Consumers' Consideration of Functional Utility when Choosing Major Household Appliances

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ABSTRACT

This research investigated consumers' consideration of product attributes concerning their choice of major household appliances to explicate the pertinence of functional attributes versus other concerns such as environmental issues and status-bearing factors. A cross-sectional survey was performed amongst middle- to upper-income households in Tshwane, South Africa. The sample (N = 446) consisted of 69.4% females and 30.6% males who were further distinguished in terms of age, income and level of education. Exploratory factor analysis revealed consumers' attention to seven factors, of which functionality and durability aspects seemed more prevalent. A stronger concern for functional attributes compared to status factors and environmental issues confirms a need for the provision of product information that would enhance informed buying decisions, minimize consumers' functional risk perception and reduce negative post-purchase judgments.

Keywords: *Functional utility, Complex buying decisions, Status factors, Environmental factors, Product evaluation, Household appliances*.

1. INTRODUCTION

Major household appliances are complex, visually conspicuous commodities (Donoghue., De Klerk, & Ehlers, 2008) that involve an intricate consideration of multiple product attributes during the pre-purchase phase. Consumers' buying decisions may be quite complex because products are often purchased "not for what they can do, but for what they mean" (Solomon, Bamossy, Askegaard, & Hogg, 2009). The obvious functional purpose of a product therefore not necessarily drives a product decision. A product such as a household appliance might therefore be chosen for its status value (Goldsmith, Clark, & Goldsmith, 2006) or an awareness that it needs to be kind to the environment more so than considering its functional utility, despite the latter being the primary purpose for the acquisition. More than three decades ago, Elias (1987) described consumers' shift in focus from the functional utility of appliances and their subsequent value as labor-saving devices, to a value-for-money orientation and eventually an almost inflated concern with product attributes that are associated with status and a sense of fulfillment. Other researchers similarly proclaim that in modern societies, household appliances as a product category has secured itself as a semiotic marker of fortune and a primary indicator of progress and status (Du Plessis, 2003; Mehlwana, 1999).

Amidst such debate, an impressive automatic washing machine that proudly offers the sophistication of nanotechnology and the ability to sanitize and deodorize, nonetheless still needs to successfully perform the very basic washing cycles that are offered by their counterpart at the bottom of the product range. Inevitably then, one wonders how pertinent the various product attributes are when consumers select an evoked set of appliances before they conclude their final buying decisions. Specifically referring to major household appliances, suppliers, retail and consumer organizations agree that it has become very difficult to attend to consumers' product expectations and needs because they are not necessarily concrete, realistic or clear (Donoghue & De Klerk, 2009).

This research was prompted by a notion that consumers' choice of major household appliances, although influenced by status-bearing factors and environmental issues, are eventually driven by functional and performance utility, because consumers' post-purchase dissatisfaction with household appliances and their subsequent complaint behavior generally revolve around functional performance failures. It should be noted that complaint statistics typically report on the kinds of defective products and the product problems that cause dissatisfaction. This might be because complainers would find it easier to express themselves in terms of the functional performance as symbolic performance failures are more abstract and subsequently more difficult to

Nurture*: Volume 5, Issue 1, 33-44,* ***2011***
Online ISSN*: 1994-1633/* ***Print ISSN****: 1994-1625*
DOI*: 10.55951/nurture.v5i1.56 |* ***URL****: www.nurture.org.pk*

verbalize (Donoghue. et al., 2008). Evidence to the contrary, i.e. a precedence of the instrumental dimension during the pre-purchase phase, would signify the need for an urgent reconsideration of how appliances are launched and promoted in the marketplace, and how consumer facilitation should be approached in retail to enhance customer satisfaction and to reduce customer complaints.

Theoretical Background Rational Buying Decisions

Rational decision-making presumes that a consumer strives towards an informed purchasing decision and subsequently intentionally gathers product information that would enable an objective, informed comparison of different products in terms of relevant attributes. A consumer obviously would have to possess the cognitive ability to identify relevant discriminators and to judge the expected value of product alternatives (Babin & Harris, 2011). A consumer firstly retrieves whatever knowledge about the products may exist in memory, based on prior exposure and experience, and then starts an external search for additional information before investigating product alternatives. Consumers would typically consider attributes in terms of their potential importance and eventually carefully assimilate the information they have gathered based on its potential to satisfy their needs (Babin & Harris, 2011). An external search of product information may involve various potential sources of information such as personal information obtained from friends, family and salespeople, or impersonal information acquired from printed and electronic media such as promotions, independent research reports or the Internet. Consumers would typically take into consideration the ease of obtaining information from these sources as well as the objectivity and trustworthiness of the information. Information obtained from friends and family is generally considered more trustworthy than the recommendations of salespeople, who mostly receive incentives through increased sales of certain brands (Babin & Harris, 2011; Erasmus, 2010).

