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## Protection Motivation Theory and Skincare Risks: The Role of Social Influence towards Purchasing Intentions of Local Cosmetic Products

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### Abstract

The study is conducted to investigate the extent of purchasing intention of local skincare products among Generation Y in Malaysia and its the relationship that involves variables partially adopted from protection motivation theory (PMT) such as perceived severity and whether social influence also play a catalyst element in those relationship as well. It is important to see the pattern of this behavioural element among Generation Y as this is the most targeted population of many brands as skincare consumption in Malaysia based on 2019 data which indicates an increase in purchased especially from the young generations below 30 years old. With the improvement of purchasing power and its uptrend rise in the consumption demand, it necessary for the marketeers and manufacturers to keep tab on their purchasing behaviours. More than a third of Generation Y have a tendency towards buying safer products after gathering information on social platform. This trend is likely on the high and shall have a significant impact on manufacturers of local skincare products in the near future. This study applies analysis technique using SmartPLS 3.4 version involved 197 respondent among Generation Y of various race in Malaysia. This study partially adopted Protection Motivation Theory (PMT) as main underlying framework to further explained the variables involved.

**Keywords:** Perceived Severity, Social Influence, Behaviour, Skincare Risks, Purchasing Intentions

### Introduction

An operational definition on “cosmetic product” emphasized by De Groot & White (1992) refers to any substance or preparation intended to be placed in contact with the various external parts of the human body (epidermis, hair system, nails, lips, and external genital organs) or with the teeth and the mucous membranes of the oral cavity with a view exclusively or mainly to cleaning them, perfuming them, changing their appearance and/or correcting body odors and/or protecting them or keeping them in good condition. The scope for this study will follow the approach of Shamsudin et al (2020) that stated the likes of

skincare products that involves towards the application on users' skin such as beauty balm, correcting colours, makeup remover, sunscreen or also known as sunblock, lipstick and the rest of products are cream stick, mascara, lip gloss, eyebrow pencil and eyeliner. There are many types of products available in the markets consist of local and international products. According to Eze & Lee (2012) local cosmetics products particularly local skincare products such as Syahirah, Simply Siti and many more has become an extensive and popular category among young and adult people as it identified them with a more relaxed lifestyle, greater versatility and comfort. Attitudes towards using cosmetics product such as skincare are changing whereas not only women show a great importance on personal grooming, men also tend to see a personal grooming as a necessity rather than a luxury. In 2016 alone, the skincare products alone stand second in ranking at RM374.6 Million after beautifiers and make up regime which contributed a big portion of 29.9% of RM1.25 Billion (Ridzuan et al., 2021). It is supported by Shamsudin et al (2020) which also stated that skincare markets in Malaysia contributed about 30% of the overall local cosmetic industry as at to date whereby easily there are more than 20 brands available in Malaysia which basically heavily dependent on social media platform to market their skincare regime (Shamsudin et al., 2020). Despite all the statistics, there are also steady existence of cases whereby local skincare products are banned by the National Pharmaceutical Regulatory Department (NPRA) under the Ministry of Health Malaysia, due to containing scheduled poisons or excessive amounts of hazardous nature such as heavy metals, hydroquinone, mercury, lead and the likes.

Some of the preservatives and fragrances used in the local skincare products are reported to be toxic and prohibited to become the ingredients because it can cause cancer, mutation, reproductive toxicity and endocrine disruption (Rani & Krishnan, 2018). In short, it is simply impossible to know which is good and which is bad for the skin as the nature of the ingredients in skincare agents is not promptly accessible in every products. Despite the abovementioned skincare risks, this study would want to investigate whether the relationship of perceived severity that relates closely with the intention to purchase would become strengthen with an added construct of social influence in the framework and prompt the intention to buy safer local skincare products in the near future which prompt this study to partially adopt protection motivation theory(PMT) as underlying framework in order to investigate behaviours of Generation Y or Generation Y particularly in confronting a potentially threatening risks in buying skincare products with the knowledge of the risks associated with the local skincare products.

