Systematic review: External shame in anorexia nervosa, bulimia nervosa, and binge-eating disorder: A systematic review

Empirical paper: Does poverty-related shame mediate the link between poverty and depression and poverty and aggression in young adults?

Submitted by Natasha Griffiths to the University of Exeter

as a thesis for the degree of Doctor of Clinical Psychology, May 2020

I certify that all material in this thesis which is not my own work has been identified and that no material has previously been submitted and approved for the award of a degree by this or any other University.

Signature: 

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SCHOOL OF PSYCHOLOGY

DOCTORATE IN CLINICAL PSYCHOLOGY

LITERATURE REVIEW

External shame in anorexia nervosa, bulimia nervosa, and binge-eating disorder: A systematic review

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Abstract

Background: Research has highlighted the link between shame and eating disorders (EDs). However, broad definitions of shame used within the literature make it difficult to identify specific shame-based mechanisms that might play a key role in EDs. Specifically, research has highlighted the social evaluative aspect of ED, however, little attention has been paid to external shame. This systematic review collated research to investigate the relationship between EDs and external shame.

Method: Electronic databases were searched for studies on external shame within clinical populations of individuals with an ED published prior to 30th March 2020. A total of 2610 titles were retrieved. Of these, 11 met the inclusion criteria and were included in the review.

Results: The results suggested a medium to large effect size in the relationship between external shame and EDs. The association of external shame to specific ED presentations were mixed, with some indication that external shame may be specifically related to anorexia nervosa.

Conclusion: External shame appears to be associated with EDs. However, further research is needed to assess the role external shame has across ED diagnoses. Understanding the role of external shame in EDs could help to improve interventions to target key processes that contribute to and maintain EDs.

Keywords: shame, eating disorders, anorexia nervosa, bulimia nervosa, binge-eating disorder.

Background

Eating disorders (EDs) are characterised by a preoccupation of weight and/or shape and disturbance in eating behaviours, cognition and emotion (National Institute of Mental Health, 2016). Disordered eating is the third most common chronic health condition among the female population, and it has been suggested that prevalence and severity of EDs may be increasing (Johnston et al., 2018; Rosen, 2003). Age of onset for EDs is typically in adolescence (Favaro, Busetto, Collantoni, & Santonastaso, 2019) and EDs are associated with lifelong adverse health outcomes (Mitchell & Crow, 2006) including suicide (Favaro & Santonastaso, 1997), comorbid psychiatric disorders (Braun, Sunday, & Halmi, 1994) and social impairment (Preti et al., 2009).

In the fifth edition of the Diagnostic and Statistical Manual of Mental Disorders (American Psychiatric Association [APA], 2013), the following ED diagnoses are included: anorexia nervosa (AN), bulimia nervosa (BN), binge-eating disorder (BED), and other specified feeding and eating disorder (OSFED). There are a range of treatment options available for individuals who receive a diagnosis of an ED, including pharmacological and psychological treatments (Gabbard, 1992). The National Institute of Health and Clinical Excellence (NICE, 2017) recommended treatments include cognitive behavioural therapy for eating disorders (CBT-ED) or guided self-help. However, psychological treatments have been shown to have limited efficacy in reducing ED symptoms (Fichter, Quadflieg, Crosby, & Koch, 2017; Wilson, Grilo, & Vitousek, 2007) and high levels of relapse have been observed (Grilo et al., 2012). Current treatments largely target behavioural and cognitive features of EDs, with little emphasis on emotional features of an ED (Blythin et al., 2020). The association between shame and EDs has been discussed within the

literature, however due to the complex nature of shame, how shame relates to EDs is widely debated. This review aims to increase our understanding of the relationship between external shame - the belief that others see the self as inadequate - and EDs.

Shame and ED

Shame is a painful and multifaceted self-conscious emotion that involves affective, behavioural, social, cognitive and physiological components (Goss & Allan, 2009), which appears to be experienced in relation to another individual, group or society (Tangney & Dearing, 2003). Tangney and Dearing (2003) argue that whilst everyone can experience shame, not everyone will be prone to shame. Shame is thought to develop in childhood and Tangney and Dearing (2003) found that children with high levels of shame-proneness at age eight displayed more anger and substance misuse difficulties at 18-years of age, highlighting the possible maladaptive effects of shame-proneness throughout an individual's life (Mahtani, Melvin, & Hasking, 2018).

Gilbert's (2003) evolutionary theory suggests that shame may be adaptive in that it provides an early warning sign that the self is under social threat and triggers automatic defences to protect the self from others. However, individuals with low social rank may experience shame-proneness due to the negative perceptions they have of their social status and associated feelings of inferiority. Western cultures place a high cultural value on having a body of a certain size, particularly for women, therefore physical appearance may become a way to gain social rank, avoid feelings of shame and overcome threats to the self. Thus, individuals that internalise these cultural values of attractiveness and experience shame-proneness may be more likely to engage in ED behaviours to protect the self from negative affect, avoid

rejection and gain social status. Evidence has found that internalisation of cultural values of attractiveness are a risk factor for ED symptoms (Thompson & Stice, 2001).

Fredrickson and Roberts' (1997) objectification theory supports this and suggests that individuals, particularly women, experience body shame and restrain their eating due to the internalisation of the 'thin ideal'. Body shame relates to experiences of shame about the body and one's failure to meet external social norms of attractiveness (Kittler, 2003). According to objectification theory, internalisation of cultural norms involves individuals adopting an observer's perspective of the self (Fredrickson, Roberts, Noll, Quinn, & Twenge, 1998).

Both Gilbert's evolutionary model and Fredrickson and Roberts' objectification theory emphasise the role of evaluations and views by others in EDs. Yet the use of broader shame definitions dominates the EDs literature (e.g., body shame), making it difficult to identify potential mechanisms that may contribute to the development and maintenance of specific EDs. Parsing the multifaceted concepts of shame into more homogenous constructs (i.e., external and internal shame) might be beneficial to develop targeted interventions.