1.1. The Significance of Multiple Product Attributes

Consumers are generally bombarded by a bewildering array of choices in terms of both product offerings and product features, forcing them to base their evaluation of major household appliances on multiple product attributes. Functional characteristics specifically refer to the ability of an appliance to perform as expected and to achieve a particular goal (through specific functions) (Desmet & Hekkert, 2007; Donoghue. et al., 2008; Hawkins & Mothersbaugh, 2010) for example, a vacuum cleaner has to have an expected suction power and has to operate for a minimum period of time (expected service life) before having to be replaced. Consumers are not necessarily competent to judge the functional and performance attributes of different products in a complex product category and are therefore not necessarily able to make informed buying decisions. This is partly attributed to long inter-purchase times for major appliances, which makes it almost impossible to keep abreast with technological progress or to remain informed about the market offering at any point in time.

The price of an appliance and its running costs inevitably communicate the affordability of an appliance in the short and long term. Lack of ability to judge performance and durability characteristics may divert consumers' focus to price, which often serves as an indication of quality – assuming that more expensive appliances would be superior (Erasmus., Makgopa, & Kachale, 2005; Isaac, 2010). The guarantee of an appliance increases trust in the product and provides an indication of durability along with some assurance that would lower consumers' perception of performance risk. It is further supported by the brand of the product and an associated image that may have developed over time. Through exposure, personal experience and/or communication with friends and family, all brands eventually develop reputations that aid (or destroy) consumers' confidence in selecting them and that also influence consumers' risk perception (Huang, Schrank, & Dubinsky, 2004). Brands also bear status (O'cass & McEwen, 2004) and provide a sense of prestige that may be highly desirable for some.

Aesthetic factors refer to the style and attractiveness of appliances and are especially noteworthy when appliances are installed where they would be visible to guests in one's home. The visual appearance, style, design, size and colour of an appliance may be even more important when a new appliance needs to match existing appliances in a home (Creusen & Schoormans, 2005). Compared to functional characteristics, consumers can easily evaluate an appliance's aesthetic appearance at the point of purchase simply by looking at it. Consumers may also infer higher quality based on the beauty of an appliance, which in turn implies perceptions of better usability (Desmet & Hekkert, 2007). When products of comparable price and functionality are presented, a consumer is more likely to purchase the one that is aesthetically more pleasing (Creusen & Schoormans, 2005). Aesthetic attributes are therefore highly likely to sway consumers' final buying decisions. In addition, the first impression that a customer gets upon entering a store is generally based on the aesthetic attributes of the product array, which will draw attention (or not).

Nurture**: Volume 5, Issue 1, 33-44, **2011
***Online ISSN**: 1994-1633/ **Print ISSN**: 1994-1625*
***DOI**: 10.55951/nurture.v5i1.56 | **URL**: www.nurture.org.pk*

Environmental issues have certainly become more prevalent in recent years in terms of consumers' choice of major household appliances. Issues of energy consumption and the scarcity of water resources have been high on the agenda of the media in South Africa during the last decade. Unfortunately the general perception exists that environmentally friendly products are more expensive than competing offerings, which may discourage consumers from considering appliances that are ethically or environmentally better (Wagner, 2003). The most price-conscious consumers in the world are apparently found in Africa (United Nations Environment Programme (UNEP) & United Nations Educational Scientific and Cultural Organisation (UNESCO), 2001). It is therefore unlikely that appliances that are more expensive will form part of price-sensitive consumers' evoked set of products. In order to encourage pro-environmental buying decisions, a 'green' appliance must therefore be competitive in terms of non-environmental attributes such as price, functionality and aesthetic features (Schlegelmilch, Bohlen, & Diamantopoulos, 1996). Research indicates that inexperienced consumers and those who find it difficult to identify the most suitable products tend to rely on surrogate indicators such as price, brand name and the reputation of retailers to guide their buying decisions (Brucks, Zeithaml, & Naylor, 2000).

1.2. The Prevalence of the Functional and Performance Utility of Major Appliances

An appliance's physical features (intrinsic attributes) represents its tangible (physical) form and composition and involve characteristics such as the power of the motor, the number of programmes, materials used in its manufacture, and design of the appliance (Erasmus & Donoghue, 1998). These attributes are relevant in terms of an appliance's functional performance, its durability, ease of use, maintenance and care ((Donoghue. et al., 2008). Consumers that have difficulty to evaluate appliances' functional performance may however divert their attention to other product attributes that they are more familiar with (Erasmus. et al., 2005; Isaac, 2010). The utilitarian value and the quality of an appliance may for example be deduced from pertinent external physical characteristics such as its style, design and brand (Creusen & Schoormans, 2005). Evidence to the latter was confirmed in an earlier South African study that reported that consumers across all age groups are inclined to base their product judgements on the brands and specific design elements rather than the specific performance dimensions of product alternatives (Erasmus. et al., 2005).

