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Criminal investigations often rely upon eyewitnesses to help drive investigations forward and convict offenders. Witnesses can assist investigators by identifying suspects, through identification parades; and by providing detailed accounts about the incident, through their statement. However, research suggests that witnesses will not always produce reliable evidence. Witness inaccuracies can be due to various dispositional and circumstantial factors, however for the purpose of the current discussion, the author focuses on the malleability on the suggestibility of eyewitnesses during co-witness discussions.

**Keywords:** conformity; eyewitness; memory; misinformation; suggestibility
There is an expectation placed within the criminal justice system that witness accounts are independent and not based on information encountered post-event (Deffenbacher & Loftus, 1982). However, this is not always the case. After witnessing an incident, witnesses may encounter post-event information about the incident from external sources (Gabbert et al., 2012) which may conflict with their personal recollections or provide additional details about the event that they may have previously been unaware of (French et al., 2006; Gabbert et al., 2006). Witnesses can encounter post-event information from various sources, most typically through other co-witnesses (Gabbert, 2004), interviewers (Jack et al., 2013) and media reports (Gabbert et al., 2012). However, research has shown that most influential source of post-event information are other co-witnesses (Paterson and Kemp, 2006a). Interviewers will usually encourage witnesses to only recall information that they remember seeing. However, research suggests that many eyewitnesses who encounter misleading post-event information may then incorporate the misinformation into their personal statements (Mojtahedi, 2017; Mojtahedi et al., 2017).

Co-witness discussions are common occurrences (Skagerberg & Wright, 2008). Survey results from Paterson and Kemp (2006b) suggest that on average, public crimes will involve 6.77 co-witnesses and approximately 86% of witnesses will engage in a post-event discussion with their co-witnesses after the incident. If co-witnesses hold differing recollections of the event, a group discussion could cause the individual statements of the eyewitnesses to become more similar (Gabbert et al., 2004; Mojtahedi et al., 2018a). This process of co-witness contamination is frequently referred to as memory conformity (Carlucci et al., 2010; Davis & Meade, 2013; Paterson et al., 2012). A notable case of memory conformity was the investigation of the 1995 Oklahoma bombing incident. Three eyewitnesses had reported having seen the suspect come into the store they worked at to rent the vehicle that was used for the attack. Initially, two of the witnesses had correctly reported only seeing McVeigh get inside the truck, but the third witness mistakenly believed that a second accomplice was present. After discussing the event with each other, all three witnesses agreed that a second accomplice had been present during the incident (Memon & Wright, 1999; Schacter, 2001). This collaborative error caused police officers to exhaust their time and resources looking for a non-existent second suspect – in what is considered to be one of the most expensive manhunts in US history (Skagerberg & Wright, 2008).

Researchers have been able to emulate and examine the effects of memory conformity through an experimental design commonly referred to as the misinformation paradigm (see Ayers & Reder, 1998 for review). Participants first witness an incident (either on screen or in person). After witnessing the event, they are then exposed to misleading post-event information from a co-witness, either directly (using other participants or confederates) or indirectly (e.g., written statements from previous participants). Finally, participants are individually questioned by the interviewer about the event. Responses are then compared to a control group of participants who have not been exposed to the misinformation to determine whether exposure to misinformation influenced the participants' memory reports (e.g., Mojtahedi et al., 2018b). Research using this paradigm has demonstrated the vulnerability of human memory to contagion, with evidence showing that individuals are susceptible to co-witness influence when recalling an incident (Davis & Meade, 2013), describing a suspect (Loftus & Greene, 1980), making an identification (Zajac & Henderson, 2009) or attributing blame (Mojtahedi et al., 2019).

Psychological explanations of memory conformity

It is generally accepted that the memory conformity can operate outside of a witness's awareness (Morgan et al., 2013), such that some witnesses will recall post-event information with the belief that they had witnessed the information (Scoboria et al., 2006). This unintentional acceptance of misinformation can be a result of source attribution errors, a psychological process where post-event information is misattributed as witnessed information during memory reconstruction (Cann & Katz, 2005; Schacter et al., 2011). Co-witness conformity can also occur intentionally as a result of
informational influence (Blank, 2009; Gabbert et al., 2007), the process of conforming to others to obtain the correct answer (Deutsch & Gerard, 1955). Due to the significant implications that are associated with giving evidence to the police, many witnesses will feel pressured to provide accurate information. However, a heightened pressure to perform can motivate an eyewitness to report newly learnt misinformation, if they perceive the source to be accurate (French et al., 2011; Williamson et al., 2013).

**Individual differences and memory conformity**

Research on memory conformity has consistently found that not all participants conform to their co-witnesses. The literature suggest that some eyewitnesses may possess certain dispositional attributes that put them at a higher risk of being influenced by co-witnesses, relative to others (Goodwin et al., 2012). Alternatively, some co-witnesses may also possess certain attributes that make them more influential to other co-witnesses, than others (Mojtahedi et al., 2019).

Wright et al., (2009) reported that participants with social anxiety were more vulnerable to being influenced by a co-witness during memory recall, due to a greater fear of negative evaluation making them more susceptible to normative influence. Cooperativeness and reward dependence were also associated with a greater susceptibility to misleading post-event information (Zhu et al., 2010). Dougherty et al., (2017) found that participants who scored lower on measures of openness, extraversion and neuroticism were significantly more susceptible to memory conformity, relative to higher scoring participants. Further, Liebman et al., (2002) found that eyewitnesses with a high external locus of control, low memory efficacy and/or high levels of neuroticism were significantly more vulnerable to interrogative suggestibility.

In relation to the source of the misinformation, research suggests that the characteristics of an information source can affect their level of influence over their co-witnesses (Forgas & Williams, 2001). More specifically, it is the way in which the information source is perceived by their co-witnesses that affects their level of informational influence (Skagberg & Wright, 2009; Williamson et al., 2013). Research has shown that a co-witness’s perceived credibility (e.g. memory accuracy) can determine their level of influence over other co-witnesses. Thorley (2015) found that participants were susceptible to conforming to their co-witness’s false blame attribution, after reading their erroneous statement, but only when the unfamiliar co-witness was a young adult. The study found that when the co-witness was an elderly woman, participants were significantly more likely to reject her statement. Additionally, Thorley (2015) found that participants were more likely to conform to co-witnesses that were perceived as having better memory over co-witnesses that they deemed as being more reliable.

Eyewitnesses are also more likely to conform to the memory reports of co-witnesses that they share a pre-existing relationship with, relative to unfamiliar co-witnesses (French et al., 2008; Mojtabahedi et al., 2018a). This is because individuals are better equipped at assessing the credibility of an acquaintance in comparison to a stranger. Thus, there would be more reason to accept information from a familiar source. However, if the individual perceives a familiar co-witness as being incompetent or untrustworthy, this could motivate them to disregard their co-witness’s report (Skagerberg & Wright, 2009). Another reason why eyewitnesses are more likely to be influenced by familiar co-witnesses than by strangers is due to an increased level of likability towards the co-witness. Research on social cognition suggests that the likeability of an information source can moderate the level of social influence they have (Burger et al., 2001).
CONCLUSION

Within the past two decades, research has demonstrated how misleading information from co-witnesses can influence an individual to falsely report seeing items that were not present, get the characteristics of certain details incorrect (e.g., suspect's hair colour), and even misidentify the wrong suspect from an identification parade. However, when assessing the real-world applicability of such research, one must acknowledge that the observations made within laboratory settings will not be replicated by all eyewitnesses after a real incident. In addition, the ecological validity of the laboratory-based observations is not completely exemplary, therefore, caution must still be taken when interpreting the findings and using them to assess the reliability of an eyewitness’s statement.

REFERENCES


Reactions to contemporary narratives about masculinity: A pilot study

John Barry, Rob Walker, Louise Liddon, & Martin Seager

Male Psychology Network
United Kingdom

Correspondence: john@malepsychology.org.uk

Masculinity is frequently talked about in contemporary Western media as being in crisis, needing reform or even being ‘toxic’. However, no research to date has assessed the impact that this pervasive narrative might be having on people, particularly men themselves. This cross-sectional online pilot survey asked 203 men and 52 women (mean ± SD age 46 ± 13) their opinions about the terms toxic masculinity, traditional masculinity, and positive masculinity, and how they would feel if their gender was seen as the cause of their relationship or job problems. Most participants thought the term toxic masculinity insulting, probably harmful to boys, and unlikely to help men’s behaviour. Having feminist views, especially being anti-patriarchy, were correlated with more tolerance of the term toxic masculinity. Most participants said they would be unhappy if their masculinity or femininity were blamed for their work or relationship problems. Further analysis using multiple linear regression found that men’s self-esteem was significantly predicted by older age, more education, and a greater acceptance of traditional masculinity. Men’s mental positivity – which is known to be negatively correlated with suicidality – was significantly predicted by older age, a greater acceptance of traditional masculinity, and more education. Implications for the mental health of men and boys are discussed in relation to the narrative around masculinity in the media, social sciences, and in clinical psychology.

Keywords: feminism; gamma bias; patriarchy; self-esteem; toxic masculinity
Until around the 1980s, masculinity was typically described using adjectives such as ‘active’, ‘dominant’, ‘self-contained’ (e.g., Cicone & Ruble, 1978) and ‘aggressive’ (Spence et al, 1975). However, recently masculinity has increasingly been constructed using attributes such as ‘misogyny’ and ‘homophobia’ (Mahalik et al., 2003). This represents a blurring of normative traits that are common to most men, with deviant traits which are manifest in a minority (Ferguson, 2018). These more recent conceptions originated in sociology, mostly in relation to ‘hegemonic masculinity’ (Connell, 1987), which claims masculinity is about striving for dominance, including dominance over women. Similarly, in ‘critical psychology’ – inspired by Marxist ideas – men are sometimes portrayed as a dominant class who oppress women as a class, and ‘male privilege’ and ‘patriarchy’ are constructed as problems in relation to masculinity (Arfken, 2017; Nicolson, 2010).

Toxic masculinity is described as ‘the constellation of socially regressive male traits that serve to foster domination, the devaluation of women, homophobia, and wanton violence’ (Kupers 2005, p.710), and has become synonymous with violence and sexual assault by men. In 2018 ‘toxic’ was voted Word of the Year, and – in a year of great concern over environmental pollution – the phrase ‘toxic masculinity’ was ranked second only to ‘toxic chemicals’. The Word of the Year is chosen by the Oxford University Press to reflect the preoccupations of society that are most likely to have lasting cultural significance, and the widespread use of the term ‘toxic masculinity’ probably reflects the culmination of several decades of negativity about men and masculinity. This raises the possibility that the term now shapes how men are perceived, foregrounding toxicity over and above the law-abiding and positive behaviours of most men (Barry, 2017).

There is evidence that feeling good about masculinity boosts men’s self-esteem (Burkley et al., 2015) and some research shows that low self-esteem is correlated with suicidal ideation (De Man & Gutiérrez, 2002). There is research suggesting that boys are more quickly associated with negative attributes than are girls (Heyman, 2001). Giving someone a ‘bad name’ can lead to bad behaviour (Sharma & Sharma, 2015), and it is suggested that without being given a way to develop a healthy identity, many boys are likely to opt for an unhealthy identity (Nathanson & Young, 2009; Acharya & Relojo, 2017). However, so far, no research on the influence on men and boys of negative language about masculinity has been conducted.

The aim of the present study was to pilot questions about how people feel about various conceptions of masculinity, and whether such views are related to self-esteem.

**METHOD**

**Design**

This study is a cross-sectional online survey analysed using multiple linear regression. The dependent (criterion) variables were self-esteem and mental positivity. The predictors were (a) age; (b) education level; (c) attitudes to masculinity (i.e., attitudes to traditional, toxic, and positive masculinity); and, (d) and feminist attitudes (i.e., identifying as feminist, equal opportunities, and anti-patriarchy). Data were analysed using SPSS software, Version 26. The survey platform was PsyToolkit.

**Materials**

**Types of masculinity.** All participants were presented with the statement: *In general, masculinity can be defined as the set of characteristics, behaviours and social roles usually associated with men. The following questions ask your opinion on different types of masculinity.*

This was followed by three descriptions of masculinity. Participants saw all three descriptions, but the order of presentation was randomised:
The term ‘traditional masculinity’ is sometimes used to describe traditional male behaviours, such as being a provider and protector of the family, someone who is prepared to fight for the things he values in life, and someone who keeps their problems to themselves. Please answer the following questions about your opinion of traditional masculinity, stating the extent to which you agree with the statements.

The term ‘toxic masculinity’ is sometimes used to describe men’s behaviour that is socially dominant, misogynistic, violent or homophobic. Please answer the following questions about your opinion of toxic masculinity, stating the extent to which you agree with the statements.

The term ‘positive masculinity’ is sometimes used to describe men’s behaviour that is socially useful. For example, some men like to take dangerous risks, and becoming a firefighter is a positive way to channel risk-taking behaviour. Please answer the following questions about your opinion of positive masculinity, stating the extent to which you agree with the statements.

After each of these descriptions, the following questions were asked, with the name of the type of masculinity varied as appropriate. The question also varied depending on whether the participant was male, female, or other gender:

**The idea of ‘toxic masculinity’ helps me to behave in a good way.** [Asked to male participants only]

**The idea of ‘toxic masculinity’ helps men in general to behave in a good way.**

**The idea of ‘toxic masculinity’ might make my [or men’s] behaviour worse.**

**The idea of ‘toxic masculinity’ is insulting to me [or men].**

**The idea of ‘toxic masculinity’ changes the way all men are seen, not just the ‘toxic’ men.**

**The idea of ‘toxic masculinity’ may have a harmful impact on boys if they hear or read about the term.**

**The idea of ‘toxic masculinity’ is helpful.**

The response options were on a 6-point Likert scale from ‘very much agree’ to ‘very much disagree’.

Two other questions were asked, with changes appropriate to the gender of the participant:

**Question 1:** If you were feeling down about problems in your relationship due to having arguments, and you were told that your problems were caused by your masculinity [or femininity, or gender], how would you feel?

**Question 2:** If you were feeling down because your job was making you stressed and you were told that your problems were caused by your masculinity [or femininity, or gender], how would you feel?

The response options were the Positive Mindset Index (PMI; Barry et al., 2014) items (happy, confident, in control, emotionally stable, motivated and optimistic).

**Feminist attitudes.** There were three items: (a) I am a feminist; (b) Women should have equal opportunities to men; and (c) Patriarchy prevents women from having equal rights to men. The response options were on a 6-point Likert scale from ‘very much agree’ to ‘very much disagree’.

**Positive Mindset Index.** The PMI consists of six items (happiness, confidence, being in control, emotional stability, motivation, and optimism), and uses a 5-point Likert scale. This scale shows good internal reliability (Cronbach’s alpha = 0.926) and good concurrent validity with the psychological subscale of the SF-12 ($r = .678$). There is also good concurrent validity between the PMI and Paykel's
Suicidal Ladder ($r = -0.539$) (Seager et al., 2014). Phillips et al., (2018) found good concurrent validity with PsyCap (a measure of an appealing personality; $r = .687$) and the Subjective Happiness Scale ($r = .689$). The norm score for the PMI is around 3.3 (0.8) for men and women combined.

**Self-esteem.** Self-esteem was measured using Rosenberg’s (1965) scale, a 10-item measure of global self-worth. Positive and negative feelings about the self are assessed on a single dimension. Cronbach’s alpha for various samples range from 0.77 to 0.88 (Blascovich & Tomaka, 1993). Scores between 15–25 indicate normal self-esteem. Items are answered on a 4-point Likert scale, from ‘strongly agree’ to ‘strongly disagree’. The present study used a 6-point scale, and scores were converted to be comparable to the scores and norms on the original scale using the algorithm: score minus 1, then: 5 = 3.33; 4 = 2.67; 3 = 2; 2 = 1.33; 1 = 0.67; 0 = 0.

**Free text responses.** Free text responses were reviewed and coded using content analysis (Graneheim & Lundman, 2004). The free text was reviewed by RW and recurring themes tallied and given an appropriate label.

**Participants**

Participants were recruited via social media, with the initial post on the Male Psychology Network Twitter account being subsequently shared more widely. Participants were excluded if they were under 18 years old, did not complete the consent form, or did not give key information (e.g. age, gender or attitudes to masculinity). Participants indicated their informed consent to take part by ticking a box which followed an information sheet. The survey was anonymous and confidential, and done in accordance with the ethical guidelines of the Declaration of Helsinki (World Medical Association, 2013).

**Procedure**

Participants answered an invitation on social media, posted initially on the Male Psychology Network social media channels. After reading an information sheet and indicating their consent with a tick box (compulsory for participation), participants filled in the questionnaire. Three types of masculinity were described, with the order of their presentation being randomised. The survey took around 15 minutes to complete.

**Statistical analyses**

Demographic data were analysed using independent t-tests or $\chi^2$. Opinions about masculinity were presented as percentages. Pearson's correlations were used to assess relationships between variables. All statistical analyses had a sufficiently large sample size ($> 50$) to use parametric tests regardless of the shape of the distribution (Hinkle et al., 2003), based on the central limit theorem (Pek et al., 2018). According to Tabachnick and Fidell (2001), for multiple linear regression, the minimum number of participants should be $> 50 + (m^28)$, where $m$ = the number of predictors. In the present study, with 8 predictors this means the minimum number required was 114. To detect a moderate effect size with 80% statistical power, a minimum of 52 participants are needed per group for independent t-tests, and at least 100 participants are needed for Pearson's correlations (Cohen, 1988).

**RESULTS**

Two hundred and seventy-nine people responded to the survey. Twenty-four people (8.6%) didn't answer one or more key question, so were omitted from the study. Most participants were born in the British Isles (57%), 13% were from other parts of Europe, 18% were from the US or Canada, 7% from Australia or New Zealand, and 5% from other countries. Table 1 shows the descriptive statistics and comparison by gender for background characteristics of the participants.
Table 1

Comparisons by Gender for Background Characteristics.

<table>
<thead>
<tr>
<th></th>
<th>Men (N = 203(^a))</th>
<th>Women (N = 52(^b))</th>
<th>Test statistic</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age: Mean (SD)</td>
<td>44.86 (12.94)</td>
<td>46.68 (13.19)</td>
<td>-.093</td>
</tr>
<tr>
<td>Ethnicity (White)</td>
<td>191 (90.5%(^a))</td>
<td>50 (94.7%(^b))</td>
<td>17.787</td>
</tr>
<tr>
<td>Undegraduate degree or higher</td>
<td>133 (68.7%)</td>
<td>43 (76.8%)</td>
<td>7.097</td>
</tr>
<tr>
<td>Employed full-time</td>
<td>131 (62.1%(^a))</td>
<td>18 (32.1%(^b))</td>
<td>28.71****</td>
</tr>
<tr>
<td>Relationship: Married</td>
<td>72 (34.1%(^a))</td>
<td>24 (42.9%(^b))</td>
<td>2.52</td>
</tr>
<tr>
<td>Relationship: Single</td>
<td>87 (41.2%(^a))</td>
<td>22 (29.3%(^b))</td>
<td></td>
</tr>
<tr>
<td>Heterosexual</td>
<td>186 (88.2%(^a))</td>
<td>51 (98.2%(^b))</td>
<td>5.369</td>
</tr>
<tr>
<td>Politics: Conservative</td>
<td>61 (28.9%(^a))</td>
<td>14 (25.0%(^b))</td>
<td></td>
</tr>
<tr>
<td>Politics: Labour/Liberal Democrats/Green/Other Party</td>
<td>54 (29.3%(^a))</td>
<td>13 (29.4%(^b))</td>
<td>3.168</td>
</tr>
<tr>
<td>Politics: No party</td>
<td>86 (40.8%(^a))</td>
<td>25 (44.6%(^b))</td>
<td></td>
</tr>
</tbody>
</table>

NB: Values are shown as mean (SS) or frequency count (with percentage).

\(\* p < .05; ** p < .01; *** p < .001\) (two-tailed)

\(^a\) Numbers vary where participants did not give full demographic information.

\(^b\) All test statistics are \(\chi^2\), apart from Age which is mean (SD)

The PMI and self-esteem scores were within the normal range for these scales. PMI and self-esteem were strongly correlated \((r = .766; n = 273; p < .05^{51})\), indicating good concurrent validity. Not shown in Table 2, 22.8% of the men and 53.6% of women agreed to some degree (‘very much’, ‘moderately’, or ‘slightly’) that they were a feminist. 96.3% of men and 100% of women agreed to some degree with equal opportunities for men and women. 15.6% of men and 42.9% of women agreed to some degree that patriarchy prevents women from having equal rights to men. For all the participants combined, scores on the feminism item and patriarchy item were strongly correlated \((r = .589; p < .05^{24})\), scores on the feminism item and equal opportunities item were significantly correlated though more weakly \((r = .172; p < .005)\), and scores on the equal opportunities item and patriarchy item were not correlated at all \((r = .075; p < .220)\).

Table 2 shows the descriptive statistics and comparison by gender for the variables measuring self-esteem, mental positivity, and attitudes to gender.
### Table 2

**Descriptive Statistics and Comparison by Gender.**

<table>
<thead>
<tr>
<th>Variable</th>
<th>Men</th>
<th>Women</th>
<th>t</th>
</tr>
</thead>
<tbody>
<tr>
<td>Self-esteem</td>
<td>21.75 (7.72)</td>
<td>25.89 (6.09)</td>
<td>-4.27&lt;sup&gt;3&lt;/sup&gt;&lt;sup&gt;****&lt;/sup&gt;</td>
</tr>
<tr>
<td>PMI</td>
<td>3.28 (0.72)</td>
<td>3.58 (0.64)</td>
<td>-2.86&lt;sup&gt;***&lt;/sup&gt;</td>
</tr>
<tr>
<td>'I am a feminist'</td>
<td>2.04 (1.56)</td>
<td>3.30 (1.93)</td>
<td>-4.52&lt;sup&gt;3&lt;/sup&gt;&lt;sup&gt;****&lt;/sup&gt;</td>
</tr>
<tr>
<td>Support for equal opportunities</td>
<td>5.67 (0.99)</td>
<td>5.75 (0.79)</td>
<td>-0.54</td>
</tr>
<tr>
<td>Belief patriarchy holds women back</td>
<td>1.79 (1.43)</td>
<td>2.89 (1.86)</td>
<td>-4.42&lt;sup&gt;***&lt;/sup&gt;</td>
</tr>
</tbody>
</table>

NB: Values are shown as mean (SD), compared using independent t-tests.

*<sup>p</sup> < .05; **<sup>p</sup> < .01; ***<sup>p</sup> < .001 (two-tailed)

Notes: Responses to questions about the three feminism questions were on a 6-point Likert scale from 6 (very much agree) to 1 (very much disagree)

* Equal–variances-not assumed correction used

### Attitudes to different types of masculinity

Table 3 shows the participants’ opinions about three concepts of masculinity.

### Table 3

**Percentage Participants Who Agreed with Statements Regarding Masculinity.**

<table>
<thead>
<tr>
<th>Agree (very much, moderately, or slightly) that:</th>
<th>Traditional</th>
<th>Toxic</th>
<th>Positive</th>
</tr>
</thead>
<tbody>
<tr>
<td>The idea of ‘... masculinity’ helps me to behave in a good way.</td>
<td>M 73.0</td>
<td>F 10.1</td>
<td>M 68.5</td>
</tr>
<tr>
<td>The idea of ‘... masculinity’ helps men in general to behave in a good way.</td>
<td>M 76.3</td>
<td>F 76.9</td>
<td>M 74.9</td>
</tr>
<tr>
<td>The idea of ‘... masculinity’ might make my behaviour worse.</td>
<td>M 19.9</td>
<td>F 30.8</td>
<td>M 42.7</td>
</tr>
<tr>
<td>The idea of ‘... masculinity’ is insulting.</td>
<td>M 24.6</td>
<td>F 19.2</td>
<td>M 87.9</td>
</tr>
<tr>
<td>The idea of ‘... masculinity’ changes the way we see all men.</td>
<td>M 69.2</td>
<td>F 61.5</td>
<td>M 81.5</td>
</tr>
<tr>
<td>The idea of ‘... masculinity’ many have a harmful impact on boys if they hear or read about the term.</td>
<td>M 28.4</td>
<td>F 25.0</td>
<td>M 88.4</td>
</tr>
<tr>
<td>The idea of ‘... masculinity’ is helpful.</td>
<td>M 69.7</td>
<td>F 71.2</td>
<td>M 70.0</td>
</tr>
</tbody>
</table>

n = 203 men; n = 52 women

Table 3 shows that most of the men (~70%) agreed that the concepts of traditional and positive masculinity would help themselves and other men behave well. In contrast, only around 10% agreed that toxic masculinity would help them. Around 43% of men thought the concept of toxic masculinity might make their behaviour worse, which is more than traditional (20%) or positive (12%) masculinity. Around 88% of men thought the term ‘toxic masculinity’ is insulting, much more than thought
traditional (25%) or positive (34%) masculinity insulting. The strongest agreement was regarding how much the terms changed the way we see men in general: 92% thought the idea of ‘toxic masculinity’ changes the way we see all men, compared to 69% for traditional and 67% for positive masculinity. Most men (88%) agreed that the term ‘toxic masculinity’ may have a harmful impact on boys who hear or read it, compared to 29% for traditional and 27% for positive masculinity. 70% of men thought the idea of traditional and positive masculinity is helpful, compared to only 10% who thought toxic masculinity was a helpful idea.

Table 3 shows that women scored similarly to men in their answers in this section, though they thought ‘toxic masculinity’ more helpful than men did (21% vs 10%). Women also appeared to be ambivalent about positive masculinity; they were both more concerned that ‘positive masculinity’ might make men’s behaviour worse (38% women agreed vs 13% men), and that it might help men behave in a good way (87% women agreed vs 75% men).

Some, but not all, feminist views were correlated with how insulting the term ‘toxic masculinity’ was seen: the higher the score on the ‘feminist’ \( r = -.45; p < .001 \) and ‘patriarchy’ \( r = -.52; p < .001 \) items, the less insulting men and women thought the term toxic masculinity. However, there was no correlation between agreeing with the ‘equal opportunities’ statement and opinions about toxic masculinity, for men or women.

**Predictors of self-esteem**

Regression analysis was conducted on the male sample only because the female sample was below the minimum suggested by sample size analysis. The model (Table 4) performed significantly better than chance \( F(8, 187) = 6.99, p < .001 \) and borderline moderately predicted the amount of variation in self-esteem (Adjusted R Square = 19.7%).

Table 4 shows that men had higher self-esteem if they were older \( (\beta = .305) \), had more education \( (\beta = .217) \), and expressed an agreeable attitude to traditional masculinity \( (\beta = .159) \).

**Table 4**

**Predictors of Self-Esteem in the Male Sample Only**

<table>
<thead>
<tr>
<th>Variable</th>
<th>( B )</th>
<th>( SE )</th>
<th>( B )</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age</td>
<td>.028</td>
<td>.006</td>
<td>.305****</td>
</tr>
<tr>
<td>Education status</td>
<td>.150</td>
<td>.047</td>
<td>.217**</td>
</tr>
<tr>
<td>Attitude to traditional masculinity</td>
<td>.165</td>
<td>.082</td>
<td>.159*</td>
</tr>
<tr>
<td>Attitude to toxic masculinity</td>
<td>.095</td>
<td>.099</td>
<td>.077</td>
</tr>
<tr>
<td>Attitude to positive masculinity</td>
<td>−.002</td>
<td>.074</td>
<td>−.002</td>
</tr>
<tr>
<td>Identification as a feminist</td>
<td>.039</td>
<td>.059</td>
<td>.051</td>
</tr>
<tr>
<td>Support for equal opportunities</td>
<td>.046</td>
<td>.079</td>
<td>.038</td>
</tr>
<tr>
<td>Belief patriarchy holds women back</td>
<td>−.033</td>
<td>.070</td>
<td>−.040</td>
</tr>
</tbody>
</table>

\* \( p < .05 \); \** \( p < .01 \); \*** \( p < .001 \) (two-tailed)
Predictors of mental positivity (PMI)

Regression analysis was conducted on the male sample only. The model (Table 4) performed significantly better than chance \( [F(8, 187) = 4.092, p<.001] \) but only weakly predicted the amount of variation in self-esteem (Adjusted R Square = 11.3%). The weakness of the model reflects the fact that most of the predictors did not contribute significantly to the model.

Table 5 shows that men had a more positive mindset if they were older (\( \beta = .196 \)), expressed an agreeable attitude to traditional masculinity (\( \beta = .178 \)), and had more education (\( \beta = .151 \)).

### Table 5

<table>
<thead>
<tr>
<th>Variable</th>
<th>( B )</th>
<th>SE ( B )</th>
<th>( B )</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age</td>
<td>.011</td>
<td>.004</td>
<td>.196**</td>
</tr>
<tr>
<td>Education status</td>
<td>.064</td>
<td>.030</td>
<td>.151*</td>
</tr>
<tr>
<td>Attitude to traditional masculinity</td>
<td>.114</td>
<td>.053</td>
<td>.178*</td>
</tr>
<tr>
<td>Attitude to toxic masculinity</td>
<td>.043</td>
<td>.064</td>
<td>.057</td>
</tr>
<tr>
<td>Attitude to positive masculinity</td>
<td>.026</td>
<td>.048</td>
<td>.041</td>
</tr>
<tr>
<td>Identification as a feminist</td>
<td>.049</td>
<td>.038</td>
<td>.106</td>
</tr>
<tr>
<td>Support for equal opportunities</td>
<td>.059</td>
<td>.051</td>
<td>.080</td>
</tr>
<tr>
<td>Belief patriarchy holds women back</td>
<td>−.046</td>
<td>.045</td>
<td>−.093</td>
</tr>
</tbody>
</table>

\* \( p < .05 \); \** \( p < .01 \) (two-tailed)

Attributing work or relationship problems to gender

Participants were asked: *If you were feeling down because your job was making you stressed and you were told that your problems were caused by your masculinity, how would you feel?* The response options were the six PMI items. All items scored in the same direction, but the largest responses were for the first item (happiness), and for the sake of brevity only findings for the first item are presented here.

In response to the question, 86.7% of men said they would feel unhappy or very unhappy. A similar question about ‘relationship problems’ found 87.5% of men would feel unhappy or very unhappy. Similar questions to women about their femininity being blamed found similar levels of unhappiness or very unhappiness for their job (94.1%) or relationship (84.6%) problems.

Free text responses

Participants were asked: *What do you think is the main cause of men’s extremely bad behaviour?* 84.6% of participants responded, and content analysis of the free text found nine categories: 23.9% blamed various aspects of society; a further 19.5% blamed fatherlessness/ absence of role models; 11.5% blamed upbringing/ childhood issues; 10.6% blamed a combination of nature & nurture; 8.4% blamed the individual; 8.0% blamed mental illness (including drug and alcohol); 4.9% blamed trauma; 4.0% blamed feminism/ intersectionality; 1.8% blamed patriarchy. Also, 7.5% of participants said they didn’t like the question, or some aspect of the survey. It was notable that in the various responses, social factors were blamed much more for bad behaviour than the individuals.
The purpose of this survey was to explore opinions on contemporary narratives about masculinity. It was found that most participants had concerns about the term toxic masculinity and blaming gender for work or relationship problems. It was also found that higher self-esteem in men was associated with agreement with traditional masculinity.

**Opinions about different types of masculinity**

Although the term 'toxic masculinity' might have been intended originally to be applied only to a minority of men, there is reason to be concerned that such terminology inevitably taints all men, in the same way that prefixing 'toxic' to any demographic might taint the people of that demographic (Barry, 2017). Such concerns gain validation in the present study, because 92% of male participants (and 87% of female participants) agreed that the idea of 'toxic masculinity' changes the way we see all men.

The present study is the first to quantify concerns about the impact of the narrative around ‘toxic masculinity’ for boys. Most men (88%) agreed that ‘toxic masculinity’ may have a harmful impact on boys who hear or read the term, compared to 29% with concerns about traditional masculinity and 27% for positive masculinity. Given that previous research has found that boys are more quickly associated with negative attributes than are girls (Heyman, 2001), further research – followed by public discussion – is needed about the impact on boys of negative narratives about masculinity. For example, schools should be aware of the implications of workshops which could inadvertently make boys feel negatively about themselves by virtue of their gender (Innes-Smith, 2020).

Around 23% of male and 54% of female participants agreed (either very much, moderately or slightly) that they were feminists, which is a similar rate for men in a recent poll of the UK general population (18%), though noticeably higher than found for women in the poll (34%) (YouGov, n.d.). This means the findings of the present study are more generalisable to men than women in the UK population. In the present study, compared to those identifying as feminists, fewer agreed they held anti-patriarchy views (around 16% of men and 43% of women). The finding that anti-patriarchy views were correlated with more approval of the ‘toxic masculinity’ narrative, whereas equality of opportunity views were not, suggests the need for a more nuanced discussion about the impact of feminism on men than is often seen. Specifically, discussions should distinguish between ‘equal opportunities’ feminism, which appears to be benign towards masculinity, and ‘anti-patriarchy’ feminism which is significantly correlated with negative views of masculinity. It was interesting that scores on the equal opportunities item and patriarchy item were not correlated at all, suggesting that views on one are not related to views on the other.

**Traditional masculinity and self-esteem**

Previous research has found that low self-esteem is correlated with suicidal ideation (De Man & Gutiérrez, 2002), and that feeling good about masculinity is good for men's self-esteem (Burkley et al., 2015). The present study found an association between having a favourable view of traditional masculinity and self-esteem and is the first study to find a correlation between traditional masculinity and mental positivity (PMI). Self-esteem and PMI were associated with being older and being more highly educated, and even after taking these into account, there was a modest but statistically significant association between self-esteem and having a favourable view of traditional masculinity. Age is important here too: the demographic most at risk of suicide in many Western countries is middle-aged men, and the present study – where the mean age of men was 45 years old – suggests that valuing traditional masculinity might be protective of self-esteem and mental positivity. Because the PMI is strongly inversely correlated with suicidality (Seager et al., 2014), it is possible that traditional masculinity could be a barrier against suicidality. These correlations need to be replicated with further research, but they beg the question of the wisdom of approaches to therapy which undermine
traditional masculinity. This negative approach to masculinity has been suggested in the US (APA Guidelines for Psychological Practice with Boys and Men, 2018) and the UK (Power Threat Meaning Framework, PTMF) (Johnstone & Boyle, 2018). Although it is possible that men who have specific issues with masculinity or patriarchy might benefit from such interventions, such interventions might risk damaging self-esteem and mental positivity of other men without such issues. Research into the safety and efficacy of anti-masculinity / anti-patriarchy approaches is needed.

Impact of gender on job and relationship problems

Masculinity/patriarchy have been suggested to hold back women's careers (Rao, 2016), or cause problems in relationships (Johnstone & Boyle, 2018). In the present study, when asked how happy they would feel if problems with their job were blamed on their gender, 86.7% of men said they would feel unhappy or very unhappy. A similar question about relationship problems found 87.5% of men would feel unhappy or very unhappy. The same questions to women about their femininity being blamed found similar levels of being unhappy or very unhappy regarding their job (94.1%) or relationship (84.6%) problems.

These findings suggest that people don’t like it when their gender is blamed for their problems. Although these questions were not asked specifically in relation to a therapist blaming their gender for their problems, it would be interesting to see what future research would find if the question were phrased in this way. Blaming gender might put people off seeking psychological help; it might alienate existing clients, and even potentially make their problems worse (Ferguson, 2018).

Principle A of the APA Code of Ethics is that ‘Psychologists strive to benefit those with whom they work and take care to do no harm’ (American Psychological Association, 2002). Regarding gender identity, the British Psychological Society says: ‘Conversion therapy is the term for therapy that assumes certain sexual orientations or gender identities are inferior to others and seeks to change or suppress them. It is unethical, potentially harmful and is not based on any reputable evidence’ (BPS, 2019). It makes sense that these values should be applied to traditional masculinity. One barrier to this, however, is that the APA view masculinity as simply as a social construct without any biological basis (APA Guidelines for Psychological Practice with Boys and Men, 2018). Following from this premise, if masculinity is simply a learned behaviour, then perhaps it can simply be unlearned. However, this social-learning reductionist view is a false premise that fails to account for the wealth of evidence that many of the physical and psychological phenomena that we associate with masculinity may have a biological basis (Barry & Owens, 2019) and appear across cultures (Ellis, 2011). Even if there were no biological basis to masculinity and it was simply a socially learned set of beliefs, it is still highly questionable that therapists should treat traditional masculinity as pathology, any more than they would treat any other traditional beliefs as pathology. The fact that traditional masculinity is likely to be to some degree innate and prevalent should cast doubt over attempts to pathologise it, especially as part of a mental health intervention.

