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Recent changes in narcissism of Chinese youth: A cross-temporal meta-analysis, 2008–2017



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ABSTRACT

The present study examined potential changes in narcissistic traits of Chinese youth from 2008 to 2017. A cross-temporal meta-analysis involving 29 independent samples ($N = 14,795$) found a downward temporal trend: Mean scores on the Narcissistic Personality Inventory and Narcissistic Personality Inventory for Chinese are significantly negatively associated with year of data collection, weighted by sample size ($\beta = -0.49$). Moderator analyses found that this trend was independent of the measurement instrument used, gender distribution, or region of data collection. These findings contradict claims that Chinese youth have become more narcissistic late. The findings also challenge the common assumption that societal increases in individualism are a global determinant of narcissism.

1. Introduction

The trait of “normal” or “subclinical” narcissism is characterized by a pervasive sense of grandiosity and self-importance, and a need to obtain continuous self-validation from others (Miller & Campbell, 2008; Morf & Rhodewalt, 2001; Thomaes & Brummelman, 2016). Although early research focused mainly on narcissism in adult populations, recent approaches have shown that narcissism has mostly similar manifestations, correlates, and consequences in youth (Frick, Bodin, & Barry, 2000; Thomaes & Brummelman, 2016; Thomaes, Brummelman, Reijntjes, & Bushman, 2013). For example, much like narcissistic adults, narcissistic youth view themselves as superior to others, feel entitled to privileges, and tend to be hostile or even aggressive, especially when they feel their self-views are threatened (Barry & Malkin, 2010; Jezior, Mckenzie, & Lee, 2016; Rasmussen, 2016; Thomaes, Bushman, Stegge, & Olthof, 2008). Also, narcissism may place youth at risk for internalizing mental health problems, including depression and anxiety (Lau, Marsee, Kunitatsu, & Fassnacht, 2011; Seah & Ang, 2008).

There has been scholarly debate on the question of whether, in the Western world (and the United States in particular), youth have become more narcissistic over the past decades. At the root of the debate was

the assumption that societal trends in individualism—a cultural orientation that prioritizes the importance of the self over the importance of the group—may instill in youth a sense of uniqueness, entitlement, or need to “stand out from the crowd” (Baumeister, 1987; Cai, Kwan, & Sedikides, 2012; Myers, 2000; Twenge, 2006). Consistent with that assumption, research has shown that Western parents who “overvalue” their children (i.e., communicate to their children that they are more important, competent, or deserving than others) cultivate narcissistic traits in their children (Brummelman et al., 2015). Because Western society has become more individualistic over the past decades, especially from the 1970s/1980s onward, it seemed reasonable to assume that more recent generations of youth have grown up to be more narcissistic than were previous generations of youth.

The empirical basis for this presumed rise in narcissism among Western youth, however, is controversial. That is, one program of research provided evidence that societal levels of narcissism have increased over the past decades. Twenge, Konrath, Foster, Campbell, and Bushman (2008) and Twenge and Foster (2010) conducted a series of cross-temporal meta-analyses and found that American college students' mean levels of narcissism were consistently positively associated with year of data collection from 1979 to 2009. Other evidence, however, has challenged this claim and found no evidence that today's US

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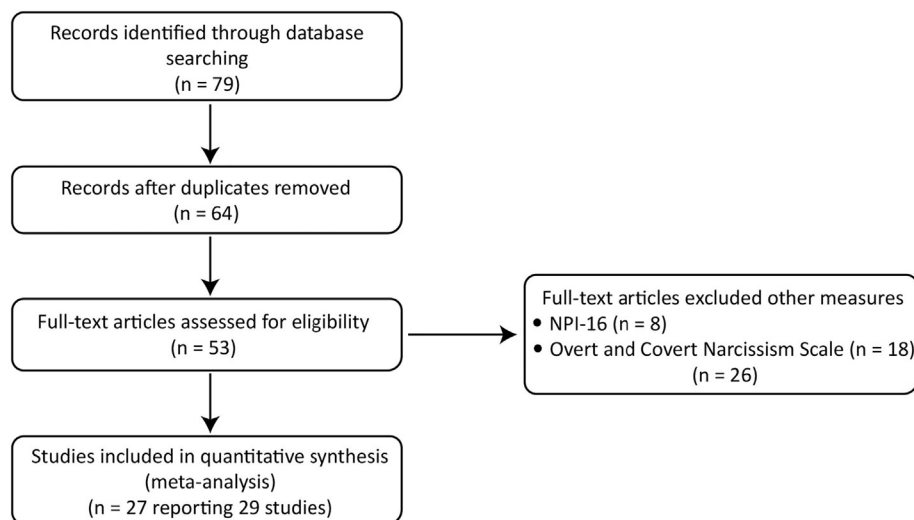


