

Exploring Factors Influencing Youth's Intentions to Properly Dispose of E-Waste in Chennai and Their Impact on Disposal Behaviour

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ABSTRACT

The study aimed to determine the factors influencing young people's intentions to dispose of e-waste and how those intentions impact their actions about appropriate disposal. This study, which builds on the Theory of Planned Behaviour, suggests that youth's intentions to dispose of their portable e-waste will be significantly influenced by their perceptions of the policies' efficacy, benefits, norms, and convenience, ultimately resulting in the appropriate disposal behaviour. Based on the convenience sample approach, 400 questionnaires were given out to young people in Chennai. 110 complete surveys could be used for more research. The study's findings demonstrated that intentions to dispose of portable electronic waste are significantly positively influenced by perceived convenience and perceived efficacy of policies. The study's findings also showed that young people's appropriate disposal practices were influenced by their desire to dispose of portable e-waste. It is recommended that future studies concentrate on different social groups to confirm the issue's importance and assist the government in developing plans for successful awareness campaigns for each target group across the nation.

Keywords: Youth Intention, E-waste, Disposable Behaviour, Waste management.

INTRODUCTION

Many origins and waste sectors are generated worldwide, ranging from the primary raw material suppliers to the companies involved in those industrial sectors and ultimately to the end users, the consumers. The amount of rubbish that people have documented producing is unimaginable. Although there are many other types of waste, in recent times, e-waste, or electric and electronic waste, has emerged as the most significant global concern. 44.7 million metric tons of electronic garbage were produced worldwide in 2016. Chennai is not exempt from this pattern. This quickly developing nation, home to over 11.8 million people, produced up to 288 metric tons of e-waste in 2016 (Baldé et al., 2017). Chennai has demonstrated an increasing tendency in the amount of electronic trash produced by the final consumers, with an annual rise of 48.6%, according to Greater Chennai Corporation, 2020.

The Department of Environment (DOE), in charge of avoiding pollution in the city, only offers basic recommendations on handling e-waste; e-waste is still non-existent (Jayaraman et al., 2019). The nation's inability to manage its e-waste effectively is predicted to significantly impact its ability to achieve sustainable development by 2020 (Kalana, 2010).

The problem of appliances and other electronic and electrical equipment being disposed of after their useful lives have ended is a significant factor in the city's excessive trash production. This worry stems from the possibility that improper disposal of e-waste could endanger the lives of all living things, including humans. This is because every electrical and electronic gadget in the world contains various compounds that can potentially be dangerous and severely impact people. (WHO,

2017). Chennai is thought to own 12 million cell phones, and nearly every part of the phones is made of potentially dangerous materials that could hurt both people and the environment. The components that contain hazardous materials are batteries, covers, cases, frames, and electronic systems. On the other hand, the smartphone's screen panel may have a combination of materials, some of which may harm the exposed person's health or life. For instance, lead and arsenic in the smartphone's electronic circuitry can damage people by entering their bloodstream.

In this regard, several past studies have focused on consumers' intentions toward recovery using the TPB as a foundation (Bezzina & Dimech, 2011; Domina & Koch, 1999; Wan et al., 2012). However, research identifying the factors influencing the intention to dispose of portable e-waste, which influences appropriate disposal behaviour, is lacking. The closest study was carried out by Kianpour et al. (2017), whose primary goal was to identify the factors motivating consumers to work with manufacturers through recycling, repair, and reuse. The study on consumer recycling behaviour is inappropriate for Chennai because, as many people in developed countries have shown, Chennai residents are still far behind regarding disposal awareness and recycling behaviour. It is pretty tricky to acquire the habit of recycling e-waste, and inhabitants of Chennai still lack the correct manners for disposing of e-waste.

