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CONSUMER CLOTHING DISPOSAL BEHAVIOR: CHARACTERISTICS AND ENVIRONMENTAL CONCERNS

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ABSTRACT
This study aims to explore the consumer clothing disposal behavior (CCDB) such as resell, reuse, donate and discard of used clothing in terms of consumer concern for environment (CCE), consumer attitude (CA), information unavailability (IU), consumer motivation (CM) and Apparel disposal subjective norms (ADSN). A cross-sectional survey research design was conducted to evaluate the consumer clothing disposal behavior. The participants included 275 female consumers between the age of 19-55 years, who were purposively selected through non-probability purposive sampling procedure. Indigenously constructed questionnaire at five-point Likert scale were used to collect the data. Correlation and linear regression were used for analysis. Findings revealed that consumers showed positive attitude towards disposing old garments and they have positive approach towards environmental concerns, CM and ADSN play an important role towards disposing garments. This study is important to fast fashion retailers, marketers, environmental campaigners, charitable organizations and public policy makers.

Keywords: Clothing, Consumer, Disposal behavior, Environmental concern, Motivation, Consumer Attitude

INTRODUCTION
In an ideal world, it is necessary that the consumer should consume the product in such a way that present and future generation should get the maximum benefit from it (Palmeira & Musso, 2020; Dong et al., 2019; Karaosman et al., 2016). From this, the idea of recycling and sustainability arises, which promotes the idea that consumer should consider their consumption patterns especially emphasizing social, environmental and economic factors (Khan et al., 2020; Buerke et al., 2016; Phipps et al., 2013). Nowadays many consumers dispose their undesirable textile waste to Lunda Bazar (in Pakistan), Salvation Army and Cancer Research (in UK), charity shops, such as Oxfam (Meacham et al., 2020; Aydin et al., 2017; Norum, 2015; Wang, 2010).

Globally, fast fashion has gained popularity, fashion designer and marketers using the strategies of bringing out the new innovative style and designs fortnightly to increase their sale, especially to attract the teens who are in search of cheap article of clothing (Niinimäki et al., 2020; Bick et al., 2018; Lago et al., 2016). People usually use the dress for a limited time period and then discard it either or throw in the bin or donate to any family member or relatives (Pandit et al., 2020; Joung & Park-Poaps, 2013). Giving, receiving, and socializing are very encouraging concept especially in the respect of fashion sustainability (Matthews & Hodges, 2016).

Textile waste has been increasing day by day, this issue creates many serious health and environmental problems worldwide (Khan & Malik, 2017). Waste may be defined as "any substance, whether that substance can be reduced, reused, recycled or recovered i.e., excess unwanted, rejected,

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discarded, abounded or disposed of" (National waste information base line reports, 2012). Mostly textile products at the end of its stage discarded and send to the landfills where their decomposition process gets started which not only damaging the environment but also harmful for the human health as well, e.g., wool. when it starts decomposing it produces the methane gas which enter in the air and cause many serious health issue (Muzenda et al., 2012).

In every sphere of human life, the consumer plays a very important role, he is the final user of the commodity so behavior of the consumer towards the society does matter. Eco-conscious consumer behavior is comparatively under-researched in Pakistan from scientific perception. Very limited research has been done on consumer disposal behavior in Pakistani context, mostly research focuses on narrow range of consumer behaviors: like consumer behavior towards environment, either textile products are made of environment friendly materials e.g., organic cotton, natural dyes etc. Consumer usually purchase a garment for affection, leisure, identity and to get that experience which they have on new dress than later that dress dispose due to quality related problems poor fit, old style, boredom, discoloration (Bick et al., 2018; Jekria & Daud, 2016). Consumers are interested in environmental issues but the phenomenon of disposal behavior is not clear among them due to lack of information (Žurga et al., 2015).

There are four major practices related to CCDB i.e., resale, reuse, donate and discard (Joung & Park-Poaps, 2013). Mostly researchers considered that giving used clothing may be due to humanitarian reasons (Jekria & Daud, 2016), while other researches argue, that neither humanitarian nor environmental responsibility which causes the removal of garment, perhaps may be less space in the cupboard, creates the need for new dress Ha-Brookshire & Hodges, 2008).

Bianhi and Birtwistle in 2012 found that recycling considered the strongest driver for consumers to donate clothes to charities. Discard clothing is considered most preferred method as it involves less effort (Rani & Jamal, 2018; Jong et al., 2013). Clothing swap is another way of recycling in order to reduce the textile waste (Matthews, & Hodges 2016).

