

This is an Open Access document downloaded from ORCA, Cardiff University's institutional repository:<https://orca.cardiff.ac.uk/id/eprint/100236/>

This is the author's version of a work that was submitted to / accepted for publication.

Citation for final published version:

Canning, Amy, Andrew, Elizabeth, Murphy, Rhian, Walker, Julian and Snowden, Robert 2017. Gender differences in the relationship between self-esteem and aggression in young people leaving care. *Violence and Gender* 4 (2) , pp. 49-54. 10.1089/vio.2017.0002

Publishers page: <http://dx.doi.org/10.1089/vio.2017.0002>

Please note:

Changes made as a result of publishing processes such as copy-editing, formatting and page numbers may not be reflected in this version. For the definitive version of this publication, please refer to the published source. You are advised to consult the publisher's version if you wish to cite this paper.

This version is being made available in accordance with publisher policies. See <http://orca.cf.ac.uk/policies.html> for usage policies. Copyright and moral rights for publications made available in ORCA are retained by the copyright holders.



**Gender differences in the relationship between self-esteem and aggression in young
people leaving care**

Amy Canning^a, Elizabeth Andrew^b, Rhian Murphy^a, Julian S. Walker^c, Robert J. Snowden^{*d}

^a*South Wales Doctoral Programme in Clinical Psychology, School of Psychology, 70 Park Place, Cardiff, CF10 3AT, United Kingdom*

^b*Aneurin Bevan Health Board and Action for Children, The Woodlands, Mamhilad Park Estate, Pontypool, NP4 0HZ, United Kingdom*

^c*Fromeside, Blackberry Hill, Stapleton, Bristol, BS16 1EG, United Kingdom*

^d*School of Psychology, 70 Park Place, Cardiff, CF10 3AT, United Kingdom*

*Corresponding author. *Tel.:* +44 117 3784012; *fax:* +44 117 3784187

Email address: Snowden:Cardiff.ac.uk

Present/correspondence address: *School of Psychology, Cardiff University, Cardiff CF10 3AT*

Abstract

Young people in care are known to have high levels of aggressive behaviors and high levels of self-esteem, and these difficulties continue into adult life. Previous research has suggested that there is a relationship between self-esteem and aggression, although the nature of this relationship is unclear and possible differences due to gender have rarely been explored. Therefore, the relationships between different forms of self-esteem (global self-esteem, social rank, social fit, and attractiveness) and aggression were investigated in a sample of young care-leavers. For men, high levels of social rank and high levels of attractiveness were predictive of aggression, whereas for women low levels of perceived social inclusion and low levels of attractiveness were predictive of aggression. These findings suggest that there are significant gender differences in the relationship between self-esteem and aggression in care-leavers and that using domain-specific measures of self-esteem provides a richer understanding of these relationships. They also suggest that a more targeted approach to intervention is needed.

Keywords: aggression; violence. Self-esteem, gender

Introduction

Many risk factors associated with aggression are particularly common among young people in care, for example hyperactivity in childhood, substance abuse, low socioeconomic status, childhood neglect, trauma, early attachment difficulties and parental violence (McCann, James, Wilson, & Dunn, 1996; Meltzer, Corbin, Gatward, Goodman, & Ford, 2003). In a report describing a mental health service for young people in care Arcelus, Bellerby and Vostanis (1999) found that aggressive behavior was one of the main reasons for referral to the service, and Stanley, Riordan and Alaszewski (2005) found that anger and aggression were frequently identified mental health problems. There is evidence that aggression (feelings of anger or antipathy resulting in hostile or violent behavior) and conduct disorders (mental disorders diagnosed due to a repetitive and persistent pattern of antisocial behaviors) in childhood are predictive of aggression in adulthood (Copeland, Miller-Johnson, Keeler, Angold, & Costello, 2007; Loeber & Hay, 1997). Hence, a clear understanding of the reasons behind the aggressive behavior of those in care is essential in order to support them effectively them and improve their prospects.

Stanley et al. (2005) found that low self-esteem was a frequently identified mental health problem in looked after children. Rees (2006) notes that low self-esteem is common among looked after children and relates this to a history of poor attachments. However, it should be noted that these studies did not use formal measures of self-esteem, and, in contrast, a study which did use a formal self-esteem measure found that most looked after children in their study had '*well preserved global self-esteem*' (Blower, Addo, Hodgson, Lamington, & Towlson, 2004) see also (Legault, Anawati, & Flynn, 2006; Lyman & Bird, 1996).