Fig. 1. Flowchart illustrating study inclusion and exclusion.

youth are more narcissistic than were previous generations (Trzesniewski, Donnellan, & Robins, 2008). In fact, recent evidence suggests that societal levels of narcissism (and its leadership, vanity, and entitlement facets in particular) among US college students have decreased from the 1990s to the 2010s (Wetzel et al., 2017).

This controversy casts doubt on whether societal trends in individualism actually are a potent determinant of increased narcissism among youth. Importantly, however, research on this issue has been conducted virtually exclusively in Western societies, and it is unclear to what extent temporal trends in narcissism, and its putative roots in individualism are similar across cultures. In the present research, we provide novel data on the issue, stemming from a different cultural context: i.e., modern China. China has been traditionally seen as a collectivist culture where traits such as modesty, respect for authority, and concern for relational harmony are societally valued and reinforced in youth (Cai et al., 2012; Foster, Campbell, & Twenge, 2003; Markus & Kitayama, 1991). As a result of sociocultural and economic reforms and the increased opening-up to Western society, however, China has seen swift sociocultural change in recent times, including change in societal values, behavioral norms, attitudes, and the self-concept. Indeed, individualism has been on the rise in China, especially in young people (Cai et al., 2012; Chen, 2009).

How have these sociocultural changes impacted the levels of narcissism among Chinese youth? Initial research using large Internet samples found that today's Chinese youth are more narcissistic than older people (Cai et al., 2012; Cai & Wu, 2011). However, a cross-temporal meta-analysis to explore generational trends in narcissism, which has become the methodological standard in the field, is still lacking. With the present research, we took a first step to filling this gap. If the view that individualism breeds narcissism is true, and holds up across different cultural contexts, one would expect that narcissism has recently increased among Chinese youth.

As to potentially relevant moderators, gender may be important. A meta-analysis on gender differences in narcissism found that males tend to be more narcissistic than females, a difference that has remained stable in U.S. student cohorts over time (Grijalva et al., 2015). Recent findings suggest that Chinese males are also more narcissistic than females (Zhou, Li, Zhang, & Zeng, 2012; Cai et al., 2012). Furthermore, regional sociocultural differences within China may also be relevant to changes in narcissism (Twenge, Abebe, & Campbell, 2010). Indeed, students recruited from universities in China's coastal regions tend to be more individualistic than those from inland China (Koch & Koch, 2007), which may translate into their levels of narcissism.

Thus, the present study used cross-temporal meta-analytic methods

to examine change over time in narcissism in Chinese youth, employing the two main Chinese scales to assess narcissism. We include data from the 2008 to 2017 time-period—the period from which data on narcissism in samples of Chinese youth are available. We explored gender and regional differences as potential moderators.

2. Method

2.1. Literature search

We searched the literature for studies that included the two most commonly used measures of narcissism in China: The direct translation of the Narcissistic Personality Inventory (NPI; Raskin & Terry, 1988; Kwan, Kuang, & Hui, 2009); and the Narcissistic Personality Inventory for Chinese (NPIC; Zhou, Zhang, Chen, & Ye, 2009), which is an adaptation of the NPI. Different from the forced-choice response format of the original NPI, both measures use a 6-point Likert scale ranging from 1 (*not at all true*) to 6 (*completely true*). Studies were located by searching Chinese scholarly databases using combinations of the following keywords: *China, Chinese, narcissism, narcissistic personality, adolescents, and young adult*. The databases we searched (i.e., China National Knowledge Infrastructure, Wanfang Data, and Chongqing VIP) jointly cover nearly all Chinese journals, doctoral dissertations, and master's theses in the social and behavioral sciences. Furthermore, using the same keywords, we also searched the Web of Science, Scopus, and ProQuest Psychology Journals English language scholarly databases.