Later research concluded that demographics profoundly impact on the recycling behavior, similarly gender, income, marital status, considered as influential factor (Rezaei Arangdad et al., 2019). Many studies did not indicate the positive relationship among the education (Zen et al., 2014) income and recycling behavior. On contrary some researches support the positive relationship between the education and recycling behaviour (Rezaei et al., 2019; Reiter & Kozar, 2016). As well as fewer studies supported the positive association between income and recycling behavior (Zen et al., 2014). While people with high income associated the word 'outdated' to their unwanted clothes and give to others rather than involved in recycling concepts (Zhang et al., 2020).

The aim of the study is to explore clothing disposal behavior of Pakistani consumer in relation to attitude, environmental concern and information unavailability as well as the subjective norms of the family and friends.

Consumer attitude towards clothing related disposal behavior investigated mostly in recycling context. According to attitude-behavioral models like TRA (Theory of Reasoned Actions) attitudes affect the behavior (Fishbein & Ajzen, 2011). Lang & Armstrong (2016) and Muthu (2014) found from a survey that female students showed strong positive attitude towards environmental, donating and resell the old clothing as compare with man.

This study is designed to explore CCDB in Pakistan whether it is beneficial from three aspects of eco-environment i.e., economic, social and environmental as it addresses the main issue of textile sector, the waste; ultimately ends in the landfills which contribute to air, water and land pollution. It is beneficial for small stake holders, so that they can pick up the cheap dress material/ raw material to start up their new business. As well as it opens the new doors for fashion designers to develop new and innovative design to renovate a used product. Furthermore, this study is important for middle to low-income population. More importantly this study also focuses the novel aspect of consumer behavior i.e., disposal behavior instead of consumer buying behavior as much research has been done on it. It is also worth importance for fast fashion retailers, marketers, environmental activists, ecological researchers, charity institutions and public policy makers. The objectives of the study are:

1. To find out whether there is likely to be a relationship between the CCE, CA, IU, and CM regarding consumer clothing disposal behavior
2. To explore the CCE in relation to CA towards clothing disposal methods
3. To analyze the CCE in relation to IU towards clothing disposal methods

4. To analyze the CCE in relation to CM towards clothing disposal methods
5. To find out the CCE in relation to ADSN towards clothing disposal methods
6. To explore CA to consumer clothing disposal reason (CCDR) regarding clothing disposal methods
7. To explore IU to CCDR regarding clothing disposal methods
8. To explore ADSN to CCDR regarding clothing disposal methods
9. To explore CM towards CA regarding clothing disposal methods

So, on the basis of the objectives the following hypothesis were formulated:

H_o1: There is likely to be significant relationship among the CCE, CA, IU and CM regarding consumer clothing disposal behavior.

H_o 2: CCE regarding CCDB is likely to be a significant predictor of CA, IU, CM and ADSN of friends, family and relatives towards clothing disposal methods.

H_o 3: CA, IU and ADSN is likely to be significantly predictor of CCDR towards clothing disposal methods.

H_o 4: CM is likely to be significantly predictor of CA towards clothing disposal methods.

METHOD

Research design

A quantitative cross-sectional survey was conducted to investigate the CCDB with its four methods resell, reuse, donate and discard in Pakistan by self-administered structured questionnaire. As previous studies indicated that much research has been done in exploring consumer buying behavior in Pakistan, but limited research has been done on consumer behavior towards disposing off old garments. For this purpose, this study adopted the theory of Fishbein & Ajzen's "Theory of Reasoned Action" (1975) to explore the CCE, CA, IU, CM and ADSN regarding to CCDB behavior towards resell, reuse, donate and discard disposed methods.

Target Population

Data was collected from two public universities of Lahore, Pakistan. Lahore College for Women University, Lahore. and COMSATS University Lahore Campus targeting females only.

Sample, Sample size and Sampling Technique

The sample comprised of females only with age range from 19-55 years. A sample of 275 female consumers were selected using non-probability purposive sampling technique.

Inclusion/exclusion criteria

In quantitative studies sample consist of large number of respondents so that the results can be generalized to the whole population (Floyd J Fowler, 2013), sample for this study consist of 275 participants living in Lahore, Pakistan. Pakistan is a developed country, although advanced technologies improve are economic status but it creates many environmental and health problems, especially the textile sector play a major role in this context. For these reasons, this study targeting consumer disposal behavior in relation to clothing. Sample was so diverse that it includes people from all ages ranging from 19-55 young as well as aged, including both employed and unemployed women. As previous studies indicated that females are more concerned about environment than men (Bianchi & Birtwistle, 2011). For the study that some female should link with the employment sector and economically strong, which showed an independent autonomous decision regarding clothing disposal behavior. Furthermore, females within this diverse age group were relatively literate and were likely to be understand the terms and concept of the questionnaire.