### **Protection Motivation Theory (PMT)**

Building on the tenets of Protection-Motivation Theory, the core component adopted for this study is based on the PMT threat assessment calculation which is a trade-off between the perceived vulnerability and severity of a threat associated with a risky behavior (Shane Banks et al., 2010). The behavioral purchasing intention that been examine in this study would also benefited the local manufacturer in their intention to produce a much safer skincare products in order to cater the needs of the greater purchasing power of Generation Y. Perceived severity is an individual's perception of the extent or level of potential damage which may result from engaging in the information sharing activity such as from social platform influence (Shane Banks et al., 2010).

This adoption of PMT theory might also shed some light as well as to how social influence might have impacted a positive or strong relationship with the exogenous and endogenous construct adopted from PMT. The protection motivation theory (PMT) is an established

theory, originally developed to explain how to influence risky behaviour and which components influence the persuasive message that reach out to the behaviour of an individuals (Rogers, 1983). However, there are also alternative possible dimension such as social influence and the likes to tested within the same tenet of PMT. Thus, the general purpose of this study is to analyze the relationship between perceived severity towards purchasing intention on the local skincare products and whether there is an element of social influence as an enabler to also posit as part of relationship so that the behaviour adopted by the consumer's namely Generation Y in this study can be implicitly explained.

- **Purchasing Intention**

Wang & Yang, (2008) defines purchase intention as the decision to act or physiological action that shows an individual's behaviour according to the product. Meanwhile, Shabbir et al (2009), consider the purchase intention as the individual's awareness to make an attempt to buy a brand. Other researchers believe that purchase intention is "what we think we will buy" Park (2002). On the other hand, Schiffman and Kanuk (2010) stated that, purchased intention can be recognized as a reflection of purchasing behavior. He argues that the greater the intention of purchase, the greater the desire of buyers to buy products. Generation Y has become an important target group not only because of their interest in fashion, but also because of their size, they also represent a group with great purchasing power (Boon et al., 2020).

The researchers found that Generation Y was even proved to be the most environmentally conscious group (Vermillion and Peart, 2010). 33 % of Generation Y lean more on a trend toward healthy consumption that they think health attributes are important (Nielsen, 2015). Most of them steer towards the positivity of sfer products to be used in their daily routines and did not mind paying more for such as products, brands, and services (Smith, 2010). They, as consumers play an important role in the purchase decisions of their peers and families so that it is important for marketers to attract and target Generation Y consumers (Lu et al., 2013).

Unwarranted rumors or sensational media coverage has the capability to build misconception, misinformation regarding products in the minds of general public especially Generation Y whose undeniably stands as major cruxes in the total number of social media user nowadays (WHO, 2020 n.d). It is very important to know the part and parcel of layered level of attitude or intentions among them as they formed a large number of percentage in the community as a whole. How to handle various emerging risks in their daily lives and how to act accordingly towards reducing that risk in such situation would be necessary towards the sustainability and resiliency of the respective community specifically and respective countries generally.

- **Perceived Severity**

According to PMT, protection motivation arises from the following two aspects: threat appraisal and coping appraisal (Rogers, 1975). Threat appraisal involves one's assessment of the risk degree of adverse consequences posed by a threatening event or unsafe behaviours (Rogers, 1975; Workman et al., 2008). It consists of perceived severity as one of the two items which represents the severity of the consequences of anticipated threats. In this study, perceived severity is taken to measure the severity of threats caused by unreservedly sharing knowledge on social platform and relatively gain information about the skincare risks that might relates to the products and thus might influence its intention to purchase the skincare

products. Perceived severity show how the individual believes and act in seriousness towards the threat would impact be to his or her own life (Milne et al., 2006). Thus, perceived severity is considered very crucial predictor underlying the basis of this study as it critically relates to how individual manage and reflect their perception towards whether buying the local skincare products should also considering the skincare risk of the local product they are buying. Factual element that cannot be denied here, perceived severity is not the only dimension under the threat tenet in PMT, there are also other construct that should be of important predictor as much as perceived severity, however, the scope of this research focusing on perceived severity whilst considering adopting other dimension under PMT for future scope of research of same element.

