A Test of the Theory of Self-Esteem: A Consumer Behavior Perspective

The purpose of this research was to test the Theory of Self-Esteem from a consumer behavior perspective. The Theory provides a potentially important conceptualization to help explain a broad number of consumer behaviors. A path modeling technique, using data from the 2008 version of the 1979 National Longitudinal Survey of Youth, was used to determine that self-esteem plays a role as an outcome of behavioral processes, a buffer that provides protection from harmful behavior, and a self-motive in directing current and future behavior. In this study, self-esteem was positively associated with changes in formal education and an increase in family size; self-esteem was negatively associated with problematic financial behavior. It was also found that self-esteem was predictive of future behavior and that previous behavior impacts future behavior as mediated through self-esteem. General support for the Theory of Self-Esteem was noted.

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Introduction

Self-esteem is a ubiquitous term that has become part of the common English lexicon. The thought that individuals evaluate their own self-worth and that they subsequently use this judgment as a factor influencing future behavior was once considered a novel hypothesis. In fact, it was not until the mid-1960s that researchers systematically began to study what is now known as self-esteem. Rosenberg (1965) is commonly credited with identifying self-esteem as a psychological construct, which is generally defined as an individual's positive self-evaluation (Rosenberg, 1981), although others in the mid- to late-1960s were also engaged in examining the role self-worth, self-love, self-respect, and other related concepts play in shaping behavior (e.g., Branden, 1969; Coopersmith, 1967).

According to Gecas (1982) and Cast and Burke (2002), self-esteem can be conceptualized as consisting of two dimensions. The first is competence. Competence refers to how someone perceives his or her overall capability and effectiveness. This is sometimes referred to as efficacy-based self-esteem. The second dimension is worth-based self-esteem. Worth is defined as the degree to which a person believes that they are an individual of value. When viewed together, self-efficacy and worth combine to shape a person's self-evaluation.

Tests of self-esteem have generally conceptualized the construct as being (a) an outcome of behavioral processes, (b) a buffer that provides protection from harmful behavior, or (c) a self-motive in directing current and future behavior. According to Cast and Burke (2002) however, "little has been done to synthesize the three research streams into an overall integrated model" (p. 1042). In an attempt to unify these three areas of research, Cast and Burke developed a formal theory of self-esteem (TSE) that integrates the motivational, buffering, and protection aspects of self-esteem. Their theory was established with the framework of Stryker's (1980) identity theory.

While the study of self-esteem has a long and robust history, there have been few tests of TSE. This is partially due to the fact that the theory was developed within the past decade. Among the few studies that have been conducted to test TSE, very few have done so from a consumer behavior perspective. The research presented here attempts to add to the existing body of literature by providing a formal test of TSE in the context of consumer financial and retirement planning behavior. As will be shown, TSE provides a meaningful way to better understand the linkages between and among behavioral processes. Providing evidence of the efficacy of TSE in a consumer behavior context adds to the empirical justification of the use of psychosocial factors as determinants of consumer actions.

The Theory of Self-Esteem: A Conceptual Review from a Consumer Behavior Perspective

According to Stryker (1980), the self is a multidimensional conglomeration of many identities. Each identity reflects how a person fits into the larger society. In the broadest of terms, this framework of the self is captured in identity theory. A key element of identity theory is that individuals seek out self-verifications of their identity. This self-verification process both produces and reproduces social meanings for individuals and society. Cast and Burke (2002) formulated TSE upon the concept of self-verification. They noted that "verification of an identity produces feelings of competency and worth, increasing self-esteem" (p. 1043). As such, self-verification can be either positive or negative. Self-verification plays an important role in shaping the three ways that self-esteem has been conceptualized in the literature (i.e., an outcome of behavioral processes, a buffer that provides protection from harmful behavior, and a self-motive in directing current and future behavior). The following review of TSE describes how self-esteem is conceptualized as an outcome, buffer, and self-motivation factor.

