



Low self-concept clarity reduces subjective well-being: the mediating effect of materialism

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Abstract

Knowing oneself and the pursuit of well-being are the eternal themes of human society. Accordingly, the link between self-concept and subjective well-being (SWB) has been a hot topic of research in psychology. This study aims to examine the effect of low self-concept clarity (SCC) on SWB and the mediating role of materialism from the perspective of self-uncertainty, so as to enrich the research in related fields. In Study 1, we conducted a questionnaire survey of 531 adults to explore the relationship between low SCC, materialism, and SWB at the trait level. In Study 2, we experimentally manipulated low SCC and examined its effect on SWB and the mediating role of materialism. The results of the two studies showed that low SCC reduced SWB, and materialism played a mediating role in this relationship. This study reveals the internal mechanism of the influence of low SCC on SWB and enriches the related research on materialism.

Keywords Self-concept clarity · Materialism · Subjective well-being · Self-concept

Introduction

Self-concept clarity (SCC) is a structural component of self-concept and is described as “the extent to which an individual’s self-concept is confidently defined, internally consistent, and temporally stable” (Campbell et al., 1996). The link between SCC and subjective well-being (SWB) is an enduring concern. Notably, many earlier studies on the link between SCC and well-being have examined SCC as a positive psychological resource, exploring its buffering role in the impact of stressful or uncertain life events on SWB (Alessandri et al., 2021; LeeFlynn et al., 2011). In fact, low SCC reflects a sense of self-uncertainty (Martin et al., 2019), which is itself a source of stress and triggers a series of emotional and cognitive responses (Arkin et al., 2013). Considering that SWB is a comprehensive indicator of one’s emotional experiences in life and cognitive assessment of one’s life’s overall quality, whether low SCC directly affects one’s SWB is a question worth exploring.

Self-uncertainty is distasteful and drives individuals to take certain measures to cope with it (Hogg, 2006). The uncertainty-reactive approach motivation theory suggests that people recreation to self-uncertainty by emphasizing beliefs about other elements of the self (e.g., values, identity, and goals) (McGregor et al., 2001). For example, self-uncertainty caused by goal conflict predicts ideological extremism (Nash et al., 2011). In today’s society, materialistic values are prevalent, and the pursuit of material possessions holds great significance in life. Previous study findings have revealed that individuals with low SCC typically have a strong tendency toward materialism (Shrum et al., 2022), and materialism is often thought to reduce individuals’ SWB (Dittmar et al., 2014). Thus, do low SCC and SWB have a relationship that is mediated by materialism? The present study intends to explore these questions through both correlational and experimental research.

Low SCC and SWB

The entropy model of uncertainty in psychological systems suggests that conflicting perceptual or behavioral experiences trigger uncertainty and are neurophysiologically associated with emotional distress (Hirsh et al., 2012). Hence, low SCC characterizes a sense of self-uncertainty that typically produces negative emotions, induces feelings

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of anxiety and stress, and reduces individuals' SWB (Hanley & Garland, 2017). Empirical research provides support for this. SCC has been shown to positively predict SWB in longitudinal studies, with people who have low SCC typically reporting lower levels of SWB (Xiang et al., 2023). Further, Brown and Matsuo (2020) found through a cross-cultural experimental study that self-inconsistency (considered an aspect of low self-concept clarity) induced through the writing paradigm reduced individuals' positive emotional experiences, regardless of whether they were American or Japanese participants. Research from the field of cognitive neuroscience also provides support, such as Xiang et al. (2022), who found that the fractional amplitude of low-frequency fluctuations in the right precentral gyrus (PreCG) and PreCG-IPL (left inferior parietal lobe) connectivity strength may be related to emotional well-being through SCC. In addition, recent intervention research on SCC shows that individual life satisfaction improves as SCC increases. (Van der Aar et al., 2022). Taken together, low SCC, manifested by self-uncertainty, may be damaging to SWB. Hence, we hypothesized that low SCC reduces SWB.