Moreover, research on consumers' efficient disposal practices is still rare because most previous studies (Babaei et al., 2015; Kianpour et al., 2017) concentrated on the general attitudes, actions, and behaviours surrounding the recycling of e-waste. This is insufficient since the Tamil Nadu government needs this information to help develop strategies for e-waste disposal programs among young people and other potential community members. This information is essential for an effective disposal habit. Therefore, this study must investigate the factors affecting young people's intent to dispose of portable electronic trash, ultimately resulting in appropriate disposal behaviour. This study investigated the four determinants of perceived policy effectiveness, perceived benefits, perceived norms, and perceived convenience using the Theory of Planned Behaviour (TPB) theoretical framework. The goal was to determine how these factors affected the intention to dispose of portable e-waste and ultimately led to appropriate disposal behaviour. Formulating a conceptual framework and the study's hypotheses comes after assessing the literature for each study variable. The proposed conceptual framework was then validated by a data analysis followed by the paper's last section's discussion and conclusion.

REVIEW OF LITERATURE

E-waste disposable behaviour

Proper disposal behaviour is the act of appropriately discarding electronic portable communication devices that have reached the end of their useful lives through the appropriate channel. According to Baldé et al. (2017), the appropriate way to get rid of portable e-waste is to recycle the devices or give them back to reputable businesses or organizations for further processing so that the devices can be recycled, any usable parts can be reused, or other recovery procedures.

It indicates that an individual's behaviour in disposing of their portable electronic trash involves using the appropriate methods and channels. Because the e-products include hazardous elements, improper disposal could endanger health (Andarani et al, 2014). Education is still crucial since it can change users' perceptions about appropriate disposal and should be the first step toward changing their behaviour (Seehusen & Edwards, 2006). As a result, not everyone who intends to dispose of e-waste will follow the proper disposal procedures. Poor disposal behaviours and practices can negatively affect the local community's environment and inhabitants.

Intention to dispose of e-waste

Behavioural intention is among the factors that could have a significant positive impact on the action itself. The intentions—which in this case are to dispose of the portable e-waste are thought of as the driving forces that can persuade someone to act or not. Xu et al., (2017b) state that behavioural intention expresses an individual's degree of subjective probability and willingness to engage in a particular course of action. One of the things that can affect a consumer's waste management intents and actions is their past behaviour. In this instance, someone who exhibits a particular behaviour in this situation is more likely to repeat it (Xu et al., 2017b). According to Fishbein and Ajzen (1975), every action taken by people is motivated by legitimate reasons that come from their norms, beliefs, and experiences, which help them generate particular kinds of perceptions.

Perceived policy

Perceived policy effectiveness, as defined by Wan et al. (2014), is the idea of an outside or contextual factor influencing presumptions and the consequent creation of a meaningful influence between the psychological determinants, intentions, and behaviours associated with waste management. It involves the ability of pertinent governments or organizations to create the policies required to ensure the efficacy of such systems. Thus, the external factor of perceived policy efficacy—consumers' complete support of the government's trash recovery initiatives—can impact how frequently they engage in waste management techniques (Xu et al., 2017a).

Perceived benefits

According to Davies et al. (2002), perceived advantages are characterized by users' high level of awareness regarding the intended outcomes when engaging in waste management actions. The terms perceived rewards, perceived incentives, and environmental advantages are frequently used synonymously with perceived benefits in academic literature. It is one of the significant obstacles to trash recovery programs, mainly when consumers are less aware of the advantages to the environment (Bom et al., 2017). In light of this, it is critical to implement educational initiatives that could improve users' perceptions of the advantages of waste management for environmental protection (Nguyen et al., 2019). This could encourage users to recycle and dispose of e-waste for future more environmentally friendly practices (Bom et al., 2017) and further develop a culture of proper disposal among users (Nguyen et al., 2019).

