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Purchasing practice of young consumers towards green packaging: influence of value system with the mediating effect of attitude.

Práctica de compra de consumidores jóvenes hacia envases verdes: influencia del sistema de valores con el efecto mediador de la actitud.

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ABSTRACT

The problem of climate change is not just because of utilizing the resources in excess and exploiting the nature, but the preference and consumption pattern of people have got changed in recent times. This consumption pattern has led in producing such large quantities of non-eco-friendly packaging materials that is creating serious environmental issues. The packaging materials are simply thrown out and become a source of massive portion of waste. Therefore, packaging materials should be considered a core factor in a way to deliver products to consumers securely. Understanding this, the knowledge and awareness on different kinds of packaging and their impact on environment the consumption patter of consumer need to be tested exclusively among the young consumers. This study was carried out in Thoothukudi Educational district, covering the schools of five different educational blocks in the district. Collecting 818 samples, the study aims to understand the knowledge, awareness, consumption pattern, attitude, and the values of 9th to 12th standard students. A Structural Equation Modelling (SEM) was constructed to test the impact of Packaging Awareness (PKGA), Eco-centric Values (ECCV), Emotional Values (EMOV), and Social Values (SOCV) on the Purchase Decision (PUDE) of young consumers. The model also tests the mediated effects of attitude on PUDE. The study has found that the awarenesss on packaging strengthens the purchasing behaviour or the intention in young minds. The awareness on the

impairments of polymeric packaging and the positve perception toward eco-friendly packaging drive the consumer intention towards green. In turn, these awarness have higher significant influence on changing the attitude of young consumers positively towards eco-friendly packaging. Hence, it is suggested that spreading awareness on the anti-environmental polymeric packaging and perceived benefits of eco-friendly packaging. Besides, emotional reactios do not significantly influence the purchase decision of them instead it is only expressed as a spur of the moment. In terms of attitude, similar to the previous studies, it was found that it strongly influences purchasing behaviour of the students and it also strongly mediat social, eco-centric values and awareness towards the purchase intention.

Keywords: Green packaing, Eco-friendly packaging, attitude, environemental awareness, values.

RESUMEN

El problema del cambio climático no es solo por el uso excesivo de los recursos y la explotación de la naturaleza, sino que las preferencias y patrones de consumo de las personas han cambiado en los últimos tiempos. Este patrón de consumo ha llevado a producir cantidades tan grandes de materiales de empaque no ecológicos que están creando serios problemas ambientales. Los materiales de embalaje simplemente se desechan y se convierten en una fuente masiva de residuos. Por lo tanto, los materiales de empaque deben considerarse un factor central para entregar productos a los consumidores de manera segura. Entendiendo esto, el conocimiento y la conciencia sobre los diferentes tipos de envases y su impacto en el medio ambiente, el patrón de consumo del consumidor, debe probarse exclusivamente entre los consumidores jóvenes. Este estudio se llevó a cabo en el distrito educativo de Thoothukudi, cubriendo las escuelas de cinco bloques educativos diferentes en el distrito. Recolectando 818 muestras, el estudio tiene como objetivo comprender el conocimiento, la conciencia, el patrón de consumo, la actitud y los valores de los estudiantes de 9º a 12º estándar. Se construyó un modelo de ecuaciones estructurales (SEM) para probar el impacto de la conciencia del empaque (PKGA), los valores ecocéntricos (ECCV), los valores emocionales (EMOV) y los valores sociales (SOCV) en la decisión de compra (PUDE) de los consumidores jóvenes. . El modelo también prueba los efectos mediados de la actitud en PUDE. El estudio ha encontrado que la conciencia sobre el empaque fortalece el comportamiento de compra o la intención en las mentes jóvenes. La conciencia sobre las deficiencias de los envases poliméricos y la percepción positiva hacia los envases ecológicos impulsan la intención del consumidor hacia el verde. A su vez, esta conciencia tiene una influencia más significativa en el cambio positivo de la actitud de los consumidores jóvenes hacia los envases ecológicos. Por lo tanto, se sugiere difundir la conciencia sobre los envases

poliméricos antiambientales y los beneficios percibidos de los envases ecológicos. Además, las reacciones emocionales no influyen significativamente en la decisión de compra de los mismos, sino que solo se expresan como un impulso del momento. En cuanto a la actitud, similar a los estudios anteriores, se encontró que influye fuertemente en el comportamiento de compra de los estudiantes y también media fuertemente los valores sociales, ecocéntricos y la conciencia hacia la intención de compra.

Palabras clave: Empaque verde, Empaque ecológico, actitud, conciencia ambiental, valores.