Although the term ‘toxic masculinity’ is supposedly intended to describe only the negative behaviours that men engage in, it is difficult to see how the contemporary mainstream discourse does not create a negative aura around men in general. This implicit generalisation of toxicity not only deflects attention from the fact that most of the crime is committed by a minority of criminals (Farrington, 1995), but equally importantly that the outliers of many distributions are disproportionately male (the ‘variability hypothesis’; Ellis, 2010). Thus, although men might form the most extreme cases (positive and negative), the extreme cases – the statistical outliers – are not typical of most men.

Strengths of the present study

This study is to first to attempt to address important questions regarding narratives around masculinity, and how they might impact men and boys. The findings of this study might inspire further work in this topic, for example, future studies might focus on specific populations identified in this study, such as schoolchildren who have been exposed to workshops, clients of therapists who have been trained to see
masculinity as a problem, as well as the wider general population who may well be frustrated that the prevailing narrative generally goes unchallenged.

The starting point for recruitment was the Male Psychology Network social media, which might tend to attract participants who are positively disposed to masculinity. However not all of the views expressed in the study were positive to masculinity, indicating that some diversity of views were accessed within the sample. The study sample included slightly more people identifying as feminists than found in the general population (YouGov, 2018), and overall might be seen as reasonably generalisable.

**Weaknesses of the present study**

Being a pilot investigation, this study inevitably has some weaknesses. For example, the number of women was relatively small compared to the number of men. On the other hand, because men are the main focus of the present study, this is probably acceptable. Also, some of the scales (the three measures of masculinity, and the three feminism items) used were bespoke for this study and not validated. Further research should refine these instruments or use validated measures.

Although the invitation to the survey was open to men and women (the invitation did not specify the gender of participants wanted), the survey attracted mostly men, at a ratio of 4:1. This gender ratio in responding is unusual, and it appears that the women who answered had significantly higher self-esteem scores 25.89 (6.09) than the male participants 21.75 (7.72). Men and women had scores within the normal range (15–25), though men were in the middle of the range and women were at the borderline for ‘high self-esteem’. This difference might mean that comparisons between men and women might not generalise very well, though this does not impact the findings based on the men-only analyses in this study.

There was good statistical power for analysis of men’s data in the present study, but lower statistical power for tests of women’s data. For example, for multiple linear regression (Table 4) the recommended sample size for eight predictors is 114 participants, and the lower number of female participants in this study (n = 52) means that any non-significant findings might have been due to low statistical power (a type 2 error), and for this reason multiple linear regressions were not conducted for the female sample. However, for the purposes of this study, men’s views were more sought after, thus the lower statistical power of analyses including women does not undermine the findings from the male sample. It would have been interesting to see the opinions of transgender people regarding masculinity, but only two transgender people participated, which is too few to conduct meaningful statistical analysis.

**CONCLUSION**

Gender differences are part of the human condition, and such differences will inevitably create different pressures and issues for men and women over and above their common interests and common humanity. Whilst modern women, despite social and political change, remain under pressure to conform to evolved female archetypes such as beauty and mothering, men remain under equal pressure to conform to equivalent archetypes of strength, risk-taking and protection (Seager et al, 2014). The male archetype itself may be said therefore to breed less societal empathy for the gender that is expected to take risks and provide physical protection. However, rather than challenging this view of men by moving to a more equal position of greater empathy, contemporary socially constructed Western narratives of gender, reflected both in social policy and the media, are in danger of amplifying these archetypal differences even further. Even within the realms of mental health, psychology and social science, current frameworks and concepts relating to gender, being founded in judgemental, rather than compassionate, notions of male power, patriarchy and even toxic masculinity, may be leading to a “double whammy” of lower self-esteem in men coupled with decreased compassion for them (Seager & Barry, 2019). This is an important public health issue for our society, and we hope that the present study is the first of many to investigate the impact of social attitudes on men and boys.
REFERENCES


The importance of contextualisation when developing pressure intervention: An illustration among age-group professional soccer players

Sofie Kent, Tracey Devonport, Andrew Lane, & Wendy Nicholls

University of Wolverhampton
United Kingdom

Correspondence: s.kent4@wlv.ac.uk

The need for interventions that help adolescents cope with pressure is widely recognised (Yeager et al., 2018). However, a recent systematic review indicates that contextualising the pressure intervention is often overlooked (Kent et al., 2018) which likely detracts from intervention effectiveness. The focus of contextualisation is to identify from the perspective of intended intervention recipients, pressure-inducing incentives, and factors factor facilitative and debilitative of performance under pressure. The present case study illustrates a process of contextualisation among age-group professional soccer players. Thirty-two male academy soccer players (11–12 years, *n* = 8; 13–14 years, *n* = 8; 15–16 years, *n* = 8; 17–18 years, *n* = 8) participated in one of eight focus groups. Informed by Baumeister and Shower’s (1986) definition of pressure five situational and two personal incentives were deductively identified. Fletcher and Sarkar’s (2012) model of psychological resilience was used to identify perceived protective and debilitative factors of performance under pressure. Supporting contextualisation, recommendation for integrating the identified incentives and protective factors into a pressure training intervention are presented. The resultant understandings are also of value to those working with adolescents.

Keywords: appraisal; coping; intervention development; resilience; stimulation training
Pressure may exert effects on performance through a variety of psychological (e.g., anxiety and effort) and physiological (e.g., muscle activity) pathways (Cooke et al., 2011). Adolescence is a period categorised by many psychological, psychosocial, and academic pressures (Wylleman, et al., 2013). The significant changes in metacognitive development during adolescence can impact upon the appraisal of pressure and adaptive coping (Yeager et al., 2018). Adaptive coping is a result of an individual being able to effectively modify coping behaviour according to the context of each situation. Moreover, there is a great value in generating contextualised and theory-guided coping interventions so adolescents can learn to adaptively cope through developing a broad spectrum of individualised strategies for optimal performance.

The present study uses the pressurised context of academy age-group soccer to illustrate how better understanding the experiences of adolescents with regards to pressure and its management can be constructively used to inform intervention development. Contextualisation encompasses the physical, social, and cultural features of the immediate setting and has been emphasised by Gucciardi and colleagues (2008) to be imperative for optimising the effectiveness and suitability of interventions. There are an estimated 12,000 adolescent male academy soccer players aged between 11 and 18 within Premier League academies (Conn, 2017), alongside the developmental pressures of adolescence, players are part of a competitive learning environment that places high demands on performance development in the short and long-term (Nerland & Sæther, 2016).

For conceptual clarity, Baumeister and Showers (1986, p.362) defined pressure as ‘the presence of an incentive or number of incentives that increase the importance for optimal, maximal, or superior performance’, a definition adopted in the present study. The author recognises conceptual similarities with stress and pressure, whereby an appraisal process is a mediator of emotion which can have an influence on performance. However, they are conceptually distinct in that stress results from a perceived ‘substantial imbalance between environmental demands and response capability… that may have valence for well-being.’ (Lazarus & Folkman, 1986, p.19). In contrast, performance pressure results from an individual's appraisal of the presence of meaningful incentives that increase the importance to perform optimally (Baumeister & Showers, 1986). And individual may experience pressure during a sport competition (incentive of single performance opportunity) where there is an audience of friends, family, and other athletes (incentive of esteem and pride), and with opportunity to win a place in a prestigious team or club (reward incentive). The same individual may experience stress where they perceive that the requirements of this competition (demands) exceed their ability (response capability), with failure carrying important consequences (valence). It is important to distinguish between stress and pressure as it can lead to different aims and objectives for interventions (Crown, 2015).

The cognitive-motivational-relational (CMR) theory of emotions (Lazarus, 1999) has been utilised as the theoretical basis for some pressure interventions and delivered in a range of pressure contexts including sport (Olusoga et al., 2014) and education (Jamieson et al., 2016). This theory proposes that primary and secondary appraisals associate with the specific emotions (and intensity) experienced, as well as the behavioural responses that influence performance. Primary appraisal refers to evaluation of the significance of an event, whereas secondary appraisal represents an evaluation of the coping strategies that individuals have at their disposal.

In order to synthesise existing knowledge Kent and colleagues (2018) conducted a systematic review of published coping-pressure interventions. This systematic review identified that coping-pressure interventions have been delivered through methods of cognitive-behavioural (CB) workshops, simulation trainings, psychology consultancy sessions, and emotional regulations strategies. Of the named interventions, simulation training (ST) integrated with CB workshops presented the most effective means of enhance performance under pressure (Kent et al., 2018). ST typically involves practice in the presence of simulated pressure (Jones & Hardy, 1990). The degree to which the
simulation replicates reality is known as fidelity; effective ST acts on the principle of presenting high levels of psychological and physical fidelity (Hamstra et al., 2014). In order to obtain high fidelity, simulation should incorporate exposure to meaningful pressure which provides recipients with opportunities to develop broad, flexible, and contextually-relevant coping strategies (Bell et al., 2013). The systematic review argued that many published pressure interventions present low fidelity due to the lack of contextualisation (Kent et al., 2018). For example, Beauchamp and colleagues (2012) developed an ST and CB workshop programme delivered to the Canadian national short-track speed skating team. This was intended to enhance sport performance under pressure of the Olympic Games. The ST of the short-track speed skating performance incorporated incentives of crowd noise and pictures of the performance venue. However, this intervention did not include other known incentives that will have increased fidelity and resultant pressure. For example, rewards or punishment based upon level of performance, observation from an evaluative audience, and environmental conditions (track, temperature, and altitude) (Baumeister, 1984). Aligned with CMR theory, the absence of meaningful incentives may not generate appraisals of importance, undermining the purpose of ST (Lazarus, 1999). Understanding pressure from the perspective of intended intervention recipients – in other words contextualisation – should be the first stage of pressure intervention development (Baumeister et al., 2007). Researchers and applied practitioners must identify incentives perceived as pressure-inducing among the target population, with the intent of creating/recreating them during ST, thus creating high fidelity.

Often adjunctive to ST are CB workshops with address psychological skills such as relaxation, attention strategies and re-appraisal for application during simulation (e.g., Bell et al., 2013). However, the appropriate content of CB workshops may vary by context. For example, relaxation strategies are deemed useful for surgeons who require low heart-rate variability and low physiological arousal in order to execute fine motor skills when undertaking lifesaving or enhancing operations (Wetzel et al., 2011). In contrast, police officers may wish to elevate physiological arousal for sharp-reactions in pressurised contexts (Nesse & Ellsworth, 2009). Fletcher and Sarkar’s (2012) grounded theory of resilience offers a useful framework in contextualising psychological factors that elite athletes perceived to help perform optimally under pressure. Such framework provides factors that should be accommodated in the development of CB workshops adjunctive to ST.

The aim of the present study was to identify incentives that increased the importance of performing well among male youth academy soccer players. This was intended to increase the fidelity of subsequent ST interventions. A secondary aim was to establish factors perceived by players to be protective or debilitating of coping with performing under pressure. This study illustrates contextualisation and identifies why it is a necessary step for any individual undertaking research or applied work in pressure and its management.

METHOD

Research context

Pragmatism is a philosophy of knowledge construction that emphasises practical solutions to applied research questions and the consequence of enquiry (Giacobbi et al., 2015). A pragmatic viewpoint was adopted because the purpose of this study is to offer researchers and practitioners integrated approached to knowledge construction for performing under pressure interventions for academy soccer players (Giacobbi et al., 2015). A case study was undertaken within the male Premier League, category one soccer club (24 soccer clubs out of 84 within the UK have achieved this status). This approach offered a structured way to disseminate ‘real life’ experiences of pressure across academy age groups aligning with the pragmatist approach of this study (Keegan et al., 2017).
Development of the interview guide

The semi-structured questions were designed with the aim of gaining a greater understanding of soccer players’ experiences of pressure. The interview commenced with a rapport building introductory question to initiate discussion and preface the topic (e.g., Could you tell me a little bit about your playing experience?). Incentives that induced pressure was then explored by asking players about playing under pressure (e.g., How important do you think it is to be able to perform under pressure? Could you describe to me what you think pressure is? What makes it important in that situation to perform? Is there anything that coaches could do increase pressure?). To continue, an examination of factors that may protect or debilitate performance under pressure, (e.g., What can help you prepare to perform under pressure? What do you think about when under pressure... Is this helpful?), and distancing techniques were also used (e.g. Can you describe a player that handles pressure well. What do you think they were thinking and feeling?) Clarification and elaboration probes (e.g., Could you tell me about…) were used to add depth and clarity in players’ responses (Woodman & Hardy, 2001).

The interview schedule was piloted with a women’s super league player (the top tier of women’s soccer in the UK) to review questions for comprehension and acceptability. This led to the researcher simplifying language used in the interview guide. As an illustrative example, the question, ‘What degree of importance do you give to being able to perform under pressure?’ was amended to ‘How important do you think it is to be able to perform under pressure?’.

Participants

The Premier League delivers a development system across three phases of adolescence: Foundation (11–12 years, Youth Development (13–16 years), and Professional Development (17–18 years) (Premier League, n.d.). Purposeful sampling was used for the identification and selection of information-rich cases related to the phenomenon of interest; in this instance the perceived pressures in maintaining an academy soccer lifestyle and associated demands (Palinkas et al., 2015). Players were purposively selected to participate in focus groups on the basis that they perceived different experiences of pressure. To support this objective, all academy players completed the five-item pressure/tension subscale from the Intrinsic Motivation Inventory (IMI; Deci & Ryan, 1994) (e.g., ‘I felt the tense while performing’) and item responses were averaged to provide one pressure/tension score. This inventory has been previously used in this way to evaluate perceived pressure (e.g., Balk et al., 2013).

The two highest (most likely to experience pressure i.e., with score > 6) and two lowest (least likely to experience pressure i.e., with score < 2) scoring players from each category (e.g., age 11, 12, and 13) were selected to participate in focus groups. This resulted in thirty-two male academy players (see Table 1) participating in one of eight focus groups, with participants grouped according to age category. Experience of academy soccer among focus group participants range from six months to 10 years (M = 6.34, SD= 8.87).
Table 1
Focus Group Demographics for Academy Players

<table>
<thead>
<tr>
<th>Focus group</th>
<th>Age range</th>
<th>Number of players per category</th>
<th>Years’ experience</th>
<th>IMI pressure score (high)</th>
<th>IMI pressure score (low)</th>
<th>Contract type</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>11–12</td>
<td>Age 11 = 4</td>
<td>$M = 3.82$</td>
<td>Defenders ($n = 1$)</td>
<td>Defenders ($n = 2$)</td>
<td>Part-time ($n = 3$)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Age 12 = 4</td>
<td>$SD = 1.27$</td>
<td>Midfielders ($n = 2$)</td>
<td>Midfielders ($n = 1$)</td>
<td>Full-time ($n = 5$)</td>
</tr>
<tr>
<td>2</td>
<td>13–14</td>
<td>Age 13 = 4</td>
<td>$M = 3.75$</td>
<td>Defenders ($n = 3$)</td>
<td>Defenders ($n = 1$)</td>
<td>Part-time ($n = 2$)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Age 14 = 4</td>
<td>$SD = 2.48$</td>
<td>Midfielders ($n = 1$)</td>
<td>Midfielders ($n = 2$)</td>
<td>Full-time ($n = 6$)</td>
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<td>Strikers ($n = 1$)</td>
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<td>3</td>
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<td>$SD = 2.86$</td>
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<td>Age 17 = 4</td>
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<td>Age 18 = 4</td>
<td>$SD = 3.14$</td>
<td>Midfielders ($n = 2$)</td>
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Data collection procedure

Ethical approval was granted by the University of Wolverhampton ethics panel before data collection. The sample represented a category one academy squad and thus showed significant external validity in a population which is small and difficult to access. Access to this squad was granted with permission and support of the academy manager (therefore representing a convenience sample). For players under 16 years of age, parents were informed of the aims of the present study and invited to offer consent for their child's involvement. For all players, informed consent to participate (in addition to parental consent as appropriate) was sought. However, for ethical reasons, it was made clear to all players and their parents/guardians that participation and any information gained as part of the study would have absolutely no impact on their squad or contractual selection. It was also made clear that they could decline participation without consequence. No inducement was offered to the players for their participation, other than the explanation that participation within this study could assist in developing an intervention to aid performance under pressure. No players declined the opportunity to take part.

Focus groups were undertaken with players enabling participants to reflect on and discuss differing or similar experiences and perspectives (Côté-Arsenault & Morrison-Beedy, 2005). All focus groups were completed in a quiet office at the academy training ground during the morning training hours of the academy.

Within a high performance sporting environment, participants may have concerns about disclosing negative experiences of pressure for fear of undesired consequences. To reassure participants of anonymity, players were informed before interviewing that pseudonyms were used in reporting data and illustrative extracts were used from across the participant pool. Interviews were transcribed verbatim with players receiving a copy of their transcript to add, amend, or omit their comments as deemed necessary to accurately reflect their participation and experiences (Miles et al. 2016). One player made an addition to their transcript to include incentive of social media.

Data analysis

Thematic analysis (TA) was conducted to explore players' perception of their pressure experience and presents a tool for enquiry that foster positive practices (e.g., development of ST) from the 'in situ' data (Hobson, 2006). TA can be an adaptable and flexible methodology allowing the researchers to utilise a pragmatic position for the detection, analysis, and reporting of themes in data (Braun & Clarke, 2006). The varied application of TA by researchers who may have different paradigmatic and epistemological positions make it important to clarify the approach utilised within this study. This helps to minimise inconsistencies and a lack of coherence when developing themes from research data (Braun & Clarke, 2006).

TA was conducted to explore players' perception of pressure-inducing incentives and factors that may protect or debilitate coping under pressure from the 'in situ' data (Hobson, 2006). Braun and Clarke's (2006) method of TA was used to identify, organise, evaluate, and reports pattern within the data. This followed a six-step approach; first, interview transcripts were read and re-read by the author to ensure clarity and understanding of participant meaning; then began the second phase of producing initial codes from the most basic segment, or element, of raw data (e.g., competition). The author engaged in self-reflexive practices (e.g., generate notes that contain self-reflective commentary about subjective feeling and sense making of codes) that required the assessment of biases and motivations in a vulnerable, honest, and transparent manner. In the third step, the work of Baumeister and Showers (1986) and Fletcher and Sarkar's (2012) grounded theory of resilience were used to deductively identify themes respectively regarding pressure-inducing incentives and factors protective or debilitative of performance under pressure. Baumeister and Showers' (1986) conceptualisation of pressure was used to
inform the organisation of incentives for optimal performance under two themes: ‘situational incentives’ and ‘personal incentives’. Situational incentives are environmental factors that influence the perceived importance of performing optimally (Baumeister & Showers, 1986). Meanwhile, personal incentives describe the intrinsic contribution to the manifestation of incentives to perform optimally (Mesagno, 2009; Mesagno & Beckmann, 2017).

Fletcher and Sarkar’s (2012) grounded theory of resilience was used to organise personal qualities that could be protective/debilitative for superior performance under pressure, under five themes: ‘confidence’, ‘motivation’, ‘challenge appraisal’, ‘metacognition’, and ‘perceived social support’. This ensured there were clear definitions of what each theme was and was not (Braun & Clarke, 2006). Special consideration was given to any with the coded that did not fit within the predetermined deductive themes, however all codes aligned with the deductively determined themes. The fourth step involved refining and reviewing themes to ensure identifiable distinctions between themes, and those sub-themes were appropriately condensed. Following this, to challenge the construction of codes, step five included a ‘critical friend’. This critical friend, in this instance the second author, engaged in a process of critical dialogue regarding theme construction and encouraged reflexivity of the first author to increase the trustworthiness of the themes that were constructed (Smith & McGannon, 2018). Step six involved writing up the report by selecting illustrative quotes which the researchers considered as best reflecting each theme.

RESULTS AND DISCUSSION

Incentives for optimal performance were deductively organised under two broad themes: situational incentives and personal incentives. Situational incentives comprised five sub-themes, while personal incentives comprised four sub-themes (see Figure 1). Psychological factors that were protective or debilitative of performance under pressure were also organised under two sub-themes: protective or debilitative (confidence, motivation, challenge appraisal, metacognition, and perceived social support).
Situational and Personal Incentives That Induce Performance Under Pressure Among Academy Soccer Players Aged 11–18.

Situational incentives

Five subthemes of situational incentives were identified: (1) presence of completion; (2) time; (3) presence of others; (4) tangible performance outcomes; and, (5) performance lifestyle.

Presence competition

The presence competition captured incentives for optimal performance resulting from players’ desire to demonstrate superiority over teammates, opposition, and trialists (players looking to gain a place at the academy). Competitive pressures were often cited as increasing the importance of performing well within contexts of tournaments, derby games (rival academies that are often local) and stadia environments. This is illustrated in the extract below:

Player A (age 13): ‘The last time we went to [name of tournament abroad] we had to win this game [semi-final] and we also had to show why we were the first team and beat the other [name of academy reserve team] team which was pressure.’
This finding suggests that, where possible, simulation training for soccer players should take place in environments perceived to be pressure-inducing, such as the club stadium.

With the difficulty in achieving a professional contract, players discussed how their progress could be assessed through comparisons against academy teammates or other academy players. This finding builds on the work of Stoker et al., (2016) who found that although the judgement of teammates did induce pressure, outperforming teammates in training and competition was not cited to be pressure-inducing. Players aged 13–18 years also discussed how outperforming teammates may provide them with the opportunity to ‘play up an age group’ or be in the starting squad for games. Only players aged 11–12 years explicitly noted how younger players promoted from younger age group squads (the under-10 squad) induced pressure to ‘fight for their place’, and to ensure game time.

Finally, the presence of trialists was a contextually unique incentive to the academy environment, whereby players age 15–18 noted ‘more pressure when trialists come in and they are playing for your position, so you have to try even harder.’ This presents a contextual incentive not previously captured within published pressure (Stoker et al., 2016) or soccer stressor literature (Reeves et al., 2009).

Developmental changes experienced throughout adolescence may underpin the ‘what’ or from whom the pressure of competition may manifest from. For instance, during late childhood and early adolescence (ages 11–14 years) a differentiated view of effort and ability begins to occur, using norm-referenced cues to determine success (e.g., win, lose, who is always in the team selection) (Kipp & Meinerz, 2017). However, during middle to late adolescence (ages 14–18 years) as cognitive development leads to a more complex view of the self and perceptions of ability, comparison to others may begin to broaden across physical (e.g., who is the fastest, who is the strongest), social (e.g., who may play up an age group), and academic domains (e.g., highest grade) (Kipp & Meinerz, 2017). Based on these findings, it is recommended that attention is given to the source of competition and the format of pressure training. For example, a format such as a league table would ensure that academy players are able to draw comparisons and compete against each other.

**Time**

Time was recognised by all players as pressure-inducing incentive comprising of time on the ball, stage of the game, and time to contractual decisions. Time on the ball was a pressure discussed by players as being influenced by the skill level and physical stature of the opposition. Facing skilful or physically mature opposition increased the importance of making quicker tactical decisions and executing more skilful action:

Player A (age 12): ‘If you play a team like [perceived weaker team] you can take on a few players... but against [perceived superior team] your freedom comes down... it’s only one or two touch but sometimes people don’t cope with that and they want to have six or seven touches.’

Proximity of time relative to the closing stages of a match also increased the importance of time on the ball and correct decision making due to the possible influence of errors and threat upon the result: ‘If you don’t keep the ball it might cost you a goal and lose the game.’ For some individuals, time pressure could become a salient threatening stimulus in the environment, evoking anxiety. Anxiety about performing successfully can disrupt performance for motor skills, such as turning and passing due to attentional bias for threat-related materials and distraction from task-related cues (Eysenck et al., 2007). However, if an athlete is able to shift attention flexibly to ensure focus is also on task-relevant stimuli, anxiety can increase effort and performance (Eysenck et al., 2007).
Overall, this study captures how for simulation training to be contextually meaningful it must be performed at an intensity that induces time pressures in ball handling, incorporates competition against players with a greater or similar stature, and comprises performance comparisons (e.g., ranking system) across the squad. This may assist players in learning how to shift attention flexibly to maintain or improve performance.

Proximity of time in respect of ‘decision deadlines’ for team selection and the awarding of renewed academy contracts were also perceived to be pressure-inducing. Contractual deadlines could evoke worrisome thoughts and varied responses. For some players, anxieties surrounding contract renewal increased motivation to avoid the negative effects of a poor performance. However, for other players, anxiety over contractual deadlines induced rumination over mistakes and ‘safety passes’ which was not conducive to optimal performance.

In the following focus group exchange, two players discussed concerns regarding contractual pressures and how they may be helpful or harmful performance:

Player B (age 12): ‘At the start of the season were doing really well... but then we started to drop because we were thinking about the contract in the next month.. I thing we have realised that we just need to believe in ourselves and try our best.’

Player D (age 12): ‘Yeah and like [name of coach] had a word with us about like how the contracts happen and [name of other player] stepped his game up massively and started doing more with it, instead of just playing the little short pass he was thinking outside of the box.’

Lazarus (1999; 2000) contends that the meaning an individual ascribes to pressure such as contractual pressures, and the perception of resources to meet the demands of a situation may explain players’ varied responses. Where a player perceives sufficient resources (e.g., self-efficacy, control, etc.), the type and intensity of emotion experienced is likely to maintain cognitive function and decreased likelihood of reinvestment (Turner et al., 2013). Time pressure is ever present across many contexts of an adolescent’s life, for example, deadlines for coursework, exams, and significant life events. This study highlights the importance of identifying meaningful events that could have ‘time deadlines’ examining how appraisal, emotions, and coping can influence performance in the build up to these deadlines.

**Presence of others**

The actual or imagined presence of parents, coaches, senior management, and other individuals (fans, scouts, social media, and media personnel) can induce pressure to perform. Being watched by an evaluative audience was an incentive for players ‘because you want to impress them’ (Player C, age 16). For some players, the exposure to an audience was beneficial ‘because I play better when I am under pressure like when people watch me.’ (Player B, age 16). Geukes et al., (2012) discussed how a mild increase in anxiety coupled with effective coping strategies could result in increased effort and perceived success under pressure. However, other players who ‘try and not think about it, as it may get you’ (Player A, age 15) may fear of negative evaluation from others in which high levels of anxiety can be debilitating to performance:

Player C (age 17): ‘If this person was playing in front of a big 500 people crowd and he was having a good game he would be upbeat... But if things started to go bad for him then he would start wanting to kill people... It's like embarrassment and what other people think about him, obviously he wants to impress people.’
Lead age-group coaches could induce pressure during training competition by verbalising performance expectations in both training and completion (e.g., ‘He could start shouting like “Come on, you can’t miss that!”’ (Player B, age 12). Similarly, critical feedback from senior coaches and parents during competition was identified by all players as pressure:

Player D (age 11): ‘If you made a mistake like some parents shout at you... and that when the “what ifs” come into your mind, like: “What if I make a mistake, are they going to get onto me. Am I gonna get bring off?”’

Wylleman’s et al., (2013) athletic career transition model depicts the identifying transition athletes could face throughout development at five different levels. One significant level is the change of psychosocial support. Specifically, Wylleman’s et al., (2013) contend that parental approval is the most meaningful source that may evoke pressure for adolescents up to age 14, where peers, coaches, and parents then become the most salient sources for individuals ages 14–18 years. While one player discussed how ‘It used to be [pressure]... and now I’m more mature he’s just left me to get on with it.’ (Player C, age 15) another player continued to perceive parental pressure-inducing incentives: ‘If you have a bad game you just get cussed [negative feedback]... and that is by my dad... it makes me want to play better.’ (Player C, age 16).

This study captured how it was often the father that evoked a need to ‘play well when is here, but when he is not there, I just play like I normally do.’ (Player A, age 12). Within focus group discussions, this study aligned with Clarke and Harwood (2014) who also identified how fathers displayed the most significant verbal reactions to their child’s soccer performance (e.g., ‘He’d talk me through the game... he’d give me roasting.’ (Player B, age 15). ‘I wouldn’t feel pressure if my mum was there but if day was there I would.’ (Player C, age 15)

The presence of a senior coach was discussed by all as significant pressure because of the perceived influence they could have on their academy progression: ‘When they [senior coaches] come and watch us because you get a chance to impress and you won’t get anywhere if you don’t impress.’ (Player A, age 15). For players aged 17–18 years, social media exacerbated performance pressures as it presented ‘the chance to look good, so if you know it’s going to be streamed, you’ve got the chance to be impressive and for people to know about you.’ (Player B, age 17).

Players also discuss how post-match criticism and side-line behaviours of all individuals (coach, senior coach and/or parent) could induce performance pressure in meaningful competition:

Player D (age 14): ‘If you don’t play well the managers will say you need to raise your game, your parents will say you need to raise your game, and even your teammates will say you have got to do better next time.’

It is important to consider that during adolescent development there is a move from concrete thinking to an increase in concern and analysis of how significant others may value them (abstract thinking) (Acharya & Relojo, 2017; Kipp & Meinerz, 2017). This study suggests that in order to assist adolescents in performing under pressure, they should have the opportunity to engage in pressure tasks in front of an evaluative audience, for example, public speaking in front of peers or family member. By engaging in such tasks, adolescents may learn and develop transferrable coping skills for managing pressure. Specific to the soccer context, training in the presence of key influencers (senior coaches, coaches’ parents, and social media), may expose players to elevated levels of anxiety, and provide opportunity to practice and develop more effective coping strategies (Oudejans & Pijpers, 2010). Findings also suggest that audience size and ‘importance’ of the audience (e.g., parents or senior coaches) should be carefully considered when developing simulation training to induce meaningful pressure.
Tangible performance outcomes

Perceived rewards or consequences associated with performance could induce pressure, namely: contractual incentives, opportunities for development (e.g., educational trips), physical punishments, and no likelihood of a second chance. Despite the increasing salaries for professional soccer (Persson, 2011), financial incentives were not explicitly cited as pressure-inducing. The awarding of contracts that were consistently noted highlights how players’ incentives to perform optimally were induced by short-term goals with all players discussing the importance of consistently performing to a high standard ‘because only 1 or 2% get a professional contract.’ (Player A, age 12). In the present study the facilitative and debilitating effects of contractual pressures were identified by all age groups, they have not previously been identified among players as young as 11 years (e.g., Reeves et al., 2009). A temporary reduction in contractual process was evident among some of the 17-year-old age group, which was attributed to relative contract security at this time:

Player C (age 18): ‘The second year has been the most pressure. It’s like when decisions get made on you... in the first year [when aged 17], if you don’t perform you still have the second year, but then if you don’t perform in the second year, they won’t give you the contract.’

Players used consequences (e.g., on the bench) and rewards (e.g., playing with an older age-group) as a method of assessing their progress towards contract renewal:

Player D (age 14): ‘If you did something bad the next game he [lead coach] might not start you [on the bench]... but then if you play well, he might start you or play you with the 15s and if you play up once and you do well, you will get a chance to do it again.’

Players aged 11–16 years discussed many physical forfeits that they were required to complete if they performed poorly in training (e.g., ‘shuttle runs’, ‘moving the goals’, and ‘standing against the wall in a chair position’). These could produce unpleasant emotional consequences for some players (e.g., ‘because if you lose, then you are going to have like the depression of losing,’ (Player B, age 11), with players aged 11 and 12 noting that this was worse if forfeit attributed to their poor performance involved the whole team.

Researchers propose that adolescents experience a normative increase in sensitivity to rewards and punishment that induces pressure, in mid- to late adolescence and this then declines into young adulthood (Urošević et al., 2012). This study lends support to the suggestion of Bell et al., (2013, p.3) who contend that exposure to punishment-conditioned stimuli is ‘exactly what is missing from modern development programs that discourage the use of punishment for fear of the negative emotional and motivational consequences.’ Pleasant and unpleasant outcomes are an unavoidable feature of day-to-day life, and to avoid the possibility, or reality of unpleasant outcomes, presents ethical considerations in failing to prepare individuals for such eventualities. Therefore, it is important to attach meaningful rewards (e.g., training up an age group or selection) and meaningful punishment (e.g., deselection) to simulation training, alongside the development of strategies to manage these. This is particularly pertinent among adolescent populations who during this life stage are developing metacognitive skills that underpin a broader range of possible coping strategies (Compas et al., 2001).

Performance lifestyle

The theme performance lifestyle represent the many on- and off-pitch ‘challenges’ and ‘sacrifices’ described as increasing the importance of performing optimally in training and competition. This included social (e.g., missing birthday parties), educational (e.g., time off school), and lifestyle...
commitments (e.g., diet). Within Jones et al., (2002) study of mental toughness, elite performers discuss how lifestyle pressure could be used in 'some way as some sort of motivation' (p.208). In the present study, data indicate that appraised losses (actual or anticipated) resulting from the need to maintain a performance lifestyle could evoke pressure to perform (Lazarus, 1999):

Player A (age 13): ‘You spend so much time at the academy... You miss all the stuff going on out of school with your mates you think ‘Oh I can't, I've got football.” You do not want to have any regrets.’

Player D (age 13). ‘Yeah, exactly; you have got the pressure to perform otherwise it was all for nothing.’

Within academy soccer literature, the sacrifice of valued elements of adolescent lifestyles is deemed important in order to pursue a professional soccer career (Holt & Dunn, 2004). Given that so many talented young players are vying for so few professional contracts, we are advocating that players, coaches, parents, and teachers should be educated about the importance of holistic development. As emphasised by Wylleman et al., (2013), ensuring that the elite adolescent player's lifestyle involves holistic experiences, helps to develop a broad set of transferable coping skills that help players coping competencies for life rather than just sport-specific pressure.

**Personal incentives**

Personal incentives were personal qualities that influenced the perceived importance of performing optimally. Two deductive sub-themes were identified: self-oriented (Baumeister & Showers, 1986) and public self-consciousness (Mesagno, 2009).

**Self-oriented**

All age-group players described personal standards and expectations that comprised of ego-oriented and task-oriented incentives to perform optimally. Ego-oriented incentives derived from the players' desire to demonstrate superior performance over others, evidenced by outcomes such as 'win games' and 'coming home with the trophy'. Task-oriented incentives prompted players to uphold competence in a manner that optimised self-focused improvements and mastery-focused outcomes such as 'being consistent... once you have set a high standard you need to keep it.' (Player A, age 13). Self-oriented incentives and the 'need' to maintain personal standards was perceived to be helpful: 'When you do well, you have got the pressure because you have set a high standard and you need to keep it.' (Player B, age 14). However, where a player's adopted 'really high' (e.g., never make a mistake) or rigid goals, this could generate unhelpful emotions and result in avoidance-coping: 'Pressure is made up of yourself... If you set yourself really high expectations and you aren't meeting them, then you will feel pressure and want to get the ball away from you.' (Player B, age 13).

Affective forecasting in the form of anticipated pleasant or unpleasant emotions was respectively associated with the achievement, or not, of self-oriented standards. This was also described as evoking pressure: 'He plays best when he is calm and relaxed before a game but he hyped himself up for this game... It was a derby game and probably thought about how he’d feel if they lost.' (Player D, age 13).

These findings indicate that pressure simulation that provides meaningful opportunity for mastery and/or ego-comparison will evoke personal incentives to perform. However, it is important to note that although self-oriented pressure may be helpful to facilitate skilled performance in the short-term, the long-term costs of rigid and inflexible incentives can be evidenced in mental health, for example experiencing depression (Turner, 2016). Self-oriented incentives are likely to develop and alter
throughout adolescence due to changing environments, and this can affect self-perception of achievement (Weiss & Williams, 2004). In particular, adolescents can often mirror the reported incentives and motivations of performance expressed by significant others such as parents and coaches. Research has indicated that parents who hold high standards coupled with admonishment for inferior performance attempts may promote negative self-evaluation tendencies, resulting in an increased anxiety to perform optimally (McArdle & Duda, 2004). Moreover, educating significant others on adaptive attitudes and achievement goals would be valuable within any adolescent performance context. Based on the findings from the present study, we advocate that cognitive behavioural workshops adjunctive to stimulation training facilitate flexible goals pursuits and adaptive management of self-oriented incentives.

Public self-consciousness

Public self-consciousness captured players’ thoughts on the performance expectations and standards they believed others (e.g., coaches, senior coaches, parents, and fans) expected from them. This study identified how academy soccer players worry about evaluation from others, including evaluations of being unskilled, incompetent, or unable to handle pressure. The preoccupation with how others may perceive them during performance may distract performers through evaluation apprehension cognitions (Mesagno et al., 2012), as illustrated by Player A (age 16):

‘You can think about the expectations from other people and that gets into your head... You start to think “I have to do this or I have to do that,” because they might want me too. That can put you off a bit. If you can't cope, you think he [lead coach] thinks you can't be a player.’

The importance players may place on the need for approval from others may result from awareness that athletes are more likely to keep their place in the team if they gain the approval of the coaching staff and academy directory (Evans et al., 2013). The developmental changes that occur in adolescence, such as increases in cognitive abilities, self-consciousness, and awareness of social standards, also contribute towards the susceptibility for academy players to perceive public self-consciousness pressures (MacIntyre et al. 2014). Simulation training in the presence of others can be useful to help players reflect on the generation of an emotion that may have positive effects on performance or altering the appraisal of the stimulus to attenuate unhelpful emotional responses (Lazarus, 1999; 2000). Cognitive behavioural workshops can assist players in understanding how they may reframe the appraisal of anxiety symptoms or reduce goal relevance (i.e., how much is at stake) to control their emotional response (Jones, 2003).