According to Gilbert (1998), external shame is concerned with the belief that others see the self as inadequate or flawed and individuals with high levels of external shame focus of attention is on the external world. In contrast, internal shame is self-focused and relates to inner experiences of being inferior and flawed. In a recent systematic review, Blythin et al. (2020) found that individuals with AN and BN have higher levels of shame compared to non-clinical controls and individuals with depression and anxiety, confirming the association between EDs and shame. However, the review did not consider external and internal shame as separate

constructs, therefore it is unclear whether there are differences in the experience of shame across EDs. Furthermore, shame was measured using several tools (e.g. state/trait), each yielding different relationships to EDs. This makes it difficult to draw conclusions regarding the role of shame in EDs due to confusion about what construct is being measured. Therefore, the current review will specifically focus on external shame and EDs.

Models and Theories of External Shame and EDs

Heatherton and Baumeister's (1991) escape theory proposes that individuals with a diagnosis of BN or BED are highly concerned with physical attractiveness and hold high standards for cultural ideals. They are also aware of themselves through comparisons with these ideals, leading to feelings of inadequacy as they failed to live up to cultural/societal standard. They propose that binge eating is a way to escape negative affect associated with perceived inferiority. Thus, individuals with BED and BN may be prone to experiencing high levels of external shame with binge eating providing a defence against the painful experiences of shame. In line with this, Grabhorn, Stenner, Stangier, and Kaufhold (2006) found that compared to individuals with AN or depression and anxiety, individuals with BN were significantly more concerned with the negative evaluation of others. Furthermore, Levinson, Byrne, and Rodebaugh (2016) found that shame was a shared vulnerability factor for social anxiety and bulimic symptoms. This suggests that individuals with a diagnosis of BN, but potentially not AN, may experience higher levels of external shame due to their increased focus on physical appearance and high social comparison.

This is supported by Bruch's (1974) displacement theory of emotion in EDs, which suggests that negative emotions are displaced into the body to avoid aversive self-awareness. Self-disgust and shame are an unbearable threat to the self; thus,

the individual displaces these feelings onto the body into “feeling fat’, which is less threatening to the ego. Thus, AN symptoms protects individuals from the painful, unbearable feelings of internal shame. Successful restriction avoids aversive self-awareness and leads to pride (Kenneth Goss & Gilbert, 2002), creating a shame-pride cycle in AN. High levels of self-disgust have been observed in individuals with AN (Moncrieff-Boyd, Byrne, & Nunn, 2014), with feelings of pride being shown to follow periods of exercise (Ma & Kelly, 2019). This may explain why AN behaviour becomes excessive, despite risk of death. Therefore, Bruch’s theory suggests that AN is a defence against unbearable feelings towards the self and AN behaviours improve confidence and sense of self (Bardone-Cone, Thompson, & Miller, 2020), suggesting that there may be limited focus on the external perception of self. Therefore, individuals with AN may have low levels of external shame. However, it could be argued that this theory relies on negative beliefs about being ‘fat’, which may not be independent of cultural norms and thus external evaluation and external shame. Individuals with AN perceive themselves to have low social rank and negatively compare themselves to others which predicts AN symptoms (Troop, Andrews, Hiskey, & Treasure, 2014). A drive for thinness and restriction therefore may be seen as an attempt to gain social desirability. Thus, there may be a complex interaction in that AN may be based on wanting to appear socially desirable (avoid external shame) and avoid the unbearable feelings of self-disgust (internal shame). This further highlights the need to consider specific constructs of shame separately to better understand the complex presentations of EDs.

Rationale

Broad definitions of shame within EDs literature make it difficult to understand the specific role that various aspects of shame might play in the development and

maintenance of EDs. Although there is preliminary evidence that external shame may be associated with EDs, it remains unclear whether there will be differences between experiences of external shame and specific ED diagnoses. Therefore, the aim of this systematic review is to twofold. The review will examine the relationship between external shame and ED and aim to explore whether external shame has a differential relationship on specific ED diagnoses. Understanding if and how external shame relates to ED diagnoses could have important theoretical and clinical implications, e.g. informing which shame aspects would need to be targeted in therapy. The review will focus on external shame in a clinical population of individuals with AN, BN, and BED.

Review Question

1. Is external shame associated with ED diagnoses?

Method

Systematic reviews are essential building blocks in the search for evidence-based information (NICE, 2012). The current systematic review followed the Preferred Reporting Items for Systematic reviews and Meta Analyses protocol (PRISMA) to guide the identification, screening, eligibility and synthesis of research studies (Moher et al., 2015).

Information Source

Relevant literature was identified using an electronic search of databases provided by Ovid and Web of Science for dates from journal inception to 30th March 2020. Ovid and Web of Science included the following databases PsycINFO®, EMBASE, Social Policy and Practice, Global Health, PsycARTICLES®, Web of

Science Core Collection and MEDLINE®. A systematic review of the grey literature was not possible due to time constraints.

Search Strategy

A scoping review was used to develop search terms and the Cochrane Library was searched to ensure that a systematic review had not been completed in the area. Key texts were also checked to generate additional search terms (see Table 1 for search terms). Although the review is interested in external shame, to ensure relevant papers were not excluded the search was not limited to external shame. To check reliability of search terms, the search criteria underwent an iterative review process with researchers in the field of eating disorders. This process yielded no revisions or further search terms. The relevant truncation and wildcards were used for each database search (e.g. * and ? for Ovid) to maximise search results. For example, the search term sham* (for shame, shamed and shaming), eating difficult* (for eating difficulties and eating difficulty) and behavio?r (for behaviour and behavior). Search terms in each section used Boolean operator “OR” to combine them. Boolean operator “AND” was used to combine search terms across sections.

Table 1

Search Terms for the Literature Review Question

	Shame Section 1 **(title or abstract)**	Eating Disorder Section 2 **(title or abstract)**
Individual search terms	Sham*	eating disorder* OR eating difficult* OR anorexi* OR bulimi* OR binge eating OR restrict* eating OR binge-eating OR disordered eating OR appetite disorder OR feeding disorder* OR

	eating behavio?r OR eating habit* OR dysfunctional eating
Combined search	Section 1 AND Section 2

Eligibility Criteria

Studies identified with the above search terms were reviewed using PECOS (population, exposure, comparator, outcome, study design; see Table 2).