INTRODUCTION

One of the largest environmental challenges that the humankind is going to face in future would be of climate change (Sarabia-Sanchez & Rodriguez-Sanchez,, 2016). The problem arises not just that humans are utilizing the resources in excess and exploiting the nature, but the preference and consumption pattern of people have got changed in recent times. This consumption pattern has led in producing such large quantities of non-eco-friendly packaging materials that is creating serious environmental issues (Duan, Song, Qu, Dong, & Xu, 2019). Once the products reach the hands of consumers, the packaging materials are simply thrown out and become a source of massive portion of waste. Therefore, packaging materials should be considered a core factor in a way to deliver products to consumers securely. Around the world packaging designers are trying to mitigate the impact of non-eco-friendly packaging waste (Veeravatnanond, Nasa-arn, Nithimongkonchai, Wongpho, & Phookung, 2012). Consumer's decisions about usage and dispose of packaging waste at the pre-consumer and post-consumer periods of the cycle are vital to tackle the trouble of waste effectively (Barr, 2007). There are differences in the waste-management behaviours, attitude of reducing, reusing, and recycling in case of household wastes (Barr, 2007). Households create waste as a consequence of their consumption. They can reduce their consumption or use of packaging, they can reuse non-eco-friendly packaging of the goods they purchase, or they can recycle the packaging. Updating these reducing, reusing, and recycling behaviours lessen the harmful environmental impacts of manufacturing and retailing (Radhakrishnan, 2016). However, these 3R behaviours (reducing, reusing, and recycling) have been examined altogether only in few studies (Barr, 2007), wherein most of the studies concentrate mostly cover one or two elements of 3R (Duan, et al., 2019; Martinho, et al., 2015). In order to update the consumption pattern towards using eco-friendly packaging awareness becomes the integral part. Hence, it becomes mandatory to understand the green packaging awareness (Bickart & Ruth, 2012)

A considerable number of studies on consumers' environmental awareness have been conducted in different countries (Onder, 2006; Vazifehdust, et al., 2011; Limbu, et al., 2012; Boztepe, 2012; Biswas, et al., 2015; Sarabia-Sanchez, et al., 2016). However, few research carried in India in this regard (Singh, 2009; Rani, 2015; Yadav, et al., 2017) call for research attempts to measure the progression of consumers' knowledge on green marketing mix, attitude, consumers' green consumption pattern, their awareness on packaging, and the application of awareness on purchasing intentions. Even, in existing studies, the importance of awreness is not given much priority in asian countries (Klaiman, Ortega, & Garnache, 2016). Moreover in the study, value system of consumers has also brought into the discussion due to the fact that it provides the sound foundation for covering different value constructs namely; emtional, social, and eco-centric (Suki, 2016).

Based on the mentioned rationale, the primary objective of the paper is to examine the effect of two types values namely; eco-centric, emotional, and social on green purchasing behaviour in indian context. It also aims to examine effect of packaing awareness on purchasing behaviour. The paper encompasses six different sections. Th proposed hypotheses and the model is discussed using literature reviews. The third section completely covers the overall methodolgy of the paper including, sampling procedure, data collection and factors' measrement model. This is further followed by a section in which the proposed model is tested and the results have been presented. Section five is allocated for discussion of results. The final section of the paper provides conclusion.

LITERATURE REVIEW

The main determinants that influence the purchasing behaviour of green-packaged products are found based on the reviews are; environmental concern (Liobikiene, et al., 2017; Wang, et al., 2016; Radhakrishnan, 2016), awareness on green packaging (Martinho, Pires, Portela, & Fonseca, 2015), attitudes (Yadav, et al., 2017; Ari, et al., 2017; Lin, et al., 2012), social norms, personal norms (Barber, et al., 2014), health consciousness (Vazifehdust, et al., 2011), perceived green values (Veeravatnanond, Nasa-arn, Nithimongkonchai, Wongpho, & Phookung, 2012), value system of an individual (Onder, 2006), and social acceptance (Lin, et al., 2012). Astonishingly, even the government regulations influence the consumers' buying behaviour of green-packaged products (Jeyaraman, Haron, Sung, & Lin, 2011). On the other hand, these constructs were by different researchers to measure green behaviour as internal, social, and external variables. Besides, these constructs were mainly used in theory based behaviour analysis like; Consumption Value Theory (CVT), Theory of Reasoned Action (TRA), and Theory of Planned Behaviour (TPB). Whereas this study

attempts to concentrate more on the internal factors like, Consumers' attitude, Values, awareness on packaging. The constructs of the study have been discussed with deeper insights and the hypotheses are framed based on the reviews as follows

2.1. Packaging Awareness (PKGA): In everyday use of polymeric packaging poses a severe threat to the environment. Plastic packaging, tiny plastics, and micro-plastic beads are not bio-degradable and the major portion of it is often released into the aquatic area and the rest is causing landfills. It poses a severe threat to the living stock of ocean and the terrestrial arena (Ari & Yilmaz, 2017). Kuraloviyan (2016) sensed the growing awareness on eco-friendly packaging among the people in India. Tan & Lau (2009) found that there was a need for eco-friendly packaging and it was rightly addressed by companies by producing substitutes for anti-environmental polymeric or plastic packaging. Marketing companies across the globe have started outlining strategies which rightly address the need of consumers' intention to protect earth (Boztepe, 2012). However, studies (Morgil, et al., 2004; Mondal, et al., 2010; Barber, et al., 2014) suggest that the growing awareness on green packaging does not necessarily significantly affect the purchase intention. Contradictorily, there are few studies (Steg, et al., 2014; Martinho, et al., 2015) supporting that the awareness on green packaging and the awareness on the hazardous nature of polymeric packaging propel the consumers to for eco-friendly packaging. Besides, in terms of packaging awareness, studies are lacking to test the mediating effect of attitude on green purchasing behaviour. Hence, this area needs to be analysed in India especially among school students by a hypothesis formulated as follows.