1.3. The Persuasive Influence of Quality Indicators

Quality, which is a hypothetical construct that is instrumental in consumers' efforts to minimise perceived risk, can be defined in various ways. It could indicate conformance to certain requirements (Day & Castleberry, 1986) the ability of a brand to perform the duty it was designed for; or the extent to which a product conforms to tight manufacturing standards (Garvin, 1984). Quality can be evaluated directly through the inspection of the product (e.g. the materials and finishes used in the construction) or indirectly through surrogate indicators such as the recommendation of significant others, for example friends and family, brand name preference or brand reputation (Day & Castleberry, 1986). On the face of it, manufacturers are encouraging the use of heuristics because products across all price ranges are purposely designed to offer highly desirably extrinsic product features to enhance the image of brands and to insinuate quality and integrity (Yamamoto & Lambert, 1994). Brands per se are therefore promoted to distinguish products from competitors in the market place in terms of pertinent characteristics such as status (O'cass & McEwen, 2004). Although very persuasive, it is not clear whether in so doing, the functional and performance utility of products is neglected and perhaps misinterpreted by consumers.

1.4. A Neglect of the Functionality of Appliances

Major household appliances are important time- and labour-saving devices without which many households where both partners are working full-time would not be able to function effectively. These appliances are however generally expensive, complex and expected to be durable, which explains why it is of the utmost importance that consumers make informed buying decisions and are satisfied with their choices. Evidence of consumers' complaints unfortunately indicates the contrary. Letters published in consumer columns of major South African newspapers as well as online letters to consumer complaint websites and consumer bodies bear evidence of the frustration of consumers encountering multiple problems with the performance of their household appliances.

The expectancy disconfirmation paradigm suggests that consumers enter into a consumption experience with predetermined cognitive expectations about a product's performance against which the actual performance is

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***Online ISSN**: 1994-1633/ **Print ISSN**: 1994-1625*
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then compared during use (Laufer, 2002). Whether a particular product was purchased because of its presumed superior functional performance or for any other reason, consumers have pertinent expectations of its performance in mind, although not necessarily realistic (Hawkins & Mothersbaugh, 2010). Expectations are beliefs, i.e. preconceived predictions about appliances' performance (Donoghue. et al., 2008; Laufer, 2002) that provide consumers with a platform on which future judgements of the actual product performance are based during or after use. Expectations about product performance, whether realistic or not, are based upon prior experience with the product, word-of-mouth endorsements/ criticisms and/or companies' marketing/ promotional communications (Babin & Harris, 2011; Laufer, 2002; Solomon et al., 2009). Experienced and knowledgeable consumers are better able to form realistic expectations about product performance and will be better able to detect if a product's performance is incongruent with prior expectations (Goldsmith et al., 2006). Friends and family members are considered to be trustworthy sources of information and may play an important role in shaping consumers' expectations. Marketers generally promote the attributes that their products excel in and make explicit promises that may seem very inviting. Unless consumers have established cognitive conceptions and are able to distinguish relevant product attributes, promotions may instigate false and/or unrealistic expectations and claims concerning the performance of appliances could then be unrealistic.

When a product's performance does not meet a consumer's expectations (i.e. when a performance failure occurs or when the product performs poorly), negative disconfirmation occurs that leads to feelings of dissatisfaction (Steward in Ndubisi and Ling (2006). Sometimes that manifests in formal complaint behaviour directed at manufacturers and/or retailers (second parties) and/or public consumer protection agencies, legal agencies and newspapers (third parties). Indirect complaint behaviour such as negative word-of-mouth, intentional decisions to boycott a retailer, brand switching and/or boycotting a product type is more difficult to control (Chen-Yu, Williams, & Kincade, 1999). In order to prevent consumer dissatisfaction, more information about the operation, maintenance and care of appliances should be provided to consumers via in-store support, marketing efforts and advertising.

2. OBJECTIVES

This research aimed to determine and describe consumers' consideration of the functional and performance attributes of major household appliances as an indication of their regard for the primary utility of these commodities. Consumers' concern about the functional utility of major household appliances is investigated amidst the perplexity caused by highly desirable status-bearing features that are probably easier to judge, and environmental issues that have been a prominent concern in South Africa in recent years. Ultimately, the findings may be useful in directing efforts to facilitate consumers' buying decisions towards informed, responsible buying decisions that would result in positive post-purchase evaluations. Findings would also make a valuable contribution in terms of the design of the content of promotional material that is distributed by retail and industry.