Indirect effects of materialism

From a functionalist perspective, materialism is regarded as “the extent to which individuals attempt to engage in the construction and maintenance of the self through the acquisition and use of products, services, experiences, or relationships that are perceived to provide desirable symbolic value” (Shrum et al., 2014). According to the above definition, turning to materialism to construct self-concept is a coping measure individuals may adopt when they are troubled by low SCC characterized by a feeling of self-uncertainty. This is supported by empirical studies, such as those showing that people with low SCC engage in more conspicuous consumption and luxury purchase behaviors (Sanyal et al., 2021). Further, numerous correlational studies have found a positive link between low SCC and materialism (Fazli-Salehi et al., 2021; Noguti & Bokeyar, 2014). Koller et al. (2013) analyzed a database of more than 1,000 participants using finite mixture modeling and discovered that people with low SCC had higher materialism. In particular, Martin et al. (2019) proposed and verified that low SCC can explain age-related changes in materialism from the perspective of self-uncertainty, suggesting that materialism is a way for individuals to cope with low SCC. Thus, adding to earlier research, we propose that low SCC leads to high materialism.

However, existing evidence indicates that materialism may not be an adaptive response to low SCC, as materialism can further reduce an individual's SWB. The goal contents theory suggests that materialism reduces SWB by overreaching for external goals at the expense of ignoring internal

goals (Kasser & Ryan, 1996). This theory is supported by numerous empirical studies. For example, experimentally induced materialism (e.g., viewing luxury goods pictures) led to more negative emotions and less positive emotions (Bauer et al., 2012). Further, a meta-analysis assessing 753 effect sizes from 259 independent samples consistently concluded that materialism negatively predicts SWB (Dittmar et al., 2014). A meta-analysis of experimental research on the link between materialism and well-being also suggested that the priming of materialism in many ways will reduce the SWB of individuals (Moldes & Ku, 2020). The latest research also shows that people's materialism increases when they face the COVID-19 pandemic threat, which in turn impairs SWB (Zheng et al., 2021). To sum up, we suggest that materialism decreases SWB. Because we assume that low SCC leads to high materialism, it makes sense to anticipate that low SCC could hinder SWB due to the mediating effect of materialism. Therefore, this study proposes a second hypothesis: materialism mediates the link between low SCC and SWB.

Present research

Although researchers have examined the link between SCC and SWB, few have explored whether and why SCC affects SWB from the perspective of self-uncertainty. Therefore, the present research focused on whether low SCC, characterized by a sense of self-uncertainty, directly affects SWB and whether it does so through the mediating role of materialism. Specifically, we conducted both correlational and experimental research to verify and extend prior findings.

Study 1

Method

Participants and procedure

Researchers argued that a sample size of at least 250 is needed to ensure that a robust correlation between variables is reached (Schönbrodt & Perugini, 2013). We recruited as many participants as possible based on this baseline of 250, and ultimately, using convenience sampling method, we conducted a questionnaire survey of 543 adults. After eliminating questionnaires with regular or consistent responses, 525 valid questionnaires were obtained. Among the participants, 111 (21.14%) were men and 414 (78.86%) were women; 159 (30.29%) were urban residents and 366 (69.71%) were rural dwellers; 464 (88.38%) were Han Chinese and 61 (11.62%) were ethnic minorities. The participants' average age was 37.80 years ($SD = 10.53$).

The author's university's Psychological Research Ethics Committee gave its approval to the research project. The questionnaire survey was conducted during the break time of a large conference held from July 5, 2022, to July 8, 2022. Before participating in the survey, oral disclosure of the pertinent study details and a request for written consent were made to the participants. Subsequently, the participants completed the questionnaire survey online through the "wjx" platform.

