

A study on the street food dimensions and its effects on consumer attitude and behavioural intentions

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Abstract

Purpose – *This study aims to find out various dimensions of the risk and benefit perceptions of the consumers of street food vendors. It will identify the reasons which affect consumer's attitude and consumption patterns towards street foods, which bring about changes in their behavioural intentions (repurchase intention and word of mouth intention).*

Design/methodology/approach – *Five risk and two benefit factors were tested on a factor model by exploratory factor analysis using 26 constructs. Two-step approach was followed in which measurement model, having six constructs with 17 measurement items, were assessed, followed by the structural model. This study explained that the consumer attitude is affected by perceived risks and benefits. Further, the risk perception negatively affects the behavioural intentions. A conceptual model was framed to depict the relationships among variables and was empirically tested.*

Findings – *The results indicate that risk and benefit perception of consumers are not only inter-related but also responsible for their changes in attitudes towards the street foods. In the factorial analysis, it was found that perceived benefit factors, i.e. convenience and value, are responsible for positively influencing the attitude of consumers towards street food. The findings indicate that reducing risk perception and increasing benefit perception will positively change the patron's attitude.*

Originality/value – *The data collection was done through a structured questionnaire specifically drafted to collect the relevant data for the study from the 658 street food consumers in Delhi. To examine the factorability of 26 items of risk/benefit perception, 586 observations were used.*

Keywords *Food safety, Consumer attitudes, Behavioural intentions, Risk-benefit perceptions, Street foods*

Paper type *Research paper*

Introduction

Street foods are described as ready-to-eat foods and beverages prepared at home or on streets and consumed on the streets without further preparation or with a little preparation (Rane, 2011). Street foods are a source of socially and culturally accepted, cheap, convenient and often tantalizing preparations for both urban and rural populations worldwide (Namugumya and Muyanja, 2011). Modern lifestyles, changing family structures, limited food preparation time, along with other socio-economic reasons, have led to significant changes in consumers' food selection attributes and consumption patterns. Further, consumers' changing demands and personal food preferences to eat out motivates them to visit different street food outlets, seeking convenience and value for their money. The mobile street food vending is amongst the many survival strategies adopted by the poor as well as urban households to maintain and further expand the base of subsistence income especially in the surge of economic crisis (Acho-Chi, 2002).

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Jerk chicken in Jamaica, arepas in Columbia, kachori in India, bunny chow in South Africa and banh mi in Vietnam are few of the most loved national street foods and found in every street and corner in those countries (Roughguides.com, 2017). From Lebanese falafel carts to taco joints of Mexico, easily accessible, convenient and ready-to-eat street food is ubiquitous (Tinker, 1999, 2003). The street foods prepared by the food vendors represent the traditional local cultures with various types of authentic cuisines (Winarno and Allain, 1991). The diverse foods offered by the street food vendors have become cultural icons and tourist attractions (Dawson and Canet, 1991; Henderson, 2000; Timothy and Wall, 1997). A few of the well-established street food trades representing different cultural food traditions in Asia include food haats in India, evening and night markets in Taiwan and Thailand, street stalls in Korea and Yatai in Japan.

In recent times, the demand for foods served on the streets around the world is growing. However, very little empirical literature is available on the patterns of street food consumption, and merely issues related to hygiene and sanitation on the food vending sites have been addressed so far. The consumption decisions, if not always, involve weighing the perceived risks and benefits (Jensen and Sandøe, 2002). Therefore, the purchase decision of the consumer depends upon the relative risk and benefit perceived and such evaluation process needs a better understanding for food consumption in future. So far, no research has specifically addressed the “dimensionality” of the street food risks and benefits. Further, how such perceptions affect the behaviour of consumers is also not well known. This study is aimed to discover the various dimensions of the risk and benefit perceptions of the patrons of street food vendors and test the effects of the risk/benefit perceptions on the attitudes and consumption patterns of consumers towards street foods and behavioural intentions (i.e. repurchase intention and word of mouth intention). It is based on the multi-dimensional concept proposed by Jacoby and Kaplan (1972), which evaluates social, physical, financial, psychological and performance risks associated with the street foods. Theory of planned behaviour has been applied to show the relationship between consumers’ attitude and behavioural intentions and how it influences the consumers’ future purchase and the positive word-of-mouth intention. A conceptual model has also been framed to depict the relationships among the variables in consideration for this study and was empirically tested.

