# Pork consumer preferences in Swaziland

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## Abstract

The aim of this survey was to reveal consumer preferences towards the consumption of pork in Swaziland. An understanding of factors affecting consumer preferences will allow the pork industry to better meet consumer expectations. Cross-section consumer data were collected using a survey method. Sample (n = 200) participants were randomly selected during their pork purchase in various meat outlets in Swaziland. Results showed that consumers have high preferences for taste. Tenderness, juiciness, flavour, scent and marbling were identified as the most visual meat attributes used to determine taste. The findings further suggested that health and nutritional considerations greatly influenced the quality of pork consumed. Participants used freshness, colour, leanness and the amount of fat in pork as visual meat attributes to discriminate good against poor quality pork. The nonparametric statistical test using Kruskal-Wallis revealed that gender, age, marital status, level of education and location had statistical significant effect ($p \leq 0.05$) on some attributes of consumer preferences. Based on the findings, consumers preferred lean, tender and juicy pork with less fat content.

*Keywords:* Consumer Preferences; Kruskal-Wallis; Meat Attributes; Pork Consumption

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## 1. Introduction

Globally, meat is one of the basic foods Ngapo et al. (2010a) and plays a significant role in the economies of many countries (Ngapo et al., 2007a). Pork is the most consumed meat world-wide accounting for 37.0% (McGlone, 2013; Resano et al., 2011). Pork provide a wide range of nutrients, such as high value proteins with essential minerals, vitamins and fats in human diets (Verbeke et al., 2010). Swaziland, an agrarian country has her agriculture contributing close to 6% of the country's GDP (Chowa et al., 2017). The country has vast room for improvement especially in pig production.

Pork consumption in Swaziland has been on the rise recently, now ranked third after chicken and beef (FAOSTAT, 2015). Currently pork production in Swaziland does not satisfy consumer demand and this has resulted to vigorous production methods where the country adopted the use of swine breeds solely improved in terms of production capacity such as weight gain (Food Faostat, 2016; Masuku et al., 2011). However, this has resulted to pork quality being neglected.

The optimization of pork production currently concedes with the changing consumer habits in Swaziland, due to presumed per capita income growth in the country (Meyers and Schroeder, 2016; Yatsuya et al., 2014). With consumers at the end of the supply chain, having their expectations met would be very critical for the success of the pork industry. Knowing consumer preferences, attitude and acceptance of pork will be the driving influence on how the pork industry responds to consumer demands. Currently no study has been done on pork consumer preferences in Swaziland.

Various studies have been carried on pork consumer preferences for different countries and were found to enhance consumption of the product studied (Balcombe et al., 2016; Chen et al., 2010; Fortomaris et al., 2006; Jin, 2008; Ngapo et al., 2010b; Ngapo et al., 2004; Verbeke et al., 2010). Consumers consider a wide variety of attributes when making consumption choices and purchasing decisions for food. Appearance has a great influence on how meat, including pork, is valued by the consumer (Fortomaris et al., 2006).

Visual meat attributes such as freshness, colour, fat content, and marbling relate to meat quality (Banovic et al., 2009; Verberke et al., 2005) and these meat attributes greatly influence consumer choice at the point of purchase (Banovic et al., 2012; West et al., 2001). Price, taste, nutrition and food safety have been identified to greatly influence decision making of consumers at point of purchase (Cummins et al., 2016; Lusk and Briggeman, 2009; Olynk and Ortega, 2013; Vanhonacker et al., 2007).

This study focuses on how nine fresh pork attributes namely: fatness, leanness, colour, flavour, scent, freshness, marbling, tenderness, and juiciness influence the purchasing of pork. The study demonstrates how socio-demographic characteristics relate to pork consumption and further reveal preferences of consumers towards the consumption of pork in Swaziland.

## 2. Materials and methods

Cross-sectional consumer data were collected using a survey. Several previous studies used surveys to investigate consumer preferences and factors influencing meat consumption. Literature shows that socio-demographic, consumer's personal values, and attitudes are considered important determinants of

behaviour and can be used as the most reliable predictors of consumer choices and preferences on meat (Font-i-Furnols and Guerrero, 2014; Fortomaris et al., 2006; Glitsch, 2000; Lazaridis, 2003 ; Ngapo, 2017; Ngapo et al., 2010a; Ngapo et al., 2007a; Roosen et al., 2003).