Self-Esteem as a Worth-Based Outcome

In some respects, self-esteem as an outcome is the easiest of the three concepts to conceptualize. First, individuals will tend to seek out situations that enhance positive self-verification. In these situations, self-esteem ought to increase. For example, people often make social comparisons and appraise situations as being either positive or negative based on their perception of the value others place in a behavior or action. Sometimes the comparison is to a personal reference point. Consider the role education plays in shaping self-esteem. Education, in the United States, provides a mechanism to increase social status. Education is considered valuable by society. Individuals who seek out opportunities to increase their level of formal education may do so, in part, as a way to self-verify their worth. Within the framework of TSE, self-esteem, as an outcome of this self-verification process, can be enhanced. That is, one would expect an increase in the self-esteem of those who increase their formal education over time.Therefore, we hypothesize that

> Hypothesis 1: Changes in formal education level, as a self-worth verification mechanism, will be positively associated with self-esteem.

Self-Esteem as an Efficacy-Based Outcome

Pursuing additional education throughout the lifespan (as self-verification leading to a self-esteem outcome) can best be seen as a factor affiliated with self-worth, one of two dimensions of self-esteem. Efficacy-based self-esteem, the second dimension of self-esteem, is "more likely to result from self-attributions" (Cast & Burke, 2002, p. 1047). Bandura (1977), Gecas and Schwalbe (1983), and others have noted that when people assess their behavior as successful they tend to conclude that they have played an important role in shaping personal outcomes. That is, successful behavior leads to positive self-verification and the maintenance or enhancement of self-esteem.

Within the field of consumer studies, the concept that previous behavior can serve as a self-verification mechanism offers an insight into why some consumers appear to exhibit recurring negative (or positive) behavioral outcomes. Consider the management of debt at the household level. Debt, as a consumer finance tool, allows individuals and families to consume products and services today while paying for the benefits received at a later date. In the majority of cases, the use of debt at the household level serves as a way to increase current and future levels of living. For example, credit card debt can be managed to allow the purchase of goods and services today that might otherwise be unaffordable but necessary. The prudent and effective management of debt can be seen as a positive self-verification process within the broader definition of TSE. The mismanagement of debt and engaging in problematic financial behavior (e.g., making late loan payments), on the other hand, can be viewed as behavior that may serve to reduce efficacy-based self-esteem. Thus, we hypothesize the following:

> Hypothesis 2: A greater number of negative financial behaviors in one period will be negatively associated with self-esteem in a later period.

Self-Esteem as Identity Verification

Role identity also shapes self-esteem. Cast and Burke (2002) pointed out that identity is relevant to the roles people play in their everyday life. Self-verification is not only a function of personal activity but also an outcome associated with the behavior of others. The behavior or actions of others in the household (and broader environment) can affect perceptions and self-evaluations. Consider interactions within a family. At any given time some individuals are facing challenges and opportunities associated with changes in the make-up of a household. Some families are growing. Others are shrinking. Some individuals are moving into marriage, while others are divorcing. An important assumption with TSE is that "when disturbances occur in the identity-verification process (that is, when identities are not verified), distress results in the form of negative emotional responses" (Cast and Burke, p. 1045). To account for this potentiality, we propose the following hypothesis:

> Hypothesis 3: Changes in family size, as a form of identity verification, will be associated with self-esteem.

Self-Esteem as a Buffer

Another important element in TSE is the concept that self-esteem acts as a reservoir of energy. This definitional framework fits well with the thoughts of those who view self-esteem as a buffer between behavior and distress that might occur when self-verification processes fail. As a key proposition of TSE, self-esteem can be seen as a flexible personal resource. Each person's "reservoir" can increase when self-verification is successful, but it can also decrease (i.e., be used up) when self-esteem is used as a buffer.

Cast and Burke (2002) noted that negative emotional consequences can occur whenever there is a disruption in the self-verification process. Depression, anxiety, and stress can result especially when disturbances in self-verification are persistent. As a fixture of TSE, self-esteem appears to act as a buffer that reduces the likelihood of distress. When viewed this way, self-esteem can be seen as a mediator between behavior in one period and subsequent behavior in another time period. As someone exhibits behavior that is self-assessed as successful, the reservoir of self-esteem is increased. This should, theoretically, improve the chances of engaging in other successful behavior in the future.