Perceived norms

Subjective norms, attitude, and perceived behavioural control are all included in the TPB as elements that impact behavioural intention to varying degrees (Fishbein & Ajzen, 1975). The definition of subjective norms is what one considers to be the typical viewpoints of persons with significant importance in one's life. These ideas originate from what other people or communities a person is surrounded by might regard as appropriate or inappropriate behaviour (Ajzen, 1991). Similar to this study, several other studies have generalized the term "subjective norms" to "perceived norms" (Kochan et al., 2016). Additionally, it is possible that other studies introduced other types of perceived norms, such as moral norms, as demonstrated by the findings of Wan et al. (2012) and Chan and Bishop (2013).

Perceived convenience

According to Tonglet et al. (2004) and Wan et al. (2012), perceived convenience is a perception based on the availability of time and space and how simple it is for people to believe that a particular action would be beneficial for them to conduct. Since it takes work to complete an act, the frequency of trips to and from recycling facilities or collection locations may be correlated with how convenient people consider them to be (Saphores et al., 2006). Sidique et al. (2010) suggested that activities could be designed to be more user-friendly to improve perceived

convenience, which significantly influences waste-handling behaviour. Furthermore, according to Wan et al. (2012), adding extra pickup or drop-off locations on campus might be seen as a way to make recycling more convenient for people.

RESEARCH METHODOLOGY AND HYPOTHESES

This investigation made use of the TPB's foundational theory. According to the idea, there should be a reasonable explanation for every action a person takes, both in terms of motivation (the goal) and volitional control (the opportunities and sources). Thus, the respondents' desire to dispose of their portable electronic waste would drive their performance. In this instance, consumers could be motivated to dispose of portable e-waste in certain circumstances. Due to consumer experience and the consumers who follow particular norms and beliefs, this circumstance will result in the goal of minimizing portable e-waste. It will cause the consumers to consider and engage in the activity. Here, the mindset is toward disposing of portable electronic trash and, ultimately, making that disposal more effective by disposing of the garbage appropriately.

The TPB's central concept indicates that attitude, subjective norms, and perceived behavioural control influence intention, influencing actual behaviour (Xu et al., 2017b). Perceived benefits and convenience were associated with the attitude that perceived norms acted upon subjective norms, perceived policy effectiveness represented perceived behavioural control, the intention to dispose of portable electronic waste was implied, and customers' proper disposal of portable electronic waste was formed as their behaviour. Perceived convenience and perceived benefits were the two variables that best reflected the attitudes of the youth, as numerous recent waste management studies have indicated that these factors significantly influence people's attitudes regarding waste disposal and recovery programs (Bom et al., 2017). Because the city's e-waste policies have been inadequate and outside the authority of individual kids, the perceived effectiveness of policies was chosen to represent perceived behavioural control in the TPB. The study's theoretical framework is depicted in Figure 1.

Steg and Vlek (2009) discovered that when there is a positive view of the efficacy of the policies, the behaviour tends to be more environmentally friendly. According to Wan and Shen (2013), if individuals believed that the regulated policy was working, their intention to carry out particular behaviours would rise. This has, therefore, given rise to the following theory.