## 2.1. Data collection

Pork consumers were randomly selected and requested to take part in this survey. Sample (n = 200) participants were chosen during their purchase of pork in meat outlets (hypermarkets, supermarkets, butcheries, wholesalers and abattoirs) at 95% confidence level. The survey was conducted from the 1st of January until February the 28th, 2017 with a total of 141 consumers completing the survey (71.0% response rate).

The questionnaire was made of semi-structured questions. It consisted of three main parts: the first part related the socio-demographic information of the respondents. Demographic characteristics age, gender, and education as a socio-economic indicator were included in recent studies on individual determinants of meat preference and choice (Bryhni et al., 2003; Glitsch, 2000; Ngapo et al., 2004; Ngapo et al., 2007b; Verbeke et al., 2005; Verbeke and Ward, 2006).

The second part used exploratory semi-structured questions since it was neither based on hypotheses nor embedded in a theoretical economic or attitudinal framework. To determine the purchase and eating behaviour of pork by consumers, respondents provided answers at the place of pork purchase; frequency; aspects considered; willingness to pay more for safe pork i.e. improved meat quality; price; safety and nutrition; and taste.

Regarding pork purchasing process, visual meat attributes used to evaluate meat quality were used to provide a base on developing items. Literature reveals that consumers use a wide variety of visual meat attributes such as freshness; proportion of fats; leanness; colour; marbling; juiciness; tenderness; flavour; and scent as their preferences to determine meat quality when making their decisions at the point of purchase (Verbeke et al., 2010). The above criteria were assessed by means of a 6 point Likert scale, with end-points 1: "Strongly disagree" to 6: "Strongly agree". A panel of experts in the field reviewed the instrument and attested to its content validity, and the overall reliability of the instrument was found to be 0.93 (Cronbach's alpha).

## 2.2. Data analysis

Data were analysed using SPSS 23.0. Descriptive statistics were used to describe consumer's general attitudes towards eating pork, and their preferred pork qualities. Kruskal-Wallis test was used to determine the statistical significant effect of independent variables (gender, age, marital status, level of education and location) on the dependent variables of the study. Significant differences were determined at $p \leq 0.05$ level.

Non-parametric statistics test was preferred over parametric test for this study because of the non-normality of the data (verification from Kolmogorov-Smirnov test). Several studies on consumer preferences have used non-parametric statistics mainly because of the underlying structure of the data at hand which is usually unknowable; thus one cannot be confident of the correctness of consumer preferences. In this sense,

nonparametric approach which does not require specificity and is distribution-free test was favoured (Font-i-Furnols et al., 2012; Jin, 2008; Jin and Koo, 2003; Moen and Capps, 1988; Ngapo, 2017; Verbeke et al., 2005).

## 3. Results

### 3.1. Socio-demographic characteristics of consumers

An overview of the socio-demographic characteristics is shown in Table 1. The total sample (n = 141) comprised of 60.3% women and 39.7% men. This gender distribution reflected that most participants (women) were traditionally household food shoppers over males. Consumers in the study were relatively young (48.9% ≤ 30 years old and only 3% ≥ 60 years) and perhaps a majority of the consumers (54.6%) were single. Consumers demonstrated high literacy levels, about 68.8% had tertiary education, with 19.9% having completed high school education. Almost two thirds (62.4%) of the consumers live in the rural part of Swaziland.