Literature review

Introduction to the street foods and the street food vending

The “street foods” or “street-vended foods” are the foods and beverages prepared and sold by vendors in streets and other public places for immediate or a little later consumption without processing it further (World Health Organization, 1996). They provide a chance for self-employment and helps to develop a small business with low capital investment (World Health Organization, 2010). They play an important socio-economic role for the low and middle income groups in meeting their nutritional food requirements at affordable prices (Ackah *et al.*, 2011). Such enterprises selling the street foods run near busy places such as transportation hubs, office blocks and school districts (Streetfood.org, 2012).

In contrast to these likely benefits, it is also documented that the street food vendors are often uneducated, poor and lack acquaintance of food safety practices such as safe working environment, sanitation and hygiene, style of food displays and proper hand washing techniques (Bhowmik, 2010). The Food safety is a broad term that incorporate several conditions, which include preparation, handling and storage of foods in terms of preventing food intoxication and food poisoning (World Health Organization, 2010). The Foods prepared largely do not meet proper hygienic standards and can, therefore, lead to morbidity and mortality due to food borne illnesses and concomitant effects on the trade and development (DeWaal and Rober, 2017). The Food vendors are often free from local taxes and violate the existing local food safety regulations.

With changing times, the street food vending businesses have now become more regulated and commercialized. In some countries (e.g. Japan, India, Singapore and USA), the government regulates standards and codes of practice in the street food trades. For example, in Singapore, the street food vendors are housed in hawker centres as a part of an urban renewal plan (Henderson, 2000). In India, the Food Safety and Standards Authority of India (FSSAI) and the State Food Safety Authorities are the main regulatory bodies for the purpose. New York City requires a mobile food vendor to have a license, a cart permit and a valid food safety certificate from the Health Department (Burt *et al.*, 2003).

Although the popularity of the street foods is expected to continue because of its benefits, yet many issues related to the street food vending remain to be addressed. Numerous researchers (Bryan *et al.*, 1988; Ekanem, 1998) have identified the issues of food safety and health hazards about the street vended foods. The vending of street foods is usually performed in small mobile food vending units (e.g. canopies, trailers and push carts) which have an insufficient equipment design and layout, poor environmental hygiene and sanitation, inappropriate food management and storage practices, as well as low quality of raw materials (Manguiat and Fang, 2013). Despite their close relationship with local dwellers' lives, the street food trades are often viewed as a "nuisance" (Tinker, 2003) because of accompanying activities described as "disorderly, untidy and disturbing to traffic" (Chakravarty and Canet, 1996). Consequently, the consumers often perceive risks in the street food and have developed a negative attitude towards the street food.

Street food vending in Delhi

Delhi is densely populated and remains bustling with large number of street food vendors selling their produce in every nook and corner of the region. The variety of street food varies from the authentic Indian and foreign jaw dropping food mixes to rather manipulated and exploited food stuffs sold as fusion street foods. This includes fast foods, momos, rolls and frankies, assorted paranthas, kachoris, samosas, assorted tandoori kebabs and tikkas, puri bhaji, chole bhature and kulche apart from the lighter snacks like mathri and fan which are served in almost all food domains including restaurant, office canteens and street food joints.

Although the street food trends present numerous problems in Delhi, yet some benefits related to the food and nutritional security have also been reported, such as strengthening of the regional food practices; an attractive way for tourists to explore the regional ethnic cuisine; a vital source of income for huge local population; and an opportunity to establish a private business with very less capital investment (Food and Agriculture Organization, 2001; Calloni, 2013). In Delhi, the street foods have become integral part of the local food culture and assure that the minimum food requirements of the people (especially the working class) are fulfilled. Food served in or near the workplace in food outlets such as office canteens, restaurants and cafes is often criticized for being nutrient-poor and energy dense (Sharma *et al.*, 2016). Efforts taken to improve this issue might include strategies such as developing healthier recipes, price reductions of healthy dishes, educational messages as well as the use of food labelling approaches (Bandoni *et al.*, 2011).

