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THE COVID-19 PANDEMIC AND THE ROLE OF HEALTH RISK PERCEPTION TOWARDS SECOND-HAND GOODS CONSUMPTION

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ABSTRACT: *The purpose of this study is to propose a simple model that addresses health risk perception for second-hand goods. The effect of the Covid-19 pandemic on household income has caused behavioral change and individuals are preferring to shop for used second-hand goods to mitigate their financial challenges. Unlike new retail products, second-hand goods are associated with the risk of contamination and virus transmission. Since participation in second-hand goods markets are a growing trend, an understanding of consumers' health risk perception of this product category is important and relevant. The methodology used involved questionnaire survey distributed among 356 respondents for the analysis of three key dimensions of health risk perception and how these dimensions influence behavioural attitude towards second-hand goods. The findings of this study have shown that the emotional dimension of health risk perception is not supported, suggesting that consideration of second-hand goods did not lead to generation of negative emotions.*

KEYWORDS: health risk perception, second-hand goods, Covid-19 pandemic.

INTRODUCTION

The Covid-19 pandemic has significantly altered many aspects of the consumers lifestyle, including disruption to consumption and expenditure patterns(Roggeveen and Sethuraman, 2020). A notable consequence has been the shift towards frugal consumption practices. A recent study by (Baker et al., 2020) has suggested that this change in consumption behavior is a conscious response by consumers for coping with the new socio-economic situation. According to (Herstatt and Tiwari, 2020) common characteristics of frugality include reduction of wasteful behaviors such as, avoiding costly habits, embracing lower cost options, and finding ways to save money. It has been observed that the practice of frugality has increased since the Covid-19 pandemic and to mitigate financial challenges consumers have turned towards second-hand product shopping (Ozdamar Ertekin et al., 2020). The practice of second-hand product shopping involves buying items that have been previously used by a first-time user which are then sold/passed on to a second-time user(Waight, 2014). This process of circulating and passing on products between first-time user and second-time user raises a number of health concerns. There exists the possibility that previously used second-hand products may be an enabler and act as the pathway for the transmission of

coronavirus, and thereby pose health risks for both buyers and sellers. Although there is a growing body of knowledge regarding the transmutability of the virus and how infected individuals pass it on to others(Wen et al., 2020), there is limited information available on the role second-hand goods play in the transmission process. More specifically, from a consumer behavior perspective there is no available information on how Covid-19 has influenced consumers health risk perception and attitude towards second-hand goods. This study, aims to look into this under-studied topic by asking the research question "What are the determinants of health risk perception and how does this affect consumer's behavioral attitude towards second-hand goods?

This aim of this paper is to introducing a simple conceptual model to examine the underlying factors that determine health risk perception (HRP), and its influence on second-hand product purchase behavior. The findings of this study add to the current literature on the factors influencing risk perception towards second-hand product consumption.

LITERATURE REVIEW

There is a scarcity of empirical study on evolving COVID-19 pandemic. Researchers around the globe are continuously uncovering new information and making new discoveries about cause and effect of Corona virus on social life.

Covid-19 and its Impact on Consumption Practices

There has been extensive media coverage of the devasting impact of Covid-19 on the livelihood of people throughout the world from USA to Europe to Asia. A Mckinsey report (1) states that preventive measures such as lockdowns and business closures has created financial burdens forcing households to change their consumption habits. According to researchers (Baker et al., 2020), (Cohen, 2020), it has been observed that

(i) With the rise in infection cases households have become very cautious, altering their typical spending habits across several product categories and that spending has been diverted from discretionary to essential goods such as foods.
(ii) The changes in purchasing habits has been driven by shifts in attitudes in order to cope with the ongoing health crisis.
(iii) The coping strategies being adopted include; prioritizing on meeting the most basic essential needs such as foods and hygiene products
(iv) There has been an increasing desire to minimize wasteful consumption habits and be more mindful on conserving money and accumulating savings as a buffer.
(v) There is a greater desire to shop locally and support locally sourced produce over foreign or imported goods.

Covid-19 and Health Risk

Findings from lab studies on Covid-19 medical researchers have suggested that it possible for a person to get infected with Covid-19 by touching a surface or object that has the virus on it and then touching their own mouth, nose or possibly their eyes(Bai et al., 2020). Transmission of Covid-19 can also take place when an infected person coughs or sneezes on their hands and some of the respiratory droplets may splash onto

a nearby surface, or the person spreads the germs by touching surfaces of shared items before washing his hands. This potential for person to person transmission through physical contact is more acute because the virus can remain infectious on materials surfaces for several days (Chang et al., 2020, Fiorillo et al., 2020).