Gender differences in self-esteem and aggression

The problem of low self-esteem in looked-after children may, in turn, have implications for levels of aggression. There is increasing evidence to suggest that there is a relationship between self-esteem and aggression. Baumeister and colleagues are advocates of the “threatened egotism hypothesis”, whereby aggression is viewed as “*a means of defending a highly favourable view of self against someone who seeks to undermine or discredit that view*” (Baumeister, Bushman, & Campbell, 2000; p. 26). Although a number of studies have found evidence to support this hypothesis (e.g., Bushman & Baumeister, 1998), a systematic review (Walker & Bright, 2009) reported that the majority of studies found that low, rather than high, self-esteem was related to aggression, and there are yet more studies that present mixed evidence (Ostrowsky, 2010; Walker & Bright, 2009). Possible explanations for these inconsistencies include the use of global rather than domain-specific measures of self-esteem, the failure to consider the impact of gender, possible differences between clinical and non-clinical populations (Ostrowsky, 2010)) and the failure to distinguish between different types of aggression (Salmivalli, 2001)

The majority of studies examining the relationship between self-esteem and aggression have treated self-esteem as a single global construct. However, it has been argued that it would be better understood as a multi-dimensional construct (Kirkpatrick & Ellis, 2001). The sociometer theory (Leary, Terdal, Tambor, & Downs, 1995) proposes that self-esteem acts as a barometer to measure social inclusion (the degree to which an individual is valued or accepted by others) which motivates individuals to take corrective action should the level of acceptance fall too low. Kirkpatrick and Ellis (2001) argue that there are multiple sociometers, as different types of relationship (e.g., mateships, coalitions, and familial networks) present different types of problems and place value on different attributes. They also note that not all relationships are cooperative, and that there is frequently competition for mates, status and resources within social networks. They suggest that further sociometers are

Gender differences in self-esteem and aggression

required to monitor individuals' self-perceptions of dominance, status and attractiveness relative to their competitors, and that sociometers evolved not just to trigger corrective action to restore social inclusion, but also to activate various other short and long term psychological and behavioral processes (including aggression) designed to solve the particular type of problem presented. They hypothesize that an individual's perception of their relative standing in terms of desirability as a mate and social status is most likely to predict aggression, with individuals who perceive themselves as having higher standing being more likely to aggress in order to maintain their status. In contrast, greater perceived social inclusion is likely to be associated with reduced aggression, as aggression towards coalition members is likely to have a significant cost. The authors suggest that measures of global self-esteem fail to consistently predict aggression because of the differential relationships between aggression and different domains of self-esteem.

Kirkpatrick, Waugh, Valencia and Webster (2002) gave students the opportunity to aggress (by administering hot sauce) against the evaluator of an essay they had written, and found that superiority was positively, and social inclusion negatively, associated with aggression, but that there was no relationship between mate value and aggression. When the context was manipulated to simulate a mating competition, mate value was positively related to aggression but there was no relationship between superiority or social inclusion and aggression. Webster and Kirkpatrick (2006) found that mate value was positively, and global self-esteem negatively, associated with aggression. Johnson, Burk and Kirkpatrick (2007) found that perceived dominance, but not global self-esteem, was positively associated with self-reported aggression in a sample of students, and Archer and Thanzami (2009) found that young Indian males who viewed themselves as more attractive reported higher levels of aggression.

Gender differences in self-esteem and aggression

There is considerable evidence of gender differences in levels of self-esteem and in levels of aggression (e.g., Archer, 2004; Gentile et al., 2009; Kling, Hyde, Showers, & Buswell, 1999). However, potential gender differences in the *relationship* between self-esteem and aggression have received relatively little attention (Ostrowsky, 2010), and there has been an assumption that violent men and women “*conform to similar patterns*” (Baumeister, et al., 2000; p. 26). In the few studies that have reported gender differences in the relationship between self-esteem and aggression the effect appears to be relatively small, and the results are conflicting. Von Collani and Werner (2005) found that the relationship between low global self-esteem and self-reported aggression was significantly stronger for women than for men. Webster (2006) found that global self-esteem was negatively, and narcissism positively, associated with self-reported aggression in male and female students. Webster and colleagues (Webster, Kirkpatrick, Nezlek, Smith, & Paddock, 2007) found that either low global self-esteem or high self-esteem instability was related to attitudinal aggression in men, but that a combination of both these factors was related to attitudinal aggression in women. In a study of 12 year olds, Diamantopoulou et al. (2008) found that exaggerated (relative to peer ratings) self-evaluations of social competence were more strongly related to aggression in boys than in girls. As Ostrowsky (2010; p. 74) notes, there is a need to “*disentangle the gender dynamics surrounding the relation between self-esteem and violent behavior*”.