The Union Government has also notified the Street Vendors' (Protection of Livelihood and Regulation of Street Vending) Act, 2014. It has the provision of "Town Vending Committees (TVC)", a decision-making body. Five TVCs have been proposed in Delhi – one each under the East, South and North corporations, Delhi Cantonment Board (DCB) and New Delhi Municipal Council (NDMC). The new Act proposes to streamline the entire street vending system in Delhi as there will be a concrete list of registered vendors (NASVI, 2016).

Perceived risk and benefit related to the street foods

The street foods though assure the nutritional and hunger needs of the population daily yet are prone to some food safety and health risks too. The Consumers, in the pursuit of attaining various benefits, face some degree of risk in every purchase decision (Kim *et al.*, 2008; Taylor, 1974). Thus, the consumer's choice of a product or service can be explained using the framework of risk and benefit perception. The Food consumption rests on the degree of perceived risk and benefit that are affected by the outrage related to the hazard and by the euphoria related to the benefit (Ashwell, 1991).

Bauer (1960) first introduced the concept of perceived risk and benefit in analysing the consumer purchase behaviour. Perceived risk is the accumulated effect of possibilities, the ambiguity involved in a purchase decision and the consequences of taking an undesirable action (Arndt, 1968; Cunningham, 1967). This two-dimensional concept was further refined by Jacoby and Kaplan (1972) to a more widely used, multi-dimensional one which evaluates social, physical, financial, psychological and performance risk. The nutrition security of the street foods has been one of the major concerns for public health, as the potential for no safety or no sanitary handling food by mobile street food vendors is common (Mamun *et al.*, 2013). In this study, the risk perception, therefore, is conceptualized as the likelihood of negative, unfavourable and harmful consequences to the consumers themselves and the society, caused by purchase and consumption of street food.

The social risk involves loss of respect and/or self-esteem (Murray and Schlacter, 1990). Researchers have argued that evident consumption of products/services create a perception of higher social risk (Bearden and Etzel, 1982). Similarly, the psychological risk relates to loss of self-image and/or self-concept (Murray and Schlacter, 1990). Many studies (van Kampen *et al.*, 1998) have explored the food safety issues related to the street food vending which includes hygiene related risks including utensil washing, hand washing, use of potable drinking water and safe food handling at the vending sites.

Many researchers (Roehl and Fesenmaier, 1992; Mensah *et al.*, 2002) have identified a few physical risks related to the street food consumption which includes illness resulting in from a purchase, anxiety about an injury or sickness resulting in from the food consumption or that the consumed product may result in a threat to human life. In fact, the researchers have identified certain causative agents related to street food, including *Salmonella*, *Shigella*, *E. coli*, *Listeria* and other *Enterobacteriaceae*—all of which can cause a wide range of symptoms like diarrhoea, cramping, vomiting and nausea (Bryan *et al.*, 1988). Moreover, the street foods prepared by the vendors used to be very high in non-essential fats, usually of inferior quality and might contribute to obesity and nutritional imbalance.

Value for money is one of the most basic requirements for any food consumer. The Financial risk involves the possibility of low value for money for the product/service through a purchase (Roehl and Fesenmaier, 1992). Consumers do not solely expect food at a low cost but rather at a cost that reflects good value for money (Price *et al.*, 2016a, 2016b). The Consumers often perceive the street foods as financial risk when the benefits of purchasing a dish outweigh the money invested in acquiring it.

The perceived benefit is defined as a consumer's belief about the extent to which he or she will become better off from the purchase and/or use of an object (Kim *et al.*, 2008). The Perceived benefits change based on consumption situation and consumer's choices. The Consumption of the street foods does have some benefits. Among them, taste, price, portion size, time in service, accessibility of the vending site, simplicity of menu and variety in menu have been often mentioned in the various research studies. In this study, two major types of the perceived benefits are associated with the street food, which can be categorized as value related to more intrinsic attributes that characterize the food itself and the convenience related to extrinsic advantages (that is, service-side). The value of eating

out has been characterized as both functional and economic: taste, price, quantity and menu variety (Park, 2004). This study, based on the literature, proposes multidimensional factors of perceived risks of the street food.