**Table 1.** Demographic characteristics of surveyed pork consumers (n = 141)

| Characteristics | | Frequency | Percentage (%) |
|---|---|---|---|
| Gender | Female | 85 | 60.3 |
| | Male | 56 | 39.7 |
| Age | From 18 – 30 years | 69 | 48.9 |
| | From 31 – 42 years | 43 | 30.5 |
| | From 43 – 60 years | 25 | 17.7 |
| | From 61 – 75 years | 2 | 1.4 |
| | Above 75 years | 2 | 1.4 |
| Marital status | Single | 77 | 54.6 |
| | Married | 48 | 34 |
| | Divorced | 11 | 7.8 |
| | Widowed | 5 | 3.5 |
| Highest level of education | Tertiary education | 97 | 68.8 |
| | High school education | 28 | 19.9 |
| | Secondary school education | 11 | 7.8 |
| | Primary school education | 3 | 2.1 |
| | No formal education | 2 | 1.4 |
| House/home location | Rural | 88 | 62.4 |
| | Urban | 53 | 37.6 |

## 3.2. Purchase, pork consumption reasons and preferences

While pork is mostly consumed world-wide (McGlone, 2013; Resano et al., 2011), in Sub-Saharan Africa pork is ranked fourth (FAOSTAT, 2015), and third after poultry and beef in Swaziland (Faostat, 2016; Masuku et al., 2011). However, the analyses from this study offered interesting results in meat preferences shown in Figure 1. Pork (31%) ranked as mostly preferred meat ahead of fish (26.0%), chicken (25.0%) and beef (17.0%). This perhaps explains the increasing demand for pork. The results are further confirmed in responses shown Table 2. About 50.0% of the respondents reported an increased rate of pork consumption in their families, due to the recent increase in production of pork.
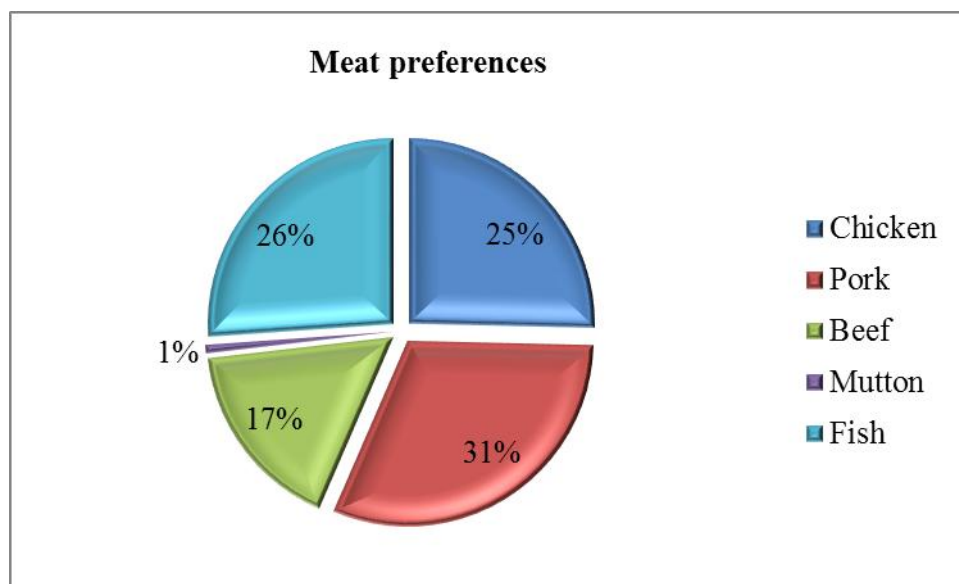


**Figure 1**. Meat preferences of respondents (n = 141)

In defining consumption and purchase behaviour of consumers towards pork, responses on several meat attributes and socio-economic factors are given in Table 2. The analysis revealed that most consumers purchase pork from butcheries (65.0%) and supermarkets (46.0%) on monthly basis. This perhaps implies that consumers had a steadily monthly income, thus have a fixed food budget. Results regarding storage revealed that pork is mainly purchased as frozen pork (63.8 %), followed by fresh pork (29.1%) and then very little pork was purchased as processed pork products (7.1%). Pork sausages (38.3%) and polony (36.9%) were found to be the most purchased processed pork products.

Taste was selected as the most popular reason for liking pork (46.1%), and frying (62.0%) and grilling/ barbeque (56.0%) who has taste attached to them were reported as the most preferred method of cooking pork. The results further revealed that health was the second most aspect after taste considered when purchasing pork. Health remains a great concern to most pork consumers, and a majority of the respondents

(61.7%) preferred more lean, tender and juicy meat, and 80.0% of the respondents reported willingness to pay more money for safe pork.

