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Impact of age on actual purchase, confirming the mediating role of overload confusion and ambiguity confusion: Insights from mushrooms in Zimbabwe

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ABSTRACT

Information overload and ambiguity confusion have been areas of great concern to date for both marketers and consumers. The situation has led researchers to seek more understanding of the consumers and what drives their purchase behaviour such that marketers can sell them their products, and develop businesses, on that basis. The challenge of confusion comes from the background that consumers are information processors, but as they get aged, their information processing capacity declines. Therefore, this paper seeks to analyse the impact of age on actual purchase mediated by the level of overload confusion and ambiguity confusion. The qualitative data were analysed using the thematic content analysis approach in Nvivo version 12. Reliability and validity of the scale were tested using Confirmatory Factor Analysis and Structural Equation Modelling. SmartpPls was used for calculating the path coefficients in order to mirror the relationships between the variables. The results show that old age consumers experience higher levels of information overload and ambiguity confusion than young adult consumers in the age group 18 - 49 years which is in line with the theory under study. However, high level of information overload confusion empirically proved that its impact on actual mushroom purchase reduction is insignificant. High level of information ambiguity confusion showed a significant inverse impact on actual purchase behaviour. Qualitative evidence showed that high levels of confusion negatively impact on actual purchase behaviour in both age groups. Mushroom marketers were therefore recommended to consider segmenting cultivated mushroom markets on the basis of age and the type of confusion which they experience. A recommendation was also made that marketers could provide consumers with only essential mushroom information through mass media to reduce chances of information overload during information search.

KEYWORDS

actual purchase, age, consumer confusion, information ambiguity confusion, information overload confusion

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Introduction

Tremendous developments in information technologies have enabled consumers to easily access a lot of product decision-relevant information of different quality. However, the same consumers have natural information processing limitations linked to their ages (Hatague & Nabua, 2019; Cowan, 2015). Such a scenario has a potential of resulting in information overload confusion, and information ambiguity confusion in the cultivated mushroom market.

Turnbull, Leek and Ying (2000, p. 145) define consumer confusion as, "… consumer failure to develop a correct interpretation of various facets of a product/service, during the information processing procedure. As a result, this creates a misunderstanding or misinterpretation of the market." Similarly, Walsh (1999, p. 24) views consumer confusion as "…an uncomfortable state of mind that primarily arises in the pre-purchase phase and negatively affects consumers' information processing and decision-making abilities and can lead consumers to making sub-optimal decisions." Turnbull et al. (2000) and Walsh (1999) concur that for consumer confusion to occur, cognitive information processing procedure is negatively influenced and decision-making abilities get negatively affected.

Ultimately, the consumer is faced with a mental challenge and failure in one way or the other in the purchasing process. This situation causes mushroom pickers to mix-up edible mushrooms with poisonous mushrooms in the forest, while shoppers broadly fail to understand, and differentiate cultivated mushroom from wild edible mushrooms and poisonous mushrooms (Ngwenya, 2018). In brief, consumer confusion results in time wastage (Renjith, 2017), deferment of purchase decision (Mitchell, Walsh & Yamin, 2005), or complete abandonment of the product (Mitchell, Walsh & Yamin, 2005; Matzler & Waiguny, 2005; Garaus et al., 2014). As a result, this makes consumer confusion an important phenomenon that draws attention for both the consumer and the producer in the cultivated mushroom market.

Previous studies (e.g., Mitchell & Papavassiliou, 1999; Walsh, Henning-Thurau & Mitchell, 2007; Mitchell, et al., 2005; Mitchell, Walsh & Yamin, 2004; Walsh, Lindridge, Mitchell & Kilian, 2016) hold that, too similar information, too much and too ambiguous information can be factors attributing to consumer confusion in the goods market. Hence, the informational environment is instrumental in

determining the type and level of confusion a consumer experiences before, during and after a purchase.

Additionally, age was arguably viewed as an underlying factor that reduces or triggers confusion in the described informational environments (Mitchell et al., 2004; Mafini et al., 2014). That is, the consumer's age and information processing capability can determine the type and level of confusion a particular consumer can experience or is prone to in the informational environment (Walsh, 1999; John & Cole, 1986). As such it is the consumer's age-based failure to correctly interpret the product information during information processing that results in a misinterpretation, misunderstanding or confusion (Mitchell et al., 2004). Similarity, quantity and quality of the product information can be viewed as informational environmental antecedents of consumer confusion while age is an individualistic internal cause of the same (Mitchell et al., 2004).