Protective and debilitative factors

Aligned with Fletcher and Sarkar's (2012) model, confidence, motivation, challenge appraisal, metacognition, and perceived social support were identified as being protective of performance under pressure. Of these, confidence, metacognition, and perceived social support could also be debilitative of performance under pressure.

Figure 2
Protective and Debilitative Factors for Performance Under Pressure Among Academy Soccer Players Aged 11–18.
Confidence was protective of performance under pressure with various sources described as influencing confidence including: performance accomplishments, preparation, and vicarious experiences. When describing pressurised performance, players often commented ‘pressure is to do with confidence’ and ‘need to ‘have to be confident’. (Player B, age 14).

Performance accomplishments were discuss by players as affirming confidence and providing a source of information based on one’s mastery experiences (Feltz, 2009). For example, ‘Making a really big tackle helps. It’s such a good feeling and you then can feel less pressure and more confident, and that’s when I’m playing my best.’ (Player C, age 12). Confidence was also affirmed within training sessions that were competitive and included ‘game realistic’ pressure scenarios. For example, ‘In training if you are doing a penalty shootout they [coaches] try and do crowd noises to see how they would cope.’ (Player C, age 12).

Within the present study, players perceived that existing training regimes did not adequately prepare them for the management of recognised pressures (e.g., superior opposition), and this was seen as
detrimental for confidence. For instance, players aged 13–16 noted ‘Training isn't like a game. You know who is there and who isn't there. Everyone watches the first team train, but no one watches us training. Sometimes you do wish that an 18s coach was there.’ (Player B, age 15).

In the present study, players aged 13–16 discussed how confidence could be undermined due to a lack of experience playing against opposition of varying physical statures. ‘When you train with the younger ones, you don't have to be switched on a lot but then in a game they [the opposition] are twice the size of them [training players] so you aren't prepared for that pressure.’ (Player D, age 14).

Training or playing competitively with teammates of a perceived superior ability was a method discussed by another under-14 player (Player C) to ‘see what I need to be training like… and I know I can do it by how close I am getting.’

Findings highlight the means by which simulation training may provide a source of confidence through performance accomplishments. The influence that performance experiences have on confidence can depend on the perceived difficulty of the task and the effort expended (Feltz, 2009). Therefore, it is important that simulation training provides players with opportunities to compete against different physical statures and perceived superior technical abilities with ‘game realistic’ scenarios.

Vicarious experiences were another important source of confidence, whereby observing others perform well under pressure demonstrated what coping behaviours may look like. For example, seeing older academy players transition in the first team (e.g., ‘You are confident that you can do it as he shows there is a pathway to get into the first team.’ (Player B, age 11) or observing the ability of their own teammates: ‘Player D (age 16): ‘A player that I used to play with... he handles pressure really well. He is composed, gets on the ball no matter where he is on the pitch. You can trust him on the ball; he doesn’t panic or rush... He just brings that composure and relaxedness to the team.’

The importance of providing adolescents with examples of adaptive performance under pressure from their respective peers or role models was clear within this study. This supports the findings of Thomas et al., (2019) who identified vicarious experiences to be a salient source of confidence among elite adolescent soccer players due to their stage of learning and undertaking new challenges.

**Metacognition**

Metacognitive skills (e.g., rationalising, re-appraising, blocking, and positive self-talk) captured players’ knowledge of, and control over cognitions when performing under pressure (Fletcher & Sarkar, 2012). Metacognition was perceived to be important for players, whereby players discussed the importance of monitoring and/or knowing how to control their own thought processes to protect from rumination (e.g., continuous thoughts of previous mistakes) or unhelpful anticipatory thoughts (e.g., worrying about the end result).

‘Player C (age 17): ‘Every game you step out onto that pitch, you want to play well and you will play well if you think pressure is just a word. If you don't think it and don't feel it, it is just a word.’

MacIntyre et al., (2014) identified that metacognitive skills can coordinate the use of psychological skills (e.g., imagery and goal-setting). The use of music and thought-stopping was discussed by players during competition to ‘try and not to think about it... think about it as if it's another game.’ Specifically, self-talk was discussed by players during competition to assist in appraising pressure adaptively and positively influencing the selection and control of coping strategies. Negative self-talk could evoke mild levels of anxiety that were helpful when performing under pressure: ‘I thought about what if I missed, but that
drove me on to score.’ (Player A, age 11). However, an inability to control unhelpful self-talk that manifested into rumination could evoke emotions that disrupted attentional control to the detriment of performance.

Player A (age 18): ‘In a game if you make a mistake you might think the same thing is going to happen again, so if you can’t block it out you might feel nervous and say “I’m not going to get on the ball and stuff like that.”

Developing metacognitive skills is of general importance among adolescent populations. This study highlighted the benefits of psychological skills such as self-talk for academy players; simulation training should be presented as an opportunity for players to rehearse their use of psychological skills to manage unhelpful thoughts under pressure (MacIntyre et al., 2014).

**Challenge appraisal**

A fundamental principle of CMR theory (Lazarus, 1999; 2000) is the idea that appraisal of pressure and coping resources interact to elicit responses. Within this study, players identified the importance of coping resources when appraising pressure, for example, ‘the thing is with pressure you have to be confident, remember that you are here for a reason because you obviously have the ability’. (Player C, age 13). Individuals that perceived that they have the capabilities and available resources to perform optimally under pressure can experience what is known as a challenge appraisal. A challenge appraisal is typically indicative of perceiving demands as an opportunity for growth. The following exchange between two players demonstrates how a challenge appraisal could help facilitate performance under pressure:

Player A (age 13): ‘There is always a pressure on you because there are another couple of hundred people fighting for my place but I think that you have to deal with it in life anyway especially if you aren’t a footballer and you go for a job interview to get another job. It’s exactly the same thing.

Player C (age 13). Exactly. It’s a good thing to help push us and help us learn as you can’t do anything in life without dealing with pressure.

Pressure research has suggested that threat appraisals are associated with avoidance goals and ‘freezing’ under pressure (Jamieson et al., 2016). However, experiencing heightened feelings of threat alongside a challenge appraisal did benefit some players: ‘I was thinking the “what if’s” again what if I miss, what if I score. It helped me in a way because it drove me on to score.’

Moreover, simplifying appraisals as either threat or challenge may not adequately account for individuals who may display ‘dual styles’ of appraisal (Lazarus, 1999; Meijen et al., 2013). During intervention design there is a need to pay closer attention to the mechanisms (e.g., emotions and appraisals) that most benefit an individual’s performance.

**Motivation**

Intrinsic motivation, in the form of ‘doing what you like and what you love best’ was described by players to protect performance under pressure – by enabling the player to ‘focus on trying to my play my best.’ (Player A, age 12). Players also described how extrinsic motives could be protective of performance under pressure ‘every single week we are fighting for a job. So you think about winning a lot which keeps you focused.’ (Player C, age 13). However, some players discussed how extrinsic motives alone could debilitate performance through distraction by ‘thinking of other things like winning it, holding the trophy instead of taking the penalty.’ (Player B, age 11).
Gagné and Deci (2005) contend that the internalisation of extrinsic motives can enhance autonomy in action, control outcomes and emotional regulation. Internalisation of external motives was captured within the data as a psychological process that could protect players when performing under pressure. For example, the extrinsic contingencies of professional soccer (e.g., results-based) were progressively transformed into personal values and self-motivations. This can be evidenced where players described an external contingency attached to performance output, but used this as a method of assessing their progress towards a goal they did find inherently meaningful: ‘We’ve gone from performance [hands emphasise low] to results [hands higher] but I like it; I want to enjoy this pressure as it is what it would be like if we were professional.’ (Player C, age 15).

Perception of social support

Key sources of social support included the coach, senior coaches, parents and teammates. Informational and emotional support was influential in affirming self-confidence and maintaining task-focus on performance relevant cues (Rees & Freeman, 2015). For instance ‘when we went to Holland we were nervous I remember [name of team mate] was really helpful when we went 1–0 down he was saying like we can still win this boys and keep focused which was really helpful’. (Player C, age 11).

Emotional support is an adolescents preferred type of support (Tamminen & Holt, 2012), this may explain why the perceived lack of emotional support increased the use of avoidance coping strategies: ‘He kept drumming it into my head that I needed to keep working on my 1v1. It made me think I wasn’t good and to just do my own thing.’

A perceived lack or avoiding the use social support has been attributed to withdrawal and an increase in anxiety (Polman et al., 2010). In contrast, players who seek social support have developed self-regulation skills which activate and sustain cognitions systematically oriented toward the attainment of goals. For example, the soccer academy uses reflection as a strategy used to help develop pressure-coping skills, this under 14 player discussed how if he found the reflection task challenging: ‘I’d ask them [parent] for help as sometimes I would be confused with what I’m writing’. However, this player then went on to discuss how: ‘But if I had a poor game sometimes, he [parent] would take over and write it himself.’

By not enabling players to take ownership may undermine the development of self-regulation techniques that may increase anxiety and performance failure under pressure (Mesagno et al., 2012). For example, this under-18 player disclosed a lack of personal responsibility and ownership in seeking support and how it may influence his ability to perform optimally: ‘It should be the coach you speak to, but it was the fact you didn’t want to. They don’t ask why you may have trained badly. I think it is the coaches understanding they need to pull you to one side and ask.’

Conditions that may develop self-regulatory skills and facilitate adolescents’ approach coping are trust, maturity, and approval from the eventual source of support (Camara et al., 2017). Moreover, in order to develop adolescents seeking social support when needed, significant individuals (e.g., coach or teacher) should look to enhance perceived relatedness within competition and training, but also educating individuals on the importance of ownership.

CONCLUSION

A recent systematic review (Kent et al., 2018) identified a need to systematically contextualise pressure interventions. This study illustrates contextualisation, with findings highlighting why this is a necessary step for any individual undertaking research or applied work in pressure and its management. Thematic analysis identified meaningful situational (presence of competition, time, presence of others, tangible
rewards, and performance lifestyle) and personal incentives (self-oriented and public self-consciousness) as perceived by academy soccer players that could induce pressure to perform optimally. The way in which the identified situational incentives and personal incentives could be integrated within simulation training to increase fidelity were highlighted. Particularly, emphasis of simulation training within the context of adolescent soccer players should focus on developing a competitive task, under time restrictions and in the presence of a meaningful crowd. Where possible the task should take place within a stadia environment in a competitive format such as a league table, with meaningful rewards and punishment assigned to the performance.

This study also highlighted psychological skills to enhance academy soccer players’ confidence, metacognition, challenge appraisal, motivation and social support. Central to effective cognitive-behavioural workshops should be to promote protective factors that are contextually relevant. In particular, metacognitive skills to help control unhelpful self-talk for the adaptive appraisal of pressure and the importance of ownership and seeking social support.

There are limitations within the present study that must be acknowledged. During focus group interviews, while players did discuss sensitive information (e.g., parental, coach, and teammate pressures), it is plausible that participants were not willing or able to discuss all thoughts and actions associated with a troubled personal experience of pressure (Folkman & Moskowitz, 2004). However, on balance, the use of focus groups did appear to enable players to compare or contrast pressure experiences, something not possible using individual interviews.

A further possible limitation was that the first author (who undertook interviews) provided sport psychology support services within the elite soccer academy environment for one year prior to data collection. These experiences helped construct a deeper understanding of the academy culture and terminology, which enabled interviews to progress using a more conversational tone (Rubin & Rubin, 2011). However, one implication of this familiarity is how the researcher’s assumptions and values may transmit into the interpretation of the meanings and experiences of players’ discourses during the interview process (Smith & McGannon, 2018). To try and mitigate this, the first author engaged in self-reflexive practices to generate field notes about subjective feelings and experiences when developing and undertaking interviews, and to challenge interpretations during themes construction (Smith & McGannon, 2018). Furthermore, during theme construction, the second author acted as a critical friend to challenge the assumptions and interpretations of the first author.

The present study illustrates a process for developing a contextualised intervention intended to enhance the coping skills of academy players when performing under pressure. This was achieved by establishing through focus group interviews, incentives that induce pressure as perceived by academy soccer players and psychological factors, both protective and debilitating, for superior performance under pressure. Adolescence is a time when behavioural and health problems can emerge or worsen if individuals cannot effectively cope (Yeager et al., 2018). Where the focal population is adolescents, the findings within this study also have implications for the design of pressure interventions to assist adolescents such as exams or public speaking. Using this study parents, teachers, coaches, social workers and child psychologists may be better informed of the incentives that induce pressure within an adolescent population. In addition, such individuals can be better informed of the meaningful protective coping resources and coping competencies to enhance performance under pressure, such as seeking social support, confidence and developing meta-cognitive skills.
REFERENCES


There are multiple negative effects, which can occur after experiencing bullying victimisation. The current study aims to investigate whether experiencing such victimisation throughout compulsory education has an effect on an individual’s trust levels throughout adulthood. A sample of 110 participants were employed, all of whom completed a survey containing the Retrospective Bullying Questionnaire (Schäfer et al., 2004), and four different trust scales. Using four separate multiple regressions, it was found that nine variables significantly predicted variations in trust level scores for all four of the scales, which suggests that being the victim of bullying reduces trust levels in adulthood. Indirect bullying and gender were the two predictor variables, which significantly predicted trust levels when viewed individually. The findings of this study may be applied to both future interventions aimed at reducing bullying and counselling techniques when attempting to increase victims’ trust levels.

**Keywords:** adulthood; bullying; compulsory education; trust levels; victimisation
Bullying

Approximations of the prevalence of bullying range from 10–25% worldwide (Analitis et al., 2009; Nansel et al., 2001) making it a universal problem. Most variations in the prevalence of bullying are subject to variations in the age of participants and the classification of bullying used. Furthermore, bullying is often experienced once individuals enrol in the school system, when social networks become wider (Arsenault et al., 2010).

The most commonly accepted definition of bullying is that it is the act of intentional and repeated aggressive behaviour towards one or more weaker individuals (e.g., Olweus, 1993; 2002). The aggressive behaviour is often split into the following four categories: (1) direct verbal (insults spoken towards the individual; Zwierzynska et al. 2013); (2) direct-physical (such as punching; Zwierzynska et al. 2013); (3) indirect (such as spreading of rumours; Bjorkqvist et al., 1992); or, (4) electronic (also known as cyberbullying; Wang et al., 2011). The second element of bullying is that the hurtful actions are repeated over a period of time. Finally, a power imbalance between the bully and the victim exists, with the victim finding difficulty defending themselves. A power imbalance may exist in terms of physical strength, age, or popularity (Arsenault et al., 2010).

A plethora of negative effects have been associated with being the victim of bullying, both short and long-term. With regards to short-term effects, research suggests victims experience acute distress such as chronic worrying, nightmares, and decreased overall well-being (Arsenault et al., 2010). However, it is the long-term effect the victim experiences that can cause most problems, as even when the bullying has desisted, victims are more likely to suffer from internalising symptoms such as long-term social isolation and loneliness, depression and anxiety (Egan & Perry, 1998; Forero et al., 1999; Hodges & Perry, 1999; Kaltiala-Heino et al., 1999; Kochenderfer-Ladd & Wardrop, 2001; O'Moore & Hillery, 1989; Olweus & Limber, 2010; Veenstra et al., 2005). Persistent victimisation is also associated with impaired social adjustment between the ages of 9–14 years (Goldbaum et al., 2003). Other research has even shown that the effects may continue throughout school (Rigby, 1999) and into adulthood (Ambert, 1994; Hugh-Jones & Smith, 1999; Olweus, 1993).

More recently, several studies have indicated associations between involvement in bullying and problems throughout adulthood (Sourander et al., 2007; Wolke et al., 2013; Moore et al., 2014), yet although research has shown that the negative effects of bullying can persist, few studies have addressed the transition from adolescence to early adulthood.

Trust

Trust is a phenomenon that works off an individual’s highest hopes and aspirations balanced against deepest worries. Deutsch (1973) stated trust to be ‘confidence that [one] will find what is desired [from another] rather than what is feared’ (p.148), and is considered to be one of the major factors involved in the development and maintenance of well-functioning relationships (Simpson et al., 2007). As with many characteristics, the ability to trust is often developed during childhood and adolescence. Schäfer et al., (2004) argued that being bullied during such important developmental stages would result in ‘... an “update” of social expectations, likely to show as an “insecure” internal working model of relationships...’ (p.380); being bullied is often perceived by the victims to be a loss of support and results in the experiencing victimisation during education with functioning aspects of adult life, such as social relationships. Schäfer et al., (2004) managed to support the argument that previous victims can ‘update’ social expectations by discovering a significant number of previous victims were categorised with a ‘fearful’ attachment profile. The individuals found it difficult to trust others due to being fearful of getting close to them would cause emotional pain, particularly if victimisation occurred during secondary school. Despite this support, many of the participants were of similar age and therefore did not
represent the older generations. Therefore, as individuals develop even further, greater experience of others may in fact increase or decrease levels of trust.

Loneliness and trust

Loneliness is one of the negative effects associated with bullying victimisation (Kochenderfer-Ladd & Wardrop, 2001; Olweus & Limber, 2010; Rubin & Mills, 1991; Veenstra et al., 2005). The most broadly accepted definition is that loneliness is a feeling of distress resulting from discrepancies between an individual's ideal and perceived social relationships (Hawkley & Cacioppo, 2007). Weiss (1973) went even further and made a distinction between different kinds of loneliness either due to emotional or social isolation. Where emotional isolation appears with an absence of close emotional attachment to others, social isolation occurs with the absence of an engaging social network.

Perceived loneliness during adulthood is negatively associated with trust beliefs and behaviours (Jones et al., 1981; Rotenberg, 1994; Rotenberg et al., 2002), in other words the higher the levels of loneliness, the lower the trust beliefs. A small number of short-term longitudinal studies have indicated a causal influence of victimisation and experiencing loneliness. Kochenderfer-Ladd (2001) followed US preschoolers for four years and reported a significant relationship between being victimised and experiencing loneliness and lower social satisfaction. Rotenberg (1994) suggested that the low trust exhibited by lonely individuals also serves to maintain the level of loneliness by limiting a person's willingness to initiate contact with others and share personal information. Therefore, if an individual begins to experience loneliness during victimisation, it follows that a continuous loop of high levels of loneliness and low trust will continue into adulthood.

Indication of a causal relationship has also been highlighted in some retrospective studies. Many adults who experienced severe victimisation continue to carry deep, poignant memories of the bullying episodes (Moore et al., 2014; Smith, 1991). Many of these adults also reported feelings that the experience did in fact have long-term effects, such as perceived loneliness and a lack of trust in social relationships; and idea supported by the retaining of such strong emotional memories of victimisation. However, Brewin et al., (1993) suggested that such reports had in fact been overestimated, particularly involving memories of highly salient and emotionally charged events. Victimisation, especially when severe, is one such topic that appears to fall into this category.

Gender

Research has also observed gender differences in loneliness and trust. For example, Rotenberg et al. (2002) reported that girls held greater trust belief in same-gender peer than boys; accounting for 57% of loneliness in girls in comparison to 18% in boys. Despite the fact that no real gender differences in the negative effects of victimisation have been observed, this greater trust belief in females may be an indication of a gender difference with regards to adult trust levels. Having greater trust prior to victimisation means a more severe break of trust later. However, although there are vague connections made by research between bullying victimisation and trust levels, no studies have explicitly examined the link.

Cyberbullying

The internet has now become an additional facility for social interaction, particularly among younger people (Gross, 2004; Hinduja & Patchin, 2009; Jackson et al., 2006). Although the ability to communicate easily via social media is often considered a positive advancement, the use of social media sites also creates an additional means through which individuals can experience bullying
Cyberbullying is defined as the ‘wilful and repeated harm inflicted using computers, cell phones, and other electronic devices’ (Hinduja & Patchin, 2009, p.208).

Cross et al., (2012) found that 28% of 11–16 year olds had experienced bullying online, with over a quarter of these cases categorised as ongoing. Furthermore, Taradpar and Kellett (2011) also found that 38% of participants were exposed to online bullying, as either a bystander or a victim. Research has even noted that many individuals who are victimised online report no previous experience with face-to-face bullying (Ybarra et al., 2007), therefore emphasising a new area of vulnerability.

Research has highlighted the fact that the effects of cyberbullying often reflect those of traditional bullying. For example, individuals report many of the internalising symptoms such as low self-esteem or depression and anxiety, as well as high absenteeism and poor academic performance (Patchin & Hinduja, 2010; Willard, 2006). O’Brien and Moules (2013) conducted a survey to investigate public viewpoints on the two forms of bullying, and discovered that 74% of participants agreed that cyberbullying was at least equivalent to the ‘traditional’ experience. Other researchers have begun to consider cyberbullying as more serious than the ‘traditional’ forms due to the anonymity behind the attacks (Campbell, 2005; Mishna et al., 2009), partly due to its ability to invade traditionally safe environments such as the home (Juvonen & Gross, 2008).

Rationale and aims

The current study looks at the influence of several predictor variables. Age was used to investigate whether the negative effects decrease through the lifespan. Gender was included due to Rotenberg et al.’s (2002) study on trust levels in males and females. Experiencing physical, verbal, indirect, and cyberbullying were all included to discover whether there is a type of bullying which influences an individual's trust levels more than others. Enjoyment of school and duration of the attacks were both included as ways to discover the perceived severity of the attacks, and finally experiencing bullying after compulsory education looks into whether prolonged victimisation increases the negative effects of bullying. The aim of the study is to discover whether any (or multiple) of the variables representing aspects of bullying victimisation have an effect on trust levels during adulthood.

Hypotheses

H1: Being the victim of bullying during childhood will have an effect on an individual's trust levels during adulthood.

H2: Different forms of bullying will affect individual's trust levels differently.

METHOD

Participants

In order to attain a medium effect ($\eta^2 = 0.15$) with a statistical power of .80 and $p < .05$, the minimum required sample for a multiple regression with nine predictor variables was calculated as be 96 (Cohen, 1992). In this study, 110 participants were employed, made up of 48 males and 63 females ranging from having experienced no bullying victimisation throughout childhood and adolescence, to having experienced severe bullying victimisation. The mean age of participants was 30.35 years ($SD = 11.43$). All participants lived in the UK.

Instruments
Information regarding participants' bullying experiences during compulsory education were recorded using a modified version of the Retrospective Bullying Questionnaire (Schäfer et al., 2004). Slight modifications were implemented following consultation with a small focus group of five participants. A section on cyberbullying was also included, and adopted the same structure as the items for physical, verbal, and indirect bullying. The modified version of the questionnaire consisted of 37 items, and aided in determining the type of bullying experienced by individuals – for example, whether it was physical, indirect, or even non-existent throughout compulsory education. A five-point Likert scale was applied to the items measuring whether individuals enjoyed school, and the duration of the victimisation. For example, if a participant only experienced bullying at randomly spaced intervals, a score of ‘2’ was applied, whereas experience lasting a year or more were assigned a score of ‘5’.

Four standardised trust scales were employed to determine participants’ trust levels. The first was Rotter’s Interpersonal Trust Scale (ITS; 1967), one of the most widely cited measurements in trust research (Carrington, 2006). THE ITS employs a five-point Likert scale and consists of 25 items. The scale has an internal consistency of 0.76, with test-retest reliabilities over five weeks, three months, and seven months, reported at 0.69, 0.68, and 0.56 respectively (Rotter & Stein, 1971).

The second scale used measured general trust (Yamagishi, T. & Yamagishi, M., 1994). This scale consisted of six items, also adopting a five-point Likert scale.

The third scale measured trust levels towards strangers (Naef & Schupp, 2009). It consisted of two items, which were: ‘How much do you trust strangers you meet for the first time?’, and ‘When dealing with strangers, it is better to be cautious before trusting them.’ Responses were measured on a four-point scale.

The final scale was McShane and Von Glinow’s (2010) Propensity to Trust Scale (PTS). It consisted of eight items, for example: ‘Most people would tell a lie if they could gain by it.’ And ‘I believe that most people are generally trustworthy.’ The PTS focused on the participant’s overall willingness to trust others, and responses were recorded on a six-point Likert scale.

Finally, two open-ended questions were also included, which were: ‘Why do you think you trust people to the level that you do?’, and ‘Do you believe bullying could have an effect on how the victims view strangers? Why?’

Demographic data, gender, nationality, and current location were also collected.

**Procedure**

The data were collected throughout the autumn term of 2015 and the winter term of 2015–16 using an online survey created using the website SurveyMonkey. Each scale was displayed separately for clarity, due to the different scoring techniques used by each. The survey was advertised on social media sites such as Facebook and Twitter to undergraduate students.

**RESULTS**

The current study examined whether there was a relationship between being a victim of bullying during childhood and adolescence, and an individual’s trust levels during adulthood. The predictor variables employed were the different types of bullying experienced: physical, verbal, indirect, and cyberbullying, as well as age, gender, whether participants enjoyed school, the duration of victimisation and whether participants continued to be a victim of bullying after leaving school. The criterion
variables were the four types of trust. Table 1 below shows the mean and standard deviation scores for each of the four trust scales.

Table 1
Means and Standard Deviations for the Four Trust Scales

<table>
<thead>
<tr>
<th>Scales</th>
<th>M</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rotter’s Interpersonal Trust Scale</td>
<td>60.05</td>
<td>11.47</td>
</tr>
<tr>
<td>Yamagishi, T. &amp; Yamagishi, M.’s General Trust Scale</td>
<td>19.05</td>
<td>5.82</td>
</tr>
<tr>
<td>Naef &amp; Schupp’s Trust Scale</td>
<td>3.81</td>
<td>1.75</td>
</tr>
<tr>
<td>McShane &amp; Von Glinow’s Propensity to Trust Scale</td>
<td>25.55</td>
<td>8.53</td>
</tr>
</tbody>
</table>

Multiple regressions were conducted for each of the four trust scales separately, with the predictor variables remaining the same throughout.

Multiple regression for Rotter’s Interpersonal Trust Scale

Table 2 illustrated that the level of trust as measured by Rotter’s ITS is strongly correlated to being indirectly bullied ($r = .44$) and the duration of victimisation ($r = .40$). A moderate correlation can be observed between the scores on the trust scale and being cyberbullied ($r = .35$). Further moderate correlations can be observed between trust level scores and gender ($r = .28$), enjoyment of school ($r = .28$), being physically bullied ($r = .26$), whether the individual continued to be bullied after education ($r = .26$), age ($r = .25$), and being verbally bullied ($r = .21$).

Table 2
Correlation Between the ITS and Predictor Variables

<table>
<thead>
<tr>
<th>Scale</th>
<th>Age</th>
<th>Gender</th>
<th>ES</th>
<th>PB</th>
<th>VB</th>
<th>IB</th>
<th>CB</th>
<th>Duration</th>
<th>BAE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rotter’s Trust Scale</td>
<td>.25**</td>
<td>.28**</td>
<td>.28**</td>
<td>.26**</td>
<td>.21*</td>
<td>.44**</td>
<td>.35**</td>
<td>-.40**</td>
<td>.26</td>
</tr>
<tr>
<td>Age</td>
<td>-.22**</td>
<td>-.09</td>
<td>-0.09</td>
<td>.10</td>
<td>.17*</td>
<td>.41**</td>
<td>.03</td>
<td>-.18*</td>
<td></td>
</tr>
<tr>
<td>Gender</td>
<td>.11</td>
<td>.37**</td>
<td>.10</td>
<td>-.00</td>
<td>-.19*</td>
<td>-.19*</td>
<td>.10</td>
<td></td>
<td></td>
</tr>
<tr>
<td>ES</td>
<td>.42**</td>
<td>.16</td>
<td>.26**</td>
<td>.24**</td>
<td>-.46**</td>
<td>-.24**</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>PB</td>
<td>.53**</td>
<td>.38**</td>
<td>.15</td>
<td>-.61**</td>
<td>.35**</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>VB</td>
<td>.63**</td>
<td>.31**</td>
<td>-.68**</td>
<td>.31**</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>IB</td>
<td>.31**</td>
<td>-.59**</td>
<td>.34**</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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</tr>
<tr>
<td>CB</td>
<td>-.35**</td>
<td></td>
<td>.05</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Duration</td>
<td>-.50**</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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<td></td>
</tr>
</tbody>
</table>

ES: enjoyed school; PB: physically bullied; VB: verbally bullied; IB: indirectly bullied; CB: cyberbullied; BAE: bullied after education

* $p < .05$, ** $p < .01$

Significant correlations were also observed between the predictor variables. The three more ‘traditional’ forms of bullying, physical, verbal, and indirect, had moderate, negative correlations to the duration of bullying: ($r = -.61$), ($r = -.68$), and ($r = -.59$) respectively.

A multiple regression was performed to assess the unique contributions of each predictor variable to trust levels as measured by Rotter’s trust scale. For each predictor variable taken separately, the beta
values are displayed in Table 3. The table shows that age, gender, experiencing verbal bullying and experiencing indirect bullying all made significant, unique contributions to trust levels found using the ITS.

Table 3
*Beta Values for Each Predictor Variable*

<table>
<thead>
<tr>
<th>Variables</th>
<th>$B$</th>
<th>SE</th>
<th>$\beta$</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age</td>
<td>.24</td>
<td>.09</td>
<td>.24**</td>
</tr>
<tr>
<td>Gender</td>
<td>8.50</td>
<td>1.94</td>
<td>.37**</td>
</tr>
<tr>
<td>Enjoyed school</td>
<td>.58</td>
<td>.76</td>
<td>.07</td>
</tr>
<tr>
<td>Physically bullied</td>
<td>–1.09</td>
<td>2.42</td>
<td>–.05</td>
</tr>
<tr>
<td>Verbally bullied</td>
<td>–7.89</td>
<td>3.20</td>
<td>–.29*</td>
</tr>
<tr>
<td>Indirectly bullied</td>
<td>9.23</td>
<td>2.60</td>
<td>.36**</td>
</tr>
<tr>
<td>Cyberbullied</td>
<td>6.05</td>
<td>2.47</td>
<td>.24</td>
</tr>
<tr>
<td>Duration of bullying</td>
<td>–1.12</td>
<td>.89</td>
<td>–.17</td>
</tr>
<tr>
<td>Bulied after education</td>
<td>3.30</td>
<td>2.08</td>
<td>.14</td>
</tr>
</tbody>
</table>

* $p < .05$, ** $p < .01$

Taken together, the predictor variables accounted for 45% of the variance in the trust level scores ($R^2 = .45$) and collectively significantly predicted trust level scores, $F(9, 100) = 9.16, p < .001$.

*Multiple regression for Yamagishi, T. & Yamagishi, M.’s General Trust Scale*

Table 4
*Correlations Between the General Trust Scale and Predictor Variables*

<table>
<thead>
<tr>
<th>Variable</th>
<th>Age</th>
<th>Gender</th>
<th>ES</th>
<th>PB</th>
<th>VB</th>
<th>IB</th>
<th>CB</th>
<th>Duration</th>
<th>BAE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Trust Scale</td>
<td>.25**</td>
<td>.31**</td>
<td>.37**</td>
<td>.36**</td>
<td>.25**</td>
<td>.37**</td>
<td>.18*</td>
<td>–.36**</td>
<td>.24</td>
</tr>
</tbody>
</table>

ES: enjoyed school; PB: physically bullied; VB: verbally bullied; IB: indirectly bullied; CB: cyberbullied; BAE: bullied after education

* $p < .05$, ** $p < .01$

Table 4 illustrate that the level of trust found by using Yamagishi, T. & Yamagishi, M.’s General Trust Scale is moderately correlated to enjoyment of school ($r = .37$), being indirectly bullied ($r = .37$), being physically bullied ($r = .36$), the duration of bullying ($r = .36$), and gender ($r = .31$). The trust scores found by the scale are also mildly correlated to age ($r = .25$), being verbally bullied ($r = .25$), being bullied after education ($r = .24$), and weakly correlated to being cyberbullied ($r = –.18$).

A multiple regression was performed to assess the unique contributions of each predictor variable to Yamagishi, T. & Yamagishi, M.’s General Trust Scale. For each predictor variable taken separately, the beta values are given in Table 5, which shows that age, gender, and experiencing indirect bullying made significant, unique contributions to trust levels found using the General Trust Scale.
Table 5  
**Beta Values for Each Predictor Variable**

<table>
<thead>
<tr>
<th>Variables</th>
<th>$B$</th>
<th>SE</th>
<th>$\beta$</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age</td>
<td>0.18</td>
<td>0.05</td>
<td>0.36**</td>
</tr>
<tr>
<td>Gender</td>
<td>3.69</td>
<td>1.03</td>
<td>0.32**</td>
</tr>
<tr>
<td>Enjoyed school</td>
<td>1.08</td>
<td>0.40</td>
<td>0.26**</td>
</tr>
<tr>
<td>Physically bullied</td>
<td>0.82</td>
<td>1.29</td>
<td>0.07</td>
</tr>
<tr>
<td>Verbally bullied</td>
<td>-1.01</td>
<td>1.70</td>
<td>-0.07</td>
</tr>
<tr>
<td>Indirectly bullied</td>
<td>2.89</td>
<td>1.39</td>
<td>0.23*</td>
</tr>
<tr>
<td>Cyberbullied</td>
<td>-0.49</td>
<td>1.31</td>
<td>-0.04</td>
</tr>
<tr>
<td>Duration of bullying</td>
<td>-0.06</td>
<td>0.48</td>
<td>-0.02</td>
</tr>
<tr>
<td>Bullied after education</td>
<td>1.48</td>
<td>1.11</td>
<td>0.12</td>
</tr>
</tbody>
</table>

* $p < .05$, ** $p < .01$

Taken together, the predictor variables accounted for 39% of the variance in the General Trust Scale scores ($R^2 = .39$), and collectively, significantly predicted changes in trust levels, $F(9, 100) = 7.37$, $p = 0.001$.

**Multiple regression for Naef & Schupp’s Trust Scale**

Table 6  
**Correlations Between Naef & Schupp’s Trust Scale and Predictor Variables**

<table>
<thead>
<tr>
<th>Variable</th>
<th>Age</th>
<th>Gender</th>
<th>ES</th>
<th>PB</th>
<th>VB</th>
<th>IB</th>
<th>CB</th>
<th>Duration</th>
<th>BAE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Naef &amp; Schupp Trust Scale</td>
<td>.15</td>
<td>.13</td>
<td>.27**</td>
<td>.11</td>
<td>.18*</td>
<td>.29**</td>
<td>.27**</td>
<td>-.17*</td>
<td>.04</td>
</tr>
</tbody>
</table>

ES: enjoyed school; PB: physically bullied; VB: verbally bullied; IB: indirectly bullied; CB: cyberbullied; BAE: bullied after education

* $p < .05$, ** $p < .01$

Table 6 illustrates that the level of trust found by Naef & Schupp’s Trust Scale mildly correlates with experiencing indirect bullying ($r = .29$), enjoyment of school ($r = .27$), and cyberbullying ($r = .27$). There is also a weak correlation with being verbally bullied ($r = .18$), and duration of the bullying attacks ($r = .17$). No correlation was observed with age, gender, experiencing physical bullying and being bullied after education.

For each predictor variable taken separately, the beta values are displayed in Table 7. The table shows that gender, enjoyment of school, and experiencing indirect bullying each made unique significant contributions to the trust scores found by the scale.
Table 7

Beta Values for Each Predictor Variable

<table>
<thead>
<tr>
<th>Variables</th>
<th>$B$</th>
<th>SE</th>
<th>$\beta$</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age</td>
<td>.01</td>
<td>.02</td>
<td>.07</td>
</tr>
<tr>
<td>Gender</td>
<td>.83</td>
<td>.35</td>
<td>.24*</td>
</tr>
<tr>
<td>Enjoyed school</td>
<td>.35</td>
<td>.14</td>
<td>.28*</td>
</tr>
<tr>
<td>Physically bullied</td>
<td>−.49</td>
<td>.44</td>
<td>−.14</td>
</tr>
<tr>
<td>Verbally bullied</td>
<td>.41</td>
<td>.59</td>
<td>.1</td>
</tr>
<tr>
<td>Indirectly bullied</td>
<td>.97</td>
<td>.48</td>
<td>25*</td>
</tr>
<tr>
<td>Cyberbullied</td>
<td>.87</td>
<td>.45</td>
<td>.21</td>
</tr>
<tr>
<td>Duration of bullying</td>
<td>.22</td>
<td>.16</td>
<td>.21</td>
</tr>
<tr>
<td>Bullied after education</td>
<td>−.01</td>
<td>.38</td>
<td>−.00</td>
</tr>
</tbody>
</table>

* $p < .05$, ** $p < .01$

Taken together, the nine variables accounted for 21% of the variance in Naef & Schupp’s trust scale ($R^2 = .21$), and collectively significantly predicted in the trust levels found by the scale, $F(9, 100) = 2.99$, $p = .003$.

