

## Generational changes and their impact in the classroom: teaching Generation Me

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**CONTEXT** Many faculty members believe that students today differ from those in the past. This paper reviews the empirical evidence for generational changes among students and makes recommendations for classroom teaching based on these changes. Generational changes are rooted in shifts in culture and should be viewed as reflections of changes in society.

**METHODS** This paper reviews findings from a number of studies, most of which rely on over-time meta-analyses of students' (primarily undergraduates') responses to psychological questionnaires measuring IQ, personality traits, attitudes, reading preferences and expectations. Others are time-lag studies of nationally representative samples of high school students.

**RESULTS** Today's students (Generation Me) score higher on assertiveness, self-liking, narcissistic traits, high expectations, and some measures of stress, anxiety and poor mental health, and lower on self-reliance. Most of these changes are linear; thus the year in which

someone was born is more relevant than a broad generational label. Moreover, these findings represent average changes and exceptions certainly occur.

**DISCUSSION** These characteristics suggest that Generation Me would benefit from a more structured but also more interactive learning experience, and that the overconfidence of this group may need to be tempered. Faculty and staff should give very specific instructions and frequent feedback, and should explain the relevance of the material. Rules should be strictly followed to prevent entitled students from unfairly working the system. Generation Me students have high IQs, but little desire to read long texts. Instruction may need to be delivered in shorter segments and perhaps incorporate more material delivered in media such as videos and an interactive format. Given their heightened desire for leisure, today's students may grow into professionals who demand lighter work schedules, thereby creating conflict within the profession.

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## INTRODUCTION

Every year in the fall, e-mails circulate among faculty members about the impossible youth of the students who sit in our classrooms. Many begin with a statement like: 'This year's college freshmen were born in 1990.' As if that weren't shocking enough, it goes on to list what the world looks like from the perspective of these freshmen (e.g. 'What Berlin Wall?... Ronald Reagan was always a former president... the Internet has always existed... Michael Jackson has always been white').

Different generations clearly have different perspectives on world events and popular culture. But does the younger generation differ in ways that impact education? Many faculty members believe that the students in their classrooms today behave very differently than they themselves did, back in the 'good old days' when they were students. These perceptions may very well be accurate, or they may just be subjective perceptions.

Certainly, some of these attitudes can be traced to selective memory: it is tempting for faculty to forget their own shortcomings in their younger years. However, the evidence is mounting that there are real differences among the generations. Many of these differences strongly affect education and instruction in the health professions; thus, it is important to understand generational differences to improve the education of today's students.

Generational differences reflect changes in the culture as a whole. Generation is a useful proxy for the socio-cultural environment of different time periods.<sup>1,2</sup> For example, children growing up in the 1970s were exposed to a fundamentally different culture to children growing up in the 1990s, just as Chinese children are exposed to a different culture than American children. In other words, these kids did not raise themselves: they are simply doing what they have been taught.

The largest psychological shift in the last few decades has concerned the movement toward focusing on the individual.<sup>3-6</sup> This has enormous advantages: now that the individual rights of women and minorities have finally been recognised, differences among individuals are more accepted and prejudice has waned. Parents nurture children's individual wants and are less likely to rely on harsh discipline.

However, there are disadvantages to too much individualism and self-focus. Parents, teachers and TV programmes encourage children with statements such as: 'Believe in yourself and anything is possible' and 'You can be anything you want to be.' Teenagers are told: 'You shouldn't care what other people think of you' and 'You have to love yourself before you can love someone else.' Young people believe the exhortation: 'You should never give up on your dreams.' The later someone was born, the more likely he or she is to believe such phrases (never mind that none of them are true – it's not possible to be *anything* you want, and what would the world really be like if no-one cared what anyone else thought of them?).

Through these aphorisms and other cultural mediums, younger generations have been taught to believe, in short, that everything is within reach, self-belief is essential for success, and other people's opinions are rarely important. This is why I labelled those born after 1970, and especially after 1980, as 'Generation Me' and described them in a book of the same name.<sup>7,8</sup> I'm one of them myself: I was born in 1971.