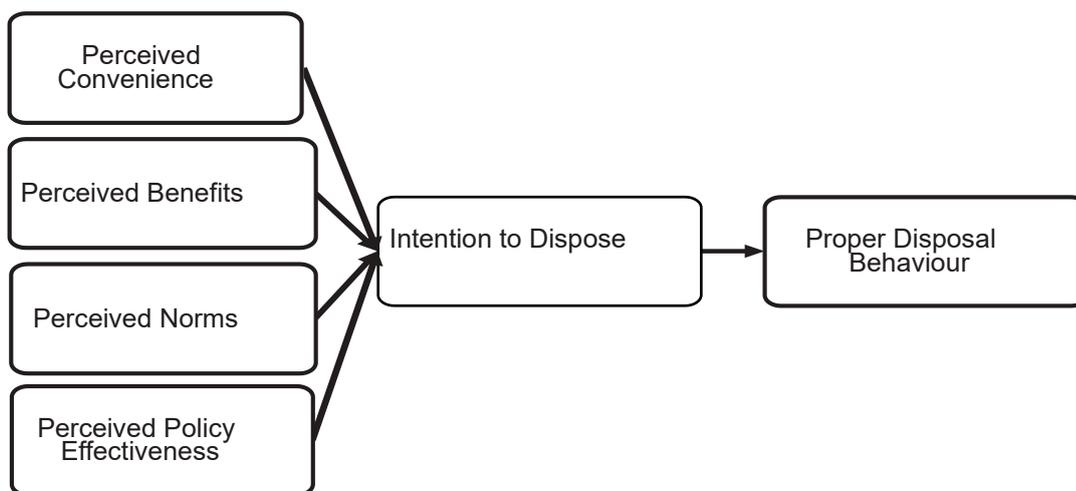


Figure 1. Theoretical framework.

H1: Perceived policy effectiveness positively impacts the intention to dispose of e-waste.

The substantial relationship between the assurance of the laptop disposal practice and the laptop disposal practice was found by Jayaraman et al. (2019). It occurred because the user adhered to the disposal plan after becoming aware of the advantages of disposal for the environment. Previous research indicated that individuals with higher education levels were better able to handle the program and, as a result, gave it more importance since they were more aware of the advantages of waste management techniques (Jenkins et al., 2003). As long as the community and authorities acknowledge the potential benefits of e-waste management, people will respond favourably to achieve the benefits of waste disposal for themselves and society (Bom et al., 2017).

H2: Perceived benefits positively impact the intention to dispose of e-waste.

Nguyen et al. (2019) found that in addition to external influences like friends, family, and neighbours, internal individual characteristics also had a significant role in correctly disposing of electronic items in Vietnamese households. Similarly, when Kochan et al. (2016) investigated the influence and relationship between perceived norms and the intention to recycle e-waste, they found a significant outcome. In their investigation, Xu et al. (2017b) looked at the impact of several factors, including subjective norms, on trash separation at home. The findings showed that people are affected by others because they are unsure of the morality of what they are doing.

H3: Perceived norms positively impact the intention to dispose of e-waste.

Prior research has consistently demonstrated that the intention to handle e-waste is significantly positively impacted by perceived convenience. In their study, Kochan et al. (2016) discovered that the desire to recycle electronic waste was significantly influenced by perceived convenience. Bezzina and Dimech (2011) also found that people's intentions and behaviours regarding garbage treatment in Malta were significantly influenced by inconvenience. This situation implies that the intention and behaviour toward the disposal of e-waste can be improved by lowering the difficulties.

H4: Perceived convenience significantly affects the intention to dispose of e-waste.

An individual who disposes of their electronic portable communication device correctly and through the appropriate route engages in proper e-waste disposal behaviour. Intention plays a significant role in determining an individual's conduct (Irvin & Stansbury, 2004). The more intent there is, the more likely the behaviour will follow the intentions (Zhang et al., 2015). The goal of salvaging something from the disposed of e-waste can favourably influence the action of handling the e-waste appropriately, according to research by Oztekin et al. (2017) and Ari and Yilmaz (2016).

H5: Intention to dispose of e-waste positively influences the disposal behaviour.

Research design

The inquiry was quantitative in character. This study looked into how the intention to dispose of portable e-waste and the proper disposal behaviour are influenced by the independent variables: perceived benefits, perceived efficiency of the policy, perceived norms, and perceived convenience. Mobile phones, digital and portable video recorders, batteries, chargers, and other embedded electrical or electronic accessories attached to the devices are examples of small and portable electrical and electronic appliances that fall under the category of small electronic gadgets and telecommunication equipment. One of the six subcategories of e-waste that was the focus of this investigation was identified by Baldé et al. (2017). As part of its research methodology, this study employed a survey to collect primary data from the selected respondents.

