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Original Article

## The Influence of Mobile App and Media, Towards Entomophagy Awareness and Acceptability

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**Keywords:**

*Mobile Application,  
Entomophagy,  
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Awareness,  
Acceptability*

The speedy development of technology in the use of smartphones and their mobile applications (apps) have become momentous and influential in today's consumer perceptions. Accordingly, the media has in recent years advocated the nutritional, environmental, and economic benefits of edible insects. However, there is still a lacklustre aggressive multipronged approach to filling the awareness and acceptability gap of entomophagy through mobile apps and media. Therefore, this study aimed to assess the contribution of a developed and designed Mobile App in comparison with Other-Media Platforms in creating awareness and lack of acceptability. A total of 200 questionnaires were purposively distributed, 100 to each group and retained a 92% response rate. PLS-SEM was employed to simultaneously explain and predict the structural relationships among the (Insefood Mobile App and Other Media Platforms) and (Awareness and Acceptability). The reliability and validity of the measurement model were assessed using the four recommended procedural remedies; Factor loadings, Average Variance Extracted (AVE), Composite Reliability (CR), and Discriminant Validity. The structural model assessment and bootstrap resampling procedure was conducted to ascertain the statistical significance of path coefficients after running the PLS algorithm. The findings indicated high coefficients of determination for Insefood App, about 80% on awareness and 83% on acceptability, while Other Media Platforms' coefficient of determination was 28% on awareness and 35% on acceptability. Predictive relevance of Insefood values 0.562 on acceptability and 0.535 on awareness, and other media platforms recorded 0.061 on acceptability and 0.081 on awareness at ( $p < 0.05$ ). Thus, Insefood Mobile App contributed highly to awareness and acceptability than

Other-Media Platforms. Affirmed the higher efficiency of the Insefood Mobile App in driving awareness and acceptability at a larger scale than Other Media Platforms. This informs the need to Engage in robust and more technological yet, vigorous insect-product marketing.

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## INTRODUCTION

An estimated number of 1900 species of insect are consumed by approximately two billion people, primarily from developing countries of Asian, African, and South American origin (Van Huis, 2013; Hamerman, 2016). The substantial evidence indicates that at a developmental stage and diet, insects tend to be high in proteins, essential amino acids, fatty acids, vitamins, and minerals (Van Huis, 2013; Belluco et al., 2013). Additionally, insects are offering vital environmental and socio-economic benefits spanning from their sustainable rearing to income generation. Insect rearing produces a considerably lesser amount of greenhouse gas and ammonia emissions and requires relatively low water quantity, feed, and space per kilogram of protein than conventional meat production. Consequently, international agencies, chiefly the Food and Agriculture Organization of the United Nations are currently backing entomophagy to offset food inadequacy associated with an exponential increase in the projected global population, expected to reach nine billion by 2050 (Vogel, 2010).

Currently, many Western societies record low acceptability of insects and insect-based foods (Yen, 2009). Contrariwise, insects are a crucial constituent of food habits in developing countries as they are consumed as a staple delicacy (Hlongwane et al., 2021). Insect consumption has existed for years in Kenya. The common edible insect groups in the western part are; termites, crickets, and grasshoppers. Guiné et al., (2021). Despite a strong sustainability awareness, entomophagy has continued to face setbacks in some social classes in terms of their willingness to accept and consume insects, mainly weighing the lack of familiarisation. Environmental and nutritional benefits alone have less influence on consumers to consider insects as food if not rightly channelled to the populace (Looy et al., 2014). Additionally, the changes in cultural and social values have radiated a negative attitude towards insect consumption (Ayieko et al., 2010; Münke-svendsen et al., 2017). Additionally, Pambo (2018) postulated that in many communities, entomophagy is seen as primitive and outdated. Among farmers, insects are generally viewed as crop pests, yet they are more valuable in nutritional benefits (Ayieko, 2013). The aforesaid remains a barrier to entomophagy consumer acceptance.