**Table 2.** Pork consumption and preferences of respondents (n = 141)

| Question | Response options | Frequency | (%) |
|---|---|---|---|
| Place (outlet) where do you buy pork? | Hyper-markets | 1 | 0.7 |
| | Supermarkets | 46 | 32.0 |
| | Butcheries | 65 | 46.1 |
| | Wholesalers | 6 | 4.3 |
| | Abattoirs | 2 | 1.4 |
| | Producers | 21 | 14.9 |
| How often do you buy pork? | Daily | 3 | 2.1 |
| | Once a week | 9 | 4.3 |
| | Twice a week | 6 | 6.4 |
| | Fortnightly | 14 | 9.9 |
| | Monthly | 109 | 77.3 |
| Which type of pork do you buy? | Fresh pork | 41 | 29.1 |
| | Frozen pork | 90 | 63.8 |
| | Processed pork | 10 | 7.1 |
| What pork processed products do you normally buy? | Pork sausage | 54 | 38.3 |
| | Vienna | 13 | 7.1 |
| | Ham | 22 | 15.60 |
| | Polony | 52 | 36.9 |
| Reason for buying pork? | Cheap | 7 | 5 |
| | Health reasons | 54 | 36.9 |
| | Tasty | 76 | 53.9 |
| | Easy to obtain | 5 | 4.2 |
| How do you prepare your pork? | Pork stew | 13 | 9.2 |

| | | | |
|---|---|---|---|
| | Fried pork | 62 | 44.0 |
| | Boiled pork | 11 | 7.8 |
| | Grilled pork | 56 | 39.0 |
| Pork preference? | More fats to lean meat | 8 | 5.7 |
| | More lean to fat ratios | 34 | 24.1 |
| | Equal lean to fat ratios | 12 | 8.5 |
| | More lean, tender and juicy | 87 | 61.7 |
| Willing to pay more for safer pork? | Yes | 112 | 80.9 |
| | No | 29 | 19.1 |
| How do you rate pork consumption in your family? | Increased | 74 | 52.5 |
| | Decreased | 19 | 13.5 |
| | No change | 48 | 34.0 |

## 3.3. Factors influencing purchase of pork

In determining the important fresh pork characteristics at the point of purchase, Table 3 shows responses of consumers on ten pork attributes they frequently use to evaluate pork quality. A six-point Likert-type scale was used to rate items from Strongly disagree = 1 to Strongly disagree = 6. To facilitate interpretation of data, means below 3.5 were regarded as implying disagreement and means above 3.5 were regarded as implying agreement on using the pork attribute on decision making at point purchase.

Findings as indicated in Table 3 showed that respondents prefer meat that is fresh, tender, juicy, tasty and leaner. Tenderness was most preferred (M = 4.87, S.D. = 1.36) followed by juiciness (M = 4.84, S.D. = 1.26) and taste (M = 4.73, S.D. = 1.54). The results imply that consumer behaviour demonstrated a bit concerned about their health, hence more fat to lean meat was not preferred as it was lowly rated (M = 3.48, S.D. = 1.60). These results demonstrate that consumers do need fats on their pork, however they preferred pork with less fat content.

## 3.4. Differences between pork attributes perceived to be determinants of consumer choice and selected socio-demographic characteristics

The Kruskal-Wallis test was used to determine the statistical significant effect of independent variables (gender, age, marital status, level of education and location) on the dependent variables of the study. The results are shown in Table 4.

The results indicated a significant statistical difference ($p \leq 0.05$) between gender and marbling as an attribute that influence consumer choice in the consumption of pork. Age was also found to significantly affect consumer preferences on pork consumption ($p \leq 0.05$). Significant differences ($p \leq 0.05$) lied between age and frequency of pork purchase, preferred state of pork, consumer willingness to pay more for safe pork, and as well as juiciness and as an attribute to determine pork quality.