H1a: Green Purchasing Behaviour is positively influenced by the Awareness on Packaging

H1b: Green Attitude is positively influenced by Awareness on Packaging

2.2. Eco-centric Values: Understanding of environmental problems is termed as environmental awareness, and it significantly affects individual's behaviour to behave environmental-friendly. Though the environmental concern or awareness is not directly having significant effect on the environmental-friendly behaviour (Wang, Fan, Zhao, Yang, & Fu, 2016), it has an indirect effect on the behaviour through other elements (Chen & Tung, 2014). Cheah & Phau (2011) stated in their study that higher the environmental concern individuals have, the higher the willingness to purchase green packaging. The environmental concern in turn is termed as the eco-centric values as the concern is about giving much importance to the nature and its elements. The TPB model developed by Chen et al., (2014) clearly states that environmental awareness exerts a positive impact on the attitude. Straughan and Roberts (1999) have found that there is a positive association between environmental concern and environmentally-friendly

behaviour. Straughan & Roberts (1999) found that there is a positive association between environmental concern and environmentally-friendly behaviour especially on the purchasing decisions. However, few studies (Sergio et al., 2015; Barr, 2007; Chaubey, et al., 2011) strongly deny the association between the awareness and the intention to adopt green behaviour. In terms of green packaging, research efforts (Lavelle et al., 2015; Limbu et al., 2012; Golnaz et al., 2012) confirmed that consumers' environmental knowledge and environmental concern impact the purchase decision positively. In sum, the environmental concern seems to have impact on purchasing intention either positively or negatively. Therefore hypotheses, H1a and H1b are formulated as follows:

H2a: Green Purchasing Behaviour is positively influenced by the Eco-centric Values of young consumers

H2b: Green Attitude is positively influenced by the Eco-centric values of young consumers

2.3. Emotional Values: Emotional value means "perceived utility derived from an alternative capacity to arouse feelings or affective states" (Sheth, B, & Gross, 1991). Emotional values of individuals differ person to person according to their typical personal experiences and the way they emotionally approach an event. Hence those values could be recognised as negative, positive, and mixed (Sheth, B, & Gross, 1991). The intense feelings or emotion of an individual could positively or negatively influence the purchase intention towards the eco-friendly products. Hence research attempts (Lin & Huang, 2012; Lee, 2009; Rex & Baumann, 2007) were made to understand the effect of emotional values on purchase intention. Rex & Baumann (2007) found that consumers with positive emotional values make receptive green purchase decisions as these values help their trust that they are ensuring behaviour of protecting environment. In light of the above discussion, it is postulated that

H3a: Green Purchasing Behaviour is positively influenced by the Emotional Values of young consumers

H3b: Green Attitude is positively influenced by the Emotional values of young consumers

2.4. Social Values "Perceived utility acquired from an alternative's association with one or more specific social groups was defined as social value and it was measured through the product association with various reference groups of consumers" (Sheth, B, & Gross, 1991). Adopting environmental-friendly behaviour is highly associated with social values and positive attitudes towards green purchase. It reveals the extent to which an individual feels morally responsible to the environment and to others by buying green products, and how positive social image is important to him or her (Barber, et al.,

2014). Many research (Biswas, et al., 2015; Cetina, et al., 2010; Milfont, 2012) attempted to prove that social value and the moral set-up that an individual has decide the purchase intention especially when the product or service is termed to be environmentally friendly. Boztepe (2012) stated that it is so vital that consumer can assess the impact of particular product consumption on the environment by themselves and their social settings. According to the goal-farming theory environmental-friendly behaviour especially the purchase intention is based on two basic goals; hedonistic, and normative goals. The first one deals with the attitude of showing off the social status or well-being to other by consuming green products. The later deals with the genuine attidude of buying consuming green products for the sake of environment and for the well-being of others (Steg, Perlaviciute, Van DerWerff, & Lurvink, 2014). On the other hand (Lin & Huang, 2012) found that values like social values, personal and emtional values of an individual no way related to environmentally friendly behaviour and these do not have any significant influence on the purchasing behaviour. Hence, it is so important to measure the influence of moral values on the purchasing behaviour, and to understand on what value basis an individual buys a green-packaged products. Therefore, it needs the below hypothesis to be evaluated

H4a: Green Purchasing Behaviour is positively influenced by the Social Values of young consumers

H4b: Green Attitude is positively influenced by the Social values of young consumers

2.5 Green Attitude (GATT): Attitude is a good prediction of a person's intention to act in environmentally-concerned ways (Straughan & Roberts, 1999). It was believed by researchers around the world that most of the behaviours are influenced by attitudes (Chaubey et al., 2011). Accepting the fact that, individuals' attitude play an important role in deciding the purchasing behaviour in terms of green packaging, it varies from individual to individual by being positive or negative, and sometimes persons could have a mixed attitude with respect to a place, thing, event or person (Limbu et al., 2012). However, in the case of packaging, consumers with the positive attitude on eco-friendly packaging have a soaring amount of purchase intention (Cheah & Phau, 2011). It should also be noted that an individual norms and moral set-up have got an influence on their voluntary purchasing behaviour towards green packaged products (Milfont, 2012). Moreover, if the purchase behaviour is not controlled by being expensive or hard to accomplish, attitudes have a massive influence on the purchasing behaviour (Stern, 2000). On the other hand, bringing in the consumption patter of eco-friendly packaging is cost associated as these packages are little expensive (Ari & Yilmaz, 2017). Hence,

understanding the need to test the influence of attitude on green purchasing behaviour, the hypothesis is formulated that

H5: Green Purchasing Behaviour is positively influenced by the Green Attitude of young consumers.