This awareness gap could be filled through an aggressive multipronged approach to communication. The introduction of digital application software platforms that keep value chain actors engaged in patronising these products in a digital age would be of potentially great contribution to the promotion and marketing of insects as food and feed. Information surrounding insects' sustainability, origin, production, climate advantages, nutritional benefits, and safety is important to increase the awareness of the people and willingness to accept and consume insects (Barton et al., 2020; Mariod, 2020). Mobile apps provide interactive engagement that ensures 24/7 visibility to potential insect consumers users and better-personalised information content, granting tailored communication to people based on their interests, location, and usage behaviour. The features offered by mobile app services allow users to easily access and personalise the information about the product (Okpoko, 2006). Mobile Apps allow creating a constructive means of linking diversity of cultures across dispersed regions, which later leads to the exchange of ideas in myriad sectors of life, including opinions on the diet. Further, media allows syndicating the content on as many platforms as possible for people to organically reach the full awareness surrounding entomophagy (Redmond & Griffith, 2006; Tian & Robinson, 2008). Mobile App allows the rapid communication of information and ideas, and consumers gain information about the benefits and risks surrounding food. It is against this background that this study investigated awareness and acceptability of entomophagy contributed by mobile application software and Other Media Platforms in Western Kenya.

## MATERIALS AND METHODS

### Study Area

The survey was executed in Siaya County. Located between latitude  $0^{\circ}26'$  to  $0^{\circ}18'$  North and longitude  $33^{\circ}58'$  East and  $34^{\circ}33'$  West, the county houses about 993,183 people. Fishing, agriculture, and trade are the primary economic occupations in Siaya County (Boi & Bonyo, 2018; County Government of Siaya, 2018). Accordingly, Siaya County is characterised by two rain seasons and receives

rainfall ranging from 800 – 2000 mm per annum (Siaya County Development Office, 2018).

### Study Design and Sampling Procedure

A descriptive research design with a quantitative methodology was used in this study. The data for this study were collected using questionnaires as a tool. Two hundred consumers were purposively selected (that is nonprobability sampling requiring elements of the targeted population to fulfil a specific functional criterion, for example, possession of useful material, easy accessibility, or the willingness to participate in the study) (Etikan et al., 2016). One hundred semi-structured questionnaires with sections on demographics, the information content of entomophagy, Other Media Platforms' usage, Awareness and Acceptability constructs were applied to collect data on respondents who relied on Other Media Platforms, i.e., social media (Facebook, WhatsApp, YouTube, Instagram, Telegram), Mainstream media (Radio & Television), Print Media (Newspapers) and Internet (Search Engines, websites.). The other set of 100 questionnaires assessed the impact of a developed Insefood Mobile App in promoting entomophagy and housed the following constructs; Demographics, the information content of entomophagy, Mobile App Usage, Awareness and Acceptability. Collectively, the questionnaires retained a 92% response rate.

### Data Analysis

The survey data was analysed to find the extent of awareness and acceptability provided by the designed and developed Insefood Mobile App in comparison to Other Media Platforms that are currently in use within Siaya County. The data analysis was performed by SmartPLS.3, where Partial Least Squares-Structural Equation Modelling (PLS-SEM) was employed to concurrently elucidate and forecast the structural relationships among the independent variables, mediator, and dependent variable. The internal reliability and validity of the measurement model were evaluated using the endorsed practical remedies; thereafter, structural model assessment and bootstrap resampling procedure with 5000 samples were conducted to ascertain the statistical significance of path coefficients. The settings

recommended by Hair et al. (2022) in running the PLS algorithm were used and as such, the path-weighting system was designated to trail a standardised data metric. Accordingly, the value of the maximum number of iterations was 300, the initial value for all outer weights was set equal to one, and the stopping criteria value was  $<10^{-6}$ .

## RESULTS

### Socio-Demographic Traits of the Participants.

Table 1 below shows age intervals (21-30) and (31-40), which recorded a higher percentage of participants, indicating youths' insatiable longing for smartphone usage (Hunsaker & Hargittai, 2018). This is in line with the previous researchers that postulated the readiness of younger age groups to adopt insects as an alternative to meat (Verbeke, 2015). In contrast, another study found that age did not significantly influence consumer acceptance of insects; instead, a strong cultural bias towards insects was identified. Aboge (2021). Nonetheless, in this research majority of the respondents were youths which shows that the average younger cohort uses digital gadgets frequently and the Internet in their daily lives. Nicholas (2014) categorised the young generation as the 'Google Generation', an indication that the App received favour in usage by

young adults as compared to people with ages exceeding 40 years old. With the majority of the respondents attaining tertiary education, they had adequate knowledge and information necessary to make both comprehensible and cogent Insefood App usage.