The study's population consisted of all young people between the ages of 15 and 40 who were either employed or resided in Chennai, Tamil Nadu. The demographic was chosen because most people in Chennai use smartphones and other portable electronic communication devices. Most users were identified as urban dwellers, with the majority originating from the Chennai region. Chennai is the capital of Tamil Nadu, one of the state's metropolitan cities and the administrative hub for the government, both of which are situated in the South India region. In addition, Chennai was chosen because the area's recently implemented waste separation program was poorly regarded by the locals and ultimately failed to address the e-waste problems (Teng, 2017). The Indian federal government enforced a mandatory e-waste separation program for this territory. However, it could not manage the e-waste adequately (Teng, 2017).

In 2017, the estimate of the youth population was derived from the percentage of youth, which was 43 per cent of Chennai's total population, projected to be 70,000. Based on this, an estimated 30,100 persons were young overall. Sekaran and Bougie (2013) state that, with a 95% confidence level, 379 samples would be the correct number. The study distributed 400 surveys by implementing this recommendation. The potential respondents were contacted at their places of employment in various government departments and agencies as part of the convenience sampling method used to select the samples. However, out of the 120 surveys, only 110 were deemed suitable for additional research and were returned. A test conducted in this instance using SPSS software version 19 with a maximum of four predictors pointing at a construct anywhere in the PLS path model and a power of 0.90 for statistical test (Cohen, 1988) showed that a sample size of 110 was an adequate sampling size for the study (Hair et al., 2017).

The demographic data analysis presented in Table 1 shows that the majority of respondents were female (53.6%), in the age range of 20–30 (88.2%), employed by the government (55.5%), had a bachelor's degree (59.1%), earned between Rs.1,000 and Rs3,000 (78.2%), and resided in Chennai (76.4%). Therefore, the appropriate demographic requirements for the investigation were gathered using these profiling characteristics.

Table 1: Demographic Profile

Items		Survey Responses	% of Responses
Gender	Male	51	46.40%
	Female	59	53.60%
Age	20–30	97	88.20%
	31–40	13	11.80%
Sector of Work	Government	61	55.50%
	Private	49	44.50%
Education Level	Secondary School	5	4.60%
	Diploma	36	32.70%
	Bachelor Degree	65	59.10%
	Master Degree	4	3.60%
Income Level	Below Rs.1,000	8	7.30%
	1,000-3,000	86	78.20%
	3,001-5,000	8	7.30%
	5,001-7,000	2	1.80%
	7,001-10,000	5	4.50%
	10,001 and above	1	0.90%
Living/Working in Chennai	Living	84	76.40%
	Working (only)	26	23.60%

Assessment of the measurement model

The measurement assessment and the structural models were used in the investigation. The reflective constructs in the measurement model were evaluated to see if they adhered to the acceptable values regarding validity and reliability. The measurement model test in the smartPLS consists of three main components: discriminant validity, internal consistency of all the scales, and individual item reliability. The reliability of each item was assessed by factor loadings (Hair et al., 2010), and the average variance extracted (AVE) and composite reliability (CR) were used to validate the construct internal consistency. With factor loadings greater than 0.6, all six variables met the standards set by Hair et al. (2010), according to the data displayed in Table 2. Additionally, readings above 0.7 in the range of 0.835 to 0.932 for the composite reliability (CR) and readings above 0.5 for the average variance extracted (AVE) in the range of 0.507 to 0.775 for the AVE were accepted.

Table 3 displays the findings of the Fornell-Lacker Criterion Analysis, which was used to test the discriminant validity. It was discovered that the square root of the AVE for every construct was higher than the correlations amongst the constructs. According to the recommendation of Hair et al. (2014), the results showed that the constructs attained discriminant validity.

Assessment of the structural model

The relevance of the regression coefficient in the structural model was investigated using the bootstrapping approach to the dataset containing 5,000 resamples (n = 110). The t-values for a one-tailed t-test were 1.645 (5% of the significance level) and 2.326 (1% of the significance level), respectively, based on an analysis of the path coefficients to determine the critical values (Hair et al., 2011).