Linkage of the perceived risk and benefit with the behavioural intention and attitude of the consumer

The attitude is moulded by both the perceived risks and benefits as people involve in the behaviour that determines behavioural intention (Ajzen, 1985). Earlier studies revealed that high levels of benefit perception and low levels of risk perception towards an object can affect the attitude of a consumer towards the food consumption (Jarvenpaa *et al.*, 2000; Huang, 1993).

This study, therefore, hypothesizes that perceived risk and benefit are responsible for the attitudinal changes of the consumer towards the consumption of street foods:

- H1. Consumers' attitude towards the street foods is adversely influenced by the perceived risks.
- H2. Consumers' attitude towards the street foods is positively influenced by the perceived benefits.

The review of previous literature reported that there is a direct linkage between the risk/benefit perceptions and the behavioural intentions of the consumers (Brunso *et al.*, 2002). It was reported that the perceived risks change a person's motives towards food consumption, thereby influencing their behavioural intentions (Floyd *et al.*, 2003). As the perceived risk/benefit are responsible in yielding both positive and negative results in terms of food consumption by the consumers, the more an individual perceive risk, the willingness to purchase the street food will simultaneously decrease and *vice-versa*. Thus, the behavioural intentions of the consumers largely depend upon the perceived risk/benefits towards the street foods. We, therefore, propose that:

- H3. Consumers' perceived risks adversely affect behavioural intentions of consumer towards the street foods.
- H4. Consumers' perceived benefits positively affect behavioural intentions of consumer towards the street foods.

The effect of attitude on the behavioural intentions

The attitude is strongly associated with the intentions to patronize the object and to endorse positive word-of-mouth about it (Oliver, 1997). In this context, the behavioural intention such as repurchase intention and word-of-mouth intention was defined as "a stated likelihood to engage in a behaviour" (Oliver, 1997, p. 28). The attitude as a precursor of the behavioural intention has been supported by extensive research in the hospitality and tourism industry. In the lodging industry, Jeong and Lambert (2001) found that favourable attitude towards a lodging website was a significant predictor of the users' decision to purchase the accommodation online. Applying the theory of planned behaviour (TPB), which explains a sequence of beliefs, attitudes, subjective norms, perceived behavioural control and behavioural intention, Lam and Hsu (2006) confirmed that the attitude is a determinant of choosing a tourist destination. We, therefore, propose that:

- H5. Consumers' attitudes towards the street foods positively affect the behavioural intention towards the street foods.

In summary, this study proposes that the perceived risks and benefits associated with buying the street foods affect the consumers' attitudes towards the street foods and, in turn,

directly and indirectly influences the consumers' future purchase intention and the positive word-of-mouth intention. A conceptual framework figure showing the model and the hypotheses is given in [Figure 1](#).

Methodology

Instrument development

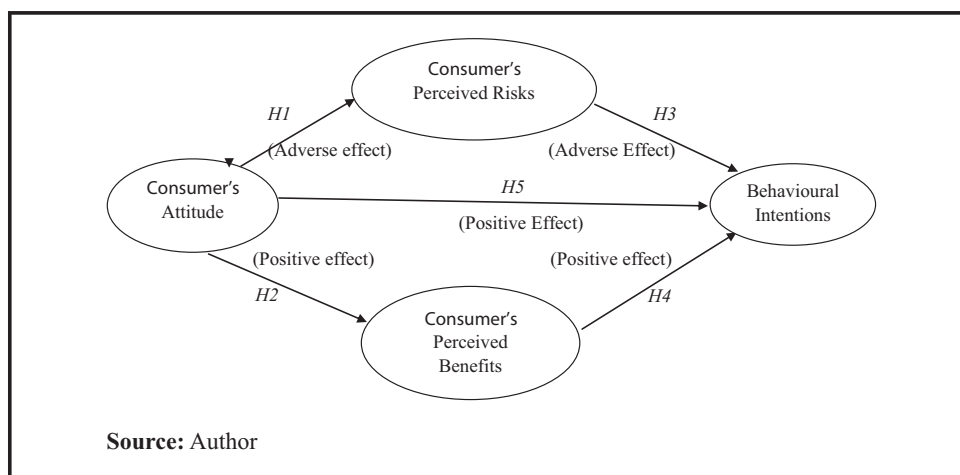
A survey questionnaire was developed based on the review of literature to determine the risk and benefit perceptions linked with consumption of the street foods and to justify the proposed relationships. The constructs used were based on the review of available literature which have been developed in the previous studies. The Risk perception was measured with 19 questions for the identified five dimensions: the socio-psychological (four items; [Yeung and Morris, 2001](#)), the hygienic (four items; performance loss in [Yeung and Morris, 2001](#)), the financial (three items; [Forsythe et al., 2006](#); [Yeung and Morris, 2001](#)), the environmental (four items; [Chakravarty and Canet, 1996](#)) and the health risk (four items; [Tester et al., 2010](#); [Yeung and Morris, 2001](#)).

