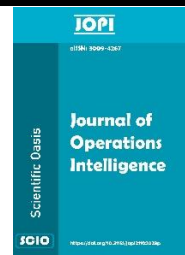




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Examining the Impact of Product Innovation and Pricing Capability on the International Performance of Exporting Companies with the Mediating Role of Competitive Advantage for Analysis and decision making

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ABSTRACT

In the present day, within the highly competitive and ever-evolving global market landscape, exporting companies are presented with numerous opportunities to enhance their performance relative to their rivals by introducing innovative products and implementing appropriate pricing strategies. Within this context, product innovation and pricing proficiency stand out as pivotal factors exerting significant influence on the international performance of exporting enterprises. Consequently, the primary aim of this research endeavor was to explore the repercussions of product innovation and pricing competency on the international performance of exporting firms, considering the mediating role played by competitive advantage. The research sample encompassed a statistical population comprising 51 exporting companies. The participants in this study included CEOs, as well as financial and marketing managers, and sales experts from these organizations. Employing Morgan's table and taking into account the total pool of exporting firms in the study, a sample size of 36 companies was selected, and a total of 108 questionnaires were gathered. The principal data collection instrument employed was a questionnaire. Rigorous measures were taken to validate the content of the questionnaire through expert assessments, and its structural validity was confirmed via factor analysis. Moreover, the reliability of the questionnaire's variables was verified using Cronbach's alpha coefficient. The data analysis phase entailed the application of correlation and linear regression methods, employing SPSS 26 software. The outcomes of the analysis demonstrated that both product innovation and pricing capability wield a positive and substantial influence on the competitive advantage enjoyed by exporting firms, as well as on their overall international performance. Furthermore, the findings indicated that, when considering the mediating role of competitive advantage, product innovation and pricing capability do not significantly impact the performance of exporting companies.

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1. Introduction

In recent years, there has been a growing recognition of the vital role played by exporting companies in national economies. These enterprises contribute significantly to economic growth, job creation, and innovation within countries, particularly in less developed nations. Their significance becomes even more pronounced when they successfully enter the global trade arena. By expanding into foreign markets, they can boost exports, generate foreign currency, and enhance their country's overall economic well-being. Through exporting, companies can also increase their market share, and governments should actively promote their international market exploration efforts, as they can serve as catalysts for these companies' global performance. However, achieving this is no easy task, especially in today's complex and dynamic markets. Evolving customer preferences, rapid technological advancements, and the resulting competitive business landscapes make obtaining a competitive advantage imperative for firms to thrive. Companies must attain competitive advantages to effectively compete on a global scale [1]. Surviving in the business world is a fundamental requirement, and thus, implementing effective business continuity strategies is crucial, particularly for companies. It holds significant importance for national economic development and revitalization. In international markets, the survival and growth of companies, and consequently, the economic prosperity of nations, largely hinge on comprehending the factors that determine a company's export performance. Understanding these foundational factors for company growth is crucial and warrants further research [2]

Previous research in the domain of export performance has predominantly centered on the correlation between pricing capabilities and company performance. These studies have yielded varying results, often contingent on demand-based factors [3]. The focus on pricing capabilities in prior research has hindered the investigation of the causes behind these inconclusive outcomes. It is plausible that the inability of some pricing capabilities to create a competitive edge has led to inconsistent findings in past research. Governments should concentrate on structural conditions rather than transient factors [4]. Growth rate, industry, technology, innovation, government, and services are the factors that initiate the cycle of developing competitive advantages through exports. This, in turn, leads to strategic alliances with companies in the destination country, ultimately culminating in full ownership abroad.

Product innovation and pricing capability are two critical competencies that contribute significantly to achieving a competitive advantage in exporting companies. Essentially, the competitive advantage of these firms primarily rests on their ability to innovate their products to align with customer needs and offer reasonable and strategic pricing in export markets [4]. Product innovation and pricing capability indirectly impact export performance by facilitating the acquisition of a competitive advantage [5]. This underscores the pivotal role these two competencies play in international success. Consequently, even if an exporting firm gains a competitive advantage through other means, it is ultimately the level of innovation and differentiation in its products, coupled with appropriate pricing, that will attract customers, optimize other capabilities, and result in improved export performance [6].

