INFORMATION SOURCE AND MEDIA CHANNEL PREFERENCE OF MALAYSIAN CONSUMERS: A PERCEPTION STUDY ON LEAD-BASED HOUSEHOLD PAINTS HAZARDS

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ABSTRACT

The context in which consumers acquires a product related information has undergone dramatic transformation in recent years. There have been arguments that the product type, characteristics of the consumers, as well as the context, have an influence on search information and media channel preference. This argument has not been extended to a lead-based household paints which is a global public health concern. This study is intended to address this void by investigating a national representative estimation for information source and media channel preferences of consumers in Malaysia regarding lead-based household paint hazards. The awareness profile of the general public on the health and environmental hazards are due to the exposure of toxic to lead-based household paints was studied. The study was carried out on a conveniently recruited population of Malaysians residing in West Malaysia. A total of 657 valid responses were subjected to statistical analysis. The study highlights that the respondents were most likely to use the internet as a channel for gathering information about lead-based household paints. They were also likely to trust information from the environmental protection organizations about lead-based household paints hazards and issues, and are least likely to trust information from political parties about the subject matter.

Keywords: lead-based paints, information search, information source, media channel, consumer behaviour

INTRODUCTION

In recent decades, the public health and environmental main concern is lead toxicity. Lead is a naturally occurring toxic metal found in earth's crust. Its widespread use has resulted in an extensive environmental contamination, human exposure, and significant public health issues in many parts of the world. While it has been agreed that the global efforts with the usage of leaded petrol has been resounding, the same cannot be said for lead-based household paints. This is even more disturbing with the fact that studies in developing countries have revealed an alarming high lead content in paints, which is well above the toxic threshold. Even though lead poisoning is generally acknowledged as a significant public health issue in several parts of the world, many countries paid little attention to the level of public awareness for the health and environmental effect of lead-based household paints (Clark et al., 2009). Even more disturbing is the fact that the context in which consumers acquires product-related information has transformed dramatically with the changes in the media health coverage, as well as the variations in the consumer preferences in information sourcing and media channel.

The outlook of the contemporary media landscape is quite different compared in the previous years. Hence, consumers are faced with the challenge

of information acquisition for enlightenment, and informed decision purposes. According to Schmidt and Spreng (1996), information search is defined as the phase of decision-making whereby consumers are engaged in active gathering and integration of information from various internal and external sources, for the purpose of making a well informed choice.

Consumer sourcing of product related information has received attention in consumer behaviour, economics, as well as the marketing literature over the past few decades (e.g. Leire & Thidell, 2005; Jepsen, 2007; Park & Lee, 2009; Mata & Nunes, 2010). With reference to the assumptions of Stigler (1961) on the economics of information; consumers utilize an implicit cost–benefit analysis to make a selection of appropriate information search strategy to use, to find out what, when, where, and how much information are needed to search, Stigler argues that consumers will search for information until the perceived marginal benefit of carrying out the search is equal to the perceived marginal cost of the search. However, Pan and Chiou (2011) argue that the vital element that influences the consumer's preference in their search for information is the realibbility in the source.

Rationale and Objective: Research scholars (e.g. Mata & Nunes, 2010; Chu & Kim, 2011; Jun, Park, & Yeom, 2014) argues that an increase in the degree of perceived risk of a product corresponds to an increase in the propensity for consumers to search for more information about the product. In the light of this, there are several arguments in the literature on what influences the consumers' search for information, as well as the media channel preference of consumers in carrying out their search for product information. Some authors argued that the type of product, characteristics of the consumers, as well as the context, have an influence on the information search and preferred channel that the information search is carried out (Park, Yoon, & Lee, 2009). Despite these facts, it is a matter of concern that questions regarding on 'which media channel is preferred by consumers to acquire information related to the lead-based household paints?' and 'which information source is trusted most by consumers of lead-based household paints?' are left unanswered. The answers to these questions are not readily available in the literature, and previous studies on the consumer information acquisition have failed to consider the information source and medium preference of consumers of lead-based household paints. Yet these answers are critical for a better understanding of the consumer behaviour towards information sources. What is most certain is that an understanding of the information acquisition channels and preferences by consumers is vital to managers and policymakers.