Consumer confusion comes in three dimensions which are information similarity confusion, information ambiguity confusion and information overload confusion (Mitchell & Papavassiliou, 1997, 1999; Walsh et al., 2007; Mitchell et al., 2005; Mitchell, et al., 2004; Walsh et al., 2016). However, this study only focused on information overload confusion and information ambiguity confusion since information similarity confusion seem to have been adequately covered in other studies.

Walsh et al. (2007, p. 704) define overload confusion as "consumers' difficulty when confronted with more product information and alternatives than they can process in order to get to know, to compare, and to comprehend alternatives." The ever-increasing quantities of information being constantly availed on the market through various forms of media are one of the sources of information overload (Anninou & Foxall, 2019). Drawing from this notion, it means consumers are overwhelmed by wild mushroom information as well as cultivated mushroom alternatives in their attempt to organise, compare and understand it. Since decision makers have limited cognitive information processing capacity, when they get information overloaded, the power needed to make decisions gets beyond the limit of the processing capability leading to confusion (Kashada, Isnoun & Aldali, 2020). In support, Li (2016) argues that it is not only the quality and quantity of product information that leads to information overload confusion, but also the consumer's characteristics such as age and information processing abilities.

Mitchell, et al. (2004, p. 8) define ambiguity confusion as, "a lack of understanding during which consumers are forced to re-evaluate and revise current beliefs or assumptions about products or purchasing environment." Abdollahi, Ranjbarian and Kazemi (2020) argue that high volumes of conflicting, inconsistent and outdated flawed information contribute to information ambiguity and confusion; hence, it is information quality that matters. According to Govorushko, Rezaee, Dumanov and Tsatsakis (2019) the major source of mushroom poisonings in the world comes from confusing edible mushrooms with toxic ones. This mental state causes consumers to shun consumption of cultivated mushrooms because of the feeling that, 'mushroom is just mushroom, it can be poisonous'. Consumer confusion has over the years been defined on the basis of informational causes (Walsh, et al., 2007; Mitchell, et al., 2004) yet, there are a variety of categories of causes of consumer confusion such as information processing capacity and personal factors (which includes age) (Jackson & Farzaneh, 2012).

Age is an influential factor that affects levels of information overload confusion and information ambiguity confusion due to experience and declining information processing capabilities that come with ageing (Mitchell et al., 2005). That is, adequate experience in the use of a product may reduce confusion in aged consumers. Paradoxically, declining information processing capabilities in the same age group tend to increase overload and ambiguity confusion. Rezaei, Shahijan, Amin and Ismail (2016) argue that aged consumers are more vulnerable to information overload confusion than young consumers. However, Mafini, Dhurup and Mandhlazi (2014) contend that young consumers are more prone to information overload confusion than aged adults.

In support, Ngwenya (2018) confirmed the death of ten family members of Mberengwa in Zimbabwe after consumption of poisonous wild mushrooms which had been picked by a 16-year-old girl, and others even much younger. The picking of poisonous mushrooms could be explained from the perspective of information overload or information ambiguity confusion by the minors.

There is a general paucity of empirical research focusing specifically on the relationships between age and consumer confusion. Previous studies by Mitchell, et al. (2004), Mitchell et al. (2005) and Mafini et al. (2014), did not provide adequate and detailed literature on age and information overload confusion and information ambiguity confusion. Availability of such literature

would assist cultivated mushroom marketing practitioners when they segment cultivated mushroom markets and craft promotional strategies.

Following the above assertions, the following three hypotheses were proposed. They are arranged on the basis of independent variables constituting them.

H_1: Old age increases the level of information overload confusion.

H_2: Old age increases the level of information ambiguity confusion.

H_5: Old age reduces actual purchases of cultivated mushrooms.

Consumers are rational individuals with individualistic information assimilation and processing limitations which can be aggravated by ageing, resulting in information overload and confusion (Mitchell, et al., 2005; Lynn and Sternthal, (1977); Ozkan and Tolon, 2015). An information overload-confused consumer is likely to make a regrettable purchase decision (Renjith, 2017; Mitchell and Papavassiliou, 1999), defer the purchase decision (Mitchell, et al., 2005), feel stressed and frustrated (Mitchell and Papavassiliou, 1999) or stop the purchase completely, which then worries the cultivated mushroom producers. Following the review above, the hypothesis below was suggested.