In light of the above, the primary question guiding this research is whether product innovation and pricing capability, as components of competitive advantage, have an influence on the international performance of exporting companies. In this study, the researcher aims to scrutinize the competencies that can impact organizational performance and competitiveness. This is especially pertinent because organizations are increasingly concerned with developing and implementing strategies that ensure their performance in highly competitive international markets.

1.1 Literature review and Research Background

1.1.1 Export Performance

In today's globalized and fiercely competitive business landscape, companies are increasingly exploring opportunities beyond their domestic borders [7]. Among these opportunities, exporting stands out as a straightforward and attractive avenue for international expansion. Recognizing the pivotal role exports play in a nation's economic growth, understanding export performance and the factors that influence it is of utmost importance [8]. Consequently, it is vital to identify the drivers of export performance, particularly those stemming from a company's internal resources. Developing capabilities for internationalization is a potent and effective strategy for companies looking to enhance their performance in global markets. Therefore, further empirical research is warranted, especially in developing markets such as Iran, to investigate the relationship between internationalization orientation and export performance [6]

Globalization, rapid advancements in information and communication technologies, and international trade agreements like the General Agreement on Trade in Services (GATS) and the European Union Services Directive have reshaped the competitive landscape of industries in the global economy [9] have scrutinized over 100 empirical studies related to international performance, highlighting its significance in international marketing while acknowledging the potential challenges in its conceptualization, operationalization, and measurement. These challenges often lead to divergent and conflicting findings [10]

1.1.2 Pricing Capability

Pricing capability refers to a company's aptitude for leveraging its resources to gain a competitive edge. These capabilities are ingrained in an organization's routines, shaping decision-making processes and internal management to achieve its goals. A company's capabilities essentially dictate how decisions are made within the organization, defining its desired behaviors and cultural values. These capabilities don't merely reside in individuals; rather, they manifest through the routines, interactions, and decisions made within the organizational context. They represent a complex set of skills and accumulated knowledge applied through organizational processes, enabling companies to coordinate activities and maximize their assets. These capabilities empower a company to add value to its products and services, adapt to market conditions, seize opportunities, and respond to competitive threats [10]. On the other hand, pricing reflects the perception of a product's value from both the seller's and the customer's perspectives [6]. It is a visible element of a product that directly influences the decision to purchase or not, and it has a direct impact on profit margins [7]. Pricing capability signifies a company's ability to set prices judiciously, considering factors such as costs, competition, and customer expectations. Companies with superior pricing capabilities can gain a competitive advantage through more favorable deals with customers [11]. While there are relatively few studies on pricing capability, the existing research suggests that companies with greater pricing flexibility can offer better financial terms [12]

1.1.3 Product Innovation

Product innovation refers to the extent to which novel products attract customers in the competitive market, enabling a company to command premium prices and establish industry leadership. However, it's important to note that greater innovation doesn't necessarily translate to better performance in all markets [13]–[15]. Nonetheless, numerous studies have demonstrated a positive relationship between organizational innovation and company performance [16,17] The ability to develop and produce new and unique products is a key indicator of a company's competitiveness, especially in international markets [15]. Product innovation capability signifies a

company's capacity to develop, modify, or invent its products in response to evolving customer needs [7,18] Therefore, product innovation capability can be a valuable and rare asset, allowing a company to align with changing customer demands and gain a competitive edge [19] Product innovation encompasses changes in the final product or service offered by an organization and involves updating products or services to maintain a strong market presence [12]. This type of innovation is characterized by the introduction of new products or services[20], which can include physical goods with new materials and new intangible services [6]

1.1.4 Competitive Advantage

The role of competitive advantage in a company's success has been extensively discussed in previous research [8,11,12]. Competitive advantage is the factor that inclines customers toward one organization, company, product, or brand over competing alternatives. Without a competitive advantage, operating in a competitive environment becomes exceptionally challenging, and maintaining market share and profitability becomes nearly impossible [21]. To assess the sustainability of competitive advantage, four criteria are proposed: durability, transferability, transparency of transfer, and repeatability [16]. In other words, capabilities can yield competitive advantages when they are sustainable, transparent, and resistant to easy replication or imitation. While many studies have explored the relationship between organizational capabilities and company performance without considering competitive advantage, some authors have examined the role of marketing capability in conjunction with competitive advantage [18]. Their findings highlight a direct connection between marketing capability and competitive advantage. Other researchers, such as Zou et al. [22], have studied the relationships between four capabilities and competitive advantage, specifically for the financial performance of exports. They found that distribution, communication, and product development capabilities directly impact the financial performance of exports, while pricing capability does not show such a direct relationship.