Table 2

Inclusion and Exclusion Criteria for Literature Review

Inclusion	Exclusion
Population • Humans (all ages)	**Population** • Participants with comorbid physical illness
Exposure • Diagnosis of eating disorder	**Exposure**
Comparator • Differences between eating disorder • Healthy controls	**Comparator**
Outcome • Measures of external shame (e.g. other as shamer scale)	**Outcomes** • Body shame or internal shame only
Study Design • Correlational design • Experimental design • Longitudinal design	**Study Design** • Qualitative study design • Scale development

Additional criteria	**Additional criteria**
• Studies published in English	• Conference posters or abstracts where full text is not available • Full text not available in English • Relevant statistics not reported

Population. As shame is thought to develop by childhood, with a high prevalence of EDs among adolescences, studies with humans of all ages were included in the review. Studies were excluded if participants had a comorbid physical health difficulty that may influence eating behaviour (e.g., diabetes).

Exposure. To avoid differences between participants, only studies that required participants to meet a diagnosis of an ED were included (Doran and Lewis, 2012). For the purpose of this systematic review, ED is operationalised as individuals who currently or in the past have met the diagnosis of AN, BN or BED according to the DSM 5 (APA, 2013) or earlier versions. Studies were included if the diagnoses of ED were determined by standardised self-report measures, (e.g. Eating Disorder Examination Questionnaire (EDE-Q; Fairburn, Cooper, & O'connor, 2008); Eating Attitude Test (EAT-26; Garner, Olmsted, Bohr, & Garfinkel, 1982) or clinician-administered interview (e.g., Eating Disorder Examination (EDE; Fairburn, Cooper, & O'connor, 2008)). Standardised measures that include a specific measure of ED symptoms were included if a diagnosis of an ED had also been established (e.g., Binge Eating Scale (BES; Gormally, Black, Daston, & Rardin, 1982)).

Eating disorder not otherwise specified (i.e., EDNOS or OSFED) were excluded as the heterogeneous nature of these presentations may make it difficult to

make inferences about the role of external shame and ED. Individuals that have difficulty with overeating and obesity where BED was not diagnosed were excluded.

Comparator. Studies were included which compared a clinical ED group with an additional comparison group (e.g. healthy control), compared different ED groups on measures of external shame, or looked at the relationship between specific ED groups on measures of shame.

Outcome. For the purpose of this review, we adopted the most common definition of external shame as the "belief about how others see the self" (Goss, Gilbert, & Allan, 1994, p. 716). For many years external shame has been measured using one standardised self-report measure, the Other as Shamer Scale (OAS; Goss et al., 1994). Due to the confusion that exists within the literature, other measures of shame that may incorporate aspects of external shame, but which are not specified as such were excluded from the review (e.g. Objectified Body Consciousness Scale; McKinley & Hyde, 1996).

Study design. Cross-sectional and longitudinal studies were included if a measure of external shame was correlated with a measure of EDs. Experimental studies that examined the efficacy of ED interventions but included a specific measure of external shame that provided information on the relationship to ED were included.

Additional criteria. Papers were included if the full texts were available in English. Papers were excluded if texts were limited to posters or abstracts or relevant statistics were not reported.

Screening Process

The search identified 2,610 citations. Duplicates were removed using EndNote 9 referencing software, which left 1,067 citations to be screened for inclusion (see Figure 1 for PRISMA diagram). The titles and abstracts were screened for eligibility and those that did not meet the inclusion criteria were excluded. A total of 202 papers were accessed and screened at full text. Those that did not meet the PECOS criteria were excluded, leaving a total of 11 papers being included in the review. Out of the 11 publications, an independent reviewer reviewed six randomly selected full texts to check they met the inclusion criteria. There was a 100% inter-rater reliability for inclusion.

Quality Evaluation

To assess the strengths and limitations of the articles included in the review the Quality Assessment Tool for Quantitative Studies (QATQS; Thomas, Ciliska, Dobbins, & Micucci, 2004) was used. The tool provides a standardised way to assess the quality of quantitative research and provides a global rating for the quality of each paper (i.e., strong, moderate or weak). An independent reviewer assessed three randomly selected papers using the same tool, discrepancies were discussed, and 100% agreement was achieved in the global ratings.