H_3: High level of information overload confusion reduces chances of actual purchase behaviour.

Information ambiguity-confused consumers lack full understanding of the available product which most likely forces them to defer the actual purchase decision and seek clarification (Mitchell, et al., 2005; Bibi and Iqbal, 2015), or misidentify the product and make wrong inferences (Hefti, Liu and Schmutzler, 2020; Leek and Szmigin, 2015). Information ambiguity confusion takes place in the mind of the consumer when the amount of doubt exceeds the consumer's capacity of tolerance to process unclear information (Fang, 2019; Wang and Shukla, 2013). Basing on the discussion above, the following hypothesis was postulated.

H_4: High level of information ambiguity confusion reduces chances of actual purchase behaviour.

Mediation

"Mediation is a correlational analysis applied to observational data to infer causal relationships between an independent variable (X) and the dependent variable (Y)" (Jollineau and Bowen, 2021, p.32). Hence, mediating variables can be viewed as techniques through which independent variable influences

the dependent variable (Hayes 2013; Frazier, Tix and Barron, 2004). Actually, in a mediational model the independent variable causes the mediating variable, while the mediating variable causes the dependent variable (Wu and Zumbo, 2008; Chan, Hu and Mak, 2020). In other words, a mediating variable "… seeks to explain *how* or *why* X influences Y" (Jollineau and Bowen, 2021, p.32). Mediating variables explain the direction in which the intervention causes the outcome (Wu and Zumbo, 2008). Additionally, "While moderators strengthen the relationship between independent and dependent variables, mediators intervene between the independent and dependent variables" (Soleman and Tiffannie, 2021, p. 43). Normally, mediators formulate an indirect relationship through connecting the two variables X and Y which usually assists in explaining the process of the relationship.

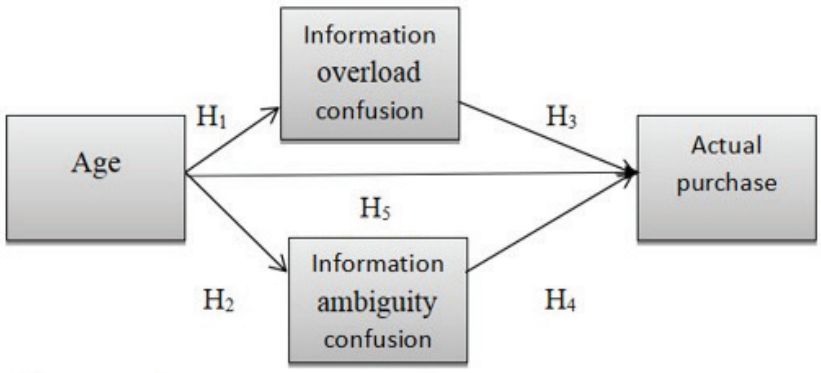


Figure 1 illustrates the relationships between age, confusion and actual purchase in the study.

Figure 1: Conceptual framework

Consumers in this study are in two segments; the young and the aged or 18-49 years old and 50 years and above. The categories experience information overload confusion as well as information ambiguity confusion which are rooted in their ages and information processing abilities (Mitchell, et al., 2004; Mafini, et al., 2014). This phenomenon of confusion negatively affects both the consumer, in terms of frustration (Mitchell and Papavassiliou, 1999) and time wastage, and the mushroom entrepreneur with respect to purchase behaviour and profit margin. Therefore, literature on information overload confusion and information ambiguity confusion based on age would bridge the knowledge gap between age, confusion and consumer purchase behaviour.

Many researchers studied information overload confusion and information ambiguity confusion (e.g. Mitchell and Papavassiliou, 1999; Turnbull, et al., 2000; Mitchell, et al., 2005; Wang and Shukla, 2013; Mafini, et al., 2014; Ozkan and Tolon, 2015; Rezaei, et al., 2016; Fang, 2019). Others pursued ethnomycology (e.g. Wendiro, Wacoo and Wise, 2019; Haro-Luna, Ruan-Soto, and Guzman-Davalos, 2019). However, there is not adequate literature linking age and confusion to mushrooms consumption and purchase behaviour. Literature on consumer confusion is indispensable for both cultivated mushroom farmers and the consumers themselves. It saves lives for consumers and enables mushroom entrepreneurs to maneuver through successful marketing strategies to better profit margins. The importance of information overload confusion literature and information ambiguity confusion literature as they are related to age of domesticated mushroom consumers and the farmers triggered the researcher's interest in this field. The purpose of this study was to analyse the impact of age on actual purchase, with information overload confusion and information ambiguity confusion as mediators in the cultivated mushroom industry in the developing economy of Zimbabwe.