2.5.1. GATT as a mediator: Knowing the importance of attitude as a measurement construct, studies (Madany, et al., 1998; Bickart, et al., 2012; Lin, et al., 2012; Liobikiene, et al., 2017; Lin, et al., 2012) all over the world measured the impact of attitude on purchasing behaviour either using it as mediator or an independent variable and the results of the studies give a conclusive evidence that attitude have a most powerful influence on purchase intention of green products and packaging. In recent study by Ari, et al., (2017), it was found that the purchase intention is often strenthened through the attitude of the consumers especially in the area of environmentalism. On the other hand, results concerning the effect of attitude on puchase intention is inconsistent. Some studies have found the weaker impact of attitude on green puchase intention which suggest a gap (Gupta, et al., 2009; Sarabia-Sanchez, et al., 2016). These controversies in results suggest a gap to measure the influence of attitude on puchase intention. Furthermore, studies in this regard are not found in India especially in south. Hence, understanding the importance of attitude on green purchasing behaviour both as an independent variable and as a mediating variable the below hypotheses are formulated.

H6a: Green Attitude partially mediates the effect of green packaging awareness on the purchase intention of young consumers towards eco-friendly packaging.

H6b: Green Attitude partially mediates the effect of eco-centric values on the purchase intention of young consumers towards eco-friendly packaging.

H6c: Green Attitude partially mediates the effect of emotional values on the purchase intention of young consumers towards eco-friendly packaging.

H6d: Green Attitude partially mediates the effect of social values on the purchase intention of young consumers towards eco-friendly packaging.

METHODOLOGY

Questionnaire Development for Data Collection: The predetermined questionnaire has three sections in which the first one is confined to general demographic questions, such as gender, type of school, education of the parents, and syllabus. The later section of the questionnaire includes questions related to testing parameters. There were six demographic questions and 31 items under five different constructs for measuring variables. However, two items have been removed while performing model fit. Hence the

final measuring variables were 29 at last. The items were measured by adopting Likert scale.

Data and Sample: In order to test the developed hypotheses, a structured questionnaire as stated above was used to collect data in Thoothukudi. Stratified random sampling was employed. The entire district was further classified as five educational districts (as per the administration guidelines of the district). Generalizability of results of stratified sampling method is found to be strong and supportive through substantiations that suggest the usage of this method in studies concentrate on understanding the purchasing behaviour studies at different locations in the same geographical area (Cheah & Phau, 2011; Prakash & Pathak, 2017). Primarily, a pilot test was conducted among 47 respondents around Thoothukudi district and some irrelevant questions, jargons and idioms in the questionnaire were removed from the questionnaire accordingly. Further, a total of 835 questionnaires were issued and collected. Out of which 17 questionnaires were found incomplete. After the scrutiny of the completeness of the collected questionnaires, the sample size finally comes to 818.

Sample Characteristics: Table 1 exhibits the socio-demographic profile of the respondents. The socio demographic profile was categorized by six different questions namely; Gender profile, Class, Syllabus of the school, Nature of school management, Medium of the school, and the area of residence.

The majority of the respondents are boys which accounts to 53.8 per cent. The main attention was given towards high and higher secondary students as the awareness would be of highly effective among them (Prakash & Pathak, 2017). Due to the large population of high school students, 9^{th} and 10^{th} standard students are found to be far above the ground that account to 28.6 and 29.2 respectively. As a large number of schools in Tuticorin district have opted for state board syllabus, many of the schools visited tend to be state-board schools. Hence, the percentage of state-board respondents tops the list that comes 74.2 per cent. The rest of the respondents (25.8 per cent) are from Matriculation schools.

In terms of the nature of school management, the government-aided school respondents lead the count at 55.1 per cent. Though the count of government schools visited is high, sample collected falls to be less as the distribution was done based on population. Hence it accounts only 19.2 per cent. The majority of the respondents are from Tamil medium in terms of language medium segment. However, 35.1 per cent of the respondents are from English medium which could be sounded considerable for further analysis. In terms of area of residence, Majority of the respondents that is 60.3

per cent are from rural area only a few (49 out of 818) are from semi-urban areas. The rest of the pupils (276) are from urban area.

Table 1: Demographic Profile of the Respondents

Sl. No.	Class	n	%
Gender	Male	440	53.8
	Female	378	46.2
Class	Nine	234	28.6
	Ten	239	29.2
	Eleven	191	23.3
	Twelve	154	18.8
Syllabus	State Board	607	74.2
	Matriculation	211	25.8
Nature of the School Management	Government	157	19.2
	Private	210	25.7
	Government-aided	451	55.1
Medium of the School	Tamil Medium	531	64.9
	English Medium	287	35.1
Area of Residence	Urban	276	33.7
	Rural	493	60.3
	Semi-urban	49	6.0
	Total	818	100.0

Source: Primary Data

Statistical Analysis: The data were analysed using the Structural Equation Modelling (SEM) technique via the Analysis of Moment Structure (AMOS) computer programme. The interrelationship between the planned constructs of the model was tested using the Statistical Package for Social Science (SPSS), computer program version 23. Analysis encompasses of two subsequent steps. The first step, a confirmatory factor analysis (CFA) was performed to validate the reliability, convergent, and divergent validity of the measurement model. In the final step, full structural model was estimated to assess the overall model fit and the hypothesized association with the help of standardized regression coefficients (β) and p-values.