To bridge this gap , the objectives of this paper are;
i.   To examine the channels that are most preferred by consumers in acquiring information related to lead-based household paints in Malaysia
ii. To study the information source most trusted by consumers in relation to information regarding lead-based household paints in Malaysia

LITERATURE

As noted in the introduction, the search process entails an internal search, as well as an external search phase. Klein and Ford (2003) argues that the external search phase is when consumers access different types of sources. During the internal search phase, consumers recalls the information that have been previously collected via external search and/or direct experience. Moreover, banking on the economics of information (Ratchford et al., 2001; Klein & Ford, 2003), a consumer's preferences during active search for information are closely linked with the time and cost associated with the acquisition of such information. This argument has been supported by several research scholars. For example, authors (Jepsen, 2007; Moon, Chadee, & Tikoo, 2008; Darley, Blankson, & Luethge, 2010) believed that the cost associated with the preference of an information source is most likely determined by its use. However, Mai (2016) stated that the information seeking behaviour found out that the trust of information source and medium is the most influential factor that affects the consumer preference of information sources. They assert that this is also

closely linked to the principle of least effort.

Barber and Kim (2001) define trust in the consumers' context as the consumer's confidence in the capability and purpose of an information source to convey accurate information as the volume of trust that an information source has earned via its dealings with other consumers. A study conducted in the United States of America by Marrie et al. (2013) revealed that patients with multiple sclerosis prefer physicians as their most trustworthy source of health information and the Internet as the first place for information related to health. On the other hand, Steelmanet et al. (2015) stated in the context of information source for disaster, found out that people prefer government and official sources as their most trustworthy source of information during disasters. Nonetheless, regardless of the information, one thing is for sure is that when consumers seek for information, they rely on certain information sources and/or media, while other information sources and/or media are left unexploited.

Based on the premise that the Internet is the most efficient in providing information about functional attributes and price, several propositions are developed on its use and impact on the use of other information sources (Ratchford, Talukdar & Lee, 2001). As an electronic medium for information sourcing, the internet may, nevertheless, significantly have an impact on all sources of information acquisition given that the ease of executing online searches for information. However, the importance of proficiency in the use of technology significantly influences the internet use. Many research scholars earlier have an implicated time for conducting an information search as a negative indicator that influences the use of internet relative to other media for information search. However, with the increase in speed, efficiency, online search tools and databases that characterized the contemporary internet paradigm, it can be argued that time may no longer be a negative influencer for information search via the internet, rather, the cognitive costs associated with the assimilation of large amounts of information and properly integrating this information that may well lead to the use of alternative information media.

Alba et al. (1997) discusses the comparative advantages of the Internet compared to other media channels regarding information on the consumers, retailers, and manufacturers. On the other hand, Ratchford et al. (2001), concentrates on the choice of the internet relative to other sources of information available to consumers. While Alba et al. (1997) highlighted on the Internet source being widely chosen due to the market outcomes; Ratchford et al. (2001) argued that the choice of the internet as a preferred media channel for information source is based on the determinants of individual differences in searching or choosing information sources. Hence, they argued that consumers will choose sources that are the most cost-effective method to convey the information that they need. Moreover, Metzger and Flanagin (2013) have argued that the information available freely on the internet may not have gone through as much scrutiny as those from other sources such as scientific journals, hence it may be more susceptible to be inaccurate. Hence credibility of information on the internet is what some research scholars have implicated as a major drawback for information searches via the internet (Metzger et al., 2003, Rieh & Danielson, 2007; Metzger & Flanagin, 2013; VanMeter, Grisaffe, & Chonko, 2015).

Other researchers (Callister 2000; Starobin & Weinthal, 2010) argued that the solution to obtain credible information is to confer authority to representative bodies (governmental organizations, scientific bodies, environmental protection regulation professional organizations, regulators and others) that are tasked with providing reliable information regarding the subject matter. However, they also argued that this might only work when there are limited sources and when high barriers exist to public access of such information.

METHODS

This section discusses the research design, as well as the overall procedure for gathering the research

primary data. The field study, which consisted of 690 conveniently recruited participants, employed a quantitative, cross-sectional, and descriptive design to investigate the awareness level of respondents regarding the health and environmental impact of lead-based household paints.

The sample of respondents were selected from West Malaysia based on convenience sampling, without prejudice for age, gender, race, ethnicity, or any other demographic characteristic. The sample size determination for research activities is recommended by Krejcie and Morgan (1970) was used. According to Krejcie and Morgan (1970), a sample size (n) of 384 is required for a population of 1,000,000 (N).