This present study explores the relationships between both global and domain-specific measures of self-esteem and aggression, together with the effect of gender on these relationships. As it is possible that self-esteem relates to different forms of aggression in different ways (Salmivalli, 2001) the present study differentiates between proactive and reactive aggression (Raine et al., 2006). Proactive aggression is goal-driven and often involves planning, whereas reactive aggression is done without any clear goal and in reaction

Gender differences in self-esteem and aggression

to events such as threats or frustration. Based on the findings of Kirkpatrick and Ellis (2001) and the findings related to gender (Diamantopoulou, et al., 2008), we hypothesised that social inclusion would be negatively related to aggression and that this effect would be most apparent in women, whereas social rank would be positively associated with aggression and that this would be strongest for men

Method

Participants

Our main aim was to examine gender differences in the relationship between self-esteem and aggression. We predicted that these differences would be “large” ($d = .80$) and so using standard conditions (α (two-tailed) = .05; $\beta = .20$) a power calculation showed we required a sample of $N = 25$ per gender to detect significant effects (Cohen, 1988).

Participants were 57 young adults (25 men, 32 women) aged between 18 and 22 who were under the care of Leaving Care Teams in the United Kingdom. Individuals with an active severe mental illness, who were intoxicated at the time of interview, for whom English was not a first language, or who had intellectual disabilities that would impair their ability to complete the questionnaires, were excluded from the study. For the men, 23 (92%) self-reported as being “white” and 1 (4%) as “black” with 1 (4%) not giving this information. Fourteen (56%) were unemployed, four (16%) employed and seven (28%) in college or training. For the women, all 32 (100%) self-reported as being “white”. Seventeen (53%) were unemployed, two (6%) employed, 11 (34%) in college or training, and one (3%) was a carer.

Measures

Rosenberg Self-Esteem Scale (RSES)

Gender differences in self-esteem and aggression

The RSES ((Rosenberg, 1965) is a widely used measure of global self-esteem. Respondents use a four-point Likert scale (strongly agree/agree/disagree/strongly disagree) to rate five positive and five negative self-worth statements.

Social Comparison Scale (SCS)

The Social Comparison Scale (SCS: Allan & Gilbert, 1995) is an 11-item semantic differential type scale that measures the individual's judgement of their social rank (Rank - e.g., inferior-superior; incompetent-competent; untalented-more talented, etc.), relative attractiveness (Attractiveness - e.g. unlikeable-likeable; undesirable – more desirable), and group fit (Group Fit – e. g., left out-accepted; different-same). In this study, the Social Comparison Scale is used as a self-esteem measure; although it was not specifically designed for this purpose the subscales can be seen as equivalent to the domains of self-esteem identified by Kirkpatrick and Ellis (2001) superiority, mate-value and social inclusion.

Reactive-Proactive Aggression Questionnaire (RPQ)

Aggression was measured using the RPQ (Raine, et al., 2006). This scale consists of 11 items that measure reactive aggression, and 12 items that measure proactive aggression.

Wechsler Test of Adult Reading (WTAR UK)

The WTAR (Wechsler, 2001) is composed of a list of 50 words that have atypical grapheme to phoneme translations. It allows pre-morbid level of intellectual functioning to be estimated in individuals aged between 16 to 89 years. The WTAR has good internal consistency for the various age groups with coefficients ranging from .87 to .95 for the UK standardisation sample.

Procedure

Potential participants were initially identified and approached by the Leaving Care Teams. Individuals who agreed to participate gave written informed consent prior to taking part. The questionnaires were completed in a predetermined order. Participants were given

Gender differences in self-esteem and aggression

help with the questionnaires where required. All participants were paid for their time. The study received ethical permission from the Local National Health Service Ethics Committee.