RESULTS

Measurement Model Analysis: The measurement model was assessed through confirmatory factor analysis (CFA) in order to check the psychometric properties of the measured items, reliability, convergent validity, and the discriminant validity of the construct measures. The measured items for the model constructs are given below in table 2.

Table 2- Measurement Items

PKGA1	I am aware of the health hazards that plastic packaging could do
PKGA2	I am aware of the environmental hazards that plastics could do
PKGA3	Plastic bags harm human beings, animals, and land
PKGA4	Plastic bag wastes emit toxic gases
PKGA5	Packaging bags are the major cause for the increase in garbage dumps
ECCV1	Avoid buying products with environmentally harmful plastic packaging
ECCV2	Observing the product and I never mind rejecting if it is packed lavishly
ECCV3	prefer to buy products of which packages can be Refilled / Reused
ECCV4	Choosing products packed by eco-friendly materials will save nature
ECCV5	Recyclable and Reusable packages can reduce the waste on environment
GATT1	If the green packaging protects the eco-system I'd adjust with my personal comforts
GATT2	My eco-friendly actions can make a qualitative change in the surroundings
GATT3	It is everyone's duty to buy green packaged products for protecting environment
GATT4	I feel that it is my duty to sort and dispose waste based on decomposability
GATT5	I would consider the environment before making any purchase decision
GATT6	I do not want to pollute environment more by choosing polymeric packages
EMOV1	Seeing streets and public places littered by plastic bags bothers me.
EMOV2	I really worry when people returning with plastic bags after their shopping
EMOV3	When I think humans destroy the mother-nature, I get angry and frustrated
EMOV4	I feel guilty if I buy products packed with plastics and polymeric
SOCV1	Bringing in green packaging consumption into lifestyle makes me feeling accepted
SOCV2	Adoption of green packages improves the way I am perceived
SOCV3	Buying products with green packaging sets a good example
PUBE1	I would buy the products packed in green packaging (to avoid plastics)
PUBE2	I would buy a product with a recyclable package.
PUBE3	I would carry cloth bags/other degradable bags for shopping
PUBE4	I would not mind spending more for green packages.
PUBE5	I would purchase products from firms with reputation for environmental concern
PUBE6	I would avoid products with too many layers of packaging

Reliability Analysis: The Cronbachs' alpha coefficient values were calculated to observe the reliability of each construct. The constructs are termed to be valid if the

Cronbachs' alpha exceeds a level of 0.70 (Yoon, 2009). All the calculated alphas in this research meet the standard threshold value of 0.70 (table 3). The alphas range from 0.714 to 0.816 which express a high reliability of the items.

Table 3 – Reliability and validity analysis

Items	Loadings	Mean	Cronbach's Alpha	CR[a]	AVE[b]
PKGA1	0.831	3.45	0.816	0.891	0.621
PKGA2	0.817				
PKGA3	0.767				
PKGA4	0.803				
PKGA5	0.716				
ECCV1	0.724	4.24	0.805	0.851	0.536
ECCV2	0.741				
ECCV3	0.813				
ECCV4	0.752				
ECCV5	0.616				
GATT1	0.780	3.87	0.751	0.883	0.560
GATT2	0.759				
GATT3	0.815				
GATT4	0.670				
GATT5	0.663				
GATT6	0.788				
EMOV1	0.722	3.62	0.748	0.820	0.534
EMOV2	0.812				
EMOV3	0.683				
EMOV4	0.698				
SOCV1	0.766	3.63	0.714	0.675	0.546
SOCV2	0.731				
SOCV3	0.719				
PUDE1	0.739	3.37	0.751	0.879	0.549
PUDE2	0.679				
PUDE3	0.813				
PUDE4	0.745				
PUDE5	0.792				
PUDE6	0.665				

[a] Composite Reliability (CR) = (square of the summation of the factor loadings) / [(square of the summation of the factor loadings) + (square of the summation of the error variance)]

[b] Average Variance Extracted (AVE) = (summation of the factor loadings) / [summation of the square of the factor loadings) + (summation of the error variance)]

The mean scores of all the constructs have been given in table 3. Out of the maximum score of 5 in Likert scale, most statements have a mean level more than 3.3. This itself implies that a high level of concerns have been given to the measurement items by the respondents. The respondents expressed high environmental concern (4.24 per cent).

Convergent Validity: The standardized loadings shown in table 3 were considered significant as they exceed the standard value of 0.70 (Hair et al., 2010). In addition to the Cronbach's alpha test, Composite Reliability (CR), and Average Variance Extracted (AVE) have also been calculated and presented in table 3. The analysis shows that the CR values of all the constructs are ranging from 0.675 to 0.891 which are greater than the threshold value of 0.60 (Bagozzi and Yi, 1988). The average variance extracted ranged from 0.534 to 0.621, above the minimum acceptable limit of 0.50 (Fornell and Larcker, 1981) and it ensures the convergent validity.