Although skewering 'inspirational' pop psychology phrases is fun, such observations followed a decade of empirical research. This research began with what I at first thought was a positive result: over time, college women described themselves as having significantly more 'agentic' traits, or those necessary to succeed in the workplace, such as ambition, assertiveness and independence.<sup>9,10</sup> However, college men's agentic traits increased over time as well, suggesting the trend actually concerned a more general rise in individualistic traits.

This study used a method I named 'cross-temporal meta-analysis', which gathers the mean scores of samples who completed well-validated psychological scales at different time-points. (These data are obtained from journal articles and dissertations written by other researchers – thus, the meta-analysis label.) For example, the study just described looked at how college students' mean scores on a measure of agency correlated with the year the data were collected. The correlation was positive, so scores on agentic traits were increasing over the generations. Because the samples were roughly the same age at sampling, but were collected at different time-points, they show how different generations of young people responded to the same questions.

I have used cross-temporal meta-analysis on many questionnaires, finding that younger generations also

score higher on extraversion (being outgoing), self-esteem and even narcissism<sup>11–13</sup> (Gentile B, Twenge JM: 'Birth cohort changes in self-esteem, 1988–2007'; unpublished manuscript, 2009). Another database using a nationally representative sample of high school students in the USA showed increases in self-satisfaction, high expectations, materialism, confidence in future performance, and a desire for leisure<sup>14–16</sup> (Twenge *et al.*: 'Generational differences in work values: leisure is in; intrinsic, social, and altruistic values are out'; unpublished manuscript, 2009).

All of this seeming self-confidence has not led to better mental health: anxiety, depressive symptoms and general psychopathology all rose sharply over the generations<sup>2</sup> (Twenge *et al.*: 'Changes in psychopathology, 1938–2007: a cross-temporal meta-analysis of the Minnesota Multiphasic Personality Inventory'; unpublished manuscript, 2009). (However, Borges *et al.*<sup>17</sup> found that students at the Northeastern Ohio Universities College of Medicine [NEOUCOM] became less tense and more emotionally stable between 1989 and 2004, possibly reflecting higher admissions standards.) Finally, younger generations score more highly on intelligence tests,<sup>18</sup> but are less likely to read books.<sup>19</sup>

Of course, these results should not be interpreted too broadly. This method shows how generations differ on average and, as with most studies on differences between groups, there are always exceptions. Not every person in a generation will be representative of the trend. In addition, sampling confounds must be considered: could the differences reflect changes in college populations? It seems the answer is no, as most results replicate in samples of elementary school, middle school and high school students<sup>10,20</sup> (Gentile B, Twenge JM: 'Birth cohort changes in self-esteem, 1988–2007'; unpublished manuscript, 2009). College populations have also not changed as much as one might think: the average income of students' parents has stayed constant since the 1960s, and minority enrolments, although improved, are still relatively low (for a discussion, see <sup>2</sup>). There are more women in college, but this change is easily addressed by analysing the data separately by gender. Another issue concerns the practice of socially desirable responding: have responses changed simply because it is more acceptable to embrace certain personality traits? It appears this factor does not play a major role, as changes are similar even when socially desirable responding is controlled<sup>20</sup> (Twenge *et al.*: 'Changes in psychopathology, 1938–2007: a cross-temporal meta-analysis of the Minnesota Multiphasic

Personality Inventory'; unpublished manuscript, 2009).

Most of the data on generational change in personality traits are drawn from American samples, primarily because most psychological research is conducted in the USA. However, many of the trends referred to below most probably apply to other Western cultures, including those of Canada, Australia, New Zealand and much of Europe. Asian cultures have also begun to shift toward Western ways of thinking in some realms, with modern ideas beginning to replace traditional thinking. Nevertheless, the changes in the US samples described here may appear in different forms, or not at all, in other cultures.

Most of these data show linear changes. Instead of making sudden shifts from one generation to the next, changes occur gradually. Thus, generational labels are less important than knowing how many birth years separate two people. Four generational changes are likely to have the biggest impact on medical education: higher expectations; higher levels of narcissism and entitlement; increases in anxiety and mental problems, and a decline in the desire to read long texts.