Statistical Considerations

Visual examination of the data and calculations of the degree of skew and kurtosis indicated that most variables were normally distributed. The Proactive Aggression Scale of the RPQ was not normally distributed, but a square-root transformation led to an acceptable distribution for statistical analysis of these data and was used for inferential statistics, though all descriptive statistics used the untransformed data.

Results

Table 1 shows descriptive statistics for the self-esteem, aggression and WTAR scores. All measures had good levels of internal consistency (Cronbach's alpha > .70) save for the Fit scale of the SCS.

The mean RPQ scores were substantially higher, and the SCS and RSES scores were slightly lower, than those found in some studies with non-clinical samples of a similar age (e.g., Cheung, Gilbert, & Irons, 2004; Schmitt & Allik, 2005; Tharp et al., 2011), which support that idea that this population is characterised by elevated levels of aggression and reduced levels of self-esteem.

There were no significant differences between men and women for the total RPQ scores or on the Reactive Aggression scale. However, men reported significantly higher Proactive Aggression scores than women. Men also reported significantly higher scores than women in all aspects of self-esteem: RSES global self-esteem, Rank, Group Fit, and Attractiveness, (*all ps* < .01). There was no effect of gender on WTAR score. The various measures of self-esteem (RSES, Rank, Group Fit, and Attractiveness) were all positively and significantly inter-correlated (*all rs* >0.61; *ps* <.01).

The relationship between self-esteem and aggression

Gender differences in self-esteem and aggression

Table 2 shows the zero-order correlations between the measures of self-esteem and aggression. For men, Rank was significantly positively associated with both Proactive and Reactive aggression. Attractiveness was also positively associated with Proactive aggression. There were no relationship between Group Fit and aggression for the men.

For women, Global self-esteem (RSES) was negatively associated with both forms of aggression. Group Fit was significantly associated with Reactive aggression but the association with Proactive aggression just failed to reach statistical significance. No relationships were found for Rank and aggression. For the Attractiveness scale, while these zero-order correlations failed to reach significance, the correlations with aggression were negative.

Regression Analysis.

In order to examine the relationship between self-esteem, gender and aggression further, we constructed regression analyses for each of the scales of the SCS and gender to predict RPQ Proactive and Reactive Aggression separately. Each aggression outcome was regressed onto participant gender the measure of self-esteem (z-scored as recommended; Aiken & West, 1991) and the interaction between self-esteem and gender. The results are shown in Table 3.

These analyses show that the different measures from the SCS interact with gender in the prediction of several of the measures of aggression. The interaction of Rank and gender was significant for Reactive aggression, which was due to a significant positive relationship for the men ($\beta = .48$, $t = 2.59$, $p < .05$), but no significant relationship for the women ($\beta = -.08$, $t = -0.46$, ns). For the Group Fit measure, the interaction with gender in predicting reactive aggression was due to a positive (but not significant) relationship for the men ($\beta = .20$, $t = 0.96$, ns), but a significant negative relationship for the women ($\beta = -.49$, $t = -3.09$, $p < .01$). Finally, the interaction between Attractiveness and gender in predicting both Proactive and

Gender differences in self-esteem and aggression

Reactive aggression would appear to reflect that the beta coefficient was positive for men and negative for women, though no individual beta was statistically significant ($ps > .09$).

Discussion

The results of this study show a very different pattern of relationships between self-esteem and aggression for men than for women. In particular, high social rank was strongly related to aggression in men but not women, whereas low social inclusion or fit was related to aggression in women but not men.

The results of this study build on Kirkpatrick and Ellis's (2001) theory of self-esteem, as gender differences in the relationship between self-esteem and aggression are consistent with an evolutionary approach and can be understood in terms of sexual selection. Men are usually more competitive and aggressive than women in most animal species. This is thought to be due to gender differences in parental investment; males tend to have much lower parental investment than females and therefore competition for mates is much greater for males (Archer, 2009). There is evidence that social status is directly linked to reproductive success in men, and that women (but not men) find dominance attractive in potential mates (Sadalla, Kenrick, & Vershure, 1987). Social rank and relative attractiveness may be particularly important for men (and defended more aggressively) because they may be more strongly linked to reproductive success. In contrast, dominance in women is not clearly linked to reproductive success (Sadalla, et al., 1987). For many social species, fitting in with others is often more important for females, as they are frequently reliant on each other for support when rearing young. It would make sense that the cost of being excluded from the group would be higher for women, and that social inclusion would therefore more strongly inhibit female aggression.

