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## Sustainable Laundry Practices: Exploring the laundry practices among US Households

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Consumers' washing habits are constantly changing and are influenced by social, cultural and moral norms (Laitala, Boks, & Klepp, 2011). A large portion of clothing is washed purely habitually rather than as a result of examining the level of soiling first (Klepp, 2003). It is a common notion among consumers that clothing items that have been in contact with the skin should be washed after each use. Life cycle assessment studies on clothes, detergents and washing machines show that the use period of clothes is usually the most energy-demanding period during these products' life cycle, and is even higher than production or transportation phases.

Although some insights into the sustainable laundry practices in European Households are available (Fisher et al, 2008; Arild et al, 2003), little research is available on households laundry practices in the United States of America. To fill this gap, this study was designed to explore laundry practices among US households. The study aimed to understand the variations in laundry practices based on demographic characteristics and tried to examine the laundry practices among US Households.

Data were collected over a two-week period, during July 2012 by a market research firm. The sample was selected from a panel which was representative of US households. Initial emails were sent to each member of the panel to participate in the study. Once they agreed to participate, an online survey was completed. For the purpose of this study only females were asked to participate in the study. A total of 502 female participants completed the survey.

To measure laundry practices several dependent variables were used. These dependent variables measured the changes made by the US households in their washing frequency, use of detergent, change in drying method and change in water temperature during washing; and knowledge of proper laundering. The independent variables included buying higher quality clothes and demographic characteristics such as family size, family income, employment, level of education, marital status and number of household members. The data were analyzed using t-tests and chi-square.

Family size and employment were found to be statistically significant with households' reduction in the frequency of washing clothes. It was interesting to see that level of education had a

significant effect on knowledge of proper laundering. Those households' with higher education (college or graduate) were found to make changes in their laundry practices, i.e. made changes in laundry detergent to be more efficient or lessen the impact on the environment, changed the water temperature during washing to save energy, changed the way of drying clothes to be more energy efficient, and reduced the frequency of washing clothes between wearing them. Interestingly, households' with kids, toddlers and infants did not affect the laundry behavior and it was found that they did not change their laundry behavior during the past two years. Also it was interesting to see that households who purchased higher quality clothes in the past two years made changes in their laundry habits. It seemed that households who purchased higher quality garments were much more sustainable and energy efficient in their laundry practices.

The study findings have important implications and contributions. First, changes in the laundry behavior analyzed in this study with respect to the demographic variables on the changes in the frequency of washing was found to be significant, showing that the frequency of washing was dependent on the demographic variables such as family size, income, age, and marital status. Second, the knowledge of proper laundering was found to be influenced by the level of education among the households. Third, acquisition of higher quality garments were found to positively influence sustainable laundry practices. However, future research is recommended to understand which aspects of laundering (washing, drying, laundry detergent, washing machine) has a major impact on the sustainable laundry behavior and to determine and measure the environmental consciousness of U.S. households in laundering.

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