Measures

Low SCC

The Self-concept Clarity Scale was employed to measure low SCC (Campbell et al., 1996), and it has 12 items. 10 of the 12 items on the original scale were reverse-scored using a 7-point Likert scale (1 = "strongly disagree" to 7 = "strongly agree"). To facilitate the elaboration of the study's concerns from the perspective of self-uncertainty, the reverse-scoring items in the original scale were scored positively, and the positive-rated items were reverse-scored, so as to construct low SCC and characterize uncertainty. In the original study, the scale's Cronbach's α coefficient was 0.86; in this study, it was 0.85.

Materialism

A modified Chinese version of Richins and Dawson's (1992) Material Values Scale was employed to assess how materialistic a person was (MVS; Li & Guo, 2009), and it has 13 items. A 5-point Likert scale was used (1 = "not at all characteristic of me" to 5 = "entirely characteristic of me"), and 5 of the 13 items were reverse scored. In the original study, the scale's Cronbach's α coefficient was 0.79; in this study, it was 0.73.

SWB

In this study, SWB as a composite indicator was quantified using the Satisfaction with Life Scale (SWLS) and the Positive and Negative Affect Scale (PANAS) (Diener et al., 1985; Watson et al., 1988). The SWLS has five items and is scored on a 7-point Likert scale (1 = "strongly disagree" to 7 = "strongly agree"). In the original study, the scale's Cronbach's α coefficient was 0.87. The PANAS has 20 items to describe the emotional experience of the last few weeks, with 10 items each for the positive and negative affect dimensions, scored on a 5-point Likert scale (1 = "not at all" to 5 = "extremely"). In the original study, the scale's Cronbach's α coefficients ranged from 0.86 to 0.90 for the positive affect dimension and from 0.84 to 0.87 for the negative affect dimension. The Cronbach's α coefficients

for the SWSL and the positive and negative affect dimensions of PANAS were 0.87, 0.86, and 0.88 in the current study, respectively.

According to previous research (Thrash et al., 2010), a standard score of life satisfaction plus a standard score of positive emotions minus a standard score of negative emotions was used as a score of SWB.

Data analysis

Descriptive statistics and correlation analysis of the data were done using SPSS 27.0. The PROCESS 4.1 macro's Model 4 was used to implement mediation analyses (Hayes, 2017).

Results

Common method bias

As the study collects data in a self-reported manner, there may be a risk of common method bias. To mitigate this bias, the study emphasizes anonymity, confidentiality, and data limited to academic research during the data collection. The results of the Harman single-factor test found that there was no significant common method bias in our study since the interpretation rate of the first common factor was 20.71%, a rate that was below the cutoff point of 40% (Zhou & Long, 2004).

Descriptive statistics and correlations

Table 1 shows that low SCC is positively correlated with materialism ($r=0.38$, $p<0.001$) and negatively correlated with SWB ($r=-0.27$, $p<0.001$), and materialism is negatively correlated with SWB ($r=-0.28$, $p<0.001$). It shows that individuals with low SCC usually have higher materialism and lower SWB.