Limitations and areas for future research

Gender differences in self-esteem and aggression

There are a number of issues that should be noted when considering these findings. The sample size in this study was small and it is possible that weaker relationships between variables have not been detected due to insufficient power. Nevertheless, we were able to show clear gender differences due to the large effect sizes. There is undoubtedly a need for further research using larger sample sizes.

This study relies on a self-report measure of aggression that is potentially open to response bias and impression management. Further research using objective measures of aggression such as criminal records or behavioral experiments would be valuable. It is possible that the levels of aggression in women have been underestimated in this study as there is evidence to suggest that, compared to men, women tend to engage in more indirect than direct aggressive acts (Griskevicius et al., 2009) and the RPQ has not been designed to specifically measure indirect and direct aggression. Given the possibility that the outward manifestation of aggression might differ between genders, future studies might wish to distinguish the methods of the delivery of aggression from the motivations that cause the aggression (Little, Henrich, Jones, & Hawley, 2003).

The cross-sectional design of this study means that it is not possible to draw firm conclusions about the direction of the relationships between self-esteem and aggression. Research using a longitudinal design would help to clarify this.

Care leavers are a more clinically relevant population than the students commonly used in this area of research; however it is not clear how much the results of this study can be generalised and further research is needed in a wider variety of populations.

Conclusions

In conclusion, this study provides strong evidence for the view that self-esteem is an important factor in aggression and that it may be a suitable focus for the treatment of aggression, particularly in this vulnerable population that is known to have high rates of

Gender differences in self-esteem and aggression

criminal behavior. However, the findings suggest that the relationship between self-esteem and aggression is complex, and that clinical interventions for the treatment of aggression may need to be gender specific. It may be important to focus on perceptions of rank when working with men and to break the possible relationship they may perceive between being aggressive and having high social rank. On the other hand, women may benefit from interventions that focus on their sense of social inclusion. An additional consideration is that many of the interventions currently available for the treatment of aggression are group-based. While the social aspect of this type of intervention may be of value to women, more caution may be needed when working with men, as group dynamics around competition may be more likely to evolve which could interfere with their ability to engage in the intervention.

Acknowledgements

Many thanks to the young people who took part in this study, to the Social Services Teams for their help identifying potential participants, and to Laura Gerlach for help with this manuscript.

Author Disclosure Statement

No competing financial interests exist

References

Aiken, L. S., & West, S. G. (1991). *Multiple regression: Testing and interpreting interactions*. London: Sage.

Allan, S., & Gilbert, P. (1995). A social-comparison scale - psychometric properties and relationship to psychopathology. *Personality and Individual Differences, 19*(3), 293-299. doi: 10.1016/0191-8869(95)00086-1

Gender differences in self-esteem and aggression

Amad, S., Gray, N. S., & Snowden, R. J. (submitted). Self-esteem and aggression: a cross-cultural study of Western and Eastern young adults.

Arcelus, J., Bellerby, T., & Vostanis, P. (1999). A mental health service for young people in the care of the local authority. *Clinical Child Psychology and Psychiatry*, 4, 233-245.

Archer, J. (2004). Sex differences in aggression in real-world settings: A meta-analytic review. *Review of General Psychology*, 8(4), 291-322. doi: 10.1037/1089-2680.8.4.291

Archer, J. (2009). Does sexual selection explain human sex differences in aggression? *Behavioral and Brain Sciences*, 32(3-4), 249-+. doi: 10.1017/s0140525x09990951

Archer, J., & Thanzami, V. (2009). The relation between mate value, entitlement, physical aggression, size and strength among a sample of young Indian men. *Evolution and Human Behavior*, 30(5), 315-321. doi: 10.1016/j.evolhumbehav.2009.03.003

Baumeister, R. F., Bushman, B. J., & Campbell, W. K. (2000). Self-esteem, narcissism, and aggression: Does violence result from low self-esteem. or from threatened egotism? *Current Directions in Psychological Science*, 9(1), 26-29. doi: 10.1111/1467-8721.00053

Blower, A., Addo, A., Hodgson, J., Lamington, L., & Towlson, K. (2004). Mental health of "looked-after" children: a needs assessment. *Clinical Child Psychology and Psychiatry*, 9, 117-129.