Antunes [23] conducted a study titled "Product Innovation, Market Intelligence, and Pricing Capability as Competitive Advantages in the International Performance of Startups" and found that the widespread COVID-19 pandemic has created various opportunities for exporting products, making startup development and expansion a sustainable and significant option. However, this study evaluates the impact of company capabilities through competitive advantage as a mediator in international performance. The study was based on responses from 200 active startups in Peru and concluded that competitive advantage acts as a mediator between two of the three evaluated capabilities. These results can inform more effective strategies for promoting startups interested in internationalization and product exports. Falahat et al. [1] investigated the roles of innovation, product capabilities, market intelligence, and pricing as drivers of international performance for Malaysian exporting companies. The research aimed to explore competitive advantage among small and medium-sized companies striving for international performance. The results suggest that competitive advantage serves as a mediator between pricing capabilities and the international performance of small and medium-sized companies. This study underscores the potential for small and medium-sized companies to leverage foreign opportunities.

Falahat et al. [24] conducted a study examining the impact of digitalization and resources on gaining a competitive advantage in international markets. Digitalization, as a determinant of competitive advantages for small and medium-sized enterprises (SMEs) in international markets, has received limited attention [21, 24–31]. The study fills this gap by investigating the direct and indirect effects of digitalization on firms, particularly on price, product, and service advantages in digitalized international markets. Drawing on data from 143 exporting SMEs in Malaysia, the analysis revealed that digitalization doesn't have a direct impact on competitive advantage but exerts strong indirect

effects on product and service advantages. Consequently, managers and policymakers can leverage digitalization to enhance their internationalization strategies in alignment with their competitive objectives.

Pham [7] emphasized the significance of organizational capabilities and reviewed the literature on two fundamental export capabilities that can contribute to a competitive advantage for exporting companies: product innovation and pricing capability [32–34]. These capabilities hold the potential to confer a competitive advantage on exporting companies and can influence export performance by virtue of their impact on competitive advantage.

In summary, the relationships between the variables and their implications are illustrated in the conceptual model presented in Figure 1, considering the provided definitions and background of the study.

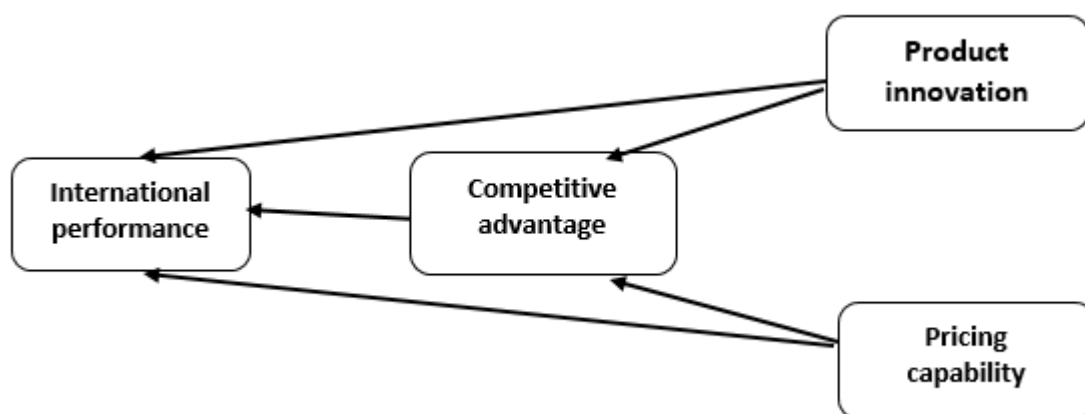


Fig. 1. conceptual model adapted from

2. Methodology

Research is a methodical journey into the unknown, aimed at acquiring essential knowledge. In scientific inquiry, which seeks to uncover truths, the selection of an appropriate research method is a fundamental aspect [21,29,30]. The choice of a suitable research method depends on the research's goals, characteristics, subject matter, and available resources. Research serves the purpose of obtaining precise and accessible answers to research questions. Notably, one of the most critical facets of scientific research lies in its methodology, as the foundation and credibility of research findings greatly hinge on this aspect. Without a proper research methodology, study results and analyses lack credibility and generalizability, rendering research methodology a common criterion for evaluating scientific research. Research can be categorized as applied when it aims to provide solutions to existing organizational problems. Conversely, when research primarily seeks to enhance the understanding of specific issues commonly encountered in organizational environments and their resolutions, it falls under fundamental, foundational, or pure research. The present study is applied in its objective and, by elucidating the existing context and the relationships between study variables, adopts a survey-analytical approach.