Research instrument

Structured questionnaire was used to determine the CCDB which consist of six sections using five-point Likert scale along with demographic sheet and introductory question which measure the consumer choice about using any one method of clothing disposal. Section I, III & IV consist of 15, 10,10 items respectively each adopted from weber (2015), measured CCE, IU and CM towards clothing disposal methods respectively. Section II including 12 items used to measure the CA towards clothing disposal methods which was adopted from Fishbein & Ajzen (2011). Section V measured the ADSN using 5 items adopted from George's (2004). While section VI was designed to investigate the reasons of consumer disposing the old garment using 20 items adopted from Koch and Domina (1999). Lastly demographic sheet was used, which include name, gender, age range, educational level and income of the participants.

Pilot study

Pilot study was done to determine the validity and reliability of the developed instrument. For this purpose, 30 questionnaires were distributed among the consumer. Cronbach alpha was used to determine the reliability of the questionnaire through SSPS software. The value of Cronbach alpha 0.874 showed that there is a highly positive relationship exist among the items of CCE, the value of Cronbach alpha 0.778 showed that there is the highly positive relationship exist among the items of CA. While 0.756 showed, positive relationship exists among the items used for measuring IU, moreover value of Cronbach alpha 0.778 showed that there is the highly positive relationship exist among the items of consumer motivation. Value of Cronbach alpha 0.896 showed highly positive relationship exist among items used to measure the ADSN. Lastly 0.964 value of Cronbach alpha showed highly positive relationship exist among the items used to measure reasons for clothing disposals. After pilot study, necessary correction was made and questionnaire was ready to administered among 300 participants to measure the opinion of the respondent about clothing disposal behavior.

Table 1. Cronbach's Alpha: Reliability of Measures

Variables	Cronbach's Alpha
Independent variable	
Consumer concern for environment	0.874
Dependent variable	
Consumer attitude	0.778
Information unavailability	0.756
Consumer motivation	0.746
Apparel disposal subjective norms	0.896
Reasons of Clothing disposal behavior	0.964

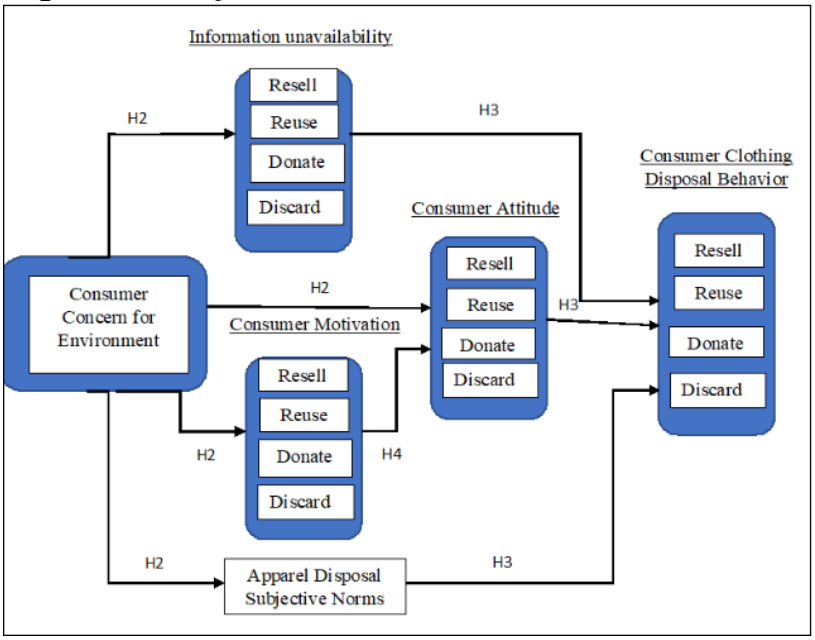
Procedure

A Quantitative survey was conducted to measure the consumer disposal practices through structured questionnaire. 300 questionnaires were distributed among participants. Those questionnaires which was incomplete were discarded and not included in the study. 275 completed questionnaires were ready for data analysis.

Conceptual model

Conceptual Model of the study was shown in figure 1.

Figure 1. Conceptual Model



RESULT AND DISCUSSION

Survey response rate

The total number of questionnaires which was returned were 275 (overall response rate was 91%) as shown in table 1.