**Table 3.** Visual pork attributes frequently used by respondents at point of purchase (n = 141)

| Fresh pork attributes | M | S.D. |
|---|---|---|
| Freshness | 4.72 | 1.60 |
| More Fat to lean ratio | 3.48 | 1.60 |
| More lean to fat ratio | 4.46 | 1.31 |
| Marbling | 4.19 | 1.35 |
| Tenderness | 4.87 | 1.36 |
| Juiciness | 4.84 | 1.26 |
| Colour score | 3.77 | 1.52 |
| Flavour | 4.51 | 1.36 |
| Scent | 3.84 | 1.54 |
| Taste | 4.73 | 1.54 |

*M = Mean; S.D. = Standard deviation*

Significant statistical differences ($p \leq 0.05$) were further observed between marital status and frequency of pork purchase, willingness to pay more money for safe pork, and pork freshness. The level of education was also found to significantly affect consumer preferences on pork, and significant differences lied on preferred state of pork and colour. Finally, location was found to significantly affect consumer choice on pork. Significant differences lied between pork safety and more lean to fat ration.

## 4. Discussion

The relative analysis of the results indicated that taste (53.0%) was the most important benefit sought when purchasing pork. In the present study, consumers (61.7%) categorically demonstrated high preference for lean, tender and juicy pork (Table 2). It is therefore not surprising that most consumers demonstrated high preferences for pork attributes associated with taste such as tenderness, juiciness, flavour, marbling and scent were high ranked (Table 3). This remains consistent with many previous studies, in their review, Hemmerling et al. (2016) found that taste dominated other food sensory properties such as visual appearance. Furthermore, in their studies Ngapo et al. (2010b) and Verbeke and Vackier (2004) found that

consumers used taste at point of purchase and their preference was more tender and sometimes juicier pork. Previous studies have shown that tenderness and juiciness are positively correlated with intramuscular fat content and they all contribute in improving taste (Bryhni et al., 2003; Pannier et al., 2014; Straat et al., 2013).

**Table 4.** Kruskal-Wallis test results on effect of gender, age, marital status, level of education and location

| Factors influencing pork consumption and purchase | Gender | Age | Marital | Education | Location |
|---|---|---|---|---|---|
| | *p*-value | | | | |
| Frequency of pork purchase | 0.645 | 0.046* | 0.032* | 0.667 | 0.292 |
| Preferred state of pork | 0.484 | 0.048* | 0.209 | 0.042* | 0.757 |
| Willing to pay more money for safe pork | 0.753 | 0.010* | 0.040* | 0.749 | 0.090 |
| Taste | 0.531 | 0.010* | 0.122 | 0.332 | 0.076 |
| More safe due to Pre-sale inspection | 0.882 | 0.872 | 0.298 | 0.529 | 0.036* |
| Visual pork attributes at purchase | | | | | |
| Freshness | 0.622 | 0.337 | 0.050* | 0.145 | 0.461 |
| Fatness | 0.849 | 0.435 | 0.384 | 0.572 | 0.878 |
| More lean to fat ratio | 0.242 | 0.922 | 0.402 | 0.432 | 0.005* |
| Colour | 0.858 | 0.607 | 0.894 | 0.839 | 0.137 |
| Marbling | 0.020* | 0.495 | 0.642 | 0.006* | 0.808 |
| Juiciness | 0.929 | 0.024* | 0.929 | 0.209 | 0.733 |
| Tenderness | 0.755 | 0.027* | 0.107 | 0.982 | 0.345 |

*p ≤ 0.05, *Means are significantly different*

Given the strong linkage between taste and the visual meat attributes of tenderness, juiciness, flavour and marbling demonstrated by the present study, the continued consistency implies that visual meat attributes can be accurately used as predictors of pork consumer preferences. The results show consistency with Fortomaris et al. (2006) who found purchasing decision to be greatly influenced by meat appearance, taste, tenderness, colour, fat and marbling.

Several studies have demonstrated marbling as a key meat attribute in determining meat quality, however consumers seem not to understand this concept, thus inconsistent preferences on marbling have been reported in several studies. Belgian and Spanish consumers were apparently not convinced on the favourable

effects of marbling on taste (Font-i-Furnols et al., 2012). However, Ngapo et al. (2007b) reported consistent consumer preferences on marbling in Taiwan, Japan and Korea.

