Spenders and Savers, Tightwads and Spendthrifts. Individual correlates of personal ratings of being a spender or a saver.

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Abstract

There is limited literature on the causes, correlates and consequences of being a saver (tightwad) or a spender (spendthrift). This paper reports on five studies which look at demographic, bright- and dark-side personality, money belief and self-evaluation correlates of to what extent a person considers themselves a spender or saver. In each study, adult participants indicated their spender-saver habits on a single scale and completed a number of tests. The first study looked at trait correlates and showed savers were close-minded, conscientious, stable, extraverts. It also showed as predicted that savers were more likely to associate money with security, and not love or freedom, and claim to have better financial knowledge. The results from the second study on dark-side personality correlates indicated that spenders were more likely to have psychopathic tendencies, but less likely to be Machiavellian. The third study on personality disorder correlates of spender-saver tendencies suggested that spenders were likely to have elevated Cluster B personality disorders. The fourth study examined self-beliefs and showed savers rated themselves as more attractive, healthy and intelligent than spenders. The fifth study, also using various self-ratings, showed spenders had more liberal political views, report higher emotional intelligence and are less likely to own their own home, while savers rated their physical health higher, and saw themselves as more entrepreneurial. Overall, the results suggest the simple saver-spender question is logically correlated with a number of individual difference variables with savers having a more positive profile. Implications and limitations are considered.

Key Words: Saver; spender; tightwad; spendthrift; personality; self-rating

1. Introduction

Researchers from a number of disciplines – biology, economics, finance, marketing, psychology, psychiatry, sociology – are interested in whether people are naturally savers or

spenders (Allom et al., 2018; Ashtiani et al, 2020; Carter, 2014; Carter & Gilovich, 2012; 2014; Cryder et al., 2008; Kappes et al., 2020; Kasser 2011, 2016; Klontz, et al., 2011; 2014; Lastovicka et al., 1999; Okada & Hoch 2004; Romal, & Kaplan, 1995; Rick, 2014; 2018; Tatzel, 2014; Tobol et al., 2020; Zaleskiewicz et al., 2013). Many are interested in "extreme" (pathological) types, how they got that way as well as how they can be persuaded to change their dysfunctional money-related beliefs and behaviours (Furnham, 2014; Furnham & Horne, 2021). Moreover, many are interested in the psychological consequences of how people spend their money (Aknin et al., 2013) and whether it makes them happier (Jin & Li, 2021; Thibault Landry et al., 2016) Others are interested in profiling people into "money-types", in order to sell them a particular financial product or service (Furnham & Grover, 2021).

As may be expected there is an evolutionary basis for spending and saving which has attracted attention (Metcalf, 2001). Evolutionary psychology naturally views saving and spending in terms of a possible increase or decrease a person's survivability. People who overspend may not have money for necessary resources such food and shelter while a person who spends money wisely may have an increased resources, which may make them more attractive to mates and increases their chances of reproduction (Iredale et al., 2008). Evolutionary psychology would suggest the acquisition of resources, along with judicious spending has many advantages which suggests that generally saving would normally be more adaptive than spending.

 Because both many organisations and governments are usually eager to encourage more people to save there is an important and growing behavioural economics literature on the topic (Prelec & Loewenstein, 1998; Thaler, & Benartzi, 2004). This is mainly concerned with using many standard techniques/nudges to encourage people to save more efficiently and regularly (Tantia et al., 2014). Nudging has been used to target both savers and spenders.

There is also a fast-growing literature on attitudes to, beliefs about, and uses of money (Dunn et al., 2008; Foster et al., 2009; Fünfgeld, & Wang, 2009; Furnham, 1984; 1996; 2014; Sabri et al., 2018; Santos & Campos, 2019) and a number of measures of money attitudes have been developed (Furnham & Grover, 2020ab; Furnham & Horne, 2021; Klontz et al, 2011; Lay & Furnham, 2019). This study is about one specific money-related behaviour pattern: the inclination to spend or save money. Most people when asked are they predominantly a spender or a saver (of their money) have no difficulty in understanding and answering the question. A few claim to be inconsistent and variable, but most report cross-situational and temporal

consistency in this behaviour. In these studies, we use both a binary answer (spender vs saver) or the option of responding on a Likert scale, though results are similar which ever is used.

There is an interesting and important related literature on things such as materialism and happiness which shows how ideological factors such as religion and politics play a part in how the "virtues" of spending and saving are portrayed (Furnham 1990). However, as Kasser (2014) notes thrifty attitudes, behaviors, and lifestyles sometimes satisfy psychological needs for safety∕security, competence, relatedness, and autonomy (and thus promote well-being) but can interfere with satisfaction of these needs (and thus diminish well-being). It is clearly not a simple case that thrift (and habitual saving) is always morally and psychologically advantageous.

Most world religions have strong injunctions about spending and saving which influence their adherents (Furnham, 2014). Similarly, all political theories focus on economic issues and attempt to influence spending and saving behaviour by propaganda, taxation etc. We therefore expect the personal political and religious view to influence the extent to which people are savers and spenders.

There is a rich and interesting psychiatric literature on people with "money problems" (Ealy & Lesh, 2008; Forman, 1987; Goldberg & Lewis, 1978; Matthews, 1991). One problem that has attracted a good deal of attention is impulsive and obsessive spending (Fenton O'Creevy & Furnham, 2020ab). This is seen to have many more negative consequences compared to those who are self-denying, misery, tightwads and savers.

Rick et al. (2008) focused on the Tightwad-Spendthrift construct, rather than pure spending and saving tendencies. Tightwads and Spendthrifts are, by definition, frustrated with their spending and saving tendencies: tightwads would like to spend more than they normally do, and spendthrifts would like to spend less (Rick, 2014; 2018; Rick et al., 2011). On the other hand, we are focusing on people who do not necessarily seem troubled by their money related behaviour, though no doubt some do, and indeed should be concerned. These two "types" have been profiled:

*1.1 Spenders and Spendthrifts***:**

According to clinicians, spendthrifts tend to be compulsive and uncontrolled in their spending which they do particularly when depressed, feeling worthless and rejected. Spending is an instant but short-lived gratification that frequently leads to guilt (Forman, 1987). Benson

(2008) noted that compulsive buying has now been recognised as a common, and serious, social problem. Many "over-shoppers", as spendthrifts, tend to feel they have to keep their compulsion secret, lest they are condemned as narcissistic, superficial and weak-willed. It is argued that over-shopping, impulsive and compulsive spendthrifts spend money to feel better about themselves and find a distraction to help them avoid other important issues (Fenton-O'Creevy et al., 2018) It can be seen as the lesser evil compared to being addicted to alcohol, drugs or food (Fenton-O'Creevy & Furnham, A.2020a). Although, spending beyond one's means may lead to considerable debt and spiral into bankruptcy and homelessness. Further, hiding spending from significant others may lead to relationship issues. Spending could also, for some, be a way of trying to feel more in control or finding meaning in life (Furnham, 2014).

Impulsive buying is a topic that has been investigated for over 60 years and is defined as the tendency to buy spontaneously, unreflectively, and immediately. Some distinguish impulsive from compulsive buying; compulsive spending involves repeated and excessive purchases leading to serious detriment to quality of life. Some argue that compulsive buying is the more extreme case of impulsive buying, a view reinforced by evidence of the financial harm associated with impulsive buying (Fenton-O'Creevy et al., 2018; Harnish & Roster, 2018).

Muruganantham and Bhakat (2013) documented 32 important studies published between 1950 and 2011, many of which tried to identify internal (individual difference) and external (environmental) factors that exacerbate impulsive buying. Santini et al. (2018) found ten factors that were reliably related to impulsive buying, including positive emotions. In a recent study, Fenton O'Creevy and Furnham (2020a) found younger females and those with higher household income were more likely to engage in impulsive buying. Their analyses showed that those high on Neuroticism and Extraversion, and those low on Conscientiousness, were more likely to be impulse buyers.