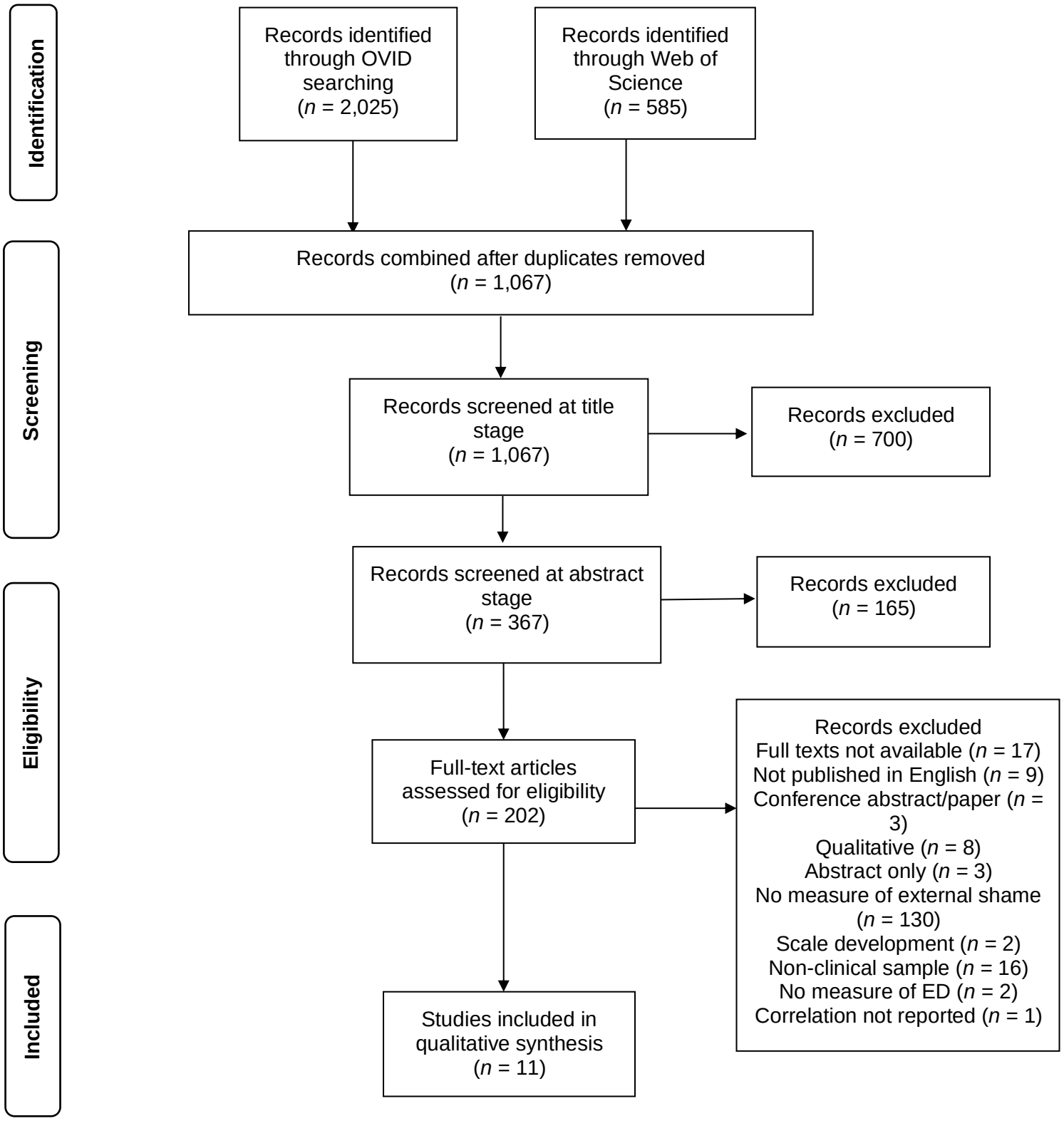

Figure 1. Results of the literature search. Flow chart based on PRISMA protocol (adapted from Moher et al., 2009)

Results

A total of 11 studies met the eligibility criteria and were used to explore the systematic review questions 'Is external shame associated with ED diagnoses?'. A summary of the papers included in the review can be found in Table 3. Overall, there seemed to be support for a critical role of external shame in ED, with possibly a specific link to AN. However, studies will be investigated systematically below as research studies showed considerable variability in their methodology.

Table 3

Qualitative Evaluation of Studies Meeting PECOS Criteria

Author, publication year & country	**Design and Aims**	**Sample**	**Measures: (1) External Shame (2) Eating Disorder (3) Other**	**Intervention** **Comparator**	**Results and Conclusion**	**Evaluation**	**QATQS ratings** (see notes for abbreviated ratings)
#1. Cardi, Di Matteo, Gilbert, and Treasure (2014), UK	Cross-sectional study on rank perception in individuals with ED, recovered ED (REC) and healthy controls (HC).	*N* = 118	(1) OAS (2) SCID-1 interview; EDE-Q (3) DASS; PFQ-2; SCS; SBS	ED *n* = 46 (29 AN, 17 BN; M_{age} = 27.3; SD_{age} = 10.2) REC *n* = 22; M_{age}= 29.5; SD_{age} = 8.4)	Groups differed significantly on all measures. Current ED had significantly higher levels of external shame (*d* = 1.03 and *d* = 2.14), compared to REC and HC respectively.	**Strengths:** Use of different groups allows for comparison between groups to be made. **Limitations:** Cross-sectional so it is not possible to	A –Moderate B –Moderate C – Weak D – Weak E – Strong F – N/A **Overall: Weak**

				HC n = 50 (M_{age} = 25.3; SD_{age} = 7.4)	REC had significantly higher levels of external shame (d = 0.80) and submissive behaviour compared to HC. Internal shame and social comparison were not significantly different to HC. **Conclusion:** Participants with ED have significantly higher levels of external shame than healthy controls and those that had recovered from an ED.	determine causality. REC group may be underpowered, and results could be unreliable. AN and BN combined into ED group, assumes there will be no differences in social rank perception between groups, which is unclear within the literature.	
#2. Duarte, Ferreira and Pinto-Gouveia (2016), Portugal	Cross-sectional study on similarities and differences in eating psychopathology between AN, BN and BED.	N = 119	(1) OAS (2) EDE; SCID-1 interview; EDE-Q (3) FSCRS; DASS; SCPAS	AN n = 34 (M_{age} = 19.85; SD_{age} = 4.96) BN n = 34 (M_{age} = 26.91; SD_{age} = 9.23) BED n = 51 (M_{age} =	ED severity was significantly correlated with external shame (r = .32). No significant difference between groups means on OAS: AN vs BN d = 0.34 BN vs BED d = 0.19 BED vs AN d = 0.45. No significant differences in eating psychopathology were	**Strengths:** Use of different ED groups allows for comparison. **Limitations:** Cross-sectional so it is not possible to determine causality. Post-hoc power calculation completed on total sample, unclear if ED groups were	A – Moderate B – Weak C – N/A D – Moderate E – Strong F – N/A **Overall: Moderate**

				38.48; SD_{age} = 10.47)	found between the groups. **Conclusion:** Severity of ED is related to external shame, however there is no mean difference in external shame across ED presentations, but small to medium effect size between BED vs AN.	individually powered to detect significant differences.	
#3. Duarte and Pinto-Gouveia (2017), Portugal	Cross-sectional study on shame experiences in childhood and adolescence in a sample of women with BED.	*N* = 114	(1) OAS (2) EDE 17.0D; BES (3) SEI; CES; IES-R; CFQ-BI; BISS	BED (M_{age} = 36.62; SD_{age} = 37.62)	Significant moderate positive correlation between OAS and BES (*r* =.33). Shame experiences recalled were related to negative comments or criticism about body weight, shape and physical appearance. Shame experiences were associated with binge eating severity and this affect was mediated by external bodily shame	**Strengths:** Sample was treatment seeking adults; thus, results may have generalisability to other BED populations. **Limitations:** Cross-sectional so it is not possible to determine causality. Used retrospective data to assess shame experiences.	A – Moderate B – Weak C – Moderate D – Weak E – Strong F – N/A **Overall: Weak**