The Benefit perceptions of the respondents were measured with seven items including taste, affordable price, large serving size, prompt service, convenience to eat, easy accessibility and food variety ([Dawson and Canet, 1991](#); [Ekanem, 1998](#); [Mosupye and von Holy, 1999](#); [Taylor et al., 2000](#)). Three statements asking the respondents about liking, trustworthiness and food satisfaction were constructed to measure overall attitudes towards the street foods (refined from [Jarvenpaa et al., 2000](#)). The behavioural intention had two items i.e. asking the participants' level of intention to repurchase the street foods and to recommend to others (positive word-of-mouth intention; [Jeong and Lambert, 2001](#)). All questions were measured using five-point Likert scales anchoring 1 (extremely unlikely) to 5 (extremely likely).

Data collection and participants of the study

The data collection was done through a structured bilingual questionnaire from the street food consumers in Delhi. This study applied location intercept techniques because these techniques offer maximum response rates ([Malhotra, 2008](#)). The areas, specially the famous markets of Delhi, were selected for the study. Pilot-testing of questionnaire was performed randomly in the study area with some consumers which lasted for three days

Figure 1 Conceptual framework figure showing model and hypothesis



and minor revisions were incorporated to make the questionnaire more relevant and precise.

Consumers were selected purposively based on the accessibility, availability and willingness to participate in the study. Predict the bias and Multiple imputation techniques were used together to reduce the self-selection biases (Keeble *et al.*, 2015). Use of information from non-participants was done to try to predict the amount of bias present during data collection and missing values were adjusted and replaced with reasonable estimates drawn from the collected data. A detailed analysis was also done for each filled questionnaire to check the consistency of data. In some cases, many incomplete questionnaires were found. Such questionnaires were not considered worthy for further analyses and were rejected. The data collection lasted over three weeks to gather the responses from approximately 650 respondents.

A total of 648 responses were collected from the different food vending sites of Delhi. Fifty-five respondents, who never had tried street foods before, were excluded from further analysis in the initial screening. After eliminating non-users ($n = 55$) and unusable responses, including observations with missing values ($n = 07$), 586 observations were used. Approximately 55 per cent ($n = 357$) of the respondents were female. Most of the respondents (58 per cent) fell between the ages of 21 to 30, and the lowest percentage (6 per cent) was 40 and over.

Data analysis and results

To examine the factorability of the 26 items of the risk/benefit perception, 586 observations were used. The data matrix had correlations higher than 0.30 between the variables. The Kaiser–Meyer–Olkin (KMO) measure of sampling adequacy was found to be 0.81 which was well over the threshold of 0.60. Bartlett's test of sphericity was significant, $\chi^2(325) = 5126$, $p < 0.001$ which was well below 0.05 and thereby shows the reliability, suitability and adequacy of data.