Bushman, B. J., & Baumeister, R. F. (1998). Threatened egotism, narcissism, self-esteem, and direct and displaced aggression: Does self-love or self-hate lead to violence? *Journal of Personality and Social Psychology*, 75(1), 219-229. doi: 10.1037/0022-3514.75.1.219

Gender differences in self-esteem and aggression

- Cheung, M. S. P., Gilbert, P., & Irons, C. (2004). An exploration of shame, social rank and rumination in relation to depression. *Personality and Individual Differences, 36*(5), 1143-1153. doi: 10.1016/s0191-8869(03)00206-x
- Cohen, J. (1988). *Statistical Power Analysis for the Behavioral Sciences, 2nd Ed.* Hillsdale, NJ: Erlbaum.
- Copeland, W. E., Miller-Johnson, S., Keeler, G., Angold, A., & Costello, E. J. (2007). Childhood psychiatric disorders and young adult crime: A prospective, population-based study. *American Journal of Psychiatry, 164*(11), 1668-1675. doi: 10.1176/appi.ajp.2007.06122026
- Diamantopoulou, S., Rydell, A. M., & Henricsson, L. (2008). Can both low and high self-esteem be related to aggression in children? *Social Development, 17*(3), 682-698. doi: 10.1111/j.1467-9507.2007.00444.x
- Gentile, B., Dolan-Pascoe, B., Twenge, J. M., Maitino, A., Grabe, S., & Wells, B. E. (2009). Gender Differences in Domain-Specific Self-Esteem: A Meta-Analysis. *Review of General Psychology, 13*(1), 34-45. doi: 10.1037/a0013689
- Griskevicius, V., Tybur, J. M., Gangestad, S. W., Perea, E. F., Shapiro, J. R., & Kenrick, D. T. (2009). Aggress to Impress: Hostility as an Evolved Context-Dependent Strategy. *Journal of Personality and Social Psychology, 96*(5), 980-994. doi: 10.1037/a0013907
- Johnson, R. T., Burk, J. A., & Kirkpatrick, L. A. (2007). Dominance and prestige as differential predictors of aggression and testosterone levels in men. *Evolution and Human Behavior, 28*(5), 345-351. doi: 10.1016/j.evolhumbehav.2007.04.003
- Kirkpatrick, L. A., & Ellis, J. B. (2001). Evolutionary perspectives on self-evaluation and self-esteem. In G. Fletcher & M. Clark (Eds.), *The Blackwell Handbook of Social*

Gender differences in self-esteem and aggression

Psychology Vol 2: Interpersonal Processes (pp. 411-436). Oxford, England: Blackwell.

- Kirkpatrick, L. A., Waugh, C. E., Valencia, A., & Webster, G. D. (2002). The functional domain specificity of self-esteem and the differential prediction of aggression. *Journal of Personality and Social Psychology*, 82(5), 756-767. doi: 10.1037//0022-3514.82.5.756
- Kling, K. C., Hyde, J. S., Showers, C. J., & Buswell, B. N. (1999). Gender differences in self-esteem: A meta-analysis. *Psychological Bulletin*, 125(4), 470-500. doi: 10.1037//0033-2909.125.4.470
- Leary, M. R., Terdal, S. K., Tambor, E. S., & Downs, D. L. (1995). Self-esteem as an interpersonal monitor - the sociometer hypothesis *Journal of Personality and Social Psychology*, 68(3), 518-530. doi: 10.1037//0022-3514.68.3.518
- Legault, L., Anawati, M., & Flynn, R. (2006). Factors favoring psychological resilience among fostered young people. *Children and Youth Services Review*, 28(9), 1024-1038. doi: 10.1016/j.chilyouth.2005.10.006
- Little, T. D., Henrich, C. C., Jones, S. M., & Hawley, P. H. (2003). Disentangling the "whys" from the "whats" of aggressive behavior. *International Journal of Behavioral Development*, 27(2), 122-133. doi: 10.1080/0165025024400128
- Loeber, R., & Hay, D. (1997). Key issues in the development of aggression and violence from childhood to early adulthood. *Annual Review of Psychology*, 48, 371-410. doi: 10.1146/annurev.psych.48.1.371
- Lyman, S. B., & Bird, G. W. (1996). A closer look at self-image in male foster care adolescents. *Social Work*, 41(1), 85-96.
- McCann, J. B., James, A., Wilson, S., & Dunn, G. (1996). Prevalence of psychiatric disorders in young people in the care system. *British Medical Journal*, 313(7071), 1529-1530.