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#### HIGH EXPECTATIONS

Members of Generation Me have been taught to aim for the stars when planning their future. In many ways, this is a positive development: women are no longer told that they cannot be doctors, and nor are people from racial minorities. Recent research suggests, however, that many students may be aiming *too* high. Twice as many high school seniors in 2000 (versus 1976) said they planned to earn a graduate degree; by 2000, fully half of high school students expected to complete graduate education. However, the number of people who earned graduate degrees did not change substantially over this time, staying flat at about 9%.<sup>14</sup> Many of these students planned to take a high-risk path to this goal, starting out at a community college, a path that rarely leads to graduate education. The number of students who expected to work in a 'professional' job (including those of teacher, lawyer, doctor or nurse practitioner) also increased, with 75% of high school seniors expecting to work in such a job by the age of 30 years, although only about 20% are likely to do so. The researchers concluded that recent generations had become 'too ambitious' and that many of them were setting goals that might not be right for them.

Data on college students show a similar pattern: three in four expect to earn an advanced degree. Among Year 1 undergraduates, 12% plan to earn an MD.<sup>21</sup> Of course, only about 1% will actually do so.

Young people are also increasingly optimistic about how they will perform in the future. In 1975, only one in three high school students predicted they would be a 'very good' spouse or parent (the top choice offered, out of five), but one in two predicted that stellar outcome by 2006. Even more striking, two in three students predicted they would be 'very good' workers on a job in 2006 (compared with the one in two who guessed so in 1975). Thus, by 2006, two-thirds of students were predicting that they would perform in the top 20% of the population in their adult jobs.<sup>16</sup>

It is tempting to believe that this is a positive development. American culture teaches that one must be self-confident to be successful. However, self-esteem does not predict success.<sup>22</sup> In fact, being overconfident – a fair description of a group in which two in three people expect to perform in the top 20% – actually leads to greater failure,<sup>23</sup> perhaps because overconfident people do not recognise when they are doing badly and need to improve. One study showed that overconfidence – measured using a narcissism scale – was highest among those who failed a course and lowest among those who earned A-grades (Foster JD: 'Narcissism and performance in a college class'; unpublished manuscript, 2008). Certainly, it is good that more young people are ambitious in their career goals, perhaps because if they don't meet their original goals, they will fulfil another useful goal that is easier to obtain. In the meantime, however, many will experience frustration as they realise that they are unlikely to attain the success they had hoped for.

These changes explain the appearance of so many students in college and medical school classrooms who have more ambition than skill. Educators must walk a fine line with such students, trying to encourage them while steering them in the direction in which they are most likely to be successful. Students should also recognise that it is fine to admit that one doesn't know something, and that one can learn from failure. Perfectionism has reached high levels among this generation, especially among the high achievers who fill medical education classrooms.<sup>17</sup> Perfectionism can paralyse a student who is afraid to fail.

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#### NARCISSISM AND ENTITLEMENT

Four datasets from four different sources suggest a marked rise in narcissism over the generations. Three examine changes in scores on the Narcissistic Personality Inventory (NPI), a measure of narcissistic traits; those who score high on the NPI are overconfident, self-centred, and lack empathy for others. Eighty-five samples of college students from all regions of the USA showed marked increases in NPI scores between 1982 and 2006. By 2006, one in four answered the majority of questions in the narcissistic direction, up from one in seven in 1982.<sup>13</sup> Scores on the NPI also increased among college students at the University of California at Davis between 2002 and 2007,<sup>24</sup> and an Internet sample showed higher NPI scores in younger people than older people.<sup>25</sup>

Lastly, a large epidemiological study conducted by the National Institutes of Mental Health screened over 35 000 Americans for Narcissistic Personality Disorder (NPD), the more severe, clinically diagnosed form of narcissism.<sup>26</sup> It concluded that about 6% of Americans – one in 16 – had suffered from NPD at some point in their lives. Nearly one in 10 Americans aged 20–29 years has experienced NPD, versus one in 30 of those aged over 65 years. If rates of NPD remained constant over the generations, *more* older people would report experience with NPD because they have had more years in which to experience the disorder. For example, a 65-year-old has had 40 more years in which to experience NPD than a 25-year-old. Instead, rates among older people are only a third of those among younger people. Although it is possible that older people may have forgotten some earlier episodes of NPD, there would have to be a huge amount of forgetting to explain this large difference, especially as their recall was facilitated by trained professionals. This study is a vivid illustration of a statistical principle: small average changes are magnified at the top or bottom of distributions. Most young people are, even now, not very narcissistic, but there are now more individuals who reach a very high level of narcissism.