Methodology

The study followed a pragmatist research paradigm since the challenge of age and consumer confusion in the mushroom market in Zimbabwe is quite practical and calls for practical solutions to facilitate development of mushroom entrepreneurs. The pragmatist view was adopted because it focuses on the problem at hand and how it can be solved using methods and resources that work in the context (Creswell, 2014). It was designed following the explanatory sequential mixed method design which applies both quantitative and qualitative data in the survey. The design began with a quantitative study followed by a qualitative survey to further clarify the quantitative results The major rationale behind using this design was that the qualitative methodology would cover up for the weaknesses and bias of the quantitative methods and vice versa (Creswell, 2015a; Shannon-Baker, 2016). In this study quantitative methods were dominant while being complemented by the qualitative survey methods. Thus, qualitative results gave further clarifications on the relationships between age, confusion and actual purchase in the mushroom market in Zimbabwe.

The target population was 2 200 as confirmed by the Municipality of Marondera. The age groups used in the study were 18-49 years and 50 years and above which were adapted from Matzler and Waiguny (2005). The age

groups were used in the study since they were able to establish purchasing power and willingness to purchase cultivated mushrooms. Additionally, the age groups were composed of mature consumers who can show meaningful information processing of mushrooms. Urban consumers were used since most mushroom farmers in Zimbabwe are found in urban and peri-urban areas (Mutema, et al., 2019; Fresh Plaza, 2021). Following Krejcie and Morgan's (1970) table, the sample size for a target population of 2 200 is given as 327 subjects at 95% level of significance as illustrated in Appendix A. The sample was drawn from Ward Four in Marondera urban which has 2200 households. Household numbers in ward four on the Municipality list were selected using random numbers. One mature and willing person was picked to participate from every household selected. The residents were divided into two age groups of two hundred and five (205) young consumers and one hundred and twenty-two (122) aged consumers which meant when the results for old aged consumers were obtained, those for young consumers were inferred. More youthful consumers were included in the sample since, proportionally; young people are more than aged consumers (Zimbabwe National Statistics Agency (ZimStat, 2012). Quantitative data collection for the first phase followed.

Phase 1: Quantitative survey

Data collection

The instrument was administered through mall-intercepts and drop-off method. One hundred (100) participants provided data through mall-intercepts, while two hundred and twenty-seven (227) were supplied with questionnaires while in their homes. Mall intercepts were used even if the participants are not fully representative of the population because mall customers make up a huge share of the market for many products including cultivated mushrooms. Drop-off method had the advantage of allowing subjects adequate time to complete the questionnaire while in the comfort of their homes.

Measurement instruments, reliability and validity

Data for the first phase were gathered through the survey method, using a structured questionnaire. The structured questionnaire was used since it was suitable for the collection of a large quantity of numerical data from the large sample. It was also easy to administer and relatively inexpensive to use.

Cronbach alpha coefficients for all the variables ranged from 0.699 to 0.821, which shows that the instrument was internally consistent and, hence, collected

reliable data. The calculated KMO value was 0.776, which illustrated that the sample was adequate and capable of providing valid and reliable data. Convergent validity and discriminant validity calculations for the data were worked out and shown in Table 2, Table 3 and Table 4. In order to measure validity of the interview guide the researcher selected six people who are knowledgeable in mushroom consumption, production and distribution to provide expert qualitative data. The six people selected analysed the data collection instrument in order to rid it of unclear questions, leading and emotive questions. This was followed by the qualitative data collection and analysis.