					Conclusion Binge eating is associated with external shame in females with a diagnosis of BED.		
#4. Duarte, Pinto-Gouveia, and Ferreira (2017), Portugal	Cross-sectional study on the role of shame, depression, weight, shape and eating concerns, and body image in BED.	*N* = 73	(1) OAS (2) EDE 17.0D; BES; (3) DASS21; CFQ-BI	BED (M_{age} = 38.10; SD_{age} = 10.88).	Strong positive correlation between BES and OAS (*r* = .46), with a moderate correlation between total EDE and OAS (*r* = .29). Significant correlation between the EDE subscales restraint and OAS or shape concern and OAS. Significant moderate positive correlations between eating concern and OAS and weight concern and OAS. Mediation analysis showed significant direct effect of OAS on BED severity (bOAS = 0.09 after controlling for depression.	**Strengths:** Sample was treatment seeking adults; thus, results may have generalisability to other BED populations. **Limitations:** Cross-sectional, limiting conclusions about causality. Female only participants.	A – Weak B – Weak C – Weak D – Weak E – Strong F – N/A **Overall: Weak**

					Conclusion Binge eating severity is positively associated with external shame in individuals with BED. This effect was maintained after controlling for depression suggesting that external shame is important in understanding BED.		
#5. Ferreira, Pinto-Gouveia, and Duarte (2013), Portugal	Cross-sectional study design investigating if self-compassion mediates the link between shame, body image dissatisfaction and drive for thinness.	*N* = 102	(1) OAS (2) EDI subscales drive for thinness, bulimia, and body dissatisfaction; EDE (3) DASS 42; SCS	ED *N* = 102 (AN =32.4% BN =30.4% EDNOS = 37.2%), (M_{age} = 23.62; SD_{age} = 7.42) Non-ED *N* = 123 (M_{age} = 23.54; SD_{age} = 6.89)	ED sample had significantly higher scores on OAS compared to non-ED (*d* = 1.2). Significant, positive correlations in both the ED and non-ED groups between OAS and EDI subscales. In the ED sample, external shame predicted drive for thinness and self-compassion. The relationship between external shame and drive for thinness was	**Strengths:** Comparison with healthy controls allows researchers to consider specific aspects of shame and ED. **Limitations:** Cross-sectional study design, limits conclusions that can be made. The ED condition included those with a diagnosis of AN and BN, therefore, it is unclear whether differences exists between ED	A –Moderate B – Weak C – Strong D – Weak E – Strong F – N/A **Overall: Weak**

					fully mediated by self-compassion. **Conclusion** There were significantly higher levels of external shame in the ED sample compared to the non-ED sample.	presentations.	
#6. Hopkins (2017)	Cross-sectional study on the role of shame on the severity of restricting behaviours (RES), binge eating behaviours (BE), purging behaviours (PUR), and binge/purge behaviours (BE+P)	*N* = 518	(1) OAS (2) EDE-Q (3) SCS; IBSS; EBSS; ES-ESS; DASS; PFQ-2	ED (M_{age} = 24.09; SD_{age} = 8.89). RES group (*n* = 30), BE group (*n* = 79), PUR group (*n* = 53), BE+P group (*n* = 304).	Severity of eating restriction was moderately correlated with OAS (*r* = .36). Binge eating severity was moderately correlated with OAS (*r* = .33), Purging behaviours was moderately correlated with OAS (*r* = .33). Binge eating and purging was moderately correlated with OAS (*r* = .38). **Conclusion** There is a moderate positive relationship	**Strengths:** Large sample and measures valid and reliable. **Limitations:** Restriction group may have been underpowered. Cross-sectional design, females only sample. ED group consisted of those currently in treatment for ED and recovered ED.	A – Weak B – Weak C – Weak D – Weak E – Strong F – Strong **Overall: Weak**

					between external shame and different ED behaviours.		
#7. Kelly and Waring (2018), Canada	Longitudinal experimental design looking at the acceptability of a 2-week compassion intervention for effect on AN symptoms, shame and motivation in individuals with anorexia	*N* = 40	(1) OAS; (2) EDE-Q (3) SCS; FCS; ESS; ACMTQ; CEQ	AN (M_{age} = 21.6; SD_{age} = 3.97) CFT (*n* = 20) No CFT (*n* = 20)	Participants in the self-compassion condition experienced a significant decrease in external shame (*r* = .32). No significant change in wait-list control. Self-compassion increased and fear of compassion decreased in intervention group only. EDE-Q did not significantly change over time of condition. **Conclusion** Working on self-compassion via a 2-week letter writing intervention reduced external shame but no change in ED symptoms.	**Strengths:** Experimental design. **Limitations:** No healthy control group. Small sample size in each condition. Participants self-selected through advertisements.	A – Weak B –Moderate C – Strong D – Weak E – Strong F – Weak **Overall: Weak**
#8. Pinto-Gouveia et	Experimental study on the acceptability and	*N* = 59	(1) OAS	BEfree (*n* = 34), dropout (*n* = 15),	High levels of external shame in both the BEfree and waitlist	**Strengths:** Experimental design. Diagnosis	A – Weak B –Moderate C – Strong