Divergent or Discriminant Validity: The divergent or discriminant validity of the constructs has been analysed in table 4. In the table off-diagonal values refer to the correlation between the constructs while the diagonal values represent the square root of average variance extracted. All the constructs unanimously have the p value of 0.001 which is highly significant. The square root of AVE of each construct was larger than the correlation between the constructs which ensured the adequate discriminant validity. According to the results, the measurement model is completely satisfactory (table 4).

Table 4: Discriminant Validity and inter-correlations of constructs

Constructs	PKGA	ECCV	GATT	EMOV	SOCV	PUBE
PKGA	0.788					
ECCV	0.480**	0.732				
GATT	0.195*	0.152**	0.748			
EMOV	0.347**	0.341**	0.357**	0.731		
SOSV	0.252**	0.228**	0.189**	0.483**	0.739	
PUBE	0.329**	0.300**	0.366**	0.530**	0.448**	0.741

** Correlation is significant at the 0.01 level (2-tailed)

* Correlation is significant at the 0.05 level (2-tailed)

Note: Diagonals (in bold) represent square roots of average variance extracted (AVE) while off-diagonals represent correlations

Model fitness of CFA: Confirmatory Factor Analysis (CFA) is constructed to examine the validity of the constructs. The constructs exhibit a good model fit. The

observed data for the CFA are shown in table 5, fit into the cut-off criteria of the model fit indices (table 6).

Table 5: CFA fitness values and threshold values

Measure	Estimate	Threshold	Interpretation
CMIN	796.172	--	--
DF	362	--	--
CMIN/DF	2.199	Between 1 and 3	Excellent
CFI	0.909	>0.95	Acceptable
SRMR	0.045	<0.08	Excellent
RMSEA	0.038	<0.06	Excellent
PClose	1.000	>0.05	Excellent

Source: Primary Data

The above modal exhibits a good fit for the CFA based on the threshold values suggested by (Hu & Bentler, 1999). The interpretation has been given for each indicator, based on measures given by Gaskin, J. & Lim, J. (2016), which is presented in table 6. The threshold values and interpretation remain the same for Structural Model Analysis as well.

Table 6: Cut-off Criteria for the interpretation

Measure	Terrible	Acceptable	Excellent
CMIN/DF	> 5	> 3	> 1
CFI	<0.90	<0.95	>0.95
SRMR	>0.10	>0.08	<0.08
RMSEA	>0.08	>0.06	<0.06
PClose	<0.01	<0.05	>0.05

Structural Model Analysis: In order to determine model fitness, the following indices are examined: Chi-Squared (x^2), degrees of freedom (df), Chi-Squared/degrees of freedom (X^2/df), the goodness of fit index (GFI), the average goodness of fit index (AGFI), the root mean square error of approximation (RMSEA), the comparative fit index (CFI), the Tucker Lewis index (TLI) as well as the parsimony normed fit index (PNFI) and the parsimony goodness of fit index (PGFI).

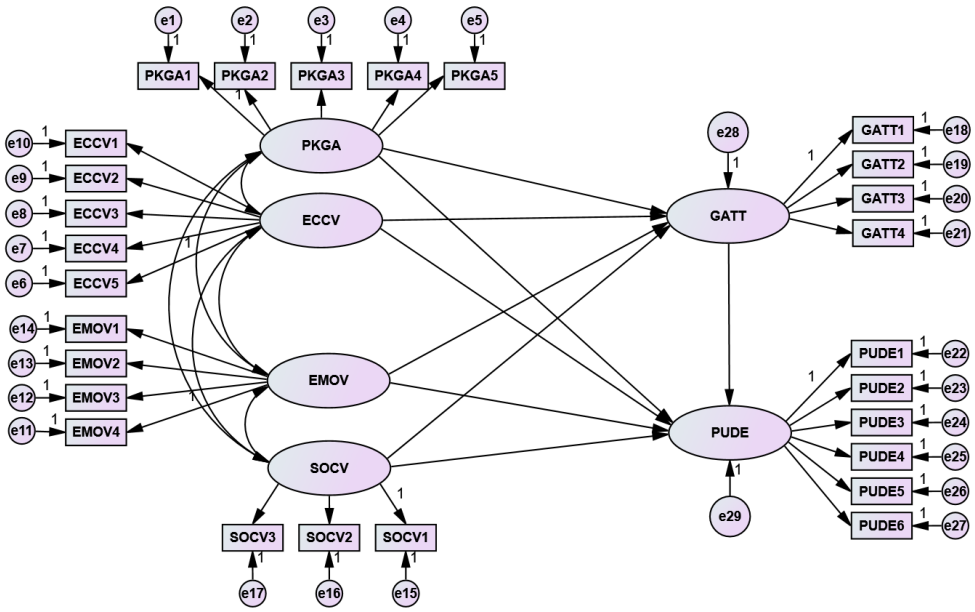

Fig.1 – Conceptual Model

The goodness of fit model indicators demonstrated an acceptable for the structural model without any mediators as the hypotheses also measure the direct influence on the dependent construct (x^2 = 610.848, x^2/d.f. = 1.977, CFI = 0.929, GFI = 0.903, AGFI = 0.872, NFI = 0.912, IFI = 0.901, TLI = 0.909, RMSEA = 0.035). These indicators meet the required fit indices and express a satisfactory model as they fulfil the threshold values (table 6). The following table highlights the foresaid values with the interpretation of each values.