One of the facets of narcissism is entitlement, the sense that the world owes you something ('I deserve the best', 'I *need* an A'). With narcissism on the rise, entitlement will appear more often. More students will expect to get good grades for 'trying' or 'working hard', not necessarily for good performance. One recent study found that a third of undergraduates believed they deserved at least a B just for attending

class; two-thirds believed they should get special consideration if they simply explained to their professor that they were trying hard.<sup>27</sup> More students will expect to sit make-up examinations administered at their convenience; Greenberger *et al.*<sup>27</sup> found that a third of students believed that if an examination were to interfere with their vacation plans, the professor should agree to give the examination at a different time. Arguing over grades will be more common and will take more creative forms, such as asking for extra credit after the class is over.

Those in high school in the 2000s, who will be the medical students of the 2010s, feel entitled for another reason: they were given better grades for doing less work. A total of 20% fewer high school students did 15 or more hours of homework per week in 2006 than in 1976, and more did no homework at all. Yet the number of A-grade students has nearly doubled over the same period: whereas only 18% of students said they earned an A or A-average in 1976, 33% said they were A students in 2006, representing a whopping 83% increase in self-reported A-grade students.<sup>16</sup> Generation Me has come to expect an easy ride, courtesy of their high school education.

Is the increase in narcissism and entitlement necessarily a bad thing? For the most part, yes. Narcissists do better than others at public performance in the short-term, but in the long-term their performance suffers as their overconfidence backfires and they ruin their relationships with others. Narcissism is corrosive to work relationships, as narcissists lack empathy for others and lash out with anger or aggression when challenged. In competitive situations, narcissists do well when risk is rewarded, but when the game changes and becomes more challenging, their risk-taking style leads them to fail more spectacularly. For example, stock market simulations show that narcissists win big in bull markets but lose more than others when the market turns downward. In fact, the crash of narcissistic overconfidence is a fairly accurate assessment of the financial crisis of 2008 (for a review of this research, see *The Narcissism Epidemic*).<sup>28</sup>

In medical education, it is vital that faculty and staff temper overconfidence and excessive risk-taking. Teach students that it is better to admit to lack of knowledge than to seem falsely competent. Demonstrate that risk can be good when it is carefully considered, but that too many risks can often compromise patient care. (Of course, there will still be exceptions, or students who are underconfident

and risk-averse; a different approach will be needed with them.) One way to satisfy students' need for participation and to temper overconfidence is to use a classroom response system (often called 'clickers'). Each student has a remote control that allows him or her to answer multiple-choice questions or vote on responses to questions. The instructor can then display the results to the class. This allows students to actively participate, even in large lectures, and may help them to realise when they do not know as much as they thought.

Another consequence of narcissism and entitlement is an expectation for plenty of leisure time. Recent generations are more likely to agree that 'work is just making a living' and to favour jobs that do not require overtime and allow for several weeks of vacation (Twenge *et al.*: 'Generational differences in work values: leisure is in; intrinsic, social, and altruistic values are out'; unpublished manuscript, 2009). Medicine is not immune to the lure of specialties that allow for less disruption of lifestyle.<sup>29</sup> The number of plastic surgeons, for example, has tripled since the mid-1970s, whereas the number of doctors has merely doubled. Ten times as many medical students in 2002 chose dermatology as did in 1996, six times as many chose anaesthesiology, and twice as many chose radiology. At the same time, the numbers of medical students choosing general surgery or family practice have declined.<sup>29</sup>

Doctors in many specialties are now choosing to work less. The number of doctors working part-time jumped 46% in just 2 years from 2005 to 2007.<sup>30</sup> Some of the increase derives from a rise in flexible schedules for women who are raising families, but almost a third of male doctors who moved to a part-time schedule said they wanted more time for 'unrelated professional or personal pursuits'. The era of doctors who considered themselves to be doctors first and everything else second appears to be over.