3. METHODOLOGY

A cross-sectional survey was performed during the second quarter of 2010 amongst middle- to upper-income households in suburbs across Tshwane, a major urban area in South Africa. The structured questionnaire, which consisted of nine sections, was pre-tested first, to reduce error through possible misinterpretation of constructs and scales. Questions involved simple statements that required responses by means of nominal-, ordinal- and Likert-type scales. A cohort of fourth-year Consumer Science students of the University of Pretoria distributed 500 structured questionnaires on a drop-off-collect-later basis in purposely selected suburbs across the city. Convenient, snowball sampling was done and intentional effort was made to involve a diverse sample in terms of age, income and education level. Fieldworkers requested willing spouses/partners of households to participate. Participants were assured of the confidentiality of their contributions and the liberty to withdraw whenever they wished. Students managed to retrieve 446 useful questionnaires within two weeks. They then coded the questionnaires and performed data checks under supervision. Four sections of the questionnaire are relevant for this report, i.e. (1) *Demographic information*; (2) *Consumers' prioritisation of choice criteria*; (3) *Importance of product features*; (4) *Product information required during the pre-purchase phase*. The other sections dealt with *Payment methods used*; *Status-related attributes*; and *Environmental issues*. Descriptive statistics, ANOVA as well as exploratory factor analysis were used to analyse and interpret the data.

Nurture**: Volume 5, Issue 1, 33-44, **2011
***Online ISSN**: 1994-1633/ **Print ISSN**: 1994-1625*
***DOI**: 10.55951/nurture.v5i1.56 | **URL**: www.nurture.org.pk*

4. RESULTS AND DISCUSSION

4.1. Characteristics of the Sample

The demographic characteristics of the sample (N = 446) that are presented in Table 1 indicate a larger representation of females (69.4%), which was coincidental because any willing partner in a household could volunteer to complete a questionnaire. Although the majority indicated that when buying a new household appliance, one of the spouses/partners took sole responsibility for the purchase decision, more than 40% indicated that they shared the responsibility.

The mean monthly household income of the target population at the time of the study was R14.5K, compared to the mean income of the South African population, i.e. R5.4K (Bizcommunity.com, 2010). Income levels were distinguished in accordance with established lifestyle discriminators (Du Plessis, 2003) while three levels of education were distinguished to represent the potential influence of formal education; and three age categories were distinguished to represent different levels of product-related experience. Consumers' Consideration of Product Features

Table 1. Demographic Characteristics of the Sample.

Characteristic	n	%
Gender		
Male	136	30.6
Female	308	69.4
Total	444	100
Monthly household income		
< R5000 - R9999	142	33.4
≥R10K - R24999	169	39.8
≥R25K	114	26.8
Total	425	100
Level of education		
≤Grade 12	161	36.5
Grade 12 + degree/ diploma	181	41.0
Postgraduate	99	22.5
Total	441	100

An investigation of consumers' regard for the functional utility of household appliances involved an investigation of consumers' consideration of 35 randomly listed product attributes which included several function- and performance-related statements amongst other considerations, using a five-increment Agreement scale. A subsequent section investigated consumers' concern about environmental issues in combination with questions pertaining to the functional utility of appliances, which simultaneously provided an opportunity to triangulate respondents' apparent attention to function- and performance-related attributes.

Responses were subjected to exploratory factor analysis, implementing a Varimax rotation and a norm of an Eigenvalue > 1 to reduce and distinguish the number of relevant factors. Seven distinct factors emerged and were labeled in accordance with their descriptors. Ten of the 35 attributes were assembled in terms of two coherent factors that inferred functional utility, i.e. factor 1: Functionality and durability and factor 4: Quality. The remaining 25 attributes were divided amongst four factors that distinguished pertinent status-related constructs, i.e. factor 2: Impressiveness; factor 3: Aesthetics; factor 5: Exterior finishes/Colour; and factor 6: Reputation. Factor 7, i.e. Price, inferred affordability and was hence excluded as a status-bearing factor. Interestingly, 15 functional and performance attributes were cohered in terms of only two factors that were fairly inclusive. Status-bearing attributes, on the other hand, were cohered in terms of various factors containing fewer and more specific attributes. This suggests that functional utility is perceived more holistically, unlike status factors that seem more differentiated, for example distinguishing the *colour* of appliances (Factor 5) from *aesthetics* (Factor 3), which inferred the exterior appearance, size, style and design. The factors that were distinguished through factor analysis are presented in Table 2. Factor loadings are presented in descending order.