Knowledge and information have been identified as key factors influencing consumers' decisions on food choices. In terms of gender, most females had experience and information on insect consumption, and this made the use of the Mobile App effective and efficient. Males are not much involved in meal preparation planning (Flagg et al., 2014). The aforesaid argument contributed to their dwindled responses; Males represented (40.2%) against females (59.8%) for the Other-Media App Data set. Insefood Mobile App Data set indicated male (39.1%) against female (60.9%). Accordingly, married participants expressed higher involvement in the study than single ones. Women who are married express household responsibilities, including making decisions regarding households' food choices, purchases, and consumption (Aboge et al., 2021). There is both discipline and diversity in food selection with married couples as compared to unmarried, including palatability during meal preparations. This espouses the larger participation of married folks, unlike single ones in this study.

**Table 1: Socio-demographic traits of the participants**

Characteristics	Category	Frequency	Percentage
<b>Other-Media Platforms</b>			
Gender	Male	37	40.2%
	Female	55	59.8%
	N	92	100%
Age	15-20	21	22.8%
	21-30	30	32.6%
	31-40	29	31.5%
	Above 40	12	13.0%
	N	92	100%
Education level	Secondary	13	14.1%
	Tertiary	79	85.9%
	N	92	100%
Marital status	Single	22	23.9%
	Married	70	76.1%
	N	92	100%
<b>Insefood Mobile App</b>			
Gender	Male	36	39.1%
	Female	56	60.9%

Characteristics	Category	Frequency	Percentage
<b>Other-Media Platforms</b>			
	N	92	100%
Age	15-20	14	15.2%
	21-30	24	26.1%
	31-40	42	45.7%
	Above 40	12	13.0%
	N	92	100%
Education level	Secondary	16	17.4%
	Tertiary	76	82.6%
	N	92	100%
Marital status	Single	27	17.4%
	Married	65	70.6%
	N	92	100%

### Measurement Model Evaluation

Test to which degree the study instrument measured the intended purpose, the two data sets were lifted to SmartPLS.3. To further evaluate the measurement model in readiness for structural analysis. In this stage, four assessments were examined for convergent and discriminant validity tests that include (i) factor loadings, (ii) Average Variance Extracted (AVE), (iii) Composite Reliability (CR), and (iv) Discriminant Validity for the research to go to another stage of analysis.

In *Table 2*, Average Value Extracted (AVE) ranges from 0.588 to 0.678 and 0.690 to 0.703. In both

tables, the values exceed the 0.5 thresholds, pointing to a satisfactory convergence validity. Next, the Composite Reliability (CR) values were greater than the recommended value of 0.70 (Hair et al., 2017). A reliability test was further conducted and yielded Cronbach's alphas for all factors above 0.709, as shown in *Table 3*. Following Verbeke (2005), the test results above the 0.7 cut-off value provided a satisfactory measure for internal consistency and confirmed the reliability of the study measures. The high values for (CR) show that there is high internal consistency. Therefore, the measurement model records a higher instrument-satisfactory convergent validity.

**Table 2: Cronbach's Alpha, Average Variance Extracted (AVE) and Composite Reliability (CR) of both Data set constructs**

Constructs	Reliability (Cronbach's alpha)	AVE	CR
<b>Other-Media Platforms</b>			
Mediating Variable	0.732	0.588	0.701
Entomophagy promotion by other media platforms	0.709	0.602	0.728
Awareness	0.723	0.646	0.754
Acceptability	0.730	0.678	0.743
<b>Insefood Mobile App</b>			
Mediating variable	0.786	0.703	0.876
Entomophagy promotion by a Developed Mobile App	0.909	0.690	0.930
Awareness	0.851	0.693	0.900
Acceptability	0.851	0.693	0.900

*Table 3* below. A successful evaluation of discriminant validity showed that a test of a concept is not highly correlated with other tests designed to

measure theoretically different constructs. Finally, the measurement model expressed that the

instrument had satisfactory convergent validity and discriminant validity.