Covid-19 and Second-hand goods Consumption

The risks associated with second-hand goods have been widely studied by previous researchers and found to stem from a number of sources such as; poor regulatory oversight of consumer protection rights (Sundararajan, 2014); ambiguity of product performance information (D'Hauwers et al., 2020), and the fact that products are not "new' or "fresh" and have been handled by previous owner. It is this researcher's contention that since the advent of the Covid-19 pandemic the risk of this category of products has been further compounded by the concern that used second-hand items may be a vehicle for disease transmission and pose a serious health risk. Such health risks can be attributed specific unique characteristics of second-hand goods. For instance;

(i) Poor regulatory oversight of second-hand marketplace which opens up scope for unscrupulous sellers to neglect necessary decontamination of used products and sell unclean and unhygienic goods (Sundararajan, 2014).

(ii) The intermediary agents who act as sellers have incentive to hide accurate product history and previous usage information to maximize sales and profits(D'Hauwers et al., 2020).

(iii) Buyers do not have direct access to original manufacturer or retailer and therefore is required to make sub-optimal decisions with limited product information(Abbey et al., 2015).

For the purposes of this research it is assumed that the process of second-hand trade involves exchange of used items between consumers. Further, if the first owner of the product is unknowingly infected with Covid-19 the virus may be carried on the surface materials of these used products and thereby infect the second-time user, and expose him to health risk of covid-19 disease.

The Concept of Perceived Health Risk

Although not specifically defined in previous literature the perceived heath risk (PHR)refers to the perception of the occurrence of a negative consequence or experience related to the health of the individual or group of people. Furthermore, the level of health risk perceived by the consumer can be affected by a number of factors. According to (Tandi et al., 2018), these factors include;

(i) The extent of concern/worry/alarm or dread the specific health risk evokes in the consumer's mind.

(ii) The level of consumer awareness and understanding of the risk and the implications it has on health.

(iii) The frequency and probable likelihood of personal exposure by the consumer.

(iv) The level of confidence the consumer has in his/her ability to manage and control the health risk

(v) The intensity of media coverage of the risk issues and its implications on consumers health.

The level of health risk perceived by an individual has implications on his/her behaviour. Existing research (Ferrer and Klein, 2015), suggests that risk perceptions associated with disease can determine how an individual adapts his/her behaviour. A

person's motivation to abstain or to engage in a behaviour is believed to be driven by beliefs about the probability that a negative health consequence will occur(Sigel et al., 2010, Taylor, 1974).

The Three Dimensions of Health risk

According to World Health Organisation (WHO), (Brown et al., 1984), health can be defined in terms of the three dimensions (i) physical, (ii) mental and (iii) social; and that an individual's health comprises a state of complete physical, mental and social well-being, and not merely the absence of disease or infirmity. For the purposes of this study, the health risk is framed in terms of these three components, and the perceived health risk (PHR) is defined as the harmful consequences of Coivid-19 on each of these three components

(i) Emotional factors:

Emotional health refers to the emotional aspect of the individual's health (Brown et al., 1984). For the purposes of this study mental states of discomfort such as fear, worry, dread, anxiety, depression, pessimism is defined as emotional risk. Furthermore, if these emotional states reach a level of high intensity it may trigger or evoke emotional panic reactions(Baker et al., 2004). Medical studies,(Grobe et al., 1999) ,(Headey et al., 1993) looking into the link between psychological state and perception have established a strong link and found that immediate positive emotions (e.g., happiness) can lead to lower risk perception and vice versa negative emotions(e.g. fear) can trigger increase perception of risk (Haase and Silbereisen, 2011). These authors have also suggested that mere imagination of negative consequences on ones wellbeing can evoke feelings of stress, which in turn can lead to a decrease in level of willingness to engage in a behaviour (Sobkow et al., 2016). Other studies also support the link between mental imagery and risk perception. For instance, in a study by (Traczyk et al., 2015), it is suggested that individuals can feel or intuitively experience the size of a potential danger in their mind and that activities which elicit negative emotions can lead to higher perceived risk. For the purposes of this research, it is assumed that the link between emotions about potential risk and health risk perception (HRP) has an effect on attitude and behaviour towards second-hand products. For instance, since second-hand products have been previously used a sense of danger is evoked in the consumers mind that used items may be contaminated. This emotional discomfort is further compounded by (i) media coverage that reoccurring waves of infection outbreaks are imminent, (ii) unavailability of a remedy and inability to discover a timely vaccine cure. This researcher assumes that the attitudes of consumers towards second-hand products is directly influenced by their perception of health risk perception which are determined by mental/emotional risk factors. Therefore, it can be hypothesised that that mental/emotional factors have a significant influence on health risk perception which influences behavioural attitude towards second-hand products (H_1).