- **Social Influence**

According to Rashotte (2007), social influence is about changing of feelings, attitude, thoughts and behavior, intentionally or unintentionally influenced by the other person. On the other hand, social influence also defined as social norm, and was shown to be a significant determinant of behavioral intentions Ajzen (2011) which justify social influence as one of the dimension that relates directly towards purchasing intentions of skincare products. In short, social influence has been found to be a major factor that influences purchasing behaviour at various level (Lee, 2010). Another interesting aspect of social influence is that it bolsters the image (Moore & Benbasat, 1991) of an individual, which refers to an individual's perception that engaging in the information sharing behavior will enhance his or her social standing within a certain social group. Social influence may induce an individual to share information via online platform even though the individual may consider such a behavior to be potentially threatening or damaging. Hence, it is possibly related directly towards the intention to purchase certain brands or products which already stated as one of the hypotheses for this study. Thus, three hypotheses has been established for this research from the research framework:

**H1:** There is a positive relationship between perceived severity and social influence towards purchasing intentions of local cosmetic products

**H2:** There is a positive relationship between social influence and purchasing intentions towards local cosmetic products

**H3:** There is a positive relationship between perceived severity and purchasing intention towards local cosmetic products

## **Methodology**

This study adopted a quantitative approach and data were gathered via survey using self-administered questionnaire. The study population for this research originated from a sample of 650 respondents which already categorize as Generation Y who had the birth years ranging from 1981 to 1996 respectively. Generation Y or also known as Millennial Generation usually refer to a generation born between the early 1980s and 1990s but there are also broader definition includes children born in the early 2000s (Boon et al., 2020). The response rate stands at 32.5% which is within acceptable range.

## **Results and Discussion**

The demographic results showed that more than half of the sample, 80.2 percent were from female respondents and 47.2 percent of those respondents comes from the age 21-30 years old. The demographic data of the respondents showed that all of the respondents come from



the diverse educational background. More than 72 percent of the respondents comprised of diploma holder and the rest comes from undergraduates and postgraduates level.

### Assessment on Reflective Measurement Model

All item loadings stands equal and more than 0.70 whilst AVE of all average variance extracted (AVE) and CR values stands greater than 0.50 and 0.7 respectively, suggesting convergent validity of the model has satisfactory internal consistency reliability when the composite reliability (CR) of each construct exceeds the threshold value of 0.7. All CR values that are greater than 0.70 indicate an acceptable reliability. Thus, the results indicate that the items used to represent the constructs have satisfactory internal consistency reliability.

Table 1: Fornell-Larcker Criterion

	<i>INTENTION</i>	<i>PERCEIVED SEVERITY</i>	<i>SOCIAL INFLUENCE</i>
<i>INTENTION</i>	<b>0.755</b>		
<i>PERCEIVED SEVERITY</i>	0.178	<b>0.765</b>	
<i>SOCIAL INFLUENCE</i>	0.270	0.150	<b>0.783</b>

Based on Table 1, an off-diagonal elements are lower than square roots of AVE (bolded on the diagonal). Hence, the result indicating an adequate discriminant validity for all of the reflective constructs. As for the HTMT criteria, it also indicates that the confidence interval does not show the value of 1 on any of the construct which also confirms discriminant validity.

