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## Moderating Effect of Self-Esteem on Relationships between Financial Education and Experience, Compulsive Buying and Compulsive Hoarding

Mijeong Noh, Ohio University, USA  
Minjung Cha, Sungkyunkwan University, South Korea

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Previous researchers have reported that financial education positively affects financial well-being (Norvilitis & MacLean, 2010). Financial disorders which are identified as being opposite to financial well-being incorporate compulsive hoarding (Archuleta, Dale, & Spann, 2013). Compulsive hoarding is defined as “the acquisition of, and failure to discard, possessions which appear to be useless or of limited value” (Frost & Gross, 1993). Approximately 20–30% of obsessive compulsive disorder (OCD) patients shows compulsive hoarding behavior (Frost, Krause, & Steketee, 1996). Noh and Cha (2018) found the compulsive buying is positively related to compulsive hoarding. Noh and Cha (2018) reported that college students with financial education and previous financial experience don’t tend to become compulsive buyers and eventually compulsive hoarders.

Across several research studies, self-esteem is considered as being important to understanding compulsive behaviors. Noh and Hasan (2017) found that college students with low self-esteem tend to engage in compulsive buying behavior to mitigate the negative feelings that result from having low self-esteem. Although previous studies describing problematic compulsive buying and hoarding behaviors exist, a knowledge gap remains in understanding the relationship of self-esteem to financial education, experience, and compulsive buying as antecedents of compulsive hoarding. The research questions in current study were as follows: 1) Does self-esteem moderate the relationships between financial education and experience and compulsive buying and between financial education and experience and compulsive hoarding? and 2) Does self-esteem moderate the relationship between compulsive buying and compulsive hoarding?

### *Hypotheses Development*

- H1: Self-esteem moderates the relationship between financial education and experience and compulsive buying.
- H2: Self-esteem moderates the relationship between financial education and experience and compulsive hoarding.
- H3: Self-esteem moderates the relationship between compulsive buying and compulsive hoarding.

### **METHOD**

#### *Instruments and Data Collection*

The researchers used 1 item (e.g., I have ever learned about financial topics) to measure financial education and 13 items (e.g., I had checking account) to measure previous financial experience (Hogarth & Hilgert, 2002). They used 5 items (e.g., I bought things even though I couldn’t afford them) to measure compulsive buying (Faber & O’Guinn, 1992), 5 items (e.g., how distressing do you find the task of throwing things away?) to measure compulsive hoarding (Frost, Sketekee, & Grisham, 2004), and 8 items (e.g., on the whole, I am satisfied with myself) to measure self-

esteem (Rosenberg, 1965). Financial education was measured on 1-2 rating scales (1= true, 2= false). The other items (i.e., previous financial experience, compulsive buying, and self-esteem) were based on 5-point Likert scales (1 = strongly disagree, 5 = strongly agree). Compulsive hoarding was measured on 1-5 rating scales (1= never, 5 = almost). The online survey was conducted with college students enrolled at a major Midwestern University.

### **Participants**

A total of 193 undergraduate and graduate students' responses were used to analyze data. Respondents' ages ranged from 18 to 39 years, ( $m = 21$ ). Respondents were female (79.8%), Caucasian (79.3%), Asian (9.3%), African-American (3.6%), freshman (20.2%), sophomore (18.7%), junior (24.9%), senior (28%) and graduate students (7.3%). Their yearly taxable income was less than \$25,000 (75.6%).

### **Validity and Reliability**

A principal component factor analysis with varimax rotation was conducted to evaluate the measurement of each construct. The factor loadings were above of .60, indicating acceptable convergent validity. Two factors were extracted from the 8-item self-esteem measurement. They designated these as "positive" and "negative". Reliabilities with Cronbach's alphas for previous financial experience, self-esteem, compulsive buying, and hoarding constructs were 0.81, 0.85, 0.82 and 0.77 respectively, exceeding the suggested level of .70. Next, the researchers performed confirmatory factor analysis (CFA) for the measurement scales. The results showed an overall moderate fit ( $\chi^2 = 220.804$ ;  $df = 84$ ;  $\chi^2/df = 2.629$ ;  $p = .000$ ; CFI = .84; IFI = .84; RMSEA = .08). The average variance extracted (AVE) for each construct was greater than .50, confirming construct validity. The correlation coefficients between the constructs in the model were less than 0.8 indicating discriminant validity.

### **Results and Discussion**

#### *Hypothesis Testing*

Multiple-group (positive self-esteem group vs. negative self-esteem group) SEM was performed to evaluate the model fit and to test hypotheses H1 to H3 (figures 1 and 2). For the base model, the chi-square was statistically significant ( $\chi^2 = 252.902$ ;  $df = 124$ ;  $\chi^2/df = 2.040$ ;  $p = .000$ ). Other model fit indices indicated acceptable values (CFI = .83; IFI = .84; RMSEA = .07) indicating a moderate model fit. For the constrained model, the chi-square was statistically significant ( $\chi^2 = 256.006$ ;  $df = 127$ ;  $\chi^2/df = 2.016$ ;  $p = .000$ ), with other model fit indicating a moderate model fit (CFI = .83; IFI = .84; RMSEA = .07). The model fit comparison indicated that the chi-square difference test was statistically significant ( $\Delta\chi^2 = 3.1$ ;  $\Delta df = 3$ ;  $p \leq .05$ ). The moderating effect of self-esteem between financial education and experience and compulsive buying was not supported, rejecting H1. However, the moderating effect of self-esteem on the negative relationship between financial education and experience and compulsive hoarding was supported (H2). That is, the college students with positive self-esteem don't tend to be compulsive hoarders when they have financial education and experience. Boosting students' self-esteem and giving them the financial education and experience will help prevent them from falling into a problematic behavior. When respondents' self-esteem was negative, the positive relationship between compulsive buying and hoarding was not significant, rejecting H3.

#### **Implications and limitations**

These findings can help both educators and college students understand the importance of self-esteem as well as financial education and experience to prevent college students from being

engaged in problematic consumption behavior such as compulsive hoarding. The results can not be generalized because small sample size of college students used in this study does not represent the major population in the U.S.

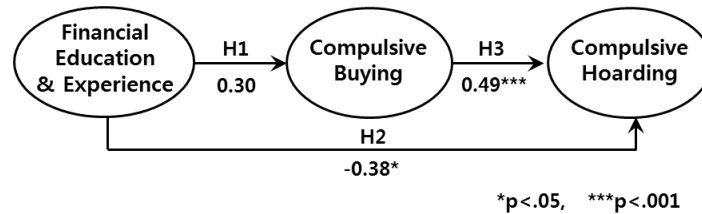


Figure 1. Path estimates for positive self-esteem group.

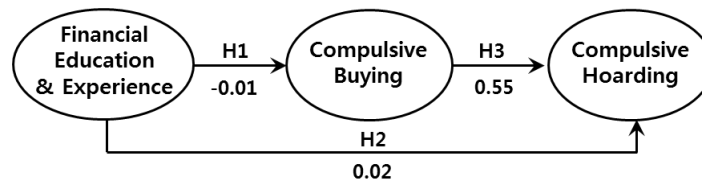


Figure 2. Path estimates for negative self-esteem group.

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