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Niche Update

Update on 1998 Schmidt & Hunter — Validity and Utility of Assessment Methods

In 1998 Schmidt and Hunter analysed 85 years of research into the validity of selection assessment methods and late last year they released a working paper updating this study. The study analysed 100 years of research using the more advanced statistical procedures that have been developed over this time (Schmidt, Oh & Shaffer, 2016).

Their updated results are shown in Table 1. What is interesting about this research is that the most predictive single measure is IQ (General Mental Ability - GMA). The combinations of methods with the best validity and utility for predicting job performance are IQ plus an integrity test (.78) or IQ plus a structured interview. (.76).

In contrast to the 1998 study, they found there was the much higher validities in unstructured interviews than previously analysed. In the 1998 study unstructured interviews had .38 validity coefficient whereas in this updated analysis they have .60 and structured went from .51 to .58.

The study's validity coefficient of .65 for GMA (IQ) testing alone to predict on the job performance is the average of 8 meta-analytic studies presented in a previous Schmidt, Oh & Shaffer's (2008) paper. However, other studies

Table 1: Selection Method Predicting Job Performance	Operational Validity (r)	Multiple validity (R) by adding IQ test
GMA (IQ) Test	.65	
Integrity Test	.46	.78
Structured Interview	.58	.76
Unstructured Interview	.60	.75
Conscientiousness	.22	.70
Reference Checks	.26	.70
Biodata	.35	.68
Job experience	.13	.67
Person job fit	.18	.67
Assessment centres	.37	.66
Peer ratings	.49	.66
Years of education	.10	.66
Emotional Intelligence	.24	.65
Work Sample tests	.33	.65
Emotional Stability	.12	.65

cited in the article show the GMA validity does vary over different job levels and complexities. They found professional and managerial jobs had GMA validity coefficients of .74 but unskilled jobs had only .39. In addition, GMA is also an excellent predictor of job-related learning at all job levels studied. The authors go on to state "GMA can be considered the primary personnel measure for hiring decisions, and we can consider the remaining 30 personnel measures as supplements to GMA measures".

This updated research highlights the utility gains an organisation can achieve by adding IQ and integrity testing to their selection procedures. In addition, unstructured interviews seem similar or slightly better than structured interviews at picking those who may succeed on the job.

Are there Generational and Gender differences in Faking of Personality Assessments?

There seems to be lots of talk in the news about how the Millennials (Generation Me) are different and more narcissistic than previous generations. Some companies report higher turnover from this generation and that their values are different to previous generations.

There seems to be less research on whether the Millennials try to fake personality assessments any more than other generations. At Niche we have analysed the people who have completed the CPI (California Psychological Inventory) and who also have given us their date of birth (this is optional on our consent form) and analysed the level of faking across generations. The CPI has a strong `indication of faking and those who have a faked profile are asked to resit the assessment and be more candid in their responding.
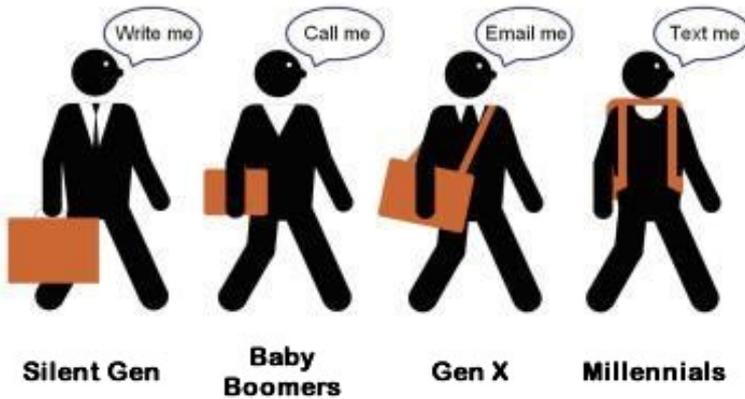
Generation Z
? ? ?