Phase 2: Qualitative survey

In the second phase a sample of twelve (12) elements was selected from the larger sample. The purposive sampling technique was applied to come up with the sample of twelve, that is, only elements that are knowledgeable in mushrooms were selected for the second and final phase. A sample size of twelve was enough to avoid unnecessary repetition of ideas without any new data coming up. Guest, Bunce and Johnson (2006) argue that a small sample of up to twelve (12) participants is adequate for gathering qualitative data. However, the technique has the drawback of bias since the researcher could prefer one participant to another, posing challenges of population representativeness. Semi-structured interviews were used. The method was selected since it outlines targeted issues and specific questions as targets of the interview. Semi-structured interviews are more flexible than structured interviews while more focused than unstructured ones. Data were collected through an interview guide with stated questions, but allowing probing on age, information overload confusion, information ambiguity confusion and mushroom purchase behaviour. This allowed interviewees to express their views openly in a guided and focused style.

Results

Table 1 shows the demographic profile and response rate for the study.

Table1: Demographic profile and response rate

Age group	Data collection method	Questionnaires administered	Questionnaires returned	Response rate
18-49 years old	Mall intercepts	60	60	94%
	Drop-off	145	138	
50 years and above	Mall intercepts	40	40	
	Drop-off	82	71	
TOTAL		327	309	

Source: Survey data

Three hundred and nine participants out of a sample of 327 returned their questionnaires for processing which resulted in 94% response rate. According to Fosnacht, Sarraf, Howe and Peck (2013) in their Higher Education survey, this is a high response rate which ensures unbiased estimates from a survey.

Convergent Validity

Composite Reliability (CR), Average Extracted Variance (AVE) and Cronbach alpha test (CA) were conducted to examine convergent validity of the items.

Table 2 shows the summary of the results.

Table 2: Descriptive statistics for the items

	AAC	IAC	AOC	AP	IOC
CA	0.803	0.789	0.785	0.841	0.743
CR	0.884	0.876	0.858	0.888	0.826
AVE	0.717	0.702	0.605	0.615	0.547
VIF	1.745	1.670	2.124	1.912	1.410

Source: Survey data

The VIF values suggest absence of multicollinearity in the items. The CA, CR and Ave values are all good, suggesting existence of convergent validity. The standardized factor loadings and cross-loadings are also used to confirm the existence of convergent validity. The factor and cross loadings are shown in Table 3.

Table 3: Factor and cross loadings

	AAC	AOC	AP	IAC	IOC
AAC2	**0.847**	0.225	0.306	0.224	0.039
AAC3	**0.849**	0.135	0.355	0.192	0.087
AAC4	**0.844**	0.219	0.303	0.202	0.046
AOC4	0.182	**0.622**	0.289	0.234	0.114
AOC6	0.104	**0.764**	0.531	0.702	0.044
AOC7	0.189	**0.870**	0.599	0.674	0.125
AOC8	0.194	**0.831**	0.622	0.656	0.091
AP1	0.502	0.313	**0.673**	0.295	0.091
AP4	0.143	0.552	**0.715**	0.586	0.020
AP6	0.243	0.559	**0.809**	0.645	0.024
AP7	0.279	0.534	**0.847**	0.734	0.058
AP8	0.289	0.594	**0.859**	0.783	0.021
IAC2	0.281	0.560	0.718	**0.875**	0.133
IAC3	0.190	0.520	0.667	**0.840**	0.061
IAC8	0.124	0.702	0.572	**0.798**	0.071
IOC10	0.078	0.056	-0.029	0.007	**0.605**
IOC7	0.015	0.117	0.029	0.079	**0.773**
IOC8	0.071	0.069	0.026	0.084	**0.714**
IOC9	0.064	0.124	0.082	0.109	**0.845**

Source: Survey data

The entire cross loadings displayed in Table 3 are exceeding the threshold value of 0.6 showing the existence of convergent validity on the items. The inter-constructs correlations and the square root of AVEs that help in confirming discriminant validity of the items are shown in Table 4.

Table 4: Inter-constructs correlations and square root of AVEs

	AAC	**AOC**	**AP**	**IAC**	**IOC**
AAC	0.847				
AOC	0.231	0.778			
AP	0.378	0.65	0.784		
IAC	0.244	0.698	0.784	0.838	
IOC	0.066	0.135	0.056	0.108	0.74

Source: Research

There is discriminant validity because the entire square root of the AVE values are above the corresponding correlation coefficient values. This is the requirement for discriminant validity.

Hypothesis Testing

SmartpPls was employed in the calculation of the path coefficients after constricting a Structural Equation Model (SEM). The results of the path coefficients are summarized in Table 5.