(i) Physical factors

In this study the physical dimension of health refers to the physical human body and the quality of physical health constitutes an individual's physical condition ranging from severe to milder impairment by illness. Furthermore, there is a strong link between physical health and mental health, but for the purposes of this research each are considered independently. The distinction is that physical health quality represents the

physical organic components of the individual's body as opposed intangible components such as feelings. For the purposes of this study, the physical health component involves the functioning of internal organs and external organs. It is assumed that the perceived physical health risk of Covid-19 is potential damage to the body parts such as kidney, lungs and heart (Balachandar et al., 2020). As mentioned earlier, medical evidence has found that Covid-19 virus is contagious and can be deadly(Yuan et al., 2020). Although the fatality rate is difficult to calculate, public data show that the risk of dying is highest for those who are elderly, have a pre-existing health problem, and lack access to medical facilities such as medicine, doctor and hospital(Mao et al., 2020, Jordan et al., 2020). Furthermore, evidence indicates that disease also has long-term health implications for survivors who recover from infection in the form of damage to critical body organs such as lungs, kidney heart and neurological functions (Nowakowski, 2020). It can therefore be assumed that there will be a high probability that consumers will experience high anxiety and concern about the risk to their health when coming into contact with surfaces of products which they suspect may have been previously used by unknown people who may be carriers of the covid-19 disease. Since second-hand goods fall into a category of previously used by others, the product may be contaminated and therefore may expose the consumer to health risk. Therefore, it is it is assumed that the attitude and behavior towards second-hand products is influenced by the relationship between physical factor (i.e. Human body parts) and health risk perception.Supported by the assumptions and evidence mentioned above, this researcher hypothesizes that that the disease contact with physical factors (i.e. body parts) have a significant influence on health risk perception which in turn influences behavioural attitude towards second-hand product (H_2).

(ii) Social factors

Social factors broadly characterize a set of constructs that capture the ways in which social processes affect key health related outcomes(Brown et al., 1984). These social factors may directly affect quality of health available to individuals either beneficially or adversely, and therefore subsequently affect health risk perception of individuals. An example of social factor is the public health care delivery system of a country. In the context of Covid-19, the lack of preparedness by the National government / Health Ministry/Public health agencies has implied that the capacity of hospital beds and equipment has failed to keep pace with the rise in infection cases. This lack of response capability by health agencies has deteriorated general public's confidence towards the health care system and therefore increased in health risk perception (Steinwachs et al., 2017).The link between social factors and heath risk perception is further supported by the numerous reported criticisms(Dyer, 2020) about the public panic and alarm that has been generated on account of national government's lack of co-ordination, confused messaging and untimely response in several countries, particularly poorer nations. Other examples of social factors include the disruptions in global supply leading to shortages in face masks, sanitation equipment, respiratory equipment and skilled medical nurses (Gereffi, 2020),(Ranney et al., 2020)The lack of health care planning and preparedness by medical authorities and institutions has implied that there has been a sense of helplessness and mental distress (Pfefferbaum and North, 2020) among individuals. For the purposes of this research, it is assumed that health risk perception can intensify when individuals cannot rely on the health care system; as when (i)

preventive equipment and treatment by health professionals is not easily accessible (ii) supply of medicines is not available, (iii) accurate medical care information is not forthcoming. It is further assumed that the social factors can lead to a decline of confidence in public health system causing a change in the attitude of consumers towards products which are susceptible to contamination. For this study it is assumed that the relationship between social factors can significantly influence health risk perception and bring about changes in attitude and buying behaviour towards second-hand products. Based on the assumption cited above, this researcher hypothesizes that social risk factors have a significant influence on health risk perception which leads to a change in behavioural attitudes towards product (H_3).