Exploratory factor analysis

The Exploratory factor analysis was used to examine the dimensions of the street foods (Perceived risk/benefit). Seven factors (five risk factors and two benefit factors) had initial eigenvalues higher than 1.0, and the total variance explained by the seven factors was 62.82 per cent of variance. In the next step, five variables with communality less than 0.30 were removed in the sequence. On further analysis, 4 items were removed because they were either loaded onto the other factors or were highly cross-loaded. Finally, the six-factor model (financial risk variable was deleted) was estimated for 17 items. The six-factor solution (four risk factors and two benefit factors) explained 70.05 per cent of the total variance. The hygiene risk explained the most variance (25.52 per cent), followed by the environmental risk (14.83 per cent), the convenience benefit (10.23 per cent), the health risk (8.43 per cent), the value benefit (6.29 per cent) and the socio-psychological risk (4.75 per cent). The internal consistency of the data was determined through Cronbach's alpha measure of reliability. The value of alpha coefficient estimates was acceptable and ranged between 0.61 to 0.87. [Table I](#) provides a summary of factor loadings, standard deviation, eigenvalues, means and variances.

Measurement model and confirmatory factor analysis

Two-step approach was followed in which the measurement model having six constructs with 17 measurement items was first assessed, followed by the structural model (Anderson and Gerbing, 1988). The Composite reliabilities of all the constructs

Table I Results of exploratory factor analysis (*N* = 586)

Factor labels	Factor items	Factor loading	Mean (SD)	Eigenvalue		Variance explained (%)	Alpha
Hygiene risk (HG NR)	Stale raw materials	0.87	3.45	(1.00)	4.78	25.52	0.87
	Inappropriate storage of materials	0.85	3.60	(0.94)			
	Scarce supply of potable water	0.82	3.63	(0.99)			
	Unhygienic conditions	0.72	3.81	(0.87)			
Environmental risk (E VRR)	Use of plastic	0.81	3.75	(0.87)	2.42	14.83	0.79
	Disposables						
	Food waste	0.77	3.53	(0.84)			
	Contamination						
Convenience benefit (CVNB)	Potable water	0.68	3.65	(0.85)	1.75	10.23	0.76
	Contamination						
	Eating convenience	0.87	3.94	(0.73)			
	Easy accessibility	0.73	4.13	(0.72)			
Health risk (HLHR)	Professional service	0.60	4.03	(0.71)	1.38	8.43	0.75
	Inappropriate nutrition	0.74	3.07	(0.98)			
	Fat accumulation in body	0.66	3.23	(1.10)			
	Food intoxication	0.43	3.37	(0.98)			
Value benefit (VAUB)	Large portion size	0.75	3.30	(0.76)	1.19	6.29	0.68
	Value for money	0.71	3.54	(0.78)			
Socio-psychological risk (SOPR)	Unwanted appraisal by	0.71	2.36	(1.02)	1.04	4.75	0.61
	Friends and peers						
	Damage to dignity	0.61	1.81	(0.92)			

Source: Author

exceeded 0.70 except the socio-psychological factor (0.65). The average variance extracted (AVE), the measure of amount of variance of captured by the indicators relative to the measurement error (Fornell and Larcker, 1981) of the socio-psychological factor was less than the suggested value of 0.50 and due to this, the construct was removed from the structural model test (Choi *et al.*, 2013). Table II provides the list of constructs and their measurement items, the standard loadings, the composite reliabilities and the average variance extracted (AVEs). Table III presents descriptive statistics (means and standard deviations), AVEs and the correlations of second-order factors. A good fit to the data was yielded by the measurement model except the chi-square. Chi-square fit for the measurement model was significant ($\chi^2 = 1523.32$, $df = 430$, $p < 0.001$).

Structural model and hypothesis testing

The Maximum likelihood estimation was used to assess the parameters. The standardized path coefficients are described in Figure 1 with *t*-values in parentheses. All the Hypotheses i.e. 1, 2, 3, 4 and 5 were supported in this study. As projected, the perceived risks had significant negative effects on attitude ($\beta = -0.52$, $t = -8.97$, $p < 0.001$) and behavioural intention ($\beta = -0.18$, $t = -2.97$, $p < 0.01$). The perceived benefits had a significant positive effect on the attitude ($\beta = 0.23$, $t = 3.71$, $p < 0.001$). Finally, the attitude positively affected behavioural intention ($\beta = 0.53$, $t = 7.67$, $p < 0.001$). The perceived risks and benefits together explained 35.1 per cent of variance in the attitude. In turn, almost half (49.4 per cent) of variance in the behavioural intention was explained by the perceived risks, the benefits and the attitude towards the street food (Figure 2).