Table 2: Reliability measures

Indicators	Indicator Reliability	Composite Reliability	AVE
EPE1	0.681	0.872	0.578
EPE2	0.717		
EPE3	0.765		
EPE4	0.831		
EPE5	0.797		
ITD1	0.619	0.835	0.507
ITD2	0.87		
ITD3	0.638		
ITD4	0.639		
ITD5	0.761		
PPE1	0.655	0.868	0.571
PPE2	0.833		
PPE3	0.662		
PPE4	0.768		
PPE5	0.838		
PB1	0.948	0.932	0.775
PB2	0.909		
PB3	0.893		

PB4	0.759		
PN1	0.8	0.852	0.593
PN2	0.857		
PN3	0.786		
PN4	0.617		
PC1	0.91	0.885	0.659
PC2	0.716		
PC3	0.822		
PC4	0.786		

Note: EPE- Disposal behaviour, ITD-Intention, PPE-perceived policy-Perceived benefit, PN- Perceived norms, PC-perceived convenience,

Table 3: Discriminant validity.

	DPE	ITD	PB	PC	PN	PPE
PDB	0.76					
ITD	0.35	0.71				
PB	0.15	0.23	0.88			
PC	0.19	0.46	0.7	0.81		
PN	0.38	0.36	0.46	0.63	0.77	
PPE	0.13	0.41	0.38	0.46	0.58	0.76

Note:PPE: Perceived Policy Effectiveness, PB: Perceived Benefits, PN: Perceived Norms, PC: Perceived Convenience,

ITD: Intention to Dispose of Portable E-Waste, and PDB: Proper Disposal Behaviour

Table 4: Path analysis

Hypothesis	Path	Beta	T-statistics	Decisions
H ₁	PPE → ITD	0.267*	1.727	Supported
H ₂	PB → ITD	-0.208	1.002	Not Supported
H ₃	PN → ITD	-0.003	0.019	Not Supported
H ₄	PC → ITD	0.482**	2.547	Supported
H ₅	ITD → PDB	0.346***	3.443	Supported

Sig. level: ***p < 0.001, **p < 0.01, and *p < 0.05.

Notes: PPE: Perceived Policy Effectiveness, PB: Perceived Benefits, PN: Perceived Norms, PC: Perceived Convenience, ITD: Intention to Dispose of Portable E-Waste, and PDB: Proper Disposal Behaviour.

The blindfolding test was used to evaluate the predictive relevance of the model. According to the results, the appropriate disposal behaviour (PDB) and intention to discard (ITD) had Q2 values of 0.093 and 0.037, respectively. Since the values exceeded zero, the model had attained the necessary prediction skills (Garson, 2016). As a result, the path analysis was carried out using the conclusions listed in Table 4.

Three hypotheses were found to be accepted based on Table 4: H1 ($\beta = 0.267, p < .05$), H4 ($\beta = 0.482, p < .01$), and H5 ($\beta = 0.346, p < .001$). Perceived policy effectiveness (PPE) and perceived convenience (PC) were the dependent variables for each of them, and they all showed positive correlations with them. These relationships significantly increased the intention to dispose of portable electronic waste (ITD). Proper disposal behaviour (PDB) was likewise significantly positively influenced by ITD, indicating that H5 was similarly promoted. Nevertheless, two hypotheses were found to be unsupported (H2; $\beta = -0.208, p > .05$) and H3 ($\beta = -0.003, p > .05$), indicating that the intention to dispose of e-waste (ITD) was not significantly influenced by perceived benefits (PB) and perceived norms (PN).

DISCUSSION

The purpose of this study was to evaluate the factors that significantly influence the desire to dispose of portable e-waste, which in turn may affect appropriate disposal behaviour: perceived policy effectiveness, perceived benefits, perceived norms, and perceived convenience. The TPB theory was applied in this study to ascertain whether the youth consumers had any pre-existing norms, beliefs, or experiences that could have contributed to their positive attitudes toward disposing of portable electronic waste and ultimately increased their disposal behaviours.

