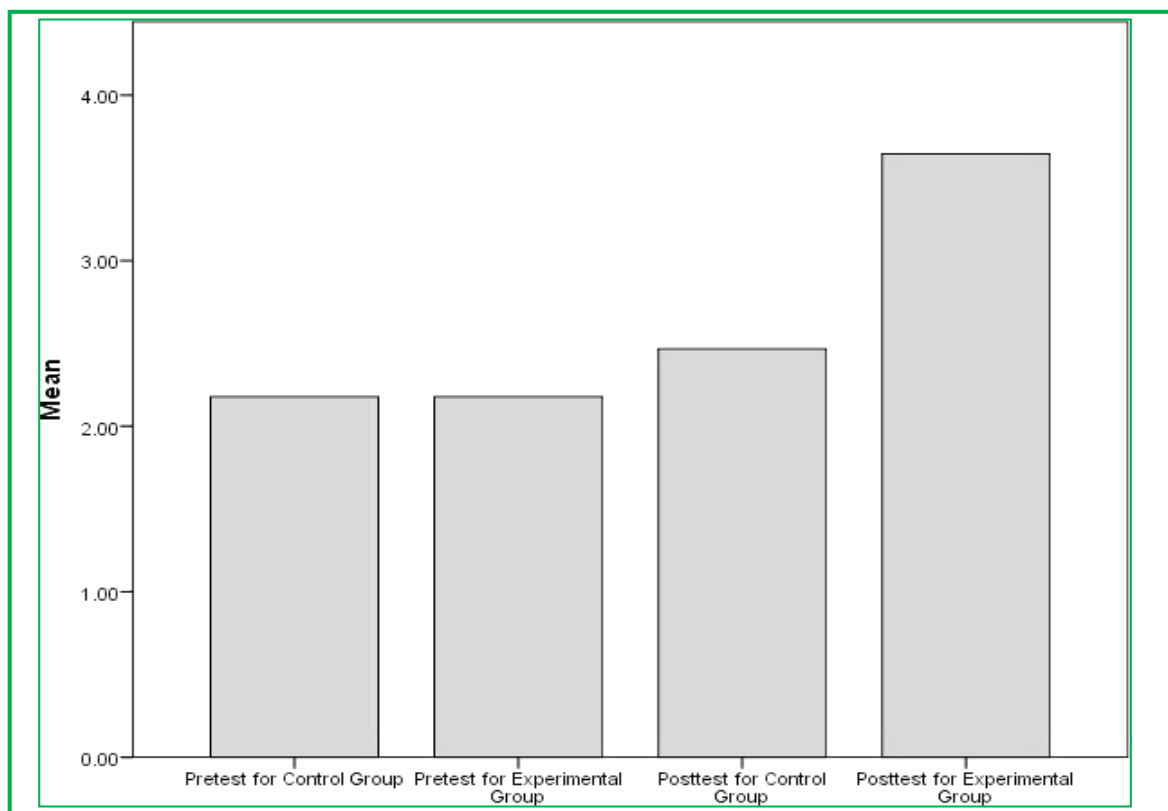


Figure 2: Bar Chart of Pre-test and Post-test Mean Scores by Group

Figure summarizing students' argumentative writing performance based on the study's original data, 2025.

The bar graph measures the impact of an intervention by showing pre-test and post-test results for two groups. Although both groups started off similarly, only the experimental group significantly improved following the intervention, as shown by the pictorial evidence. The chart is an effective tool for analyzing the experiment's results because the control group's static results demonstrate that the treatment is directly responsible for the measured gain. The substantial change in post-test accomplishment among the experimental and control groups are visually summarized in the bar chart below (see Figure 2).