Multiple regression for McShane & Von Glinow’s Propensity to Trust Scale

Table 8

Correlations Between the PTS and Predictor Variables

<table>
<thead>
<tr>
<th>Variable</th>
<th>Age</th>
<th>Gender</th>
<th>ES</th>
<th>PB</th>
<th>VB</th>
<th>IB</th>
<th>CB</th>
<th>Duration</th>
<th>BAE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Propensity to Trust</td>
<td>.23**</td>
<td>.28**</td>
<td>.15</td>
<td>.22*</td>
<td>.16*</td>
<td>.30**</td>
<td>.22*</td>
<td>−.14</td>
<td>.13</td>
</tr>
</tbody>
</table>

ES: enjoyed school; PB: physically bullied; VB: verbally bullied; IB: indirectly bullied; CB: cyberbullied; BAE: bullied after education

* $p < .05$, ** $p < .01$

NB: Correlations between predictor variables can be found in Table 2.

Table 8 illustrates that levels of trust found by the PTS mildly correlated with experiencing indirect bullying ($r = .30$), gender ($r = .28$), age ($r = .23$), being physically bullied ($r = .22$), and being cyberbullied ($r = .22$). The scores also weakly correlated with being verbally bullied ($r = .16$). Enjoyment of school, duration of bullying attacks, and being bullied after education showed no significant correlation to trust level scores.

For each of the predictor variables taken separately, the beta values are shown in Table 9.
Table 9

<table>
<thead>
<tr>
<th>Variables</th>
<th>B</th>
<th>SE</th>
<th>β</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age</td>
<td>.17</td>
<td>.07</td>
<td>.22*</td>
</tr>
<tr>
<td>Gender</td>
<td>6.42</td>
<td>1.64</td>
<td>.38**</td>
</tr>
<tr>
<td>Enjoyed school</td>
<td>.50</td>
<td>.64</td>
<td>.08</td>
</tr>
<tr>
<td>Physically bullied</td>
<td>1.38</td>
<td>2.05</td>
<td>.08</td>
</tr>
<tr>
<td>Verbally bullied</td>
<td>−1.22</td>
<td>2.71</td>
<td>−.06</td>
</tr>
<tr>
<td>Indirectly bullied</td>
<td>6.09</td>
<td>2.21</td>
<td>.32**</td>
</tr>
<tr>
<td>Cyberbullied</td>
<td>3.67</td>
<td>2.09</td>
<td>.18</td>
</tr>
<tr>
<td>Duration of bullying</td>
<td>1.48</td>
<td>.76</td>
<td>.29</td>
</tr>
<tr>
<td>Bulied after education</td>
<td>2.24</td>
<td>1.76</td>
<td>.13</td>
</tr>
</tbody>
</table>

* p < .05, ** p < .01

It can be observed that age, gender, and experiencing indirect bullying each made significant, unique contributions to trust level scores found by the PTS.

Taken together, the nine predictor variables accounted for 29% of the variance ($R^2 = .29$), and significantly predicted changes in trust levels scores when using the PTS, $F(9, 100) = 4.56$, $p < .001$.

**Summary**

The first two trust scales were significantly correlated to all nine of the variables. The other two scales were significantly correlated with five variables each. When taken together however, the nine variables did significantly predict the changes in trust levels for all four of the scales. As a subtype, indirect bullying showed the most significant individual contributions to predicting trust levels, yielded significant beta values in all four regressions. In addition, gender also yielded significant beta values with all four scales.

**Thematic analysis**

The final stage of the questionnaire consisted of the two open-ended questions, which were: ‘Why do you think you trust people to the level that you do?’ and, ‘Do you believe bullying could have an effect on how victims view strangers? Why?’ The open-ended questions aimed to provide further insights to the answers received on the standardised scales. Responses were analysed using thematic analysis utilising an inductive approach, as there was little predetermined theory to provide pre-existing framework for participants’ answers’. For the two questions, 65 participants gave responses. Once analysis was complete, three main themes emerged from the responses.
The first main theme discovered was characteristic of trust formation. The theme was constructed to highlight that trusting another individual is a process: there are varying stages and exchanges, which can either strengthen or destroy trust levels. ‘I do give people a certain level of trust in meeting them which they can break or strengthen,’ (Participant 47).

Furthermore, some contrast in positivity emerged throughout the analysis, whereas some individuals offer trust immediately; others discussed starting at zero and having new acquaintances build up trust through trustworthy actions. Participant 6, when explaining the low level of trust reported, stated that it was because ‘I've never had a reason to trust anyone’.

The second main theme to be discussed is that of concept of trust formation, which encompasses how previous experiences and emotions can develop a preconceived notion of how individuals are likely to act in the future. ‘My natural inclination is to trust people… personal experiences of various forms of abuse by a variety of people as a child… eroded that,’ (Participant 12). It was apparent that multiple past experiences relied on ‘past experiences’, for example Participants 4, 17, 21, 33, 41, 51, and 65.

The final main theme that emerged was difficulty forming new relationships: ‘I am unable to accept a new person in my life as I am afraid they will just hurt me in some shape or form,’ (Participant 31). The theme actually contains the largest amount of supporting quotes found in individuals’ responses, highlighting the importance and possible influence over how trusting one is. One strongly apparent aspect in the responses is that the individuals were fearful of experiencing emotional pain again from new individuals. For example, ‘I don’t want to be hurt by others,’ (Participant 2).

**DISCUSSION**

The aim of this study was to investigate which aspects of bullying in childhood and adolescence would have an effect on adult trust levels. The childhood experiences used were age, gender, how much the individual enjoyed school, experiencing physical, verbal, indirect, or cyberbullying; duration of bullying attacks, and whether the individual continued to be bullied after leaving compulsory education. The results indicated that when taken together, the predictor variables significantly explained changes in trust levels for all the four scales used. Accordingly, our first hypothesis: Being a victim of bullying during compulsory education will have an effect on an individual's trust levels during adulthood, is accepted.
It is also worth noting that experiencing ‘indirect bullying’ was the only facet of bullying to make a single significant contribution to all four trust measures. Therefore, our second hypothesis: Different forms of bullying will have varying predictive strengths of an individual’s trust levels, is also accepted. Although there is no scientific supportive research on this, such a finding may offer an explanation as to why females have been found to exhibit more internalising symptoms than males (Wimmer, 2009). As females are more likely to experience indirect bullying than males, who more often experience physical bullying (Wimmer, 2009), it is likely that there would be greater negative effects on females due to the type of bullying experienced. The finding that indirect bullying offered the greatest predictive value for varying trust levels could also inform bullying interventions. As it is apparent that general bullying interventions have had little effect on prevalence (Analitis et al., 2009; Nansel et al., 2001), targeting indirect bullying specifically could act as a stepping stone to reducing bullying on the whole. Lowering levels of indirect bullying could also increase a victim’s ability to create social networks aiding in keeping rates low, which could also have implications for counselling.

The current study also found gender to be a significant predictor of trust scores for all four scales used, which is consistent with the fact that males and females are prone to different types of bullying (Wimmer, 2009). Furthermore, this finding is supported by Rotenberg et al., (2002), who found that generally, females have a significantly higher level of trust belief in same-sex peer than males. It is possible that either this higher trust belief remains throughout victimisation, or that there is greater effect on females due to the higher trust belief prior to having experienced bullying. Future research could benefit from looking more in depth on the role of gender during victimisation and its consequent effect on later trust levels.

Participant’s age showed significant predictive strength for trust levels for three of the scales used. It appears from the results that the effect of bullying victimisation can have on adult trust levels does decrease partially over time. This finding is supported by Sund (2004), who also found that the negative effects linked to bullying decrease as individuals age.

The thematic analysis performed on the responses to the two open-ended questions did offer insight into how individuals’ perceived levels of trust are affected. These perceptions not only applied to victimisation but trust development as a whole. Characteristics of ‘trust formation’ primarily refer to general trust construction. ‘Concept formation’ envelops the cognitive process where individuals use previous experience and perceived sense of self to predict the outcomes of future events (Mullally & Maguire, 2014), such as individuals breaking trust in the future due to bullying being perceived as a breach of trust in others. The importance of previous experience can occasionally be overlooked when questioning the continuance of negative symptoms of bullying. Yet, the most influential theme that emerged from the analysis did appear to be ‘difficulty forming new relationships’. This theme appears the most relevant to victimisation, where participants did report being fearful of further emotional pain and an ‘updated’ negative view of the general public. Whether this was due to the phrasing and direction of the questions asked is unclear, therefore possible future research should ask more general questions around the topic. However, difficulty forming new relationships has been linked to low trust levels (Schäfer et al., 2004), with multiple quotes supporting this idea.

**CONCLUSION**

Although full anonymity was ensured to participants, a criticism of using self-report measure is the possibility that responses could be affected by social desirability bias, when an individual responds in a way that is socially acceptable instead of being entirely accurate. Furthermore, self-report relies on the recall or perceptions of the participant, and it is entirely possible that the memory recall of participants is not always reliable (Dudukovic et al., 2004). However, Brewin et al., (1993) did show that for emotionally charged memories, such as experiencing victimisation, recall is significantly more reliable...
and accurate. In order to address this problem of reliability of recall, further research could be supplemented by research adopting a longitudinal design.

Bullying victimisation, taken as whole, does appear to have an effect on individual's trust levels during adulthood, and is supported by both the quantitative and qualitative analysis. In particular, indirect bulling, gender, and age appear to have the strongest individual predictive strengths in relation to trust levels found by pre-existing and established trust scales. Both conclusions could carry implications in both the development of future bullying interventions and counselling techniques with victims of bullying.

REFERENCES


Aliyah, meaning to rise or ascend, refers to the phenomenon of ongoing predominately Jewish immigration to Israel for religious, sociocultural and idealistic reasons, or to escape cultural and religious persecution. Since research into the current demographic is limited, from both a cross-cultural and positive psychological perspective, the qualitative methodology and Interpretative Phenomenological Analysis, were employed to explore the lived experience of three women; recent lone immigrants to Israel from the UK or US, aged between 50 and 65. Semi-structured interviews were conducted, with analysis revealing five superordinate themes, common to all participants: life journey, acculturation, transcendence, intrinsic identity, and meaning and purpose. Subthemes were also common to all participants. Findings indicated that cultural adaptation was facilitated by the participants’ perception of Aliyah as a positive psychological intervention; participants experienced greater well-being, despite concurrent difficulties with acculturation, reporting personal growth and resilient coping. Scope for further research is suggested, aiding the development of resources to support acculturation for this and other immigrant communities.

Keywords: acculturation; cultural persecution; Israel; Jewish immigration; religious persecution
This research explored the experience of single Anglo women, aged between 50 and 65, who within the two years prior to participating in this study, and permanently relocated to Israel, from either the UK or US. Context is offered for the uniqueness of Aliyah as an immigration phenomenon, as well as the application of positive psychological theory as supportive of the relocation process. According to the Population Division of the United Nations Department of Economic and Social Affairs (2017), 258 million people live in countries other than their birth nation. While immigration as refugee or asylum seeker may be viewed differently from actively choosing to leave one's birth nation for the purposes of enhancing life experience or socioeconomic status, research suggests that in all instances, immigration requires a re-evaluation of identity, reassessment of future plans and acclimatisation to a new culture, with possible far reaching psychological effects long after the physical upheaval of relocation has ended (Berry, 2006; Strang & Ager, 2010).

The phenomenon of Aliyah

The use of the term Aliyah, from the Hebrew word translating as to rise or elevate, to describe Jewish immigration to Israel, stems from the conviction that moving to Israel as the ancient Jewish homeland, elevates one's soul. Though not solely Jewish, permanent immigrants to Israel, whether secular or religious, are often motivated by idealism, a desire for cultural acceptance or a belief that fitting into a predominantly Jewish society offers a sense of belonging which may have been lacking in the host nation (Ben-Porat, 2013; Johnson, 2013). Israel offers religious freedom in the Middle East for all faiths, with a pro-immigration policy facilitating citizenship for Jews and their families from anywhere in the world (Smoha, 2002; The Jewish Agency, 2014). Furthermore, many Jews continue to view Israel as offering protection from widely reported recent global increases in anti-Semitism (Cotler, 2010; United States Department of State, 2008).

Since the pre- and post-World-War-Two influxes of persecuted, displaced Middle Eastern and European Jews and Holocaust survivors, the Israeli Central Bureau of Statistics (CBS; 2019) reported recent arrivals of large numbers of immigrants from Russia, Ukraine, Ethiopia and France, with an ongoing influx of smaller numbers from the UK, US, and other global destinations. As a nation of immigrants, Israel is multifaceted, complex and comprises a diverse mix of political, religious, socioeconomic and ethnic backgrounds. Though identifying as the Jewish state, a fifth of the population are Israeli Arabs and five percent other faiths (CBS, 2019). Social divisions exist, not only between Arabs and Jews, but between genders and Jewish secular, traditional, religious and ethnic groups (Avineri, 2017). Furthermore, whilst Israel is considered a hub of technological, medical and business innovation and by the current definition, a first world nation, ordinary Israelis often fail to benefit from these advances, due to gaps in a bureaucratic system encompassing a challenging mix of Middle Eastern and Eastern European mentalities (Ben-Porat, 2013; Zerubavel, 2000).

Nonetheless, Israel recently ranked as the 13th happiest country globally, reflecting the spirit of a nation whose people, despite multiple differences, demonstrate a remarkable sense of community, warmth, and unity in times of trouble (Avineri, 2017; Ward, 2008; World Happiness Report, 2019). Though for many new immigrants, life in Israel is vastly different from their host nations, research argues that adaptation may be facilitated by open-mindedness about cultural and social differences, acceptance of changes in employment opportunities or standard of living and increased quality of life, through becoming part of a society where one's religious and spiritual identity is unquestioned (Amit & Bar-Lev, 2015).
Positive psychological considerations supporting cultural adaptation

The burgeoning field of positive psychology has shifted the focus of psychological research from the alleviation of negative human behaviour and suffering, to the exploration of factors facilitating resilience, flourishing and optimal well-being (Seligman & Csikszentmihalyi, 2000). Without negating the potential adverse effects, positive psychological research argues that difficult life events may provide opportunities for enhanced resilience and personal growth (Relojo-Howell, 2017; Southwick & Charney, 2018). Studies have evidenced that behaviours offering protection from the effects of adversity can be learned, in both organisational and personal contexts (Parks & Schueller, 2014). Proyer et al. (2014) found that applications of Positive Psychological Interventions (PPIs); gratitude practices and utilising character strengths, created long lasting effects on well-being levels, effective for people of all age groups. Furthermore, active utilisation of positive coping strategies may impact well-being and resilience levels more than individual differences in personality, physical ability or socioeconomic status (Ivtzan et al., 2015).

The three stages of relocation – planning, transit, and departure – often induce prolonged stress, however, much like during other difficult and ongoing circumstances, such as serious illness, bereavement or divorce, an individual's pre-immigration problem-solving abilities may help mediate the adverse effects of relocation (Amit, 2010; Weiss & Berger, 2012). A sense of meaning and purpose, self-compassion, gratitude practice, personal character strengths, developing language proficiency and contact with other immigrants who have successfully managed their bicultural identity may all positively impact the experience of relocation, so that it becomes one of personal transformation and growth (Amit & Bar-Lev, 2015).

Research rationale

Israel offers structured life paths for immigrant families and lone immigrant youth, including military service and highly subsidised educational programmes for the under thirty-fives. However, no such programmes exist for older adults (The Jewish Agency, 2014). Despite active contribution in every area of society, as combat soldiers, scientists and politicians, the dichotomous nature of Israel as a modern state with roots in religiosity and leanings towards a family-oriented rather than individualistic society, mean that women are generally still expected to marry and become mothers, often earn less than men, are less represented in government and expected to retire earlier than men. (Remennick, 2000; Rosenthal, 2008). Older women are less likely than men to find meaningful employment opportunities, which often requires a process of re-evaluation of career direction and social status (Lavee & Katz, 2003). Furthermore, adaptation may be particularly challenging for women transitioning from their traditional gender roles of mothers, wives, homemakers, or caregivers (Amit & Bar Lev, 2015; Remmenick, 2013).

Though there are many Anglo or English-speaking Jewish immigrant communities in Israel, however, the primary researcher's familiarity with UK and US communities facilitated an interest in the lived experience of Aliyah for women from these communities, since Western women choosing Aliyah are underrepresented in current Aliyah literature, which has recently largely focused on Russian and Ethiopian immigrants (Berger, 2013). Furthermore, relocation agencies such as Nefesh b’Nefesh often group these communities together for the purposes of providing support, information and resources in English; therefore it was assumed that the participants will all have had access to similar resources (Kantor, 2017).

Participants' views regarding personal traits, attributes and strengths which may have supported integration into Israeli society, allowed for exploration of the phenomenon of Aliyah from a positive psychological and sociocultural viewpoint. Though previous theories and models of acclimatisation,
acculturation, and social and cross-cultural psychological perspectives of immigration offer valuable definitions and explanations of the concept of immigration, they frequently lack the ability to consider the experience of the individual, therefore losing the voice of the immigrant (Berry, 2006; Larkin et al., 2006). For this reason, the qualitative research methodology of Interpretative Phenomenological Analysis (IPA; Smith, 2015) was selected for the current study, allowing for consideration of the lived experience of the phenomenon of Aliyah, directly from the viewpoint of the participant.

**METHODOLOGY**

Interpretative Phenomenological Analysis is idiographic and non-assumptive, focusing on the distinct experience of each participant as an expert on the phenomenon being explored, while also deducing meaning of lived experience from the whole sample. An effort is made to ensure a homogenous sample to whatever degree is possible (Smith, 2015). From an epistemological perspective, IPA assumes the stance of realism or the existence of the self (Smith et al., 2009). Based in phenomenology, IPA is considered a subcategory of philosophy, exploring what it is like to be, or to experience a phenomenon (Husserl, 2012). Ontologically, IPA considers experience from a hermeneutic perspective, being concerned with the experience of being or existing in the world, considering things are they appear, whilst also interpreting meaning (Heidegger, 1996). The theoretically informed methodology of IPA is such that both researcher and participant co-create the interpretation of the data; we feel, sense and are present for our lived experiences, through our physical being in time and space, rather than outside of ourselves, therefore while it is impossible to be completely removed from the IPA process, reflexivity on the part of the researcher allows the participant’s experience to shape the finding of the study (Larkin et al., 2011). The current study contributed to qualitative literature on Aliyah and cultural adaptation, giving voice to the participants, revealing the meaning of their lived experience of relocation and factors supporting their sustained well-being (Smith et al., 2009).

A purposive, homogenous, self-selected sample was recruited, of three women fitting the research criteria as follows: (1) having emigrated to Israel, within the last two years; (2) having originated from either the UK or the US; (3) being aged between 50 and 65; and (4) having emigrated alone. Snowball sampling was implemented via posts in Anglo-Israeli social media groups for immigrants on Facebook and through email contact with Jewish immigration agencies (The Jewish Agency or Nefesh b’Nefesh). Three participants were chosen in order of response time via Facebook and were initially contacted via email.

<table>
<thead>
<tr>
<th>Relocation number</th>
<th>Age</th>
<th>Marital status</th>
<th>Country of origin</th>
<th>Relocation date</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>64</td>
<td>Divorced</td>
<td>UK</td>
<td>April 2016</td>
</tr>
<tr>
<td>2</td>
<td>58</td>
<td>Divorced</td>
<td>US</td>
<td>August 2015</td>
</tr>
<tr>
<td>3</td>
<td>63</td>
<td>Divorced</td>
<td>US</td>
<td>July 2016</td>
</tr>
</tbody>
</table>

Participant 1 is a mother of two adult females who live outside of Israel. She previously attempted Aliyah as a younger woman and becoming homesick, she returned to the UK where she spent her adult life until her recent relocation. Her mother was a refugee and father a member of the Kindertransport. She describes her upbringing with awareness of familial emotional suppression, barely mentioning her mother, while admiring her father’s life of contribution and acknowledging his reluctance to discuss his life outside of the UK. Her narrative suggests her own emotional difficulties with her upbringing, though she expresses a strong sense of idealism and connection to her Jewish roots.
Participant 2 is the mother of an adult male and female, both outside of Israel. Born a Christian, she actively chose conversion to Judaism, describing her family as explorers and pioneers, with an ancestral background of both relocation and changing faiths. Having left a difficult marriage, she struggles culturally and socially and with her financial ability to continue to sustain her life in Israel. She has a new partner in Israel and while she is hopeful of the relationship continuing, she enjoys, but is not reliant on this relationship. Her choice of a more religious community suggests her need for self-enforced boundaries as she develops her social identity.

Participant 3 is the mother of one adult male, who relocated to Israel five years before her. She describes suppressing her Jewish identity while serving in the US Navy, for fear of discrimination. Her father was a university professor, her mother an immigrant to the US from a wealthy family. While she discusses a childhood of freedom and exploration, she simultaneously struggles with her mother's drug and alcohol addictions and eventually abandons her role as her father's helper for a military career. She describes her current conflict; transitioning to civilian life, learning to fill her days for herself and having to recreate a social circle outside of the military.

A semi-structured interview schedule was designed, with questions carefully worded to allow for free disclosure. Participants live in Israel; therefore, data was obtained through the primary researcher conducting three semi-structured Skype video interviews, an hour or less in length, digitally recorded using mp3 Skype recorder software. The purpose of the interview was described to the participants as a way of finding out about their experience or relocating to Israel as single Anglo women. Through summarising and reflecting answers, further disclosure was encouraged where the researcher sensed that participant’s responses warranted deeper exploration.

Data was analysed following the process of IPA as described by Smith et al., (2009). Interviews were listened to several times, familiarising the researcher with the data, then transcribed verbatim. Analysis was carried out initially on a case by case basis; interview transcripts were reread several times, before the researcher annotated the transcripts in Microsoft Excel, using the right-hand margin for exploratory comments. Descriptive comments summarised what the researcher thought was meant by the participant (in standard text), linguistic comments were used where the language used by the participant was perceived by the researcher as being of relevance or importance (in italics) and conceptual comments were made (in underlined text), where the researcher interpreted possible underlying meaning for the participant. Once exploratory coding was completed, the left-hand margin was used to note potential initial emergent themes and interpretative remarks on the data.

Comments were re-read and emergent themes were developed, with supporting excerpts for each theme collated from the original transcripts. The researcher then further analysed the themes, considering how they might be connected, employing a hermeneutic, circular process of interpretation, revisiting and reconsidering themes throughout this process. Factors such as relationships between conflicting or opposing concepts, number of occurrences and narrative context to the data were all examined. Superordinate and subordinate themes were developed for each case and with analysis then conducted across all cases, a final master table of superordinate and subordinate themes was produced (Table 2). Themes which were not considered intrinsic to this study were not reported.

The primary researcher conducted analyses without the intention of developing theoretical conclusions, considering and interpreting each participant’s unique experience. The secondary researcher supervised the analysis process, ensuring that themes seemed relevant to the data. No further comment was made by the supervisor on interpretation of the data, since the double hermeneutic process of IPA is such that the primary researcher’s interpretation was pivotal, therefore external comment may have changed the meaning of the interpretation. From a phenomenological perspective, the participants’ words formed the essence of this study. An audit trail of decisions and steps taken during the analytical process, enabling
themes to be traced back to the verbatim transcription of each participant’s words, ensured trustworthiness of the analysis (Smith, 2015). Awareness of personal and cultural similarities to the participants facilitated the primary researcher’s reflexivity during analysis and a reflexive account, comprising notes and observations compiled throughout the duration of the study, allowed for expansion on these considerations. Though relevant literature was considered before the analysis, the idiographic nature of findings warranted the inclusion of further research, based on the exploration of each participant’s experiences.

This study was undertaken by the primary researcher as part fulfilment of the Masters in Applied Positive Psychology. Ethical approval was granted by Buckinghamshire New University’s Ethics Committee. Participants were provided with an information sheet before their interviews, a debrief sheet after the interview and requested to provide written informed consent via digital signature. Participants were advised of the voluntary nature of their participation and of their right to withdraw. The primary researcher stored recordings in password protected cloud-based files, for possible future research. Anonymity was ensured when transcribing data through omission of names and places. Participants were referred to the relevant support agencies with details made available on the debrief statement provided after the interviews and participants become upset or anxious during questioning due to the sensitive nature of the subject matter, the researcher would have offered to pause or stop the interview. However, all participants were comfortable with the interview process.

RESULTS

Analysis of the participants’ verbatim transcripts led to the emergence of five superordinate themes and subordinate themes as noted in Table 2.

Table 1
Superordinate and Subordinate Themes

<table>
<thead>
<tr>
<th>Superordinate</th>
<th>Subordinate</th>
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<tbody>
<tr>
<td>Life journey</td>
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<td>• Life stages</td>
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<td>• Language barrier</td>
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<td>Transcendence</td>
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<td>• Self-reliance and independence</td>
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<td>• Freedom and fun</td>
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<td>Intrinsic identity</td>
<td>• Familial influence</td>
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<td>• Self-perception and self-worth</td>
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<td></td>
<td>• Religion and spirituality</td>
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<td>Purpose and meaning</td>
<td>• Dream fulfilment</td>
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<td>• Contribution, helping, organising</td>
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<td>• Refuge and security</td>
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Subordinate theme 1: Life journey

Participants express the meaning of relocation to Israel with a sense of continuity, of next steps, rather than as a new start and with a sense of growth and change.

**Maternal bond.** As mothers of adult children, all participants describe re-evaluation of their maternal relationships:

‘Now my children are all grown up and er... self-sufficient and I've always, always wanted to be back in Israel. So, my children said to me... well now are your time Mum...’ (P1)

‘And so they were very excited, and once I got their approval, then I started the process to make Aliyah...’ (P2)

‘And of course, I'm closer with my son too. Physically close, it's easier to... so I can see him er...’ (P3)

**Life stages.** Participants express awareness of transitioning through stages of life, each describing a pivotal time or event as preceding the decision to relocate:

‘So, when I got the divorce settlement, I had four years of spousal support, so I knew every month I was getting a certain amount of money that was going to be plenty for me to live.’ (P2)

‘I ... I felt that if I didn't make the change now, I might, I probably would, always regret not coming and not... and not trying and seeing how it worked.’ (P1)

‘The last 17 years, when I was working with the City of [place of work in the US] it began to gnaw on me quite a bit, it really did.’ (P3)

**Future self.** Participants discuss visions and hopes for their future selves, expressing a lack of certainty, for both social and practical reasons:

‘I have always had a plan B and the plan B would only come into effect after a minimum of three years here, when I gave it a good, you know, a good testing.’ (P1)

‘Erm, because there's a lot of times, like now, when I can't see how I'm gonna make it. 'Cause my support, that spousal support aforementioned ends in December, and so [laughs] and I'm not really sure that I'm gonna have what I need.’ (P2)

‘Erm... I'm really wanting to stay here. I really, really, really, really want to but at the same time too I think you're figuring out that I am a planner, OK? So, I know if I don't get my license, erm I will give it two years...erm.’ (P3)

Superordinate theme 2: Acculturation

Participants describe the implications of sociocultural change, strategies for acculturation and the impact on their well-being.

**Social acceptance and relationships.** Building social relationships appears essential for safeguarding participants against a sense of loneliness and isolation, while meeting the need for social acceptance:
'When you come to a community and you put yourself out there and you start connecting with people, just on any level, you know, just start connecting, it's amazing in this country, not just in my community.' (P2)

'If I don't get something to where I have a core group of good, good friends and stuff like that, which I would say within two to three years I may go back.' (P3)

'Erm, I think if I hadn't have met ... so... met and made so many friends, if I wouldn't have had family here, erm... I might not have settled as well.' (P1)

**Community and belonging.** Participants’ choices of communities are expressed as extensions of their bicultural identities:

'Some days I'm like whatever, I'm just going to wear this and other days I'm like, yeah OK, I'll choose for this you know... cover this and wear a sweater and whatever. So, I guess it's got me more mindful, you know, just because the ... the... in the community people are more mindful of that.' (P2)

'With nine-inch nails, erm you know it's, it's very eclectic up here.' (P3)

'Erm... it's a lovely area, it's got everything within a three or four-minute walk, erm and that's, you know they're all things that... that er that combine to make... to make moving country a success.' (P1)

**Social and cultural diversity.** Participants describe a sense of awareness, acceptance and appreciation of cultural and religious diversity, both in their chosen communities and in wider society:

'So, the ... it's like the culture understands that a huge amount of people, if not most, are immigrants.' (P2)

'When you're here, of course you're with other religions, other way of life, but here just seems a little bit more normal for me. So, I mean it's a lot of fun.' (P3)

'I... I live in an area that is full of... of young people, erm... of the whole spectrum of observance.' (P1)

**Cultural duality.** Participants suggest an ongoing process of integrating two cultural identities:

'Yeah... so I have... I do have two homes and it is still... it is my previous home, but this is my current home. And this home is nicer than the other.' (P1)

'They still have this there, they put some of their stuff in storage and they’ve moved to, you know. So, they made it like a temporary kind of a move...' (P2)

'I just feel normal, I don't feel on... on guard. Erm... of course things... on guard here a little bit different than other areas but it just feels normal.' (P3)

**Language barrier.** Limited fluency in spoken and written Hebrew impacts participant’s career choices, navigation of everyday life and the process of internalising a new cultural identity:
‘I wanted a job in English because although I speak Ivrit [modern Hebrew] erm, my Ivrit is not good enough if... It’s fine for everyday conversation, but not in a work environment (P1) even getting the job as a... and an assistant I didn’t get a job in a gan [kindergarten] here erm, because I don’t have the Hebrew enough.’ (P2)

‘But I really wanted to understand the culture, and in order to do that really, you kinda have to know something of the language.’ (P2)

‘So, for me, and you know nothing was in English, nothing’s erm you know that easy.’ (P3)

Superordinate theme 3: Transcendence

Participants describe determination, wanting to remain fiercely independent, overcoming practical and emotional challenges, and finding ways of coping.

Managing bureaucracy. Participants each describe navigating the bureaucratic process of Aliyah:

‘From that point of making the decision to go through the Jewish Agency and Nefesh b’Nefesh [Jewish relocation agency] to start the process, erm, one thing after another inexplicably started falling into place, so things that could have been just so difficult weren’t.’(P2)

‘All the expected bureaucracy, erm that I thought I would encounter, actually went particularly smoothly, so I didn’t have a rough ride with all the different offices. I wasn’t sent from pillar to post like I was the first time I came...’ (P1)

‘A lot of other olim that are having a lot of issues but... but for me I think there was really no big surprises’ (P3)

Self-reliance and independence. Participants all express their sense of independence through mobility and employment as essential to successful immigration:

‘I think soon as I can get my driver’s license then I can... get out of here, get a little bit more independence that will really jelly some things up.’ (P3)

‘I was going to give it eighteen months to find work. Erm...and then I might have had to reconsider the whole, the whole, the whole erm Aliyah programme.’ (P1)

‘I... I began trying to supplement my income because I knew OK, I only have a few more years of this and then it’s, I’m on my own you know.’ (P2).

Positive coping. Participants express feelings of joy, gratitude and appreciation of their new lives, whilst simultaneously acknowledging distress and practising self-compassion:

‘I would talk to my friend, the friend that lives here from [US home town] and she was good at er... she was good at kinda talking me off the ledge... I was never on the ledge, but you know she was good at like bringing back to reality and helping me to you know unfog my glasses, to see you know, what’s ...what’s really here you know.’ (P2)

‘I’m willing to give it a go and erm I, I see... I try and see the best in everything. Er...not everything is wonderful, but if you, if you look for the best bits, erm that helps.’ (P1)
‘So for me it’s just... gosh... it’s everything. Like right now I can hear the jackals in the mountains and they just sound beautiful to me. So, it’s just the little things you know that really make me happy, so... so yeah.’ (P3)

**Freedom and fun.** The *Aliyah* experience appears to reawaken participants’ sense of freedom and the desire to experience fun:

‘So we’re riding a camel to Woodstock, you know, of the of the crazy hippy generation which I love which is a lot like this kibbutz is to, you know the twenty-second century.’ (P3)

‘And I am like a fifteen-minute drive to the beach er... and I can go any time I want and I never take it for granted.’ (P1)

‘Erm, getting up in the morning and looking out my window and seeing the Judean hills, you know [laughs] just like, like, yeah, just like, it’s just simple things just blow me away... I’m going grocery shopping ... and I’m in Israel ... I’m going into the mall to buy some shoes, and I’m in Israel, wow... I’m just driving along, and I’m stuck in traffic, and I’m in Israel. (P2)

**Superordinate theme 4: Intrinsic identity**

The ability to make sense of relocation and adapt to a new sociocultural identity is expressed as deeply rooted in participants’ internal narratives and past experiences.

**Familial influence.** Narratives around their family backgrounds strongly influence participants’ relocation decision-making processes:

‘My whole childhood and my whole education, my whole social environment has always been with a connection with Israel and the Jews and my community both there, not so much here because it works differently here. Erm.... so really it would have been very surprising had I have not wanted to er, to make *Aliyah* for the second time.’ (P1)

‘And I have other relatives that went west on the stage... on the stage coach, covered wagons you know and went West and tried... so I have like pioneer in my family from way back.’ (P2)

‘I think the big thing is my parents also travelled. So, in the beginning being a young child and doing what the Kennedy's did and all the travel and when we travelled, we stayed for months.’ (P3)

**Self-perception and self-worth.** Participants describe their perception of themselves in relation to others, whilst expressing doubt about their self-worth:

‘I have sometimes when I’m down, when I get like, when I can't see the light at the end of the tunnel, erm, but I'd say for most of the time, I'm a pretty glass half full kind of person... yeah.’ (P2)

I don’t know I just don’t take, I don't like to have arguments, I don't like confrontation, erm... so quite often I will just go along with whatever, just so not to upset anybody or not to offend anybody.’ (P1)

‘Erm so yeah, I’m an oxymoron as you might say, I really, really am. It keeps people on their toes [being an oxymoron] I think so it's kind of fun watching people...’ (P3)
Religion and spirituality. Religion and spirituality are key factors affecting the decision to make Aliyah, whether based in Judaism, Zionism, idealism, or a sense of a spiritual self:

‘My background was in Christianity. It was in erm... it was kind of a long journey... and erm continually was just seeking kind of... the way I feel like I was looking for truth. Erm and yeah, looking for truth, authenticity, real, erm real faith.’ (P2)

‘Emotionally, erm... every time I hear Hatikvah [Israeli National Anthem, literal meaning, The Hope] I cry, erm... If I hear the song at a wedding, I am Eshkachech Yerushalayim [if I forget thee, oh Jerusalem], then that makes me, makes me cry.’ (P1)

‘Very much into the earth, very earthy people... Erm very much into spiritual ... er you know the spiritual way of how they feel, how they think, is a lot like my thinking too at the same time.’ (P3)

Superordinate theme 5: Purpose and meaning

Participants describe becoming part of Israeli society as giving them a new sense of purpose and meaning, striving for new goals.

Dream fulfilment. Aliyah is expressed as the fulfilment of a long-term dream, each having considered relocation for many years:

‘I decided in my heart really, that I was gonna live here someday erm, and that I was gonna be Jewish. That being said, it, obviously it took till 2015 for that to actually happen so [laughs] er... but yeah.’ (P2)

‘I think as a... I've always wanted to come here. Erm, I had experience before as a young child being here and always wondering why I was going back.’ (P3)

‘Well the fact that I'm here ... that's... that's the number one positive. Erm... the fact that I still don't believe that I'm here, erm.’ (P1)

Contribution, helping, and organising. Living a meaningful life in Israel translates for all participants into a sense of needing to contribute, to give back to society:

‘I wanna do some voluntary work because it's one thing that's very big for me is to be able to give back to Israel as much as possible... I'll volunteer for the lone soldier programme, the young er soldiers that come over here and serve but they're from you know England or the United States...’ (P3)

‘I didn't want to come on a potential 20-year holiday. Not... I couldn't afford a twenty-year holiday nice as it might have been, erm and I felt that I wanted to contribute something... to... to the society to... and for my own self-esteem.’ (P1)

It's important to me to... to invest in the next generation you know. And I, any way that I can do that is just awesome. So this... so, for the time I was investing in my own kids and now, you know I can invest in these kids, at this age.’ (P2)

Refuge and security. All participants express a sense of Israel as a refuge, revealing an underlying feeling of safety, unprecedented in their birth nations:
‘It’s being home. It’s my home. It’s my… it’s the home that I have in my heart, erm… it’s the home of the Jewish people erm… and I just feel… I just feel that this is where I should be.’ (P1)

‘Wow… Erm I just feel whole again, I just… It’s so hard to just explain. I can breathe… breathe fresh air, erm… erm… yeah it’s just… it’s just and unusual experience, it really, really is.’ (P3)

‘And so you have a whole country of people that their go to is… I got your back, OK?’ (P2)

DISCUSSION

The current study explored the phenomenon of Aliyah from a cross-cultural and positive psychological perspective, from within the framework of IPA, as lived experienced (Smith, 2015). As such, emergent themes evolved directly from the data, encompassing the impact of relocation on cultural identity, past lived experiences, current emotional states, and internal representations which were interlaced throughout the participants’ narratives. Subordinate themes were interconnected rather than discrete and had time not been limited, further analysis may have facilitated greater thematic consolidation. Nonetheless, emergent themes as reported revealed some distinctive concepts supporting both the concept of Aliyah as a positive psychological intervention, aiding cross-cultural adaptation. Participants described separate, yet conceptually overlapping experiences of awareness of the difficulties of sociocultural adaptation to Israeli life, yet all expressed a sense of newfound freedom, belonging, meaning, rediscovery, reinvention and reconnection with the essence of self. Despite sometimes frustrating bureaucracy, relocation was framed from a positive perspective, with a sense of automatic acceptance by the host nation, gratitude for the ability to openly identify as Jewish, whether religiously observant or not, a sense of relief, refuge and security and relatively little culture shock (Ward, 2008; Weiss & Berger, 2012).