Table 2. Number of Participants from two Educational Institutions of Lahore, Pakistan

Sr. No.	Name of Educational University	Number of Participants
1	Lahore College for Women University, Lahore.	130
2	COMSATS Institute of Information and Technology, Lahore Campus.	145
	Total	275

Respondent demographics

Respondent's demographic characteristics were summarized in table 3. All respondents were female with the 100 percentage overall. The age of the participants was ranged from 19-55. It was clear that most of the respondent were less than 19-30 years of age i.e., 191 about 69% overall, whereas between 31-40 years of age the number of respondents were 62 (23 %) and only 7 respondents were above of age 41-55 years. Majority of the respondent (nearly 63.1 %) have bachelor's degree, whereas 14 respondents are diploma holder. Additionally, 17.9 % respondents have completed their master's degree. While, only 38 respondents have completed their M-Phil and PhD degree. Exactly, 173 respondents have monthly family income of rupees PKR 10,000-35,000. Slightly over 63 (23 %) of the sample population has monthly income of rupees PKR 50000-100000. Moreover, 9.5 % of the individuals have monthly family income of rupees PKR 10000-35000.

Table 3. Descriptive statistics of Respondent's Demographics

Demographics	Categories	M(SD)	Frequency	Percentage%
Gender		2.00(0.000)		
	Male		0	0%
	Female		275	100%
Age		1.38(0.618)		
	19-30		191	69%
	31-40		63	23%
	41-55		20	7%
Education		2.41(0.789)		
	Diploma or equivalent		14	5.1%
	Bachelor		173	63.1%
	Master		49	17.9%
	M-Phil/Doctorate		38	13.9%
On job		1.64(0.482)		
	Yes		100	36.5%
	No		174	63.5%
Income per month		2.22(0.672)		
	Rs. 10000-35000		26	9.5%
	Rs. 35001-50000		173	63.1%
	Rs. 50000-100000		63	23%
	Rs. 100001-above		12	4.4%

Descriptive Statistics

Table 4. Descriptive Statistics

Sr. No.	Variables	Cronbach's Alpha	Mini	Max	Mean	Std. Deviation
1	CCE	0.874	25.00	75.00	52.4051	8.00870
2	CA	0.778	23.00	60.00	37.8686	6.22275
3	IU	0.756	18.00	50.00	31.1176	5.15309
4	CM	0.746	20.00	50.00	29.8832	5.08905
5	ADSN	0.896	5.00	25.00	15.1569	3.72707
6	CCDR	0.964	63.00	160.00	103.8504	13.96580

N= 275

Hypothesis testing

Correlation statistics

Pearson product correlation of coefficient was used to determine the relationship among the CCE CA, IU, CM and ADSN regarding CCDB (H_o1) as shown in table 4 below.

Table 5. Correlations of Coefficient

Sr No.	Variables	1	2	3	4	5	
1	CCE	1					
2	CA	0.321**	1				
3	IU	0.179**	0.345**	1			
4	CM	0.258**	0.438**	0.418**	1		
5	ADSN	0.187**	0.210**	0.415**	0.483**	1	
6	CCDR	0.329	0.457	0.468	0.495	0.356	1

P<0.01

As shown in the table 4 there is significant positive relationship exist between CCE and IU. The value also showed significant positive relationship among CCE and CM as well as there is a significant positive relationship exist among the CCE and ADSN. Moreover, the value showed a significant positive relationship exist among CA and IU while the value showed significant positive relationship among the CA and CM. Significant positive relationship also exists between ADSN and CA, while significant positive significant relationship exists among CM and IU. The value showed significant relationship among ADSN and IU, while highly significant positive relationship exist among CM and ADSN, so on the basis of the results research hypothesis i.e. there is likely to be significant relationship among the CCE, CA, IU, CM and ADSN regarding CCDB has been accepted. These findings consistent with the findings of Bianchi & Birtwistle (2011) as environmental consumer showed more positive attitude towards clothing disposal practices. In Pakistan, mostly consumers don't know what to do with the garment or fabric when it was no longer in use, they don't know how to dispose it. Most of them use it as cleaning rags and then through it in the bin which ultimately become the part of the land.

Regression analysis

Regression analysis was used to predict the direction of the relationship among the study variable. In order to test the following hypothesis linear regression was applied.