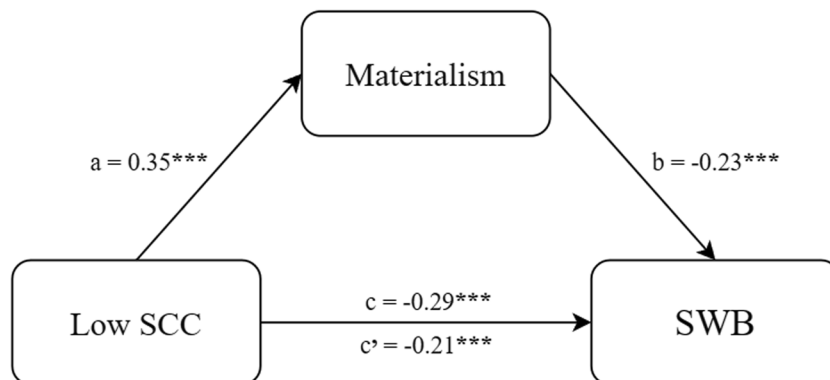
Mediation analyses

We opted for Model 4 in the PROCESS 4.1 macro for SPSS 27.0 (Hayes, 2017) to test the mediation hypothesis. Taking gender and age as the control variables and low SCC, materialism, and SWB as independent, mediating, and dependent variables, respectively, the results (see Fig. 1) found a significant direct effect of low SCC on SWB ($\beta=-0.21$, $SE=0.05$, 95% CI = [-0.31, -0.12]) and a significant mediating effect of materialism between low SCC and SWB ($\beta=-0.08$, $SE=0.02$, 95% CI = [-0.12, -0.04]). The direct effect (-0.21) and mediating effect (-0.08) accounted for 72.41% and 27.59% of the total effect (-0.29), respectively. The

Table 1 Means, standard deviations, and correlation coefficients in Study 1

	<i>M</i>	<i>SD</i>	1	2	3	4
1. Gender	1.79	0.41	-			
2. Age	37.80	10.53	-0.28***	-		
3. Low SCC	3.52	1.05	0.05	-0.30***	-	
4. Materialism	2.89	0.52	-0.01	-0.20***	0.38***	-
5. SWB	-0.04	1.75	0.01	-0.01	-0.27***	-0.28***

N = 525; ****p* < 0.001; Gender: 1 = men, 2 = women

Fig. 1 Materialism mediates the effect of low SCC on SWB in Study 1. Note: Standardized coefficient displayed

results show that materialism plays a mediating role between low SCC and SWB, verifying both hypotheses.

Discussion

Study 1 used a correlational design and found that low SCC negatively predicted SWB, with materialism playing a partially mediating role. However, the correlational study did not yield a causal relationship. To confirm the above mediating model's causal relationship, Study 2 employed an experimental design.

Study 2

Method

Participants

Based on a G*Power analysis (Faul et al., 2007), this study required a minimum of 144 participants to identify a medium effect size ($\eta_p^2 = 0.06$) with a power of 0.85 ($\alpha = 0.05$). Through the snowball sampling method on the online social network, we enrolled 167 college students from two universities in Guangxi Zhuang Autonomous Region and Henan Province. The entire sampling process lasted six days, from August 19, 2022, to August 24, 2022. After excluding 16 participants who did not complete the writing task as required by the instructions (for example, for participants in the low SCC condition, there was no description of the

conflict and confusion that they felt), 151 valid participants were selected, including 63 (41.72%) males and 88 (58.28%) females; 54 (35.76%) urban dwellers and 97 (64.24%) rural residents; 14 (9.27%) ethnic minorities and 137 (91.73%) Han Chinese, averaging 22.74 years old ($SD = 2.80$). Participants were placed at random to one of two conditions: low SCC (74 participants) or high SCC (77 participants).

Procedure

Using the online experiment method, after receiving the document of informed consent signed by the participants, they were randomized via the “wjx” platform to low and high SCC conditions. By requiring the participants to write down their two conflicting (versus coordinating) aspects of self-concept, their SCC was manipulated (Jiang et al., 2020). To make it easier for participants to comprehend the demands of the writing task, we made minor modifications to the instructions used by Jiang et al. (2020). Specifically, the instructions for the low SCC condition are: “Self-concept is multidimensional and consists of personality, attitudes, beliefs, values, etc. Sometimes people may feel that different aspects of their self-concept conflict with each other (e.g., a person is both lazy and ambitious), which would make them confused about who they are. Please describe two aspects of your self-concept that conflict with each other in the following space: You have to describe what they are, how you feel the two conflict with each other, and the confusion that the conflict brings to you.” Accordingly, participants in the high SCC condition were asked to describe the coherence

of the two aspects of their self-concept and the clarity that this coherence gave them. Their materialism level and SWB were measured after verification of the manipulation results. Finally, the participants filled in demographic data such as gender and age.