In some ways this is a good thing, particularly in terms of ensuring that doctors are able to spend time with families and that they get enough rest to provide good patient care. Yet those who talk about 'work-life balance' the most are often recent graduates who do not yet have children. Educators should be realistic with students about the challenges of residency and practice, and should let students know that, at least for a while, their work may take precedence over the rest of their lives. However, the trend toward increased leisure time may be unstoppable, and it remains to be seen whether the system or Generation Me's expectations will crack first.

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## MENTAL HEALTH PROBLEMS

Across several studies and methods, anxiety and depression are higher among younger generations<sup>2,31,32</sup> (Twenge *et al.*: 'Changes in psychopathology, 1938–2007: a cross-temporal meta-analysis of the Minnesota Multiphasic Personality Inventory'; unpublished manuscript, 2009; but see <sup>33</sup>). Medical and nursing students have always experienced stress and anxiety; the training is demanding and the stakes are measured in human life and limb. This, combined with the already high levels of stress in this generation, mean that more and more young people are experiencing serious mental health problems while in school. Some university faculty describe the undergraduates entering prestigious institutions as falling into two types, neither of which is good: 'crispies' are burned out from too much work and too much perfectionism, and 'teacups' are perfect on the outside but easily broken if rattled. By the time they arrive at medical school, even the strongest may be feeling fragile.

However, there is debate on this point. Suicide rates in young people (aged 15–24 years) declined between the early 1990s and the mid-2000s (although this may reflect an increase in the use of antidepressants over the same period). Borges *et al.*<sup>17</sup> examined medical students (combined BS/MD and MD only) at NEOUCOM between 1989 and 2004 and found declining levels of tension and increased emotional stability, two traits positively related to mental health. As the authors note, however, their results may be attributable to markedly more stringent admissions standards for the later group; they also found that the more recent students scored higher on reasoning. This sample also showed generational increases in apprehension, perfectionism and sensitivity, which may lead to mental health troubles. The younger generation was also lower in self-reliance, another red flag, which represents empirical support for the suggestion that Generation Me has been carefully supervised by its so-called 'helicopter' parents, making its members less independent.

The decline in self-reliance apparent in these data and in anecdotal reports suggests that the current generation of students needs to be given structure and precise directions. They like to know exactly what they need to do to earn good grades and they become stressed when given ambiguous instructions. Spell out the rules and requirements carefully, and you will get better results from Generation Me.

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## INTELLECTUAL SKILLS

Today's students are definitely smart. On average, younger generations score more highly on intelligence tests, particularly on reasoning ability and maths; however, much of the gain has taken place at the lower rather than the higher end of the IQ range.<sup>18</sup> At the same time, fewer and fewer young people read books,<sup>19</sup> which suggests a decline in the skills involved in reading long passages of text. Many young people read the short pieces of text found on webpages and in e-mails much more regularly than they read books. Those born since 1970 have watched 100 channels of television for much of their lives; those born after 1980 have used computers since early childhood, and those born since 1990 barely remember a time when the Internet did not exist.

Medical education has always emphasised learning by doing, which is the preferred learning style of this generation. Generation Me students like doing things themselves better than sitting and listening to a lecture. When they must hear a lecture, these students respond to pictures, graphics and short video segments like those found on YouTube. Professors who can incorporate modern technology into their teaching can facilitate the learning of this group.

The downside of this is that the textbook may never be read, or may only be skimmed. Textbook publishers are beginning to respond to generational changes by shortening undergraduate textbooks and printing more material in easy-to-digest chunks. This trend is likely to continue; few young people today, even the high achievers, enjoy sitting quietly with a book and reading. Instead, they attempt to multi-task, doing homework while surfing the web and exchanging instant messages with friends. (I say 'attempt to' because research in cognitive psychology has demonstrated that people cannot truly multi-task; instead, they must sequentially switch their attention back and forth, which depletes cognitive resources. Thus multi-tasking is a poor strategy [see <sup>34</sup>].)

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## WHAT TO DO

Medical educators face many of the same challenges as other faculty in trying to communicate with a generation they may not fully understand. Although Generation Me has many strengths, such as tolerance and a drive to succeed, its members may

sometimes be *too* confident. Others crack under the pressure of sustaining high achievement and develop mental health problems. Their previous educational experiences have often not prepared them for the hard work and challenges required to succeed.

