



Importance Weighting in the Domain-of-Life Approach to Subjective Well-Being: the Consideration of Age

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Abstract

The domain-of-life approach to subjective well-being (SWB) has been popular for decades. Recognizing the possibility that individuals may not perceive all life domains equally important, many researchers advocate for importance weighting, which is to incorporate the relative importance of life domains (i.e., domain importance) into the scoring of SWB at the individual level. However, the need for and the adequacy of importance weighting remain topics of debate. What has been missing in the debate is the consideration of influences of potential confounding factors. Given that age is significantly associated with domain satisfaction, domain importance, and SWB, assessing importance weighting should not ignore the potential confounding effect of age. Analyzing data from an online survey, we found that adjusting for the confounding effect of age produced negligible changes in the results of assessing the role that domain importance played in the relationship between domain satisfaction and SWB. Our findings support the observations from the literature that the results of assessing importance weighting depended on the SWB variable selected. However, given our non-probability study sample, future studies should continue to consider age as a confounder in assessing importance weighting in the domain-of-life approach to SWB.

Keywords Life satisfaction · Happiness · Domain importance · Importance weighting · Domain weighting · Causality · Confounding effect · Age

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Introduction

Subjective well-being (SWB), including happiness and life satisfaction, has long been a research topic of social scientists (e.g., Diener 1984; Diener and Biswas-Diener 2002; Maddox 1992; Maddox and Wiley 1976; George 1996; Sirgy and Lee 2018). One area of SWB research that has gained attention is the relationship between overall life satisfaction and (life) domain-specific (such as health and family life) satisfaction (Sirgy et al. 2020). Specifically, whether or not (as well as how) domain importance should be considered in the relationship between overall life satisfaction and domain-specific satisfaction has been a center of debate (e.g., Hagerty and Land 2007; Hsieh 2003b, 2004, 2013, 2016; Rojas 2006; Russell and Hubley 2005; Russell et al. 2006).

Domain importance weighting, which is to use importance of life domains as a weighting factor linking domain-specific satisfaction to SWB, has been proposed as a way to understand the relationship between domain-specific satisfaction and SWB (e.g., Hsieh 2003b). However, several researchers (e.g., Rohrer and Schmukle 2018; Wu 2008b) have used empirical findings to question the adequacy and validity of domain importance weighting. Several previous studies have discussed the potential sources leading to inconsistent empirical findings in assessing importance weighting (e.g., Hsieh 2012, 2013, 2016; Hsieh and Kenagy 2014; Hsieh and Li 2019). These possible sources include the choice of life domains included in a study, the choice of the SWB measures serving as criterion variables, and the way by which domain importance is weighted, among others (Hsieh 2015). Missing from the investigations, however, is the consideration of influences of potential confounding factors, especially demographic factors, on assessing importance weighting (Lee et al. 2021). Analyzing data from an online survey, we assessed the adequacy of importance weighting by considering a potential demographic confounder of age.

Literature Review

SWB Measurement Approaches and Implied Causal Directions

Diener (1984) suggested that SWB is generally measured by either the bottom-up approach or the top-down approach. The bottom-up approach suggests that SWB can be considered the aggregate of satisfaction in various domains. The top-down approach, on the other hand, argues that measuring SWB must capture one's predisposition (or trait) that influences one's evaluation of satisfaction in various life domains. From a measurement perspective, the domain-of-life approach to SWB is consistent with the bottom-up approach and coincides with the "causal-formative indicators" model (e.g., Bollen and Lennox 1991; Bollen and Ting 2000; Hsieh 2004, 2012, 2013). That is, domain-specific satisfaction items, which are the indicators, can be thought of as the "causes" (rather than the "effects") of the latent variable, SWB (Bollen and Diamantopoulos 2017). Hsieh (2004) depicted the conceptualization of this causal-formative indicator model of the relationships between domain satisfaction, domain importance, and SWB. Domain importance in the conceptual model acts as a moderator (Hsieh 2004).

Following Pearl’s (2009) work on causality, we believe that the relationship between domain satisfaction and SWB cannot be accurately captured without taking into account confounders. In the simple model of domain-of-life approach to SWB outlined by Hsieh in 2004 (see Fig. 1a), a confounder is a factor that impacts or affects both domain satisfaction and SWB (see Fig. 1b).