All participants demonstrated positively focused coping mechanisms and behaviours which enabled resilient coping, such as learning to self-soothe, demonstrating self-compassion, expressing gratitude, and recognising despite encountering difficulties, a continual sense of accomplishment (Neff, 2011, Bonanno et al., 2011). Finding purpose and meaning, in both personal and work settings may all have helped participants mediate responses to both unexpected and everyday dilemmas (Wong, 2013). As reported in previous research, participants’ self-perception and ability to accept cross-cultural differences impacted social integration more than language proficiency (Amit & Bar-Lev, 2015). Furthermore, as supported by Queniat and Charpentier’s (2012) qualitative study of women aged 65 and older, the current study contradicted Western societal preconceptions of older women as facing dependence and frailty. All participants expressed the intention to continue to live autonomous, active and meaningful lives, demonstrating a sense of positive aging and rediscovering the essence of themselves as women (Valliant, 2008).

Relocation was considered by all participants within the context of the life journey, as a continuation of their story, through making sense of the past and planning the future, rather than a new chapter. The reassessment of the need for hands-on parenting engendered a sense of absolution from maternal guilt, with the knowledge that adult children were living independent lives. Modern technology allowed for remote parenting for Participants 1 and 2, whereas Participant 3 described her release from the somewhat parental constraints of her military career and reconnection with her sense of freedom and creativity (Remennick, 2015).

Echoing Erikson’s (1994) life cycle theory, proposing that for adults in their fifties to mid-sixties, the focus is on caring for others, participants expressed a desire to contribute to a new generation and a
sense of reassessment of what is important for the future. All participants decisions were shaped by internal representations of their life stories, when considering their relationships with the self and with others (McAdams, 2001). Familial influences, patterns and childhood expectations were expressed through often judgemental, conflicted and often self-critical inner voices. Nevertheless, as suggested by Seery et al., (2010), personal resources developed through childhood struggles may have facilitated the development a new bi-cultural identity, so that as adults, participants continued to evolve strategies to increase self-esteem and build on positive emotion, even whilst simultaneously experiencing negative emotion and periods of self-doubt.

Previous studies have suggested that particularly for immigrants aged over fifty, physical health and social resilience, a separate but related concept to resilience in everyday life situations, may support positive adaptation (Amit, 2008; Amit & Litwin, 2010; Friedland et al., 2005). Participants in the current study described their need for social inclusion as paramount to their continued well-being. Nevertheless, hedonic happiness alone, fleeting pleasures, were not enough for the participants to feel that they were living their best life, even though relocation enabled a sense of freedom and fun. The need for eudaimonic happiness; flourishing through a life of meaning, purpose and self-actualisation, was evident in all three participants’ narratives, demonstrated through active contribution to others, whether by volunteering, engaging in meaningful employment, or supporting the development of future generations (Ryan et al., 2013).

Strengths and limitations

While every effort was made to recruit a homogenous sample, cultural differences between participants from the UK and US were noted. Participant 1 was a returning immigrant, which may have been advantageous and socioeconomic disparities between participants were evident. Nonetheless, on analysis, the primary researcher felt that the homogeneity of the sample was uncompromised by these factors. Participants’ responses provided an abundance of rich data, suggesting not only that interview questions did not overtly lead the participants’ responses, but that despite their differences, they expressed commonality of meaning of the experience of relocation. The primary researcher’s sociocultural similarity to the participants may have influenced participants’ responses, however, participants may have felt more inclined to openness, given the nature of some of their disclosures. Overall, the study positively focused on the exploration of meaning of Aliyah for three women of similar ages, who shared life experiences through relocating to Israel at this stage of life. The convergence of themes elicited from the data suggested that though the nature of IPA is idiographic, there were similarities in the Aliyah experiences across the sample and as such, meaning can be derived from the findings for this demographic.

CONCLUSION

This study gives the current demographic a voice while exploring cross-cultural adaption from a positive psychological viewpoint. Findings suggest there would be merit in exploring the experience of a younger demographic of younger immigrants who are currently offered greater opportunities for integration into Israeli society and men of the same demographic as the current study. However, cross-cultural positive psychological research is currently lacking not only in Aliyah studies, but in the wider body of immigration research, therefore further exploration is also warranted across other immigrant groups. The positive perception of Aliyah contributed to participants’ resilience and increased sense of well-being. However, whilst expressing a profound sense of meaning, freedom, gratitude, reinvention of and reconnection with self, participants also described challenges with developing social acceptance, gaining meaningful employment and building social networks, all of which were essential for continued well-being. Despite possessing a multitude of transferable skills developed in their birth countries participation in state sponsored immigration, employment and education programmes is currently
aimed largely at younger people or families, creating a need for greater. In summary, the offering of understandings from the women who participated in this study may underpin the exploration of the development of a range of positively focused mentoring, coaching, education and employment programmes, to support acculturation for this and other immigrant communities.

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Mendelian randomisation analysis of smoking behaviour and cognitive ability on the Big Five

Charleen Adams
Harvard University, United States
Correspondence: cdadadams@hsph.harvard.edu

Tobacco smoke, a mutagen that can thin the brain's cortex, might influence the Big Five (neuroticism, conscientiousness, agreeableness, extraversion, and openness). Cognitive ability, however, is a potential confounder, since it is associated with who smokes and with personality. Mendelian randomisation (MR), which uses genetic variants as instrumental variables, can be used to probe the causal nature of these factors on personality. Here, MR was used to appraise smoking and cognitive ability on the Big Five and cognitive ability and neuroticism on social disparity. The results seem to suggest that smoking, independent of cognitive ability, leads people to be more neurotic and less extraverted and conscientious. Higher cognitive ability appears to make people less neurotic and more open, when accounting for smoking. Neuroticism appears to increase disparity, and higher cognitive ability appears to decrease it. Smoking may enhance disparity between those of lower and higher cognitive ability by exacerbating personality differences.

Keywords: Big Five; cognitive ability; Mendelian randomisation; personality; smoking
Personality is a set of enduring traits that influence how individuals interact with their internal, physical, and social environments. Though relatively stable across the lifespan (DelVecchio & Roberts, 2000) and highly heritable (heritability estimates range from 33–65% (Bouchard & Loehlin, 2001; De Moor et al., 2012; Distel et al., 2009; Liu & Barabasi, 2006; Vernon et al., 2008) ), some environmental factors also appear to affect personality (Vukasović & Bratko, 2015). Tobacco smoke may be one of these.

Tobacco smoke has catastrophic effects on human health, including detrimental impacts to tissues outside the respiratory tract (Alexandrov et al., 2016; Tsai et al., 2018). For example, tobacco smoke has been documented to thin the brain's cortex (Karama et al., 2015). Further to this, a recent longitudinal study, which adjusted for education (a proxy for cognitive ability), in approximately 15,500 participants found that smoking makes people more neurotic and less agreeable, conscientious, extroverted, and open (Stephan et al., 2019). However, despite the strong longitudinal design and the adjustment for education, observational studies can still suffer from confounding and reverse causation.

This means that, in this scenario, cognitive ability, a potent predictor of important health and economic outcomes (Deary, 2012; Gale et al., 2010), remains a potential confounder (Figure 1). This is so because: (i) smoking is done disproportionately by those of lower socioeconomic (SES) status (US Department of Health and Human Services, 2014); (ii) lower SES is a risk factor for lower cognitive ability (von Stumm & Plomin, 2015); (iii) cognitive ability is associated with various aspects of personality (Ackerman & Heggestad, 1997; Ashton et al., 2000; Austin et al., 2002; Batty et al., 2007; Chamorro-Premuzic et al., 2005; Furnham & Chamorro-Premuzic, 2004; Hemingsson, et al., 2008; Kubička et al., 2001; Martin, et al., 2004; Poropat, 2009; Weiser et al., 2010); and, (iv) adjustment by cognitive ability in observational studies does not necessarily rule out confounding.

Given the known role of cognitive ability on life outcomes and the interwoven relationship between cognitive ability and personality, if smoking causally impacts personality, it may exacerbate disparity between those of different cognitive abilities. Mendelian randomisation (MR), a method designed to address confounding and reverse causation, can be used to tease out the causal nature of these relationships, if certain assumptions are met.

**Mendelian randomisation**

MR is analogous to a randomized-controlled trial (RCT). In an RCT, randomisation happens on treatment. With MR, randomisation happens on genotype, an exploitation of the random assortment of alleles from parent to offspring. (An exception to full randomisation is the lingering possibility of population stratification, a type of genetic confounding, that can occur, though for instructional purposes, the RCT analogy is the closest hermeneutic to grasp the overall approach.) Genetic variants (usually single-nucleotide polymorphisms, SNPs) strongly associated with variables of interest are used as proxies to test the causal impact of environmental exposures i.e., MR is an instrumental variables technique that uses genetics to understand the environment. Doing so avoids most environmental sources of confounding and forestalls reverse causation, in most circumstances.

MR has three key assumptions, which must hold up in order for the results to be valid: (i) SNPs acting as the instrumental variables must strongly associate with the exposure of interest; (ii) SNPs acting as instrumental variables must be independent of confounders of the exposure and the outcome; and, (iii) the SNPs acting as instrumental variables must associate with the outcome of interest only through the exposure (sometimes called the ‘exclusion restriction’).
Figure 1. Diagram showing how cognitive ability might explain associations between smoking and personality. This also illustrates possible violations to MR assumptions (ii) and (iii). If the smoking-associated SNPs are also associated with cognitive ability, regardless of whether cognitive ability is a confounder of the relationship between smoking and personality, this would represent a violation to MR assumption (iii) i.e., it would represent a pathway from the smoking SNPs to personality that is independent of smoking. Since cognitive ability is a known potential confounder, if the smoking SNPs used as instrumental variables for smoking are also SNPs for cognitive ability, this is a violation of MR assumption (ii).

Types of Mendelian randomisation

Originally, MR was developed to use genetic variants extracted from a single genome-wide association (GWA) study, but as more GWA studies have been performed and on larger populations, the method was adapted. Two-sample MR adapts the procedure to use summary statistics from two GWA studies (Hemani et al., 2018). Multivariable MR is a further adaption that enables the inclusion of more than one exposure in a model. This permits adjustment. When univariable and multivariable models are both run, the total (univariable, unadjusted) and direct (multivariable, adjusted) effects can be assessed, as a way to appraise the underlying relationships. Bidirectional MR, as the name suggests, assesses causality in two directions: it is a formal way to test reverse causation. Here, two-sample univariable, multivariable, and bidirectional MR are employed to probe the relationships between smoking, cognitive ability, personality, and disparity.

METHODOLOGY

Data sources for genetic instrumental variables

Genetic instrumental variable for smoking. A publicly available GWA study of lifetime smoking, which adjusted for sex and genotyping chip, containing 462,690 in the UK Biobank was chosen (Wootton et al., 2018). Lifetime smoking is a novel measure, inclusive of smoking status, smoking duration, heaviness, and cessation: a standard deviation (SD) increase in lifetime smoking is ‘equivalent to an individual smoking 20 cigarettes a day for 15 years and stopping 17 years ago or an individual smoking 60 cigarettes a day for 13 years and stopping 22 years ago’ (Wootton et al., 2018). From this GWA study, it showed that independent (those not in linkage disequilibrium; $R^2 < 0.01$) SNPs associated at genome-wide significance ($p < 5 \times 10^{-8}$) with an SD increase in lifetime smoking were identified.

Genetic instrumental variable for cognitive ability. The UK Biobank appraised fluid intelligence by summing the number of correct answers given to 13 fluid intelligence questions (UK Biobank data-field
Members of the Medical Research Council-Integrative Epidemiology Unit (MRC-IEU) at the University of Bristol used PHESANT to run a GWA study of this fluid intelligence measure \((n = 149,051)\) (Millard et al., 2018). They treated the variable as an ordered categorical type. Thus, the GWA study results indicate a categorical unit increase in fluid intelligence. The summary data are publicly available on MR-Base (available at http://app.mrbase.org/) (Hemani et al., 2018). Independent (those not in linkage disequilibrium; \(R^2 < 0.01\)) SNPs associated at genome-wide significance \((p < 5 \times 10^{-8}\)) with a categorical step increase in cognitive ability were identified.

Genetic instrumental variable neuroticism: The Social Science Genetic Association Consortium (SSGAC) ran a GWA study of neuroticism. For this, summary statistics from 170,911 respondents in the Genetics of Personality Consortium (GPC) \((n = 63,661)\) and UK Biobank were pooled. The neuroticism measure for the UK Biobank participants came from their score on a 12-item version of the Eysenck Personality Inventory Neuroticism scale (Eysenck & Eysenck, 1975; Okbay et al., 2016). The summary data are reported in standard deviation (SD) units and available through MR-Base (Hemani et al., 2018). Independent (those not in linkage disequilibrium; \(R^2 < 0.01\)) SNPs associated at genome-wide significance \((p < 5 \times 10^{-8}\)) with a SD increase in neuroticism were identified.

**Data sources: Outcome data sets**

Outcome data set for neuroticism: The SSGAC GWA study for neuroticism, used to obtain genetic instruments for neuroticism, was also used as the outcome GWA study for the test of cognitive ability on neuroticism. The data are in SD-units and publicly available through MR-Base.

Outcome data set for the Big Five: The GPC ran GWA studies of the Big Five on 17,375 participants of European ancestry, using the Neo Personality Inventory (McCrae et al., 2005) to measure the traits (De Moor et al., 2012). The summary data are reported as continuous on arbitrary scales and are available through MR-Base. Standardised betas were calculated by dividing both the betas and the standard errors by the SD of the traits as reported in de Moor et al. (2012).

Outcome data set for smoking: The GWA study of lifetime smoking (Wootton et al., 2018) (hereafter referred to as ‘smoking’), used to obtain the genetic instrumental variables for smoking, was also chosen for the outcome data source for the test of cognitive ability on smoking. Standardised betas were calculated by dividing both betas and standard errors by the SD of lifetime smoking in the whole sample \((SD = 0.694)\).

Outcome data set for social disparity: Participants in the UK Biobank were assigned Townsend Deprivation Index scores that were calculated from the national census output areas they lived in immediately prior to enrolment (UK Biobank data-field 189). A GWA study of this Townsend Deprivation Index, a continuous variable, was performed by the MRC-IEU using PHESANT (Millard et al., 2018). The variable was first transformed to a normal distribution. The data are reported in SD-units and are publicly available through MR-Base.

**Statistical approach.** Changes in the outcome traits were calculated with the inverse-variance weighted (IVW) MR method. The ‘TwoSampleMR’ package (Hemani et al., 2018) was used to do this. All analyses were performed in R version 3.5.2.

**Assessing possible violations to MR assumptions (iii): Horizontal pleiotropy.** Sensitivity estimators can be used appraise pleiotropic bias. Three were chosen to complement the primary IVW causal tests: MR Egger regression, weighted median, and weighted mode estimations. When the sensitivity estimators comport with the IVW methods in terms of the direction and magnitude of their effect estimates, this provides some evidence against pleiotropy. This is so because the different sensitivity estimators make
different assumptions about the underlying nature of pleiotropy; it is unlikely for them to align if pleiotropy is introducing bias. Thorough descriptions of the various MR sensitivity estimators and the assumptions they make about pleiotropy are provided elsewhere (Hwang et al., 2019; Spiller, Davies, & Palmer, 2019; Yarmolinsky et al., 2019).

In addition, since variability in the causal estimates between SNPs can also indicate unwanted pleiotropy, MR radial regression was used to identify SNP outliers (Bowden et al., 2018). For all meta-analysed genetic instruments, only those with no outliers were selected for final analysis and report. An additional test for heterogeneity was performed using Cochrane’s Q-statistic (del Greco et al., 2015) on all final genetic instruments ($p \geq 0.05$ indicate a lack of heterogeneity in the SNP effect estimates).

A differing number of SNPs were used to genetically instrument smoking (and cognitive ability) for the Big Five. This is because, in order for a SNP to be included in the meta-analysed genetic instrument, it had to be available in the outcome GWA study and not be an outlier.

Assessing violations to MR assumption (ii: confounding). In order for a trait to be a confounder, it must be associated with both smoking and personality. Cognitive ability fits this criterion, as it is negatively associated with smoking behaviour (Batty et al., 2007; Hemmingsson et al., 2008; Kubička et al., 2001; Martin et al., 2004; Weiser et al., 2010) and with neuroticism (Ackerman & Heggestad, 1997); both positively and negatively associated, depending upon the study, with conscientiousness (Austin et al., 2002; Chamorro-Premuzic et al., 2005; Poropat, 2009); and positively associated with both extroversion and openness (specifically crystallized (Cattell, 1987) rather than fluid intelligence (Unsworth et al., 2014) (Ashton et al., 2000; Furnham & Chamorro-Premuzic, 2004). Aspects of agreeableness, but not the trait itself, are associated with cognitive ability (e.g., aggression negatively associates with cognitive ability) (Ackerman & Heggestad, 1997). Thus, cognitive ability is a highly plausible candidate for confounding, a violation to MR assumption (ii) above (Figure 1).

In addition, despite the statistical checks-and-balances provided by the statistically based MR sensitivity estimators, cognitive ability could violate MR assumption (iii) if the SNPs that instrument smoking is also associated with cognitive ability. To address this, SNPs proxying for smoking and SNPs proxying for fluid intelligence (as measured in a GWA study of fluid intelligence performed by the Neale Lab) (Neale Lab, 2017) were checked for linkage disequilibrium (LD)—whether any of the SNPs were physically correlated. SNPs in LD were removed. The remaining smoking-associated SNPs were run through PhenoScanner, a curated database of GWA studies containing SNP-phenotype associations (Kamat et al., 2019; Staley et al., 2016). This identified all known traits with which the smoking SNPs are associated. SNPs found to be associated with any measure of educational attainment (e.g. education years or school qualifications) or cognitive ability (any formal measure of intelligence) were removed. The results removing SNPs linked with cognitive ability are presented in Table 1.

To formally appraise the direct effects of both cognitive ability and smoking on the Big Five, multivariable analyses including both cognitive ability and smoking (with cognitive ability SNPs removed) were performed for neuroticism (SSGAC) and each of the Big Five traits in the GPC. The SNPs included in these models were not checked for outliers with Radial MR regression nor were SNPs in LD between cognitive ability and smoking removed, since this could lead to a loss in precision for the effect estimates in the multivariable setting (Sanderson et al., 2019). These results are reported in the Abstract. Formally assessing reverse causation. Because germline genotypes are fixed (assigned at conception), they temporally precede most other variables under consideration. Thus, use of SNP proxies generally precludes reverse causation (Zheng et al., 2017); that is, if the MR results indicate causal associations, the direction tested is usually what is responsible for them. There are exceptions, though. One exception would be the following scenario: Say the SNPs genetically instrumenting smoking are not associated with personality except through smoking, but some aspects of personality are developmental, such that
budding personality at one stage in life influences smoking behaviour, which in turn impacts ‘final’ personality. This is conceivable.

Since the GWA for neuroticism (SSGAC) contains suitable genetic proxies, a bidirectional appraisal was done to assess whether neuroticism causes smoking. Unfortunately, the GWA studies for the Big Five performed by the GPC are not suitable for bidirectional MR, either due to the associations between the Big Five traits and SNPs being too statistically weak (which would violate MR assumption (i)) or not having more than one strongly associated SNP).

A special criterion for bidirectional MR appraisals is that the SNPs instrumenting each trait are not overlapping or in linkage disequilibrium (LD) (Davey Smith & Hemani, 2014; Richmond et al., 2017). Therefore, the SNPs instrumenting both smoking and neuroticism (SSGAC) were checked for overlap and LD. As with the primary investigation examining smoking on the Big Five, cognitive ability is still a lurking, highly likely confounder and source of horizontal pleiotropy under this scenario. As such, the smoking SNPs not in LD with fluid intelligence and not associated with any measure of cognitive ability or educational attainment, as assessed by PhenoScanner, were used to instrument smoking in the bidirectional appraisal: neuroticism on smoking.

In addition, cognitive ability on smoking was assessed (comprising a bidirectional MR test along with the association of smoking on cognitive ability). If cognitive ability is observed to influence smoking, this will strengthen the possibility that cognitive ability is a confounder of the smoking-personality relationships, possibly inducing horizontal pleiotropy (Yang, 2019). As for the assessment of smoking on the Big Five, smoking-associated SNPs associated with cognitive ability were removed, as were any SNPs in LD between smoking and cognitive ability.

**Impact**

One criterion for assessing whether potential smoking-shifted changes in personality are important for health is knowing whether aspects of personality and factors associated with it increase social disparity. As such, the cognitive traits that could be adequately instrumented (neuroticism in the SSGAC and cognitive ability) were examined against the Townsend Deprivation Index, a measure of social disparity.

**Power**

Estimates of the proportion of variance in exposures explained by genetic instruments ($R^2$), used in the calculation of the F-statistic (the strength of the association between genetic instruments and exposure traits) were generated. $F$-statistics $< 10$ are considered to suffer from weak-instrument bias. $F$-statistics are used to assess whether a genetic instrument has power to reject the null of no association. For instance, the instrument for smoking on neuroticism (SSGAC) has an $R^2 = 0.008$ and the $F$-statistic $= 15$.

In addition, the study was formally powered on neuroticism in the SSGAC (its GWA study contains approximately 100,000 more participants than the GPC GWA studies for the Big Five, though they are also aptly powered). To perform a power calculation for quantitative traits for MR, an educated guess about the true causal effect, the observational association between the traits (for neuroticism $= 0.18$, obtained from Das et al., 2015), the $R^2$ (for neuroticism $= 0.008$), the sample size for the outcome trait, and the variances for the exposure and outcome are required (for neuroticism: both $= 1$, since both are in standard deviation units). Das et al. (2015) displayed the observational estimate for neuroticism as an odds ratio (OR; 1.2). To obtain the beta estimate, the following was done $\log(1.2) = 0.18$ (natural log in $R$). The mRnd MR power calculator (available at http://cnsgenomics.com/shiny/mRnd/) (Burgess et al., 2015) was used for the calculation.
Multiple testing. Counting the MR tests of smoking on neuroticism (SSGAC) and smoking on the Big Five (GPC), smoking on cognitive ability, cognitive ability on neuroticism (SSGAC) and cognitive ability on the Big Five (GPC), reverse tests for neuroticism and cognitive ability on smoking, the multivariable analyses of smoking and cognitive ability on neuroticism (SSGAC) and the Big Five (GPC), and the tests of cognitive ability and neuroticism on disparity, 29 tests were performed. As such, a false-discovery rate (FDR) correction for 29 tests was applied to the IVW estimates.

RESULTS

Univariable models of smoking on the Big Five and on cognitive ability (Table 1)

Smoking was associated with an increase in neuroticism (SSGAC): IVW estimate = 0.10; 95% CI = 0.04, 0.16; \( p = 0.002; \) FDR = 0.007). Likewise, smoking was associated with an increase in neuroticism (GPC): IVW estimate = 0.46; 95% CI = 0.20, 0.71; \( p = 0.004; \) FDR = 0.002). The sensitivity estimators were similar in direction and magnitude of effects for neuroticism in both the Social Science Genetic Association Consortium (SSGAC) and the Genetics of Personality Consortium (GPC). Smoking was associated with a decrease in conscientiousness: IVW estimate = -0.32; 95% CI = -0.56, -0.07; \( p = 0.01; \) FDR = 0.02). The sensitivity estimators were similar in direction, but the magnitude of the MR-Egger estimate was greater than the others, which could imply some pleiotropy. Smoking did not appear to influence agreeableness: IVW estimate = -0.23; 95% CI = -0.47, 0.003; \( p = 0.05; \) FDR = 0.09). The sensitivity estimators were similar in direction, but the magnitude of the effect estimate for the MR-Egger was greater than the others. Smoking did not appear to influence extraversion: IVW estimate = -0.22; 95% CI = -0.46, 0.02; \( p = 0.07; \) FDR = 0.11). The MR-Egger estimate was in the opposite direction. Smoking did not appear to influence openness: IVW estimate = -0.02; 95% CI = -0.26, 0.22; \( p = 0.89; \) FDR = 0.92). The MR-Egger and weighted mode estimators were in the opposite direction from that of the IVW estimate. Smoking did not appear to influence cognitive ability: IVW estimate = -0.14; 95% CI = -0.28, 0.01; \( p = 0.07; \) FDR = 0.11). The MR-Egger and weighted mode estimators were in the opposite direction from that of the IVW estimate.

Univariable models of reverse directions (Table 2)

Neuroticism (SSGAC) did not appear to influence smoking: IVW estimate = 0.10; 95% CI = 0.002, 0.20; \( p = 0.05; \) FDR = 0.09). The sensitivity estimators were similar in direction, but the magnitude of the effect estimate for the MR-Egger was greater than the others. Cognitive ability was associated with a decreased risk for smoking: IVW estimate = -0.05; 95% CI = -0.06, -0.03; \( p = 5.64 \times 10^{-9}; \) FDR = 8.18E-08). The sensitivity estimators displayed some variability in the magnitude and direction of effects.

Univariable models of cognitive ability on the Big Five (Table 3)

Cognitive ability was associated with a decreased risk for neuroticism (SSGAC): IVW estimate = -0.03; 95% CI = -0.05, -0.01; \( p = 0.005; \) FDR = 0.01). The sensitivity estimators were similar in direction with some minor variability in the magnitude of effects. Cognitive ability was not associated with neuroticism (GPC): IVW estimate = -0.03; 95% CI = -0.10, 0.04; \( p = 0.43; \) FDR = 0.50). The sensitivity estimators displayed some variability in magnitude and direction of effects. Cognitive ability was not associated with conscientiousness: IVW estimate = -0.04; 95% CI = -0.11, 0.03; \( p = 0.30; \) FDR = 0.38). The sensitivity estimators displayed some variability in the direction of effects. Cognitive ability was not associated with agreeableness: IVW estimate = -0.002; 95% CI = -0.07, 0.07; \( p = 0.96; \) FDR = 0.96). The sensitivity estimators displayed some variability in magnitude and direction of effects. Cognitive ability was not associated with extraversion: IVW estimate = -0.05; 95% CI = -0.11, 0.02; \( p = 0.17; \) FDR = 0.24). The sensitivity estimators displayed some variability in magnitude and direction of effects. Cognitive
ability was associated with an increase in openness: IVW estimate = 0.13; 95% CI = 0.06, 0.19; \( p = 0.0003 \); FDR = 0.002). The sensitivity estimators mostly aligned in magnitude and direction of effects (the MR-Egger estimator’s effect estimate was slightly smaller).

**Multivariable casual estimates for cognitive ability and smoking on the Big Five (Table 4)**

Independent and opposing direct effects were observed for both cognitive ability and smoking on risk for neuroticism (SSGAC) with cognitive ability being protective and smoking increases risk. For neuroticism (GPC), smoking but not cognitive ability had a direct effect. As for neuroticism in the SSGAC, smoking increased risk for neuroticism in the GPC. Smoking did not have direct effects on agreeableness or openness but directly decreased conscientiousness and extraversion. Cognitive ability did not have a direct effect on conscientiousness, agreeableness, or extraversion, but directly increased openness.

**Cognitive ability and neuroticism on disparity (Table 5)**

Higher cognitive ability was associated with a decrease in disparity: IVW estimate = -0.03; 95% CI = -0.04, -0.02; \( p = 5.22E^{-09} \); FDR = 8.18E-08). The sensitivity estimators aligned in magnitude and direction of effects. Neuroticism (SSGAC) was associated with an increase in disparity: IVW estimate = 0.10; 95% CI = 0.03, 0.16; \( p = 0.004 \); FDR = 0.01). The sensitivity estimators aligned in magnitude and direction of effects.
### Table 1

**Causal Estimates for Smoking on the Big Five and for Smoking on Cognitive Ability (Excludes SNPs Associated with Cognitive Ability).**

<table>
<thead>
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<th>Method</th>
<th>SNPS</th>
<th>( \beta )</th>
<th>Lower 95% CI</th>
<th>Upper 95% CI</th>
<th>( p )</th>
<th>FDR</th>
<th>( Q )</th>
<th>( q )</th>
</tr>
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<tr>
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<td>0.002</td>
<td>0.007</td>
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<td></td>
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<td>IVW</td>
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*Denotes a sensitivity test. \( \beta \) = beta estimate; CI = confidence interval; \( P \) = \( p \)-value; FDR=false discovery rate corrected \( p \)-value; IVW = inverse weighted variance; \( Q \) = \( Q \)-statistic; \( q \) and \( q \)-value pertain to the Cochrane test for heterogeneity (\( q \)-value \( \geq 0.05 \) is evidence against heterogeneity); SSGAC = Social Science Genetic Association Consortium; GPC = Genetics of Personality Consortium.
Table 2
Reverse Directions: Causal Estimates for Neuroticism on Smoking (Excluding SNPs for Cognitive Ability) and Cognitive Ability on Smoking

<table>
<thead>
<tr>
<th>Method</th>
<th>SNPS</th>
<th>β</th>
<th>Lower 95% CI</th>
<th>Upper 95% CI</th>
<th>p</th>
<th>FDR</th>
<th>Q</th>
<th>q</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Neuroticism (SSGAC) on lifetime smoking (n = 462,690)</td>
<td></td>
<td></td>
<td></td>
<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>IVW</td>
<td>4</td>
<td>0.10</td>
<td>0.002</td>
<td>0.20</td>
<td>0.05</td>
<td>0.09</td>
<td>3</td>
<td>0.37</td>
</tr>
<tr>
<td>MR Egger*</td>
<td>4</td>
<td>1.90</td>
<td>-0.60</td>
<td>4.40</td>
<td>0.27</td>
<td></td>
<td>1</td>
<td>0.57</td>
</tr>
<tr>
<td>Weighted median*</td>
<td>4</td>
<td>0.03</td>
<td>-0.15</td>
<td>0.21</td>
<td>0.74</td>
<td></td>
<td>NA</td>
<td>NA</td>
</tr>
<tr>
<td>Weighted mode*</td>
<td>4</td>
<td>0.09</td>
<td>-0.04</td>
<td>0.21</td>
<td>0.18</td>
<td></td>
<td>NA</td>
<td>NA</td>
</tr>
<tr>
<td></td>
<td>Cognitive ability on lifetime smoking (n = 462,690)</td>
<td></td>
<td></td>
<td></td>
<td></td>
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<td></td>
</tr>
<tr>
<td>IVW</td>
<td>39</td>
<td>-0.05</td>
<td>-0.06</td>
<td>-0.03</td>
<td>5.64E-09</td>
<td>8.18E-08</td>
<td>53</td>
<td>0.05</td>
</tr>
<tr>
<td>MR Egger*</td>
<td>39</td>
<td>-0.06</td>
<td>-0.13</td>
<td>0.01</td>
<td>0.11</td>
<td></td>
<td>53</td>
<td>0.05</td>
</tr>
<tr>
<td>Weighted median*</td>
<td>39</td>
<td>-0.05</td>
<td>-0.07</td>
<td>-0.03</td>
<td>1.36E-05</td>
<td></td>
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<td>NA</td>
</tr>
<tr>
<td>Weighted mode*</td>
<td>39</td>
<td>-0.09</td>
<td>-0.15</td>
<td>-0.03</td>
<td>0.01</td>
<td></td>
<td>NA</td>
<td>NA</td>
</tr>
</tbody>
</table>

*Denotes a sensitivity test. β = beta estimate; CI = confidence interval; P = p-value; FDR = false-discovery rate corrected p-value; IVW = inverse weighted variance. Q = Q-statistic; Q and q-value pertain to the Cochrane test for heterogeneity (q-value ≥ 0.05 is evidence against heterogeneity).
<table>
<thead>
<tr>
<th>Method</th>
<th>SNPS</th>
<th>β</th>
<th>Lower 95% CI</th>
<th>Upper 95% CI</th>
<th>p</th>
<th>FDR</th>
<th>Q</th>
<th>q</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cognitive ability on neuroticism (SSGAC): n = 170,911</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>IVW</td>
<td>58</td>
<td>−0.03</td>
<td>−0.05</td>
<td>−0.01</td>
<td>0.005</td>
<td>0.01</td>
<td>62</td>
<td>0.30</td>
</tr>
<tr>
<td>MR Egger*</td>
<td>58</td>
<td>−0.10</td>
<td>−0.19</td>
<td>−0.01</td>
<td>0.04</td>
<td></td>
<td>60</td>
<td>0.35</td>
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<tr>
<td>Weighted median*</td>
<td>58</td>
<td>−0.02</td>
<td>−0.05</td>
<td>0.01</td>
<td>0.15</td>
<td></td>
<td>NA</td>
<td>NA</td>
</tr>
<tr>
<td>Weighted mode*</td>
<td>58</td>
<td>−0.002</td>
<td>−0.07</td>
<td>0.06</td>
<td>0.96</td>
<td></td>
<td>NA</td>
<td>NA</td>
</tr>
<tr>
<td>Cognitive ability on neuroticism (GPC): n = 17,375</td>
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<td></td>
<td></td>
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<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>IVW</td>
<td>49</td>
<td>−0.03</td>
<td>−0.10</td>
<td>0.04</td>
<td>0.43</td>
<td>0.50</td>
<td>41</td>
<td>0.75</td>
</tr>
<tr>
<td>MR Egger*</td>
<td>49</td>
<td>−0.22</td>
<td>−0.59</td>
<td>0.14</td>
<td>0.23</td>
<td></td>
<td>40</td>
<td>0.76</td>
</tr>
<tr>
<td>Weighted median*</td>
<td>49</td>
<td>−0.01</td>
<td>−0.11</td>
<td>0.10</td>
<td>0.91</td>
<td></td>
<td>NA</td>
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</tr>
<tr>
<td>Weighted mode*</td>
<td>49</td>
<td>0.09</td>
<td>−0.13</td>
<td>0.31</td>
<td>0.43</td>
<td></td>
<td>NA</td>
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</tr>
<tr>
<td>Cognitive ability on conscientiousness (GPC): n = 17,375</td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>IVW</td>
<td>50</td>
<td>−0.04</td>
<td>−0.11</td>
<td>0.03</td>
<td>0.30</td>
<td>0.38</td>
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<td>0.45</td>
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<td>0.04</td>
<td>−0.32</td>
<td>0.40</td>
<td>0.84</td>
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<td>49</td>
<td>0.42</td>
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<td>−0.09</td>
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<tr>
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<td>−0.15</td>
<td>0.32</td>
<td>0.48</td>
<td></td>
<td>NA</td>
<td>NA</td>
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<tr>
<td>Cognitive ability on agreeableness (GPC): n = 17,375</td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>IVW</td>
<td>48</td>
<td>−0.002</td>
<td>−0.07</td>
<td>0.07</td>
<td>0.96</td>
<td>0.96</td>
<td>36</td>
<td>0.87</td>
</tr>
<tr>
<td>MR Egger*</td>
<td>48</td>
<td>0.01</td>
<td>−0.33</td>
<td>0.35</td>
<td>0.96</td>
<td></td>
<td>36</td>
<td>0.85</td>
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<tr>
<td>Weighted median*</td>
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<td>−0.06</td>
<td>0.13</td>
<td>0.43</td>
<td></td>
<td>NA</td>
<td>NA</td>
</tr>
<tr>
<td>Weighted mode*</td>
<td>48</td>
<td>0.08</td>
<td>−0.12</td>
<td>0.28</td>
<td>0.46</td>
<td></td>
<td>NA</td>
<td>NA</td>
</tr>
<tr>
<td>Cognitive ability on extraversion (GPC): n = 17,375</td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>IVW</td>
<td>50</td>
<td>−0.05</td>
<td>−0.11</td>
<td>0.02</td>
<td>0.17</td>
<td>0.22</td>
<td>35</td>
<td>0.93</td>
</tr>
<tr>
<td>MR Egger*</td>
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<td>0.21</td>
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<td>0.55</td>
<td>0.24</td>
<td></td>
<td>33</td>
<td>0.95</td>
</tr>
<tr>
<td>Weighted median*</td>
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<td>−0.07</td>
<td>−0.16</td>
<td>0.03</td>
<td>0.16</td>
<td></td>
<td>NA</td>
<td>NA</td>
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<tr>
<td>Weighted mode*</td>
<td>50</td>
<td>−0.09</td>
<td>−0.29</td>
<td>0.12</td>
<td>0.41</td>
<td></td>
<td>NA</td>
<td>NA</td>
</tr>
<tr>
<td>Cognitive ability on openness (GPC): n = 17,375</td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>IVW</td>
<td>49</td>
<td>0.13</td>
<td>0.06</td>
<td>0.19</td>
<td>0.0003</td>
<td>0.002</td>
<td>33</td>
<td>0.95</td>
</tr>
<tr>
<td>MR Egger*</td>
<td>49</td>
<td>0.08</td>
<td>−0.27</td>
<td>0.43</td>
<td>0.66</td>
<td></td>
<td>33</td>
<td>0.93</td>
</tr>
<tr>
<td>Weighted median*</td>
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<td>0.22</td>
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<tr>
<td>Weighted mode*</td>
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<td>−0.09</td>
<td>0.30</td>
<td>0.31</td>
<td></td>
<td>NA</td>
<td>NA</td>
</tr>
</tbody>
</table>