Discussion and future implications

The results of this study indicate that the risk and benefit perception of consumers are responsible for their changes in the attitudes towards street foods. In the factor analysis, it

<i>Second-order factor</i>	<i>First-order factor/items</i>	<i>Stand. loadings</i>	<i>Composite reliability</i>	<i>AVE</i>
Perceived risks	Hygiene risk		0.87	0.66
	Stale raw materials	0.86		
	Inappropriate storage of materials	0.85		
	Scarce supply of potable water	0.75		
	Unhygienic conditions	0.72		
	Environmental risk		0.79	0.56
	Use of plastic disposables	0.78		
	Food waste contamination	0.74		
	Potable water contamination	0.71		
	Health risk		0.75	0.52
Perceived benefits	Inappropriate nutrition	0.75		
	Food intoxication	0.72		
	Fat accumulation in body	0.63		
	Value benefit		0.71	0.56
	Large portion size	0.77		
	Value for money	0.65		
	Convenience benefit		0.76	0.55
Attitude	Convenience in eating	0.82		
	Easily accessible	0.71		
	Professional service	0.64		
	Trust	0.56	0.74	0.52
Behavioural intention	Liking	0.79		
	Good food	0.81		
	Repurchase intention	0.79	0.78	0.65
	Word-of-mouth intention	0.82		

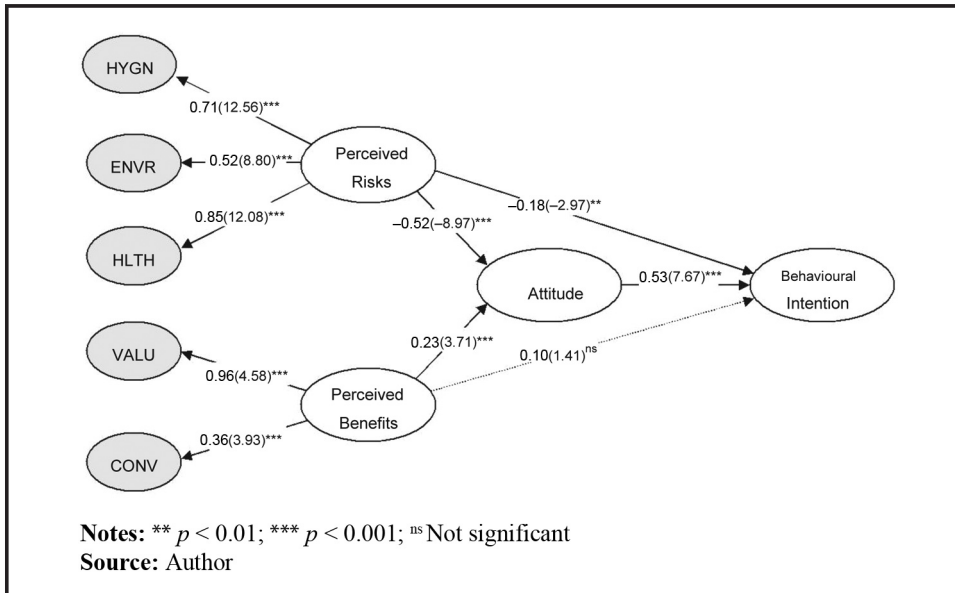
Note: WOM = Word of mouth
Source: Author

<i>Factors</i>	<i>Mean (SD)</i>	<i>AVE</i>	<i>Risks</i>	<i>Benefits</i>	<i>Attitude</i>	<i>Behavioural intention</i>
Risks	3.51 (0.61)	0.51	A	B	-0.53	-0.51
Benefits	3.79 (0.51)	0.55	0.72_c	B	0.34	0.32
Attitude	2.88 (0.65)	0.55	0.02	0.63	0.14	0.74
Behavioural intention	3.06 (0.81)	0.64	0.30	0.14	0.45	0.76