Measuring and Weighting Domain Importance

In their landmark study, *Quality of American Life*, Campbell et al. (1976) proposed a domain-of-life approach to SWB. The domain-of-life approach to SWB, which was referred to by Diener (1984) as the bottom-up approach, suggested that an individual’s SWB (i.e., overall life satisfaction) could be obtained by summing the satisfaction scores across various life domains. This summed-domain method assumes that satisfaction (or dissatisfaction) with all the life domains would contribute equally to an individual’s overall life satisfaction or SWB (e.g., Hsieh 2016; Rojas 2006).

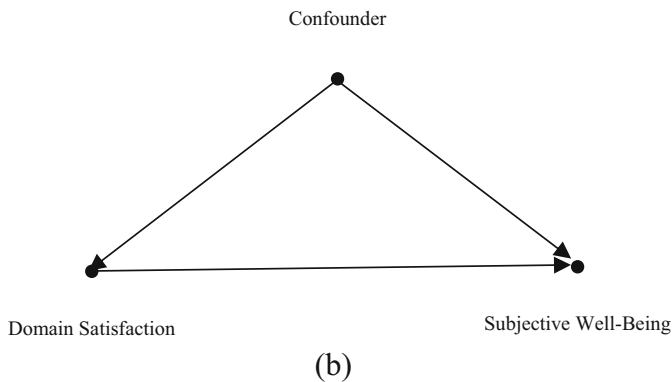
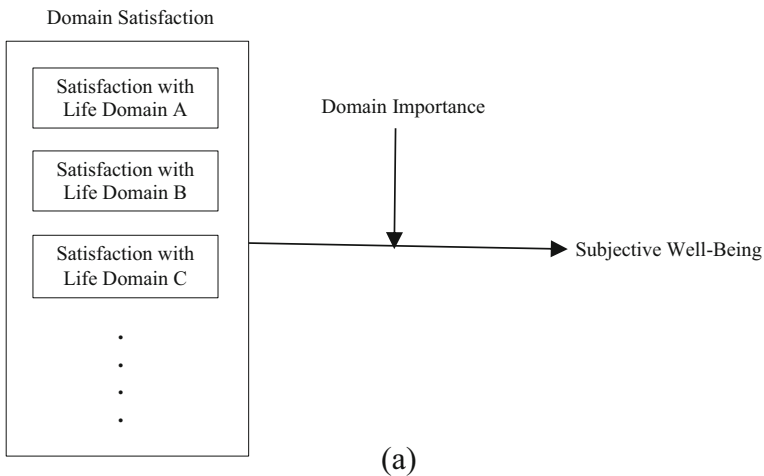


Fig. 1 Domain-of-life to subjective well-being model: (a) Domain Satisfaction, Domain Importance, and SWB (b) Domain Satisfaction, SWB, and Confounder

Recognizing the possibility that individuals may not perceive all life domains equally important, some researchers (e.g., Frisch et al. 1992; Ferrans and Powers 1985) advocate for incorporating the relative importance of various life domains (i.e., domain importance) into the scoring of SWB. However, the need for and the adequacy of incorporating domain importance at the individual level, otherwise known as importance weighting, remain contentious (Hsieh 2003b, 2004, 2012, 2013, 2016; Hsieh and Kenagy 2014; Mastekaasa 1984; Russell et al. 2006; Wu 2008a, b; Wu and Yao 2006a, b, 2007).

Although importance weighting appears to be intuitively appealing, empirical evidence assessing the adequacy of importance weighting in the SWB literature has been mixed and inconclusive (Hsieh and Li 2019). Opponents of importance weighting argue that there has not been consistent evidence showing that weighting domain importance can produce a detectable increase in the variances explained in SWB measures; in comparison with only domain satisfaction scores, importance weighting should not be supported (e.g., Campbell et al. 1976; Russell et al. 2006; Wu 2008a, b). Proponents of importance weighting, on the other hand, have shown that the relationship between SWB measures and domain satisfaction depends on domain importance (e.g., Hsieh 2003b, 2012, 2013, 2016; Hsieh and Kenagy 2014; Hsieh and Li 2019; Tiefenbach and Kohlbacher 2015).

Common in the SWB literature is to use rating scales to measure domain importance and multiplicative scores (multiplying importance and satisfaction scores) to weight domain importance (Hsieh 2017). However, there are other ways to measure domain importance and to weight domain importance (see Hsieh 2015 for more). As Hsieh (2003b, 2004) showed, the performance of importance weighting was dependent upon how domain importance was measured and how domain importance was weighted. As suggested by Hsieh (2003b), domain importance ranking can be a good alternative to rating scales because direct comparisons can be made between various life domains.