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Table 2. The Relevance of product characteristics when evaluating appliances.

Product characteristics	Factors						
	1	2	3	4	5	6	7
I prefer durable appliances that will last long	0.79	-0.01	0.05	0.08	-0.01	0.12	0.07
The performance of the appliance is important	0.69	-0.08	0.18	0.13	0.04	0.02	0.00
I prefer brand names that I trust	0.67	-0.08	0.28	0.17	0.05	0.23	-0.13
Appliances should be safe to use	0.66	0.05	0.09	0.00	0.05	0.08	0.18
The product guarantee should be considered	0.62	0.11	0.17	0.12	0.05	0.21	0.11
I consider price: affordable, not necessarily cheapest	0.59	0.00	0.02	0.06	-0.03	-0.02	0.06
Appliances must be well-designed (exterior and interior)	0.55	0.18	0.30	-0.01	0.13	0.14	-0.08
Appliances must be easy to operate (not complicated)	0.51	0.07	0.17	-0.07	-0.02	0.03	0.16
Appliances must have best functions, even if it costs more	0.44	0.17	0.15	0.30	-0.08	0.06	0.22
I prefer certain brand names that cause fewer problems	0.39	0.03	0.20	0.32	-0.14	0.17	-0.11
Beautiful appliances could boost one's image amongst friends	-0.13	0.71	0.12	0.26	-0.01	0.12	0.03
Appliances that people own reveal part of their personality	0.02	0.70	0.13	0.11	-0.07	-0.05	-0.02
People prefer appliances that will make a good impression	0.12	0.70	0.15	0.15	0.14	0.14	-0.05
Appliances must have beautiful exterior features	0.03	0.62	0.22	0.03	0.18	0.12	0.00
The appliances that people own reveal their personal style	0.12	0.61	0.24	0.18	0.04	0.03	-0.03
People would buy certain brands to impress others	-0.01	0.60	-0.08	0.18	0.03	0.06	0.09
Owning beautiful appliances makes one feel good	0.04	0.57	0.09	0.03	-0.10	0.08	0.18
I prefer appliances with impressive features (new technology)	0.23	0.31	0.19	0.29	0.14	0.18	-0.18
The colour of my appliances should match my kitchen's colour scheme and decor	0.10	0.36	0.62	0.07	0.31	0.07	-0.10
The size of appliances, i.e. dimensions/capacity is important to me	0.21	0.10	0.61	0.06	-0.06	0.07	0.08
The design of appliances, i.e. shape, is important to me	0.24	0.16	0.57	0.23	-0.12	0.05	0.02
I attend to the appearance of appliances, i.e. compact /large/ conspicuous)	0.20	0.29	0.55	0.20	0.02	0.06	0.07
Appliances should match to create a coordinated look	0.19	0.44	0.47	0.13	0.36	0.00	-0.14
I prefer certain brands because they are easy to service /repair	0.31	0.03	0.44	0.21	-0.17	0.11	-0.10
Electronic appliances are of a better quality than manual ones	-0.16	0.28	0.10	0.64	0.13	-0.07	0.14
Expensive products are of better quality	0.07	0.30	0.06	0.50	-0.07	0.18	-0.07
Appliances with special finishes are of good quality	0.20	0.14	0.19	0.42	0.08	0.03	0.12
I prefer appliances with electronic controls over manual controls	0.22	0.18	0.12	0.41	0.17	-0.15	0.03
The materials used, signify the quality of the appliances	0.21	0.15	0.26	0.33	0.00	-0.02	-0.12

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Product characteristics	Factors						
	1	2	3	4	5	6	7
I prefer appliances made of stainless steel / a stainless steel look	0.16	0.20	0.18	0.24	0.57	0.07	0.01
I prefer white appliances, i.e. a white enamel finish	0.09	0.07	0.16	0.02	-0.58	-0.05	0.09
I prefer brand names that are recommended by my friends, family	0.15	0.12	0.06	0.01	0.10	0.60	0.11
I prefer appliances with a good reputation amongst friends, family	0.25	0.22	0.13	0.02	0.00	0.57	0.03
Appliance must be as affordable as possible, i.e. as cheap as possible	0.14	0.05	-0.02	0.00	-0.13	0.13	0.54
Price is important to me, i.e. I decide beforehand what I will pay	0.37	0.13	0.04	0.14	0.05	-0.03	0.40
Cronbach Alpha	0.85	0.84	0.80	0.65	*	*	*
% Variance explained	0.49	0.21	0.07	0.06	0.06	0.04	0.03
Mean/ Maximum	43.5/ 50	27.2/ 40	23.2/ 30	17.3/ 25	6.6/ 10	7.6/ 10	7.5/ 10
Std dev	5.9	6.8	4.5	3.7	1.4	1.8	1.8

The internal consistency of responses was confirmed through Cronbach's Alpha which varied between 0.65 and 0.85 for all factors that contained more than three attributes. Despite a higher standard deviation for factor 2, the internal consistency was acceptable.