Continuing the analogy of debt management, as a consumer behavior issue, imagine that someone has managed their debt level well and that they have few negative financial behaviors. In other words, they deem their debt management behavior as successful. According to TSE, this series of actions should lead to the maintenance and possible increase of self-esteem. That is, the person's reservoir of self-esteem should remain stable or increase. In turn, the successful management of debt behavior should result in an experiential gain for the person and intensify what Cast and Burke (2002) called cognitive resources (i.e., the reservoir of self-esteem). It is these cognitive resources that then provide a pathway to future successful behavior. We therefore also hypothesis the following:

> Hypothesis 4: A lack of self-verification from debt management behavior in previous periods will be associated with lower self-esteem in a subsequent period.

<u>Self-Esteem as Self-Motive</u>

The third element of TSE is the role self-esteem plays as a self-motive. Swann (1983) argued that people seek out opportunities for self-verification. This means that people tend to engage in behaviors, either individually or jointly, that confirm their identities, while shunning situations that might limit self-verification. By seeking out self-verification opportunities individuals tend to maintain or increase their reservoir of self-esteem. According to Cast and Burke (2002), "In this way self-esteem can be viewed as a self-motive, organizing and providing direction for behavior" (p. 1043).

People, acting in ways to maintain their self-esteem, will tend to engage in subsequent behavior that verifies past behavior. This is an important concept within TSE. As hypothesized within TSE, the less an individual receives self-verification from past behavior the more unstable future behavior may become. Within a debt management conceptual structure, this implies that those who have high revolving debt loads and a high number of negative financial behaviors in one period are not only likely to have lower levels of subsequent self-esteem, these past actions may produce additional self-motivations that limit a person's ability to engage in future behavior that might be defined as successful. In other words, it is possible that negative past actions that lead to a lowering of self-esteem also present a motivational constraint. Individuals fitting this behavioral pattern may be less likely to subsequently engage in positive planning behavior. In this study wetheorize that financial planning behavior (proxied by preparation for retirement) is associated with self-esteem, and that financial planning actions can be indirectly affected by prior self-verification behavior. As such, we hypothesize the following:

> Hypothesis 5: Lower self-esteem in a previous period will be associated with a lack of adequate planning behavior in the future.

A Conceptual Framework of TSE and Consumer Behavior

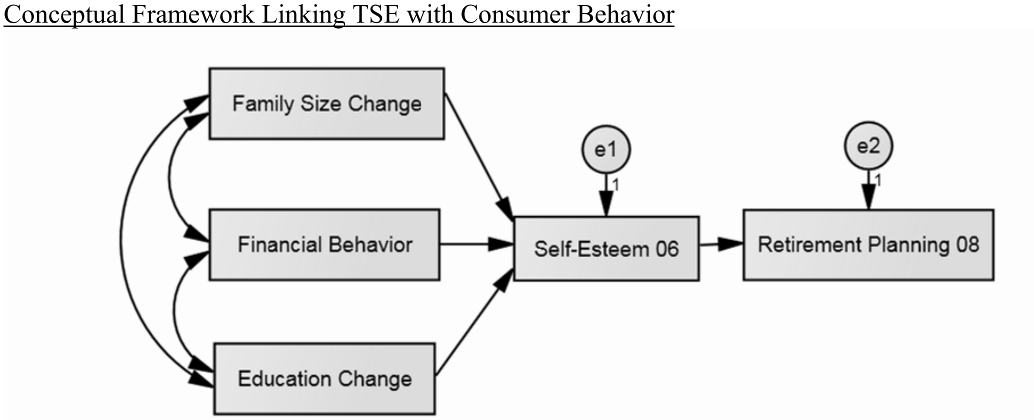
TSE (Cast & Burke, 2002) is premised on the assumption that self-esteem acts like an outcome, a buffer, and a self-motive. As an outcome, self-esteem can be negatively influenced by behavioral outcomes. In this study debt management behavior is conceptualized as an efficacy-based self-verification factor. In the model shown in Figure 1 it is hypothesized that financial behavior from a prior period can be used to *predict*subsequent self-esteem. In the model it is also hypothesized that changes in formal education are associated with self-esteem. Again, education change is thought to be a self-verification process related to the worth-based aspect of self-esteem. It is also shown in Figure 1 that a change in family size is likely to be associated with the measurement of self-esteem in a later period. This prediction is related to identity verification. Self-esteem can also be thought of as a buffer that reduces the impact of negative behaviors or experiences. Cast and Burke proposed this aspect of self-esteem as being akin to a reservoir of personal resources. In this model (Figure 1), self-esteem is hypothesized to act as a buffer between previous credit and debt behavior, volunteer activity, and subsequent retirement planning behavior.Finally, self-esteem is seen as a self-motive characteristic. Those who exhibit a high level of self-esteem ought to be more engaged in proactive planning activities “that maintain or increase positive evaluations of the self” (Case & Burke, p. 1042).