The Role of Confounders

The focus of previous studies on importance weighting in the SWB literature has been on the relationship between domain satisfaction and SWB. Potential confounders that may bias the estimate of the relationship between domain satisfaction and SWB have not been included in these studies (e.g., Hsieh 2003b, 2012, 2013, 2015; Rohrer and Schmukle 2018; Russell et al. 2006; Wu 2008a, b; Wu and Yao 2006a, b, 2007).

For the sake of argument, we could regard domain satisfaction in the domain-of-life approach to SWB as the “cause” and the latent variable, SWB, as the “effect.” A variable that impacts or affects both domain satisfaction and SWB would be considered as a confounder. Since our focus is importance weighting, domain importance (in addition to domain satisfaction) should also be added to the “cause” side. A confounder would, therefore, be a variable that impacts or affects domain satisfaction, domain importance, and SWB. As Pearl (2009) pointed out, the identification of confounders must take into account the direction of the impacts or influences of the variables. Specifically, the direction of the impacts should be from the confounder to the cause (as well as the effect), but not the other way around. Based on Pearl’s (2009) work, it is necessary to identify and adjust for confounders so unbiased estimates of the relationships between domain satisfaction, domain importance, and SWB can be obtained.

It is important to note that we do not include a demographic variable as a confounder if we do not have evidence to suggest that it affects both the cause and effect (in our case, domain satisfaction, domain importance, and SWB). For example, although there appeared to be evidence showing that gender might affect the perception of domain importance (Lee et al. 2021), the literature (e.g., Diener 1984; Hsieh 2001) has not shown a significant gender difference in life satisfaction (SWB). We, therefore, did not include gender as a confounder. Besides, we do not include a demographic variable as a confounder if we cannot determine the direction of impacts between the demographic variable, domain satisfaction, domain importance, and SWB. For example, income is shown to be associated with domain (financial, in particular) satisfaction (e.g., Hsieh 2001) and domain importance (e.g., Hsieh 2005). However, there does not appear to be a definitive direction of the influence between these variables. That is, one could consider that income may affect an individual's perceived importance of the financial situation. It is also not unreasonable for anyone to consider the possibility that an individual's perceived importance of financial situation may affect his or her income. Without a clear direction of the influences, we do not consider income as a confounder.

One demographic variable, age, appears to fit the aforementioned criteria of a confounder in assessing importance weighting based on the domain-of-life approach to SWB. First, in terms of impacts, there is evidence to suggest that age is significantly associated with domain-specific satisfaction (e.g., Bardo 2017; Hsieh 2001, 2003a), perceived importance of life domains (e.g., Hsieh 2005), and SWB (e.g., Hsieh 2011; George 2010; Yang 2008). Second, in terms of the direction of impacts, it does not make sense to argue that an individual's domain-specific satisfaction affects the individual's age in a cross-sectional survey. Similarly, it does not make sense to argue that either an individual's perceived importance of life domains or an individual's SWB affects the individual's age. The direction of the impacts should, therefore, go from age to domain-specific satisfaction, domain importance, and SWB.

Given the potential confounding effect of age, we believe that assessing importance weighting based on the domain-of-life approach to SWB should follow what Pearl (2009) termed "back-door adjustment" to control for the effects of age. The purpose of this study is to assess the adequacy of importance weighting based on the domain-of-life approach, accounting for the potential confounder of age. Specifically, we assess the bivariate relationships between age and domain satisfaction, domain importance, and SWB to check if age is a potential confound in importance weighting. We then compare results of importance weighting with and without adjusting for the effect of age.

Method

Data and Sample

An online survey of Chinese adults was our data source. Fuzhou Great Marketing Research Co., Ltd., a Chinese market research company, was contracted to conduct the online survey. The company invited Chinese adults (age 18 and above) to participate in

the survey. Survey participation was strictly voluntary, and no incentive was provided. The survey was opened on June 1, 2019, and was closed on June 30, 2019. There were 1620 respondents who participated in the survey. For the current study, we analyzed the data from this anonymous survey to assess the adequacy of importance weighting based on the domain-of-life approach, accounting for the potential confounder of age. The current study was approved by the University of Illinois at Chicago's Office for the Protection of Human Subjects.