Pre-experiment

We verified the effectiveness of writing tasks to manipulate low SCC through pre-experiments. After providing informed consent, a total of 57 undergraduates from a university in Guangxi Zhuang Autonomous Region (different from the formal experimental samples) participated in the pre-experiment. Five of them did not complete the writing task carefully as required by the instructions, and 52 valid participants were obtained, including 44 (84.62%) females and 8 (15.38%) males, 19.07 years old on average ($SD = 0.85$). Randomly, 26 participants were placed in the condition of low SCC, and another 26 were placed in the condition of high SCC. The pre-experiment used six state-biased items from the Self-Concept Clarity Scale to verify the effectiveness of low SCC clarity manipulation (Ayduk et al., 2009). The Cronbach's α coefficient of these six items in the pre-experiment was 0.71. Independent sample t -test results found that participants in the low SCC condition had lower SCC ($M = 2.13$, $SD = 0.55$) than those in the high SCC condition ($M = 2.79$, $SD = 0.66$): $t(50) = 3.89$, $p < 0.001$, $d = 1.09$, $BF_{10} = 86.61$). This demonstrated the effectiveness of the low SCC manipulation.

Measures

Materialism

The classic forest-management games were used to measure individual materialism (Kasser & Sheldon, 2000). Participants were instructed to envision themselves in charge of a timber company in a competitive environment, and three items were used to measure the materialistic tendencies in the conflict situation between profitability and environmental protection: "How fast would you advocate that the company cut down trees"; "To what extent would you like to be more profitable than other companies"; and "How many trees do you plan to cut down in the first year". Because of the inconsistent scale of measurement of the three items, the scores of individuals on the three test items were standardized and summed as an indicator of materialism. The Cronbach's α coefficient of these three items in this study was 0.76.

SWB

The synthetic scoring method of SWB and the life satisfaction measure were the same as those used in Study 1.

Positive and negative affect were measured using the International PANAS Short Form (I-PANAS-SF) (Thompson, 2007). The I-PANAS-SF has 5 items for each positive affect dimension and negative affect dimension and is graded on a 5-point Likert scale (1 = "not at all" to 5 = "extremely"). The SWSL and positive and negative affect dimensions of I-PANAS-SF in our study had Cronbach's α coefficients of 0.91, 0.72, and 0.85, respectively.

Data analysis

Same as in Study 1.

Results

Independent sample t -test results revealed that materialism in the low SCC condition ($M = 0.63$, $SD = 2.48$) was significantly higher than that in the high SCC condition ($M = -0.37$, $SD = 2.18$), $t(149) = -2.61$, $p = 0.010$, $d = 0.43$, $BF_{10} = 3.92$. The SWB of the low SCC condition ($M = -0.82$, $SD = 2.11$) was significantly lower than that in the high SCC condition ($M = 0.47$, $SD = 2.24$), $t(149) = 3.64$, $p < 0.001$, $d = 0.60$, $BF_{10} = 65.43$. Materialism and SWB have a significant negative correlation ($r = -0.47$, $p < 0.001$).