The primary data was collected via a structured type self-administered questionnaire. The questionnaire was adapted from Frewer et al. (1996). The first section (section 1) contains 6 items which are related to the demographic profile of the survey respondents. The second section (section 2) contains questionnaires on the media channel preference (newspaper, magazines, scientific press, television, radio, internet, and blog). It was anchored on a 3-point Likert scale with 1 = unlikely, 2 = not sure, 3 = likely. The third section (section 3) contains questionnaires on the extent of trust of the following information source (national government, regional/local government, European Union, paint manufacturing companies, scientists, journalists, political parties, environmental protection organizations, and consumer associations). It was anchored with a 3-point Likert scale with 1 = non-trustworthy, 2 = not sure, 3 = trustworthy.

The research instrument used is the structured type questionnaire adapted from Choi, J., & Park (2006) as well as Elliott, Fu and Speck (2012). To assess the content validity of the research instrument, three experts in the subject matter were invited to review, as well as to advice in the pre-test stages. Some revisions that borders on the question clarity and understanding were made in line with the feedback gained from the experts.

The questionnaire field survey of the present study took place on October and November 2017, with a total of 716 questionnaires were distributed. The addition of 332 questionnaires above the sample size was to accommodate the potential non-response or incomplete questionnaires. Self- administered hand-to-hand (contact) distribution was adopted for the questionnaires, and a total of 690 responses were retrieved (response rate of 96.3%).

The data gathered from the questionnaire surveys were coded, screened, and then inaccurate or missing data were managed. The data were coded by the means of characters and numbers, and the responses from the questionnaires were manually entered into a Statistical Package of Social Sciences (SPSS) version 21.0. Screening of the raw data was carried out to detect inappropriately filled questionnaires, as well as other associated errors and then correcting them. This was done by means of frequency analysis, after which 657 responses were usable after the exclusion of incomplete responses.

RESULTS AND DISCUSSION

Descriptive statistics of demographic characteristics
The descriptive statistics of the of respondents' demographic characteristics in terms of frequency and percentages is as presented in the Table 1.

Reliability Analysis
Reliability analysis was carried out to understand the precision, and consistency of the research instruments, in order to reduce the measurement errors. The Cronbach's alpha coefficient value of the items (Sekaran, 2003; Hair et al., 2010), was computed to measure the internal consistency.

Nunnally (1978) suggested by using 0.70 as the minimum threshold for acceptable, 0.80 for satisfactory, and 0.90 for adequate. Also, George and Mallery (2003) provided that the following rules of thumb: "_ > 0.9 – Excellent, _ > 0.8 – Good, _ > 0.7 – Acceptable, _ > 0.6 – Questionable, _>0 .5 – Poor, and_ < 0.5 – Unacceptable".

Table 1 Summary of respondents' demographic characteristics

Demographic characteristics	Category	Frequency	Percent
State in which responses were collected	Perak	349	53.1
	Penang	100	15.2
	Johor	83	12.6
	Kuala Lumpur	125	19.0
	Total		
Gender	Male	260	39.6
	Female	397	60.4
	Total	657	100
Age	20 years or less	93	14.2
	21 – 30 years	279	42.5
	31 – 40 years	121	18.4
	41 – 50 years	107	16.3
	More than 50 years	57	8.7
	Total	657	100
Educational Level	Primary	10	1.5
	Lower secondary (Forms 1-3)	29	4.4
	Upper secondary (Forms 4-6)	172	26.2
	Certificate/ Diploma	190	28.9
	Bachelor Degree	184	28.0
	Master's degree and above	72	11.0
	Total	657	100
Primary Area of Employment	Government	90	13.7
	Private Sector	329	50.1
	Self- employed/Business	124	18.9
	Unemployed	86	13.1
	Retired	28	4.3
	Total	657	100
Frequency of house painting	Once a year	125	19.0
	After two years	247	37.6
	Or above	285	43.4
	Total	657	100

From the results based on Table 2, the Cronbach alpha for the constructs were above 0.6. Thus, all the measures were the recommended threshold for Cronbach alpha and were considered reliable.