2.2. Inclusion criteria

To be included in the meta-analysis, studies met the following criteria (Fig. 1): (a) participants all came from mainland China; (b) the study included at least 30 participants (Twenge & Campbell, 2001); (c) the study either used the NPIC or the NPI; (d) participants were adolescents or young adults (i.e., mean age of participants < 25 years); (e) the study reported the means, standard deviations, and sample sizes for the total sample. If the same data set was reported on in multiple publications, the earliest publication was included. If the time of data collection was not reported, we contacted the authors for information. If the authors could not be reached (which was the case for two publications), the year of data collection was coded as two years before publication (Twenge, Abebe, & Campbell, 2010; Twenge et al., 2010).

This search and inclusion strategy yielded a total of 29 studies ($N = 14,795$) (Table 1).

Table 1
Data included of NPIC and NPI in the analysis.

Source	Year of data collection	n	Age	Narcissism Measure	M	SD	%male	Region
*Zhou, Zhang, Chen, and Ye (2009)	2008	471	Undergraduate	NPIC	3.61	0.64	0.32	Coastal
*Zhou, Zhang, and Zheng (2009)	2008	459	Grades 7–11	NPIC	3.42	0.75	0.39	Inland
*Zhou, Zhou, and Zhang (2010)	2009	408	24.70	NPIC	3.50	0.89	0.46	–
Feng, Zhou, Liang, and Yi (2012)	2010	116	19.00	NPIC	3.52	0.20	–	Coastal
*Meisel, Ning, Campbell, and Goodie (2016)	2011	106	20.12	NPI	2.75	0.60	0.32	Inland
*Xu (2012)	2011	251	Grades 10–11	NPI	2.85	0.65	–	Inland
*Zhou et al. (2012)	2011	485	15.91	NPIC	3.55	0.78	0.41	Inland
*Luo, Cai, Sedikides, and Song (2014)	2012	304	18.29	NPI	2.70	0.75	0.44	Inland
*He and Gu (2014)	2013	234	19.26	NPIC	3.26	0.61	0.47	Inland
*Lin, Li, and Su (2014)	2013	6126	Undergraduate	NPIC	3.06	0.74	0.33	Coastal
*Zhao (2014)	2013	58	19.14	NPIC	3.25	0.74	0.50	Inland
*Zhou and Zhang (2014)	2013	301	Grades 7–9	NPIC	3.39	0.79	0.40	Coastal
*He (2015)	2014	290	19.14	NPI	2.90	0.75	0.49	Inland
*Lu (2015)	2014	157	21.23	NPI	2.80	0.85	0.51	Inland
*Min and He (2015)	2014	361	Grades 8–11	NPIC	3.02	0.50	0.48	Inland
*Yan (2015)	2014	187	20.80	NPI	2.75	0.45	0.49	Inland
*Zhang (2015)	2014	60	19.00	NPIC	3.76	0.74	–	Inland
*Zhao (2015)	2014	455	19.90	NPIC	3.25	0.68	0.34	Inland
*Zhou, Zhang, Yang, and Chen (2015)	2014	228	14.35	NPIC	3.54	0.78	0.37	Inland
*Zhou et al. (2015)	2014	278	20.69	NPIC	3.47	0.75	0.47	Inland
*Zhou et al. (2015)	2014	204	20.69	NPIC	3.63	0.66	0.49	Inland
*Ding, Zhou, Zhang, and Chen (2016)	2015	133	16.50	NPIC	3.32	0.85	0.55	Coastal
*He and Zhu (2016)	2015	98	Undergraduate	NPI	2.84	0.75	0.16	Inland
*Kong (2016)	2015	93	21.50	NPIC	3.12	0.63	–	Inland
*Hao and Lu (2017)	2016	467	Undergraduate	NPIC	2.96	0.61	0.47	Coastal
*Wu (2017)	2016	420	14.96	NPIC	2.80	0.68	0.46	Inland
*Zheng (2017)	2016	578	Undergraduate	NPIC	3.31	0.74	0.36	Inland
*Li, Dong, and Wang (2018)	2017	709	19.48	NPI	2.57	0.84	0.17	–
*Zhang (2018)	2017	758	Grades 8	NPI	2.60	0.80	0.47	Inland

2.3. Data analysis strategy

In a first step, we looked at the overall average of all reported mean narcissism scores across time. To create a single narcissism index (allowing us to analyze the NPIC and NPI scores in concert), we derived a linear transformation that makes the theoretical range of the NPI scores equal to the theoretical range of the NPIC scores (Card, 2015),¹ and applied this transformation to the means for the NPI measure. To calculate the overall average, we weighted each observed average by its variance. This is the sum of the between-study variance plus the sampling variance, the latter being equal to the within-study variance of the scores divided by the sample size of the study. To use a more accurate estimate of this within-study variance, we first pooled per instrument all the narcissism variances reported in individual studies (Trzesniewski & Donnellan, 2010; Twenge, Abebe, & Campbell, 2010; Twenge, Gentile, et al., 2010).