Table 5. Regression Analysis

Sr. No.	Variables	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	CCE, CA	0.321	0.103	0.099	5.90515
2	CCE, IU	0.179	0.032	0.028	5.07947
3	CCE, CM	0.258	0.066	0.063	4.92599
4	CCE, ADSN	0.187	0.035	0.032	3.66789
5	CA, CCDR	0.457	0.209	0.206	12.44548
6	IU, CCDR	0.468	0.219	0.216	12.40498
7	ADSN, CCDR	0.356	0.127	0.123	13.07606
8	CM, CA	0.438	0.192	0.189	5.60467

As above table 5 summarizes the regression analysis among the CCE, CA, IU, CM and ADSN regarding consumer clothing disposal behavior. Table 5 revealed that the value of r square= 0.103 showed that there is 10.3 % change occur in CA towards CCDB due to CCE while the value of r square= 0.032 showed that there is 3 % change occur in IU towards CCDB due to CCE. Moreover, r square value showed 6% change occur in CM towards CCDB due to CCE, while the value of r square indicated that 19 percent change occur in CA towards CCDB due to CM so the results indicated that due to the mediators variable (CM) change has been increased in the CA towards clothing disposal behavior, but results also indicated that 2 percent change occur in consumer disposal behavior. 2 percent change has occurred in CCDB due to IU, while 12 percent change occur in CCDB due to apparel disposal clothing behavior.

Table 6. Regression Coefficients and Confidence interval

		Unstandardized Coefficients		Standardized Coefficients			95.0% Confidence Interval for B	
Sr. No.	Variables	B	Std. Error	Beta	T	Sig.	Lower Bound	Upper Bound

1	CCE, CA	24.815	2.366		10.490	.000	20.158	29.472
		.249	.045	.321	5.582	.000	.161	.337
2	CCE, IU	25.112	2.035		12.341	.000	21.106	29.119
		.115	.038	.179	2.986	.003	.039	.190
3	CCE, CM	21.297	1.973		10.792	.000	17.412	25.182
		.164	.037	.258	4.401	.000	.091	.237
4	CCE, ADSN	10.591	1.469		7.208	.000	7.698	13.484
		.087	.028	.187	3.143	.002	.033	.142
5	CA, CCDR	65.017	4.645		13.997	.000	55.872	74.162
		1.025	.121	.457	8.472	.000	.787	1.264
6	IU, CCDR	64.260	4.612		13.933	.000	55.179	73.340
		1.271	.146	.468	8.691	.000	.983	1.559
7	ADSN, CCDR	83.645	3.314		25.240	.000	77.121	90.169
		1.333	.212	.356	6.278	.000	.915	1.751
8	CM, CA	24.815	2.366		10.490	.000	20.158	29.472
		.249	.045	.321	5.582	.000	.161	.337

In order to test the second hypotheses which is CCE regarding CCDB is likely to be a significant predictor of CA, IU, CM and ADSN towards the resell, reuse, donate and discarding methods for clothing disposals, linear regression was applied table 6 indicated that CCE independent parametric estimates the beta value 0.249 and its *p* value is 0.000 which is less than alpha so CCE is a significant predictor of CA, Moreover, CCE independent parametric estimates the beta value 0.115 and its *p* value is 0.003 which is less than alpha so CCE is a significant predictor of IU. As table 6 showed that CCE independent parametric estimates the beta value 0.164 and its *p* value is 0.000 which is less than alpha so CCE is a significant predictor of CM, additionally table 6 indicated that CCE independent parametric estimates the beta value 0.087 and its *p* value is 0.002 which is less than alpha so CCE is a significant predictor of ADSN, so based on results second hypotheses has been accepted. CCE is the predictor of CA, as CA towards clothing related disposal behavior. This finding has been supported by the Connell (2010), that consumers who were well acquainted with process of recycling, demand recycled products. However, when that clothing presented for sale consumer prefer low price garment irrespectively of its environmental impact. Moreover, this finding also consistent with the Žurga et al., in 2015 on consumer behavior towards purchasing and disposal of apparels, they found that there is a need to educate the consumer about apparel recycling and develop new strategies to reduce the amount of used apparel which ends in landfills. Additionally, Muniafut and Otito, (2010) also support that throwing away a garment which become the part of landfills; contribute the waste problems which is not only harmful for the environment but also for the human health, that waste ultimately converted to air and land pollution. According to Fishbein & Ajzen (2011), attitude-behavioral model; TRA (Theory of Reasoned Actions) attitudes affect the behavior. Attitude related to the "person's overall evaluation of performing a certain behavior". Some studies showed positive association (Reiter, & Kozar, 2016; Kong et al., 2016). Understanding fashion consumers' attitude and while some indicated no relationship (Ackerman, 2013; Egea, & Frutos, 2013), even some concluded negative relationship (Huffman et al., 2014). between recycling expediency and disposal behavior.