**Table 3: Discriminant Validity on both measurement models Other Media Platforms and Insefood Mobile App**

	Acceptability	Awareness	Other-Medias	Mediating**
<b>Other-Media Platforms</b>				
Acceptability	0.823*			
Awareness	0.710	0.803*		
Other Media	0.702	0.720	0.776*	
Mediating Variable	0.712	0.711	0.715	0.767*
<b>Insefood Mobile App</b>				
Acceptability	0.832*			
Awareness	0.824	0.842*		
Mobile App	0.816	0.731	0.831*	
Mediating variable	0.814	0.821	0.822	0.838*

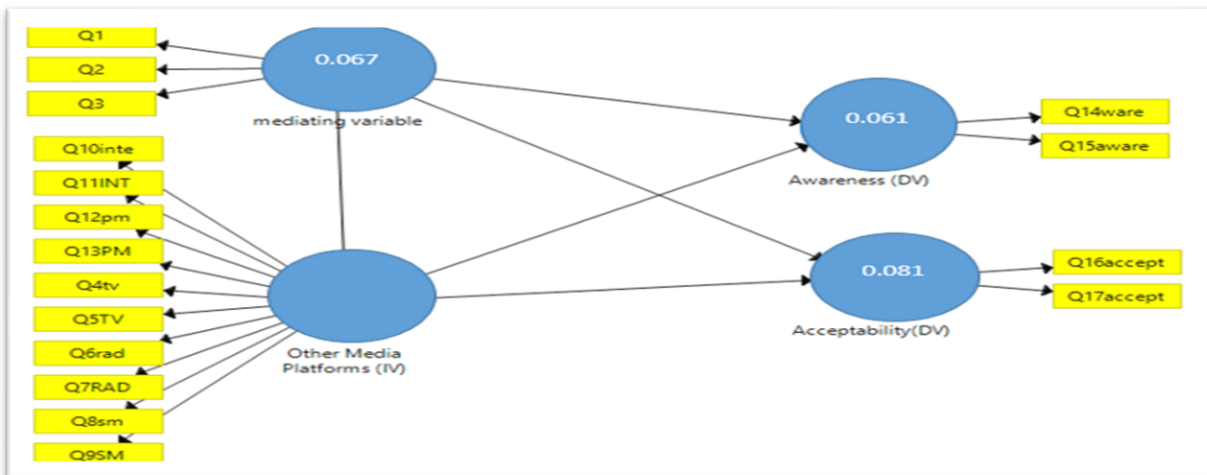
*\*The bold (diagonals) represent the squared root of AVE, while the other entries represent the correlations. \*\* Information content*

**Analysis of the Structural Equation Model**

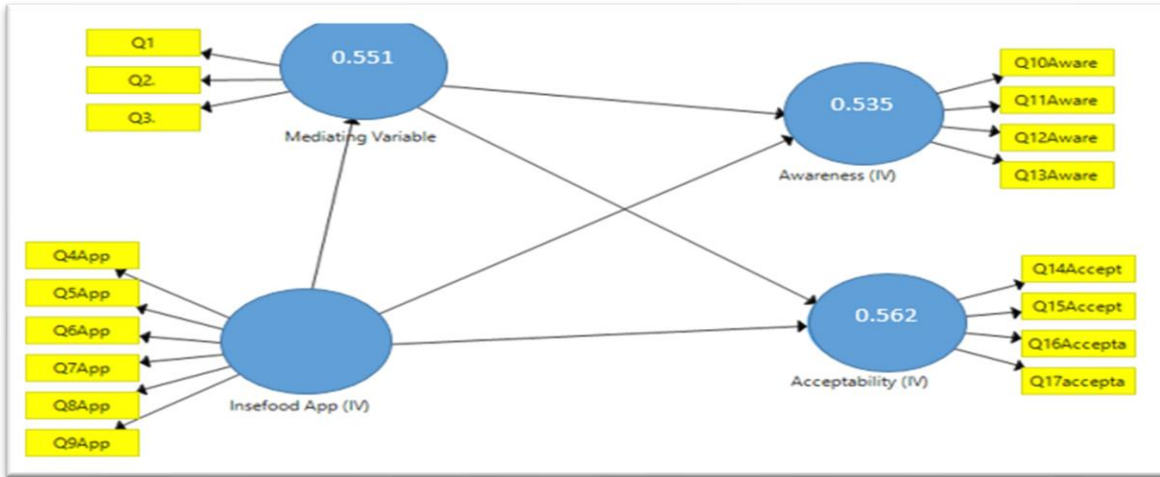
The Factor Analysis and Satisfactory Measurement Models enabled progress to the next step of the structural analysis. The adequacy of the structural model in PLS-SEM using SmartPLS 4 evaluated the model based on various criteria, namely: (i) the level of significance of path coefficients, (ii) the