In their study, Prada et al. (2017) they reported a positive association between healthfulness and taste of foods. The present study shares the same sentiments as safety, health and nutrition were found to be the second most important aspect considered by consumers at purchase. In defining this premise, consumers used freshness, leanness and fatness as visual meat attributes to evaluate pork quality at point of purchase. More lean pork was preferred over fat pork and furthermore, consumers (80.9%) were willing to pay more money for safe pork. However, fat was one of the visual attributes lowly rated in the study. This implies that consumers had low preference for meat with high fat content, thereby opting for meat with less fats. Several consumer studies have related fat content to meat quality, especially to health quality (Grunet, 1997; Grunet et al., 2015; Issanchou, 1996; Ngapo, 2017; Ngapo et al., 2007a; Perrea et al., 2015).

Given consumers' increasing concern on their health and the reported 46.0% prevalence of obesity in Swaziland (Neupane et al., 2016), it was therefore not surprising that consumers demonstrated high preference for lean meat. Similar results were reported by Ngapo (2017) who found that preference for leaner pork was stronger in Quebec and Nova Scotia. In their study, Verbeke et al. (2005) found that Belgians generally prefer pork chops without fat cover. In this study, more lean meat can be attached to food preparation method. Consumers in the present study indicated frying and grilling as preferred methods of cooking pork; thus preferred pork qualities were more lean to fat, tender and juicy.

Another health precaution reported in the study was willingness of consumers to buy fresh pork. A visual meat attribute attached to freshness in this study was meat colour. Consumers used colour to determine fresh meat characteristics at the point of purchase, and this was in line with several studies (Gracia and de-Magistris, 2013; Ngapo et al., 2010a; Verbeke et al., 2005). Inadequate colour was associated with spoilage (Mancini, 2009), red–purple colour with freshness (Carpenter et al., 2001; Faustman and Cassens, 1990; Issanchou, 1996). However, in the present study colour was not considered as an outstanding meat attribute. Perhaps due to fact that pork is mostly sold as frozen pork in Swaziland.

Results on pork storage shown in Table 2 revealed that pork was mostly purchased as frozen pork (63.1%). This study corroborates with findings from Realini et al. (2011) who mentioned that freezing was the preferred method for preserving pork. Freezing protected meat from detrimental effect of pressure on colour with meat recovering its original colour after thawing, indicating that it could be marketed refrigerated without consumer rejection (Ma et al., 2016). However, it is assumed that freezing as a storage method greatly influenced pork consumer preferences. This claim is confirmed by the findings of Elsbernd et al. (2016) who reported that marbling (a visual meat characteristics associated to taste) was more prominent in frozen pork chops than in fresh pork chops. They further reported that fresh pork chops were found to be juicier than frozen pork chops. Surprisingly, in their similar study, frozen pork chops were found to be more tender than fresh pork chops.

This study revealed poor pork processing in Swaziland, with pork sausages (38.3%) and polony (36.9%) as the most purchased processed pork products (Table 2). Poor processing is linked to reduced flexibility on the production part, thus limited consumer choice. Moreover, given that consumers consider health and

nutrition at purchase, and bearing it in mind that processed products contains additives and other artificial ingredients, as having lower nutritional quality and are considered as unhealthful (Ares et al., 2016), this greatly influenced pork consumer preferences in this study. It is generally assumed that some processing methods linked with pork preservation ultimately change the original taste for meat. This include salting, drying, smoking, heating, curing, fermenting, and maturing. Duranton et al. (2012) reported changes in consumer preferences and initiatives to reduce salt in meat products. Pretorius and Schönfeldt (2016) further validated this consumption behaviour when they stated that reducing salt consumption significantly reduced death due to cardiovascular diseases and fatal strokes.

Consumer choices were examined to determine the effect of gender, age, marital status, level of education and location on consumer choice as shown in Table 4. The results shares the same sentiments with the findings of Jeremiah (1982) and Ngapo et al. (2007b) who found that a wide variety of independent socio-demographics characteristics including gender, age, marital status, level of education and geographic location to greatly influence consumer choices on meat. In the present study, age was found to be the strongest variable to influence consumer choice. Age had a statistically significant effect on several consumer preferences including frequency of pork purchase, preferred state of pork, consumer willingness to pay more for safe pork, and as well as juiciness and as an attribute to determine pork quality. The relationship between age and consumer choice reflects that the population was relatively young groups, thereby explaining their eating behavior in relation to convenience and taste.