To test the third hypotheses which is CA, IU and ADSN is likely to be significantly predictor of CCDR towards resell, reuse, donate and discarding methods, linear regression was applied. Table 6 indicated that CA independent parametric estimates the beta value 1.025 and its *p* value is 0.000 which is less than alpha so CA is a significant predictor of CCDR, moreover the value in the table 6 showed that IU independent parametric estimates the beta value 1.271 and its *p* value is 0.000 which is less than alpha so IU is a significant predictor of CCDR. Linear regression values indicated that ADSN independent parametric estimates the beta value 1.333 and its *p* value is 0.000 which is less than alpha so ADSN is a significant predictor of CCDR, so based on results third hypotheses has been accepted. Findings also indicated that most of the consumer do not know the methods how to dispose of the used garments, as these findings also consistent with the findings of Žurga et al., (2015) that consumers are interested in environmental issues but the phenomenon of disposal behavior is not clear among them due to lack of information. IU regarding CCDB play an important role as this result supported by the findings of Morgan, & Birtwistle (2009) consumer were not well aware from the concept, that a garment

which they use would be part of damaging the environment or there are other ways of disposing them like recycling and donating (Rezaei Arangdad et al., 2019). Moreover, Cornell (2010) also found that lack of knowledge in relation to environmental effects in clothing is the main reason of CCDB. Although many research has been done on factors related to environmental impact in textiles, as Zarley et al., (2013) found that some of the factors related to internal barriers such as no concern attitude towards environment. Additionally, Chen, & Chai (2010) study result indicated that consumer showed negative attitudes towards consumer disposal practices. Findings also revealed that ADSN is the predictor of CCDB, as these findings supported by the findings of Joung & Park-Poaps (2013) people usually use the dress for a limited time period and then discard it either or throw in the bin or donate to any family member or relatives. As Matthews, & Hodges (2016) found that giving, receiving, and socializing are very encouraging concept especially in the respect of fashion sustainability. Additionally, Roux (2010) findings also supported that; clothing swap are very beneficial especially in terms of reselling i.e. second hand clothing, many stores offer larger variety of used clothing to those consumers who are economically weak and can't afford the expensive clothing. This method is very beneficial not only for those consumers who are less privileged but also to those who sell their clothing.

Lastly to test fourth hypotheses i.e., CM is likely to be significantly predictor of CA towards resell, reuse, donate and discarding methods, linear regression was used. The values showed that CM independent parametric estimates the beta value 0.249 and its *p* value is 0.000 which is less than alpha so CM is a significant predictor of CA, so on the basis of results fourth research hypothesis has been accepted. The findings also indicated that CA towards CCDB can be affected if the CM towards clothing practices has been increased. Eco conscious consumer which not only reducing the amount of waste that ends in the landfills but also increasing the life span of clothing products, as well as it also helps in solving the problem of poverty for those who cannot afford to buy even basic clothing. It is revealed that if consumer showed interest in sustainable practices in relation to clothing disposing methods then their attitude towards CCDB is positive. The consumer social and psychological mechanisms, need for satisfaction effect the consumer clothing purchasing intension, its use and disposal behavior practices. Moreover, Joung & Park-Poaps (2013) findings supported this as they explores the effect of five motivational factors; environmental, economic, charity and convenience concerns and information unavailablity on consumer disposal behavior they found that consumer environmental concerns are directly related to resale and donation behavior, while economic behavior are linked with resale and reusing, charity concerns focus on donation behavior and convenience related to discarding. Generally, those consumers who are well aware from the environmental impact showed more positive attitude towards clothing disposal practices (Bianhi and Birtwistle, 2012).

According to the proposed conceptual model CCE has a positive relationship with CA, CM, IU, ADSN. Also, CA, IU, ADSN have a positive relationship with CCDR. Finally, CM has a significant relationship with CA. All proposed hypothesis has been accepted which showed that CCE, CA, IU, CM and ADSN are the predictor of CCDB.

CONCLUSION

This study proves that CM, CA, IU and ADSN are the key factor in attractive consumers' involvement in CCDB. As lack of information and raising awareness about different aspects of clothing disposal methods and reasons are important. Different campaign should be run in many universities and public sectors to raise awareness among students and common people about clothing disposing methods and its effect on the environment, this will help the students to face the obstacle towards CCDB. Charitable organizations, NGO's and fashion designers can help and educate the consumers about how they can make their clothing disposal practices more effective, they help them to identify and assess the effect of their CCDB to the environment both in positive and negative aspects. Moreover, maximum information should be provided to consumer about the number of reasonable possibilities, to engaging them in clothing disposal practices, this includes maximum utilization of the garment, well inspired designed apparel by the fashion designers and charitable organizations. Additionally, secondhand clothing should be encouraged in families and societies for maximum usage of the used garment. Sustainable garments should be made to overcome environmental issues. Mostly, in previous researches the researcher has noted that consumer showed less involvement in environmental and CCDB may be due to less information and knowledge.