The framework shown in Figure 1 was designed as a traditional path model. The single arrowed lines represent associations between two variables. For example, the line linking financial behavior with self-esteem is based on the theoretical hypothesis that financial management behavior can be used as an efficacy-based self-verification process. The two arrowed lines linking the exogenous variables (i.e., family size change, financial behavior, and education change) represent possible associations between and among each variable. If these possible associations were unaccounted for the model’s accuracy could be jeopardized. Finally, the circles with single arrows leading to self-esteem and retirement planning behavior are error terms. Error terms are required within a path modeling structure whenever a regression prediction is made.

In effect, the conceptual framework tested in this study advances the literature in two significant ways. First, this research offers an applied test of Cast and Burke’s (2002) self-esteem theory. Second, this study is among only a handful of research projects that attempts to predict consumer behavior (i.e., retirement planning preparation) using panel data. That is, the model presented in this paper was examined using observations from the same individuals in 2004, 2006, and 2008. Rather than calculating estimates of only cross-sectional associations between and among variables, this paper presents predicted estimates of retirement planning behavior.

This second contribution to the literature is not entirely free of controversy. The conceptual model is premised on the assumption that previous behavior can have a predictive effect on subsequent self-esteem. There is evidence for this assumption within TSE, where self-esteem is seen as a reservoir of energy that can fluctuate based on self-verification processes. The fluctuation of self-esteem itself is contingent upon the role of previous behavior shaping self-evaluations. The more important question is what period of time between behavior and self-evaluation is appropriate. The TSE literature fails to address this important question. In this study, a two-year interval between debt management behavior (2004) and self-esteem evaluation (2006) is proposed. This time interval is sufficiently long to remove the impact of short-term self-verification miscues resulting from changes in debt levels, but short enough to link the efficacy component of past behavior with self-esteem evaluation. Further, the model shows self-esteem predicting future retirement planning behavior. While the predictive nature of this link has not been explicitly explored in studies of TSE, the theory suggests that this ordering of cause and effect is reasonable. Specifically, self-esteem as both buffer and self-motive factors suggests that self-esteem evaluation in one period must precede subsequent behavior. What remains unknown as of this writing is what an appropriate time interval between self-esteem evaluation and future behavior ought to be. In order to remain consistent with the modeling technique used, a two-year time interval was chosen (2006 to 2008).

Figure 1
<u>Conceptual Framework Linking TSE with Consumer Behavior</u>



Methods

<u>Dataset and Respondents</u>

Data for this study were obtained from the National Longitudinal Survey of Youth, 1979 cohort, consisting of young men and women (*n* = 12,686) who were born between January 1, 1957 and December 31, 1964 (between ages of fourteen and twenty two years of age) at the time. Individuals in this sample were interviewed annually from inception through 1994, and biennially thereafter. The initial survey sample consisted of three subsets representing: (a) a cross-section sample designed to represent noninstitutionalized, civilian population of youths living in the

United States (n = 6,111); (b) a supplemental oversample of minority youths and economically disadvantaged non minority youths residing in the United States (n = 5,295); and (c) a military sample of enlistees in the Army, Air Force, Navy or Marine Corps as of September 30, 1978 (n = 1,280).

Beginning in 1985, all but 201 randomly selected respondents in the military subsample were dropped from the survey, and the economically disadvantaged non minority subsample was discontinued in its entirety in 1991, to reduce sampling costs. The first subset, the supplemental oversample of minority youths in the survey, and 201 randomly selected military participants remained at the time of this study (n = 9,964). During the latest survey, 7,654 individuals responded, representing a 77% retention rate. For the purpose of this study, the entire sample was retained.