Table 2 Reliability statistics

Measures	No. of items	Cronbach alpha
Media channel preference	7	0.831
Extent of trust of source of information about lead in paints related issues	9	0.765

Descriptive Analysis

The mean and standard deviation were applied as the measures of central tendency. According to the recommendation of Boone & Boone (2012) for the Likert scale data, the mean and standard deviation was applied as a measure of central tendency and variability respectively. Thus, an average of above 2.0 was considered to be good (Boone & Boone, 2012) as this indicated the level of the respondents' agreement to those statements representing the constructs tested.

Table 3 shows the descriptive statistics output of the research constructs. The means and standard deviations were derived by computing the average of the means of their respective items.

The results of the descriptive statistics of the constructs, as seen in the Table 3, indicates that the mean values of 1 (extent of information trust - political parties) out of 15 items were below the midpoint level of 2.0. While the mean values of the other 14 items were above the midpoint level of 2.0.

On media channels preference, the likelihood to use the internet had the highest mean of 2.74 (SD = 0.606), while the likelihood to use the scientific press had the lowest mean of 2.16 (SD = 0.897). This indicates that on an average, the respondents were most likely to use the internet as a media channel to gain information about lead in household paints, while most of the respondents were least likely to use the scientific press to acquire information about

Table 3 Summary of descriptive analysis

Measures	N	Mean	Std. Dev.
Media channel preference (newspaper)	657	2.52	0.792
Media channel preference (magazines)	657	2.25	0.886
Media channel preference (scientific press)	657	2.16	0.897
Media channel preference (television)	657	2.63	0.715
Media channel preference (radio)	657	2.46	0.813
Media channel preference (internet)	657	2.74	0.606
Extent of information trust (national government)	657	2.50	0.749
Extent of information trust (regional/local government)	657	2.36	0.807
Extent of information trust (European union)	657	2.32	0.792
Extent of information trust (paint manufacturing companies)	657	2.23	0.835
Extent of information trust (scientists)	657	2.59	0.693
Extent of information trust (journalists)	657	2.10	0.833
Extent of information trust (political parties)	657	1.67	0.736
Extent of information trust (environmental protection organizations)	657	2.61	0.685
Extent of information trust (consumer associations)	657	2.52	0.728

lead in paints. This information might however may not be unconnected with the mean age of 2.630 of the respondents who are in the age bracket of 21-40 years and hence are more inclined towards internet as a source of general information.

Regarding the extent of trust of information source, environmental protection agencies had the highest mean of 2.61 (SD = 0.685), while the extent of information trust from political parties had the lowest mean of 1.67 (SD = 0.736). This indicates that on an average, the respondents were most likely to trust the information about lead in paints from an environmental protection agency, while on an average, the respondents were least likely to trust the information about lead in paints from political parties.

CONCLUSION

The results from this study reveal that the internet is the most preferred media channel for information sourcing, while environmental protection organizations as well as scientists, are the two most trusted information source in order of preference respectively regarding the lead-based paints hazards. However, political parties are ranked the lowest in terms of preference of information source. These findings are supported by studies in the literature.

Concerning the internet as the most preferred media channel, Klein and Ford (2003) attributed it to the following; importance of technology in present, advancements in technology, improved proficiency in executing online searches effectively, and proliferation of new online tools, while Hesse et al. (2005) attributed this to the readily available and easily assessable electronic sources of information. Moreover, Frewer et al. (1996) observed that the preference for information from the government or political office holders is often low due to the lack public trust. This is because the general public perceive them as biased and self-serving. Whereas other information sources (e.g. consumer organizations, the quality media, scientists) are regarded as highly trusted.

The findings of this study have both theoretical and practical implications. Theoretically, the findings affirm the tenets of the least-effort principle which implies that consumers have preference for information sources that they perceive to be trustworthy. Practically, the findings of this study have an important advocacy implication for the dissemination of lead-based household paint safety information to the general public.

Prior to this study, an exploration of consumer information seeking activities with a focus on source and media channel preference had only received limited attention in the literature. The findings from this study has thus opened doors of opportunities to many other researches. For example, it would be interesting to study which information source/media channel combinations are used in search for decision making regarding product/service related information. Also, another important focus for future researchers will be the development of information acquisition patterns/models that would result in highly effective and quality information retrieval. A major limitation of this study is that there was no inquiry that investigate the reasons why some individuals, organizations, and media channels are trusted as sources of lead-based paint household hazards related information and others are not. A probe in this area will be worthy of further research.

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