



External factors that impact apparel repurposing practice: Relationships between factors and repurposing levels

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Introduction: It is well known that textile waste is a serious issue (EPA, 2019) and repurposing is a sustainable design practice which can extend a product cycle and reclaim existing goods for creative purposes (Hawley, 2006). Engaging in the repurposing practice results in extended product use reflecting the user's renewed need (Fletcher, 2016). Creativity, or artistic expression, of a repurposing designer is critical to generate innovative results. According to Sanders (2006), to achieve a higher level of creativity in making processes, it is necessary to be qualified with an advanced knowledge and skill of development in addition to having interest in the topic and sewing knowledge and experience are essential in practicing sustainable clothing consumption (Lapolla & Sanders, 2015). However, with the decline of Family and Consumer Sciences (FCS) programs that teach basic sewing skills in primary-level education (Williams, 2014) it may be implied a lack of sewing knowledge and experience exists among apparel consumers and may impact participation in repurposing. The purpose of this study was to investigate the influence of external factors that impact consumers to practice apparel repurposing to suggest ways to promote and encourage creative sustainable apparel practices amongst consumers. More specifically, the external factors under review included sewing experience and select motivation.

Background: To explore factors influencing repurposing involvement, sewing experience and external motivations were selected based on previous research to guide the design of this study. Sewing experience on repurposing has been shown to significantly affect designers and producers for creative practice through the techniques of restyling, reshaping, embellishing, and overprinting to give the discarded/unwanted textile products a new life. Depending on the repurposer's level of sewing experience, and therefore efficiencies with carrying out the repurposing technique, they may be motivated to engage in a 'for profit' repurposing business venture (Janigo et al., 2017) or as a way to be thrifty (Wilson, 2016), thus incentivized by money, either to make or to save. Dunn (2008) shared how designers view engaging in the repurposing process as an act of creative freedom; viewing their designs as works of art through which they are encouraged to creatively express themselves. Artistic expression may act as a motivation for the designer to engage in the repurposing process, whether initially or repeatedly. In addition, environmental awareness can be another factor influencing sustainable clothing practices (Butler & Francis, 1997). This finding implies that individuals with strong environmental awareness may be more likely to engage in apparel repurposing.

Methods: Four levels of repurposing have been identified (1) restyle to repurpose, (2) subtractive repurposing, (3) additive repurposing, and (4) intentional patternmaking (Eike et al., 2020). In line with the Sanders' (2006) four categories of making, higher levels of sewing and construction skills are expected for higher levels of repurposing. Based on previous research related to

external factors to repurposing, hypotheses were formulated for this study. Sewing experience, artistic expression, environmental concerns, monetary incentive, and age will have a significant influence on frequency of usage of repurposing techniques (level 1 to level 4).

An online survey research design was used for data collection. A questionnaire consisted of four sections: (a) demographic; (b) apparel consumption habits; (c) repurposing behaviors; and (d) sewing experience-related background. Cronbach's alpha value was computed to assess the internal consistency aspect of reliability of the multi-item scales ($\alpha=0.83$). Data cleaning yielded a usable sample of 331 responses.

Results: Multiple regression analyses were conducted. First, as the outcome variable is level 1 repurposing technique (*restyle to repurpose*) ($R^2=.20$, $F(11.90)=$, $p<.001$), it was found that artistic expression ($\beta = .31$, $p<.001$), environmental concerns ($\beta = .18$, $p<.05$), and monetary incentive ($\beta = .17$, $p<.05$) significantly predicted. Second, as the outcome variable is level 2 repurposing technique (*subtractive repurposing*) ($R^2=.20$, $F(11.45)=$, $p<.001$), it was found that artistic expression ($\beta = .30$, $p<.001$), environmental concerns ($\beta = .16$, $p<.05$), and sewing experience ($\beta = .20$, $p<.005$) significantly predicted. Third, as the outcome variable is level 3 repurposing technique (*additive repurposing*) ($R^2=.20$, $F(11.24)=$, $p<.001$), it was found that artistic expression ($\beta = .18$, $p<.05$), environmental concerns ($\beta = .19$, $p<.05$), monetary incentive ($\beta = .15$, $p<.05$), and sewing experience ($\beta = .32$, $p<.001$) significantly predicted. Fourth, as the outcome variable is level 4 repurposing technique (*intentional pattern making to repurpose*) ($R^2=.17$, $F(9.85)=$, $p<.001$), it was found that artistic expression ($\beta = .25$, $p<.01$), monetary incentive ($\beta = .16$, $p<.05$), and sewing experience ($\beta = .35$, $p<.001$) significantly predicted.

Discussion: Results indicate that individuals who engage in repurposing levels that require low to moderate sewing skills (level 1-3) do so because of environmental concern, suggesting that they view practicing this sustainable action with their apparel as a way to participate in environmental activism. Interestingly, monetary incentive (engagement in the repurposing action to either make or save money) was also significant within the repurposing levels of 1 (restyle) and 3 (additive) only. The researchers suggest that significance only within these two levels may be connected to how the repurposer views their creation(s) and the value placed on their work(s). Finally, the findings of this study show that repurposing apparel, no matter the level, fills a creative need that individuals have to express themselves. However, the more advanced level of repurposing, the more advanced level of sewing skills are needed, as indicated by p-value. Therefore, for individuals to engage in higher-levels of creative expression through repurposing, a revival and expansion of soft-good 'making' instruction and training is needed.

Conclusions and Future Research: The key take-away from this study was how engaging in repurposing, regardless of the level, contributed to the individual's creative expression. In the challenging world that we currently live in, having the skills to engage in a positive creative outlet (coping practice) that also positively impacts environmental issues, is essential for health and well-being (Gillam & Gillam, 2018). Future research opportunities include the gathering of repurposed artifacts for more detailed analysis of techniques and creative processes employed at the different repurposing levels as well as researching 'value' connected to the repurposed items.

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