Conceptual Model

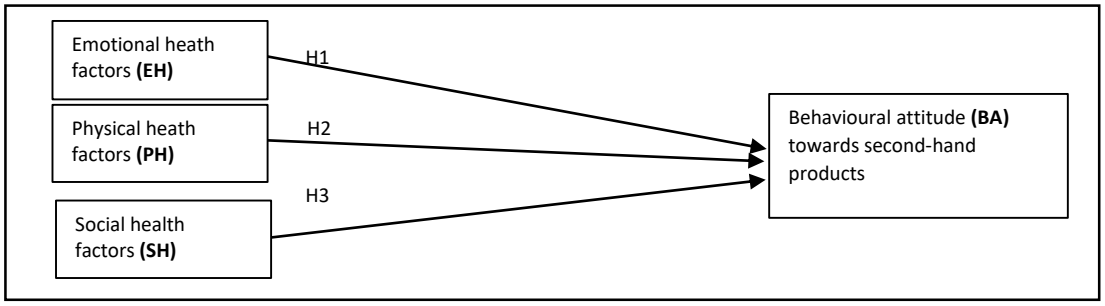

Figure 2.1: Conceptual model of three dimensions of behavioural attitudes (BA), that influence health risk perception (HRP)

The conceptualization of the model for this study is based on linking three distinct constructs, health, risk perception and behavioural attitude. The definition of the health construct, as defined by WHO, consists of the three dimensions physical health, emotional health and social health. These three factors are introduced as independent variables and in the context of Covid-19 can be said to be responsible for having an influence upon the dependent variable health risk perception. This study assumes that the relationship between the independent variables and dependent. Variable can explain consumer's behavioural attitude towards second-hand products in the context of Covid-19 pandemic. It is assumed that the health consequences of Covid-19 pandemic have had a profound impact on all three health dimensions and this has influenced perceptions and attitudes towards second-hand products. The model introduced by this researcher provide a method for analysis of health risk perception and its influence of consumer behaviour.

METHODOLOGY

The focus of the present study is to analyse how the three dimensions (physical, emotional and social) affect respondent's health risk perception and their role in influencing the behavioural attitudes towards second-hand products. It is assumed that the health consequences of Covid-19 pandemic have impacted all three health dimensions. Therefore, the target population for this study is all potential adult aged individuals who are aware of and impacted by the Covid-19 pandemic and understand

used or second-hand products. The target population is the entire population at the capital city Dhaka. However, due to COVID situation only 356 samples were selected for this research. The questionnaire was designed to get answers about how strongly respondent express concern that physical, emotional and social factors have contributed to their health risk perception in the context of covid-19 pandemic and whether their behavioural attitudes towards second-hand products has been impacted. Therefore, the questionnaire was divided into four sections considering three relationships ;(EH-BA, PH-BA, SH-BA). For each section relevant measurement scales were used to get the best possible answer from the respondents. The five-point Likert scale (1 = strongly disagree, 5 = strongly agree) was used for collecting data on the three factors.

RESULTS

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
1	.912	.790	.889	2.344	.890	953.327	3	353	.000

Table 4.1: Model summery of the multiple regression analysis result

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	15711.992	3	5237.331	953.327	.000[b]
	Residual	1939.291	353	5.494		
	Total	17651.283	356			

Table 4.3: Analysis of Variance (ANOVA)

Coefficients

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	95.0% Confidence Interval for B	
	B	Std. Error	Beta			Lower Bound	Upper Bound
1 (Constant)	.407	.419		.972	.332	-.416	1.230
T_EH	-.010	.023	-.012	-.455	.649	-.055	.034
T_PH	.093	.028	.107	3.392	.001	.039	.147
T_SH	.736	.029	.862	25.404	.000	.679	.793

a. Dependent Variable: T_BA

Table 4.3: Coefficients results

DISCUSSION

The respondents range from 18 to 65 years old. Respondents gender were almost equal in number (male 184 and female 172). Student, teacher, government, and private