*Denotes a sensitivity test. β = beta estimate; CI = confidence interval; P = p-value; FDR = false-discovery rate corrected p-value; IVW = inverse weighted variance; Q = Q-statistic; Q and q-value pertain to the Cochrane test for heterogeneity (q-value ≥ 0.05 is evidence against heterogeneity); SSGAC = Social Science Genetic Association Consortium; GPC = Genetics of Personality Consortium.
Table 4
Multivariable Casual Estimates for Smoking and Cognitive Ability on the Big Five

<table>
<thead>
<tr>
<th>Exposures</th>
<th>SNPs</th>
<th>β</th>
<th>Lower 95% CI</th>
<th>Upper 95% CI</th>
<th>p</th>
<th>FDR</th>
</tr>
</thead>
<tbody>
<tr>
<td>Neuroticism (SSGAC): n = 170,911</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cognitive ability</td>
<td>75</td>
<td>-0.04</td>
<td>-0.07</td>
<td>-0.01</td>
<td>0.002</td>
<td>0.007</td>
</tr>
<tr>
<td>Smoking</td>
<td>82</td>
<td>0.12</td>
<td>0.03</td>
<td>0.21</td>
<td>0.007</td>
<td>0.018</td>
</tr>
<tr>
<td>Neuroticism (GPC): n = 17,375</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cognitive ability</td>
<td>51</td>
<td>-0.03</td>
<td>-0.10</td>
<td>0.03</td>
<td>0.33</td>
<td>0.4</td>
</tr>
<tr>
<td>Smoking</td>
<td>54</td>
<td>0.48</td>
<td>0.24</td>
<td>0.72</td>
<td>0.00008</td>
<td>0.0008</td>
</tr>
<tr>
<td>Conscientiousness (GPC): n = 17,375</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cognitive ability</td>
<td>51</td>
<td>-0.06</td>
<td>-0.13</td>
<td>0.01</td>
<td>0.10</td>
<td>0.15</td>
</tr>
<tr>
<td>Smoking</td>
<td>54</td>
<td>-0.34</td>
<td>-0.59</td>
<td>-0.09</td>
<td>0.01</td>
<td>0.02</td>
</tr>
<tr>
<td>Agreeableness (GPC): n = 17,375</td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cognitive ability</td>
<td>51</td>
<td>-0.01</td>
<td>-0.07</td>
<td>0.05</td>
<td>0.74</td>
<td>0.79</td>
</tr>
<tr>
<td>Smoking</td>
<td>54</td>
<td>-0.24</td>
<td>-0.46</td>
<td>-0.02</td>
<td>0.03</td>
<td>0.06</td>
</tr>
<tr>
<td>Extraversion (GPC): n = 17,375</td>
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<td></td>
<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Cognitive ability</td>
<td>51</td>
<td>-0.04</td>
<td>-0.11</td>
<td>0.02</td>
<td>0.17</td>
<td>0.22</td>
</tr>
<tr>
<td>Smoking</td>
<td>54</td>
<td>-0.29</td>
<td>-0.51</td>
<td>-0.07</td>
<td>0.01</td>
<td>0.02</td>
</tr>
<tr>
<td>Openness (GPC): n = 17,375</td>
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<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cognitive ability</td>
<td>51</td>
<td>0.10</td>
<td>0.04</td>
<td>0.17</td>
<td>0.0008</td>
<td>0.004</td>
</tr>
<tr>
<td>Smoking</td>
<td>54</td>
<td>-0.08</td>
<td>-0.29</td>
<td>0.14</td>
<td>0.48</td>
<td>0.54</td>
</tr>
</tbody>
</table>

*Denotes a sensitivity test. β=beta estimate; CI=confidence interval; p=p-value; FDR=false-discovery rate corrected p-value; SSGAC=Social Science Genetic Association Consortium; GPC=Genetics of Personality Consortium.
Table 5
Casual Estimates for Cognitive Ability and Neuroticism on Social Disparity

<table>
<thead>
<tr>
<th>Method</th>
<th>SNPS</th>
<th>Log odds</th>
<th>Lower 95% CI</th>
<th>Upper 95% CI</th>
<th>p</th>
<th>FDR</th>
<th>Q</th>
<th>Q value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cognitive ability on social disparity (GPC): n = 17,375</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>IVW</td>
<td>56</td>
<td>-0.03</td>
<td>-0.04</td>
<td>-0.02</td>
<td>5.22E-09</td>
<td>8.18E-08</td>
<td>41</td>
<td>0.38</td>
</tr>
<tr>
<td>MR Egger*</td>
<td>56</td>
<td>-0.06</td>
<td>-0.11</td>
<td>-0.01</td>
<td>0.02</td>
<td>39</td>
<td>0.43</td>
<td></td>
</tr>
<tr>
<td>Weighted median*</td>
<td>56</td>
<td>-0.03</td>
<td>-0.05</td>
<td>-0.01</td>
<td>0.0005</td>
<td>NA</td>
<td>NA</td>
<td></td>
</tr>
<tr>
<td>Weighted mode*</td>
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<td>-0.03</td>
<td>-0.06</td>
<td>0.01</td>
<td>0.12</td>
<td>NA</td>
<td>NA</td>
<td></td>
</tr>
<tr>
<td>Neuroticism (SSGAC) on disparity (n = 462,464)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>IVW</td>
<td>8</td>
<td>0.10</td>
<td>0.03</td>
<td>0.16</td>
<td>0.004</td>
<td>0.01</td>
<td>0.44</td>
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</tr>
<tr>
<td>MR Egger*</td>
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<td>0.21</td>
<td>-0.35</td>
<td>0.76</td>
<td>0.49</td>
<td>5</td>
<td>0.39</td>
<td></td>
</tr>
<tr>
<td>Weighted median*</td>
<td>8</td>
<td>0.09</td>
<td>0.00</td>
<td>0.18</td>
<td>0.04</td>
<td>NA</td>
<td>NA</td>
<td></td>
</tr>
<tr>
<td>Weighted mode*</td>
<td>8</td>
<td>0.03</td>
<td>-0.13</td>
<td>0.18</td>
<td>0.74</td>
<td>A</td>
<td>NA</td>
<td></td>
</tr>
</tbody>
</table>

*Denotes a sensitivity test. $\beta = \beta$-estimates CI = confidence interval; FDR = false discovery rate corrected p-value; IVW = inverse weighted variance; Q = Q-statistic; Q and Q-value pertain to the Cochrane test for heterogeneity (Q-value $\geq 0.05$ is evidence against heterogeneity); SSGAC = Social Science Genetic Association Consortium; GPC = Genetics of Personality Consortium.

DISCUSSION

Summary of findings

After multiple-testing correction and removing SNPs that influence cognitive ability, in the univariable models of smoking and the Big Five, there was evidence for smoking increasing neuroticism (SSGAC and GPC) and decreasing conscientiousness. After adjusting for cognitive ability, however, there was evidence that smoking directly increases neuroticism and directly decreases conscientiousness and also extraversion. There was suggestive evidence that smoking also decreases agreeableness in the multivariable model prior to, but not after, multiple testing. Smoking did not have an effect on openness or cognitive ability. In both the univariable and multivariable models of cognitive ability on the Big Five, cognitive ability protects against neuroticism (SSGAC) and increases openness. In the univariable models of neuroticism (SSGAC) and cognitive ability on social disparity, neuroticism increases risk for greater social disparity, and higher cognitive ability protects against it.

As hypothesized, higher cognitive ability was observed to decrease smoking behaviour. This suggests that cognitive ability is a confounder of the smoking-personality relationships and might, therefore, be a source of horizontal pleiotropy. The tests that show non-zero direct effects of smoking and cognitive ability in the multivariable models, however, suggest that the effects of smoking and cognitive ability estimated by the univariable MR analyses are unlikely to entirely be due to horizontally pleiotropic effects.

Excepting for openness, which appeared not to be affected by smoking, the MR results lend support to the majority of the longitudinal findings by Stephan et al. (2019), which found that smoking increases neuroticism and decreases the other Big Five personality traits (Stephan et al., 2019). Beyond this, the present study suggests that smoking’s influence on personality may enhance social disparity by exacerbating personality differences between those of lower and higher cognitive ability. This further
implies that smoking is a potential barrier to economic success and that campaigns and policies for reducing smoking may be beneficial far beyond the common knowledge that not smoking protects from various chronic diseases. This knowledge might be utilized in on-going strategies aimed at reducing smoking.

Strengths and limitations

The study has a number of limitations. First, MR studies are always subject to the possibility of unwanted pleiotropy, which cannot be entirely ruled out. Measures were taken to investigate this possibility, however, and smoking-associated SNPs related to cognitive ability were removed to reduce the possibility for violations to MR assumptions (ii) and (iii). For the traits showing evidence of causality, substantial bias from pleiotropy was not apparent, though for most of the traits, the MR-Egger test, the most conservative of the sensitivity estimators, did not provide additional evidence to support the IVW.

Second, for the test of cognitive ability on neuroticism, there may be up to 72% overlap in the participants in the GWA studies used in the two-sample MR. This can lead to bias in the estimates that is compounded by ‘winner’s curse’, an overestimation of the SNP-trait effect in the discovery GWA study (Burgess et al., 2016; Haycock et al., 2016). For the tests of cognitive ability on social disparity and cognitive ability on smoking, there may be up to 32% overlap in the participants in the GWA studies used in the two-sample MR. For the tests of neuroticism (SSGAC) on smoking and neuroticism on social disparity; however, the possibility for overlap is only at most 23% for both. There should be minimal participant overlap for the two-sample MR tests of cognitive ability on the Big Five (GPC) and smoking on the Big Five (GPC).

The present analysis also has some noteworthy strengths. One is that using SNPs associated with lifetime smoking, which captures smoking status and also cessation, duration, and heaviness (versus a less comprehensive measure), may reduce some possible violations to MR assumption (iii), the exclusion restriction assumption. This is because it is conceivable that a measure of smoking that captures only one or some of these aspects of smoking could violate the exclusion restriction, when a more comprehensive measure of smoking that includes them all does not (Vanderweele et al., 2014).

Other strengths of present analysis include the incorporation of multivariable and bidirectional MR to better discern confounding and reverse causation and the capitalizing on the power of large samples to detect effects. The two-sample MR design, in particular, is strong, since, if the findings are biased by weak instruments (“winner’s curse” notwithstanding), the effect estimates would be biased towards the null, reducing concerns for false-positives.

IMPLICATIONS

Observationally, tobacco smokers are noted to score high on neuroticism and low on conscientiousness (De Moor et al., 2012; Terracciano & Costa, 2004; Terracciano et al., 2008). Supposing the present MR results are not biased towards the direction of potential bias in the observational data, the comportment with the observational studies provides some Bayesian (i.e., prior) support for the present findings for these two traits, in particular. But the present findings extend beyond what has been previously reported. They suggest that the correlation in the observational data between smoking and neuroticism is at least partly due to the effect of smoking and not due primarily to reverse causation, neuroticism leading people to smoke. Moreover, the present findings have implications for society: smoking may change aspects of personality that impact life prospects.
Fortunately, globe over, smoking rates have declined, a trend that is likely to continue (Gravely et al., 2017). With the foreseeable continuation in smoking decline, there should also be a reduction in smoking-driven changes in personality that may enhance disparity between those of different cognitive abilities.

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It takes a village to deal with mental health: How to integrate theory, practice, and social policies

Cormac Russell

De Paul University
United States

Correspondence: cormac@nurturedevelopment.org

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The ratio of investment in ‘talking cures’ as against chemical ones reveals a trend towards viewing people with mental health issues as in need of chemical intervention and consequently towards the exponential growth of prescription drugs and new diagnostic labels. Currently, it is estimated that one in six adults in the US takes a psychiatric drug, with antidepressants being the most common, followed by anxiety relievers. Meanwhile, the Diagnostic and Statistical Manual of Mental Disorders, Fifth Edition (DSM-5), published in May 2013, contained a massive expansion of labels around what is currently considered to be within the domain of mental illness. These are a very complex set of issues that have more to do with market forces, the imbalance of power across society, and the need to properly regulate big pharmaceutical companies, than they do with patient care and general mental health. The central point within this article is made best in the words of Young (2010): ‘Good mental health is rooted in social cohesion, not in the individual.’

Keywords: chemical intervention; mental disorders; mental health; mental illness; social cohesion
Consider the way our culture generally approaches mental health. Campbell and Burgess (2012) remind us that good mental health is rooted in the community and is not the unilateral responsibility of the individual. In other words, people with mental health challenges are not to blame, nor, alone, are the professional systems that endeavour to care for them. The determinants of mental health are three-fold and interrelated: (1) biological factors, including genetic make-up; (2) life circumstances/events of the person living with mental health challenges; and (3) the impacts of the wider political, social, economic, and environmental spheres such as consumerism (Relojo-Howell, 2018), lead poisoning, inhumane policies, and so forth.

Campbell and Burgess (2012) rightly argue that our focus has been largely on the first two determinants, and even then we tend to be overly diagnostic and consequently far too prone to medicalise issues. The ratio of investment in ‘talking cures’ as against chemical ones reveals a trend towards viewing people with mental health issues as in need of chemical intervention and consequently towards the exponential growth of prescription drugs and new diagnostic labels. Currently, one in six adults in the US takes a psychiatric drug, with antidepressants being the most common, followed by anxiety reliever (Miller, 2016). Meanwhile, the Diagnostic and Statistical Manual of Mental Disorders Fifth Edition (DSM-5), published in May 2013, contained a massive expansion of labels around what is currently considered to be within the domain of mental illness. These are a very complex set of issues that have more to do with market forces, the imbalance of power across society, and the need to properly regulate the big pharmaceutical companies, than they do with patient care and general mental health. The central point here is made best in the words of Young (2010): ‘Good mental health is rooted in social cohesion, not in the individual.’

The challenge for us all is to try to navigate a very narrow strait between ‘normalisation’ (Guttman, 2019; Bautista et al., 2018), which tries to deny the existence of the issue in the first place. There is also the preponderance towards diagnostic labels and professionalised interventions which all too often distance people with mental health challenges from their families, friends, communities, and the economy. Often, these leave those outside the professional system feeling like they have nothing of value to contribute.

This challenge is further compounded by the fact that while it is generally accepted that we all need community connections to stay well and to recover, when we become unwell the common practice is to become isolated (Relojo-Howell, 2016), whether by our own withdrawal or by others distancing themselves from us. Many of our communities of place have become atomised, so much so that people are more likely to be watching an episode of Friends than they are to be making friends with a new neighbour. In line with these trends, we are growing ever more impotent in the ability to collectively co-create our mental health.

If we accept that community cohesion is decisive in mental health, and indeed we can be more confident than ever in that assertion that health Inequality in the United Kingdom looks beyond economic costs and benefits towards a goal of environmental sustainability (Marmot et al, 2010). The review contends that creating a sustainable future is entirely compatible with action to reduce health inequalities through promoting sustainable local communities, active transport, sustainable food production, and zero-carbon houses – all of which have health benefits.

The central question then must shift from ‘How do we deal with an individual with mental health challenges?’ to ‘How can we support somebody with mental health challenges by growing our shared community together with them, so that we can all contribute to each other’s mental health and well-being?’ Another question for professionals and policymakers fall out of this one: ‘How can we as policy makers and practitioners ensure that we invest in supporting communities to become more competent
Mental health is not a product of pharmacology or a service that can be solely provided by an institution: It is a condition that is more determined by our community assets than our medication or access to professional interventions more generally. There are functions that only people living in families and communities can perform to promote mental health and well-being, and if they do not do those things, they will not get done, since there simply is no substitute for genuine citizen-led community care.

A story from Ayrshire, Scotland

In 2014, the Nation Health Service (NHS) Endowment Fund for the Ayrshire and Arran NHS Trust provided funding for an asset-based community development project in Ayrshire, Scotland, to explore how peoples' assets and skills can be supported to develop solutions to community challenges. In practice, the money was used to employ six ABCD community builders in neighbourhoods in North and South Ayrshire, with some additional funding from the Scottish Government to support an independent evaluation. From the beginning the independent evaluators followed and evaluated the Ayrshire project, focusing on the neighbourhoods of Fullarton, Harbourside, and Castlepark in North Ayrshire, and in South Ayrshire on Lochside, Wallacetoun, Dalmilling, and Craigie.

Across seven communities a team of locally-based community builders have been actively supporting residents to exchange their skills and talents to improve their local communities, in the hope that, by increasing social connectedness in this way, the mental health and well-being of the local population will improve.

The May 2018 Evaluation report to NHS Ayrshire and Arran observed: ‘The significant increase in mental health and well-being in North Ayr is perhaps the most important finding of the evaluation. This has been the core goal of the project since the outset. Coupled with this finding from the household survey, the personal stories of residents who have benefited from being connected up with local activities illuminate ‘how’ the health of individuals is being improved, e.g. fewer visits to the GP; stopping prescription drugs; and being “signed off” by clinical specialists’ (Nurture Development, n.d.).

The report is peppered with wonderful examples, quotes, and reflections from residents on their community building journey. Here is a comment from one resident who speaks openly about her mental health challenges and the well-being benefits she experienced from actively contributing to the well-being of others in her neighbourhood: I'm helping people, but at the same time they're helping me. The key is that this is purposeful.

There has been a huge impact for me because last week my CPN (community mental health nurse) and my doctor signed me off because they feel I've come on so much since doing this (connecting with other residents and doing things together with my neighbours). Before this I had hit a wall and there was nothing to motivate me – I had no reason to get up in the morning. It's a massive deal for me to be signed off by both of them because it makes me feel like I'm more in control of things. There's a light at the end of the tunnel now, whereas this time last year I was thinking, 'Which bridge will I jump off?' – Seriously. I've even got friends coming up saying to me, 'I can't believe the difference in you,' and 'We're so pleased you got into this.' I'm quite happy to sit in the house in my jammies all day every day; had my dogs, cats, and my son (whose special needs so can be quite hard going) who can run out and buy me chocolate. But this has been something to take me out of that life. I'm helping people, but at the same time they're helping me. The key is that this is purposeful; it's all very well people saying 'you need to get out more and do stuff' but when you're absolutely down low you need the draw of purpose.
From parrots to coffee grinds

In Harbourside one day a few years ago, one of the ABCD community builders was walking around the neighbourhood when he noticed a man walking towards one of the houses with a parrot on his shoulder. The community builder approached him and asked him: ‘What's the story with the parrot on your shoulder?’ The man explained that he was going to see the residents living in the house, people with varying degrees of mental health issues. ‘They like the parrot!’ He said.

The community builder knew of the house, but had never visited there. He held his nerve and stood with the man and his parrot as he knocked on the door. He asked the person who answered the door if he could come in and speak to the person in charge and effectively charmed his way in. As the manager sat with the community builder and they each explained their roles, it was clear that the house manager wanted to figure out how to support connections between the people he served and the wider community as much as the community builder did. The community builder then asked him a brilliant question: ‘What have got so much of here that you could give it away?’ After a few moments of thinking about it, the manager shared two things he felt could be shared. The first was their back garden. The second was the magnolia-painted walls, which, a few months later, became canvases for local artists and the residents of the house, as a direct result of that conversation.

The garden was soon adopted by a local gardening enthusiast with an interest in developing a community garden. Eventually she was joined by a number of the residents of the house and their neighbours. Then something magical happened: one of the people who lived in the house with a range of fears about being in public spaces, and meeting new people, became passionate about the garden. He started walking every day to the local coffee shop to collect coffee grinds, because they make excellent fertiliser for the garden. Slowly, he came to know and be known by the manager and the staff of the coffee shop, and to be noticed by the wider community. It shows how people and places that have been rendered invisible and divided in most communities can become connected with the right support. Because of the community builder’s gentle asking, he found local residents who are connectors themselves willing to broker people in from the margins to the centre of community life.

The connections – between local artists, gardeners, buildings previously closed to the wider community, business owners, staff, and people vulnerable to not having their gifts received – have changed the nature and rhythm of Harbourside in all kinds of subtle but transformative ways. Not surprisingly people directly involved are experiencing a boost in their mental health; the village is better off. What is somewhat surprising is the extent that the positive impact on mental health has extended across the neighbourhoods to benefit the entire population, a strong indication of culture change.

No them and us

A challenge faced by many countries is to provide adequate human resources for delivery of essential mental health interventions. The overwhelming worldwide shortage of human resources for mental health, particularly in low-income and middle-income countries, is well established (Kakuma et al., 2011).

This example of a village approach to mental health points up a challenge to us all, both professionally and civically. It presents us with a fresh manifesto for coming alongside people with any health issues (of which mental health will always play a dynamic part) and their communities as facilitators or precipitators of the bridge building between them. That manifesto is about realizing there are no ‘them’ and ‘us.’ This is about all of us.
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Promoting improved social interaction to people with autism spectrum disorder: Reimagining representations in television and social media

Kristin Kiggins

Jawonio, United States

Correspondence: k.kiggins6@gmail.com

I have worked in the non-profit sector of the Office of People with Developmental Disabilities (OPWDD) for adults and children with developmental disabilities for the last six years. Within that time frame I have worked as a direct support professional (DSP) working one-on-one with individuals residing in group homes. I have been an assistant director and assistant residential supervisor managing the day-to-day functions of several group homes. I advocated for individuals with developmental disabilities as their Medicaid service coordinator working with their other service providers and families to improve the quality of their lives. I have been a community habilitation coordinator training and establishing community based services for individuals and their specific one on one staff. And currently, I am a behaviour specialist; I create and implement behaviour plans and counsel individuals who have behavioural issues within five group homes in the New York metropolitan area. Throughout my career, I have worked with over 300 individuals served in Rockland County, NY with a variety of developmental and intellectual disabilities. I have learned that disabilities are not cookie cutter and what works for one person may not work for another who has the same diagnosis; people are all different. Of all of the lessons I continue to learn from working one on one with such amazing people, my biggest take away is people in the community have no idea who is living next door. I have been out in the community with several of my individuals and we as a group have received scowls, frowns, distain, and fear. Some people will attempt to be kind and shoot a quick smile before quickly scurry away from us.

Five years ago I took six individuals to Party City (a party supply store) to purchase their Halloween costumes. The six individuals I was with were a variety of ages from their 30s to late 50s; all with a variety of functioning levels and diagnoses (moderate intellectual disability, autism, intermittent explosive disorder, etc.) This particular weekend was just prior Halloween. The store was packed with families and their little ones looking for superhero costumes and princess crowns. My individuals love Halloween just as much as anyone else and required the perfect costumes. In the midst of all the typical chaos you would find in this situation, my individuals were dealing with their own struggles. Jack is stemming and making clicking noises as he paces the aisle. Georgia is upset because they don't have the costume in her size. Patrick is yelling and shaking his fist because I was helping Georgia before him. Daniel is jumping up and down saying: ‘Daniel light the match, burn the building down.’ Granted managing all these people and their varying needs is not easy, but within a few minutes everyone
calmed down as I helped to fulfill all of their needs. An older gentleman came up to me and told me I was doing 'god's work'. I nodded and smiled at his kind gesture. But in all honestly, he was wrong. I am not doing god's work. I am working with people, people who have their own needs and are frustrated – Probably were no more frustrated than the other families who were also in the same store. The willingness to want to learn or better understand individuals with disabilities is instead the real work of god.

‘Heyy you guyyss!’ A familiar film quote for most of us people born before the 1990s. The quote is from the film the Goonies. This is a film in which a horribly disfigured family member was forced to live in solitude away from society. If you are not familiar with this film how about Pet Cemetery? In this film, a woman's sister, who is also horribly disfigured, was shunned by her family and spent her days hidden in a room in the back of the house.

Let's take a quick look at how literature is provided in US school systems. Of Mice and Men by John Steinbeck is a novel following Lenny. Lenny is developmentally disabled and cannot control his strength or anger. In doing so, other characters in the book suffer horrific consequences, or the 1831 classic novel, The Hunchback of Notre Dame by Victor Hugo. One of the story's main characters is Quasimodo, a half blind half deaf man with a physical disability that was abandoned by his family and shunned by his community, banished to the Cathedrals of Paris where he lives in solitude.

There is no question that media throughout the years have depicted individuals with intellectual or developmental disabilities as hideous, dangerous, and unpredictable (Renwick, 2016). Some of the older ‘vicious monsters’ have spent many years locked away from society in asylums and mental hospitals. Then, in 1972, the taboo treatment of these disabilities gets exposed in the media.

In doing so, Rivera's (1972) exposé opened society's eyes to the conditions that individuals with intellectual disabilities, developmental disabilities, and psychiatric conditions suffer from while residing in asylums like Willowbrook, NY. The images and reports of these conditions were enough to turn even the strongest of stomachs. Luckily, news of these conditions spread like wildfire throughout the US and a majority of these asylums were shut down.

Media exposure: Community inclusion and debunking stereotypes

As time unfolded, and the general public was exposed to various disabilities, a shift in representation of people with intellectual disabilities began to occur. We see more films like Forest Gump, What's Eating Gilbert Grape, Rain Man, and I am Sam. These films that showcase a more personified image of individuals with disabilities were only made within the last 30 or so years, almost 50 years after Rivera's exposé. Although we are moving in the right direction with breaking down these faulty beliefs about disabled individuals (Relojo & Pilao, 2018), we really need to prepare ourselves for a new wave of exposure like we have never seen before in the media. At the moment, roughly 1 out of 40 children are diagnosed with autism spectrum disorder (ASD).

Diagnostic shift: Terminology and diagnosis

Years ago, people with ASD were considered ‘retarded’ or ‘socially awkward’. Fortunately, the use of the word ‘retarded’ is no longer used in current terminology; and these people who would be lost diagnostically are given the supports and services they need. However, what we can do as a society is become more educated to what it means to be autistic and work on reducing the stigma of developmental diagnoses. A firm grasp on what it means to be diagnosed with ASD will enhance the probability of positive social interactions.
The fifth edition of the *Diagnostic and Statistical Manual* (American Psychiatric Association, 2013) defines autism spectrum disorder as: ‘persistent deficits in social communication and social interaction across multiple contexts, as manifested by deficits in social-emotional reciprocity, non-verbal communication, developing, maintaining and understanding relationships.’ Another category for diagnostic criteria includes ‘restricted, repetitive patterns of behaviour interests or activities including two of the following: repetitive motor movements/objects/speech, insistence on sameness, inflexible routines/patterns, highly fixated interests, hypo or hyperactivity to sensory input.’

Autism spectrum disorder is categorised as a spectrum because the criteria of ASD includes a variety of symptoms for both high functioning individuals to severe/profound deficits in functioning. Individuals with ASD have one of the largest differences in IQ status. Some individuals may have an IQ lower than 70 which is the standard for someone having an intellectual disability or may have an IQ well over the average of 100. (100 IQ is the average for ‘normal cognitive individuals’). In ASD, individuals who are non-verbal also sometimes present as lower functioning.

IQ tests are adaptive for non-verbal individuals (Bölte & Poustka, 2002). Someone may be non-verbal but obtain an IQ score well over 100. From my personal experience working with individuals with ASD I worked with a young man under the age of 10 who was non-verbal but had an IQ of over 145, which is equivalent to Albert Einstein’s IQ!

Individuals with ASD are predominantly male (Murphy et al., 2009); averaging about 3 in 4 individuals with ASD (Herman et al., 2007). Individuals with ASD can be verbal or non-verbal. Non-verbal individuals may be able to communicate by using PEC cards or picture cards, assistive technology on iPads, or by gestures and vocalisations. Individuals with ASD exhibit repetitive or ritualistic behaviours, some of these common behaviours include hand flapping, pacing, inflexible routines, preoccupation with specific items/hobbies, humming, vocalising, repetition of words or actions (Seltzer et al., 2003). The emotional behaviours we see with ASD include poor eye contact, social withdrawal, emotion regulation deficits, low levels of emotional intelligence and social-reciprocity (Leach & LaRocque, 2011).

In the end, regardless of an individual’s culture or background, all human beings communicate by non-verbal communication. So, given that we cannot solely depend on our verbal communication to connect with others, understanding nonverbal communication in greater depth becomes increasingly important. Whether someone is mute or blind, people generally do not refuse to participate in social interaction with these individuals. Interacting with people with ASD should be no different. The bottom line is we must all adapt our understanding of others and how we communicate with them to meet the needs of the other individual.

**Understanding ASD in real terms**

Societally, across all intersections, we truly need to develop a basic understanding of what ASD is, and is not. In doing so, we can really evaluate how ASD effects individuals in more real terms. This begins with understanding how to facilitate social interaction in the real world. This can be achieved through a two-pronged approach: (1) Encouraging the media to depict more positive representations of individuals with ASD; and, (2) Promoting increased interaction with people with ASD through psychoeducation in the media and film.

People have a propensity to witness in the media, what will in turn, inadvertently inform us about certain groups of people. What I just described was how the media has the power to create social constructs. People then subconsciously internalise these constructions and use them to better relate with society and the world around us. People will trust the information provided with less scepticism when it is in the media. So, living in a community where there is not a lot of exposure to individuals with
intellectual or developmental disabilities and your only basis of understanding comes from the previously mentioned films and novels, you may be afraid and standoffish during your encounters with these individuals. What you think you know about a certain group will affect how you interact with them. This is the concept of prejudices and discrimination. Prejudices are the thoughts that we have about a certain group; discrimination is the act that is played out because of our prejudices. The media producing prejudices have been around for as long as social media has existed. The media has such a strong influence on people’s thought processes that it can alter and control your biases (Entman, 2007).

A common term from the media teaching us to develop prejudices are propaganda films, which, like the notorious Nazi propaganda film *Triumph of Will*, is a testament to how media can distort reality and convince you that what you are witnessing is an absolute truth. An entire nation believed that all Jewish people were subservient, and that Hitler and the Nazi party were truly looking out for the best interest of the German people. Thousands of men and women learned to believe this based on what they were taught. It must be mentioned that I am not comparing current media and films to Nazi propaganda, however it is important to understand the power that these entities can possess. In current day media, there is so much access to what is being produced that it would be ignorant to believe that we are filtering out incorrect representations that we witness on a daily basis. So, the circle of misunderstanding has the potential to solidify, which is why it is so crucial that the media begins to provide accurate information, such as the violence portrayed of individuals with disabilities.

Individuals with any type of psychological diagnoses like autism, schizophrenia, depression, PTSD, etc. are not inherently violent, but victims of abuse and criminal behaviour. People tend to associate mental illness with violence when they are rarely the perpetrators. Films showcase a dark and twisted past that insinuates that this is why they are violent now and as a society it is just accepted. Most commonly now is the association of mental illness and school shootings; people hear violent behaviour and immediately assume mental illness. Autism is no stranger to being represented as dangerous and violent. Can individuals with Autism have aggressive-like behaviour? Yes, it's possible, but the reason for the aggression is able to be pinpointed to a specific cause, not just to be violent. Individuals with Autism are not sadists or masochists who enjoy hitting themselves or others; they are often frustrated or overwhelmed and unable to communicate what is bothering them. Once we have a better understanding that individuals with autism or any other disability are more likely to be victims we can reduce the stigma or being afraid of them, and thus promote more interaction. The media needs to move away from glorifying mental illness (Kumar et al., 2019) as this dark, dangerous malevolent affliction.

**Establishing a more humane mental health culture for people with ASD**

The media must soften its stereotypical image of ASD as well as other mental illnesses. By softening the image, we will no doubt see a significant increase in tolerance and acceptance by others as well as people within the ASD community. This can be accomplished when the media not only focuses solely on someone's shortcomings but their strengths as well. For instance, if someone with ASD engages in self-harm by hitting themselves when they are frustrated, the viewer cannot leave with that as the takeaway about the individual – there should be some context clue about why the individual is frustrated or one of the other areas in their lives where they do thrive—memorisation, artistic skills, maths, etc.

This issue has been a controversial issue over the past decade or so, but it is important that it continues to be addressed and addressed until this theory is left in the dust. There are many opinions and arguments all over social media and news outlets that state that Autism is caused by vaccines. This theory has been disproven by many scientific researchers and the person who originally made this claim reported that he had falsified documentation and lost his medical licence. This theory is dangerous and cause for concern in the autism community because it insinuates that there is something to blame, someone is at fault or that who they are is a mistake. By labelling people with ASD of being the
result of a choice that the family made can be detrimental to their sense of self and how others view them. Regardless of the science behind what causes autism, we as a community need to focus on how we can be supportive now. Social media can play an intricate role in this topic as a majority of people seek out the opinions and recommendations from others dealing with similar situations (Sanghera, 2018). This topic is not addressed to imply that you should or should not vaccinate, but to rule out autism as a result. The prognostic factors associated with Autism indicate that genetic mutations and environmental factors regarding age of conception and course of pregnancy are what increase the likelihood of developing autism. Social media can help stop the divide when it comes to the discussion of vaccines in relation to autism.

To understand individuals with autism you need to have a basic comprehension of what someone with autism will experience on a day to day basis. As a precursor, each person with Autism may experience different symptoms and may come with a variety of intellectual abilities etc. Each person can be drastically different, which made diagnoses so difficult at first and we see such vast scale of people who fit under an ASD diagnosis. Have you ever been driving in a car and the sun setting is too bright in your eyes? Or been to a concert and the music is just way too loud you can hear your heartbeat in your ears? Ever bought a new shirt and the tag is unbelievably itchy on your neck? Imagine experiencing these sensations on a daily basis.

Individuals with autism can have heightened sensory experiences and we call it ‘sensory overload’ (Crane et al., 2002). There is so many things happening in their environment that it over floods their processing circuits in their brain and makes it difficult to concentrate or focus on the simplest of tasks. The light shining through the window may be blinding to them and they can't see their surroundings, someone tapping their foot as they take a test may make it impossible for someone with autism to hear their own thoughts. These daily hurdles may be difficult to ignore and can cause frustration and irritability to occur. Remember when I mentioned that individuals with ASD may have aggressive tendencies? Usually when they are overstimulated you may see more behavioural outbursts that occur. Any behaviour like hitting, punching, breaking things etc. all serve a function. Every behaviour is to fill a certain need-disability or no disability. Behaviors of any kind tend to fit within one of the following categories known as MEATS: medical, escape, attention seeking, tangible, or sensory. Individuals with ASD may hit themselves because they are frustrated because they are non-verbal and not receiving the attention they need, or because they have a medical issue they don't know how to communicate. Imagine having everything you want to say stuck in your head but unable to express yourself to others? Simply frustrating.

Being able to get to know someone with ASD you will be able to figure out what bothers them and most importantly what soothes them and they find enjoyable. People with ASD may need adjustments to their environment to accommodate their sensory stimulation. So people with ASD may avoid going to the mall to avoid large crowds, or may require specific brands of clothing that are comfortable to their touch. When it comes to accommodations for individuals with ASD it can be difficult to find a place that can support their needs. However, some businesses are beginning to get on the bandwagon and offering services that would be comfortable for those is ASD. Some companies are including sensory options into their businesses which offer less visual and sensory stimuli so individuals with ASD can avoid becoming overwhelmed. More and more businesses and places are becoming more sensitive to ASD needs but there is always was to improve so we do not exclude others from participating in social interactions. This concept may be difficult to portray in television or media but it is important to address the notion that every behaviour serves a purpose, if we see more situations of cause and effect in relation to ASD typical symptoms, we may encourage society to look for alternative measures to take instead of avoiding the problem. Another possibility is integrating more first person experiences in film that can appropriately demonstrate what it may feel like to have Autism. If we really took a look into
what it would be like to be in someone else's shoes we can become more empathetic to how we relate to others.