Table 7: SEM fitness values and threshold values

Measure	Estimate	Threshold	Interpretation
CMIN	610.848	--	--
DF	309	--	--
CMIN/DF	1.977	Between 1 and 3	Excellent
CFI	0.929	>0.95	Acceptable
SRMR	0.042	<0.08	Excellent
RMSEA	0.035	<0.06	Excellent
PClose	1.000	>0.05	Excellent

The issue of multicollinearity was tested. All the variance inflation factor (VIF) values for the two dependent variables (GATT and PUBE) were lower than the recommended value of 5 which indicates no sign of collinearity problem. Then, the model fit was evaluated through the standardised root mean square residual (SRMR). As the SRMR value was 0.063 which is lesser than the threshold value of 0.08. Hence, it can be stated that the model expresses a reasonable model fit.

4.3 Hypotheses Testing

Table 8 - Hypotheses Testing of Direct Effects

Hypotheses	Direct Effects	Unstandardized						Standardized
		Beta	SE	t	p-value	LLCI	ULCI	Beta
H1a	PKGA →PUBE	.2138	.0248	8.6078	.0001	.1651	.2626	.2730
H2a	ECCV →PUBE	.2502	.0343	7.2904	.0032	.1829	.3176	.2332
H3a	EMOV →PUBE	.3459	.0242	14.2952	.0611	.2984	.3934	.5235
H4a	SOCV →PUBE	.2761	.0216	12.7908	.0001	.2337	.3184	.3864
H1b	PKGA →GATT	.1445	.0267	5.4197	.0042	.0922	.1969	.1864
H2b	ECCV →GATT	.1797	.0367	4.9037	.0001	.1078	.2517	.1692
H3b	EMOV →GATT	.2837	.0248	11.4163	.0014	.2349	.3325	.3711
H4b	SOCV →GATT	.3021	.0305	9.9007	.0001	.2422	.3620	.2991
H5	GATT →PUBE	.3222	.0320	10.0583	.0001	.2593	.3851	.3190

Source: Primary Data

The significance of coefficient for every path planned in the research model was assessed through by a bootstrapping technique was executed with 5000 re-samples at 95% of confidence interval (Hair et al., 2017). The hypotheses and the paths formulated in the study were tested through direct and indirect effects (mediating effects of GATT). All the paths seemingly express a significant relationship as the p-value is less than 0.05. However, EMOV does not significantly influence the purchase intention (p 0.611<.05). Other than EMOV to PUBE, all the direct paths (unmediated paths) have significant relationship between the independent and dependent variables. Packaging awareness, Green Attitude, and Social Values express highly significant relationships towards Purchasing Behaviour ($p < 0.01$) among all the other path relationships. The ranges of Lower Level Confidence Interval (LLCI) and Upper Level Confidence Interval (ULCL) do not fall in-between of null (zero). Hence it could be inferred that the independent constructs such as ECCV, PKGA, and SOCV have significant relationship to the dependent variable PUBE.

Table 9 shows that PUBE is not significantly determined by EMOV (β=0.583, 0.0114, -0.022, 0.753) when it is mediated through GATT. On the other hand, the range of LLCI and ULCI of all the other constructs do not fall into the ground of null (zero), hence it is inferred that the constructs; Packaging Awareness (β=0.0347, 0.0198,

0.0372, 0.0820), Eco-centric Values (β=.0600, 0.0152, 0.0326, 0.0921), and Social Values (β=.0391, 0.0090, 0.0230, 0.0581) have significant relationship with Purchasing Behaviour through the mediating effects of Green Attitude.

Table 9 - Hypotheses Testing of Indirect Effects

Hypotheses	Indirect Effects	Beta	SE	BootLLCI	BootULCI
H6a	PKGA → GATT →PUBE	.0347	.0198	.0372	.0820
H6b	ECCV → GATT →PUBE	.0600	.0152	.0326	.0921
H6c	EMOV → GATT →PUBE	.0583	.0114	-.0022	.0753
H6d	SOCV → GATT →PUBE	.0391	.0090	.0230	.0581

DISCUSSION

A significant positive effect of PKGA on PUBE as found in this study specifies that the students who are having knowledge over the detrimental effects of non-green packaging are more probable to buy eco-friendly packaged products. This finding is in line with the other contributions of other researchers (Chaubey, et al., 2011; Munerah, et al., 2020; Steg, et al., 2014) and it was found that the awareness on green packaging or products to have positive significant effect on green purchasing intention or behaviour due to the awareness on the impairments of non-eco friendly packaging. The perceived utility on green packaging around the world is positive and the consumer with such values tend to engage in eco-friendly purchasing behaviour. Chan (2001) in his study, found that Chinese consumers who express positive inclination towards green puchasing behaviour are more likely to have awareness over the non-eco friendly packaging and its negative impact on environment. Similar to the awareness on green packaging, the consciousness on the environental impairments that the non-eco-friendly packaging does, also has a significant positive impact on the purchasing decisions. It has even more stronger impact when it is mediated through green attitude. The environemtnal sensitiveness is termed as eco-centric values which implies the emotion towards protecting the environment through ones' activities by avoiding the harmful behaviour to the nature and its components. (Tan & Lau, 2009). Similar to the resount result of the study, the aquatic and terrestrial protection through adapting green puchasing patterns and avoiding non-eco-friendly packaging has tremendously grown recent times in the mindset of young consumers. (Kaur & Kaur, 2009). In deveped countries like the USA, through the research efforts by Hausbeck, Milbrath and Enright (1992), it was evident that secondary school students expressed opinions on protecting nature through ones'