service holder represented the samples. The study did not give enough emphasis on the demographical statistical analysis. The multiple regression analysis using SPSS provides few tables which assist to determine if the null hypotheses is accepted or rejected. The "**R**" column in the Table 4.1 represents the value of *R*, the multiple correlation coefficient. A value of 0.912, in this result, indicates a good level of prediction. The R^2 value of 0.790 shows that independent variables explain 89% of the variability of dependent variable. In the Table 4.5, the adjusted R squired value is .889, meaning that the independent variables have 88.9% variance on the dependent variable. Table 4.2 shows the coefficient result where the *F*-ratio in the **ANOVA** table (see below) tests whether the overall regression model is a good fit for the data. The table shows that the independent variables statistically significantly predict the dependent variable, $F(3, 353) = 953.327$, $p < .000$ (i.e., the regression model is a good fit of the data). A multiple regression was run to predict the dependent variable (behavioural attitude towards second-hand products) from three independent variables. These variables statistically significantly predicted. These independent variables statistically significantly predicted behavioural attitude towards second-hand products, *F=953.327, p<.000, R^2*=.890. All three variables added statistically significance to the prediction, considering *p<.05.* However, when considering the effect of individual independent variable such as the case of H_1, the result failed to reject the null hypothesis since t=-.455 and *p*=.649 which is not statistically significant. Therefore, the study did not support the alternative hypothesis (H_1 – Not Supported). Independent variable PH was found having statistically significant effect on dependent variable since t=3.392 and *p*=.000. The study rejects the null hypothesis in favor of alternative hypothesis. Therefore, the study confirms that physical factors have significant positive relationship with behavioral attitude toward secondhand product (H_2 – Supported). Independent variable social factors were found having statistically significant relationship with dependent variable since t=25.404 and *p*=.000. The study rejects the null hypothesis in favor of alternative hypothesis. Therefore, the study confirms that social factors have significant relationship with behavioral attitude toward secondhand product (H_3 – Supported). The results support the hypothetical assumptions regarding the significance relationship of two factors in determining the health risk perception model towards second-hand products. The findings suggest that these factors add significantly to the explanatory power of the model and therefore can be considered as being relevant for explaining consumer behaviour towards second-hand products in the context of Covid-19 pandemic. The study indicates that respondents are concerned about the effect of Covid-19 to their physical fitness, their emotions (although statistically not significant), and their confidence in health delivery systems; and that the impact of each of these factors lead to changes in the level of perceived health risk, that subsequently cause modification in their behavioural attitude towards second-hand goods.

Implications for research/practice

The findings of this study show that among the three dimensions tested emotional factors are not supported. In other words, the emotional factors were found to have insignificant influence on formation of behavioural attitudes towards second-hand goods. The implications are that financial burdens brought about by the Covid-19 pandemic may have introduced perceptive bias in the minds of consumers in favour of second-hand goods. The finding that emotional dimension plays no role may imply

concern of being infected by virus contaminated previously used second-hand goods does not generate negative emotions in the mind of the consumer. The rationale for this may be linked to the fact that the perceived benefit of lower purchase price of second-hand goods is considered more important and valuable for the buyer than the perceived health risk of second-hand goods. The findings therefore can be considered to have relevance for business policy makers and marketers of second-hand goods. Business firms can manipulate health risk perception of buyers by placing greater emphasis on physical and social dimensions and less emphasis on emotional dimension. Furthermore, the findings suggest that shopping for second-hand goods is not emotionally stressful and thereby explains why in spite of the pandemic emotional factors may be responsible for driving growth of recommence and goods resale activities.

CONCLUSION

This study contributes to the growing body of literature studying the impact of the Covid-19 pandemic on consumer behaviour. The Covid-19 pandemic represents the biggest economic event affecting households and has led individuals to consider lower cost consumption options such as second-hand goods to help them mitigate financial challenges. The key barrier for consumers is the risk of virus contamination and transmission associated with previously used second-hand goods. The model introduced in this study is aimed to provide a guide for analysis of health risk perception towards second-hand goods. The key learning from the findings was that the role of personal emotional factors had an insignificant influence on health risk perception towards second-hand goods.

Future Research

In recent history, the Covid-19 pandemic has had the biggest economic impact on people's lives. There remains a great deal of uncertainty about how Covid-19 will evolve and how consumer behaviour will need to adapt their consumption habits. Future research can be undertaken to investigate other areas such as (i) The role of consumer bias and its influence on health risk perception? (ii) How media narrative on the pandemic has influenced health risk perception? (iii) Comparative studies on how pandemic has influenced perception among different demographic characteristics.

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