CONSUMERS' CONSIDERATION OF THE FUNCTIONAL UTILITY AND THE PERFORMANCE OF APPLIANCES (FACTORS 1 AND 4)

Respondents' regard for attributes relating to the functional utility of appliances seemed more pertinent compared to other factors, because they *strongly agreed* that the functional utility of appliances is important (factor 1), whilst they *agreed* that quality indicators (factor 4), status-bearing factors (factors 2, 3, 5) and price/affordability (factor 7) are pertinent. Quality *per se* is however more difficult to judge because it involves product knowledge and experience, which probably explains why factor 4 seemed less important than factor 1 – although factor 4 also infers functional utility.

INFORMATION THAT CONSUMERS WOULD LIKE TO OBTAIN PRIOR TO PURCHASING

Respondents had to indicate what type of information they would like to have at hand before finalising their purchase decisions. Twelve statements were responded to by means of a five increment *Agreement* scale, which was meant to triangulate respondents' prioritization of the functionality of appliances (see former section) and to give an indication of their need for information about environmental issues.

Responses were once again subjected to exploratory factor analysis and a principal axis factor extraction method with oblique rotation that implemented a norm of an Eigen value $\geq$ 1 to identify the number of factors. Two distinct factors containing six items each emerged, and were labeled *Greenness* and *Functionality* for purposes of further discussion.

Table 3. Information Consumers would like to have Prior to Purchasing.

Information required (N = 395)	Mean	SD	Factor 1	Factor 2
• How the manufacturing of appliances could harm the environment	3.8	1.1	0.86	0.56
• How our use of appliances could harm the environment	3.9	1.1	0.84	0.55
• What manufacturers actually do to protect our environment	3.9	1.1	0.78	0.49
• How to evaluate the water consumption of appliances	4.0	1.1	0.81	0.61
• How to use energy rating information	3.8	1.2	0.79	0.61
• How to judge the noise level of appliances	3.9	1.0	0.62	0.58
❖Where and how to complain when an appliance is faulty	4.5	0.9	0.49	0.78
❖How one could benefit from product guarantees	4.2	1.0	0.52	0.78

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❖ What the retailer/manufacturer will do when an appliance is faulty	4.3	0.9	0.48	0.76
❖How to make the best use of new appliances	4.2	1.0		0.76
❖How to judge the service life of appliances	4.2	1.0	0.61	0.74
❖How to evaluate the running cost of appliances	4.1	1.0	0.64	0.69
Cronbach Alpha	0.93		0.90	0.88
% Variance explained			85.4	14.5
Mean/ Maximum			23.5/30	25.7/30
Std dev			5.7	4.8

Factor 1 involved items referring to environmental aspects, while Factor 2 assembled functional attributes. Consumers expressed a stronger need for information pertaining to the performance and functional utility of appliances (Table 3) than to environmental issues.

Cronbach's Alpha $\geq$ 0.88 confirmed the internal consistency of responses. In terms of the *functionality* of appliances, means > 4 and standard deviation < 1 suggest that consumers strongly agreed about acquiring information pertaining to the performance, durability and after-sales service of appliances. Efforts to inform and educate consumers about functional utility as well as environmental issues involve cognitive thought processes. Consumers' strong regard for functionality is therefore encouraging because it indicates that the provision of useful, understandable factual information would be appreciated.

Respondents' need for information is visually presented in Figure 1, along with findings regarding the pertinence of various factors during consumer decision-making. Both investigations indicated consumers' stronger concern pertaining to the functionality of major household appliances than to status-bearing factors or environmental issues. Consumers' need for information about the functional utility of appliances therefore supported the findings of the former section.

A single mean was subsequently calculated to compare consumers' need for information about the functionality of appliances to enable comparisons per subsets of the sample, i.e. gender, age, income and level of education (Table 4).

This study showed that gender and age seem to be significant indicators of consumers' need for information about the functionality and performance of appliances. In terms of gender, a T-test revealed that females' need for information about the functional utility of major household appliances was significantly stronger than the need expressed by men, although both agreed that the information was necessary (means ≥ 24, p = 0.009).

