

Don't throw away: Identifying the Factors Influence Clothing Disposal Methods among Chinese Consumers

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Background and Purpose: With the rising demand of textiles and clothing, as well as the development of economy, more and more textiles are produced, consumed, discarded and result in a large number of waste textiles. Especially in China, the country with the largest population in the world produces much of the material that ends up in landfills. Approximately, 26 million tons of textile wastes were generated in China annually, which make up about 3.5% to 4% of the world's waste materials (Ravenhall, 2012; Xue, et al., 2014). Recycling of those underused textiles and clothing products has become more urgent than ever before. Previous studies have identified that people dispose of their clothing in different ways, including redesign, resale, reuse, donation and pass down to family or friends (Bianchi & Birtwistle, 2010). Although clothing recycling has becoming more popular in developed countries, it is not the case in developing countries, such as China (Ravenhall, 2012).

Several factors are proposed to have impact on consumers' clothing disposal behaviors, including environmental consciousness, environmental apparel knowledge, self-identity, attitude, ability and opportunity. Gam (2011) found that environmental consciousness is a predictor and has a positive effect on sustainable behavior. Environmental apparel knowledge has been primarily used for assessing consumers' knowledge of environmental issues associated with clothing and textiles. Consumers who care about the environment or have more environmental knowledge are more likely to practice sustainable behavior (Kim & Damhorst, 1998). Self-identity serves as a critical psychological variable that is related to socially responsible behavior. In addition, the perceived ability and opportunity are the other two factors that contribute to consumers' pursuit of sustainable consumption behavior.

Compared to the volume of studies and the knowledge gained consumers' disposal behavior in developed countries, the understanding of Chinese consumers' disposal behavior is still limited. To address the research gap, the purpose of the study is to identify the impact of the motivational factors on Chinese consumers' clothing disposal methods.

Method: Data were collected in China. An online survey was set up on a Chinese online market research website. Participants were recruited through email survey link and the social media app. Data cleaning yielded 401 usable samples out of 410 returned responses, with a completion rate of 97.8%. All items were measured utilizing a 5-point Likert scale with "1=strongly disagree, to 5=strongly agree." Demographic information were also collected, including gender (male = 33.4%; female = 66.6%); age (18-30 = 49.6%; 31-40 = 38.4%; 41-68 = 12.0%); income (<RMB ¥69,999 = 26.2%; RMB ¥70,000- RMB ¥99,999 = 20.7%; > RMB ¥100,000 = 53.1%; and education (Some college or lower = 17.0%; College graduate = 55.9%; Graduate school = 27.2%).

Environmental consciousness ($\alpha = .861$) contained three items emphasizing on their environmental concerns. *Environmental apparel knowledge* ($\alpha = .853$) was measured by four items. *Self-identity* ($\alpha = .785$) was measured by three items. The semantic differential scale was applied to measure *attitude* ($\alpha = .890$). Both *ability* ($\alpha = .755$) and *opportunity* ($\alpha = .783$) were measured by three

items. Finally, five clothing disposal methods were selected in this study, including redesign, resale, reuse, donation and pass down to family or friends. Each disposal method was measured by one item with the scale of 1 = strongly disagree, to 5 = strongly agree.”

Results: A series of multiple regression analyses were applied to examine the influence of predicting factors on clothing disposal methods. For the method of redesign, the regression model was significant [$R^2 = 0.275$, $F(6,394) = 24.961$, $p < 0.000$] and explained 27.5% of the variance. Self-identity ($\beta = 0.111$, $p < 0.043$), environmental consciousness ($\beta = -0.208$, $p < 0.000$), ability ($\beta = 0.213$, $p < 0.000$) and opportunity ($\beta = 0.353$, $p < 0.000$) were all significantly related to redesign of unused clothing. However, neither attitude nor environmental apparel knowledge was associated with clothing redesign. For resale of unwanted clothing, the model was significant [$R^2 = 0.115$, $F(6,394) = 8.518$, $p < 0.000$] and explained 11.5% of the variance. Environmental consciousness ($\beta = -0.148$, $p < 0.011$) and opportunity ($\beta = 0.275$, $p < 0.000$) were significantly associated with of the intention to resale unwanted clothing. But no significant relationships were found between attitude, self-identity, environmental apparel knowledge or ability with clothing resale. For reuse of old clothing, the model was significant [$R^2 = 0.104$, $F(6,394) = 7.652$, $p < 0.000$] and explained 10.4% of the variance. Only ability ($\beta = 0.257$, $p < 0.000$) was found to be significantly associated with reuse of unwanted clothing. In addition, for the donation of clothing, the model was significant [$R^2 = 0.180$, $F(6,394) = 14.432$, $p < 0.000$] and explained 18% of the variance. Both ability ($\beta = 0.157$, $p < 0.000$) and opportunity ($\beta = 0.285$, $p < 0.000$) were found to be significantly related to clothing donation. However, none of other factors significantly affect the behavior of clothing donation. Further, the model for unwanted clothing pass down was also significant [$R^2 = 0.277$, $F(6,394) = 25.118$, $p < 0.000$], which explained 27.7% of the variance. Specifically, attitude ($\beta = 0.131$, $p < 0.009$), environmental consciousness ($\beta = 0.132$, $p < 0.012$), ability ($\beta = 0.246$, $p < 0.000$), and opportunity ($\beta = 0.190$, $p < 0.000$) were all significantly related with passing down of unwanted clothing; but neither self-identity nor environmental apparel knowledge had influence on clothing passing down.

Discussion: The study points out disposal methods are influenced by a variety of factors. Ability and opportunity were found to have impact on most of the disposal methods. When consumers are provided with the opportunity to recycle or donate their unused clothing, they are more likely to pursue the recycle behavior. Consumers who are more environmental conscious would be more likely to pass down their clothing to others, instead of reusing or reselling those items. Upon the results of this study, implications can be provided. To encourage more textiles and clothing recycling behavior among Chinese consumers, enhancing their environmental knowledge and building more opportunities for them would be beneficial to deter increase textile waste.

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