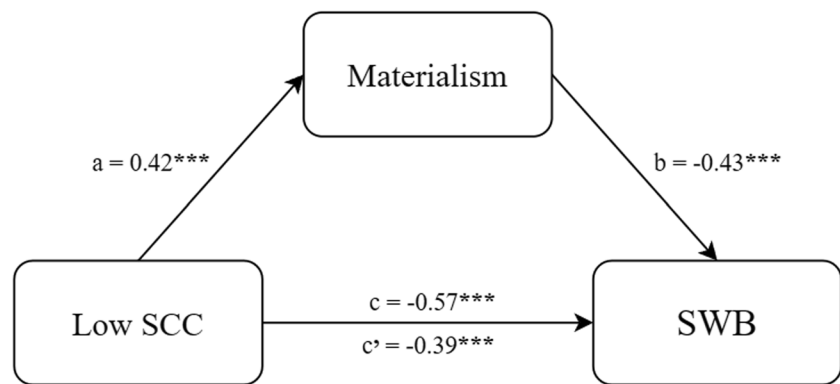
The low SCC condition was coded as 1 (experimental condition), while the high SCC condition was coded as 0 (control condition). Model 4 in the PROCESS 4.1 macro for SPSS 27.0 (Hayes, 2017) was used to test the mediating role of materialism between low SCC and SWB. The results (see Fig. 2) found a significant direct effect of low SCC on SWB ($\beta = -0.39$, $SE = 0.33$, 95% CI = [-1.53, -0.24]) and a significant mediating effect of materialism between low SCC and SWB ($\beta = -0.18$, $SE = 0.08$, 95% CI = [-0.35, -0.04]). The direct effect (-0.39) and mediating effect (-0.18) accounted for 68.42% and 31.58% of the total effect (-0.57), respectively. It indicates that materialism mediates the link between low SCC and SWB, verifying both hypotheses.

We repeated the analyses once more, including age and gender as covariates. The results were largely consistent.

Discussion

In Study 2, low SCC was manipulated using an expressive writing paradigm (Jiang et al., 2020), which provided more powerful support for the mediating role of materialism between low SCC and SWB. The findings demonstrated that participants in the low SCC condition exhibited higher materialism and lower SWB than those in the high SCC condition. That is to say, when individuals are in a state of low SCC, they are more inclined to be materialistic, which will further reduce SWB.

Fig. 2 Materialism mediates the effect of low SCC on SWB in Study 2. Note: Standardized coefficient displayed



General discussion

The current study explored whether and how low SCC affects SWB from the perspective of self-uncertainty. Through two progressive studies (correlational and experimental), we found that low SCC reduces SWB and that materialism partially mediates this relationship.

Through correlational and experimental studies, we explored the impact of trait- and state-low SCC on SWB. The results consistently suggested that low SCC reduces SWB. This finding is in keeping with earlier research findings (Brown & Matsuo, 2020) and the self-discrepancy theory put forward by Higgins, (1987), which contends that self-conflicts or self-inconsistencies can lead to emotional problems and reduce SWB. Regarding the exploration of the link between SCC and SWB, researchers took different perspectives in earlier studies. First, SCC can be regarded as a psychological resource that serves as a protective factor when individuals face stressful or uncertain events (e.g., the outbreak of COVID-19), facilitating more adaptive responses, which in turn maintain or enhance one's SWB (LeeFlynn et al., 2011; Alessandri et al., 2021). Second, the contribution of SCC to SWB can also be understood in terms of basic psychological need satisfaction. This is because individuals with high SCC have better decision-making performance (Uğurlar & Wulff, 2022), higher levels of commitment and relationship satisfaction (Parise et al., 2019), and are less inclined to seek external informational support (Campbell et al., 1996), which will increase one's level of SWB through the realization of competence, relationship, and autonomy needs, respectively. The present study takes the perspective of self-uncertainty and suggests that low SCC reflects a sense of self-uncertainty. As an uncomfortable or even aversive self-perception, self-uncertainty often induces anxiety and stress and even threatens the meaning of existence (Martin et al., 2019; Arkin et al., 2013). Therefore, low SCC reduces SWB.

The current study proposes and validates for the first time that materialism mediates the link between low SCC and SWB. This finding supports the empty self theory, which