Qualitative Findings

Thematic analysis of interview data, conducted using Atlas.ti v.28, yielded rich insights that substantiate and illuminate the quantitative results. The data crystallized around two central themes, underpinned by ten sub-themes, which collectively articulate the experiential impact of the MIT-informed instructional approach. First, participants reported marked improvement in their argumentative writing skills. They described an enhanced ability to formulate precise thesis statements, structure coherent arguments with logical progression, and effectively integrate and rebut counterarguments. This perceived advancement in core rhetorical competencies directly addresses the specific challenges they initially identified, such as weak claim development, disorganized essay structure, and underdeveloped counter argumentation. This finding demonstrates that the intervention targeted and strengthened the very skills foundational to academic argumentation. Second, students consistently emphasized a significant increase in engagement and self-efficacy. They attributed their progress not to an abstract activation of "intelligences," but to the varied, interactive, and scaffolded nature of the classroom activities. Participants highlighted how strategies such as structured debates, collaborative group tasks, and graphic organizers demystified the writing process, making it more accessible, less daunting, and personally relevant. This perception of a more supportive and stimulating learning environment fostered a greater sense of ownership, participation, and confidence in their writing abilities. These qualitative findings provide crucial mechanistic explanation for the quantitative gains. They suggest that the MIT-informed design succeeded by offering diverse "rehearsal spaces" for practicing argumentation, thereby reducing anxiety and building competence through multiple entry points. This aligns with the social constructivist principle of scaffolding and corroborates prior research on the motivational benefits of differentiated instruction in EFL contexts [6]. Thus, the qualitative data confirm that the intervention's efficacy is most accurately attributed to its role in creating a more responsive and empowering pedagogical environment, rather than to a direct causal influence of intelligence profiles. Generally, thematic analysis supported and illuminated the quantitative gains. Two overarching themes: demystification of argumentation through multi-modal practice, in which students reported that activities like debates and graphic organizers "made abstract concepts like 'thesis' and 'counterargument' tangible, their description on how different activities reinforced the same skill, aiding comprehension and retention, and enhanced agency and confidence, in which they consistently linked the varied activities to reduced writing anxiety and increased motivation were merged. One student noted, "When the lecture failed me, the group work or the drawing activity helped me understand. I felt there was always a way in." This denotes to increased self-efficacy and engagement as key outcomes of the diversified approach.

Discussion

This study provides robust evidence that an instructional approach informed by MIT as a pedagogical heuristic significantly enhances argumentative writing performance among Ethiopian EFL learners. The large effect size ($\eta^2 = 0.72$) indicates substantial practical significance. The findings should be interpreted through the stated theoretical lens: improvement is not attributed to the activation of latent "intelligences," but to the enriched, scaffolded, and differentiated learning environment created by applying the MIT framework. The variety of activities likely provided multiple opportunities for cognitive rehearsal and social negotiation of writing concepts, aligning with Vygotskian principles (Nguyen, 2025; Vygotsky, 1978). This pedagogical variety appears to have addressed diverse learning preferences more effectively than the conventional monolithic approach, leading to higher engagement and deeper processing, as evidenced in the qualitative data. These results corroborate recent international research on the benefits of differentiated and multi-modal writing instruction and critically extend their relevance to a sub-Saharan African EFL context [10,19]. They demonstrate that even as a heuristic, MIT offers a viable and effective framework for operationalizing learner-centred pedagogy in resource-constrained settings.

Conclusion and Implications

This study provides robust evidence that an instructional approach informed by MIT as a pedagogical heuristic significantly enhances argumentative writing performance among Ethiopian EFL learners. The large effect size ($\eta^2 = 0.72$) indicates substantial practical significance. The findings should be interpreted through the stated theoretical lens: improvement is not attributed to the activation of latent "intelligences," but to the enriched, scaffolded, and differentiated learning environment created by applying the MIT framework. The variety of activities likely provided multiple opportunities for cognitive rehearsal and social negotiation of writing concepts, aligning with Vygotskian principles [24,23]. This pedagogical variety appears to have addressed diverse learning preferences more effectively than the conventional monolithic approach, leading to higher engagement and deeper processing, as evidenced in the qualitative data. These results corroborate recent international research on the benefits of differentiated and multi-modal writing instruction and critically extend their relevance to a sub-Saharan African EFL context [10,19]. They demonstrate that even as a heuristic, MIT offers a viable and effective framework for operationalizing learner-centred pedagogy in resource-

constrained settings.

Implications

- **For Pedagogy:** EFL writing instructors are encouraged to adopt differentiated instructional design using frameworks like MIT to plan multi-activity lessons that cater to varied learner needs.
- **For Curriculum Development:** National and institutional curriculum developers should support the integration of flexible, learner-centered pedagogical models into teacher guides and writing syllabi.
- **For Research:** Future studies should employ longitudinal designs to assess skill retention and investigate the specific contribution of different activity types (e.g., kinesthetic vs. spatial) within the MIT heuristic to writing development.

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Declaration Statements

Ethical Approval

The study protocol was approved by the Ethical Review Board of the College of Social Sciences and Humanities, Jimma University (Ref. No. CSSH/5/23/2018, Date: 5 March 2026) in accordance with the institution's ethical guidelines for research involving human participants.

Funding Declaration

This research did not receive any specific grant from funding agencies in the public, commercial, or not-for-profit sectors.

Human Ethics and Consent to Participate

Informed consent was obtained from all individual participants included in the study.

Consent to Publish

Informed consent was obtained from all participants for the publication of findings of the study. The authors confirm that the manuscript is original and prepared from a PhD dissertation, and decided for submission.

Conflict of Interest

The author declare no competing and/or conflicts of interest/s.

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