At the outset, surveys were conducted by personal interview. Over the past thirty one years, the data collection process has evolved into a combination of personal interviews, selected at random, with the majority representing telephone interviews; interviewers are now able to record responses using web-based survey instruments. Interviewees are provided a small monetary gift for participating every two years.

Outcome Variables

Self-Esteem. Self-esteem was measured using the Rosenberg self-esteem scale developed by Morris Rosenberg (1965). The individual variables comprising the self-esteem scale consist of ten statements measured on a four point Likert-type scale, ranging from strongly agree (4) to strongly disagree (1). Each statement listed below is self-assessed by the respondent.

1. On the whole I am satisfied with myself.
2. At times I think that I am no good at all.
3. I feel that I have a number of good qualities.
4. I am able to do things as well as most other people.
5. I feel I do not have much to be proud of.
6. I certainly feel useless at times.
7. I feel that I am a person of worth, at least the equal of others.
8. I wish I could have more respect for myself.
9. All in all, I am inclined to feel that I am a failure.
10. I take a positive attitude toward myself.

Statements 2, 5, 6, 8 and 9 were reverse coded. Scores were summed with high scores suggesting high self-esteem. Mean and standard deviation scores were 23.48 and 4.43, respectively. Cronbach's alpha, reflecting the scale's reliability for self esteem, was $\alpha = .89$.

Retirement planning behavior.Retirement planning behavior was measured by asking respondents a series of questions related to their planning actions. The following questions were asked: (a) Have you ever calculated how much retirement income you would need at retirement? (b) Have you consulted a financial planner about how to plan your finances after retirement? (c) Have you read any books or magazines on retirement planning? (d) Have you used a computer program to help you plan your retirement? (e) Have you ever attended any meetings on retirement or retirement planning? A summated variable was calculated based on responses, which were coded dichotomously as 1 = yes or 0 = no. Scores ranged from 0 to 5, with a mean and standard deviation of 1.01 and 1.37, respectively. Over 50% of respondents indicated taking no retirement planning action. The Cronbach's alpha for the summated measure was $\alpha = .73$.

Behavioral Variables

Two change variables and one summated financial management behavior variable were used in the analysis. The education change variable was created by subtracting reported years of education in 2004 from years of education recorded in 2006. On average, respondents indicated increasing their level of education slightly (.06 years) between 2004 and 2006. The range of change was 0 to 6 years.

A similar change variable was calculated for family size change. Reported family size in 2004 was subtracted from family size recorded in 2006. Only slight changes in family size between 2004 and 2006 were noted (M = -.10), although the breadth of family size change was large, ranging from -8 to 7.

The financial behavior variable was created by summing responses to debt management questions asked in 2004. Each respondent was asked if they had (a) missed a payment or (b) been turned down for credit in 2004 or (c) ever been bankrupt. Responses were coded dichotomously as 1 = yes, 0 = no. The range of scores was 0 to 3. Although measured at the ordinal level, the summated variable was treated as normally distributed for use in the path model (Blunch, 2008). Overall, approximately 33% of respondents indicated engaging in at least one of these behaviors.

Analytical Approach

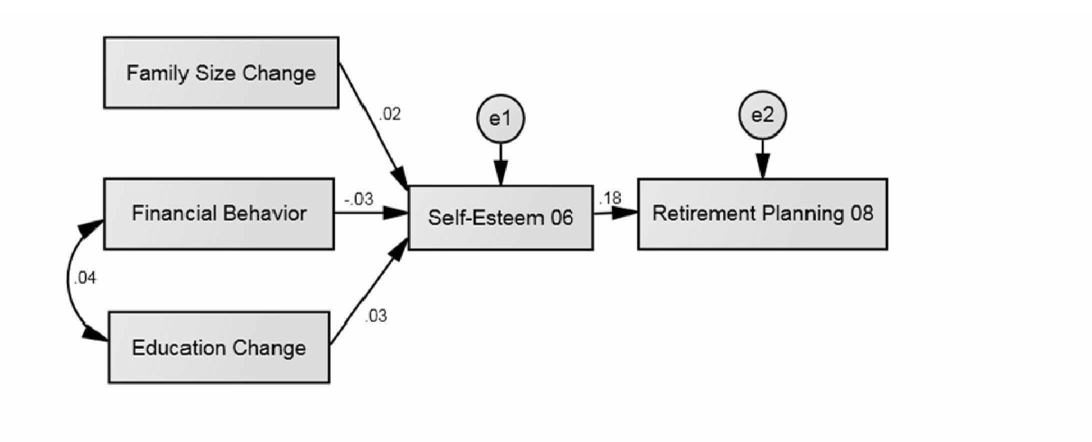
The conceptual framework (Figure 1) was tested and modified using a path modeling procedure in AMOS 18.0 for PASW. Path modeling is a form of structural equation modeling (SEM). The method allows for the direct and indirect effect of variables to be evaluated (Pedhazur, 1982). The technique uses a combination of correlational and multiple linear regression analyses. The output from a path model results in the calculation of standardized regression coefficients, with regression weights for error terms fixed at 1.0. Four variance-covariance data fitting criteria were evaluated: chi-square, CFI, NFI, and RMSEA. These criteria and the specified model are shown in Figure 2.