Next, we performed a cross-temporal meta-analysis, examining the change in mean scores on psychological measures over time (Twenge, 2001a, 2001b). We tested associations between the narcissism (i.e., NPI and NPIC) means and year of data collection using a meta-regression analysis (assuming a linear trend over time) and using an inverse-variance weighted analysis of variance (evaluating differences between years of publication, without assuming a linear trend).

¹ The following formula (Card, 2015) was used:

$$\text{new score} = [(\text{old score} - \text{Min}_1) \frac{(\text{Max}_2 - \text{Min}_2)}{(\text{Max}_1 - \text{Min}_1)}] + \text{Min}_2,$$

$$\sigma_{\text{new}} = \frac{\text{Max}_2 - \text{Min}_2}{\text{Max}_1 - \text{Min}_1} \times \sigma_{\text{old}},$$

where Min₁ and Max₁ are the lowest and highest possible score, respectively, on the scale to be transformed. Min₂ and Max₂ are the lowest and highest possible score on the new scale. Because the theoretical range of the (mean) NPIC scores was from one to six, and the theoretical range of the (mean) NPI scores from 0 to 40, we transformed the mean NPI-scores by dividing them by 8 and adding 1.

Third, to evaluate whether the initial value and the time trend are moderated by the scale (NPI = 0, NPIC = 1), the region (coastal region = 0, inland region = 1) or gender (proportion of males), we included each of these variables in the meta-regression model with a main effect and an interaction effect with year.

3. Results

The overall mean score for narcissism across time is 3.16 (95% CI = [3.03; 3.28]). We found a high amount of variance across studies (tau² = 0.12, I² = 0.99; Q = 2140.30, df = 28, p < .0001).

Has the level of narcissism in Chinese youth increased since 2008? Our data suggest it has not. In fact, we found a decrease in narcissism over time: whereas in 2008 the expected narcissism score is 3.49 (95% CI = [3.21; 3.77]), this expected score is significantly going down with 0.06 per year (95% CI = [−0.11; −0.02], z = −2.59, p = .01). Fig. 2 shows a scatter plot of the observed means for the years between 2008 and 2017, with the size of the dots being proportional to the weights these observed means get in the meta-regression. In addition, the regression line with a 95% confidence band is given. The plot reveals that fitting a linear trend is reasonable. Indeed, adding a quadratic term resulted in very similar predicted narcissism scores for each year. When treating the publication year as a categorical variable, we do not find a statistically significant effect of publication year (Q(df = 9) = 16.10, p = .06).

Moderation analyses show that neither the initial level of narcissism (z = 0.20, p = .84), nor the trend of narcissism over time (z = 0.03, p = .97), were affected by the proportion of males in each study. Similarly, region did not affect the initial level of narcissism (z = 0.96, p = .34) or the time trend (z = −0.61, p = .54).

Finally, we found that the instrument used (NPI vs. NPIC) does not affect the time trend (z = −0.62, p = .53), but there is evidence for a difference in the overall mean for both instruments (z = 3.11, p = .002). If we drop the non-significant interaction term, we learn that the expected mean score for the NPIC is 0.54 higher (z = 6.90, p < .001).