coefficient of determination (R<sup>2</sup>), and (iii) predictive relevance (Q<sup>2</sup>) value of the path model (Hair et al., 2022). The bootstrap resampling procedure was applied to evaluate the statistical significance of path coefficients. The PLS algorithm was used to obtain the coefficient size. *Figure 1* and *2* indicates the Structural Model on Other Media Platform data set and Insefood Mobile App data set with their respective predictive relevances (Q<sup>2</sup>).

**Figure 1: structural equation modelling of Other-Media Platforms data set.**



**Figure 2: structural equation modelling of Insefood Mobile App data set.**



**Coefficients of Determination (R<sup>2</sup>) Results**

Table 4 shows the coefficient of determination or R Square (R<sup>2</sup>) statistics, which explains the variance in the endogenous (dependent) variable after an influence from the exogenous (independent) variable(s). The values portray a wider gap between the (R<sup>2</sup>) values of the two data sets. The values obtained from the Other Media Platforms are 0.350 for acceptability and 0.281 for awareness. This suggests the perceived variance value explained in the awareness to be 28% and 35% in acceptability.

Consequently, indicating a weak or low significant positive effect on awareness and acceptability. Nonetheless, the two coefficients of determination (R<sup>2</sup>) computed from the Insefood Mobile App data set indicate a high-level variance value explained, ranging from 83% in acceptability to 80% in awareness. Thus, considering the rule of thumb by Henseler et al. (2015) and Hair et al. (2013) on R square values, Insefood Mobile App recorded a more substantial variability in the target variable than that of Other-Media Platforms.

**Table 4: R squared values for both Other-Media Platforms and Insefood Mobile App.**

	R square	R square adjusted
<b>Other-Media Platforms</b>		
Acceptability	0.352	0.35
Awareness	0.283	0.281
Mediating variable	0.28	0.278
<b>Insefood Mobile App</b>		
Acceptability	0.832	0.828
Awareness	0.803	0.798
Mediating variables	0.796	0.794

**Effect size (F<sup>2</sup>) Results**

Table 5 below designates the effective sizes (F<sup>2</sup>), calculated to examine the impact of the exogenous constructs (Other Media Platforms and Insefood Mobile App) on the endogenous constructs (Awareness and Acceptability), following both the guidelines by (Hair et al., 2022) and thresholds,

proposed by (Murphy et al., 2012). The Other Media Platforms effect size in F squared values indicated medium and low influence towards endogenous variables; a moderate effect of 0.126 on acceptability and 0.122 on awareness. Accordingly, Insefood Mobile App’s effect size values ranged from 0.178 to 3.910 on acceptability and awareness, respectively. Thus, Insefood Mobile App notched

up a substantial impact in promoting awareness and acceptability of insects as food and feed than Other-media Platforms.