Educators can take several steps to better teach this generation. The first step is to understand its perspectives and realise that they are reflections of contemporary culture. Generation Me is doing exactly what it has been taught to by parents, teachers and media. The second step is to meet its members on their own ground by breaking lectures into short chunks, using video and promoting hands-on learning. However, standards for content and learning should remain the same, and should be fair to everyone. If one student asks for and receives special treatment, the rest of the class is short-changed, as is the 'special' student in the long run (the longer he receives special treatment, the more difficult he will find it to succeed in a world that does not confer special treatment just for asking). Educators cannot compromise on the material that must be learned. As students feel more entitled, more will demand better grades for less work, just as they received in high school. In medical education, however, allowing students to earn good grades when they do not learn the material is not only unfair but dangerous.

Today's students frequently need the purpose and meaning of activities spelled out for them. Previous generations had a sense of duty and would often do what they were told without asking why. Most young people no longer respond to appeals to duty; instead, they want to know exactly why they are doing something and want to feel they are having a personal impact. This is an opportunity: if young people understand the deeper meaning behind a task, they can bring their energy and passion to bear on it. Medicine is a natural field for people who seek to have an impact, and this desire can be harnessed to improve medical education. Although self-esteem and narcissism do not necessarily help people succeed, narcissistic people's desire for attention can potentially be harnessed to good ends, such as that of helping others through medicine. However, medical educators must make sure that students' overconfidence does not lead to failure, and that the importance of less visible tasks is emphasised. Medical education resembles evolution in that it rewards by ensuring the survival of the fittest. When taught properly, the fittest of Generation Me will

succeed, just as the fittest members of previous generations have done in the past.

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## REFERENCES

- 1 Stewart AJ, Healy JM. Linking individual development and social changes. *Am Psychol* 1989;**44**:30–42.
- 2 Twenge JM. The age of anxiety? Birth cohort change in anxiety and neuroticism, 1952–1993. *J Pers Soc Psychol* 2000;**79**:1007–21.
- 3 Fukuyama F. *The Great Disruption: Human Nature and the Reconstitution of Social Order*. New York, NY: Free Press 1999.
- 4 Myers D. *The American Paradox: Spiritual Hunger in an Age of Plenty*. New Haven, CT: Yale University Press 2000.
- 5 Nafstad HE, Blakar RM, Carlquist E, Phelps JM, Rand-Hendriksen K. Ideology and power: the influence of current neo-liberalism in society. *J Community Appl Soc Psychol* 2007;**17**:313–27.
- 6 Seligman MEP. Why is there so much depression today? The waxing of the individual and the waning of the commons. In: Ingram RE, ed. *Contemporary Psychological Approaches to Depression: Theory, Research, and Treatment*. New York, NY: Plenum Press 1990;1–9.
- 7 Twenge JM. *Generation Me: Why today's young Americans are more confident, assertive, entitled – and more miserable than ever before*. New York, NY: Free Press 2006.
- 8 Twenge JM. Generation Me, the origins of birth cohort differences in personality traits, and cross-temporal meta-analysis. *Soc Pers Psychol Compass* 2008;**2**:1440–54.
- 9 Twenge JM. Changes in masculine and feminine traits over time: a meta-analysis. *Sex Roles* 2007;**36**:305–25.
- 10 Twenge JM. Changes in women's assertiveness in response to status and roles: a cross-temporal meta-analysis, 1931–1993. *J Pers Soc Psychol* 2001;**81**:133–45.
- 11 Twenge JM. Birth cohort changes in extraversion: a cross-temporal meta-analysis, 1966–1993. *Pers Individ Dif* 2001;**30**:735–48.
- 12 Twenge JM, Campbell WK. Age and birth cohort differences in self-esteem: a cross-temporal meta-analysis. *Pers Soc Psychol Rev* 2001;**5**:321–44.
- 13 Twenge JM, Konrath S, Foster JD, Campbell WK, Bushman BJ. Egos inflating over time: a cross-temporal meta-analysis of the Narcissistic Personality Inventory. *J Pers* 2008;**76**:875–901.
- 14 Reynolds J, Stewart M, Sischo L, MacDonald R. Have adolescents become too ambitious? High school seniors' educational and occupational plans, 1976 to 2000. *Soc Probl* 2006;**53**:186–206.