Results

The estimation of the model's significance showed that the chi-square statistic was significant ($\chi^2(3, N = 7{,}654) = 20.22$, $p< .01$). In the parlance of path modeling, this was interpreted to mean that the model, as illustrated in Figure2, did not reproduce the sample variance-covariance relationships. A hoped for outcome with path modeling is a non-significant chi-square. In this study, however, the significant finding was not unexpected. According to Blunch (2008), a large sample size almost guarantees a non-significant chi-square. Because of this, three additional goodness-of-fit statistics were calculated. The comparative fit index (CFI) and the normed fit index (NFI) are often used to determine the validity of a path model. These measures can take on values from zero to 1.0, with values closer to 1.0 suggesting a "measure of complete covariation in the data" (Byrne, 2001, p. 83). A coefficient above .90 is a common cut-off score (Bentler&Bonett, 1980). In this study, CFI was .94, while NFI was .93. A fourth measure, called root mean-square error of approximation (RMSEA), was used to adjust the model for degrees of freedom. In general, a "RMSEA around 0.05 is considered a sign of good fit and models with values larger than 0.10 should not be accepted" (Blunch, p. 116). The RMSEA for the final specified model in this study was .03.

Figure 2

Specified Path Model Illustrating Self-Esteem as Outcome, Buffer, Identify Verification, and Self-Motivation



Chi-square: 20.22, DF = 3, p < .01; CFI = .94; NFI = .93; RMSEA = .03

Figure 2 illustrates the conceptual model showing the standardized regression coefficients from the analysis. These coefficients indicate both the strength and direction of the association between variables. Table 1 shows the correlation coefficient estimates for the exogenous variables of family size change, financial behavior, and education change. Only one of the associations was statistically significant: the association between financial behavior and education change. Because the other associations were not statistically significant they were not included or shown in the final specified model.

Table 1
Correlation Estimates among the Exogenous Variables

Variable Association	Correlation Estimate	*p*
Family Size Change & Education Change	0.00	n.s.
Education Change & Financial Behavior	0.04	.001
Family Size Change & Financial Behavior	-0.01	n.s.

Information shown in Figure 2 and in Table 2 can be used to address the research hypotheses. Hypothesis 1 stated "Changes in formal education level, as a self-worth verification mechanism, will be positively associated with self-esteem." The hypothesis was confirmed. The association between increasing formal education between 2004 and 2006 and self-esteem was positive and statistically significant (β = 0.03, *p*= .03). If it is accepted that increasing attained education is a form of self-worth verification, this result adds applied evidence to the validity of TSE. This finding also provides support to the following assertion made by Cast and Burke (2002, p. 1044): self-verification results in "behavior that produces a match between self-relevant meanings in the situation and the meanings and expectations held in the identity standard. The actions taken to do this constitute the role behaviors of the person occupying the role, and these behaviors enact/create/sustain the social structure in which the role is embedded."

Hypothesis 2 stated "A greater number of negative financial behaviors in one period will be negatively associated with self-esteem in a later period." (β = -0.03, *p*= .01). Specifically, those who reported a high number of negative financial behaviors were predicted to have a lower level of self-esteem. As such, the hypothesis was supported.