Measures

Domain Satisfaction Satisfaction with life domain was measured by asking respondents to rate their satisfaction on a scale of 0 to 10, where 0 was not at all satisfied and 10 was completely satisfied, for the following seven life domains: health, work, finances, family life, love life, housing, and child-rearing. The question on health, for example, was: "How satisfied are you with your health?" Similar to several previous studies (Hsieh 2003b, 2011; Hsieh and Li 2019), these seven life domains were selected to cover life domains efficiently and effectively, based on prior research (Cummins 1995, 1996; Cummins et al. 1994). Satisfaction with child-rearing is applied to only respondents who reported having children ($N = 864$).

Importance of Life Domain Respondents were asked to rank the top three most important life domains among the same seven (health, work, finances, family life, love life, housing, and child-rearing) major life domains. The ranks of 1, 2, and 3 were given to the top three life domains in the order of their importance by the respondents. We then coded the remaining four life domains as 4, following the work of Allison and Christakis (1994). Based on the domain ranks, we constructed importance weight (IW) for each domain, following the work of Hsieh (2003b):

$$IW = (5 - R_i) / \sum R_i \quad (1)$$

where R_i is the rank of domain i .

SWB We used three measures to collect data related to a respondent's SWB. They were the five-item Satisfaction with Life Scale (SWLS, Diener et al. 1985), a single-item overall life satisfaction questions, and a single-item happiness question. The reliability coefficient (Cronbach's α) for the SWLS measure was 0.85 for the current study. The SWLS scores were calculated based on the mean/average of the five items. The single-item overall life satisfaction question asked: "How satisfied are you with your life as a whole?" Responses ranged from zero to 10, where 0 was not at all satisfied and 10 was completely satisfied. This same scale has been used by the Organisation for Economic Co-operation and Development (OECD) Better Life Index project (see <http://www.oecdbetterlifeindex.org>). The single-item happiness question was "On the whole, how happy are you?" Respondents rated their happiness on a scale of 0 to 10, where 0 was not at all happy and 10 was extremely happy. Previous studies (Cheung and Lucas 2014; Krueger and Schkade 2008) showed that the psychometric properties of single-item SWB measures (including satisfaction with life as a whole and happiness) are adequate.

Analysis

Before assessing the adequacy of importance weighting, we examined whether or not age significantly impacted domain satisfaction, domain importance, and SWB. We used the bivariate (Pearson's r) correlation to assess the association between age and domain satisfaction (satisfaction with each of the seven life domains) and age and SWB (the SWLS, overall life satisfaction, and happiness) to test the hypotheses that age was significantly associated with (1) domain satisfaction and (2) SWB. We used the exploded logit model (or rank-order logit model) to assess the association between age and domain importance and to test the hypothesis that age was significantly associated with domain importance. A generalization of the conditional logit model, the exploded logit model can handle data obtained by ranking a set of items (see Allison (1999) and Allison and Christakis (1994) for a detailed discussion). For the exploded logit model analysis, we organized the data into one separate record for each domain for each respondent. A set of 6 dummy (indicator) variables corresponds to 6 of the 7 domains. The reference (omitted) domain was love life. Data were then stratified by the individual respondent, and partial likelihood procedures (the PHREG procedure of the SAS program) were used to estimate the models.

To assess the adequacy of importance weighting in the domain-of-life approach to SWB, we followed the regression approach used in previous studies (e.g., Evans 1991; Hsieh 2012, 2013; Mastekaasa 1984). The regression analysis included three steps. Step 1 was to regress the SWB on the seven domain satisfaction ratings. Step 2 was to add the seven domain importance weight (IW) variables. Step 3 was to add to step 2 the seven (satisfaction by importance) interaction terms. The interaction terms were constructed, using the product of the satisfaction score and the importance weight of each domain. A significant change in R^2 (based on the F test) between step 2 and step 3 would support importance weighting. We would compare the (age) adjusted and unadjusted regression results. Close to half (47%) of our sample did not have children, and therefore they did not report satisfaction with child-rearing. If listwise deletion was used to handle missing data in our regression analysis, we would have to delete a significant amount of data. Deleting over 700 responses would result in a loss of statistical power and biased estimates for our regression analysis (Allison 2010). Instead of listwise deletion, we used the dummy variable adjustment method (Cohen and Cohen 1985) to handle the missing data. It should be noted that some (e.g., Jones 1996) argue that the method of dummy variable adjustment can yield biased regression parameter estimates, especially when the data are missing at random. According to Allison (2010), however, the method of dummy variable adjustment leads to unbiased estimates if data are missing due to the nature of "not applicable" (which was the situation we faced: satisfaction with child-rearing does not apply to respondents without children).