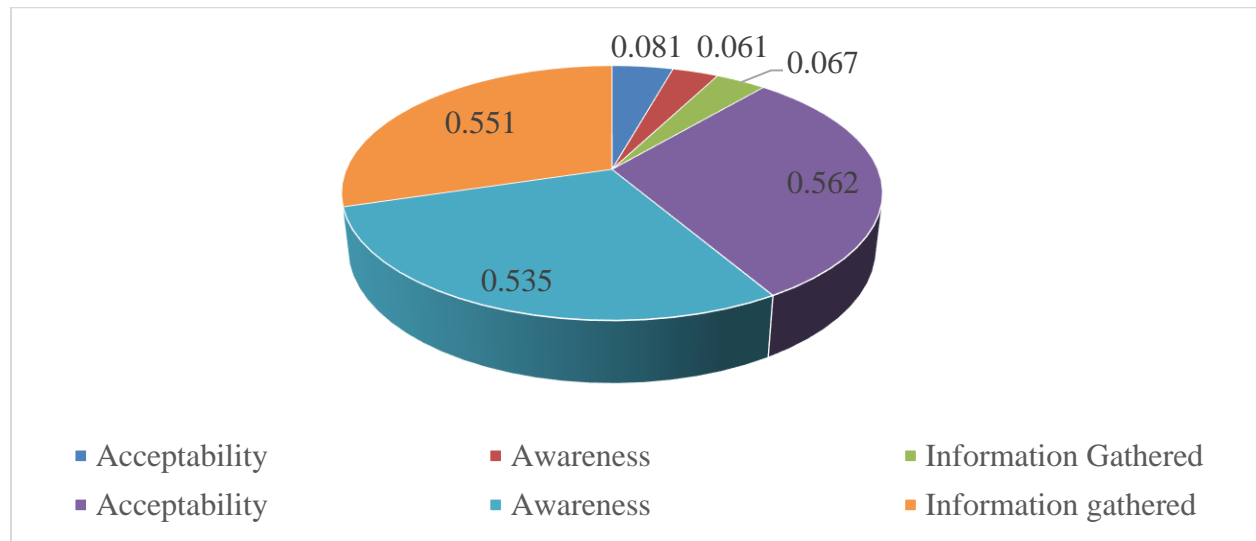
**Table 5: F square (effective size) for both data sets.**

	Acceptability	Awareness	Other media	Mediating
<b>Other Media Platforms</b>				
Acceptability				
Awareness				
Other media platforms	0.126	0.122		0.220
Mediating variable	0.053	0.020		
<b>Insefood Mobile App</b>				
Acceptability				
Awareness				
Mobile App	0.178	0.218		3.910
Mediating variables	0.371	0.219		

**Q2 Predictive relevance bearing on Awareness and Acceptability**

In the evaluation of the model’s predictive relevance, the Q<sup>2</sup> values were calculated using the blindfolding procedure. Q-square values above zero indicate that values are well reconstructed and that the model has predictive relevance (Hair et al., 2022). Nonetheless, there is a weak predictive relevance of the endogenous constructs (awareness and acceptability) associated with the exogenous variable (Other Media Platforms), ranging from

0.061 on acceptability and 0.081 on awareness. While from Insefood Mobile App’s Dataset, the values indicated a strong predictive relevance, ranging from 0.562 on acceptability, and 0.535 on awareness variables, as shown in *Figure 3* below. Therefore, Insefood App has substantial predictive power in explaining awareness and acceptability. The higher values of predictive relevance entail the strong contribution of the Insefood Mobile App towards awareness and acceptability. Figure 3: Q Squared of Both Other Media Platforms and Mobile APP





**Significance of the Model**

Statistical significance of various calculations such as path coefficients, R<sup>2</sup>, F<sup>2</sup> and Q<sup>2</sup> values as outlined in *Tables 4 & 5* and *Figure 3*. A nonparametric

procedure (bootstrapping) was run, and as shown in *Table 6*, every computation was significant. This entails the acceptance of results and the structural equation model.