al. (2017), Portugal	efficacy of BEFree intervention in BED		(2) EDE 16.0D; BES; (3) BDI; ORWQ; BIAAQ; SCS; CFQBI; FFMQ-15; ELS	(M_{age} = 42.72; SD_{age} = 9.94) Waitlist control (n = 25), dropout (n = 8), (M_{age} = 41; SD_{age} = 9.56)	control at baseline, with a significant small effect of the intervention on eating, binge eating, external shame (d = 0.32). No significant differences in the waitlist control group. Results were maintained at 3- and 6-month follow up. **Conclusion:** Individuals with a diagnosis of BED experience high levels of external shame. Levels of external shame and binge eating reduced following BEfree intervention, suggesting external shame is associated with BED.	confirmed via interview. **Limitations:** No healthy control group. Small sample size. High levels of dropout/withdrawal. Participants excluded if not overweight/obese. Group allocated by availability; thus, intervention group may have been more highly motivated/engaged.	D – Weak E – Strong F – Weak **Overall: Weak**
#9. Pinto-Gouveia et al. (2019), Portugal	Experimental study on the efficacy and process of change in a BEfree group intervention for	N = 31	(1) OAS (2) EDE; BES (3) AAQ-II; CFQ-BI; ELS;	BED (M_{age} = 39.68; SD_{age} = 10.29) Drop out n = 10	Significant decrease in external shame (d = 0.69), binge eating, eating psychopathology, psychological inflexibility, body image	**Strengths:** Experimental design allows for some conclusions regarding possible causality. Diagnosis	A – Weak B –Moderate C – N/A D – Weak E – Strong F – Weak

	individuals with BED.		FSCRS; SCS; FFMQ-15	DNA *n* = 9	cognitive fusion, and self-criticism following intervention. Increase in valued living, compassion. Gains were maintained at 3- and 6-month follow up. Changes in external shame mediated the decrease in binge eating (*b* = -3.39) but did not mediate the change in eating psychopathology. **Conclusion** BEfree reduced external shame, binge eating and lowered eating psychopathology. Study highlights external shame as a process that could be targeted in treating BED.	confirmed via interview. **Limitations:** No control group. Small sample size, with high levels of dropout/withdrawal.	**Overall: Weak**
#10. Troop, Allan, Serpell and	Cross-section study looking at shame from multiple perspectives in	*N* = 224	(1) OAS (2) SEED	*N* = 224 (M_{age} 31.6; SD_{age} = 10.2).	OAS significantly correlated with AN severity (*r* = .41) and BN severity (*r* = .35). After controlling for	**Strength:** Good sample size with reliable self-report measures.	A – Weak B –Moderate C – N/A D – Weak E – Strong

Treasure (2008), UK	women with a diagnosis of ED.		(3) BDI; PFQ-2	Current ED (*n* = 151) Recovered from ED (*n* = 57).	depression, OAS correlated with AN severity (*r* = .14), but not BN severity (*r* = .07). BN correlated with internal shame only. Participants in remission scored significantly lower on OAS compared to those that are still ill (*d* = 0.67). **Conclusion:** External shame predicted severity of BN and AN. After controlling for depression, external shame was associated with AN, but not BN.	**Limitation**: Cross-sectional study. Sample includes women in remission from an ED. Diagnosis not confirmed via formal interview.	F – Weak **Overall: Weak**
#11. Troop and Redshaw (2012), UK	Longitudinal study looking at contributions of shame to ED symptoms and if specific types of shame	*N* = 55	(1) OAS (2) SEED (3) BDI; BSS; PFQ-2	Current or history of ED (M_{age} = 34.6; SD_{age} = 4.8)	External shame correlated with AN severity (*r* =.49) and BN severity (*r* =.36) at time 1. External shame correlated with AN severity (*r* =.41), but	**Strengths:** Sample size had statistical power and consists of participants from ED register so may have generalisability.	A –Moderate B – Weak C – Strong D – N/A E – Strong F – Weak **Overall: Weak**

	contribute to AN vs BN		not BN severity (r =.15) at time 2. Regression analysis showed that body shame accounted for a significant amount of the variance on AN subscale. OAS did not make any additional contribution to the model. **Conclusion** External shame is related to both AN and BN severity. However, after 2.5 years, AN, but not BN severity correlates with external shame.	**Limitation**: No manipulation, difficult to make conclusions about direction of relationship. Sample includes women in remission from an ED, unclear how this will influence outcomes. ED not formally diagnosed. No theoretical rationale for regression model.

Note. QATQS ratings: A = Selection bias, B = Study Design, C = Confounders, D = Blinding, E = Data Collection Method, F = Withdrawals and Dropouts. *N* = total number of participants, *n* = sample of participants, M = mean, SD = standard deviation, SCID = Structured Clinical Interview, EDE-Q = Eating Disorder Examination Questionnaire, DASS = Depression, Anxiety and Stress Scale, PFQ = Personal Feelings Questionnaire, OAS = Other As Shame Scale, SCS = Self-Compassion Scale, SBS = Submissive Behaviour Scale, EDE = Eating Disorder Examination, FSCRS = Forms of Self-criticizing/Attacking & Self-Reassuring Scale,

SCPAS = Social Comparison through Physical Appearance Scale, SEI = Shame Experiences Interview, CES = Centrality of Event Scale, IES-R = Impact of Events Scale-Revised, BES = Binge Eating Scale, BISS = Body Image Shame Scale, CFQ-BI = Cognitive Fusion Questionnaire-Body Image, EDI = Eating Disorder Inventory, EBSS = Externalized Bodily Shame Scale, IBSS = Internalized Bodily Shame Scale, ES-ESS = Eating-Related Shame Adaptation to the Experience of Shame Scale, FCS = Fear of Compassion Scale, ACMTQ = Autonomous and Controlled Motivation for Treatment Questionnaire, CEQ = Credibility/Expectancy Questionnaire, BDI = Beck Depression Inventory, ORWQ = Obesity-Related Well-Being questionnaire, BIAAQ = Body Image-Acceptance and Action Questionnaire, FFMQ – Five Facet Mindfulness Questionnaire, ELS = Engaged Living Scale, AAQ = Acceptance and Action Questionnaire, SEED = Short Evaluation for Eating Disorders, BSS = Bodily Shame Scale.