People with ASD tend to avoid social interaction with others. This typically occurs because the person with ASD has difficulty reading social cues, so to avoid embarrassment and humiliation they may avoid interaction to protect themselves. People with ASD have difficulty reading facial expressions, non-verbal gestures and filtering out what they say. Imagine buying an outfit that you think is very flattering and you feel great. If you ask someone with ASD their opinion, they may tell you flat out that it makes you look like your grandmother's couch, and to add insult to injury they may ask “why are you crying?” That person was not trying to be hurtful but shared their opinion not knowing that it may be upsetting to hear. They are honest and they are genuine with their responses. In addition to having difficulty filtering their thought processes they have difficulty understanding relationships. Have you ever had difficulty understanding your significant other or friend and wish they would just tell you what is bothering them? Of course! It is a constant guessing game for people with ASD to gather as much information from their surroundings as possible but still sometimes miss the mark on the social cues.

**IMPLICATIONS**

ASD individuals wish they knew what others were thinking or feeling but are unable to identify what you may be experiencing. This makes it difficult for individuals with ASD to maintain their friendships or even make one to begin with, which can lead to a very isolated social life. Another issue in regards to social interaction with people with ASD is that typically people with ASD have a hobby or interest that they enjoy wholeheartedly. So one person may like trains and cars and will know everything you need to know about vehicles; because this is their main interest they may only want to talk about this subject even if you have no idea what they are talking about. It’s not that they do not care about your interest, but they have difficulty seeing that someone else may not want to talk about trains for three hours straight. So to improve social interaction with people with ASD, you may need to be the one to initiate conversation. They may want to say hello but cannot bring themselves to physically do so. And when you are engaged in a conversation, you may need to be more verbal with sharing if something they said was offensive or hurtful; not to make them feel bad or put them down but to help them develop better social skills. This is where promoting social interaction with individuals with ASD can flourish in television and social media.

Out of all of the big blockbuster films that were previously listed, the best depiction of a high functioning young man with autism is from the Netflix series *Atypical*. This show does a fantastic job of depicting someone living with Autism and the struggles they go through with making friends, dealing with family issues and beginning to date. Not only does it depict an individual with Autism flawlessly, it does not focus on Autism being this person's world, it is a piece of his world. He is a teenager with teenager issues and drama, and he also is diagnosed with ASD. This person is not defined by his diagnosis, but it is something that he deals with every day. I think this television show truly captures how we need to prompt positive perceptions of ASD, normalise it. This show normalises and identifies the life of a family, with all of its graces and flaws. Life is messy, unpredictable and sometimes unfair. Film, whether it's hitting the big screen, being broadcasted on national television or binged from a streaming service should show all that it means to human, just for as it is, not extra dramatizing or shock value imagery. If we can have popular shows like *Friends*, *Seinfeld*, or *This is Us*, why can't we incorporate more characters with diagnoses like Autism where their diagnosis isn't the niche or punchline of why they are on screen.

Another common issue to avoid in media is the notion that individuals with ASD need to be ‘fixed’. Media overdramatises that people's lives would be better if the issue they were struggling with just went away miraculously. This fairy tale type of idea is very dangerous not only for ASD but for everyone. Sometimes, the situations we deal with are lifelong or unavoidable. You wouldn’t tell someone with
spastic quadriplegia that if only they could walk they would be so much better; so why treat someone with ASD that way? What should be emphasised more is the impact of how growth and developing skills to adapt to the cards we were given can improve the quality of life. Autism should not be portrayed that if only he was verbal, or if he suddenly got better than he could get a job. Being optimistic is important but its damaging being delusional, for the individual and their family. Some people with ASD may never speak, may never get a job or be fully independent, and that is acceptable. Individuals with ASD have a developmental diagnosis, but that does not mean that they do not have the potential to learn. Maybe someone’s goal is to maintain eye contact for five minutes, or to refrain from hand flapping while out in the community; these goals can be mountains to people with autism and should be treated as such.

CONCLUSION

Promoting improved social interaction with individuals with ASD through more positive and accurate representations in television and social media should have started a long time ago. A quote which I think is applicable to multiple facets of life but particularly when it comes to the portrayal of any diagnosis is: ‘it is not your fault but it is your responsibility’. We may have not written the book on stigmas and stereotypes but it is our responsibility to make the required changes. So whether you are a screenwriter, director, actor, social media influencer or a person, If you come across someone who is non-verbal, learn how they communicate; sign language, iPad texting, writing things down etc. If the person is non-verbal and lower functioning observe their behavior and join in on activities that interest them. The old debate of the chicken or the egg: will we promote better social interaction by witnessing it through media, or will our interactions influence what is portrayed in media? Regardless, effort does not go unnoticed. Ultimately, the quality of someone’s life can be changed by your actions.

REFERENCES


Development and preliminary psychometric evaluation of the Tripartite Attachment Battery

Lachlan McWilliams & Ashley Coveney

University of Saskatchewan
Canada

Correspondence: lachlan.mcwilliams@usask.ca

Mikulincer and Shaver's (2007) model of attachment-system functioning and dynamics in adulthood provided the impetus for developing three self-report measures assessing adult attachment characteristics. These scales are collectively referred to as the Tripartite Attachment Battery (TAB). The Secure Attachment Scale assesses attachment insecurity-security along a single dimension. This is the first self-report measure designed to directly assess attachment security in adults in this manner. The Organized Insecurity Scale includes subscales assessing two specific forms of insecurity: attachment anxiety and attachment avoidance. Unlike other popular measures of adult attachment assessing these constructs, it also includes items that capture secondary attachment strategies related to anxiety (i.e., hyperactivation) and avoidance (i.e., deactivation). The Disorganized Attachment Scale is based on an earlier self-report measure. It captures a more severe form of attachment insecurity characterised by fear, confusion about relationships, and distrust. The process of developing items for these measures is briefly described and an initial psychometric evaluation of each measure is presented. These evaluations were aimed at: (a) assessing the internal consistency of each scale or subscale, and (b) identifying poor items that may need to be removed or modified. A small convenience sample ($N = 53$) was used. Each measure had a high level of internal consistency, with coefficient alphas ranging from .81 to .93. Recommendations regarding further revising and evaluating the measures included in the TAB are presented.

**Keywords:** attachment anxiety; attachment avoidance; disorganised attachment; secondary attachment strategies
The current study reports on the development and initial evaluation of the Tripartite Attachment Battery (TAB). Attachment theory (Bowlby, 1969), the evolution of self-report measures of adult attachment, and limitations of the most commonly used measures of adult attachment are first briefly reviewed. Mikulincer and Shaver’s (2007) model of attachment-system functioning and dynamics in adulthood is then presented. This model is used as a framework for developing three separate self-report measures of adult attachment that are collectively referred to as the TAB. The process used to develop items for the TAB is described and initial psychometric evaluations of its scales are presented.

Attachment Theory (Bowlby, 1969) is a theory of bonding and emotional regulation. In brief, it posits that early experiences with caregivers establish a set of enduring expectancies regarding one’s capacity to respond to threats and the behaviour of social partners. Those who received consistent and sensitive care are thought to develop positive models of self and other. The presence of positive models of self and other is often referred to as attachment security. In contrast, attachment insecurity is thought to develop in response to care that is less consistent and/or sensitive or in response to the absence of care.

Since the mid-1980s, there has been great deal of research on individual differences in attachment security in adulthood. Initially, numerous self-report measures of attachment were used. The diversity of these measures made it difficult to identify relationships between attachment characteristics and other psychological phenomena that were consistent across different conceptualisations of attachment security and insecurity. This issue was largely addressed by Brennan et al., (1998). They conducted a factor analytic investigation of all the self-report measures of attachment available at the time. They obtained a two-factor solution in which most scales loaded on either a factor they labelled anxiety or on a factor they labelled avoidance. Based on these findings, they used the pool of items in existing measures to create the Experiences in Close Relationships Questionnaire (ECR). The ECR is a measure of attachment in intimate or romantic relationships and includes 18-item scales assessing anxiety and avoidance. The ECR and the revised version of it (ECR-R; Fraley et al., 2000) are by far the most frequently used self-report measures of adult attachment. Related to the widespread use of these measures, most of the recent research investigating individual differences in adult attachment characteristics over the past two decades has focused on the constructs of anxiety (i.e., self-doubts about worthiness and fears of rejection and abandonment) and avoidance (i.e., mistrust of others and discomfort in relationships).

There are three important limitations of the widely used ECR and ECR-R. First, they do not directly assess attachment security. Attachment security can be inferred from the absence of attachment anxiety and avoidance, but the presence of the experience of security is not directly captured by these measures. This is an important limitation because in many situations researchers have hypotheses about security or insecurity, rather than hypotheses about specific forms of insecurity captured by existing measures. Second, the items in the ECR and ECR-R were taken from older measures of attachment, so they are not well-suited to capturing more recent conceptualisations of anxiety and avoidance. Most notably, subsequent to the development of the items included in these measures, there has been far more attention to the concept of secondary attachment strategies. In brief, secondary attachment strategies are employed by those who are unable to achieve a sense of security with their attachment figures. Hyperactivation refers to insistent efforts to maintain proximity with attachment figures and receive love and support from them. This strategy is common of those high in attachment anxiety and involves vigilance to signs of attachment figure unavailability, clinging and controlling behaviours aimed at obtaining care and support from attachment figures, and exaggerated appraisals of threat (Mikulincer et al., 2003). Deactivation refers to an inhibition of support seeking in order to avoid frustration and distress caused by the unavailability of attachment figures. This strategy is commonly employed by those high in attachment avoidance and involves the avoidance of attachment needs (e.g., closeness, intimacy, and dependence), efforts to maximise physical and emotional distance from others, and the pursuit of self-reliance and independence (Mikulincer et al., 2003). Important components of
hyperactivation and deactivation are not captured by the ECR or ECR-R. For example, they do not include any items assessing the tendency to react strongly to negative events (i.e., heightened distress) and ineffective coping with distress (i.e., rumination and catastrophising) that are central to the concept of hyperactivation.

A final limitation of the all self-report measures of adult attachment is their susceptibility to one form of response bias. When participants are asked to agree or disagree with statements included in a self-report measure, some people tend to respond with agreement to the statements presented regardless of the content of the item. This is referred to as acquiescence bias (see Krosnick & Presser, 2010). Reverse-scored items are often included in order to reduce the impact of acquiescence bias. This strategy has been employed with measures of adult attachment, such as the ECR. However, this approach does not fully address the problem as it may simply result in those who acquiesce scoring closer to the middle point of a scale than they would have had it been possible to reduce their acquiescence. Items that ask participants to rate themselves along a continuous dimension (e.g., extremely bad to extremely good) are often easier to respond to accurately and have higher levels of reliability and validity (see Krosnick & Presser, 2010). This approach has not yet been used measures of adult attachment.

Mikulincer and Shaver’s (2007) model of attachment-system functioning and dynamics integrates early theoretical writings (Ainsworth et al., 1978; Bowlby, 1969) and more recent research on adult attachment. It includes three sequential modules related to responses to the activation of the attachment system. In the first module, the model proposes that signs of threat will activate the attachment system and this activation leads to seeking proximity to an attachment figure. Related to this module, they suggest that those with more experiences involving attachment figure availability and the accompanying sense of security are more likely to appraise events as unthreatening. In the second module, the availability of the attachment figure is assessed. If the figure is available and responsive, the individual seeking proximity will experience a sense of security, reduced distress, and increased emotional well-being. If the attachment figure is not available or responsive, attachment insecurity and increased distress are experienced. In the third module, an assessment is made regarding the viability of further efforts at obtaining proximity and support. If this is seen as unviable, the secondary attachment strategy of deactivation is used. If further proximity seeking is seen as viable, the secondary attachment strategy of hyperactivation is used. It should be noted that the appraisals and decisions regarding the use of secondary attachment strategies may be largely unconscious and influenced by past experiences with attachment figures rather than by more objective assessments of the potential threat and specific relationship context. As noted earlier, those high in attachment avoidance tend to use deactivation and those high in attachment anxiety tend to use hyperactivation.

The third module of Mikulincer and Shaver’s (2007) model suggests that individuals will select one of two secondary attachment strategies. They refer to these strategies as organised forms of insecurity. While not included in their model, they also note the possibility of disorganised attachment insecurity. They suggest that extremely insecure individuals may be unable to select one course of action and could instead chaotically vacillate between the two secondary strategies. They noted that such individuals have been referred to as fearful avoidant (see Simpson & Rholes, 2002; i.e., they want love and support and are also fearful of potential negative consequences of being close or reliant on others) and that this pattern is similar to the disorganised attachment pattern identified in child-parent interactions (see Main & Hess, 1990).

Mikulincer and Shaver (2007) noted that their model of attachment-system functioning and dynamics ‘calls for multiple kinds of scales’ (p. 99). This commentary was the impetus for developing the TAB. Mikulincer and Shaver (2007) raised the possibility of a unidimensional scale related to the second module in their model, which concerns ‘perceived attachment figure availability’ and ‘sense of felt security’. They indicated that such a measure would be suitable for studies in which differentiating
between those with relatively low and high levels of security was the focus. To address this need, the Secure Attachment Scale was created. The third module in their model includes deactivation and hyperactivation. They referred to these forms of insecurity as organised or strategic. They suggested that scales assessing avoidance and anxiety, such as the ECR and ECR-R, could be used to assess these specific forms of attachment insecurity. However, as noted earlier, these measures include few items directly capturing deactivation or hyperactivation and they are vulnerable to acquiescence bias. To address these limitations, the Organized Insecurity Scale was created to assess anxiety and avoidance as well as the secondary attachment strategies associated with them. Mikulincer and Shaver (2007) described fearful avoidance or disorganised attachment as a particularly severe form of attachment insecurity. They suggested that the combination of high avoidance and anxiety might capture this severe form of insecurity. However, they also noted the possibility of a scale that directly assesses disorganised attachment (i.e., the chaotic and confused enactment of both secondary strategies) that might be able to distinguish between those with disorganised attachment strategies and those with organised forms of attachment insecurity (i.e., those with normal deactivating and hyperactivating tendencies). To address this need, the Disorganized Attachment Scale was developed. The process of developing the items for these new measures and a preliminary evaluation of them is the described below. This evaluation was aimed at: (a) assessing the internal consistency of each new attachment measure, and (b) identifying poor items that may need to be removed or modified. Descriptive statistics regarding these new measures are also reported.

METHOD

Item development

The initial impetus for the current Secure Attachment Scale was the concept of felt security included in the second module of Mikulincer and Shaver’s (2007) model. The first step in creating items was to list the characteristics of attachment security included within this model. In order to obtain a rich description of secure attachment, several other sources were also reviewed. These included articles on ‘secure-base scripts’ (Mikulincer et al., 2009), attachment prototypes in clinical settings (Maunder & Hunter, 2012), and the potential advantages of attachment insecurity (Ein-Dor et al., 2010). Items capturing the characteristics noted in these sources were then written. For example, Mikulincer et al., (2009; p. 616) indicated that those high in attachment security would see themselves as ‘valued, and able to elicit beneficial care from responsive relationship partners.’ This prompted the creation of items regarding feeling valued and perceptions of the helpfulness of close others. This item generation process resulted in the creation of 32 items for the Secure Attachment Scale.

A similar process was used to generate items for the Organized Insecurity Scale. This measure was designed to include subscales that capture the separate constructs of anxiety and avoidance. One of the articles used in developing items for the security scale (Ein-Dor et al., 2010) was also used in developing descriptions of attachment anxiety and avoidance. Another article that focused on attachment and affect regulation (Mikulincer et al., 2003) was relied upon heavily for content related to the secondary attachment characteristics. Furthermore, the content of the ERC and ERC-R were also reviewed. The item generation process resulted in the creation of an Organized Insecurity Scale with 36 anxiety items and 23 avoidance items.

A measure of disorganised attachment for use with adults has already been developed (see Paetzold et al., 2015). The original measure had items based on a review of the literature on disorganised attachment in children and behaviours characteristic of disorganised attachment in the Strange Situation. Its items capture characteristics such as fear, confusion about relationships, and distrust. The item content of this nine-item scale served as the basis of the current Disorganized Attachment Scale. However, the wording was altered substantially in order to utilise a response format that would be less vulnerable to
an acquiescence response bias. For example, the initial Item 1 was a statement (‘Fear is a common feeling in close relationships’) that participants were asked to rate in terms of their agreement (e.g., strongly disagree to strongly agree), but in the current scale the item was a question (‘How frequently do you experience fear in your close relationships?’) that asked participants to rate themselves in terms of frequency (never or not at all to very frequently). Furthermore, some of the complex items were used to generate multiple items. For example, Item 2 was about romantic partners taking ‘advantage of each other’ and it was separated into an item about participants being taken advantage of by romantic partners and another item about taking advantage of romantic partners. The current version of the scale includes 12 items.

Procedures and participants

Participants were recruited from the University of Saskatchewan’s online bulletin as well as advertisements posted on Kijiji for several cities and towns within the same region. The study was open to individuals 18 years of age and older and was described as an online survey aimed at ‘evaluating a new measure of relationship styles’. It was conducted using fluid surveys, an online platform for creating and administering surveys. The first 50 participants were eligible to receive a $10 Visa gift card as an honorarium. The recruitment materials and the online survey were removed shortly after 50 participants had completed the survey. These procedures were reviewed and approved by the University of Saskatchewan’s Research Ethics Board.

Based on recommendations and calculations regarding sample sizes for evaluating coefficient alphas (see Bujan et al., 2018), a large sample was not required. Given the number of items included in each measure (ranging 12 to 36) and a null hypothesis of coefficient alpha equals 0, a sample of 50 has excellent statistical power (i.e., coefficient alpha = .50) and far exceeds that required for evaluating measures with a fair level of internal consistency (i.e., coefficient alpha = .70) or better.

A total of 53 individuals completed the study. The average age of the participants was 27.53 (SD = 8.68) years. Majorities indicated that they were female (69.8%), white (77.4%), and spoke English as their first language (90.6%). Most participants had been involved in a dating relationship (88.5%) and most were currently in a relationship (80.0%). A slight majority were single and never married (51.1%), with the other participants indicating they were married (22.2%), in a common law relationship (24.4%), or divorced or separated (2.2%).

Measures

Participants were asked a series of questions related to demographic variables used to describe the sample (e.g., age, race/ethnicity, sex, language, and relationship variables). They were then administered the TAB, which is comprised of the Secure Attachment Scale (32-items), the Organized Insecurity Scale (36-item Anxiety subscale and 23-item Avoidance subscale), and the Disorganized Attachment Scale (12-items).

Four features of the TAB scales and their administration should be noted. First, they were presented as separate measures with their own set of instructions. However, the instructions for each scale were very similar to each other. Second, items had response options tailored to the content of the item. For example, the Secure Attachment Scale item about success in ‘calming yourself down when distressed’ had response options that ranged from ‘very unsuccessful’ to ‘very successful’. Third, the scales differed in terms of the number of response options available. The Secure Attachment Scale had three response options (very, moderately, and mildly) in the negative direction and the same three options in the positive direction. For this scale, there were no numbers associated with the response options presented
to participants. However, in scoring the measure, the numbers associated with the options ranged from 1 (very in the negative direction) to 6 (very in the positive direction). The Organized Insecurity Scale and the Disorganized Attachment Scale both used response options that ranged from 0 to 4, with higher ratings indicating stronger endorsement of the item. Each option had a description associated with it (e.g., 0 = not at all helpless). Fourth, participants were also provided with a ‘question unclear’ option for each item. They were instructed to use this option if the question was unclear or too confusing to answer. Those using this option were asked to explain what made that question difficult to understand. The specific instructions for each scale and their items are available from the author.

Item and scale evaluation plan

All analyses were conducted with SPSS (version 24). The initial step in the evaluation of each scale was to examine its internal consistency level (i.e., Cronbach's alpha). Values below .70 were considered unacceptable, values between .70 and .79 were regarded as fair, values between .80 and .89 were considered good, and values of .90 and above were regarded as excellent (Cicchetti, 1994). The remaining steps of the evaluation focused on specific items. The first of these was to examine the item-total correlations (i.e., each item's correlation with the sum of the other items in the scale). This was done to identify obviously poor items, such as those negatively correlated with the other items in the scale. Second, potential changes in internal consistency associated with dropping specific items (e.g., Cronbach's alpha if item deleted) were investigated. Third, the number of ‘question unclear’ responses for each item was considered. The final step was examining participants' comments regarding these specific items. Modifications to the items (i.e., rewording) and scales (i.e., item removal) were considered on the basis of these different sources of information.

Internal consistency results and suggested modifications

The 32-item Secure Attachment Scale had an internal consistency of .93 (95% C.I. = .90 to .96). All the item-total correlations were positive, but five of them (Items 12, 21, 25, 30, and 32) were under .30. There were seven items (6, 10, 12, 23, 25, 30, and 32) with an alpha-if-item-deleted value greater than the initial internal consistency level. These two sets of findings suggested the scale could be improved by deleting some or all of these seven items. However, given the early stage of evaluation, these findings were insufficient to warrant the deletion of these items at this point in the development of the measure.

The ‘question unclear’ option was used once for 6 different items of the Secure Attachment Scale. Comments were provided for only five of these items. Item 1 (‘How happy are you with your close relationships?’) received the most detailed response. It was noted that responses to this item would change over time, would be different for each relationship, or vary depending on which group of friends was considered. One participant noted that Item 5 (‘When you try to deal with conflicts or disagreements with those you are close to, how satisfactory do you usually find the outcomes?’) made the assumption that the participant deals with conflicts. This participant further reported generally avoiding conflicts and experiencing different levels of satisfaction depending on the conflict situation. Item 9 (‘How sure are you that someone will be available and supportive when you need help?’) received a Question Unclear response, but there was no comment for it. Item 16 (‘When you turn to others in times of need, how helpful are they?’) was noted as difficult because the answer would depend on who the participant turned to for help. One person reported difficulties with item 20 (‘How worthy of support are you?’) because it was unclear whether it was about the participant's perspective of him or herself or instead it was about the participant's perceptions of what others thought of him or her. One person commented that item 30 (‘How safe do you see the world as?’) was too broad to answer easily. All of the comments provided regarding these items highlighted potential difficulties with the items. However, given the vast majority of participants did not have difficulty responding to
them and the absence of clear evidence indicating they have extremely poor psychometric properties, it is recommend that all of the Secure Attachment Scale items be retained until the scale receives a more comprehensive evaluation.

The Organized Insecurity Scale includes a 36-item Anxiety subscale and a 23-item Avoidance subscale. The Anxiety subscale's internal consistency was .92 (95% C.I. = .88 – .95). Item 10 (‘How vigilant are you to potential threats to your safety and well-being?’) had a low and negative item-total correlation (i.e., -.01). Four other items (19, 20, 22, and 41) had item-total correlations less than .30. The deletion of these items and item 10 would have made very slight improvements to the internal consistency of the scale.

Six items (2, 8, 12, 28, 52, and 56) were rated as unclear or difficult to answer because they did not apply. These questions were about relationship partners, so they were likely rated as difficult to respond to by those without a partner or those with no past relationships. This highlights a potential difficulty of assessing attachment using items that refer to romantic partners. Item 45 (‘To what extent do you want more emotional closeness with your romantic partners than they want with you?’) also received one Question Unclear response. The comment for it stated that the participant and his or her partner have the same emotional closeness for each other. It should be noted that this situation could have been captured by this participant using the ‘not at all option’ for that particular question. Item 10 (‘How vigilant are you to potential threats to your safety and well-being?’) received two Question Unclear responses. One person indicated not knowing the meaning of 'vigilant' and the other person indicated difficulty understanding the type of threat referred to by the question. Given these difficulties and its poor psychometric properties noted earlier, this item was not used in scoring this subscale. It should be noted that this led to only a very slight improvement to the subscale's internal consistency (i.e., alpha changed from .920 to .921). One other change is suggested. Item 20 (‘When you do not have support from others, how capable are you of coping with challenges on your own?’) was a reverse scored item and was one of the items with a low correlation with the other items in the scale. In future administrations of the measure, it may be helpful to reword it in the opposite direction so that it more directly reflects attachment anxiety (i.e., ‘capable’ changed to ‘incapable’).

The internal consistency of the Avoidance subscale was .81 (95% C.I. = .73-.88). The reverse scored item 46 had a small negative item-total correlation (-.15). There were seven other items (16, 17, 36, 38, 50, 53, and 57) that had item-total correlations less than .30. In all of these cases, dropping the item would have only slightly increased the internal consistency of the scale.

The reverse scored avoidance item 9 (“How helpful is it for you to turn to your romantic partner in times of need?”) received one Question Unclear response. The comment about it indicated the participant believed it did not apply. Similar to what was noted earlier, this likely reflects difficulty responding to a question about a romantic partner when either not having one or having little experience with one. Item 36 (‘When faced with upsetting thoughts and memories, how likely is it that you would try to block them out or ignore them?’) also received a Question Unclear response. The comment for it indicated that the participant tried this approach, but that it does not always work. The participant asked whether the question was about trying to use this approach or the actual outcome of the approach.

Five modifications are suggested for the Avoidance subscale. As noted earlier, the reverse scored item 46 (‘How enjoyable do you find activities that are new and challenging?’) had a negative correlation with the total subscale score. This item was not used in scoring this measure. This change improved the scales internal consistency to .83 (95% C.I. = .75 – .89). In future administrations of the measure, it is suggested that the item's direction be changed to better capture the original intent underlying the item (i.e., ‘How unenjoyable do you find activities that are new and challenging?’). Item 16 (‘When you want help and it is not available, how frustrated do you get?’) had a very low item-total correlation (i.e., .04).
Its focus on frustration in response to the absence of help may be more relevant to anxiety than to avoidance. Rewording it to capture the original idea related to experiencing frustration when having to rely on others is warranted (‘How likely is it that relying on others will lead to frustration?’). Reverse scored item 50 (‘How compassionate are you?’), with an item-total correlation of .10, seems to capture a characteristic of attachment security rather than attachment avoidance. It is suggested that it be changed to capture the idea of placing relatively less value on emotions (‘How much do you value reason over emotion?’). As well, the reverse scored item 17 (‘How reliant on others are you for comfort and reassurance?’), with a .14 item-total correlation, may be improved by rewording it to capture the ability to tolerate the absence of comfort and reassurance (‘How easy is it for you to go without comfort and reassurance from others?’). The reverse scored item 38 (‘How willing are you to recognise and admit your own weaknesses or short-comings?’) also had a low item-total correlation (i.e., .23). This item could potentially be improved by making it a non-reversed scored item by changing the word ‘willing’ to ‘unwilling’.

The internal consistency of the 12-item Disorganized Attachment Scale was .90 (95% C.I. = .85-.94). The item-total correlations were generally high and ranged from .43 to .79. The alpha-if-item-deleted values did not suggest the removal of any items. Six items of the Disorganized Attachment Scale (1, 5, 6, 7, 8, and 9) received the Question Unclear response once. The comments related to these responses suggested that items 1, 7, and 8 were not answered because they did not apply. As they all refer to close relationships or romantic partners, it may be that those without a romantic relationship or history of such relationships find these items difficult to answer. For Item 9 (‘In comparison to your reactions to strangers, how much more fearful are you of romantic partners?’), one participant indicated this question was not answered because of uncertainty about what was feared. Item 5 (‘How dangerous is it to trust romantic partners?’) received a relatively lengthy comment. This participant asked whether the question was about physical or emotional danger. The participant also questioned whether it was about him or her trusting a romantic partner or instead about romantic partners trusting them. The comment for Item 6 (‘How normal is it for you to have traumatic experiences with the people you are close to?’) indicated that the participant did not answer it due to believing that it was inappropriate because he or she had not had a traumatic experience. It should be noted that the first option for responding to this question (‘Not at all normal’) could have captured this situation. However, it is possible that this individual may have interpreted the question as referring to traumatic experiences independent of those he or she is close to. In light of this, rewording the question is worth considering (e.g., changing ‘with’ to ‘involving’). However, retaining the original item may be more desirable in order to maintain consistency between this measure and the wording of the original measure. In light of the psychometric properties of all of the unanswered items and low frequency of difficulty with the items, no changes are suggested regarding the Disorganized Attachment Scale.

Scale descriptive statistics

Descriptive statistics for the scales of the TAB are reported in Table 1. These include the original 32-item Secure Attachment Scale and the 12-item Disorganized Attachment Scale, as well as the slightly modified subscales of the Organized Insecurity Scale described above (i.e., the 35-item Anxiety and 22-item Avoidance subscales). In all cases, scores on the measures represent the average score of all the items belonging to the measure.
Table 1
Descriptive Statistics for the Measures Included in the Tripartite Attachment Battery

<table>
<thead>
<tr>
<th>Measure</th>
<th>M</th>
<th>SD</th>
<th>Minimum</th>
<th>Maximum</th>
<th>Moderate-to-High Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>Secure Attachment Questionnaire</td>
<td>4.79</td>
<td>.60</td>
<td>3.16</td>
<td>5.75</td>
<td>90.6%</td>
</tr>
<tr>
<td>Organized Insecurity Questionnaire</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Anxiety subscale</td>
<td>1.42</td>
<td>.51</td>
<td>.34</td>
<td>2.89</td>
<td>15.1%</td>
</tr>
<tr>
<td>Avoidance subscale</td>
<td>1.80</td>
<td>.45</td>
<td>1.09</td>
<td>3.09</td>
<td>28.3%</td>
</tr>
<tr>
<td>Disorganised Attachment Questionnaire</td>
<td>.86</td>
<td>.68</td>
<td>.00</td>
<td>2.92</td>
<td>5.7%</td>
</tr>
</tbody>
</table>

*This column reports the percentage of participants with scores that are > than the ‘moderate’ response option for each measure (i.e., 4 for the Secure Attachment Questionnaire and 2 for the other scales).

The descriptive statistics generally suggest that on average participants in this study experience some attachment security and low levels of attachment anxiety, attachment avoidance, and disorganized attachment. To further describe the attachment characteristics of the sample, categorical variables were created to indicate the presence of attachment security and the various forms of insecurity. Scores equal to, or greater than, the ‘moderate’ response option for each measure were used for this purpose. For example, those with a score of 4 or more on the Secure Attachment Scale were categorised as having secure attachment. A score of 2 or more was used for the measures reflecting attachment insecurity. As can be seen in Table 1, a large majority of participants were classified as having secure attachment. When considering the measures of attachment insecurity, in all cases a minority of participants were classified as having these forms of attachment insecurity. It should be noted that it was possible to be classified as secure based on responses to the Secure Attachment Scale and be classified as insecure based on scores on the other measures. However, this was rare (e.g., 12.5% of the 42 participants classified as secure were in the moderate to high attachment anxiety category).

DISCUSSION

The TAB developed and evaluated in this research was inspired by Mikulincer and Shaver’s (2007) call ‘for multiple kinds of scales’ (p. 99) relevant to specific modules within their model of attachment-system functioning. Each scale within the TAB included numerous items developed based on several descriptions of the relevant construct, so it is reasonable to expect that they all have good face and content validity. As well, a vast majority of participants did not find the item content difficult to understand, and each scale or subscale had a good or excellent level of internal consistency. Thus, these new scales are promising alternatives to commonly used attachment self-report measures that only assess attachment anxiety and avoidance, such as the ECR and ECR-R. However, small modifications to several items in the new measures may enhance their psychometric properties. These potential modifications were noted in the preceding section and will not be reiterated here. More importantly, additional research regarding the psychometric properties of the new measures is required.

The current study focused on Cronbach’s alpha. While the findings were encouraging, this measure of internal consistency is only accurate when the items within a measure all assess the same construct. Factor analytic investigations of the scales and subscales within the TAB are required in order to determine whether they are unidimensional or multidimensional. Given that the Disorganized Attachment Scale was based on an earlier unidimensional measure (Paetzold et al., 2015), it is likely to be unidimensional as well. However, there are reasons to believe the other measures may be multidimensional. The Secure Attachment Scale was based on the construct of a ‘sense of felt security’ included within the second module of Mikulincer and Shaver (2007) model. However, items were also developed by examining other broader descriptions of attachment security not directly included in this model. For example, Maunder and Hunter (2012) noted that securely attached individuals tend to be
empathic and psychologically minded, so items were developed to reflect this conceptualisation of attachment security. These other features of attachment security might form a factor that is distinct from the items directly related to the second module of Mikulincer and Shaver’s model. As well, the subscales of the Organized Insecurity Scale may also be multidimensional as they include items related to the main attachment dimensions (i.e., anxiety and avoidance) as well as items related to their associated secondary attachment strategies (i.e., hyperactivation and deactivation, respectively). Thus, this scale might include separate anxiety, avoidance, hyperactivation, and deactivation factors.

In addition to factor analytic investigations of the scale and subscales in the TAB, additional research is needed to evaluate their reliability (i.e., test-retest) and validity (i.e., construct, incremental, and predictive). Two additional issues should be noted. First, the TAB currently includes 101 items. This likely makes the TAB impractical for use in many clinical and research contexts. Additional research aimed at developing shorter versions of its scales and subscales is warranted. Second, the Disorganized Attachment Scale was included within the TAB because Mikulincer and Shaver (2007) suggested the need for a measure of disorganised attachment that could differentiate between those with disorganized attachment strategies and those with organised forms of attachment insecurity. In the current study, scores on the Disorganized Attachment Scale were very low, and only 5.7% of participants had a score on this measure that could be considered as falling above the ‘moderate’ range. In light of this, research with large clinical samples, which would be expected to have wider and higher ranges of responses to its items, may be required in order to determine whether the Disorganized Attachment Scale can identify individuals with disorganized forms of attachment insecurity. Nonetheless, the current preliminary findings indicate that it and the other self-report measures included within the TAB are a promising method of assessing individual differences in adult attachment characteristics. Additional psychometric evaluations of these measures are required before their use in clinical and research settings.

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I have experienced heartache, grief, hallucinations, and the chaos of my mismanaged altered state on my personal and academic life as a student. I think all too often people forget that those living with a mental health disorder, diagnosis, or issue with their health are unique and singular in the expression and needs as individuals, and people ingratiated into a large system of care. We all require different forms of treatment, support, and often help. This is why I will never understand why there are so many niches and cliques out there championing mental health reform yet disabling the voices of people with different sets of needs, opinions, and ideas on how to advance the discourse further. Our voices are diverse and should be diverse. Our voices should reflect our needs as professionals and consumers. Only when needs are truly articulated will professionals, and peers alike, reform the system progressively. It is up to all of us, to be clear about our needs, and throw our support to ongoing research to drive the discourse of mental health for all people needing understanding forward (Speed, 2006). This is why I believe, and still do, in bridging the gaps not only in academia, but among the prosumer, peer, and professional community of all people interested in improving the mental health system, with or without a diagnosis, requiring medication or just a supportive friend. Our voices must be as diverse as possible, instead focused on the agents which limit and marginalise us further away from our goals and dreams of tomorrow (Relojo, 2018).

As a psychotherapist, one of the most troubling aspects of providing safe, patient-focused, effective therapy for patients in radically altered states is balancing the benefits of continuing with ongoing treatment due to increasing concerns of risk of harm from their compromised or shifting mental status. Let me be perfectly clear here: I truly believe some people have spiritual emergencies which can be treated with psychotherapy without medication and even with the support of a peer who has similar lived experience in the community without forced treatment. I am also a seasoned mental health therapist who knows when someone is an acute psychiatric crisis running the risk of self-harm or exacting harm to others as a direct or indirect result of their weakened mental status (Mangnall & Yurkovich, 2008). There must be a decisive change in their treatment pathway and course of therapy. This course of action takes place when we continue the same treatment and wait for progress or halt care in favour of a more restricted treatment setting e.g., in patient or more intense treatment milieu, continues to a big source of conflict in the mental health community (Form, 2012). Practitioners are plagued with patient complaints, family petitions, and court orders which further complicate the
provision of psychotherapy. In the end, most patients want the least restrictive and intrusive course of treatment available and rightfully so.

The line I am referring to has been and continues to be outlined by the letter of the law and mental health laws in the US. These laws, for better or worse, make it as clear as day when someone is at immediate risk of serious harm to himself or others. Upon crossing this metaphysical line in the clinical realm, these folks at risk of immediate harm need to be hospitalised and/or assessed for further risk of harm. There really is no grey area here. To do otherwise is negligence. Of course, sometimes someone can be at risk of harming themselves, having a spiritual emergency, and still not require in-patient hospitalisation or a psychiatric evaluation and observation. It doesn't matter, though. When the risk is this high, we simply shouldn't be gambling with life.