Results

Sample Characteristics

Among the 1620 respondents, over half (56%) were female. Respondents ranged from 18 to 67 years old, with a mean age of 29.54 ($SD = 7.12$). About 22% of the

respondents had a high school (or less) education, and the remaining 25% had some college or an associate degree, and the remaining 55% of the respondents had a bachelor's (or higher) degree. Respondents resided in all different provinces (municipalities or autonomous regions).

Table 1 shows the descriptive statistics of domain satisfaction, domain importance, and SWB. The top three life domains that respondents reported with the highest satisfaction ratings were child-rearing ($M = 9.19$, $SD = 1.83$), family life ($M = 8.75$, $SD = 2.14$), and health ($M = 8.51$, $SD = 2.00$). The top three most important life domains based on the mean ranks (the lower the rank value, the more important) were health ($M = 2.40$, $SD = 1.34$), family life ($M = 2.85$, $SD = 1.12$), and finances ($M = 3.00$, $SD = 1.09$).

Age, Domain Satisfaction, and SWB

Table 2 shows the results of the bivariate association between age and each domain satisfaction and age and SWB. The results indicated that age was significantly associated with all three SWB variables and six of the seven domain satisfaction ratings (all except for child-rearing).

Age and Domain Importance

As mentioned earlier, we used the exploded logit models to assess the relationship between age and domain importance. The column labeled “ β ” in Table 3 shows the results of the (exploded logit) regression model with the six domain (dummy) independent variables. The results indicate that, on average, these respondents ranked health the highest in terms of importance and housing the lowest in terms of importance. Based on the results of the likelihood ratio chi-square of the model (379.22 with 6

Table 1 Description statistics ($N = 1620$)

	Satisfaction		Importance	
	Mean rating	(SD)	Mean rank	(SD)
Domain				
Health	8.51	(2.00)	2.40	(1.34)
Family life	8.75	(2.14)	2.85	(1.12)
Finances	7.43	(2.49)	3.00	(1.09)
Love life	7.98	(2.80)	3.07	(1.12)
Work	7.96	(2.12)	3.51	(0.90)
Child-rearing	9.19 ¹	(1.83)	3.55	(0.86)
Housing	8.03	(2.23)	3.61	(0.80)
SWLS	4.40	(1.28)		
Life satisfaction	8.36	(1.93)		
Happiness	8.55	(1.94)		

¹ $N = 864$: only respondents with children responded to this question

Table 2 Correlation with age ($N = 1620$)

	<i>r</i>
Domain satisfaction	
Health	.11***
Family life	.13***
Finances	.24***
Love life	.23***
Work	.19***
Child-rearing	.00 ¹
Housing	.19***
SWLS	.26***
Life satisfaction	2.4***
Happiness	.23***

¹ $N = 864$ *** $p < 0.001$

degrees of freedom, $p < .001$), we would reject the null hypothesis that all life domains were of equal importance to the respondents. The column on the right of Table 3 shows the results of the regression model with the age-by-domain interaction terms and the domain variables as independent variables. As indicated, the results are shown by multiplying the coefficients by 100 due to the small numbers. A Wald χ^2 test (see Allison and Christakis 1994) was used to assess if the respondents' ranking of domain importance differed across age. The results of the Wald χ^2 test show a χ^2 value of 18.53 ($df = 6$, $p < .01$). The results, therefore, indicate that the null hypothesis that the respondents' ranking of domain importance did not differ across age should be rejected.

Importance Weighting

Table 4 shows the regression results of the three SWB variables. These results were based on regression models without adjusting for age. Following previous research (e.g., Hsieh 2015; Hsieh and Li 2019), we showed the changes in R^2 , instead of the coefficients. We report the results to three decimal places, given the small numbers. The upper panel of Table 4 displays the results, using the dependent variable of SWLS. As shown, the addition of the block of interaction terms (step 3) was not statistically significant. The R^2 difference between step 2 and step 3 was .002, $F(7, 1598) = 1.047$, $p = .396$. The middle panel of Table 4 shows the results, using the dependent variable of overall life satisfaction ratings. As shown, step 3 was statistically significant. The R^2 difference between step 2 and step 3 was .005, $F(7, 1598) = 3.022$, $p = .004$. The findings support importance weighting when using overall life satisfaction as the criterion variable. The lower panel of Table 4 shows the results, using the dependent variable of happiness ratings. As shown, step 3 was statistically significant. The R^2 difference between step 2 and step 3 was .009, $F(7, 1598) = 4.880$, $p = .000$. The findings support importance weighting when using happiness as the criterion variable.