We believe that all spendthrifts or extreme spenders are usually aware of their condition though it may not be necessarily pathological or personally detrimental to personal health, wealth and welfare, though it could be. However, we believe that spenders will have personality profiles that may indicate certain types of pathology.

Moreover, we are interested in the self-perceptions of savers and spenders. There is a growing literature which has shown simple self-ratings on things such as intelligence, health and attractiveness are subtle markers of self-esteem with many correlates (Furnham 2021;

Furnham & Grover, 2021ab). We assume that overall that being a saver is "psychologically healthier" than being a spender and that the former would have more positive self-ratings.Indeed there is an extensive literature on problematic impulsive spending (Fenton O'Creevy & Furnham, 2020ab, 2021).

1.2 Savers and Tightwads:

Nearly all researchers in the study of money have noted one very powerful emotion and motive associated with money is security, leading to over-saving and miserliness. Forman (1987) distinguished between the *miser,* who hoards money and tends not to admit being niggardly, have a terrible fear of losing funds, and tend to be distrustful, yet have trouble enjoying the benefits of money, and the *spendthrift,* who tends to be compulsive and uncontrolled in his/ her spending and does so particularly when depressed, feeling worthless and rejected. A fear of financial loss becomes paramount because the extreme saving security collector supposedly depends more and more on money for ego-satisfaction: money bolsters feelings of safety and self-esteem.

Goldberg and Lewis (1978) distinguish between four super-saving types. *Compulsive Savers;* for them saving is its own reward and they tax themselves because no amount of money saved is sufficient to provide enough security. *Self-deniers;* who tend to be savers but enjoy the self-sacrificial nature of self-imposed poverty, and their behaviour maybe a disguise for envy, hostility, and resentment towards those who are better off. *The Compulsive Bargain Hunter;* where money is fanatically retained until the situation is "ideal" and then joyfully given over. For them the thrill is in out-smarting others: essentially, those paying the full price. *The Fanatical Collector*: who obsessively accumulates all sorts of items, many without much intrinsic value, and turn to material possessions rather than humans as potential sources of affection and security.

There is, however, an obvious difference between a compulsive saver and one who does so for good reason and think of themselves as financially prudent. Indeed, it is rare for people to present with a saving-, as opposed to a spending-, problem to either therapists or financial advisors. They might present with depression or anxiety but therapists rarely it seems question their money habits. On the other hand, there are many popular fictional accounts and religious texts which lampoon and condemn miserliness (Furnham, 2014)

1.3 This Study

If people are asked, most are happy to accept that they are (predominantly) either spenders or savers, though a number want to indicate the degree and consistency with which they are either. Presented with a spectrum, we have found the question tends to reveal a normal distribution with some indication of bimodality. Equally, if forced to make a binary choice, few object to indicating which of the two they tend to be. In most of these studies we examine sex and ideology (political and religious belief) correlates of spending and saving. In each study participants rated themselves on a 9-point scale, where 1 = Spender and 9 = Saver; religiousness, where 1 = Not at all and 9 = Very; and a political view, where 1 = Very Conservative and 9=Very Liberal. As the data indicates below, the Mean and SD for the saver-spender rating was very consistent across the different studies. In each study we focus on one particular correlate of the spender-saver dimension while trying to control for sex and ideology.

2. Study 1: Bright-Side Personality

This study has two parts. The first focuses on personality correlates of spending and saving. There is a scattered literature on this topic, which suggests that there are modest, but predictable relationships between personality and a range of monetary beliefs (Furnham, 2014; Furnham & Grover, 2021). None, however, we believe have focused specifically on the spender-saver dimension, as most looked at personality correlates of associating money with different issues like love, freedom, security and power. Based on the clinical literature we believe savers are more emotional stable, planful and successful than spenders (Furnham & Grover, 2021; Furnham & & Horne, 2021).Thus, we hypothesised that spenders would be more Neurotic (H_1), Extraverted (H_2), and less Conscientiousness (H_3) than savers.

The second part focuses on money related beliefs and behaviours. Whilst there are now a number of money beliefs and behaviour questionnaires, there are clearly overlaps between them (Lay & Furnham, 2018). Goldberg and Lewis (1978) that provided the first, and perhaps best, description of different money types. *Money as Security* had four types: Compulsive Savers, Self-deniers, Compulsive Bargain Hunter and Fanatical Collectors. Those who experienced *Money as Power* were divided into three sub-types: The Manipulator, The Empire Builder and The Godfather. Similarly, for those who associated *Money as Love* there were three sub-types: The Love Buyer, The Love Seller and The Love Stealer. Finally, for those who associated *Money with Freedom* there were two types: The Freedom Buyers and The Freedom Fighters

There have been a large number of studies using measures that assess these types (Fenton-O'Creevy & Furnham, 2020a; 2020b; Furnham et al., 2014a; 2014b). These studies examined many correlates of the four beliefs. In a study of over 100, 000 British participants, von Stumm et al. (2013) found money to be associated with love and power, as well as general personal pessimism was associated with over all money pathology. They also found that older people were more likely to associate money with freedom and security, and less with power and love, than young people. Better educated people associated money with security and less so with freedom and power compared to less educated people. The richer a participant was, the more he or she associated money with security. People of self-rated higher, as opposed to lower, social class associated money more with security and less with freedom. Essentially, associating money with power was linked to an increased risk of experiencing adverse financial events, while security appeared to be protective.

In this study, we also measured financial knowledge, which has been used in previous studies (Lay & Furnham, 2019). It is essentially assessing confidence and interest: that is the extent to which an individual is involved and interested in their own financial affairs and in finance in general. It tends to be associated with those who have more money and interested in making more of it.

On the basis of this classification, we predicted that savers would associate money more with Security (H1) and less with Love (H2), Freedom (H3) and Power (H4). We also predicted that savers would have higher financial knowledge scores (H5).

2.1 Method

2.1.1 Participants.

In all, 500 participants, 250 men and women, completed the survey. All participants were both current residents of the United Kingdom, that had also been born there. The average age of participants was 37 years (SD= 12.29). The sample was secular, rating themselves an average of 1.53 on a 1-9 religiousness scale; well educated, with an average 5.26 years spent in higher education (SD= 4.25); and politically moderate, rating themselves an average of 5.66 (SD= 1.830) on a 1-9 scale from highly conservative to highly liberal. They rated themselves on average 5.52 (SD=2.12) on the 9-point spender (1) saver (9) scale.

2.1.2 Measures.

Ten Item Personality Measure (TIPI; Gosling et al., 2003). This measures five personality traits, Emotional Stability, Extraversion, Openness, Agreeableness, and Conscientiousness, using 2 items each. Because these were two item scales we calculated the correlation between the two items which ranged from $.50 < r >.60$ which is consistent with other studies, This measure was designed to maximise content validity and efficiency, but as a result, has a poor factor structure and reliability. Items were measured on a 7-point scale from 'strongly disagree' to 'strongly agree'.

Money Madness Measure. This was developed from a close reading of literature (Furnham & Horne, 2020; Lay & Furnham, 2019). Items were written and tested for their comprehension. Each was measured on a 7-point scale from strongly disagree (1) to strongly agree (7). Items were randomized in each survey. The alphas for the four scales were Security (.74), Power (.79), Love (.74), and Freedom (.62).

Financial Interest and Literacy. This was a measured based on a dimension established by Lay and Furnham (2019), across 11 items on a 7-point scale rated from strongly disagree (1) to strongly agree (7) ($\alpha = .846$, with items 1, 2, 9, 10, 11 reversed). It essentially identifies a pro-positive and anti-negative approach to financial interests and literacy.

Spender- Saver: This was a single item with a 9-point scale (Spender = 1, Saver = 9) with a mean on 5.49 (*SD*=2.12)

2.1.3 Procedure.

Ethics permission was sought and received (CEHP/514/2017). Participants were recruited through Prolific.ac, an online participant database. The survey took an average of 11 minutes to complete, and participants were paid £1.02 after completing the survey.