Limitation and Suggestions

First main limitation of the study is that it targets only female's university students. Future research should be done on the both male or female university students, as well as another public should also be target. Second limitation is that it addresses the CM, CA, and ADSN in relation to CCDB, other factors in this regard should also be explored. Role of NGOs, charitable organization, and small stake holders in this regard should also be explored. As this study targeted young and old generation, a single study should be done on old generation only.

More research should be done on the attitude–behavior gap presents among consumers, to find out the more effective ways to empower the consumers to act as more responsible environment consumers. Past researchers have identified that mostly consumers are interesting in purchasing sustainable products made from organic materials. Though, information about such markets are rare. Further research is important in this domain which help the consumers to buy the environment friendly clothing. Implication of this study is that it is beneficial for the textiles and fashion industries to move further with the commitment of developing eco-friendly products and should inform the consumers about their brands through media or any other advertising channels for their maximum effectiveness.

REFERENCES

Fishbein, M., & Ajzen, I. (2011). *Predicting and changing behavior: The reasoned action approach*. Taylor & Francis.

Aydin, H. (2017). Used clothing disposal behavior within the scope of sustainable consumption. *International Journal of Academic Research in Economics and Management Sciences*, *6*(3). https://doi.org/10.6007/ijarems/v6-i3/3148

Bianchi, C., & Birtwistle, G. (2011). Consumer clothing disposal behaviour: A comparative study. *International Journal of Consumer Studies*, *36*(3), 335-341. https://doi.org/10.1111/j.1470-6431.2011.01011.x

Bick, R., Halsey, E., & Ekenga, C. C. (2018). The global environmental injustice of fast fashion. *Environmental Health*, *17*(1). https://doi.org/10.1186/s12940-018-0433-7

Buerke, A., Straatmann, T., Lin-Hi, N., & Müller, K. (2016). Consumer awareness and sustainability-focused value orientation as motivating factors of responsible consumer behavior. *Review of Managerial Science*, *11*(4), 959-991. https://doi.org/10.1007/s11846-016-0211-2

Dong, Li, Shen, & Tong. (2019). Sustainability in supply chains with behavioral concerns. *Sustainability*, *11*(15), 4051. https://doi.org/10.3390/su11154051

George, J. F. (2004). The theory of planned behavior and internet purchasing. *Internet Research*, *14*(3), 198-212. https://doi.org/10.1108/10662240410542634

Floyd J Fowler, J. (2013). *Survey research methods*. SAGE Publications.

Ha-Brookshire, J. E., & Hodges, N. N. (2008). Socially responsible consumer behavior? *Clothing and Textiles Research Journal*, *27*(3), 179-196. https://doi.org/10.1177/0887302x08327199

Jekria, N., & Daud, S. (2016). Environmental concern and recycling behaviour. *Procedia Economics and Finance*, *35*, 667-673. https://doi.org/10.1016/s2212-5671(16)00082-4

Joung, H., & Park-Poaps, H. (2011). Factors motivating and influencing clothing disposal behaviours. *International Journal of Consumer Studies*, *37*(1), 105-111. https://doi.org/10.1111/j.1470-6431.2011.01048.x

Karaosman, H., Morales-Alonso, G., & Brun, A. (2016). From a systematic literature review to a classification framework: Sustainability integration in fashion operations. *Sustainability*, *9*(1), 30. https://doi.org/10.3390/su9010030

Khan, M. S., Saengon, P., Alganad, A. M., Chongcharoen, D., & Farrukh, M. (2020). Consumer green behaviour: An approach towards environmental sustainability. *Sustainable Development*, *28*(5), 1168-1180. https://doi.org/10.1002/sd.2066

Khan, S., & Malik, A. (2017). Toxicity evaluation of textile effluents and role of native soil bacterium in biodegradation of a textile dye. *Environmental Science and Pollution Research*, *25*(5), 4446-4458. https://doi.org/10.1007/s11356-017-0783-7

Koch, K., & Domina, T. (1999). Consumer textile recycling as a means of solid waste reduction. *Family and Consumer Sciences Research Journal*, *28*(1), 3-17. https://doi.org/10.1177/1077727x99281001

Lago, A., Martínez-de-Albéniz, V., Moscoso, P., & Vall, A. (2016). The role of quick response in accelerating sales of fashion goods. *Springer Series in Fashion Business*, 51-78. https://doi.org/10.1007/978-981-10-1014-9_4

Lang, C., & Armstrong, C. M. (2016). Personal attributes: Influences on clothing disposal reasons and frequency. *Journal of Family & Consumer Sciences*, *108*(3), 41-47. https://doi.org/10.14307/jfcs108.3.41

Matthews, D., & Hodges, N. N. (2016). Clothing swaps: An exploration of consumer clothing exchange behaviors. *Family and Consumer Sciences Research Journal*, *45*(1), 91-103. https://doi.org/10.1111/fcsr.12182

Meacham, S., McAndrews, L. E., & Medvedev, K. (2020). The Clothing Consumption Process of the Vintage Consumer and Sustainable Practices for Mainstream Consumers. *Journal of Family & Consumer Sciences*, *112*(3), 34-40.