Table 5: SEM results

Hypothesis	Relationship	Coefficient	*T-statistic*	*P*-values
H_1	AOC -> IOC	0.135	1.922	0.055
H_2	AAC -> IAC	0.244	4.373	<0.001
H_3	IOC -> AP	-0.043	1.307	0.192
H_4	IAC -> AP	0.687	20.631	<0.001
H_5	AGE -> AP	-0.447	13.571	<0.001

Source: Research data

Results for Old Age and Information Overload Confusion

Hypothesis 1: Old age increases the level of information overload confusion.

According to the results in Table 5, old age increases the level of information overload confusion ($\beta = 0.135$, $t = 1.922$ $p < 0.1$). For each additional year of age, the level of confusion increases by a factor of 0.135. Hypothesis 1 was therefore, not rejected at 10% significance level basing on the statistical evidence. Aged consumers are therefore easily overwhelmed by cultivated mushroom information and become confused due to declining cognitive information processing competencies (Mitchell, et al. 2005; Rezaei, et al., 2016). It became statistically evident that age significantly determines the level of information overload confusion. The excerpt below was extracted from an interview script and it also provides evidence that old age influences level of information overload confusion in the cultivated mushroom market.

> "Being old means I have accumulated a lot of information. The information can be excessive that it causes confusion on what to believe and what not to believe as many different views from others affect our mental processes. Hence old age influences the level of information overload confusion"

However, Osmani, (2016) argues that it depends on individuals, since at old age some would have accumulated experience and alternative decision

making strategies that enable them to manoeuvre through large amounts of product information without overload and confusion. In fact, Osmani, (2016) actually observed that there is no statistical significant evidence that cognitive information processing power for adults declines with ageing. Ismagilova, Dwivedi, Slade and Williams, (2017:76) argue that, "Information overload depends on the amount of information, type of information, and format of information", which implies that old age is not the only antecedent of information overload confusion. If the value of the cultivated mushroom information is not very important to the consumer, it bothers him or her unnecessarily leading to overload and confusion. The excerpt below which was extracted from interview scripts has the justification that information overload confusion affects even the young mushroom consumer segments.

> "Youths do not have the same level of information processing capabilities because they are young; the levels vary, exposing them to varying levels of information overload confusion."

Therefore, even though information overload confusion is mostly common among aged (50 years and above) consumers, it is also experienced by young (18 – 49 years old) cultivated mushroom consumers.

Results for Old Age and Information Ambiguity Confusion

H_2: Old age increases the level of information ambiguity confusion.

The level of information ambiguity confusion increases as old age increases. Age showed a statistically significant positive association with information ambiguity confusion ($\beta = 0.244$, $t=4.373$, $p = 0.001 < 0.05$). The study has therefore, provided statistical evidence that the level of information ambiguity confusion in the cultivated mushroom industry increases with ageing (Mitchell, et al., 2004; 2005). Hypothesis 2 was therefore, not rejected at 95% significance level basing on the above evidence. Rigorous cognitive processing of cultivated mushroom information is associated with ambiguity confusion in the aged consumers. The results upheld the Theory of Consumer Confusion. Some of the consumers end up avoiding the process by being loyal to familiar products (wild mushrooms), thus, abandoning the new product (domesticated mushrooms) (Mitchell, et al., 2004).

Excerpts from interview scripts gave evidence of this type of confusion. Understanding of mushroom information becomes difficult following a decline in information processing abilities and varying traditional and current mushroom knowledge.

"People believe that mushroom is generally poisonous and do not know how to differentiate between the different types. The good information about cultivated mushrooms becomes difficult to understand because consumers already believe that eating mushrooms is risky".

The phrase 'local people' which was echoed by interviewees in the excerpt below was not age selective, which means it includes both age groups in the study. Hence, both youthful (18 - 49 years old) and aged (50 years and above) mushroom consumers experience information ambiguity confusion.

"Local people stick to their beliefs. They tend to be impervious to new information. Consequently, information ambiguity emanates from wild mushroom beliefs traditionally held by the consumers".

Results for information overload confusion and actual purchase behaviour.

H_3: High level of information overload confusion reduces chances of actual purchase behaviour.