**Table 6: Other Media Platforms’ and Insefood Mobile App bootstrapping.**

	Original sample (O)	Sample mean (M)	SD	T Statistics	p. values
<b>Other Media Platforms</b>					
Mediating variable – awareness	0.341	0.129	0.101	3.382	0.016
Mediating variable – acceptability	0.323	0.224	0.113	2.858	0.040
Other media platforms – acceptability	0.344	0.361	0.137	2.511	0.013
Other media platforms- awareness	0.349	0.383	0.112	3.116	0.002
Other media platforms- mediating variable	0.425	0.442	0.089	4.775	0.000
<b>Insefood Mobile App</b>					
Mobile App –acceptability	0.478	0.476	0.203	2.354	0.015
Mobile App –awareness	0.460	0.457	0.130	3.546	0.000
Mobile App -mediating variables	0.892	0.899	0.027	33.337	0.000
Mediating Var- acceptability	0.553	0.553	0.219	2.528	0.012
Mediating Var – awareness	0.461	0.469	0.133	3.477	0.001

**Mediation Effect of Knowledge Gathered in the Model**

Mediation analysis was performed to assess the mediating role of Information-Content on the linkage between Other Media Platforms and Awareness/ Acceptability, which is the control group. The other mediating analysis was performed to determine the intermediating role of Information

Content on the connection between the Insefood Mobile App on awareness/ acceptability, as shown in *Table 7*. This study postulated that the Information Content mediates the relationship between perceived values of Other Media Platforms (OMP) on Awareness and Acceptability. Therefore, the mediation effect was examined using the procedures by Hayes (2009). As a result, bootstrapping was suggested as the strategic approach.

**Table 7: A mediation analysis**

Total effect		Direct effect		Indirect effects					
OMP-Awareness/ acceptability		OMP-Aware/Accept		OMP on Awareness and Acceptability					
β	p	β	P-value	β	SD	T value	p-value	BI	(2.5%, 97.5%)
<b>Other Media Platforms</b>									
0.342	0.003	0.304	0.031	OMP	0.412	0.129	4.079	0.011	0.167-0.237
0.323	0.012	0.312	0.036		0.431	0.089	5.105	0.004	0.173-0.282
<b>Insefood Mobile App</b>									
0.460	0.00	0.334	0.022		0.520	0.061	8.525	0.001	0.178-0.294
0.478	0.015	0.344	0.033		0.572	0.082	6.976	0.002	0.185-0.305

## DISCUSSION

Among the effective marketing or promotion strategies, mobile Apps have been useful tools in product and service promotion globally. An effective marketing campaign requires effective dealing with the exponentially rising information (Iqbal et al., 2018). This study examined the effect of perceived values on Insefood Mobile Apps and Other Media Platforms and tested the mediation effect of information content on overall awareness and acceptability.

### **Influence of Insefood Mobile App in Promoting Entomophagy Awareness and Acceptability**

*Figure 3* indicates that Mobile App's perceived values recorded the highest than other media values, emphasising that Insefood mobile app users were more satisfied with insect content housed by the App than the group that depended on Other Media Platforms. Contrary to the findings of Summerfield (2012), the younger generation group refuses to use the apps to unearth information and prefers the interactivity of the apps for pleasure-seeking and personalisation for regular usage. The Insefood Mobile App kept the value chain actors engaged to patronise insects' products and their multidimensional benefits. Even though Covid-19 exacerbated challenges to social interactions (Fiorillo & Gorwood, 2020), the Insefood App provided better-personalised information content, granting tailored communication to people based on their interests, location, and usage behaviour. Insefood Mobile App took advantage of the flux engagement of smartphones, which has made the use of Insefood Mobile App a potent force in giving unmatched progress in the quantity and quality of entomophagy information, speed, and logically cogent information- circulation was at the fingertip. The App targeted not only psychological factors on food acceptance (e.g., cultural conditioning, food neophobia, and personal values/experiences); but also product-associated factors, including appearance, taste/flavour, nutritional qualities, availability, and perceivable benefits. Information content housed by the App led to a stronger influence on awareness and insects' acceptability. This was in line with Verneau et al. (2016), suggesting that informing consumers of the benefits of eating insects increases their intention to

entomophagy acceptance. A developed Mobile App espoused substantial edible insect content 24/7 online or offline, in terms of pictures, literature, YouTube videos, and websites such as FAO, and Insefood, via hyper texting links, which incorporated all the factors that create consumer willingness towards insect's products and services. This made research participants show more willingness to accept edible insects, as indicated by the predictive relevancies in figure 4 above. Additionally, Johnston (2008) and Guthman and Brown (2016) supported the idea of exposure to promote the broader benefits of entomophagy and education to change the attitude of those who identify edible insects as a novelty. Indeed, convincing consumers that insects can be pleasurable to eat is a daunting task that requires a more diverse and robust approach by taking advantage of the booming technological advances to promote the adoption of entomophagy (Deroy et al., 2015).