2.2 Results and Discussion

Part 1: Personality Traits

Tables 1 and 2 here

Table 1 shows the correlations and confirmed all three hypotheses with respect to personality. Table 2 shows the multiple regression. Savers were Conscientious Introverts, not Open to Experience. These factors accounted for a sixth of the variance. The biggest correlation, which was still modest, was for Conscientiousness, defined as being planful, organized, hard-working

and reliable. This is, in many ways, the concept of the non-miserly, non-pathological, "ordinary saver".

The results in many ways confirm what is perhaps the stereotype of a saver: a serious minded, hard-working individual, not seeking out excitement, while the spender is clearly curious and sociable. The size of the correlations and the amount of variance accounted for in the regression suggests that this behaviour is reasonably significantly related to personality traits, particularly Conscientiousness, which is consistently linked to educational and work success. It is likely therefore that savers and spenders would not be very compatible (Olson & Rick, 2017), particularly if their relationship involved many activities associated with the use of money.

Part 2: Money Types

Table 3 and 4 here

Table 3 shows the correlational results which confirms four of the five hypotheses. Savers had greater financial knowledge and were more likely to associate money with security, and less with love and freedom. The regression (Table 4) accounted for over 1/3 of the variance, but this could in part be due to item overlap between the money types measure and the principle idea of focus, namely spender-saver preferences. Yet the overlap only occurred for the items on money as security.

Studies using this four-fold typology have consistently shown that those who associate money as security are in general better adjusted and more successful than those who associate it with any of the other three concepts (von Stumm et al., 2013).

3. Study 2: Dark-Side Personality: The Dark Tetrad

There has been an explosion in the literature on dark-side personality, particularly the dark triad and more recently the dark tetrad (Furnham et al., 2013). A few have looked at the dark-side and money beliefs in general (Furnham, 2020). It has been suggested that many dark-side traits are associated with using money to manipulate others.

Boonroungrut et al. (2018; 2020), in two studies on dark-triads and student spending, argued that Machiavellians value money more, and take advantage of others when there is maximal gain with minimal risk; Narcissists, with their egotism, grandiosity and entitlement,

as well as overconfidence and unrealistic optimism, drives them to risk indebtedness because of feeling of entitlement to things they want; while Psychopaths exhibit reckless impulsivity which is a threat of consequent risk to financial investment. They found that both Psychopaths and Narcissists were more likely to be spenders rather than savers.

On this basis, and using the new Dark Tetrad measure, it was hypothesized that spenders would be more Narcissistic (H1) and Psychopathic (H2), but less Machiavellian (H3).

3.1 Method

3.1.1 *Participants.*

In total, 502 participants from the United States completed the questionnaire, of which 53% were female (age range = 19 to 76 years, $M = 31.6$ years, $SD = 13.5$). In all 27% had a high school level of education, 48% held an undergraduate degree, and 21% had some postgraduate qualification. The rated their beliefs on two scales: Religiousness (1 = Not at all; 9 Very); $M= 2.25$, $SD = 2.31$; Politics (1 = Conservative; 9 = Liberal) $M = 5.97$, $SD = 1.68$). They rated themselves on average 5.79 (SD=2.14) on the 9-point spender (1) saver (9) scale.

3.1.2 *Measures.*

The Short Dark Tetrad (Paulhus et al., 2020). This is a 28 item measures that assesses Narcissism, Machiavellianism, Psychopathy and Sadism. Paulhus et al. (2021) did a confirmatory factor analysis (CFA) of items which showed acceptable fit for a four-factor solution. Also, the subscales each showed coherent links with the Big Five and adjustment. Further, the four-factor structure replicated across student and community samples and the four subscales show distinctive correlates. We calculated the alphas in this study, which were *Crafty* (Machiavellianism) .65; *Special* (Narcissism) .81; *Wild* (Psychopath) .79; *Mean* (Sadism) .79.

Tables 5 and 6 here

3.2 Results and Discussion

Table 5 shows the correlation results which indicates that only one of the dark tetrad factors correlated with the saver-spender question. It indicated that sub-clinical psychopaths were more likely to be spenders. This confirms H2.

Table 6 shows the results of the regression. This indicated that two traits were related to spending and savings: Machiavellians were less, but Psychopaths more, likely to be spenders. This confirms the work of Boonroungrut et al. (2018; 2020) who used different measures and different populations. It may be that Machiavellians are careful with their money because they see it as a useful interpersonal manipulative tool, and it is useful to have a lot of it. Equally the fact that may psychopaths do not plan for the future and are often impulsive may explain why they are more likely to be spenders.

4. Study 3: Dark Side Personality: Personality Disorder Clusters

In the previous study we examined Dark Tetrad correlates of spending and saving. This study looks at all the personality disorders and the relationship with spending and saving. The area of personality disorders remains a highly disputable area, as there remains considerable disagreement about the essential PDs, which has changed over time (Furnham, 2021). However, there is more agreement about the "higher order clusters" of the PDs. When clustering, three higher-order ones are usually created which we combined: Cluster A. Odd/Eccentric (Self-defeating, Passive-aggressive, Paranoid, Schizoid, Schizotypal); Cluster B. Dramatic/Emotional/Erratic (Antisocial, Borderline, Histrionic, Narcissistic) and Cluster C. Anxious/Fearful (Avoidant, Dependent and Obsessive-Compulsive) (Furnham, 2022).

In a study relevant to this, Furnham (2020) looked at the relations between the PDs at both the individual and cluster level, and general attitudes to money. He found that Narcissism was positively related to money beliefs about Achievement and Success, as well as Power and Prestige. Histrionic PD was positively related to money beliefs about Power and Prestige, while Obsessive Compulsive was positively related to Mindful and Responsible Money beliefs.

At the higher analytic level, he found Cluster B (dramatic) scorers were more likely to see money as a source of Achievement and Success, as well as Power and Prestige, and less likely to see money as Mindful and Responsible. Furthermore, anxious individuals who had PD traits in Cluster C were more likely to exhibit Savings Concerns and Financial Literacy Worries. Those who had PD traits in Cluster A were less inclined to hold a Mindful and Responsible money attitude.

On the basis of these findings and the description of the cluster we predicted that Cluster B would be more (H1), while Cluster C less (H2), likely to be spenders.

4.1 Method

4.1.1. Participants

In all, 397 people took part in this study: 195 male, 199 female and 3 non-binary. They ranged in age from 19 to 71, with a mean of 39.9 years (*SD*= 11.63 yrs). In all, 54% were graduates with the rest with school certificates, 93% were British nationals (the remining being Europeans) and 60.3% claimed they owned their own homes, while the others rented. They were all working and indicated their occupations, which were very varied to include accountants, health workers and people in IT.

4.1.2. Measures.

Coolidge Axis-II Inventory – Short Form (SCATI) (Coolidge, 2001). This 70-item self-report measure assesses 14 personality disorders, 10 from *DSM-V*, 2 from Cluster B of the *DSM-IV-TR* (Depressive and Passive Aggressive) and 2 from *DSM-III-R* (Sadistic and Self-Defeating). The SCATI has good internal scale and test-retest reliability. It has been used to predict PDs in subclinical (Coolidge, Segal, Cahill & Simenson, (2010) and clinical populations. The reliability of this measure in this study is as followed: Antisocial (.58), Avoidant (.74), Borderline (.64), Dependent (.60), Depressive (.81), Histrionic (.56), Narcissistic (.65), Obsessive-Compulsive (.68), Paranoid (.74), Passive-Aggressive (.63), Sadistic (.66), Self-defeating (.64), Schizotypal (.63), and Schizoid (.70). Using the DSM-5 classification the three clusters were calculated: A (alpha=.73), B (alpha=.72), C (alpha=.73),

Spender-Saver. In this study they were asked simply whether they were Spenders or Savers; in all 37% said there were Spenders and 63% Savers.