The study found an inverse relationship between high level of information overload consumer confusion and actual purchase, albeit, insignificant (β = -0.043, t=1.307, p = 0.192 > 0.05). The result upheld the hypothesis that high level of information overload confusion reduce chances of actual purchase behaviour. Information overload confusion proved to have insignificant impact on actual purchase in the cultivated mushroom market in Zimbabwe. Previous studies (Matzler and Waiguny, 2005; Lu, Gursoy and Lu, 2016) also found similar and insignificant results in their studies of consumer confusion on online hotel booking and online tourism respectively. Similarly, Turnbull, Leek and Ying, (2000) studied consumer confusion in the cell phone market and found out that even though it was evident that consumer confusion was present in the market, its impact on purchase behaviour was insignificant. The results were expected, but with a significant outcome. The outcome was in agreement with the Theory of Consumer Confusion as propounded by (Mitchell, et al., 2005; Mitchell, et al., 2004; Mitchell and Papavassiliou, 1997) which holds that a confused consumer does not make a reliable purchase decision, and the level of confusion determines the quality of the purchase decision to be made.

Qualitative results were in congruent with the assumptions of the theory of consumer confusion. Thus, as the level of information overload confusion increase, negative consumer behaviour also increases in the mushroom market. This was evidenced by the excerpts below which were extracted from interview scripts.

"High level of consumer confusion triggers avoidance behaviour such as postponement of purchase decision and complete abandonment of the purchase decision".

"There is high risk of eating poisonous mushroom, so high levels of consumer confusion discourage consumers from buying".

Therefore, both age groups in the study proved that they shun mushrooms as information overload confusion levels rise.

Results for information ambiguity confusion and actual purchase behaviour.

H_4: High level of information ambiguity confusion reduces chances of actual purchase behaviour.

High level of information ambiguity confusion reduces chances of actual purchase behaviour ($\beta = 0.687$, $t=20.631$, $p=0.001<0.05$) suggesting that the relationship is statistically significant. The results suggest that the influence of information ambiguity consumer confusion on actual purchase were significant. Information ambiguity confusion proved to have significant impact on actual purchase in the cultivated mushroom market in Zimbabwe. However, previous studies (Matzler and Waiguny, 2005; Lu, Gursoy and Lu, 2016) found results with insignificant impact in their studies of consumer confusion on online hotel booking and online tourism respectively. Similarly, Turnbull, Leek and Ying (2000) studied consumer confusion in the cell phone market and found out that even though it was evident that consumer confusion was present in the market, its impact on purchase behaviour was insignificant. Qualitative results were in congruent with the assumptions of the theory of consumer confusion. Thus, as the levels of information ambiguity confusion increase, negative consumer behaviour also increases in the mushroom market.

Therefore, both age groups in the study proved that they shun mushrooms as information ambiguity confusion levels rise.

Results for age and actual purchases

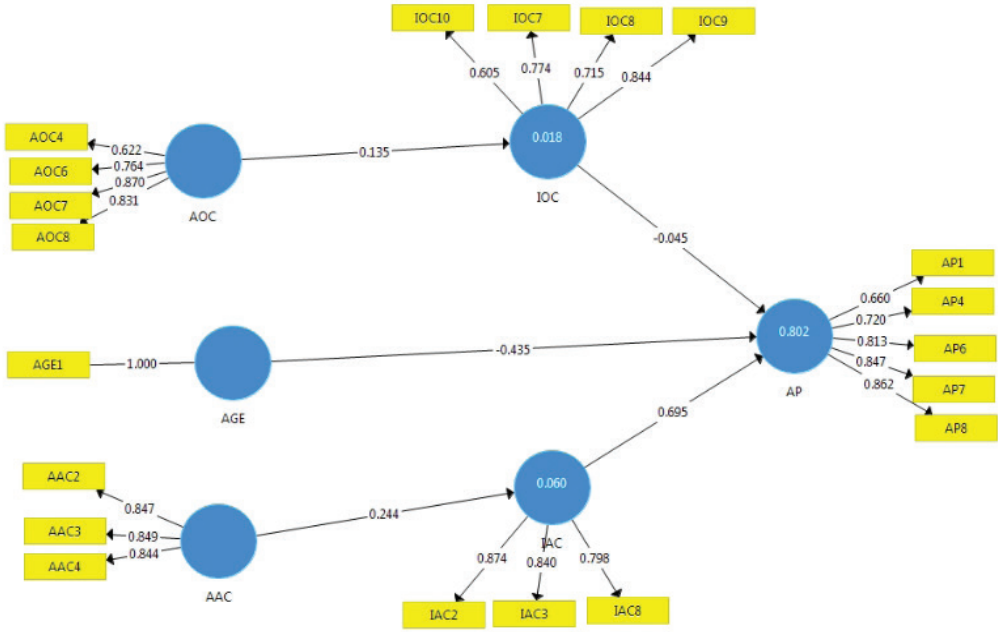
H_5: Old age reduces actual purchases of cultivated mushrooms.