Self-harm is the act of deliberately inflicting pain and damage to your own body. Think about it: as therapists, we assess risk all the time. If we are doing our jobs right and are truly person-centred, we should be using every technique in our toolkit to treat our patients where they are at regardless of how society views mental health diagnosis. Again, it doesn't matter what the world believes a psychiatric label means in the context of providing therapy, what works and is the right fit for our clients in the context of their disorder and circumstance. However, somewhere along the way these new hot emerging trends in psychotherapy and peer work are being thrown around. They are the ‘in’ therapies, the hot new miracle modalities which are going to bring about better outcomes and are more humane.

*Debunking the myth of the miracle modality in psychotherapy*

I have made no secret about my scepticism in the clinical value of new research in mental health in the last decade. I am just not certain we are targeting the right areas or bodies of underdeveloped research and moving forward in the important or needed areas to truly impact mental health as a discourse or field of enquiry. ACT (acceptance and commitment therapy) and other hot interventions like dialogical therapies, while sharing some commonalities, also share what has truly become a cancer in mental health research. This cancer, located at the metaphysical polarities of the clinical spectrum for accepted, empirical, and ‘evidence-based’ research, continues to eat away, and carve out the discourse of mental health treatment from within. Therapists are all talking about ACT, a ‘third wave’ behaviour therapy approach with a supposedly ‘expanded perspective on how to guide clients to skilfully self-regulate emotional distress and conflicting states of mind’, or at least, that is what all the literature suggests this new so-called approach to same age-old problematic experiences therapists encounter when treating their patients.

These are patients, according to the literature on ACT (e.g., Hayes et al., 2006), who experience affective dysregulation from a new or existing anxiety, posttraumatic stress disorder (PTSD), depression diagnosis and/or deep interpersonal conflict (Boltivets & Relojo, 2019). The theory behind ACT is a framework which posits through the application of a traditional mindfulness exercises and intensive psychotherapy targeting specific cognitive processes, the patient will experience relief through acceptance of private experiences; active cognitive diffusion; being present; and self as context. When all of these targeted modalities are mobilised in the course of psychotherapy, patients supposedly become more flexible in their interpersonal kinship networks and other interactions in their professional work and personal lives. Building upon the assumption that firstly, a positive increase in prosocial interactions will result in the cultivation of value-based behaviours (Caleb et al., 2019). ACT theoretical underpinnings go a layer deeper. The literature suggests this algorithm for conducting therapy will yield further patient insight into their own personal set of values, developing a stronger commitment to positive action and behaviour (Schoendorff & Steinwachs, 2012). This chain reaction yield, what ACT terms, the behavioural and cognitive activation which contributes to the success of patients experiencing therapeutic gains in the course of their treatment.

The framework of ACT builds upon basic mindfulness. While I doubt many therapists would minimise the importance of patients understanding basic mindfulness or even a nuanced deep and complex awareness of self-awareness tools, the use and validity of research confirming this existing modality is
already widely accepted and utilised across the board by therapists in mental health. So, what’s really new then? Self-acceptance? I haven’t met a social worker, psychologist or psychiatrist that hasn’t, in the course of treating anxiety, depression, and PTSD, forgotten to teach self-acceptance strategies when the opportunity presented itself in the course of their patients’ treatment (Gagani et al., 2016). The next wheel I like to suggest isn’t so inventive is active cognitive diffusion (Dobrev, 2001). Even more problematic, cognitive diffusion, which has patients confront or raise problematic areas of their dysfunction or conflict without affective state escalation or agitation isn’t even accepted as completely effective in treating the symptoms of these disorders.

I have seen first-hand, both experienced and inexperienced therapists clumsily use this technique, and sessions collapse shortly after as their patients unravel, become irritated, and begin to flood with emotion and negative sense memory. So, if this technique is so delicate and difficult to apply in practice, why incorporate it into this already complex and overly technical so-called ACT paradigm. I am assuming, much of this has to do with the assumption that ACT-trained therapists will go through rigorous training and attend every webinar possible throughout their careers and tenure or practicing ACT. The final two underpinnings are in my opinion, the basic skills taught in social work 101. Maybe I am missing something here? Or, just maybe, contextualising the self in more meaningful and meaning-laden terms is what we are already doing as therapists (Kuha et al., 2018). So many of these so called new and exciting modalities we chit-chat about at the water cooler and gloat about to our colleagues should already be in our tool kit for practicing psychotherapy.

**Owning our craft**

I seem to be unclear as to what’s new here in terms of practicing person-centred therapy. Clinicians like myself are finding themselves sitting at the same round table discussing the same techniques and theories from graduate school. Maybe I am a brilliant clinician, or just maybe, I've taken the time to truly be person-centred, read a diagnosis for what it is, and apply my existing and ever broadening skill set to my patients and experience good outcomes without calling upon the buzz of a new acronym or miracle modality. I get it, we all do it, and want to talk about our skills in broad colourful strokes of positive regard, but we therapists should also be a little humbler and learn our craft from the moment we commit to the helping process. Instead, we blame our shortcomings and inability to successfully treat our patients on our incomplete education of new terminology and the next, ‘in’ therapy (Bautista et al., 2018).

The acuity and esoteric nature of these hot, miracle modalities continue to overshadow what we practitioners are setting out to do. Instead of practitioners learning a vast, eclectic and broad skill set to treat all diagnosable or treatable conditions, the task at hand has become estranged from healing and the helping process. Alas, clinicians are boxed into a small physiological space for learning new research and identifying gaps in current mental health trends and community-based needs. In a sense, these mental health clinician-crats (and those that decide what techniques are in, and which are out) are ruling out and marginalizing hope and healing for a segment of the population which could benefit and stand to profit from advancing research forward across the board and not limiting future data collection to the in treatments and those practiced by those with more influence in the field than intellectual credence.

**Interdisciplinary parity: Which is the right clinical pathway forward?**

As a social worker, I sit on a vast, layered, and profoundly broader body of knowledge, theoretical understanding and foundation of information than some other more narrow-focused disciplines out there in mental health. This is why I believe it is up to social workers, prosumers (people with lived experience and professional training) and other more ornate backgrounds and experiences to jettison research into the next era. In order to truly help people, the mental health community needs to better define what ‘help’ means for people with a mental health disorder. We work in a multidisciplinary field rife with different approaches and different languages all targeting the same issue, treating mental
illness or mitigating the impact of the disorder by providing a service to people in the public mental health system. Maybe this is the problem. By in large, practitioners are working in isolation at the micro level within a larger system of care. This is a bit counterintuitive to reform an already mixed up way of managing the entire way we do things in mental health (Jayakody et al., 2000)

In the end, there are so many different perspectives on what constitutes best practice in mental health treatment. So, what is and is not best practice will continue to be hotly contested until the structure of the system is changed as well as what the system defines as common indicators of progress and what a good outcome is and is not. Thinking about progress is critical for both consumers and practitioners, as well as researchers and those with a vested interest in creating space in the field for creative pathways to empowering people with a diagnosis to be motivated in their recovery and truly track in their own terms, their success in treatment.

In therapeutic settings, therapists monitor the progress of their patients. This is done in several ways, depending on the type of therapy (for example, the modality, setting and treatment milieu) and needs to also be taught to consumers of treatment, so both practitioner and patient can work more closely and in greater clinical harmony. For most therapists, in private practice, or in the public mental health system, there are already methods of tracking progress, without using complex, cumbersome, and expensive treatment modalities to implement and train staff. But, ultimately, these measures, are clumsy and at times, disorganised approach to tracking recovery, and its converse, the over-intellectualized, ornate, and highly prescribed new, hip, modalities, which are so difficult to train with enough latitude to reach the mass base of practitioners, that identifying a common language to measure client and collateral reporting during interdisciplinary meetings, or even indiscipline collaboration becomes impossible and presents yet another impasse to treatment.

The DSM-5, and other manuals, research, can only provide generic research for diagnosis, Meaning, research and prognosis is measured in broad strokes, and is based on studies, populations, circumstances, but is limited in its ability to truly put numbers and language around a person-centred prognosis for people with a mental health disorder. This is a problem for people who want to know what's ahead, plan for it, and what to expect, in their own terms, while living out their life with a diagnosis. Underneath diagnosis, and even less researched, is rate-of-recovery, and the speed (duration of illness and the symptoms) of a person to experience progress and relief from their symptoms. I recommend, without further delay, immediate research and studies charged with the measurement of recovery, in very real terms, that truly allows patients and practitioners to know what to expect, when to expect it, and plan so problems can be addressed before they occur.

Ethical considerations for taking back the academy and research

I am very serious about the set of propositions I am laying out here. This is part of a restatement of claims I have made before, but this article needs to signal a giant tectonic shift in how we do things in our field. So, who really is charged with appraising the clinical value of our research these days? Who is really validating the claims researchers are making? Scholarly work, studies, published papers – all these outlets and mediums for disseminating good information in our field have bias. We must accept and own these biases. Peer-reviewed work, blinded, however we tell ourselves our work is pure, intellectually and ethically solvent, needs to be overhauled if not torn down at the very ground floor we built the discourse on before we can call ourselves truly unbiased, and platonic in our commitment to unassailable research in mental health. Let's be totally honest here.

Endorsement of peer work in academia is as rife with political intrigue and back door funnelling of money and funding as the White House. The difference with academia is that we refuse to talk about it. And there are no television dramas depicting our ethical and moral battles in the wings of institutions and library halls. Similar to the perseverance of our patients, we must redirect the very meaning-making and re-target the areas of research which aren't talked about: the missing or underdeveloped areas of research which continue to confound and contest the very bodies of knowledge we hold as truly
incontestable (Lacasse, 2014). Well, if we are really being honest about what we do in mental health, we would do just that. No modality, no study, no manuscript for submission is truly above reproach. There are taboo areas of how we do things as researchers that are problematic (Mohr et al., 2017).

If we do not overhaul and turn academia, pedagogy and practice on its head sooner rather than later we are headed for disaster. I would hazard to say the destruction of this field as we know it as an accepted discourse of intellectual enquiry. So, before it is too late, ask questions, continue to go against the current, until the very armamentarium of new research moves with us towards a brighter, healthier vistas of tomorrow.

The extended metaphor of the war time therapist

I am not gesturing to being clairvoyant or the most versatile and experienced practitioner overnight. I am going to suggest though that we should begin to put together the basic rubric for what can best considered best practices for psychotherapy despite the varied, and micro nature of the provision of care in some cases. For each micro interaction, each session, group, and generally, way of handling the practice of mental health treatment shares indisputable commonalities based on the principles of balancing the protection of life with the risk of failing, experiencing relief and progress in the wake of distress and the possibility of relapse. In this vein, and a few things come to mind, we can begin to think of best practice of micro and patient-centred approaches through a very macro, sociological, and human rights perspective for carrying out the provision of mental health treatment. Let’s break it down, psychotherapy crosses several intersections in society when it comes to governance, ethics, plight, human rights, and the need for all people to live a life buoyant with self-determination and good health. All of these intersections mark the medium for measuring good practice. For the purposes of this discussion, let us think of the office of the president, when it comes evaluating the indicators, we are all familiar with to measure the success of the president and the nature of his role as a leader, protector, and model for health among the citizenry. In times of war, or extreme peril. When the nation state is altered radically and requires guidance, repair, and stabilisation, we term our leaders war time war time presidents.

These are presidents described as strong, persevering, and able to lead during times of extreme national distress or even division. These presidents unify the populace around them. If you’ve never struggled with a major mental health disorder, or issue in your life, you might not liken disorder to war, but I do. Every day for me is a war against my illness, and I am in it to win it or else suffer the tragic unfortunate process of florid psychosis in full bloom (Addington et al., 2003). As a practicing social worker (really, the reader need only think of a mental health clinician), it is my duty, my responsibility to teach the people I work with to carry on despite their plight. My clients suffer from a full range of mental health disorders, all complicating their lives to the point where the best route to health may be too obfuscated to identify at first glance. This is where I come in, and this where I thrive. I am a war time social worker. Yes, this is a thing, if a president can lead the nation to peace and victory. I can lead my clients to health and wellness out of the annals of disaster, grief, or any of the endless symptoms people can become stricken with under the terror of mental illnesses (Pilao et al., 2017). This is serious, this is also very important. War time social work is the micro level counterpart of the war time leaders in our nation’s long history of challenging wrongers throughout the world. Instead, I challenge my clients to confront their evils, inside and many times in their interpersonal landscapes when their social world gets out of hand. I am now challenging all social workers, psychologists, and clinicians in mental health to take on a new acronym and designation as a war time clinician. Like the point person who owns their case (Guttman, 2019). The war time social worker is you’re go to clinician when the odds are pitted against the client to recover. There is a reason why you bring on the war time social worker into the clinical picture. Because; serious harm was done, endured, and must be righted if the client is to survive or return to their baseline. The war time social worker has a job, a great task ahead.

They are charged with not just a simple intervention (Griner & Smith, 2006). They are charged with major restorative clinical work and progress. If this is not experienced or produced, the client is surely in
peril. War time social workers are as savvy in their skills as they are speedy in their writing to produce brilliant outcomes. Their skills outpace the constraints of most people's movements and the speed of societal waves to interfere or complicate the lives of their clients. In fact, the war time social worker mobilises the community and its resources around and for their client. They stretch and use resources in a way that creates new opportunities for their clients. I have been a war time social worker for my clients’ time and again. I have had to manipulate billing to justify needed services so my clients would be met with consistently and frequently when they needed it the most (Pinto-Coelho & Relojo, 2017). I have gone to war for my clients to secure housing, bridge connections and natural supports, and create safety plans that are so radical, they transcend the bounds of conventional status changes around the protection of health. I’ve held meetings across multiple systems until the right person in the government was reached that could bring about the needed oversight across systems to ensure my clients would not fall through the cracks of treatment when they need it the most. So, I ask you: what kind of therapist are you? Are you willing to escape the confinement of conventional clinical wisdom and depart from the textbook? Or are you going to sit idly by while your client falls apart, when the minimum work just doesn't cut it? I am encouraging you all, with every breath I can spare, to expel out of your lungs the disease of inactivity and traditionalist thinking when it comes to clinical practice. Understand the intersections that guide our lives and don't let the lines get blurred when it comes to intervening in the most effective way possible, every time.

CONCLUSION

I believe that research must be wholly beneficial to the public, raising the discourse to new heights. Knowledge must be free and rife with regard for society's welfare. As a prosumer and mental health interventionist researcher, I have sought nothing but a bold new model that works for the masses (Chavez-Valdez et al., 2019). We need therapy and practitioners utilising methods which are both targeted, yet beneficial to all conditions and diagnosable disorders (impairments, both environmental and developmental, and, as this theory unfolds, at the root of it all: biological).

My theory here is that we must adhere to natural laws and revise life within the limits of our biological wherewithal as people. Therefore, I termed Biologic theory as such. Biologic theory is totalising and yet person-centred. Sitting atop a canon of research that suggests empirical-driven, evidence-based treatment must be as dichotomous as it is episodic. I am dispensing a new vast continuum of working knowledge. Both mobilised and charged with the provision of care, treatment, and elaboration of mental health under the auspices of this new theory. I now bring into being a new power: (novi virtutem) to revise the discourse further.

In my opinion, there are no limits and no frontier too unmanageable. Only restricted and subsumed by the limit of our imaginations. Biologic theory inserts itself with cautious regard for deterministic philosophy and the real limits imposed by nature and the finality of life itself. This is a prosumer approach to driving treatment forward. This is the age of the rise of the prosumer. There is no question that the best and most effective practitioners must have an internal, real, and first-hand experiential knowledge of how to implement this theory in practice.

The ultimate and proximate implications are thus not process- or content-driven, but rather wholly and inherently biological. Nature sets the quotient for change. Self-directed, internal, spiritual, and external, this is the person in their environment. The limits of our world mark the weak points and the strengths of each person. Our knowledge only drives us to the apex of understanding and is not defined by the process or content of the work. This means that only the therapist's experience practicing and the breadth of how the work stems from lived experience – as biological, natural, and interconnected people fundamentally are the real and final markers for outcomes and people's journeys in life.

Instead of gesturing to overt or covert limitations, biologic theory makes use of them instead of expelling determinism for its obvious reductionist and ableist underpinnings. Biologic theory has only two basic philosophical assumptions. These assumptions are: (a) human capacity for change is limited by the
biological nature of the bodies' medical and psychiatric status and (b) all people are unique in their potential for change.

This dialectical approach satisfies not only deterministic, but categorical, diagnostic uses for treatment and sets the stage for empirical evidence to assemble a legitimate canon of unbiased and differentiated future research. Even self-deterministic views of people are satisfied and incorporated into the grand schema connecting biologic theory.

From the untreatable to the most canonical expressions of mental health disorders, to acute and chronic conditions rooted in trauma, biologic theory nurtures previous research and cultivates the conditions for lasting impact in definable treatment. This means that the limits of our capacity to retract, redirect or (more biologically said) heal are what this theory considers the aim of real mental health treatment. For people to be as successful in their mental hygiene as clinically possible is both reciprocal to the material expression of their very DNA for healing, and, this theory sharply implies, driven by the reigns of the prosumer to enact this theory in practice.

For the prosumer: Operating the therapist's clinical scalpel is as important as their lens and gaze for interpreting the person being treated with biological needs for healing. This is not based on content or process, but value. This value, for better or worse, must never be calculated for state-sponsored selection for rehabilitation and assessment of greater worth to society. Instead, this theory must be applied to society itself and the macro-biological systems existent, ripe for change and urgent reform.

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Use of animation to improve motivation and achievement levels among primary school students

Lucy Tambi & Mohd Mahzan Awang
National University of Malaysia
Correspondence: lucytambi84@gmail.com

Teaching and learning on how to acquire skills have been traditionally limited the students' potential due to emphasis on rote learning. Learning by current developments such as the use of animation is one approach that is not only able to attract, but can enhance students' understanding of the events of history. Interesting animation display also allows students to use a variety of skills in the learning process. This quantitative study was conducted to examine the relationship between learning History course through animation techniques to motivation and achievement. The primary objective of the study is to identify the use of animation for learning history among students. Another objective of this study was to identify the levels of student motivation and achievement in History lessons. A total of 46 students were involved (24 boys and 22 girls) who study in Level 2 at a primary school in Zone Debak, Betong, and Sarawak in Malaysia.

Keywords: animation; learning; motivation; student achievement; teaching strategy
The rapid changes and the impact of globalisation have changed the mode of teaching and learning within the Malaysian education system. This change is in line with the characteristics of savvy generation Information and Communication Technology (ICT), since the Malaysian education system is at par with the other countries. Malaysian Education Development Plan (2013–2025) also outlined the ICT as an alternative to improve the quality of teaching as well as a medium to facilitate more accessible teaching method (Boltivets et al., 2018) History is one of the subjects that not only need to be learned but also understood and appreciated by every Malaysian citizen. The importance of this subject in cultivating, nurturing and spreading the spirit of patriotism has made it a compulsory subject for the Malaysian Certificate of Education (SPM, Sijil Pelajaran Malaysia) since 2012. Indeed, History subject has also been taught at the primary level since 2014. However, past studies have shown that several factors contribute to poor performance in this subject, such as lack of interests among students (Leng et al., 2013). This situation is further exacerbated when the students themselves have grown up assuming that this subject is boring because it requires a lot of reading and it is difficult to acquire good marks. There are also studies which examined the causes of achievement and lack of interest in History subject as a result of less creative teachers (Ahmad et al., 2015) and teacher-centric mode of teaching (Nielsen et al., 2013).

The use of animation as a medium of instruction to change the learning environment to learning that is interactive and fun has been shown to have beneficial effects in the classroom (e.g., Stith, 2004). The excitement of learning, in turn, will increase student motivation and achievement for certain subjects using a range of learning tools (Ackland-Tilbrook & Warland, 2015). Efforts to strengthen the effectiveness of teaching and learning have proven be a necessity nowadays (Relojo, 2011), parallel with the development of education. Using a variety of teaching and learning methods, particularly in the form of animation, teaching and learning environment can be fun and interesting among students. This is because effective learning can be achieved with the involvement of all the senses of human sensitivity through a combination of multimedia elements such as text, audio, video, and graphics (Tews et al., 2015). Therefore, approaches and theories of education should be implemented in the design of animation; either moving or static effectively with the integration of teaching strategies. This is to ensure the delivery of teaching and learning that can increase the quality of knowledge and motivation of students towards learning (Kuha et al., 2018). The use of animation in learning is chosen as it is easier to understand the content of learning what they have read (Underwood & Pearson, 2004) especially for History. Learning by using computer animation can provide an opportunity for students to learn in a dynamic and interactive fun learning. Hence, the use of multimedia for learning to use animation is one of the most important factors to make learning become more interesting.

Various studies on the use of information and communication technologies were done both inside and outside of Malaysia. These include studies on the use of animation (Mayer, 2002), the flipped classroom model (Persky, 2015) and visual multimedia (Angeli & Tsaggari, 2016; Uluyol & Şahin, 2016; Umar & Yusoff, 2014; Yunus & Suliman, 2014) and its impact on teaching and facilitation. These studies have demonstrated that ICT can enhance student achievement. ICT is an alternative to conventional teaching methods and is a two-way learning process. In addition, the previous studies also showed the implementation of ICT is mostly done for Science (Klieger et al., 2010), English (Yunus & Suliman, 2014), and Islamic Education (Nawi et al., 2014). By and large, there is a scarcity of studies on the use of ICT for History lessons. Thus, studies on the relationship between the animation in History subject with students’ motivation and achievement should be carried out given the importance of mastering the subjects of History, especially in primary schools. The results of this study can benefit teachers to plan and organise a strategy to diversify teaching methods and facilitation for History subject. Therefore, this study aimed to see the relevance of learning History through animation techniques for motivation and achievement.
The objectives of this study are to see the relevance of learning history through animation techniques for motivation and achievement. In particular the objectives of this study are two-fold: (a) identify the use of animation for learning history among students; and (b) identify the level of motivation and achievement in the subjects of History.

**Animation in the History subject**

Previous studies show positive impact of using animation in teaching and facilitation of various subjects and at various ages. The application of animation in education is an important point that changed the way of learning and at the same time have the effect of increasing understanding and motivation. The use of animation in teaching and facilitating innovation in learning styles of teachers who take advantage of both teachers and students (Hawk & Shah, 2007). Changes to how to deliver subject content are important to increase the understanding of students and quality of education. In addition, the use of animation can also present content clearly even complex learning through different methods and relevant to current changes. Teachers must be flexible in diversifying interaction between students with different teaching methods and facilitation to ensure that learning takes place.

Similarly, studies on the use of animation have been shown to be effective especially in teaching listening skills. As students listen and view the animation in the form of concrete such in storytelling, they will understand the series of events better. Students were excited and curious in strings of storytelling delivered. The high motivation was to increase the interest of students and have shown an increase in the skills of listening, retell and showed an improvement in their performance assessments. Davies (2002) also found the animation to enhance students' understanding. The use of animation can provide a positive impact on students' academic achievement. The use of animation – whereby it includes various elements to make teaching interesting – can deliver significant student engagement. When students understand the topics presented, they will be able to explain the topic in their own words than traditional methods that rely more rote methods. Learning can be maintained through interactive activities (Crawford, 2001). The use of multimedia presentations such as video, music and images to help improve the retention rate of the information submitted in teaching and facilitation. 3D-shaped animations enhance the understanding of students, especially at the primary level. The animation is one approach that is particularly suitable for primary and secondary schools to explain in graphic design and visual content in the form of abstract subjects.

**Animation in improving student motivation**

Hanifah (2015) found an animated display to increase the interest and curiosity of what will be shown next. This causes students to give full attention to what is seen on the display. Attractive and interactive animations also spark interest in students to repeat what they hear. Through the use of animation as well, more teachers are flexible to teach a subject in accordance with the level of intelligence of students. If the students have not yet reached the learning objectives, the teachers can repeat the animation display which only involves the use of technology (Lazar & Panisoara, 2018). This finding is also in line with Johnson et al., (2000) that demonstrates the use of animation in teaching and learning to work on improving motivation and interest in learning. This can be seen through the response and behaviour of students. The use of animation has facilitated an abstract concept for analysis to small parts move through the display illustrations and simple text for effective delivery. As a result, when tested, there are changes in the level of knowledge among students. In addition, Neumann et al. (2011) observed an increase in terms of interest and academic achievement after the animation used as one approach (Bautista et al., 2018). In his study, combined with animation cooperative learning method, which is not an individualistic learning curve. Visually displayed through this learning method has increased interest among students. Interest will trigger the motivation to finally seen through academic
achievement after the assessment. Interest in the subject of history can be fostered through the use of multimedia, namely audio and composite video, images and movies (Kraining, 2010). Existing interest in the students working on their creativity and arouse curiosity to find information or other historical sources, such as photographs and artefacts.

Therefore, motivation is also one of the factors that can predict a student's achievement (Greene et al., 2004). Motivation in this study refers to the interest in the subjects of history and the ability to push themselves to understand and appreciate the story of the nation's history. The effect of this motivation can be seen through the improvement of knowledge of students in examinations.

Animation in improving student achievement

Hamzat et al. (2017) in his study also shows that animation can increase student achievement in practical work. Students were exposed to computer-based learning using animation methods for Biology. Students can learn skills through the exciting animated display. The results also showed no differences in gender outcomes. The use of said animation tools is gender-friendly. The success of learning occurs when students can use the senses in interaction and provide a response to the submission of a teacher.

The use of animation that has short-text, sound, colour illustrations and movement the added value that can help students in understanding the verbal presentation by the teacher. Animation has been used in teaching and learning as a different approach to learning sessions are no longer dull (Yunus & Suliman, 2014). In addition, Kliger et al., (2010) noted that laptops can contribute significantly to teachers' professional and personal development and to a shift from teacher-centred to student-centred teaching. One-to-One laptops also changed the schools' digital culture. The findings are important for designing concepts and models for professional development when introducing technological innovation into the educational system. The use of various methods of learning is likely to attract students to study History. The use of information technology at the moment is easy for students to access information quickly. The use of multimedia will provide opportunities for students active in learning history (Kraining, 2010). Trend education at this time is to use multimedia materials. The use of multimedia is not to replace the direct role of the teacher as a teacher but as a facilitator in teaching and learning (Zachary, 2002). The use of multimedia would avoid only teacher-centred learning.

METHODOLOGY

Krecjie & Morgan's (1970) table was used to obtain a representative sample with 95% confidence level and 5% error. Minimum sample must be taken by 40. This study involved participants, which in line with Krecjie & Morgan. This study used a questionnaire using a sample of 46 Level 2 primary school students as participants. The instrument is divided into four sections. Part 1 is the participant's demographic; Part 2 is the use of animation in teaching and learning; Part 3 is the students' motivation to use animation in teaching and learning history; and Part 4 is the achievement of students in the History subject. The questionnaire in the form of a five-point Likert's scale has been used to collect data from respondents. Data were analysed using descriptive analysis of the mean and the standard deviation. The descriptive analysis based on frequency, percentage, mean and standard deviation were used to analyse the use of animation in the level of motivation and student achievement tests. Participants were 46 pupils (100.0%) of 24 were males (52.2%) and 22 were females (47.8%). Participants' age are as follows: 10 years old (n = 19); 11 years old (n = 16); and 12 years old (n = 11).
Levels of use of animations in teaching and learning were analysed using descriptive statistics. The analysis results are shown in Table 4.1. Based on the results obtained, it was found that respondents have the highest use of animation to the statement that: 'I studied the History of comic-shaped aids use two hours a week.' ($M = 4.74$, $SD = 0.444$). The statement has the lowest mean score was: 'I learn History through video screenings twice a week.' ($M = 4.52$, $SD = 0.505$). However, the mean score is still within the category of high-level perception. This shows that the students in this study showed a high level of use of animation to any statement regarding the use of animation in teaching and learning History subject. Motivating students to use animation in the history learning has also been analysed using descriptive statistics. Based on the results of the analysis are shown in Table 1, showed the statement: 'I am more interested in studying the history subject if taught using the comics than the text length.' ($M = 4.72$, $SD = 0.455$) had the highest mean score. Meanwhile, a statement that has the lowest score was "I often do my history revision using videos at home." ($M = 4.22$, $SD = 0.417$).

Table 1

<table>
<thead>
<tr>
<th>Constructs</th>
<th>$\bar{x}$</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>I understood the events history when shown in the form of comics.</td>
<td>4.65</td>
<td>.482</td>
</tr>
<tr>
<td>I can understand the order of events shown through comics History.</td>
<td>4.59</td>
<td>.498</td>
</tr>
<tr>
<td>I was more interested in studying the history subject if taught using a comic than a long text.</td>
<td>4.72</td>
<td>.455</td>
</tr>
<tr>
<td>I can answer this question better test history after the teacher uses comics to teach history.</td>
<td>4.30</td>
<td>.465</td>
</tr>
<tr>
<td>I can retell the events of history according to the order of events after learning to use comics.</td>
<td>4.37</td>
<td>.488</td>
</tr>
<tr>
<td>I often use the revision history of comics alone at home.</td>
<td>4.30</td>
<td>.465</td>
</tr>
<tr>
<td>I understood the events history when shown in the video.</td>
<td>4.67</td>
<td>.474</td>
</tr>
<tr>
<td>I can understand the order of events shown in the video.</td>
<td>4.52</td>
<td>.505</td>
</tr>
<tr>
<td>I was more interested in studying the history subject if taught using video.</td>
<td>4.61</td>
<td>.493</td>
</tr>
<tr>
<td>I can answer this question better test history after teachers use video displays to teach History.</td>
<td>4.33</td>
<td>.474</td>
</tr>
<tr>
<td>I can retell the events of history according to the order of events after watching the video.</td>
<td>4.30</td>
<td>.465</td>
</tr>
<tr>
<td>I often do my history revision using videos at home.</td>
<td>4.22</td>
<td>.417</td>
</tr>
</tbody>
</table>
Results reveal that all passed the test of History. A total of 30 students have obtained a grade of B (65.2%). This was followed by students who obtained Grade A total of 10 students (21.7%) and Grade C among six students (13.0%). This shows the level of motivation among students who use animation to learn History subject have contributed to good marks, simple and brilliant. None of the participants failed in this subject after using the method of learning in form of animation.

Table 2
Final Exam Score for Year 2019 Subject History

<table>
<thead>
<tr>
<th>Scores</th>
<th>Frequency</th>
<th>%</th>
<th>Cumulative %</th>
</tr>
</thead>
<tbody>
<tr>
<td>80–100</td>
<td>10</td>
<td>21.7</td>
<td>21.7</td>
</tr>
<tr>
<td>65–79</td>
<td>30</td>
<td>65.2</td>
<td>87</td>
</tr>
<tr>
<td>50–64</td>
<td>6</td>
<td>13.0</td>
<td>100</td>
</tr>
<tr>
<td>Total</td>
<td>46</td>
<td>100</td>
<td>–</td>
</tr>
</tbody>
</table>

DISCUSSION

Findings showed that the level of motivation of students in the use of animation to learn History subject has provided better performance than learning only using textbooks which have been recorded 100.0% pass marks for Level 2. The highest mean score ($M = 4.72, SD = 0.455$). As can be seen from Table 2, it shows that participants have a very high interest towards the subject of history after using animated form. These results are in line with Davies (2002) also found the animation to enhance students' understanding. The analysis also showed that the level of study regularly using animation for two hours a week is also at a high rate. The findings show that the use of comic twice a week has obtain interpretation high score ($M = 4.74, SD = 0.444$) as well as the use of animation in the form of video which also obtaining interpretation mean a very high level ($M = 4.52, SD = 0.505$). The use of animation in History learning contributes to higher motivation for them to be more interested in the subject. These results are also consistent with the Neumann et al. (2011) using animation media as a teaching aid in his research.

IMPLICATION

The results of this study have implications for educators to teach subject like history, especially in the primary school which is the main focus of this study. Even though the research conducted in only one school but it the overview of using animation in History subject had impact to motivate the students and their performance result clearly shows the increase of their interest in the subject. This is because the primary school level will start to form the interest in the subjects of History which will give a huge impact on their acceptance of the concept being taught as this subject is boring to some students as it involves a lot of factual evidences. With the results of this study, the educators can change the method of teaching History subject to other method that is more enjoyable and able to motivate students to have their interest in learning History.
REFERENCES


In the US, only 40% of students with emotional, behavioural, and mental health disorders progress from high school, compared to the national average of 76% (US Department of Education, 2001). Meanwhile, over 50% of students with emotional and behavioural disabilities ages 14 and older, drop out of high school. This is the highest dropout rate of any disability group (Data Resource Center for Child & Adolescent Health, 2005)

*Wales High School: First Diagnosis* (Peters, 2020), as the new point of departure in the Peters’ book series, calls upon lovers of creative young adult fiction, memoirs, case studies, and autobiography. First and foremost, there’s a lot to appreciate in *Wales High School*. This book is for anyone who has been diagnosed with a mental health condition for the first time. For people with serious mental illness, getting the services or treatment needed to deal with mental health symptoms can be elusive. People in crisis can inappropriately end up on a waiting list before beginning critically needed treatment.

This is an altogether different protagonist than the young adult depicted in J. Peters’ first authored book *University on Watch: Crisis in the Academy*. Since then, J. Peters has published several new editions of his first work and two other books in the three-part series. I can confirm this book also stands on its own as well. Similar to his first two works, *Wales High School* shares several similarities in style, delivery, form, and inventive language. In the same way these commonalities can be traced throughout the J. Peters series. Even more subtle, and at times, not so subtle differences, emerge for the reader to bear witness. These sometimes stark, and at other times, seemingly intuitive differences signal to the reader this is a very different story than ever before.

Like I noted earlier, Jacques Peters truly isn’t the same as he reads in either preceding books in the series. While the differences are artfully nuanced. The biggest difference is the author’s scientific accounting of stages of human development and its invariable impact on behaviour. This time, Jacques is raging through his adolescence. This makes the narrative more organic as Jacques’ speech is very much congruent with his stage of development. In this sense Jacques’s age is captured well in the writing when it comes to dialogue. This can be seen in the simplicity and elegance of the book’s language. So, the higher-level rhetoric offered in *University on Watch*, and the snarky, bitter intellectualization of young adult themes as seen in *Small Fingernails* is not present in this book.

Like J. Peters other two books, the first chapter continues to be screenshots of Jacques unresolved complex and memorable traumas from previous years. The book therefore follows the same formula at its departure in the first chapter and its conclusion. *Wales High School* begins with a Jacques’ past
experiences in Middle School as an ineffective Middle School student council president now decidedly finding himself at the bottom rung of the social ladder as a freshman in High School. In this manner, Wales High School extends these screenshots of Jacques memories and rolls them out into the same iconic vignettes this author has mastered throughout the book series.

In terms of relevance, the contemporary reader will appreciate the strength of the narrative. The book very cleanly builds into a fever pitch culminating in the protagonist's hospitalisation. I cannot emphasise how much I enjoyed reading this new Peters book. Specifically, I really enjoyed the glimpses of Jacques' thought processes and the opportunity to better understand where these types of impulses originate. To me, this story felt very believable and relatable.

There is quite a bit of conflict in this piece; whether it's emotional, physical, or situational. A teenage Peters spends most of the book in conflict with himself. In doing so, Peters is caught between what he wants and his own limitations which prevent him from getting that. However, he also comes into conflict with nearly every other character in the book (his grandmother being an important and notable exception) and this is an important part of his journey. This troubling aspect of Peters' life and burgeoning mental health condition becomes increasingly obvious to the reader as the tension mounts that Jacques will do anything in his power to achieve what he wants. This is both exciting and terrifying.

Interestingly, there is not a clear point at which the conflict ends for Peters. While his internal conflicts seem to settle a bit in the last few chapters, he continues to have negative interactions with others and even the last lines allude to ongoing conflict.

The falling action of this story is very satisfying. There are no threads left unfinished. I liked the messages of recognising who is truly there for you and controlling what you can and stepping away from what you cannot. I identified themes of isolation, attention-seeking, and reality vs illusion.

There is no question that the very same passion that set the stage for Peters' adult adventure into language is visible during Wales High School in what his youthful and most vulnerable phase of life is – adolescence. Here, the reader will witness first-hand how this iconic literary character gained the transformative power to transgress with such ease, albeit to his own demise, and ultimately, setting the path to his near distant future at New London University. This book also gets underneath the root of Small Fingernails (Peters, 2019), elaborating on the urgency of Peters' mission to New London University and the new life he sought to establish for himself after his heart-wrenching experience in Wales High School.

It was such a privilege to read this story and get lost in the tumultuous life of Peters – I feel like I know him now (and know myself a little bit better too. This book sheds light on issues of access and stigma, making visible the challenges people with mental illness face in society. People with mental health disorders are more than a diagnostic code or a clinical definition (First et al., 2015).

The author's intent, as indicated in the book's dedication, was for the reader to better understand how the mental health system works. In doing so, if people find themselves with a diagnosis, they are more prepared to find the help they will need is abundantly clear within the book. Readers should be prepared for joy, hope, grief, and laboured panic-stricken horror as this book unfolds. Ultimately, a great read.
REFERENCES


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CONTACT

editor@pjp.psychreg.org