Tables 7 and 8

4.2 Results and Discussion

Table 7 shows the correlational results which confirms H2, namely that those who said they were spenders were more likely to have Cluster B scores. It has been argued that those with cluster B personality disorders find it hard to control their emotions, hence other people might see them as unpredictable. According to the DSM-5, Cluster B concerns emotional volatility: pronounced, exaggerated reactions to everyday events. They exhibit mood swings from feeling better than everyone to feeling alone and depressed. They may outwardly brag about their greatness while feeling unfilled inside. Further individuals in Cluster B may aggressively turn

on others who ignore them and they may show impulsive acts of revenge without regret or shame.

It should be emphasised that we are here dealing with a normal, not clinical, population. But as the spectrum hypothesis shows, there is no clear cut-off between clinical and subclinical populations. However, it should be noted that although the results in this study were significant, very little of the variance was accounted for.

Study 4: Self perceptions

In this study we were interested in how savers and spenders saw themselves. There are a very large number of self-assessment instruments in psychology that attempt to assess personality, values and motivation. In this study we examine people's comparative ratings on a wide range of factors from attractiveness to intelligence. There is an extensive literature on the relationship between self-estimates and actual behaviour, particularly in the area of intelligence (Furnham & Grover, 2020b). The data suggest that correlations between self-ratings and objective or test-based measures are $.25<r<.50$, suggesting people are reasonably accurate. Moreover, whilst people do differentiate between different characteristics (e.g., IQ vs EQ), the ratings tend to intercorrelate fairly highly suggesting they pick up a general self-esteem factor.

As noted above, the literature on impulsive and compulsive spenders suggest that they are essentially unhappy with their low self-esteem. Based on this we expected that, compared to spenders, savers would rate themselves significantly higher on their attractiveness (H1), health (H2), cognitive ability (IQ) and emotional intelligence (EQ). We also explored, out of interest, participant evaluations of such things as whether they were good listeners. This was exploratory, though we hypothesised that where there were differences, savers would have a more positive view of themselves, i.e., a better driver, better listener and less prone to depression.

6.1 Method

6.1.1. Participants.

In all, 1623 participants, 814 men and 809 women, completed the survey. All participants were both current residents of the United Kingdom, that had also been born there. Participants ranged in age from 14 to 74 with an average of 29 years (SD= 14.51. The sample was secular, rating

themselves an average of 2.23 (SD= 2.76 on a 1-9 religiousness scale; well educated, with an average 4.66 years spent in higher education (SD= 5.25); and politically moderate, rating themselves an average of 5.95 (SD= 1.82) a 1-9 scale from highly conservative to highly liberal. They rated themselves on average 5.56 (SD=2.21) on the 9-point spender (1) saver (9) scale.

6.1.2. Measures

Self-Ratings. Participants rated themselves on 9 dimensions which were divided into two categories; "On a scale from 1-100 (100 being extremely high), how would you rate your: Physical Attractiveness? Physical Health? Intelligence? Emotional Intelligence?". They also answered the following: "Compared to others of you own age, stage and background, to what extent do you think you are much more (1) or much less (9) a: Good driver? b: Risk taker? c: Physically healthy? d: Have a strong sex drive? e: A good listener? f: Prone to depression?

Spender-Saver: This was a single item with a 9-point scale (Spender = 1, Saver = 9) with a mean of 5.56 (*SD*=2.17).

Tables 9 and 10 here

6.2 Results and Discussion

The correlational results in Table 9 showed that, compared to spenders, savers saw themselves as more attractive, healthy and intelligent, but not emotionally intelligent. Savers also saw themselves as better drivers, more physically healthy and less prone to depression. In this study, those participants that rated themselves as more religious and more conservative in their political views were more likely to rate themselves as savers.

The results of the regression were particularly interesting, firstly as sex was a significant negative predictor, which is not a result seen in studies 1-4. Females in this sample were more likely to rate themselves as spenders. Besides sex, only three predictors were significant. Participants' rating of their general health was a positive predictor so those that rate themselves higher on general health are more likely to consider themselves to be savers. Those participants that saw themselves are much less of a risk taker compared to others their own age, stage and background were more likely to rate themselves as savers. Finally, those that rated themselves

as having higher emotional intelligence were more likely to consider themselves to be spenders rather than savers.

5. Study 5. Self Evaluations.

The final study also involved self-evaluations and was a part replication. We again asked questions about intelligence, health and attractiveness. In this study we also asked questions about such things about their financial situation: how many credit cards they owned, whether they owned the property they lived in.

7.1 Method

7.1.1 Participants.

In all, 1125 participants, 562 men and 563 women, completed the survey. All participants were UK nationals. The average age of participants was 40.78 (*SD*= 8.99). The sample was secular, rating themselves an average of 1.67 on a 1-9 religiousness scale; well educated, with 63.2% of the sample having a university degree; and politically moderate, rating themselves an average of 5.56 (*SD*= 1.79) on a 1-9 scale from highly conservative to highly liberal. They rated themselves on average 4.50 (SD=2.19) on the 8-point spender (1) saver (8) scale.

7.1.2 Measures.

We asked identical questions to those in study 5 but in addition we asked: "Which of these best describes your position where you work?" (1 - CEO/Managing Director, 2 - Director, 3 - Manager, 4 - Employee); "How ambitious at work are you?" from Not at All to Very Ambitious; "On a scale from 1-100 (100 being extremely stressed) how stressed by work are you at the moment?"; How many credit/debit cards do you have?; Would you say you were entrepreneurial? from Not at All to Very Entrepreneurial; When at school were you ever elected in a leadership role? 1-Yes, 2-No; Overall, would you say you are a good team player? 1-Yes, 2-No; Do you own the property you live in? 1-Yes, 2-No.

7.2 Results and Discussion

Insert Tables 11 & 12

Correlations show Spenders have more liberal political views, report higher emotional intelligence and are less likely to own their own home. Savers are more educated, tend to have

a university degree, rate their physical health higher, and see themselves as more entrepreneurial.

Regression analysis showed that those participants with more children, those that rate themselves to be more ambitious, as having higher emotional intelligence and have more liberal views were more likely to rate themselves as spenders, as well as those participants that do not currently own the property that they live in. Those participants with more years of education, who rate their physical health higher as well as seeing themselves as more entrepreneurial, are more likely to rate themselves as savers.

General Discussion

This paper sought to explore correlates of the spender-saver self-description. It was concerned with "normal" as opposed to "clinical" or "problematic" spendthrifts or tightwads, though it is quite possible that some in the different samples fell into that category. One general issue is how much behavioural information about an individual do you "pick up" when you ask the simple question: are you a saver or a spender?

Comparing the five studies it was noticeable that only one (study 4) showed a sex difference and one (also study 4) a significant relationship with religion. This was surprising given the way religious beliefs have been associated with many aspects of money use, for instance in the idea of the Protestant Work Ethic. Despite stereotypes to the contrary, in only one study was there a sex difference in either correlations or regressions. For many the spendthrift, or at any rate the impulse buyer, is a woman, yet this may simply be an inaccurate stereotype. Three studies showed a significant relationship with political beliefs always in the same direction: savers were more politically conservative.

These studies help to describe the psychological characteristics of savers. They tend to be Conscientious, Emotionally Stable, Closed-to-Experience, Introverts, with lower scores on Psychopathy and Cluster B Personality Disorders. They associate money with Security, not Love or Freedom and claim to have greater financial literacy than spenders. Overall, savers rate themselves as more intelligent, healthy and attractive, more entrepreneurial though less emotionally intelligent. However, the relationship between emotional intelligence could be a function of introverts rating themselves lower on sociability rather than their emotional

capabilities. A more extensive assessment of emotional intelligence is needed to further investigate this relationship.

By contrast, spenders tend to be associated with stress, disorders and lower self-esteem as assessed by self-ratings. They associated money more with Love and Freedom and seemed less interested in personal money affairs as well as less confident in their ability to manage them. It is likely therefore that spenders have more financial difficulty and problems than savers (Fenton O'Creevy & Furnham, 2021).