Hypothesis 3 was tested as a way to evaluate the role of identity verification within TSE. The hypothesis stated: "Changes in family size, as a form of identity verification, will be associated with self-esteem." (β = 0.03, *p*= .03). The hypothesis was accepted, which suggest that role identity helps shape subsequent self-esteem. In this study, those who reported an increase in family size (likely through marriage or the birth of children) reported a higher level of self-esteem.

Support was found for Hypothesis 4, which stated: "A lack of self-verification from debt management behavior in previous periods will be associated with lower self-esteem in a subsequent period."This is a noteworthy result and one that supports TSE. Recall that Cast and Burke (2002) called self-esteem a reservoir of energy. This appears to be true in the context of this study. Self-esteem can be conceptualized as a flexible personal resource. This "reservoir" increased for those who exhibited positive financial behavior in a previous period, whereas the "reservoir" decreased for those with a higher number of negative financial behaviors in the two years preceding the self-esteem evaluation.

Finally, support for Hypothesis 5, which stated, "Lower self-esteem in a previous period will be associated with a lack of adequate planning behavior in the future," was documented in this study. Those with high self-esteem in 2006 were found to have taken more steps to prepare for retirement in 2008 (β = 0.18, *p*= .001). The relationship between self-esteem and subsequent consumer financial planning was the strongest in the model. This finding not only adds support to TSE in a generalized sense, the result confirms that "self-esteem can be viewed as a self-motive, organizing and providing direction for behavior" (Cast & Burke, 2002, p. 1043). It certainly appears that people act in ways to maintain their self-esteem, and that by doing so they engage in subsequent behavior that verifies past behavior.

Table 2
Maximum Likelihood Estimates for the Model

Variable Association	Regression Weight	Standardized Regression Weight	Standard Error	*p*
Family Size Change → Self-Esteem 2006	0.12	0.03	0.06	.03
Education Change → Self-Esteem 2006	0.35	0.03	0.16	.03
Financial Behavior → Self-Esteem 2006	-0.17	-0.03	0.07	.01
Self-Esteem 2006 → Retirement Planning 2008	0.056	0.177	0.00	.001

Table 3 is of interest because it shows that the direct effect of financial behavior, education change, and family size change on self-esteem were of approximately equal size. The primary difference among the three variables is that financial behavior (i.e., higher numbers represented worse behavior) was negatively associated with self-esteem. Taken together, these findings are notable because they indicate that prior financial behavior and changes in self-verification processes not only have an association with self-esteem but more importantly a predictive relationship with self-esteem.

Table 3
Direct Standardized Effects of Variables on Self-Esteem

Variable	Direct Effect
Financial Behavior	-0.03
Education Change	0.03
Family Size Change	0.03

Several important questions were posited at the outset of this study. First, can financial behavior in a prior period and change variables be used to predict self-esteem, and second, what role does self-esteem play in predicting subsequent consumer behavior, which in this study was defined as retirement planning? The answer to the first question is yes, prior period financial behavior and change variables can be used to predict self-esteem in a later period. The fact that the financial behavior factors were measured two years prior to the self-esteem evaluation did not appear to mitigate the strength of the association. The answer to the second question can be summarized as follows: self-esteem not only acts as an outcome and identity factor, but also as a buffer and self-motivation characteristic. Data shown in Table 4 point to this conclusion. Recall that the direct effect from financial behavior to self-esteem was $\beta = -0.03$. After accounting for the buffering effect of self-esteem, the total effect of financial behavior on retirement planning was reduced to $\beta = -0.01$. Further, the direct and total effect of self-esteem on retirement planning was positive ($\beta = 0.18$). This means that, as predicted in TSE, self-esteem appears to work as a self-motivation for future behavior. In this test, those who had high self-esteem were more likely to have taken proactive steps in preparing for retirement.

Table 4
Indirect, Direct, and Total Standardized Effects of Variables on Retirement Planning Behavior

Variable	Indirect Effect	Direct Effect	Total Effect
Financial Behavior	-0.01	0.00	-0.01
Education Change	0.01	0.00	0.01
Family Size Change	0.01	0.00	0.01
Self-Esteem	0.00	0.18	0.18

Discussion

This study endeavored to connect Cast and Burke’s (2002) Theory of Self Esteem (TSE) to practical consumer behaviors specific to the subject of personal retirement planning preparation. By examining together the dimensions of efficacy-based (competence) and worth-based self-esteem, this study demonstrated that self-esteem plays a significant role in shaping consumer financial behavior, with self-esteem acting as an outcome of previous behavior, a buffer between past and future behavior, and a predictor of future behavior. Results from this study provide support for TSE within the context of consumer behavior.