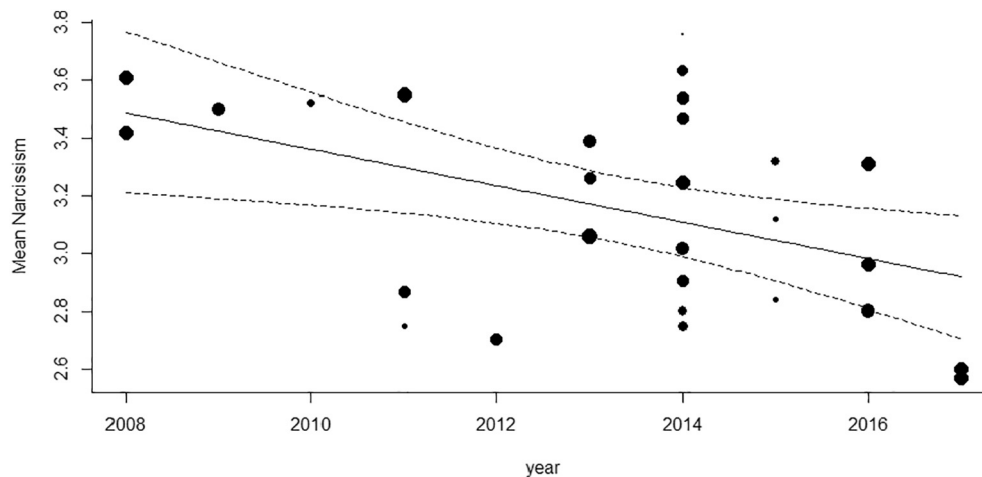


Fig. 2. Narcissism scores of Chinese youth from 2008 to 2017.

4. Discussion

A cross-temporal meta-analysis of 25 samples of Chinese youth found that narcissism did not increase, but rather, decreased from 2008 to 2017. This finding challenges the idea that individualism is a global determinant of narcissism. It might seem straightforward to assume that when cultural values increasingly emphasize the importance of the self, narcissism will increase accordingly, but our findings from modern China suggest otherwise.

Previous work has distinguished two forms of individualism, horizontal and vertical (Singelis, Triandis, Bhawuk, & Gelfand, 1995). People who are horizontally individualistic see themselves on an equal plane to others, are self-reliant, and value social equality; those who are vertically individualistic see themselves as different from others, are status-seeking and competitive, and value social inequality (Vargas & Kemmelmeier, 2013). Not surprisingly, previous work has suggested that it is vertical individualism that is linked to heightened narcissism, more so than horizontal individualism (Konrath, Bushman, & Campbell, 2006; Le, 2005). There is evidence that individualism in modern China is predominantly horizontal (Yao, Wang, Dang, & Wang, 2012; Zhang, Mandl, & Wang, 2011). Indeed, concerns about social harmony and interpersonal obligation continue to be strong determinants of Chinese individuals' worth and well-being (Nelson & Chen, 2007). Even if Chinese youth have become increasingly self-reliant and autonomous, they may not have become more status-seeking or competitive – the type of individualistic traits that are assumed to drive narcissistic development.

Parenting factors may also matter (Horton, Bleau, & Drwecki, 2006; Otway & Vignoles, 2006; Thomaes et al., 2013; Thomaes, Bushman, Orobio de Castro, & Stegge, 2009). Recent evidence suggests that Chinese parents tend to exert relatively high levels of psychological control over their children, perhaps in part because they are prone to base their own worth on their children's achievements (Gao, Xing, & Zhao, 2016; Ng, Pomerantz, & Deng, 2014). Compared to Westerners, Chinese parents tend to hold high standards and expectations for their children, being more likely to push their children to achieve, and to make decisions for them on personal issues (e.g., what to wear, whom they are friends with) (Chua, 2011; Qin, Pomerantz, & Wang, 2009; Tomchak & Allen, 2015). Speculatively, such parenting practices may temper or cancel out the potential influence of sociocultural trends on the development of narcissism in youth.

Some limitations of our study should be noted. First, we were unable to test potential differential effects for different facets of narcissism; too few studies reported facet (or subscale) narcissism scores. Previous work in Western samples found that temporal trends in narcissism may differ across narcissism facets, and it would be valuable for future work to explore such differential trends in Chinese samples as

well. Second, the number of available studies for the meta-analysis was modest, and so the power to detect statistically significant effects was limited. Moreover, the NPIC scale scores tended to be higher than those for the NPI, which further hampered the precision of our estimates. Although the decreasing temporal trend for narcissism that we found was significant, these factors did limit the likelihood of detecting moderating effects (e.g., for gender and region). Finally, although we speculated on sociocultural influences that may account for changes in youth narcissism over time, we did not investigate these influences directly. Future work should try to do so.

5. Conclusion

The present research meta-analyzed temporal changes in youth narcissism in modern China. We found no evidence that Chinese youth's narcissism has been increasing in recent years. In fact, we found a decreasing temporal trend. This finding contradicts the common assumption that societal increases in individualism are a global determinant of narcissism.

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