The research population for this study comprised employees of exporting companies, totaling 40 companies. The study respondents included CEOs, financial managers or marketing managers, and sales experts from these companies. The organizational unit of analysis in this research is the company itself. Given the researcher's interest in generalizability to the entire target population, a probability sampling method was employed. Since the sample design was accessible and simple random sampling offers high generalizability potential within the context of exporting companies, it

was the chosen sampling method for this research. Some companies did not cooperate with the research team; data collection proceeded until the desired sample size was achieved. Utilizing Morgan's table, a sample size of 36 companies was determined and 108 questionnaires were ultimately gathered. The data collection tool employed was a questionnaire consisting of four sections, with the number and source of each section specified in Table 1.

The questionnaire collection process continued until the desired sample size was reached. In total, 108 questionnaires were collected from these companies, with three questionnaires obtained from each of the 36 companies (one from the CEO, one from the financial manager or marketing manager, and one from the sales expert).

Table 1
Number of questions in different variables

Variable name	Number of questions
Competitive advantage of the company	5 questions
Product innovation	3 questions
Pricing Capability	4 questions
International performance	7 questions

Two types of validity, face validity and structural validity, were utilized in this research. Face validity for questionnaire items was established based on components extracted from previous valid studies and confirmed through expert examination. Structural validity employed confirmatory factor analysis, and the appropriateness of data for factor analysis was assessed using the Kaiser-Meyer-Olkin (KMO) measure and Bartlett's test. Convergent validity of the questionnaire was confirmed after confirmatory factor analysis by examining communalities. Reliability of the questionnaire variables was assessed using Cronbach's alpha coefficient in this research. It determines the internal consistency among items measuring a concept. Statistical methods were employed in two forms: descriptive and inferential. After data collection, it was first summarized and categorized. Statistical data description (measures of central tendency and dispersion, preparation of tables and charts), data fitness testing (reliability and validity), correlation testing, and hypothesis testing were conducted using SPSS version 26 software in this research. Correlation analysis was employed to scrutinize relationships between variables. The correlation coefficient, ranging from -1 to 1, indicates the presence and direction of relationships between two variables. In this research, a four-step mediation test was used to explore the mediating role of the competitive advantage.

3. Results

3.1 Validation of hypotheses

Table 2 displays factor loadings for all items, each exceeding 0.3, implying no item removal is required.

Table 2

Displays factor loadings for all items, each exceeding 0.3, implying no item removal is required.

Variable	Objects	Factor load of the first stage	Significance of Bartlett's test	df	Approximate Value 2χ	KMO
Product innovation	PIN1	0.894	0.000	3	95.129	0.570
	PIN2	0.981				
	PIN3	0.902				
Pricing capability	PC1	0.751	0.000	6	73.011	0.826
	PC2	0.703				
	PC3	0.771				
	PC4	0.766				
Competitive Advantage	CA1	0.710	0.000	10	94.018	0.812
	CA2	0.819				
	CA3	0.777				
	CA4	0.534				
	CA5	0.526				
International performance	IP1	0.648	0.000	21	122.371	0.863
	IP2	0.692				
	IP3	0.626				
	IP4	0.611				
	IP5	0.691				
	IP6	0.513				
	IP7	0.523				

Following data collection, reliability coefficients for research variables were calculated. As depicted in Table 3, the Cronbach's alpha coefficient for all variables exceeded 0.70, indicating the research instrument's strong reliability.

Table 3

The results of the reliability of the research variables

Variable	Cronbachs alpha
Product innovation	0.913
Pricing capability	0.887
Competitive Advantage	0.877
international performance	0.894

Skewness and kurtosis values for variables, as shown in Table 4, fell within the -1 to +1 range, supporting the assumption of data normality.

