

Consumers' knowledge gain of environmental sustainability issue pertaining to textile and apparel industry through social networking site engagement

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Background: The textile and apparel (TA) industry, today, is recognizing the need of adopting sustainable strategies as related to environmental well-being, efficiency, and cost saving (Anaya, 2010). However, mainstream TA consumers, being unaware of environmentally sustainable processes and products (Bhaduri & Ha-Brookshire, 2011; Hiller Connell, 2010) and perhaps current advocates of fast fashion, do not provide sufficient impetus to the industry to be producing environmentally sustainable products. Therefore, enhancing consumers' environmental awareness related to TA production and consumption may stimulate increased demand for environmentally sustainable apparel (ESA) (Kozar & Hiller Connell, 2013; Reiter, 2015) and could become a vital driving force for the industry to produce apparel with more sustainable characteristics and using more sustainable processes. Social networking sites (SNSs) can play significant role in enhancing individuals' environmental awareness (Tlebere, Scholtz, & Calitz, 2016) due to its increased popularity (Chaffey, 2016). **Purpose:** The purpose of this study was to investigate whether engaging with TA related environmental information within a Social Networking Site (SNS) platform (i.e., Facebook) contributed to enhanced knowledge of TA related environmental sustainability issue.

Method: One group pretest-posttest experiment (Campbell & Stanley, 1971) was conducted with 46 US participants of age 18-35 (millennial cohort). A convenience sampling strategy was used for the study. The experiment included interaction with TA environmental sustainability information in an experimental Facebook page for two-week period. The researcher was the creator and admin of the Facebook page. The content posted on the Facebook page covered four main aspects of TA environmental sustainability: water, energy, chemical and waste issue. The content was developed from available sources (for example, YouTube and websites etc.) and posted in three different formats: video, infographic and weblink. Participants responded to a study-specific 12-item textile and apparel environmental sustainability knowledge (TAESK) scale before and after the experiment. The items of the scale were developed after reviewing Kim and Damhorst's (1998) items measuring environmental apparel knowledge, LeHew and Hiller Connell's (under development) environmentally sustainable apparel knowledge scale and Kang, Liu and Kim's (2013) consumer knowledge items. The items of the scales were, afterwards, refined by following feedback of six representatives of target population and three experts of subject matter. In addition to the TAESK scale, the participants also responded to an open-ended question during posttest to reveal if any other factors outside experiment might be triggering knowledge change. Additionally, they also responded to two more open-ended questions: one related to their perception of consumer responsibilities and their use of clothing; and another

related to their perceptions of TA industry. **Data analysis:** Data analysis involved Wilcoxon Signed-Ranks test and descriptive statistics. Wilcoxon Signed-Ranks test is a good alternative of paired sample t-test when the study requires compromising with one or more assumptions of paired sample t-test (Kent State University Libraries, 2018).

Findings: The descriptive statistics of the findings revealed that 87% (n=40) participants improved their knowledge score after the experiment. The median posttest score (7) was lot higher than the median pretest score (4). Besides, the Wilcoxon Signed-Ranks test revealed that the two-week Facebook page experiment significantly changed the participants' knowledge of TA environmental sustainability issue ($Z=-5.274$, $p=0.00$). In reporting whether they resorted to other sources for information except Facebook postings, 75% (n=36) responded they did not. On the other hand, 89.58% (n=43) reported that the participation in the experiment changed their perception of consumer responsibilities and their clothing use. Additionally, 87.5% (n=42) participants reported that the participation in the experiment changed their perception of TA industry. **Implications:** The findings of the study will provide impetus to TA brand and retailers advocating environmental sustainable apparels to incorporate SNS platform in their consumer awareness making process. Likewise, policy making organizations, non-profits, and NGOs campaigning sustainable apparel consumption would find incentive to integrate SNSs in their strategies. The same way, TA educators might utilize the findings as a motivation to incorporate SNS in teaching and learning activities of TA sustainability issue. **Limitations and Recommendations:** This study utilized a convenience sample of US millennial individuals. Future studies need to use more diverse group of participants to support the findings. In addition, the usual threats of on group pretest-posttest experimental design need to be carefully considered in making any inference from the study (Campbell & Stanley, 1971).

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