As expected savers tend to have more years of education and are also more likely to own the property they live in compared to spenders. Although entrepreneurship tends to be associated with risk taking the final study showed that savers tended to rate themselves as more entrepreneurial. This could be due to the fact that they have a buffer of savings that allow them to be more entrepreneurial rather than a reflection of their perceptions of risk taking. Entrepreneurial risk taking would be classified as functional or calculated risk taking which would be associated with savers rather than impulsive or reckless risk taking that may be more associated with spenders.

There remains speculation as to why people become extreme, or compunctual spenders and savers, though there are a number of clinical speculations as to their origin and maintenance (Furnham & Horne, 2021). Equally, it is not clear how easy it is to change these beliefs or habits, though there are a number of books and programmes dedicated to these issues (Ealy & Lesh, 1998). The results of these studies suggest that spenders are less well adapted than savers, though this inevitably depends on their type and degree of spending as well as other factors like their socio-economic status and education. Many people report that they are unwise and irrational spenders on some things like clothes, holidays or presents while being more "sensible", even "stingy", on others. The data suggest that saving and thrift may not always lead to well-being (Kasser, 2011).

The amount of variance accounted for in the regressions, which included demographic and ideological variables, varied from 2% to 37%, with four being less than 8%. One reason for this was conceptual overlap though it could also be related to how the dependent variables were measured; i.e., binary (study 3) where the least variance was accounted for, or on a scale from one extreme to the other. However what suggest is that it is important to try to determine what other individual difference variables are associated with spending and saving.

Conclusion

This paper sought to explore various correlates of those who tended to classify themselves as spenders and savers. As the growing clinical literature on money pathology demonstrates, regular and sensible savers tend to be better adjusted than those who see themselves as, and indeed are, spenders, especially spendthrifts. Whilst, there is evidence of unhealthy, pathological saving, financial therapists and experts often have to deal with peoples' money problems that are a function as much as relative poverty as their inability or unwillingness to save (Klontz et al., 2011; Furnham & Grover, 2022). The studies in this paper represent a start to investigating the nature of self-assessed savers and spenders

Limitations

Like all studies, this had limitations. Although we had large samples they were unrepresentative of the population being on average better educated, and of higher socio-economic status. Perhaps the primary limitation was the restricted information we had on our participants. It would have been particularly desirable to have much more detailed *financial information* about everyone such as their income, how much they had actually saved and their pattern of spending and saving. It would also have been most informative to have more information on their *financial literacy* (Fenton O'Creevy & Furnham, 2021).

Similarly, it would have been desirable to have had some other data on their spending-saving habits like reports of a partner and their bank statements. Equally, it be interesting to see how they managed their money (i.e., regular inspection of accounts, balances and shares) and on how, and more particularly on what, they spent their money. It would be interesting to understand how in their view their money habits effected their personal relationships (Olson & Rick, 2017).

Finally, it would be particularly interesting to know both savers pattern of, and reasons for saving, as well as the consumption habits of spenders. (Furnham, 1985). Presumably, there is healthy and unhealthy saving, as there is spending (Furnham, 2014) and it remains important to explore those at extremes of these dimensions and the causes and consequences of their money related behaviour.

References

Aknin, L.B., Barrington-Leigh, C.P,, Dunn, E.W., Helliwell, J,, Burns, J., Biswas-Diener, R., et al. (2013). Prosocial spending and well-being: Cross-cultural evidence for a psychological universal. *Journal of Personality and Social Psychology*, **104**: 635– 652.

Allom, V., Mullan, B. A., Monds, L., Orbell, S., Hamilton, K., Rebar, A. L., & Hagger, M. S. (2018). Reflective and impulsive processes underlying saving behavior and the additional roles of self-control and habit. *Journal of Neuroscience, Psychology, and Economics, 11*(3), 135–146. https://doi.org/10.1037/npe0000093

American Psychiatric Association. (2013). *Diagnostic and statistical manual of mental disorders, fifth edition (DSM-5).* Arlington: American Psychiatric Association. https://doi.org/10.1176/appi.books.9780890425596.

Ashtiani, A.Z., Dudek, T., & Rieger, M. (2020). Happy savers and happy spenders: An experimental study comparing US Americans and Germans. *Journal of SocioEconomics, 85*(C), 101506. https://doi.org/10.1016/j.socec.2019.101506

Benson, A. (2008). *To buy or not to buy.* London: Trumpeter

Boonroungrut, C., Dechporm, S., Oo, T. O., & One, K. (2018). A mediation study of human dark personality and the prediction of students' monetary attitudes. *Journal of Basic and Applied Research, 4(3),* 49–57. https://doi.org/10.51152

Boonroungruta, C., Fei, H., & Dechprom S. (2020). Dark personality impacts on saving and spending attitudes: A multi-group analysis between self-support and loan students. *Kasetsart Journal of Social Sciences, 41*(3), 521–526. https://doi.org/10.34044/j.kjss.2020.41.3.10

Carter, T. J. (2014). The psychological science of spending money. In E. Bijleveld & H. Aarts (Eds.), *The psychological science of money*. New York: Springer.

Carter, T. J., & Gilovich, T. (2012). I am what I do, not what I have: The differential centrality of experiential and material purchases to the self. *Journal of Personality and Social Psychology, 102*(6), 1304-1317. https://doi.org/10.1037/a0027407

Carter, T. J., & Gilovich, T. (2014). Getting the most for the money: The hedonic return on experiential and material purchases. In M. Tatzel (Ed.), *Consumption and well-being in*

the material world (pp. 49-62). New York, NY: Springer. https://doi.org/10.1007/978-94-007-7368-4_3

Chancellor, J., & Lyubomirsky, S. (2011). Happiness and thrift: When (spending) less is more. *Journal of Consumer Psychology, 21*(2), 131–138. https://doi.org/10.1016/j.jcps.2011.02.004

Coolidge, F. (2001). *Short form of the Coolidge Axis-II inventory (SCATI): Manual*. Colorado Springs, CO: Psychology Department, University of Colorado.

Coolidge, F. L., Segal, D. L., Cahill, B. S., & Simenson, J. T. (2010). Psychometric properties of a brief inventory for the screening of personality disorders: The SCATI. *Psychology and Psychotherapy: Theory, Research and Practice*, **83**(4), 395– 405.

Cryder, C. E., Lerner, J. S., Gross, J. J., & Dahl, R. E. (2008). Misery is not miserly: Sad and self-focused individuals spend more. *Psychological Science, 19(6*), 525-530. https://doi.org/10.1111/j.1467-9280.2008.02118.x

Dunn, E. W., Aknin, L. B., & Norton, M. I. (2008). Spending money on others promotes happiness. *Science, 319*(5870), 1687-1688. https://doi.org/10.1126/science.1150952

Ealy, C. D., & Lesh, K. (1998*) Our money ourselves: Redesigning your relationship with money*. New York, NY: Amacom.

Fünfgeld, B., & Wang, M. (2009). Attitudes and behaviour in everyday finance: evidence from Switzerland. *International Journal of Bank Marketing, 27(2),* 108-128. https://doi.org/10.1108/02652320910935607

Fenton-O'Creevy, M., & Furnham, A. (2020a). Money attitudes, personality and chronic impulse buying. *Applied Psychology, 69*(4), 1557-1572. https://doi.org/10.1111/apps.12215

Fenton-O'Creevy, M., Furnham, A. (2020b). Personality, ideology and money attitudes as correlates of financial literacy and competence. *Financial Planning Review, 3*(1), e1070. https://doi.org/10.1002/cfp2.1070

Fenton-O'Creevy, M., & Furnham, A. (2021). Financial distress and money attitudes. *Journal of Neuroscience, Psychology, and Economics, 14(3),* 138–148

Fenton-O'Creevy, M., Dibb, S., & Furnham, A. (2018). Antecedents and consequences of chronic impulsive buying. *Psychology and Marketing, 35,* 175-188.