The findings demonstrated that perceived policy effectiveness positively influenced attitudes regarding the intention to dispose of portable e-waste. It demonstrated how the young people in Chennai felt about the government's strategy and how it affected their decision to eliminate their portable electronic garbage. The Department of Environment's (DOE) current instructions are sufficient to spark the intention to dispose of e-waste, even if Chennai lacks a comprehensive domestic e-waste management infrastructure. The possible cause of this is the growing public and private awareness of e-waste through initiatives that highlight the harmful impacts of e-waste on both the environment and human health. A prior study by Wan et al. (2014) that produced a comparable result corroborated this conclusion. According to Wan and Shen (2013), if people thought the regulated policy was working, they would be more inclined to carry out specific behaviours.

Furthermore, the findings demonstrated that perceived convenience has positively influenced the intention to dispose of portable e-waste. This is because most respondents stated that recycling their e-waste had been made easier for them by convenience, particularly in terms of time, space, and distance. Sidique et al. (2010) corroborated this, stating that people need enough time and space to recycle in addition to money and effort. In their study, Kochan et al. (2016) discovered that an individual's intention to recycle electronic waste was positively influenced by perceived convenience because they may have more time and space in their home to store the waste before sending it to a recycling centre.

Wang et al. (2011) found time and time again that convenience has an impact on people's intentions to recycle e-waste. Wang et al. (2011) concentrated on the convenience connected to the facilities and services offered by the authorities to manage and recover the garbage, as opposed to the convenience perception of time and space that had been suggested by Kochan et al. (2016). According to their research, over 50% of the non-recyclers in the survey tended not to recycle since insufficient professional recovery services were available. They also believed that recycling took much time and was challenging to do. This evinced a high correlation between the intention to recycle and dispose of e-waste and perceived convenience.

The study also discovered that appropriate disposal behaviour was significantly positively influenced by the intention to dispose of portable e-waste. These results demonstrate that young people in Chennai intend to dispose of portable electronic waste and that this intention will

eventually impact their actions toward proper disposal. The young person had good reason to dispose of the device—it broke, had outdated features, and its design was outdated. Their primary motivation for advocating for appropriate litter disposal was to preserve and tidy their living environment.

This evinced a high correlation between the intention to recycle and dispose of e-waste and perceived convenience. In their study, Oztekin et al. (2017) discovered that recycling behaviour was strongly influenced by the behavioural intention to recycle e-waste. According to the study, the actions of recyclers and non-recyclers with the goal of recycling would only occur to recycling and disposal when several other criteria were present. Ari and Yilmaz (2016) also came to a similar conclusion, finding that Turkish homemakers' recovery practices significantly impacted their intent to salvage the e-waste.

However, the study discovered that the perceived benefits had not significantly impacted the intention to dispose of portable e-waste. The absence of immediate personal benefits from disposing of the e-waste contributed to the inconsequential results since the benefits to the environment and nature were greater. Since they were not immediately benefiting from the actions, this could give them the impression that the act was less meaningful. According to a study by Elgaaied (2012), people's intentions to recycle e-waste items were hindered by their seeming lack of concern for the environment. In this instance, it seemed that the immediate benefits to the individual outweighed the influence of the surrounding environment.

Ultimately, the study's findings revealed that perceived standards did not substantially impact intentions to dispose of portable electronic waste. Due to subjective norms, most youth disagreed that perceived norms played a less significant role. As a result, they felt no pressure from the people and groups they considered significant, including friends, family, the media, the community, and other influential groups (Wan et al., 2017). The fact that the Chennai community, which seldom separated or recycled any waste, was the centre of the culture could have been one of the primary causes (The Star, 2017). Chennai people are not careful in managing disposals and do not know the correct ways of getting rid of e-waste (Lai, 2019).