Supported by Khalufi et al. (2019), mobile Apps in marketing are considered the lowest and cheapest technique to reach consumers or any other intended target as compared to TV, Radio, and general media. Like Insefood Mobile App, mobile apps house numerous benefits for the target group. Mobile App devices, unlike Other-Media platforms, can be accessed from anywhere and at any time. Thus, acting as an instantaneous media for the consumers, who get notified on a product content or service that they are interested in (Tadesse & Bahigwa, 2015). This entails that the Insefood mobile App saves time and effort for the consumers since it incorporates mobile marketing techniques, such as push notifications, with the use of smartphones' geolocation technology for promoting special coupons and sending a personalised message to the consumers

### **Other Media Platforms on Consumer Awareness and Acceptability**

Other Media Platforms weakly contributed to entomophagy awareness and acceptability as compared to the solely Insefood Mobile App. The less influence of other media platforms on acceptability and awareness in this study can be attributed to the consumers' negative perceptions surrounding insects and infrequencies in edible

insects' coverage by Other-Media Platforms. Accordingly, Ivy Panda (2018) highlights that media propagates information on entomophagy in a way that provokes fear and disgust in consumers when the solution should be increasing the portrayal of insects as acceptable creatures of multidimensional benefits. Cogently put, the love for nature should coerce an individual to consider insects a part of a beautiful environment in both ecosystem services and consumption. Additionally, Kremen and Miles (2012) outlined the progress of media coverage for food security, species diversity, growth stimulation, stability, ecosystem services, and natural-agricultural ecosystems resilience but omitted entomophagy in their discussion breeding knowledge gap on insects as food and feed. Media exposure is not homogeneous. Some subjects are usually portrayed in an encouraging way and others in negative terms Isernia and Marcolin (2019). The low contribution of media to entomophagy is attributed to the media-flooding of other sectors, where media dialogue on food security and sustainability usually shares the prevalent political discourse, e.g., on climate change or the interests of the dominant economic actors, while shunning topics like entomophagy (Olausson, 2009; Peters & Heinrichs, 2010).

## CONCLUSIONS

The data from the study concludes that Insefood Mobile App contributes highly to awareness and acceptability than Other-Media Platforms. The logical reason is attributed to a better-personalised information domain, offering tailored communication to people based on their interests, location, and nutritional benefits of insects as food and feed. The Insefood Mobile App provided interactive engagement that ensured 24/7 visibility to participants and harnessed familiarisation and exposure, breeding a substantial willingness towards entomophagy by consumers. Additionally, the Insefood Mobile App proved to be a more conducive way of promoting awareness and acceptability amidst roaming threats of pandemics, like Covid-19, which crippled social interactions. Accordingly, the Mobile APP provided reliable, updated information to people with physical (motor) disabilities in a friendly form. However, there was a low contribution of Other Media Platforms towards awareness and the willingness of the consumers to

accept entomophagy. Unlike the Mobile App, the general media did not provide personalised information on insects as food and feed. The information accessed during the study from other media platforms was mixed. On the one hand presented insects as beneficial, on the other as notorious pests. The majority are still viewing insects with disgust and as pathogens due to the ambiguity surrounding the consumption of insects by humans. Upgrading and deployment of Insefood Mobile App to a larger populace in order to score substantial coverage with a quest to spread essential edible insects' information, engagement in a robust and more technological yet, vigorous insect-product marketing, and involvement of deliberate entomophagy promotion on various online media by factoring in key issues that obviate disgust and misconception. Espoused by (Werunga, B. J., 2022) if optimally exploited, media can considerably contribute to enhanced consumption of insects and, as a result, promotion of food and nutrition security.

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## ETHICAL APPROVAL

This study was ethically reviewed and permitted by the Ethical Review Committee and Board of Postgraduate Studies of JOOUST. Permission to collect data from the study county was obtained from the Board of Graduate Studies. Consumers who took part in the study completed consent forms and were assured of anonymity.

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