Study aims. Of the 11 papers included, one study explored the similarities and differences between AN, BN and BED with respect to psychopathology and experiences of shame (#2). Five studies investigated the role of shame in individuals with any ED (#3, #4, #6, #10, #11). One study looked at the mediating role of self-compassion between shame and symptoms of ED (#5), whilst three explored the effect of a compassion-focussed intervention on symptoms of ED (#7, #8, #9). Finally, one of the 11 studies aimed to compare social rank perception in clinical and non-clinical samples (#1). In sum, the studies reviewed include a wide range of research aims of which external shame was not always the main focus and thus required thorough PECOS screening. For example, study #1 focused on social rank perception of how individuals think others view them. Despite a different study focus, the construct is closely linked to external shame and the authors included a measure of external shame. Whilst some of the studies had more than one study aim, only results relevant to the review questions will be reported in this review.

Study design. Of the 11 studies included, seven utilised a cross-sectional design (#1, #2, #3, #4, #5, #6, #10). Three studies utilised an experimental design (#7, #8, #9). These involved a manipulation and measuring outcomes pre and post manipulation. One study was a prospective longitudinal design (#11); however, it involved no manipulation, therefore it is difficult to make any conclusions regarding any reasons for change over time. To sum, there were several study designs used and the majority used a cross-sectional design, making it difficult to draw conclusions about causality. Experimental designs that involved some manipulation may allow possible conclusions between cause and effect, but mainly focussed on compassion-focussed interventions as a means to reduce external shame and ED behaviours.

Study sample. The research question was interested in individuals who met diagnosis for an ED, thus all of the studies included a clinical sample of individuals with an ED. Five studies included participants with a current diagnosis of BED (#2, #3, #4, #8, #9), five studies included participants with a current diagnosis of AN (#1, #2, #5, #7, #11), four studies included participants with BN (#1, #2, #5, #11). Two studies included participants that had recovered from an ED within their ED sample (#10 #11). One study (#1) included a recovered ED and healthy control group for comparison against a currently ill ED group and a further study included a non-clinical control (#5). This allows experiences of external shame to be compared across ED, recovered ED and healthy controls. Two studies included participants that currently met diagnosis for an ED, but did not specify diagnoses, instead categorising participants into ED pathology based on standardised ED measures (#6, #11). To sum, the studies reviewed included mixed ED samples, samples based on specific ED diagnoses or used ED pathology to group participants. This makes it difficult to generalise findings across studies and limits the conclusions that can be made about the role of external shame in ED diagnoses.

Six studies were conducted in Portugal (#2, #3, #4, #5, #8, #9), one in Canada (#7) and four in the United Kingdom (#1, #6, #10, #11). As these are all western developed countries, it is not clear if results have cross-cultural validity. It is worth noting that the same research group conducted over 50% of the studies. Although not inevitably constituting a limitation, it does suggest careful consideration of potential sampling biases. All 11 studies recruited female samples only, thus it is not possible to generalise the results to males with ED diagnoses. This is a limitation, particularly as the prevalence rate among males is increasing (Murray, Griffiths, & Lavender, 2019). All of the studies excluded participants if they had a

comorbid mental health difficulty and relied on an opportunity volunteer sample of participants. Thus, participants would have been highly motivated to engage. Evidence suggests high levels of comorbid mental health difficulties (Keski-Rahkonen & Mustelin, 2016) as well as high levels of secrecy and denial in individuals with ED (Klein & Walsh, 2004). Therefore, it is unclear how generalisable the results are to other individuals with a diagnosis of ED, across gender and to non-western cultural settings.

Study measures. All of the studies included in the review used the OAS as a measure of external shame. As a self-report measure, OAS has shown to good validity and reliability. The confusion within the literature around assessment of shame has resulted in difficulties interpreting and understanding the experience of shame. Thus, the consistent use of the OAS as a measure of external shame within this review is a strength as we can be sure that we are talking about the same construct. In addition to the OAS, one study used the Externalized Bodily Shame Scale (#5) and found it was highly correlated with the OAS, thus the authors concluded that it provided no significant additional benefit.

Diagnoses of ED were most commonly assessed using the Eating Disorder Examination interview (EDE) and were completed by a qualified clinician. The EDE is a semi-structured interview that is seen as the gold standard for assessing and determining ED diagnoses. The SCID was used in one study (#1), with researchers focusing on aspects of the SCID most relevant to ascertaining a diagnosis of an ED. Three studies recruited participants from an ED database (#6, #10, #11), but used a self-report measure to confirm probable ED diagnosis. In addition, several standardised self-report measures were used to assess ED psychopathology, including general measures of ED (e.g. EDE-Q), symptom specific measures (e.g.,

BES) or subscales of general measures of ED (e.g., SEED). Despite the range of ED assessments used within these studies, these were all standardized and well validated measures to determine ED diagnosis.

Study results. Of the cross-sectional studies, one found that ED was associated with external shame with moderate effect size (#2). Two studies found that individuals with a current diagnosis of an ED scored significantly higher on measures of external shame compared to individuals that had recovered from an ED, with large effect sizes (#1, #10). One study found a significantly higher level of external shame among individuals that met diagnosis for an ED, compared to a non-ED sample (#5). One study found that even after recovery from an ED, recovered ED participants experienced higher levels of external shame, compared to non-clinical controls (#1). Overall, results of the review suggest that there are medium-to-high levels of external shame in individuals with a diagnosis of ED and levels of external shame remain elevated even after an individual has recovered from an ED.

Two of the cross-sectional studies looked at BED and external shame and found BED was associated with high levels of external shame with moderate to large effect (#3, #4). One did not find any differences in external shame between AN, BN and BED (#2). However, a small to medium effect size *(d* = 0.45) for differences in external shame between AN and BED was found, which may have not reached significance as the study was likely to be underpowered.

Two of the cross-sectional studies used the sub-categories on self-report measures of ED to categorise participants (#6, #10). Of these, one study found moderate correlations between external shame and drive for thinness and binge eating, and moderate to large correlations between purging behaviours and

binge/purge behaviours (#6). Whilst the other found moderate to strong correlations between external shame and AN and BN severity. However, after controlling for depression, external shame correlated with AN, but not BN (#10). These studies suggest similar levels of external shame across ED with possibly a more robust link between external shame and AN. It remains challenging to draw conclusions about the specific role of external shame and ED diagnosis from the cross-sectional studies due to the use of different subscales on self-report measures, combining participants with heterogeneous ED presentation into an overall group, and uncertainty about how different eating psychopathology relate to specific ED diagnoses.