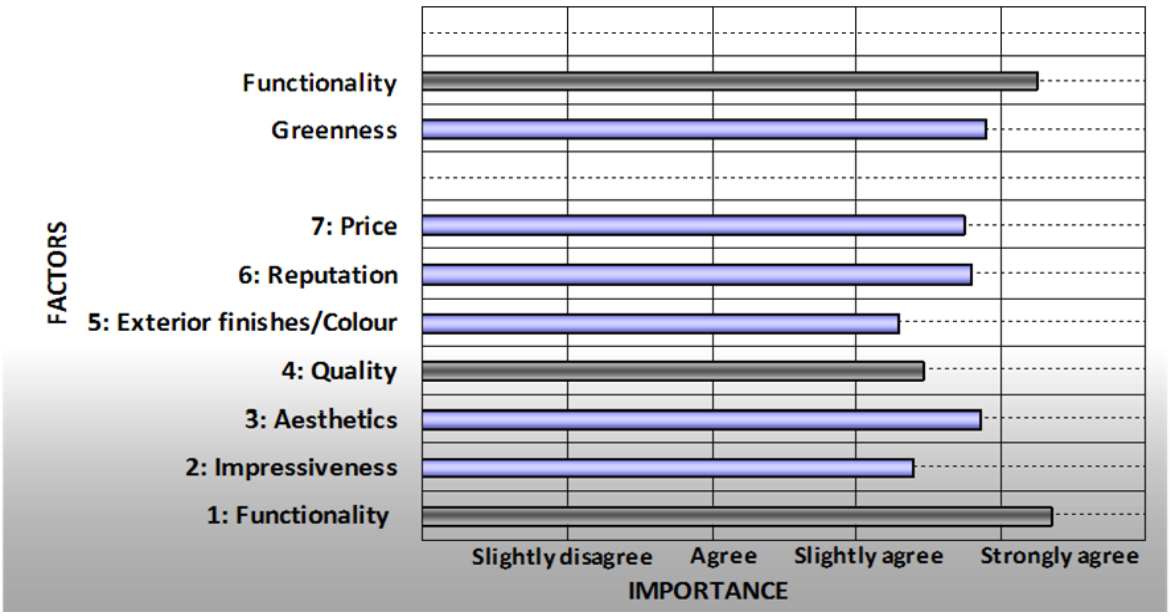

Figure 1. The pertinence of different factors as well as the type of information required to evaluate appliances.

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Table 4. A Comparison of consumers' need for information pertaining to the functionality of appliances across different subsets of the sample.

Characteristic	Needs Score*	
	Mean	Std dev
Gender		
Male	24.8	5.0
Female	26.2	4.6
T-Test: p = 0.009		
Age		
18-29 (n=152)	25.0	5.0
30-49 (n=168)	26.0	4.9
≥ 50 (n=87)	26.9	3.7
One-way Anova: p = 0.010		
Monthly household income		
< R5000	25.0	5.0
≥ R5K - R9999	25.3	4.9
≥ R10K - R14999	25.9	4.7
≥ R15K - R24999	26.0	5.1
≥ R25K	26.2	4.3
One-way Anova: p = 0.487		
Level of education		
≤Grade 12	25.6	5.1
Grade 12 + degree/diploma	26.1	4.5
Postgraduate	25.4	4.8
One-way Anova: p = 0.417		

Note: *higher score indicate greater agreement to perception of need.

In a post-purchase behaviour context, Donoghue. et al. (2008) offered strong empirical support that females had more definite/explicit expectations about appliances' product performance compared to men, and that females were more explicitly concerned about obtaining information regarding the functionality of appliances. This finding may be attributed to the general division of household labour among South African couples (especially among older and African couples), that is still traditional and stereotypical in terms of specific gender roles.

Older consumers (≥ 50 years) were significantly more interested in information about the functionality of appliances than younger consumers (≤ 30 years), although all age groups agreed that such information was important. Consumers' need for information did not differ significantly across different income levels, nor across education levels. Sources consulted by females (e.g. specific magazines) as well as older consumers (e.g. specific television programmes, newspapers) would provide proper avenues for targeting information at consumers who are interested.

5. CONCLUSIVE FINDINGS

Despite the potential influence of new technology, the inevitable influence of price and highly desirable aesthetic attributes, this study concluded that consumers' regard for the functional utility of major household appliances surpassed all other influencing factors. Respondents *strongly agreed* that the functional utility of appliances is important when buying major household appliances; they strongly agreed, for instance, that they wanted *durable appliances that would last long without causing problems*; that they preferred *brand names that could be trusted and which offered a supporting guarantee*, and that they preferred *appliances with the best/most suitable functions rather than buying the cheapest*. This suggests rational buying behaviour, i.e. a deliberation of product features in terms of the consequences of the buying decision.