An additional study on disposal behaviour in Chennai, which revealed that subjective norms had no discernible impact on public university students, corroborated the findings of this study. This occurred due to the student's propensity to decide on their trash separation without consulting friends, professors, or other influential individuals on campus (Wah & Osman, 2017). Additionally, a study conducted in 2013 by Karim Ghani et al. found that subjective norms did not significantly influence the participants' intentions to separate food waste from their daily lives. Although it was shown that subjective norms impacted waste separation intention, that impact was not significant. Students should be encouraged to participate in disposal projects to influence their families' arbitrary standards (Zhang et al., 2015).

Thus, in line with the fundamental tenet of the TPB, the young people did the behavioural action of disposing of their portable electronic waste due to legitimate motives and intentions that stemmed from their experiences, beliefs, and social norms (behavioural intention). On the other hand, there would be no justification for them to act in this manner if they had no valid reason to do so or if any norms, beliefs, or perceptions went against their own. This would lessen their intentions to dispose of their portable electronic waste properly.

CONCLUSIONS

The study's results on young people in Chennai show how average TPB preferences influence behaviour. The youth's intentions to dispose of portable e-waste were strongly influenced only by

their perceptions of the effectiveness of the policy and its convenience; perceptions of advantages and norms had the opposite effect, having no effect at all. However, the study's findings have added to our understanding of the TPB, especially in how youth were influenced by subjective norms (i.e., perceived policy effectiveness). It is significant because prior research has consistently shown that perceived policy effectiveness is the weakest factor, primarily because it is an external factor that is outside the control of the individual.

The study's findings imply that the government should concentrate on fostering an attitude toward e-waste disposal. Customers should be taught to properly dispose of electronics and other electrical goods from the moment they are acquired. It is essential to showcase the endorsements from clients who have effectively implemented appropriate e-waste disposal practices. It is recommended that authorities step up their efforts to educate people of all ages about the correct disposal of e-waste. Adults who receive additional education can serve as great role models for young people by practising responsible disposal of portable electronic waste. In addition, utilising well-known celebrity endorsements can encourage young people to dispose of their electronic waste properly. Furthermore, it is advised that the government emphasize any prizes or advantages given to final consumers who are disposing of their e-waste appropriately. These recommendations may increase the young people's motivation to carry out the disposal tasks, particularly regarding their portable electronic waste. Additionally, a greater emphasis should be placed on promoting and publicizing the severe repercussions and effects of careless portable e-waste dumping to raise awareness of the risks involved in disposing of electronic waste. Significantly, this can gradually influence how young people view standards and foster a better culture around waste disposal.

Based on the TPB, the model created in this study verifies the capacity to forecast the behavioural intents to dispose of portable electronic trash, ultimately resulting in the appropriate disposal action. It demonstrates the new understanding gained from using the model and the research's conclusions in an understandable manner. In light of this, the current study offers insight into the variables that affect individuals' favourable perceptions of carrying out portable electronic waste disposal and, ultimately, enhance their disposal practices. On the other hand, previous studies have focused on the TPB context of the recycling intention rather than the disposal viewpoints.

Multiple constraints limit the research. In order to comprehend the situation that occurs in the Chennai setting, the study acted as a preliminary attempt to investigate youth behaviour about the disposal of e-waste. The findings showed that the suggested constructs and the underlying logical reasons for the relationships among the variables could considerably actualize the TPB's foundation. Nevertheless, the study is restricted to a tiny convenience sample of 110 young people in Chennai. As a result, even if the results are noteworthy, they cannot be applied to all of Tamil Nadu. Therefore, more research covering other significant states with larger sample sizes is required to draw broader generalisations.

In order to confirm that the factors impact both the intentions of different social groups and their actions when it comes to disposing of portable electronic waste, future research should concentrate on studying these groups. Finding additional factors from the perspective of the TPB may improve our comprehension of how Chennai customers feel about disposing of their portable electronic waste.