Forman, N. (1987). *Mind over money*. Toronto: Doubleday.

Foster, J. D., Misra, T. A., & Reidy, D. E. (2009). Narcissists are approach-oriented toward their money and their friends. *Journal of Research in Personality, 43(5),* 764-769. https://doi.org/10.1016/j.jrp.2009.05.005

Furnham, A. (1984). Many sides of the coin: The psychology of money usage. *Personality and Individual Differences*, *5*(5), 501-509. https://doi.org/10.1016/0191-8869(84)90025-4

Furnham, A. (1985). Why do people save? Attitudes to, and habits of saving money in Britain. *Journal of Applied Social Psychology, 15,* 354-373. doi:10.1111/j.1559-1816.1985.tb00912.x

Furnham, A. (1996). Attitudinal correlates and demographic predictors of monetary beliefs and behaviours. *Journal of Organizational Behaviour, 17*(4)*,* 375-388. https://doi.org/10.1002/(SICI)1099-1379(199607)17:4<375::AID-JOB767>3.0.CO;2-8

Furnham, A. (1990). *The Protestant work ethic: The psychology of work-related beliefs and behaviours*. London: Routledge.

Furnham, A. (2014). *The New Psychology of Money*. London: Routledge.

Furnham, A. (2020). The personality disorders and money beliefs and behaviours. *Financial Planning Review, 2*(2)*,* e1046. https://doi.org/10.1002/cfp2.1046

Furnham, A. (2021). Just World Beliefs, Personal Success and Beliefs in Conspiracy Theories. *Current Psychology,*

Furnham, A. (2022). The Bright and Dark Side of Personality: The relationship between Personality Traits and Personality Disorders. In: Lusk, D. & Hayes, T. (Eds). *The Good, the Bad, and the Human Dark Side at Work*: New York: SIOP

Furnham, A., & Murphy, T. A. (2019). Money Types, Money Beliefs and Financial Worries: An Australian Study. *Australian Journal of Psychology, 71*(2)*,* 193-199. https://doi.org/10.1111/ajpy.12219

Furnham, A., & Grover, S. (2020a). A new money behaviour quiz. *Journal of Individual Differences, 41*(1)*,* 17-29. https://doi.org/10.1027/1614-0001/a000299

Furnham, A., & Grover, S. (2020b). Correlates of self-estimated intelligence. *Journal of Intelligence. 8*(1), 6. https://doi.org/10.3390/jintelligence8010006

Furnham, A., & Grover, S. (2021). Money Psychology: Beliefs and Behaviours about investing, saving and spending. In J. Grable and S. Chatterjee (Eds.), *Handbook of Personal Finance.* London: De Gruyter.

Furnham, A., & Horne, G. (2021). A facet measure of money madness: A preliminary analyses of a new questionnaire. *Financial Planning Review, 4(3),* e1131. https://doi.org/10.1002/cfp2.113

Furnham, A., Wilson, E., & Telford, K. (2012). The meaning of money: The validation of a short money-types measure. *Personality and Individual Differences*, *52*(6), 707-711. https://doi.org/10.1016/j.paid.2011.12.020

Furnham, A., Richards, S. C., & Paulhus, D. L. (2013). The dark triad of personality: A 10-year review. *Social and Personality Compass, 7*(3), 199–216. https://doi.org/10.1111/spc3.12018

Furnham A., von Stumm S, & Fenton-O'Creevy M. (2014a). Sex differences in money pathology in the general population. *Social Indicators Research, 123*(3), 701-713. https://doi/org/10.1007/s11205-014-0756-x

Furnham, A., von Stumm, S., & Milner, R. (2014b). Moneygrams: Recalled Childhood Memories about Money and Adult Money Pathology. *Journal of Financial Therapy, 5*(1)*,* 40-54. https://doi.org/10.4148/1944-9771.1059

Goldberg, H., & Lewis, R. (1978). *Money Madness.* London: Springwood Books

Harnish, R. J., & Roster, C. A. (2018). The tripartite model of aberrant purchasing: A theory to explain the maladaptive pursuit of consumption. *Psychology & Marketing, 36*(5), 417-430. https://doi.org/10.1002/mar.21159

Iredale, W., Van Vugt, M., & Dunbar, R. I. M. (2008). Showing off in Humans: Male Generosity as a Mating Signal. *Evolutionary Psychology, 6*, 386-392.

Jin, B., & Li, J. (2021). Does spending self-earned money make college students happier? The effect of source of money on purchase happiness. *Current Psychology*, https://doi.org/10.1007/s12144-020-01186-1

Kappes, H., Gladstone, J., & Hershfield, H.(2020) Beliefs about Whether Spending Implies Wealth, *Journal of Consumer Research*, , ucaa060. https://doi.org/10.1093/jcr/ucaa060

Kasser, T. (2011). Can thrift bring well-being? A review of the research and a tentative theory. *Social and Personality Psychology Compass*, *5*, 865-877.

Kasser, T. (2016). Materialistic values and goals. *Annual Review of Psychology, 67,* 489-514.

Klontz, B., Britt, S. L., Mentzer, J., & Klontz, T. (2011). Money beliefs and financial behaviors: Development of the Klontz Money Script Inventory. *Journal of Financial Therapy*, *2*(1), 1-22. https://doi.org/10.4148/jft.v2i1.451

Klontz, B.T., Seay, M.C., Sullivan, P., & Canale, A. (2014). The psychology of wealth: Psychological factors associated with high income. *Journal of Financial Planning, 27*(12)*,* 46-53.

Klontz, B.T. & Britt, S.L. (2012). How clients' money scripts predict their financial behaviors. *Journal of Financial Planning*, 25, 33-43.

Lastovicka, J. L., Bettencourt, L. A., Hughner, R. S., & Kuntze, R. J. (1999). Lifestyle of the tight and frugal: Theory and measurement. *Journal of Consumer Research, 26*(1), 85–98. https://doi.org/10.1086/209552

Lay, A., & Furnham, A. (2019). A new money attitudes questionnaire. *European Journal of Psychological Assessment, 35*(6), 813– 822. https://doi.org/10.1027/1015-5759/a000474

Metcalfe, J.S. (2001) Consumption, preferences, and the evolutionary agenda. *Journal of Evolutionary Economics, 11:* 37-58.

Muruganantham, G., & Bhakat, R. (2013). A review of impulse buying behavior. *International Journal of Marketing Studies, 5*(3)*,* 149-160. https://doi.org/10.5539/ijms.v5n3p149

Matthews, A. (1991). *If I think about money so much, why can't I figure it out? Understanding and overcoming your money complex*. New York, NY: Summit Books.

Okada, E. M. & Hoch, S. J. (2004). Spending time versus spending money. *Journal of Consumer Research, 31*(2), 313-323. https://doi.org/10.1086/422110

Olson, J., & Rick, S. (2017). A Penny Saved Is a Partner Earned: The Romantic Appeal of Savers. *SSRN Electronic Journal*. http://doi.org/10.2139/ssrn.2281344

Paulhus, D.L., Buckels, E.E., Trapnell, P.D., & Jones, D.N. (2020). Screening for dark personalities: The Short Dark Tetrad (SD4). *European Journal of Psychological Assessment* https://doi.org/10.31234/osf.io/2rz3q

Paulhus, D., Gupta, R., & Jones, D. (2021). Dark or Disturbed? Predicting Aggression from the Dark Tetrad and Schizotypy. *Aggressive Behaviour. Under review*

Prelec, D., & Loewenstein, G. (1998). The red and the black: Mental accounting of savings and debt. *Marketing Science, 17(1):* 4-28.