Table 3 Exploded logit regressions of importance ranking on life domains and age ($N = 1620$)

Domain	β^1	Age ^{1**}
Health	0.44	-0.47
Family life	0.18	-0.42
Finances	0.07	-0.71
Love life	0.00	0.00
Work	-0.28	0.13
Child-rearing	-0.29	0.09
Housing	-0.32	1.85***
Likelihood ratio χ^2	379.22***	397.49***
<i>df</i>	6	12

¹ Values displayed are 100 times of coefficients (the values of likelihood ratio χ^2 are the actual values)

** $p < 0.01$

*** $p < 0.001$

Table 5 shows the regression results of the three SWB variables. These results were based on regression models, adjusting for age. Similarly, we showed the changes in R^2 and reported the results to three decimal places. The upper panel of Table 5 shows the regression results, using the dependent variable of SWLS. As shown, the addition of the block of interaction terms (step 3) was not statistically significant. The R^2 difference between step 2 and step 3 was .003, $F(7, 1597) = 1.094$, $p = .364$. The middle panel of Table 5 shows the regression results, using the dependent variable of overall life satisfaction ratings. As shown, step 3 was statistically significant. The R^2 difference between step 2 and step 3 was .006, $F(7, 1597) = 3.117$, $p = .003$. The findings support importance weighting when using overall life satisfaction as the criterion variable. The lower panel of Table 4 shows the regression results, using the dependent variable happiness ratings. As shown, step 3 was statistically significant. The R^2 difference

Table 4 Regression analysis of importance weighting predicting SWB measures without adjusting for age ($N = 1620$)

Step 1 Satisfaction variables only R^2	Step 2 Adding IW variables ΔR^2	Step 3 Adding satisfaction x IW terms ΔR^2
SWLS .460***	.005	.002
Life satisfaction .576***	.003	.005**
Happiness .579***	.004	.009***

Results are shown to three decimal places due to small values

* $p < .05$

** $p < .01$

*** $p < .001$

Table 5 Regression analysis of importance weighting predicting SWB measures adjusting for age ($N = 1620$)

Step 1 Satisfaction variables only R^2	Step 2 Adding IW variables ΔR^2	Step 3 Adding satisfaction x IW terms ΔR^2
SWLS		
.463***	.006	.003
Life satisfaction		
.577***	.003	.006**
Happiness		
.580***	.004	.009***

Results are shown to three decimal places due to small values

* $p < .05$

** $p < .01$

*** $p < .001$

between step 2 and step 3 was .009, $F(7, 1597) = 4.867$, $p = .000$. The findings support importance weighting when using happiness as the criterion variable.

Discussion

Analyzing an online survey of 1620 Chinese adults, we investigated the adequacy of importance weighting in the domain-of-life approach to SWB, considering the potential confound of age. Several of our findings are worth noting:

First, we found evidence to support our hypothesis that age was significantly associated with domain satisfaction. Our findings show that age was significantly associated with satisfaction with six of the seven major life domains included in the survey. Previous studies also showed that age was a significant factor associated with domain-specific satisfaction, such as financial satisfaction (e.g., Hsieh 2001, 2003a) and job satisfaction (e.g., Magee 2015). Our findings show that age was not significantly associated with satisfaction with child-rearing, however. We believe that it is too premature to conclude no association between age and satisfaction with child-rearing, given that only a little over half of our study sample responded to the question of child-rearing satisfaction. Further investigation, based on national probability samples, is needed to assess the relationship between age and satisfaction with child-rearing.

Second, we also found evidence to support the hypothesis that age was significantly associated with SWB, which is consistent with previous studies (e.g., Dolan et al. 2008; Hsieh 2011; Yang 2008). Our findings showed a significant association between age and each of our SWB variables (SWLS, satisfaction with life as a whole, and happiness). The fact that age is associated with both domain satisfaction and SWB indicates that the relationship between domain satisfaction and SWB may be confounded by age. That is, research on the topic of importance weighting in SWB, which focuses on the relationship between domain satisfaction and SWB, should not ignore the potential role that age may play in the relationship between domain satisfaction and SWB.