In addition to the role of self-esteem in shaping behavior, results from this study suggest that an increase in level of formal education can result in an increase in self-esteem. This is, in the terminology of TSE, a relationship associated with worth-based self esteem. As discussed above, when individuals self-verify their worth through a variety of behaviors, including additional formal education, self esteem can be enhanced.A second outcome of this study demonstrated that prior period financial behavior, as modeled by missed debt payments, bankruptcy filing, or credit declination, in combination with a change variable reflecting increases in formal education, is predictive of self-esteem in a subsequent period of time. Those who exhibited the best financial behavior reported higher levels of self-esteem. Third, a positive association between self-esteem and change in household size was also noted. It was determined that role identity helps shape self-esteem.

The value of these findings in contributing to the literature is enhanced when viewed from the context of the sample used in the analysis. This study used survey data from the NLSY 1979 cohort that was collected between calendar years 2004 and 2006. Participants in this cohort ranged in age between 40 and 47 years old in 2004, the initial period being studied, and were between the ages of 42 and 49 at its conclusion in 2006. Individuals in this age bracket are arguably in the period of life referred to as middle age, and are typically within one to two decades of beginning traditional retirement. They are also in or very close to peak family spending on expenses such as college education funding for children and providing possible financial assistance for elderly family members. Opportunities to save for retirement and obtain the benefit of the effect of compounding on these retirement funds diminish with the passage of every year. Individuals who possess higher levels of self esteem at this time in their lives are more likely to take a defensive, proactive posture toward retirement preparation (i.e., be more proactive in planning for their retirement). In addition, individuals who have been prudent in the management of financial affairs in past periods are more likely to have higher self-esteem and more likely to continue to exhibit prudent financial behaviors in ensuing periods.

These insights have important consumer policy implications.Federal and state policy makers often state that they want people to save and take proactive steps to secure their own retirement. Policy makers, people in the media, researchers, and educators sound alarms and get concerned when they see segments of the population failing to prudently plan for the future. Those interested in this phenomenon need to understand that future behavior among individuals is likely tied to their past behavior, as mediated through self-esteem. Self-esteem may be a key to helping people make better consumer decisions. Unless current behavior is improved, either through educational programs, tax incentives, or regulation, it is not reasonable to assume that people's future planning and consumption behavior will suddenly improve. In short, self-esteem appears to play an important role in describing who is likely to plan for their own future versus those who may require public assistance in their later years. Helping individuals take steps, through educational, financial, or household changes, to enhance self-esteem may help reduce burdens on public fiscal requirements in the future.

To summarize, the results from this study have significance in several respects. First, the study itself contributes to the current, limited body of literature, surrounding tests involving Cast and Burke's (2002) TSE. Second, it is clear that myriad opportunities remain for analyzing potential ways in which changes in self-esteem can impact and influence consumer financial behavior. Since the NLSY 1979 cohort will be approaching the traditional age of retirement by the end of the next decade, many additional opportunities exist to research variables believed to affect self-esteem as well as the steps being taken throughout this longitudinal study by individuals to prepare themselves for retirement. Future studies are needed to not only validate the results from this research, but also to expand the evaluation of other variables that may be associated with self-esteem and consumer behavior. For example, as noted above, only slight changes in family size occurred due to birth, death, marriage or divorce during the 2004 to 2006 calendar period. It is possible that greater changes in family size would be observed by extending the period of time being measured from two years to, say, ten years, or by shifting the age range period of observation of the cohort to a younger period, such as the cohort's 30s, or by repeating this study when the cohort reaches their sixth decade in another five years' time. It may possible to obtain a better understanding of the role self-esteem plays as an outcome of behavioral processes, a buffer that provides protection from harmful behavior, and a self-motive in directing current and future behavior by exploring other types of variables and period assumptions.

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