Rick, S. (2018). Tightwads and spendthrifts: An interdisciplinary review. *Financial Planning Review, 1*(1-2), e1010. https://doi.org/10.1002/cfp2.1010

Rick, S. (2014). Tightwads, spendthrifts, and the pain of paying: New insights and open questions. In S. Preston, M. Kringelbach, & B. Knutson (Eds.), *The Interdisciplinary Science of Consumption* (pp. 147–161). Cambridge, MA: MIT Press. https://doi.org/10.7551/mitpress/9780262027670.003.0008

Rick, S. I., Cryder, C. E., & Lowenstein, G. (2008). Tightwads and spendthrifts. *Journal of Consumer Research, 34*(6), 767–782. https://doi.org/10.1086/523285

Rick, S., Small, D. A., & Finkel, E. J. (2011). Fatal (fiscal) attraction: Spendthrifts and tightwads in marriage. *Journal of Marketing Research, 48(2),* 228–237. https://doi.org/10.1509/jmkr.48.2.228

Romal, J. B., & Kaplan, B. J. (1995). Difference in self-control among spenders and savers. *Psychology: A Journal of Human Behavior, 32*(2), 8–17.

Sabri, M. F., Abdullah, N., Zenhendel, M., & Ahmad, S. Y. (2018). Moderation effect of gender on financial literacy, money attitude, financial strains and financial capability. *Malaysian Journal of and Family Economics, 20(1),* 83-101.

Santini, F. D. O., Ladeira, W. J., Vieira, V. A., Araujo, C. F., & Sampaio, C. H. (2018). Antecedents and consequences of impulse buying: a meta-analytic study. *RAUSP Management Journal, 54*(2), 178-204. https://doi.org/10.1108/RAUSP-07-2018-003

Santos, E., & Campos, A.F. (2019) Symbolic Uses of Money and Disorders of Financial Consumption: State-of-the-art and Research Proposal. *Journal of Psychiatry and Behavioural Therapy, 2*(1), 33-36.

Tantia P., White S., & Wright J. (2014) A Behavioral Economics Perspective on Innovations in Savings Programs. In: Cramer R., Shanks T.R.W. (eds) *The Assets Perspective.* Palgrave Macmillan, New York. https://doi.org/10.1057/9781137384881_8

Tatzel M. (2014) Value Seekers, Big Spenders, Non-Spenders, and Experiencers: Consumption, Personality, and Well-Being. In: Tatzel M. (Eds.) *Consumption and Well-Being in the Material World* (pp. 75-108). Dordrecht: Springer. http://doi.org/10.1007/978-94-007-7368-4_5

Thaler, R,H, & Benartzi, S. (2004). Save More Tomorrow: Using behavioral economics to increase employee saving. *Journal of Political Economy, S164-87*

Thibault Landry, A., Kindlein, J., Trépanier, SG. *et al.* (2016). Why individuals want money is what matters: Using self-determination theory to explain the differential relationship between motives for making money and employee psychological health. *Motivation and Emot*ion, **40,** 226–242 (2016). https://doi.org/10.1007/s11031-015-9532-8

Tobol, Y., Siniver, E., & Yaniv, G. (2020) Do tightwads cheat more? Evidence from three field experiments. *Journal of Economic Behavior & Organization, 180*(C)*,* 148-158. https://doi.org/10.1016/j.jebo.2020.10.003

Von Stumm, S., Fenton-O'Creevy, M., & Furnham, A. (2013). Financial capability, money attitudes and socioeconomic variables. *Personality and Individual Differences, 54*(3), 344-349. https://doi.org/10.1016/j.paid.2012.09.019

Zaleskiewicz, T., Gasiorowska, A., & Kesebir, P. (2013). Saving Can Save from Death Anxiety: Mortality Salience and Financial Decision-Making. *PLoS ONE 8(11):* e79407. doi:10.1371/journal.pone.0079407

Table 1. Means, SDs, and correlations between spender/saver ratings, religion, politics, sex and Big Five traits.

	Mean	SD	Spender/Saver	Religion	Politics	Sex	Extraversion	Agreeableness	Conscient.	Emotional Stability
Saver/Spender	5.52	2.12								
Religion	1.53	2.30	.02							
Politics	5.66	1.83	-.05	-.10*						
Sex	1.50	.50	-.02	.12**	.01					
Extraversion	3.36	1.50	-.23***	.13**	-.03	.12**				
Agreeableness	4.90	1.20	.01	.07	.06	.16***	-.01			
Conscientiousness	5.05	1.30	.28***	.06	-.23***	.04	-.03	.19***		
Emotional Stab.	4.12	1.45	.12**	.02	-.11*	-.17***	.12**	.17***	.35***	
Openness	4.78	1.19	-.18***	.09	.12**	.08	.39***	.09*	.07	10*

p < .001***, p < .01**, p < .05*

Table 2. Results of regression with sex, religion, politics and the Big Five.

	B	SE	Beta	t
Sex	.107	.187	.025	0.573
Religion	.040	.039	.043	1.005
Politics	.046	.051	.040	0.903
Extraversion	-.270	.068	-.185	-3.984***
Agreeableness	-.106	.077	-.060	-1.363
Conscientiousness	.452	.076	.277	5.967***
Emotional Stability	.114	.068	.078	1.669
Openness	-.239	.082	-.134	-2.907**
Adjusted R^2		.138		
F		10.901		
p		.000		

p < .001***, p < .01**, p < .05*

Table 3. Means, SDs and correlations between spender/saver ratings, sex, religion, politics, ratings of security, power, love, freedom and FK total.

	Mean	SDs	Spender/Saver	Sex	Religion	Politics	Security	Power	Love	Freedom	FK Total
Spender/Saver	5.49	2.15									
Sex	1.5	.50	-.02								
Religion	1.43	2.20	.02	.12**							
Politics	5.66	1.83	-.05	.01	-.10*						
Security	59.95	9.94	.28***	.12**	.04	-.08					
Power	52.84	10.35	-.05	-.13**	.04	-.18***	.40***				
Love	41.77	8.95	-.23***	.05	.06	-.08	.33***	.59***			
Freedom	55.32	7.83	-.25***	-.05	-.05	.09	.24***	.48***	.38***		
FK Total	53.72	11.07	.52***	-.10*	.03	-.13**	.15**	.05	-.16***	-.25***	

*Spender 1 to Saver 9   p < .001***, p < .01**, p < .05**

Table 4. Results of regression with sex, religion, politics, ratings of security, power, love, freedom and FK total

	B	*SE*	Beta	*t*
Sex	-.065	.159	-.015	-0.408
Religion	.001	.033	.001	0.039
Politics	.019	.043	.016	0.435
Security	.070	.009	.328	8.059***
Power	-.001	.011	-.003	-0.049
Love	-.050	.011	-.212	-4.582***
Freedom	-.039	.012	-.143	-3.277**
FK Total	.077	.008	.400	10.151***
Adjusted R^2		.374		
F		37.795		
p		.000		

p < .001***, p < .01**, p < .05*

Table 5. Means, SDs and correlations between spender/saver ratings, sex, religion, politics, Machiavellianism, Narcissism, Psychopathy and Sadism scores.

	Mean	SDs	Saver/Spender	Sex	Religion	Politics	Mach	Narc	Psych	Sadism
Spender/Saver	5.79	2.14								
Sex	1.48	.50	-.04							
Religion	2.24	2.41	.07	.03						
Politics	6.02	1.67	-.10*	.05	-.35***					
Mach	41.42	9.40	.09	-.13**	.05	-.04				
Narc	31.06	11.22	-.03	-.20***	.14**	-.07	.44***			
Psych	22.70	10.72	-.19***	-.18***	.01	.07	.26***	.57***		
Sadism	26.36	12.21	-.07	-.36***	-.08	-.06	.43***	.42***	.59***	

p < .001***, p < .01**, p < .05*

Table 6. Results of regression with sex, religion, politics, Machiavellianism, Narcissism, Psychopathy and Sadism scores.