describes a dysfunctional version of the self that seeks external yet ineffectual sources of gratification, like materialistic pursuits, in an effort to make up for their internal flaws or avoid the aversive repercussions of introspection (Cushman, 1990). This is because maintaining a positive self-evaluation and a consistent self-concept are important intrinsic human motivations (Choi et al., 2019), and material goods can serve as an extension of the self (Belk, 1988). According to the theory of symbolic self-completion (Wicklund & Gollwitzer, 1981), people seek identity-related material goods to signal their identity to others. Especially when faced with an identity threat, individuals compensate for this threat indirectly through consumption and exaggerate the value of identity-related material goods (Mandel et al., 2017). As a result, it is common for individuals to believe that by purchasing and using specific goods, they can serve to repair their self-image and compensate for deficiencies in self-perception (Sivanathan & Pettit, 2010; Gao et al., 2009). In fact, given the constantly shifting meaning of material goods and the tenuous relationship between material goods and the self, relying on tangible resources to construct self-concept is inherently flawed, and it can result in an unstable and unconfident self-concept, further increasing self-uncertainty and thus decreasing SWB (Richins, 2017). Furthermore, our study found that materialism mediates the relationship between SCC and materialism. Although it has also been found that materialism does not necessarily reduce SWB (Dittmar et al., 2014; Zheng et al., 2021), But studies on the link between materialism and well-being need to consider the motivations that give rise to materialism (Shrum et al., 2022; Srivastava et al., 2001). According to self-determination theory, turning to materialistic pursuits in response to low SCC is a negative motivation that reflects a lack of self-orientation and increases need frustration, thereby reducing an individual's SWB (Landry et al., 2016; Burroughs & Rindfleisch, 2002). Indeed, evidence from correlational and experimental studies suggests that the need for autonomy plays a mediating role between materialism and SWB (Nagpaul & Pang, 2017). In summary, current research suggests that when experiencing low SCC, individuals pursue

materialism for relief; however, material goods do not help individuals establish a clear self-concept but instead further reduce their SWB.

Contributions and implications

The following three aspects demonstrate the study's theoretical and practical value: First, although correlational and longitudinal studies have found that SCC positively predicts SWB (Hanley & Garland, 2017; Xiang et al., 2023), there is no experimental study to explore the relationship in depth. The current study found that low SCC reduces SWB in the Chinese context, validating the causal relationship and providing preliminary evidence of the cross-cultural consistency of the relationship. Second, the current study views low SCC as a sense of self-uncertainty and introduces materialism as a psychological mechanism through which low SCC reduces SWB, initially constructing a comprehensive model of the negative impact of low SCC on individuals through materialism and providing a research framework for subsequent empirical research. Third, the current study reveals the inadequacy and harm of passive coping with low SCC and laterally emphasizes the importance of active prevention as well as active coping with low SCC. In daily life, individuals often face stressful life events that undermine SCC (Ritchie et al., 2011), such as social rejection, and improving SCC can help individuals cope proactively. Indeed, existing intervention programs on SCC have made satisfactory progress, e.g., improving adolescents' agreeableness and life satisfaction (Thomas et al., 2022; Van der Aar et al., 2022).

Limitations and further directions

Although some meaningful results were obtained, there are still some limitations that need to be further improved and explored in future studies. Firstly, SCC and self-esteem represent the structural and content elements of the self-concept, respectively, and self-esteem is also closely correlated with materialism and SWB (Campbell et al., 1996; Shrum et al., 2022). To eliminate any confusion about self-esteem and its role in the impact of low SCC on SWB, subsequent research should measure and control individual self-esteem. Secondly, culture influences self-construal to some extent (Campbell et al., 1996), and follow-up cross-cultural research could help to further explore the questions involved in this study. Finally, individuals adopt various ways to cope with the uncertainty brought on by low SCC (Nash et al., 2011; Sanyal et al., 2021). Under what conditions are individuals less inclined to turn to materialism? Subsequent exploration of the moderating variables in the relationship between low SCC and materialism could address this question.

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Data availability The data that support the findings of this study are available from the corresponding author upon reasonable request.

Declarations

Ethical approval All procedures performed in studies involving human participants were in accordance with the ethical standards of the institutional and/or national research committee.

Inform consent Informed consent was obtained from all participants.

Competing interests The author declared no potential conflicts of interest with respect to the research, authorship, and/or publication of this article.

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