### Assessment of Structural Model

Two direct hypotheses are developed between the constructs. T- statistics for all paths are generated via SmartPLS3.4 bootstrapping analysis. Only one of three hypotheses are found to have t-value  $\geq 1.645$  that is, social influence towards purchasing intention thus significant at 0.05 level with ( $\beta=0.196$ ,  $p<0.01$ ). On the other hand, perceived severity are not positively related towards purchasing intention by  $\beta=0.135$ , same goes with perceive severity towards social influence by  $\beta=0.134$ . Thus, only H3 is accepted whilst H1 and H2 is not accepted. Henseler et al., (2009) indicates that moderate or average  $R^2$  values are acceptable when the endogenous construct is explained by few exogenous construct. According to Cohen, (1988),  $R^2$  value of .260 are considered substantial, values of approximately .130 are deemed average and values of .020 are described as weak. It might cause by endogenous variables only explained by one exogenous variables namely social influence in this case. For this research, perceived severity and social influence explained 13.4% of the variance in purchasing intention with  $R^2 = 0.134$ , which is considered as average. On the other hand, perceived severity only explained 8.4% of the variance in social influence with  $R^2 = 0.084$  which deemed as weak. The  $f^2$  value of 0.021 indicates perceived severity have a small effect in producing the  $R^2$  for purchasing intention. The  $f^2$  value of 0.041 indicates social influence also has small effect in producing the  $R^2$  for purchasing intention. All of the two values of the predictive relevance ( $Q^2$ ) for social influence ( $Q^2 = 0.043$ ) and purchasing intention ( $Q^2 = 0.043$ ) stands a value of greater than 0 which indicates that the model has a small predictive relevance (Hair Jr, Sarstedt, Hopkins, & Kuppelwieser, 2014).

Table 3 Path coefficients, Observed t-statistics and results for all hypothesized path

<b>HYPOTHESES</b>	<b>PATH COEFFICIENT</b>	<b>TSTATISTICS ( O/STDEV )</b>	<b>P VALUES</b>
<b>PERCEIVED SEVERITY -&gt; INTENTION</b>	0.135	1.188	<b>0.118</b>
<b>PERCEIVED SEVERITY -&gt; SOCIAL INFLUENCE</b>	0.134	1.451	<b>0.074</b>
<b>SOCIAL INFLUENCE -&gt; INTENTION</b>	0.196	1.950	<b>0.026</b>

Note: \*t-values > 1.645 (p < 0.05); \*\*t-values > 2.33 (p < 0.01) (one-tailed test)

This finding supports the argument Milne et al (2006) on the significant impact of extra dimension namely social influence outside PMT basic compound towards endogenous construct established in PMT theory. The lower value of R<sup>2</sup> perceived severity in explaining the intention behaviour construct may be due to various predictors that already established as part of predictors in PMT framework such as self efficacy, response cost, perceived vulnerability among others that should be included but absence in this study.

As for the significant and positive finding of social influence construct towards purchasing intention of local cosmetic products, this is also in line with the finding of Shane Banks et al., (2010); Shamsudin et al (2020) due to the core element of individual who perceives via his or her social circle and other social platform whose opinions shall support and encourage the information sharing behavior belief and trust on the effectiveness of recommended steps or behaviour taken based on the environment that they involves in, however the nature of the of human perception itself is going to vary from one individual to another. The feedback will not be the same let alone the convincing perception to react in certain behaviour despite the intention that they may do so. It is up to own personality and its perspective to react in certain mannerism towards various decision that they have towards certain cosmetic products that appeals to them.

### Conclusion

Results from the study indicate that social influence are one of the significant predictors in explaining the purchasing intention of the Generation Y towards local cosmetic products in Malaysia. It shows that social influence associated with the sharing of information that contributes towards the assessment of the risks that they might face with regards of their purchasing intentions that relates with the skincare risks that they may face hence increase the motivation that engage in their behaviour. Results of the study suggest that predictor namely perceived severity cannot be tested in silo as it might yield contradictory results due to the nature of its multidimensional construct in PMT. It is suggested to include other related and external related construct already established under the basis of PMT theory in the future research as part of main research framework. The mediation or moderation element relationship might also exist within the same framework and it is going to be fruitful if further probing on the relationship between variables and future variables become possible in the future research of same setting. There are also possibilities that other variables that are not included together in this study also have an impact on the endogenous construct. As for this research, future studies should continuously test the core propositions in PMT as well as interaction with other established behavioural theory in a multidisciplinary study setting by

including other risk related behaviour such as risk propensity, risk attitude, risk tolerance and many more within the interdisciplinary compound.

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