Table 4

Checking the normality of the data

Variable	Elongation	crookedness
product innovation	0.023	-0.331
pricing capability	0.618	0.996
Competitive advantage	0.400	0.406
international performance	0.746	0.983

As presented in Table 5, the correlation between variables was statistically significant at the 99% confidence level.

Table 5

Results of covariance analysis of research variables

Variable	Product innovation	Pricing capability	Competitive advantage	International performance
product innovation	1	0.811	0.560	0.494
pricing capability	0.811	1	0.520	0.451
Competitive advantage	0.560	0.520	1	0.617
international performance	0.497	0.451	0.617	1

Table 6 demonstrates that in the error normality test, the mean error values for all hypotheses were near zero, and their standard deviations exceeded half. Additionally, the Durbin-Watson statistic for all hypotheses ranged from 1.5 to 2.5, supporting the acceptance of error independence.

Table 6
 Checking the normality and independence of errors

Average	Test of normality of errors		Test of independence of errors
	Average	Al-araf standard	Watsons camera stats
1	2.39E-17	1.651	1.651
2	3E-3	1.850	1.850
3	2.27E-16	1.915	1.915

3.2 Testing Research Hypotheses

Hypothesis 1: Product innovation has a significant and positive impact on the competitive advantage of exporting companies.

Table 7
 Illustrates the analysis of variance for Hypothesis 1.

Model	sum of squares	Degrees of freedom	average of squares	F	Significance
regression	2.584	1	2.584	15.511	0.000
Remanders	5.665	34	0.167		
Total	8.249	35			

According to Table 7, a significance level below 0.05 signifies acceptance of the linear relationship between product innovation and competitive advantage.

Hypothesis 2: Pricing capability has a significant and positive impact on the competitive advantage of exporting companies.

Table 8
 Presents the analysis of variance for Hypothesis 2.

Model	sum of squares	Degrees of freedom	average of squares	F	Significance
regression	2.228	1	2.228	12.584	0.001
Remanders	6.020	34	0.177		
Total	8.249	35			

According to Table 8, the significance level is less than 0.05, indicating acceptance of the linear relationship between pricing capability and competitive advantage.

Hypothesis 3: Competitive advantage has a significant and positive impact on the international performance of exporting companies.

Table 9

Presents the analysis of variance for Hypothesis 3.

Model	sum of squares	Degrees of freedom	average of squares	F	Significance
regression	2.413	1	2.413		
Remanders	3.921	34	0.115	20.924	0.000
Total	6.334	35			

According to Table 9, the significance level is less than 0.05, indicating acceptance of the linear relationship between competitive advantage and international performance.

Hypothesis 4: Product innovation has a significant and positive impact on the performance of exporting companies through the mediating role of competitive advantage.

Table 10

Offers coefficients of the hierarchical regression models for Hypothesis 4.

Model	R	R ²	R ² modification	standard error	Wotton Camera	ANOVA			
						F	Df1	Df2	sig
Pricing capability-performance of export companies	0.451	0.203	0.180	0.385		8.66	1	34	0.006
pricing capability-competitive advantage-performance of companies	0.636	0.404	0.368	0.336	2.008	11.12	1	33	0.002

As shown in Table 10, the introduction of the competitive advantage variable into the relationship between product innovation and the performance of exporting companies renders the competitive advantage variable insignificant. Therefore, it can be concluded that the competitive advantage variable does not mediate the relationship between product innovation and the performance of exporting companies.

Hypothesis 5: Pricing capability has a significant and positive impact on the performance of exporting companies through the mediating role of competitive advantage.

Table 11
 Coefficients of the hierarchical regression models for Hypothesis 5

Hypothesis	Model	Non-Standardized Coefficients		Standardized Coefficients	t-Statistic	Sig. Standard Deviation
		B	Standard Deviation	Beta		
Dependent Variable: Export Company Performance	Constant Value	1.992	0.355		5.618	0.000
	Pricing Capability	0.342	0.116	0.451	2.944	0.006
Dependent Variable: Export Company Performance	Constant Value	1.268	0.379		.3.343	0.000
	Pricing Capability	0.135	0.119	0.178	1.131	0.266
	Competitive Advantage	0.460	0.138	0.525	3.336	0.002

Table 11 offers coefficients of the hierarchical regression models for Hypothesis 5. According to Table 11, the introduction of the competitive advantage variable into the relationship between pricing capability and the performance of exporting companies maintains the significance of the competitive advantage variable. Therefore, it can be concluded that the competitive advantage variable mediates the relationship between pricing capability and the performance of exporting companies.