Muzenda, E., Ntuli, F., & Pilusa, T. J. (2012). Waste management, strategies and situation in South Africa: an overview.

National report for South Africa. (2012). *Commencement of Insolvency Proceedings*. https://doi.org/10.1093/oso/9780199644223.003.0015

Niinimäki, K., Peters, G., Dahlbo, H., Perry, P., Rissanen, T., & Gwilt, A. (2020). The environmental price of fast fashion. *Nature Reviews Earth & Environment*, *1*(4), 189-200. https://doi.org/10.1038/s43017-020-0039-9

Norum, P. S. (2015). Trash, charity, and secondhand stores: An empirical analysis of clothing disposition. *Family and Consumer Sciences Research Journal*, *44*(1), 21-36. https://doi.org/10.1111/fcsr.12118

Palmeira, M., & Musso, F. (2020). 3Rs of sustainability values for retailing customers as factors of influence on consumer behavior. *Handbook of Research on Retailing Techniques for Optimal Consumer Engagement and Experiences*, 421-444. https://doi.org/10.4018/978-1-7998-1412-2.ch019

Pandit, P., Annaldewar, B. N., Nautiyal, A., Maiti, S., & Singha, K. (2020). Sustainability in fashion and textile. *Recycling from Waste in Fashion and Textiles*, 177-198. https://doi.org/10.1002/9781119620532.ch8

Phipps, M., Ozanne, L. K., Luchs, M. G., Subrahmanyan, S., Kapitan, S., Catlin, J. R., Gau, R., Naylor, R. W., Rose, R. L., Simpson, B., & Weaver, T. (2013). Understanding the inherent complexity of sustainable consumption: A social cognitive framework. *Journal of Business Research*, *66*(8), 1227-1234. https://doi.org/10.1016/j.jbusres.2012.08.016

Rani, S., & Jamal, Z. (2018). Recycling of textiles waste for environmental protection. *International Journal of Home Science*, *4*(1), 164-168.

Reiter, L., & Kozar, J. (2016). Chinese students' knowledge of environmentally and socially sustainable apparel and sustainable purchase intentions. *International Journal of Marketing Studies*, *8*(3), 12. https://doi.org/10.5539/ijms.v8n3p12

Rezaei Arangdad, S., Thoney-Barletta, K., Joines, J., & Rothenberg, L. (2019). Influence of demographics and motivational factors on US consumer clothing and shoes disposal behavior. *Research Journal of Textile and Apparel*, *23*(3), 170-188. https://doi.org/10.1108/rjta-08-2018-0051

Roadmap to sustainable textiles and clothing. (2014). *Textile Science and Clothing Technology*. https://doi.org/10.1007/978-981-287-110-7

Wang, Y. (2010). Fiber and textile waste utilization. *Waste and Biomass Valorization*, *1*(1), 135-143. https://doi.org/10.1007/s12649-009-9005-y

Weber, S. (2015). *How consumers manage textile waste*.

Zarley Watson, M., & Yan, R. (2013). An exploratory study of the decision processes of fast versus slow fashion consumers. *Journal of Fashion Marketing and Management: An International Journal*, *17*(2), 141-159. https://doi.org/10.1108/jfmm-02-2011-0045

Zen, I. S., Noor, Z. Z., & Yusuf, R. O. (2014). The profiles of household solid waste recyclers and non-recyclers in Kuala Lumpur, Malaysia. *Habitat International*, *42*, 83-89. https://doi.org/10.1016/j.habitatint.2013.10.010

Zhang, L., Wu, T., Liu, S., Jiang, S., Wu, H., & Yang, J. (2020). Consumers' clothing disposal behaviors in Nanjing, China. *Journal of Cleaner Production*, *276*, 123184. https://doi.org/10.1016/j.jclepro.2020.123184

Žurga, Z., Hladnik, A., & Forte Tavčer, P. (2015). Environmentally sustainable apparel acquisition and disposal behaviours among Slovenian consumers. *Autex Research Journal*, *15*(4), 243-259. https://doi.org/10.1515/aut-2015-0044