Notes: AVE = average variance extracted; ^aComposite reliabilities are shown along the diagonal and are in bold; ^bCorrelations are shown above the diagonal; ^cSquared correlations are shown below the diagonal
Source: Author

was found that amongst all the perceived risk factors, the hygiene was the most critical determinant followed by health and environment risks. Results also suggested that the street food consumers are concerned about improper disposal of waste, use of unclean utensils for food preparation and storage, poor storage areas, use of poor quality raw materials especially fats and scarce supply of potable water at the food preparation site. Due to the above-mentioned reasons, a negative perception may develop amongst the consumers and they may perceive that consuming these foods may result in health issues such as food poisoning, irregular or unbalanced nutritional diets, obesity and other lifestyle disorders such as diabetes.

Figure 2 Structural model and path coefficients (*t*-values)



It was also found that the street food consumers were conscious about the environment where the street food business is performed and consider the manifold use of plastic disposables and indescribable use of potable water to be a major environmental risk that needs focused attention and remedial measures by the civic authorities and the street vendors.

In the factorial analysis, it was found that two perceived benefit factors i.e. the convenience and the value, are responsible for positively affecting the consumers attitude towards the street food. This study further found that the value (determined by perception of affordable price and large serving size) and the convenience (determined by convenience of eating, easy accessibility and prompt service) drive the street food patrons' perceived benefits. Although the loadings were not greatly different, this study found that the value perception is more influential than the perceived convenience in forming benefit perception. Providing menu descriptions (e.g. taste, pictorial images, menu variety), nutritional information (e.g. calories, serving size) and quick service can foster a consumer's benefit perception.

In turn, such perceived risks and benefits contribute to the patrons' attitudes towards the street food. The findings indicate that the reducing risk perception and the increasing benefit perception will positively change the patrons' attitudes. Overall, this study found that the consumers' perceived risks are more critical than the perceived benefits in determining the patrons' attitudes. Similarly, the total effects (direct effect and indirect effect through attitude) of the perceived risks [$-0.19 + (-0.50 \times 0.55)$] were greater than that of the perceived benefits [$0.10 + (0.26 \times 0.55)$] on behavioural intention.

To reduce the consumers' perceived risks, providing food information through menu labelling at the point of purchase can provide the framework for measured food choice decisions (Geaney *et al.*, 2013). Understanding key drivers of food choice can allow street food operators to align their service with consumer preferences across different market segments and is also a way for them to demonstrate transparency and strengthen the relationship with their customers (Price *et al.*, 2016a, 2016b). Although consumers are guided towards making healthier choices, however, enriching menus achieves a greater acceptability compared to restricting choice and removing unhealthy dishes completely (Jørgensen *et al.*, 2010).

The street food vendors need to strive to minimize the perceived risks and maximize the perceived benefits to attract more demand for the street foods. For providing the consumers with better street food experiences, the street food vendors themselves and the local government should develop a cohesive and comprehensive strategy to reduce the risk perceptions of the patrons, such as offering volunteered food safety and handling training and developing local regulations associated with the risk factors discussed above. It is suggested and advocated that a mobile court should be introduced to monitor the street food vendors and NGOs' should emerge to promote safe street foods. These organisations should conduct awareness campaigns through rallies, drama shows and policy advocacy.

Limitation and suggestions for further study

As this study tried to further elucidate the effects of consumers' risk/benefit perceptions on the attitude and the behavioural intention, we came across few limitations related to the street food vending. These limitations prompted further study and analysis as under: -

First, for the financial and socio-psychological factors, the reliability of the risk perceptions was found to be very low. Further, study might help in developing better measures of the above-mentioned factors. Apart from the factors explored in this study, some other risk/benefit perception may also exist in the street vending. Therefore, further investigation of the risk/benefit factors may need to be gone into and may require future studies.

Second, this study has tried to identify the reasons of the non-purchase behaviour/decision of the consumer towards the street foods but, that understanding is not explored to its full potential. Further, studies might explain those reasons and factors in a better way.

Finally, the data collection for this study was done in a country where food diversity is quite limited and only domestic data were used for this study. In addition, the ways of street food vending differ from country to country and the same may not be generalised for other countries. Further studies might present the data from the different the locations and cultures and the usefulness of the data may be expanded.

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