Gender differences in self-esteem and aggression

- Meltzer, J., Corbin, T., Gatward, R., Goodman, R., & Ford, T. (2003). The mental health of young people looked after by local authorities in England. London.
- Ostrowsky, M. K. (2010). Are violent people more likely to have low self-esteem or high self-esteem? *Aggression and Violent Behavior, 15*(1), 69-75. doi: 10.1016/j.avb.2009.08.004
- Raine, A., Dodge, K., Loeber, R., Gatzke-Kopp, L., Lynam, D., Reynolds, C., . . . Liu, J. H. (2006). The reactive-proactive aggression questionnaire: Differential correlates of reactive and proactive aggression in adolescent boys. *Aggressive Behavior, 32*(2), 159-171. doi: 10.1002/ab.20115
- Rees, C. A. (2006). The care of looked-after children. *Current Paediatrics, 16*, 83-90.
- Rosenberg, M. (1965). *Society and the adolescent self-image*. Princeton, NJ: Princeton University Press.
- Sadalla, E. K., Kenrick, D. T., & Vershure, B. (1987). Dominance and heterosexual attraction. *Journal of Personality and Social Psychology, 52*(4), 730-738. doi: 10.1037/0022-3514.52.4.730
- Salmivalli, C. (2001). Feeling good about oneself, being bad to others? Remarks on self-esteem, hostility, and aggressive behavior. *Aggression and Violent Behavior, 6*(4), 375-393. doi: 10.1016/s1359-1789(00)00012-4
- Schmitt, D. P., & Allik, J. (2005). Simultaneous administration of the Rosenberg Self-Esteem Scale in 53 nations: Exploring the universal and culture-specific features of global self-esteem. *Journal of Personality and Social Psychology, 89*(4), 623-642. doi: 10.1037/0022-3514.89.4.623
- Stanley, N., Riordan, D., & Alaszewski, H. (2005). The mental health of looked after children: matching response to need. *Health & Social Care in the Community, 13*(3), 239-248. doi: 10.1111/j.1365-2524.2005.00556.x

Gender differences in self-esteem and aggression

- Tharp, A. L. T., Sharp, C., Stanford, M. S., Lake, S. L., Raine, A., & Kent, T. A. (2011). Correspondence of aggressive behavior classifications among young adults using the Impulsive Premeditated Aggression Scale and the Reactive Proactive Questionnaire. *Personality and Individual Differences, 50*(2), 279-285. doi: 10.1016/j.paid.2010.10.003
- von Collani, G., & Werner, R. (2005). Self-related and motivational constructs as determinants of aggression. An analysis and validation of a German version of the Buss-Perry Aggression Questionnaire. *Personality and Individual Differences, 38*(7), 1631-1643. doi: 10.1016/j.paid.2004.09.027
- Walker, J. S., & Bright, J. A. (2009). False inflated self-esteem and violence: a systematic review and cognitive model. *Journal of Forensic Psychiatry & Psychology, 20*(1), 1-32. doi: 10.1080/14789940701656808
- Webster, G. D. (2006). Low self-esteem is related to aggression, but especially when controlling for gender. A replication and extension of Donellan et al, (2005). *Representative Research in Social Psychology, 29*, 12-18.
- Webster, G. D., & Kirkpatrick, L. A. (2006). Behavioral and self-reported aggression as a function of domain-specific self-esteem. *Aggressive Behavior, 32*(1), 17-27. doi: 10.1002/ab.20102
- Webster, G. D., Kirkpatrick, L. A., Nezelek, J. B., Smith, C. V., & Paddock, E. L. (2007). Different slopes for different folks: Self-esteem instability and gender as moderators of the relationship between self-esteem and attitudinal aggression. *Self and Identity, 6*(1), 74-94. doi: 10.1080/15298860600920488
- Wechsler, D. (2001). *Wechsler Test of Adult Reading (WTAR-UK)*: Harcourt Assessment.