	B	*SE*	Beta	*t*
Sex	-.246	.221	-.057	-1.110
Religion	.025	.047	.028	0.526
Politics	-.091	.067	-.072	-1.365
Mach	.030	.013	.131	2.309*
Narc	.008	.012	.040	0.620
Psych	-.047	.014	-.238	-3.478**
Sadism	-.004	.012	-.024	-0.355
Adjusted R^2		.052		
F		4.230		
p		.000		

p < .001***, p < .01**, p < .05*

Table 7. Means, SDs, and correlations between spender/saver ratings, sex, age, religion, politics, and the three PD clusters

*p < .001***, p <. 01**, p < .05*

	Mean	SD	Spender/Saver	Sex	Age	Religious	Politics	ClusterA	ClusterB
Saver/Spender	1.63	.48							
Sex	1.51	.50	.00						
Age	39.88	11.62	.05	-.02					
Religious	2.29	2.91	.05	.08	.13*				
Politics	5.62	2.42	-.04	.03	-.15**	-.17**			
ClusterA	27.59	7.00	-.07	.01	-.19***	.03	-.06		
ClusterB	34.75	7.41	-.17**	-.05	-.27***	.04	.04	.54***	
ClusterC	30.26	6.70	-.04	.08	-.24***	-.06	.14**	.73***	.516***

1=Spender, 2=Saver

Table 8. Regression of demographic, ideological and PD variables.

	B	*SE*	Beta	*t*
Sex	-.009	.057	-.010	-0.166
Age	.000	.003	-.003	-0.056
Religious	.008	.010	.051	0.849
Politics	-.009	.012	-.045	-0.705
Cluster A	-.004	.006	-.058	-0.624
Cluster B	-.014	.005	-.208	-2.870**
Cluster C	.010	.007	.145	1.525
Adjusted R^2		.015		
F		1.614		
p		.131		

*p < .001***, p < .01**, p < .05*

Table 9. Means, SDs and correlations between spender/saver ratings, religion, politics, attractiveness, health, IQ, EQ, driver, risk taker, physical health, sex drive, listener and depression scores

	Mean	SD	Spd/Sav	Sex	Religion	Politics	Attract.	Health	IQ	EQ	Driver	Risk Taker	Phys. Health	Sex Drive	Listener	Depression
Saver/Spend	5.56	2.21														
Sex	1.50	.50	-.11***													
Religion	2.23	2.76	.07**	.03												
Politics	5.95	1.83	-.05*	.15***	-.25***											
Attractive.	59.51	19.51	.09***	-.06*	.08**	.04										
Heath	69.00	19.78	.14***	-.10***	.10***	.01	.32***									
IQ	73.22	13.74	.09***	-.09***	.08**	.07**	.31***	.37***								
EQ	69.00	20.31	-.01	.09***	.08**	.07**	.24***	.29***	.37***							
Driver	5.05	2.56	-.05*	.05*	-.07**	.07**	-.10***	-.14***	-.16***	-.12***						
Risk Taker	5.29	2.24	.03	.05*	-.05*	.03	-.09***	-.11***	-.15***	-.09***	.41***					
Phys. Health	4.76	2.00	-.06*	-.02	-.04	.01	-.17***	-.41***	-.17***	-.13***	.25***	.21***				
Sex Drive	4.96	2.21	-.05	.12***	-.00	.00	-.14***	-.14***	-.12***	-.11***	.18***	.20***	.31***			
Listener	3.68	2.30	.04	-.15***	-.00	-.05	.000	-.01	-.06*	-.16***	.15***	.05	.38***	.19***		
Depression	4.70	2.35	.07**	-.06*	.11***	-.10***	.11***	.20***	.14***	.13***	-.18***	-.09***	-.25***	-.08**	.05	

p < .001***, p < .01**, p < .05*

Table 10. Results of regression with sex, religion, politics, attractiveness, health, IQ, EQ, driver, risk taker, physical health, sex drive, listener and depression scores

	B	SE	Beta	t
Sex	-.366	.115	-.083	-3.182**
Religion	0.39	.021	.049	1.878
Politics	-.029	.032	-.024	-0.929
Attractiveness	.005	.003	.040	1.492
General Health	.012	.003	.110	3.616***
IQ	.008	.005	.048	1.662
EQ	-.006	.003	-.058	-2.077*
Driver	-.034	.024	-.040	-1.428
Risk Taker	.071	.027	.072	2.593**
Physical Health	-.005	.035	-.004	-0.128
Sex Drive	-.026	.027	-.026	-0.987
Listener	.031	.027	.032	1.152
Depression	.023	.025	.024	0.918
Adjusted R^2		.038		
F		5.826		
p		.000		

p < .001***, p < .01**, p < .05*

Table 11. Means, SDs, and correlations between spender/saver ratings, religion, politics, sex and age and self-ratings

		Mean	SD	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
1	Spender/saver	4.50	2.15																	
2	Sex	1.50	0.50	.02																
3	Age	40.78	8.99	.02	-.07*															
4	no. of Children	1.00	1.16	-.05	-.03	-.33***														
5	Years of Education	7.38	5.14	.10***	.03	.07*	.07*													
6	Position at work	3.43	0.80	-.01	.05	-.15***	-.08**	-.02												
7	Religion	1.67	2.47	.00	.09**	.06*	.15***	.11***	-.01											
8	Ambitious	5.71	2.20	-.03	-.05	-.16**	.00	.03	-.26***	.20***										
9	Politics	5.56	1.79	-.09**	.05	-.15**	-.15***	.01	.08*	-.15***	-.10***									
10	Physical Health	70.99	16.96	.15***	-.02	-.06*	-.02	-.00	-.03	.05	.13***	.02								
11	IQ	70.63	12.80	.03	-.07*	.00	.01	.01	-.11***	.02	.25***	.02	.33***							
12	EQ	69.67	17.79	-.07*	.16***	-.02	.04	-.03	-.06	.13***	.23***	.01	.25***	.33***						
13	Stress levels	46.38	28.52	-.04	.11***	-.08**	-.07*	.02	.05	.02	-.02	.07*	-.12***	-.04	-.01					
14	Credit/debit cards	2.69	1.61	-.01	-.01	-.03	-.06*	.00	-.07*	.00	.01	-.00	-.00	.08**	.01	.04				
15	Entrepreneurial	3.86	2.29	.08**	-.09**	.04	.04	-.01	-.38***	.10***	.36***	-.07*	.08**	.25***	.11***	.02	.06*			
16	Leadership role at school	1.67	0.47	.02	-.06*	.12***	.02	-.01	.10***	-.08**	-.18***	-.05	-.03	-.13***	-.15***	-.02	-.09**	-.15***		
17	Team Player	1.09	0.29	.06	-.04	.11***	-.04	.01	-.02	-.09**	-.18***	.01	-.07*	-.03	-.18***	.02	.00	-.01	.11***	
18	Property ownership	1.35	0.48	-.13***	-.03	-.21***	-.16***	-.02	.09**	-.03	-.02	.12***	-.12***	-.09**	-.06	.06	-.05	.01	-.01	.06*

p < .001***, p <. 01**, p < .05*

Table 12. Regressions of the variables onto spender-saver

	B	SE	Beta	t
Sex	.197	.130	.046	1.518
Age	-.002	.008	-.008	-0.245
No. of Children	-.159	.058	-.086	-2.733**
Years of Education	.043	.012	.102	3.507***
Position at work	.074	.087	.028	0.852
Religion	-.004	.027	-.005	-0.162
Ambitious	-.069	.033	-.070	-2.057*
Politics	-.113	.036	-.094	-3.122**
Physical Health	.019	.004	.151	4.790***
IQ	-.001	.006	-.006	-0.175
EQ	-.011	.004	-.094	-2.876**
Stress levels	-.003	.002	-.035	-1.179
Credit/debit cards	-.024	.039	-.018	-0.612
Entrepreneurial	.114	.032	.122	3.622***
Leadership role	.037	.138	.008	0.267
Team Player	.306	.228	.040	1.343
Property ownership	-.563	.137	-.125	-4.116***
	Adjusted R^2		.069	
	F		5.853	
	p		.000	

$p < .001$***, $p < .01$**, $p < .05$*