4. Conclusions

The examination of this hypothesis reveals that product innovation indeed has a positive and significant impact on the competitive advantage of exporting companies, corroborating the hypothesis.

In a study on Iranian exporting companies, the influence of both product and process innovation on the competitive advantage of companies was examined, with results indicating that both types of innovation (product and process) positively and significantly affect the competitive advantage of exporting companies [20,35,36]. Another study by on Iranian exporting companies showed that product innovation positively and significantly impacts the competitive advantage of companies. Companies capable of pricing their products effectively operate more competitively in the export market and gain a greater competitive edge. Moreover, appropriate pricing enables these companies to compete in the global market and attain higher revenues. Numerous research studies have investigated pricing's impact on a company's competitive advantage. Research by Alegre & Chiva [37] demonstrated that pricing is a critical determinant of a company's competitive advantage and that proper pricing can significantly influence a company's competitive position [37]. Moreover, some studies indicated that incorrect pricing can lead to substantial losses for companies. Competitive advantage refers to a company's ability to compete effectively in the market and achieve greater success compared to competitors [38]. Various types of competitive advantages exist, including relative competitive advantages (e.g., cost advantages, technology, quality, and innovation) and absolute competitive advantages (e.g., access to resources, brand, and intellectual property rights).

Several studies have explored competitive advantage's impact on the international performance of exporting companies. Research by Lee [20] demonstrated that competitive advantage, as a crucial factor, can positively and significantly influence the international performance of exporting companies. This influence can manifest through increased revenue, market share, profitability, and company growth. In general, companies with competitive advantages tend to fare better in international markets and are better equipped to compete against their rivals. Product innovation in

exporting companies does not exert a direct impact on their performance; it can only affect performance through the mediating role of competitive advantage. Multiple research studies have been conducted on the impact of product innovation and competitive advantage on the performance of exporting companies.

Research by Alegre & Chiva [37] and Falahat et al. [24] suggests that product innovation is a crucial factor influencing the performance of exporting companies. Product innovation can assist companies in offering new, higher-quality products in new markets, thereby increasing revenue and profitability. However, in companies lacking competitive advantage, product innovation alone may not significantly impact their performance. In companies with competitive advantages, product innovation can enhance the competitive advantage by differentiating products from competitors and offering higher-quality products. According to the results of studies by Lee [20], competitive advantage cannot independently affect the relationship between pricing capability and the performance of exporting companies [2]; it plays a mediating role in this relationship. In other words, competitive advantage's impact on the performance of exporting companies is explained by pricing capability. Competitive advantage can increase demand for a company's products and services, allowing companies to set prices higher than their competitors with the resultant improvement in pricing capability. However, other factors also influence product and service pricing, including production costs, market competition, demand levels, and more.

Following research, the aim is to provide practical recommendations based on the research findings to enhance the situation under study. The current research is no exception, and the following practical recommendations are proposed to potentially improve conditions related to the research topic:

1. Encourage research and development processes in exporting companies to create innovative products and enhance competitive advantage. Support should be provided for utilizing the knowledge and expertise of universities and research centers to develop innovative products.
2. Companies should offer training courses and workshops to their employees to familiarize them with innovation and the process of creating new products.
3. Companies should conduct the necessary analysis to understand their competitors' pricing processes so they can calculate prices for their products or services accurately.
4. Companies should design appropriate pricing strategies to attract new customers and retain existing ones in foreign markets.
5. Companies should establish mechanisms to provide better post-sale services to increase customer trust and satisfaction, ultimately enhancing their competitive advantage.
6. Companies should develop suitable strategies to improve their competitive advantage and enhance their international performance.
7. Utilize advanced technologies in the production of new and innovative products and services.

Author Contributions

Conceptualization, methodology, software, validation, formal analysis, investigation, J.R., R.B., S.K., J.N.-J., and M.Z.N.; resources, data curation, J.R., R.B., and S.K.; writing—original draft preparation, writing—review and editing, J.R., R.B., S.K., J.N.-J., and M.Z.N.; supervision, J.R. All authors have read and agreed to the published version of the manuscript.

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Data Availability Statement

Data will be made available on request.

Conflicts of Interest

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

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