- 15 Twenge JM. Birth cohort differences in the monitoring the future dataset: further evidence for Generation Me. *Perspect Psychol Sci* 2009;[in press].
- 16 Twenge JM, Campbell WK. Increases in positive self-views among high school students: birth cohort changes in anticipated performance, self-satisfaction, self-liking, and self-competence. *Psychol Sci* 2008; **19**:1082–6.
- 17 Borges NJ, Manuel RS, Elam CL, Jones BJ. Comparing Millennial and Generation X medical students at one medical school. *Acad Med* 2006;**81**:571–6.
- 18 Flynn JR, Weiss LG. American IQ gains from 1932 to 2002: the WISC subtests and educational progress. *Intl J Testing* 2007;**7**:209–24.
- 19 National Endowment for the Arts. *Reading at Risk: a Survey of Literary Reading in America*. <http://www.nea.gov/news/news04/ReadingAtRisk.Html>. [Accessed 10 March 2009.]
- 20 Twenge JM, Im C. Changes in the need for social approval, 1958–2001. *J Res Pers* 2007;**41**:171–89.
- 21 Astin AW, Oseguera L, Sax LJ, Korn WS. *The American Freshman: Thirty-five Year Trends*. Los Angeles, CA: Higher Education Research Institute, UCLA 2002. [Plus 2006 and 2007 supplements.]
- 22 Baumeister RF, Campbell JD, Krueger JI, Vohs KD. Does high self-esteem cause better performance, interpersonal success, happiness, or healthier lifestyles? *Psychol Sci Public Interest* 2003;**4**:1–44.
- 23 Robins RW, Beer JS. Positive illusions about the self: short-term benefits and longterm costs. *J Pers Soc Psychol* 2001;**80**:340–52.
- 24 Twenge JM, Foster JD. Mapping the scale of the narcissism epidemic: increases in narcissism 2002–2007 within ethnic groups. *J Res Pers* 2008;**42**:1619–22.
- 25 Foster JD, Campbell WK, Twenge JM. Individual differences in narcissism: inflated self-views across the lifespan and around the world. *J Res Pers* 2003;**37**:469–86.
- 26 Stinson FS, Dawson DA, Goldstein RB *et al*. Prevalence, correlates, disability, and comorbidity of DSM-IV Narcissistic Personality Disorder: results from the Wave 2 National Epidemiologic Survey on Alcohol and Related Conditions. *J Clin Psychiatry* 2008;**69**:1033–45.
- 27 Greenberger E, Lessard J, Chen C, Farruggia SP. Self-entitled college students: contributions of personality, parenting, and motivational factors. *J Youth Adolesc* 2008;**37**:1193–204.
- 28 Twenge JM, Campbell WK. *The Narcissism Epidemic: Living in the Age of Entitlement*. New York, NY: Free Press 2009.
- 29 Dorsey ER, Jarjoura D, Rutecki GW. Influence of controllable lifestyle on recent trends in specialty choice by US medical students. *JAMA* 2003;**290**:1173–8.
- 30 Reuters News Service. *Part-Time Practice Trends Intensify Physician Shortage According to Amga and Cejka Search 2007 Physician Retention Survey*. <http://www.reuters.com/article/pressRelease/idUS134560+10-Mar-2008+PRN20080310>. [Accessed 10 March 2008.]
- 31 Klerman GL, Weissman MM, . Increasing rates of depression. *JAMA* 1989;**261**:2229–35.
- 32 Lewinsohn PM, Rohde P, Seeley JR, Fischer SA. Age-cohort changes in lifetime occurrence of depression and other mental disorders. *J Abnorm Psychol* 1993;**102**:110–20.
- 33 Costello J, Erkanli A, Angold A. Is there an epidemic of child or adolescent depression? *J Child Psychol Psychiatry* 2006;**47**:1263–71.
- 34 Pashler H, . *The Psychology of Attention*. Cambridge, MA: MIT Press 1998.

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