Millennials
Work for fun

Generation X
Work to live

Baby Boomers
Live to work

Silent Generation
Work is Life

2000 — 1980 — 1965 — 1945 — 1930

The below analysis includes people assessed at Niche Consulting from April 2005 to July 2017.
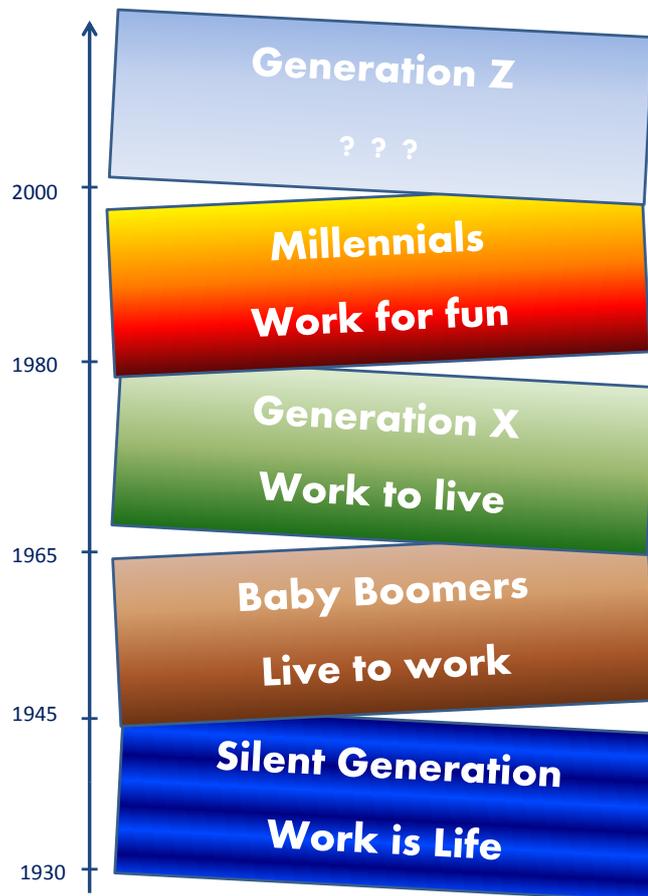
TABLE 2 - Sample April 2005 - July 2017 © Niche Consulting 2017	Dates of Birth	Number Assessed on CPI	Number Faked	Percent Faked	Percent in sample Female
Silent Generation	1945 and before	15	3	21.4%	20%
Baby Boomers	1946 to 1960	1131	100	8.8%	33.2%
Gen X	1961 to 1981	5436	536	9.9%	36.1%
Millennials	1982 to 2004	2675	259	9.7%	45.4%
Total		**9257**	**898**	**9.7%**	**38.4%**

More on Generational and Gender differences

Our four generation workforce provides challenges

Write me · Call me · Email me · Text me

Silent Gen · Baby Boomers · Gen X · Millennials

The results show Millennials do not seem to fake significantly more or less than any other generation from the Baby Boomers onwards. While our data shows the Silent Generation fakes more, this is from a very small sample of people which may not hold true over a larger sample. So if we exclude the Silent Generation, the faking is pretty consistent across different generations. For most post war generations, faking seems to occur in 9-10% of people we have assessed over the last 12 years.

However, what about by gender, do we see gender differences in faking? The data in Table 3 shows that males do tend to fake more than females in this sample with the total percentage faking nearly 3% more in males than females and this difference applies fairly consistently across generations (if you exclude the small Silent Generation with the small sample size).

Table 3: Number of Faked Profiles © Niche Consulting 2017	% Males	% Females
Silent Generation	25%	0%
Baby Boomers	10.2%	6.1%
Gen X	11.0%	7.8%
Millennials	10.6%	8.6%
Total	**10.8%**	**7.9%**

anatomy of generations
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Boomers
pre 1960 | 1960-1969 | 1970-2005 | 2006-2015
not the 60s | the 60s!!!!! | not like it was in the 60s | in their 60s

Gen Xers
pre 1990 | 1991-1995 | 1996-2015
whined about Boomers | wore plaid | whined about Millennials

Millennials
pre 2007 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015
no iPhone | new iPhone | new iPhone | new iPhone | new iPhone | new iPhone | new iPhone | new iPhone | new iPhone | new iPhone

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What is also quite heartening in the data in Table 2 is how many more females are applying for jobs and getting assessed with each subsequent generation (if we assume most people assessed have been screened and are on a shortlist or are the leading candidate). In the Silent Generation it was only 20%, but with Baby Boomers that grew to 33.2%, Gen X to 36.1% and Millennials 45.4%. Hopefully this trend will continue into Generation Z and we can see equal job opportunity and pay for females in the workplace.

Is IQ really Stable from Childhood to Old Age and Why is it Important?

Deary (2014) has shown that intelligence is fairly stable over a lifetime. In his study, he looked at the stability of individual differences by looking at people tested in childhood and tested 15 years later and then tested in old age on the same intelligence test in Scotland. Other studies had found strong correlations of .78 between IQ tests on the same people with significant year gaps, but these studies did not have a childhood score, instead were only able to compare adult scores across significant age gaps. Deary's study found that about half the differences in intelligence at age 70 could be traced back to differences at age 11, and about one third of the differences at age 90 could be traced back to the age 11 differences.

Deary also looked at risk factors and protective factors that may speed up or mitigate cognitive decline. Protective factors included physical activity, education, drinking coffee and red wine. Risk factors included smoking and gene mutations which are indicators for dementia. Interestingly, he found that once he adjusted for scores on the childhood test, the associations found with protective factors were not significant. However, he concluded that "brighter children tend to become brighter older adults, and they also take part in more intellectual activities, drink more coffee and red wine and have less-inflamed blood".

So we know from Schimdt et al's (2016) research (see Page 1) that IQ is the most effective single measure to predict job performance but what else does an individual's IQ level predict? Several researchers have shown IQ is an important predictor of many other positive life outcomes. More intelligent people tend to be in higher paid and more professional occupations, they tend to stay in education longer, they tend to be healthier and they live longer (Deary, 2000, 2012, 2013; Deary, Weiss & Batty 2010; Strenze, 2007).

Higher Intelligence (IQ)

- Stay in education longer
- Are in more Professional Occupations
- Are in Higher Income Occupations
- Tend to be Healthier
- Live Longer