Old age reduces actual purchases of cultivated mushrooms ($\beta = -0.447$, $t=13.571$, $p =0.001<0.05$). The outcome suggests that the relationship between age and actual purchases is statistically significant. There is an inverse relationship between old age and actual purchases of cultivated mushrooms in Zimbabwe. As consumer age advances by a year, cultivated mushroom purchases decline by a factor of -0.447. Hence, old age mushroom consumers buy and consume less

cultivated mushrooms as they get aged since they can be easily overloaded by ambiguous mushroom information from electronic word-of-mouth, traditional word-of-mouth, social media platforms, and other sources even if they are experienced.

Figure 1 is a summary of the fitted model with coefficients.

Figure 1: Fitted model



Source: Survey data

According to results in Figure 1, 80.2% total variations in the dependent variable is being influenced by the considered independent variables. The R^2 value for the model means that the fitted model is a good model and can be used for future purposes. The Standardised Root mean square Residual (SRMR) value of 0.077 meets the recommended value of less than 0.08 and Normal Fit Index (NFI) value is 0.925 which also meets the recommended value of above 0.9. The results imply that the fitted model is acceptable.

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Conclusion

Old age was found to increase the level of information overload confusion in the cultivated mushroom market. Therefore, mushroom consumers could be segmented on the basis of age and relevant marketing communication strategies be suggested on the same basis.

Old age was also found to increase the level of information ambiguity confusion in the cultivated mushroom market due to declining information processing capabilities. Mushroom marketers were, therefore, advised develop popular mushroom brands to enable aged customers to purchase basing on brand loyalty.

Old age was found to reduce the level of actual purchases in the field of cultivated mushrooms. Since aged consumers have declined information processing capabilities which render them prone to various forms of confusion (Mitchell, et al., 2004; 2005), an increase in age records a decline in cultivated mushroom purchases. Marketers are therefore, encouraged to provide this segment with information on cultivated mushroom production, distribution, nutrition and recipes for preparing different latest mushroom dishes to remind them about their chosen product.

A high level of information overload confusion was found to reduce chances of actual purchase behaviour, however, the impact was insignificant. It was, therefore, noted that mushroom marketers could employ television programmes, electronic word-of-mouth marketing, You Tube marketing and radio programmes to equip consumers with only essential cultivated mushroom information and reduce information overload as one of information search risks.

A high level of information ambiguity confusion was found to reduce chances of actual purchase behaviour. Lack of understanding of mushroom information could lead to negative purchase behaviour. As a result, mushroom marketers could conduct cultivated mushroom mass education sessions with consumers through the television, radio and newspapers to clarify blurred mushroom issues. That could improve consumer attitude and purchase behaviour in the mushroom market.

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Appendix A: Krejcie and Morgan's table for determining sample size for a known population

N	S	N	S	N	S	N	S	N	S
10	10	100	80	280	162	800	260	2800	338
15	14	110	86	290	165	850	265	3000	341
20	19	120	92	300	169	900	269	3500	346
25	24	130	97	320	175	950	274	4000	351
30	28	140	103	340	181	1000	278	4500	354
35	32	150	108	360	186	1100	285	5000	357
40	36	160	113	380	191	1200	291	6000	361
45	40	170	118	400	196	1300	297	7000	364
50	44	180	123	420	201	1400	302	8000	367
55	48	190	127	440	205	1500	306	9000	368
60	52	200	132	460	210	1600	310	10000	370
65	56	210	136	480	214	1700	313	15000	375
70	59	220	140	500	217	1800	317	20000	377
75	63	230	144	550	226	1900	320	30000	379
80	66	240	148	600	234	2000	322	40000	380
85	70	250	152	650	242	2200	327	50000	381
90	73	260	155	700	248	2400	331	75000	382
95	76	270	159	750	254	2600	335	1000000	384

N is the population size S is the sample size