Third, we found evidence to support the hypothesis that age was significantly associated with domain importance. Our findings showed that age was associated with an individual's perceived importance of various life domains, which is consistent with previous research (e.g., Hsieh 2005; Lee et al. 2021). It is important to note that we believe the effect of age on domain importance is likely to depend on the life domains studied and the way by which domain importance is measured. For example, Lee et al. (2021) examined the relationship between age and the ratings of individual life domains. They found that age was significantly associated with the perceived importance of emotional health, social connectedness, financial security, and material well-being, but age was not found to be significantly associated with physical health (Lee et al. 2021). Hsieh (2005), on the other hand, measured domain importance by ranking among major life domains, an approach more precise than the rating of individual life domains (Hsieh 2003b). Hsieh (2005) found that on average, age was significantly associated with a decrease of perceived importance of health in comparison with friendships. In the current study, domain importance was measured by asking respondents to rank the top three of seven major life domains. Asking domain importance for each life domain (within-domain approach) cannot provide a direct comparison between different life domains. The way by which domain importance was measured in the current study was more precise than the within-domain approach as the measure in the current study offered a comparison of perceived importance between different life domains. Based on the self-system perspective (Herzog and Markus 1999), Hsieh (2005) suggested that individuals might maintain or promote well-being over the life span through the process of domain comparison. Hsieh's (2005) study was based on a small sample of middle-age and old-age Americans. Our findings that age was significantly associated with domain importance among a group of Chinese seem to indicate that the process of domain comparison articulated in the self-system perspective (Atchley 1982; Suls and Mullen 1982) is likely to be a psychological process that is cross-cultural. Besides, the process of domain comparison is likely to start earlier than middle age, as evidenced by our study sample.

Fourth, our findings suggest that whether or not adjusting for age, the role of domain importance in the relationship between domain satisfaction and SWB appeared to be quite consistent. Specifically, whether or not adjusting for age, we found evidence to support that the relationship between domain satisfaction and SWB depended on domain importance if SWB was operationalized as overall life satisfaction or happiness. We did not find evidence, whether or not adjusting for age, to support that the relationship between domain satisfaction and SWB depended on domain importance if SWB was operationalized as SWLS, however. Based on the regression results of the current study, adjusting for age appeared to increase the differences in R^2 (i.e., enhanced effects of the satisfaction by importance interaction terms), but the increase was negligible. These findings are important as they help us assess the claim of importance weighting by controlling for the potential confounding factor of age. The fact that by adjusting for age the regression results did not produce noticeable differences in comparison with the regression results without adjusting for age seemed to suggest that the potential confounding effect of age in the relationships between domain satisfaction, domain importance, and SWB might be negligible. However, it is too premature for us to suggest that the effect of age is negligible

across the board because of the potential endogenous selection bias (Elwert and Winship 2014).

Limitations

It must be noted that our study sample, though sizable and diverse, was not obtained in a fashion that could be considered a nationally representative sample of the Chinese population. The generalizability of our study results was limited and could not go beyond the study sample. Besides, this study used only three measures of SWB, which was by no means comprehensive. Respondents were asked to rank just the top three most important life domains among the seven domains included, which limited the precision of domain importance. Also, only seven out of a large number of all possible life domains (e.g., Cummins 1996) were included in the domain satisfaction and domain importance.

Conclusion

Our findings supported our hypotheses that age was significantly associated with (1) domain satisfaction, (2) SWB, and (3) domain importance. Assessing importance weighting in the domain-of-life approach to SWB, therefore, should not ignore the potential confounding effect of age. Based on the work of Pearl (2009), we investigated the role of domain importance in the domain-of-life approach to SWB by considering the potential confounding factor of age. Our findings showed that adjusting for the confounding effect of age produced negligible changes in the results of assessing importance weighting, which seemed to support previous observations that the choice of the criterion (SWB) variable matters (e.g., Hsieh 2003b, 2012, 2013, 2015). However, given the potential selection bias of our non-probability study sample, future studies should continue to consider age as a confounder in assessing importance weighting in the domain-of-life approach to SWB.

Compliance with Ethical Standards

Conflict of Interest The authors declare that they have no conflict of interest.

Ethical Approval The study was approved by the Institutional Review Board of the University of Illinois at Chicago.

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