While the socio-demographic characteristics revealed a majority of respondents were a relatively young (48.9% ≤ 30 years and only 3.0% ≥ 60 years), more demonstrated to be working with fixed budget for pork and were willing to pay more money for safe pork (Table 1). Price preferences have been linked to consumer age and gender (Font-i-Furnols et al., 2012 and Font-i-Furnols et al., 2011). Very old consumers with low purchasing power usually prefer lower meat prices and to them, meat characteristics is not an important issue (Font-i-Furnols and Guerrero, 2014).

The effects of low purchasing power were observed when consumers demonstrated high preferences for pork (Figure 1.) while the actual consumer purchasing behaviour indicates that chicken is the most consumed (preferred) meat followed by beef (Faostat, 2016; Masuku et al., 2011). The consumer attitude-behavioural gap demonstrated by consumers was influenced by a combined effect of several factors including the supply of various types of meat, price of pork relative to other types of meat and moreover christian and cultural orientation of consumers towards that particular type of meat. Apart from beef, the price of pork relative to other types of meat is currently high, selling at 5.41 US dollars per kilogram, chicken is the cheapest selling at 3.40 US dollar per kilogram and beef the most expensive at 7.11 US dollars per kilogram. The high prices of pork resulted from the high demand for pork due to very low supply, high feed prices emanating from price monopoly since the country currently has only three feed companies.

Price differences generally explains the reason why chicken meat remains the most consumed meat in spite of consumers holding high preferences for pork meat. However, this might reflect the increasing demand for pork. The results were further confirmed in Table 2. About 50.0% of the respondents reported an increased rate of pork consumption in their families, due to the recent increase in production of pork.

Finally, the study revealed that visual meat attributes (tenderness, leanness, fats, marbling, flavour, scent and colour) are used by consumers to draw their preferences on taste, nutrition, and health. Conclusively they tend to be more accurate predictors of consumer preferences and they greatly influence the pork consumption and purchase behaviour.

## 5. Conclusions

Based on the findings of the study, consumers considered taste as an outstanding preference on pork consumption. Consumers demonstrated high preferences for tender, lean and juicy pork. Visual pork meat attributes found to influence pork consumer preferences were tenderness, juiciness, marbling, leanness, flavour and scent.

Nutrition and health were the second most important aspect consumers consider towards pork consumption. Generally, consumers used freshness, colour, leanness and fats as visual attributes considered at consumption and purchase. A bold conclusion in this aspect was that consumers generally preferred fresh pork with less fat.

Age was found to be the most socio-demographic characteristic for influences consumer choice. The other independent variables found to significantly influence consumer choice were gender, marital status, level of education and geographical location.

However, consumer preferences in the present study might have been limited by the price, storage and pork processing. Pork was relatively expensive than chicken, thus resulting to consumers finally settling for chicken in spite of having high preferences for pork. Freezing was found to be the most preferred storage method, yet freezing altered the visual characteristics of pork such as colour, marbling, tenderness and juiciness when compared to fresh pork, thus influencing consumer preferences. Moreover, very little pork processing in the country was associated with reduced flexibility on pork processed products, thus limiting the consumer choice.

In addition, for successful future development of the pork industry in Swaziland, an accurate determination of consumer preferences is required. It is very imperative to understand how consumer preferences relate to production methods, type of breed, feed resources, price of pork relative to other types of meat and moreover understanding how this relationship depends on the cultural context. However, in this study, there is no strong evidence that consumers consider fats unhealthy as they demonstrated high level of inconsistency in the inclusion of fats in their pork preferences. Respondents showed high preferences on marbling while reporting low preferences for fats. It can therefore be concluded that Swazi consumers lack clarity or understanding on the relationship between fats, marbling and taste.

While visual meat attributes were found to predict consumer choice, it is generally assumed that understanding fats, their importance in human diets and their influence on human health can help consumers to make informed decisions at point of purchase. A study focusing on evaluating pig body fat content and human health at various pig body weights can be very enlightening to pork consumers.

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