lifestyple by adopting eco-friendly packagind decades ago. In China, This value system of protecting the environment and its living stock has been inplanted in them through awareness initiatives by the government and its other initiatives (Duan, Song, Qu, Dong, & Xu, 2019). However, In developing countries like India, researches (Singh 2009; Radhakrishnan 2016; Prakash and Pathak 2017; Yadav and Pathak 2017) in this regard suggest the government to take initiatives to spread awarenss to increase the concern on nature among school and college students.

Social Values have a positive significant effect on purchasing behaviour both directly and indirectly (mediating through green attitude). It is inferred that the social value system of the students turn out to be action-oriented and they are inclined to opt green lifestyle. Studies like; (Arvola, et al., 2008; Hartmann, et al., 2012; Yadav, et al., 2017) suggested that the marketing strategy in this current situation should be tied up with environmental benefits as the moral values of consumers are highly attached towards the environmental benefits. Additionally, though the social value system of an individual supports to adopt the green consumption behaviour, the social influence do not take positive influence over the purchase intention (Biswas & Roy, 2015). However, consumers take a cautious movement before adopting green consumption lifestyle by seeking experts' advice (Aqueveque, 2006). Researches (Hausbeck, Milbrath and Enright 1992; Mondal and Mete 2010) support the findings of this study that social values of an individual develop the attitude of green and it has a significant effect on green consumption and purchasing pattern.

Emotional values have positive siginificant impact on green purchasing behaviour in the study. However, it does not have any significant impact when it is mediated through green attitude. Among all values an individual possesses, emotional values especially differ individual to individual according to their residence, perceived benefits, culture, lifestyle, and the emotional experiences (Sheth, B, & Gross, 1991). Consumer with positive emotional values express strong inclination to purchase green packaged products, wherein the consumers who believe in the rigidness of society resist opting for green packaged products. However, the consumers who express willingness feel more morally responsible to protecting the environment by adopting green lifestyle (Rex & Baumann, 2007). In the present study, the students expressed the positive purchasing behaviour likely to demonstrate the environment-consciousness as they feel helping the environment. Besides, many of the emotional values have no impact on purchasing decisions as they emerge as the spur of the moment (Xu, Wang, & Yu, 2020).

Green purchasing behaviour is positively influenced by the attitude towards green directly in the study. In addition to that, it works as the mediator and positively mediates the constructs; Eco-centric values, social values, and environmental concern. Behaviour that are not limited by being expensive or difficult to perform, attitudes have greater

predictive values for those behaviours (Stern, 2000). In this sense, the value systems of consumers have greater influence on attidue and attitude further has got predictive values in converting those values into a purchase action in marketing related studies (Sharma, 2011). Though the eco-friendly packaging is little expensive, the purchasing behaviour is not limited any kind of attitude (Sharma, 2011). Studies around the world express that attitude towards green has positive significant impact on green purchasing behaviour (Laroche, Bergeron and Barbaro-Forleo 2001; Aqueveque 2006; Onder 2006; Ertz, et al. 2017). On the other hand, there are few studies that contradic the upshots of the studies (Vazifehdust and Asadollahi 2011; Veeravatnanond, et al. 2012). However, when it comes to health consciousness, and environmental sensitiveness, the attitude towards green is highly influential in converting them into a purchasing decision.Consumers who are highly health-conscious ignore the surges in prices and look to purchase green packaged products especially the food products (Ari & Yilmaz, 2017).

As conclusion, the research model is comprehensive to explain the buying intention or behaviour of young consumers towards eco-frienldy packaging. Particularly, the study has found that the awarenesss on packaging strengthens the purchasing behaviour or the intention in young minds. The awareness on the impairments of polymeric packaging and the positive perception toward eco-friendly packaging drive the consumer intention towards green. In turn, these awarness have higher significant influence on changing the attitude of young consumers positively towards eco-friendly packaging. Hence, it is suggested that spreading awareness on the anti-environmental polymeric packaging and perceived benefits of eco-friendly packaging, will help the nation to adopt sustainable consumption pattern which in turn revive nature. On the other hand, The social values, and the values about environment protection have higher significant influence on the purchasing behaviour of young consumers. Besides, the young comsumers have agreed that they express anger and disappointment while seeing people using plastic bags while shopping. These emotional reactios do not significantly influence the purchase decision of them instead it is only expressed as a spur of the moment. In terms of attitude, similar to the previous studies, it was found that it strongly influences purchasing behaviour of the students and it also strongly mediat social, eco-centric values and awareness towards the purchase intention.

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