Through factor analysis it also became clear that consumers' comprehension of functional utility involved a holistic perception that involved an integration of multiple relevant attributes. Status-bearing factors, to the contrary, were distinguished in a more specific, discerning manner, i.e. differentiating the colour of appliances, the material used in its manufacture, the style and the design of product alternatives, rather than considering all of these as exterior design and finishes.

Nurture**: Volume 5, Issue 1, 33-44, **2011
***Online ISSN**: 1994-1633/ **Print ISSN**: 1994-1625*
***DOI**: 10.55951/nurture.v5i1.56 | **URL**: www.nurture.org.pk*

Difficulty to judge intangibles was confirmed through respondents' strong concern about *functional* utility amidst an apparent lower regard for *quality* – a construct which undoubtedly infers functional utility and performance. This suggests a lack of understanding of relevant attributes and of what quality implies. Respondents may therefore opt for indirect ways (heuristics) to judge quality, for example trusting specific brand names and more expensive appliances if they lack the ability to inspect and interpret actual product characteristics, for example manufacturing standards or performance characteristics, directly. On the face of it, manufacturers are not making it easy for consumers, because household appliances have become so sophisticated in recent years that it has become very difficult to keep up with product features and to evaluate and compare the functional properties of alternatives in the marketplace. Long inter-purchase times further complicate matters in terms of anticipating and judging products' functional and performance utility.

This study therefore proposes that useful, relevant information that would aid informed buying decisions and that would reduce risk perception should be made available to reduce consumers' functional risk perception. Consumers' regard for the functional utility of major household appliances was confirmed through unequivocal confirmation that they needed information pertaining to the performance and functionality of appliances prior to purchasing. Respondents lacked information on *where and how to complain when an appliance is faulty*; *how they could benefit from product guarantees*; *what retailers/manufacturers would do when they encountered problems with their appliances*; *how to make the best use of new appliances*; *how to judge the service life of appliances*; and *how to evaluate the running cost of appliances.* Although this type of information may be presented in printed format in appliances' instruction manuals, it may not be clear/understandable enough for the average consumer, and knowing that these instruction manuals are mostly sealed in the containers in which appliances are delivered, the information is only available after the appliances has been delivered to their home. Manufacturers and retailers will therefore have to reconsider the format in which written information is presented to prospective buyers.

This study showed that, in the context of this research, gender and age seemed to be significant indicators of consumers' need for information about the functionality and performance of appliances. Females and older consumers ($\geq$ 50 years) expressed a significantly stronger need for information about the functional utility of major household appliances than their younger counterparts. However, this does not necessarily mean that males and younger consumers are better informed. It may only confirm that increased experience contributes to an increased awareness of the potential shortcomings of appliances: females are more involved with appliances in their homes in South Africa due to a more traditional role orientation (Donoghue. et al., 2008) and older consumers have almost certainly made more repeat purchases over time. A One-Way ANOVA followed by a post hoc Bonferoni test, however, indicated that consumers $\geq$ 50 years of age who were significantly more concerned about the functional utility of appliances, were significantly less concerned about the *impressiveness* of appliances (a status-bearing factor) than younger consumers were (< 30 years: $p = 0.031$; 30 to 49 years: $p = 0.002$). (Mehlwana, 1999) explains that young aspiring consumers may associate impressive products with a luxurious lifestyle. A symbolic attachment to appliance ownership may thus be more important to younger consumers than their older counterparts, while the reverse is true for functional utility.

Insignificant evidence that income and education level influence consumers' concern about the functional and performance utility of household appliances, could be investigated in a subsequent study.

6. LIMITATIONS OF THE STUDY

The study was confined to an urban area. According to Heaney, Goldsmith, and Jusoh (2005) urban consumers benefit from more extensive exposure to stores and products than consumers in smaller towns and rural areas. This affects consumers' awareness of product differences. Either way, confusion exists. Urban consumers may find it difficult to choose from the array of products in stores, while limited exposure may exert pressure to purchase what is made available in one's area because that would affect availability of spare parts and after-sales service.

7. RECOMMENDATIONS FOR FUTURE RESEARCH

This exploratory study provides valuable evidence that should be optimised through in-depth panel discussions to explicate consumers' concerns and to formulate clear recommendations in terms of suitable ways in which manufacturers and retail could address the gaps in their service offering.

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***Online ISSN**: 1994-1633/ **Print ISSN**: 1994-1625*
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FUNDING
This study received no specific financial support.

CONFLICT OF INTEREST
The authors declare that they have no competing interests.

ARTICLE HISTORY
Received: 2 May 2011/ Revised: 3 October 2011/ Accepted: 28 November 2011/ Published: 30 December 2011

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