One experimental study measured external shame and ED symptoms in individuals with AN following a self-compassion intervention or wait-list control (#7). Critically, the study found support for high levels of external shame for both AN groups, although this could not be contrasted to a healthy control group as one was not included. The study found no difference in external shame or ED symptoms between conditions at baseline, however participants who completed the two-week self-compassion intervention reported a significant decrease in external shame but not ED symptoms compared to the wait-list control. Although the intervention appeared to have a positive effect on reducing external shame, this did not translate to AN symptoms, casting doubt on the link between external shame and AN. However, there were several design aspects to the study that may limit the conclusion that can be drawn from the study, such as being underpowered, no control condition or follow-up. It remains unclear if AN participants initially experienced higher levels of external shame, if results were maintained or if ED

symptoms reduce over time due to increased self-compassion and a decrease in shame.

Two longitudinal experimental studies looked at the efficacy of a BEfree intervention for individuals with BED (#8, #9). One study compared a BEfree intervention group with a wait-list control and found that following the BEfree intervention there was a significant medium to large effect on binge eating and external shame. No changes were found in the wait-list control (#8). A follow-up study found that changes in external shame in the intervention condition mediated the decrease in binge eating (#9), suggesting that in individuals with a diagnosis of BED a reduction in external shame leads to reduced binge eating. These results were maintained at a 3- and 6-month follow up. These studies suggest that external shame is related to BED. However, both studies compared the intervention group to a waiting-list control, therefore it is unclear how this intervention would compare to evidence-based treatments e.g. CBT.

Finally, one longitudinal study investigated shame and different ED symptoms in individuals with a current or past diagnosis of ED (#11). While they found moderate correlations between external shame and both AN and BN at time point one, at time point two AN, but not BN correlated with external shame. This study suggests that external shame may be related to AN, but not BN over time. However, the study included no manipulation; therefore, it is unclear what may have resulted in change overtime. Furthermore, the sample consisted of a mixture of individuals with current and past diagnosis of ED limiting the conclusions that can be drawn about the role of external shame in current presentations of ED.

To sum, across the variety study aims and methodology, evidence for a moderate to strong relationship between external shame and ED was found (#1, #2, #5 , #10), with severity of ED relating to increased levels of external shame in a clinical population (#2, #4, #6, #10, #11). Although some findings suggest a specific role of external shame in AN (#10, #11), there is also some evidence for higher levels of external shame in BED vs AN (#2). Results should be interpreted with caution due to a range of methodological challenges as discussed below.

Discussion

The aim of this systematic review was to evaluate the relationship between external shame and symptoms of ED in a clinical population of individuals with AN, BN or BED. It was anticipated that external shame would relate to ED symptoms in individuals that met a diagnosis of an ED. Furthermore, it was of interest to see whether experiences of external shame would be specifically associated with BN, BED or AN.

Summary of Evidence

Overall the results of the systematic review suggest that there is a moderate to strong relationship between external shame and EDs, with the severity of ED relating to increased levels of external shame in a clinical population. The findings support Gilbert's (2003) evolutionary theory of shame and social rank theory. According to social rank theory, gaining social rank is important for survival and how one perceives their social status/rank has a significant influence on emotions (Gilbert, 2000). Individuals perceive their social rank based on how they believe others perceive them. Thus, individuals with low social rank believe that others view them unfavourable and experience external shame (Wood & Irons, 2016). Research

has found that compared to healthy controls, individuals with an ED perceive that they have low social rank (Troop, Allan, Treasure, & Katzman, 2003), have an increased vigilance to social rank and biased processing toward social rank cues (Cardi et al., 2014).

The findings regarding the association of external shame and particular ED diagnoses were mixed. Consistent with Blythin et al. (2020), evidence from this review indicates that external shame may not differ across ED presentations. However, there was some evidence that after controlling for depression, external shame was associated with AN, but not BN (Troop et al., 2008; Troop & Redshaw, 2012). In line with this, Troop, Andrews, Hiskey and Treasure, (2014) found that low social rank predicted an increase in AN symptoms, but not BN symptoms. Furthermore, they found that externally focused aspects of social rank (e.g. submissive behaviour) predicted an increase in AN symptoms, suggesting that individuals with AN believe that others perceive them to have low social rank. AN behaviours may be a way for the individual to control or maintain social rank. This fits with Bruch's (1982) early observations that individuals with AN are concerned with how others see them and whether they are seen as worthy. However, methodological issues in the studies mean that caution should be used when interpreting results. For example, Troop and Redshaw (2012) regression model controlled for body shame, concluding that external shame did not make any additional contribution to the model. However, since body shame is highly related to external shame (Hopkins, 2017), it may not make sense to control for this.

Studies looking at eating psychopathology within combined ED samples found no differences between external shame and specific ED symptoms, suggesting that external shame is related to restriction, drive for thinness, binge-eating, purging, and

binge/purge behaviours (Ferreira et al., 2013; Hopkins, 2017). However, caution should be taken when interpreting cross-sectional studies that use a combined ED sample and subscales of ED measures as a way to explore the relationship between external shame and different ED diagnoses. For example, Duarte et al. (2017) found that in a clinical sample of individuals that met BED diagnosis, binge eating, but not food restriction was associated with external shame, highlighting the challenges of making inferences from a combined ED sample. Furthermore, the majority of papers included in this review were cross-sectional in design and did not control for other variables, thus limiting the conclusions that can be made about causality. Though the evidence suggests an association between external shame and ED, it is unclear how these variables interact. For example, it could be that individuals with a diagnosis of an ED develop high levels of external shame because of the stigma around mental health and ED. It could also be that comorbid depression leads to high levels of external shame, a relationship supported within the evidence-base (Kim, Thibodeau, & Jorgensen, 2011). This could explain why after controlling for depression, external shame is no longer associated with BN.

This review found that compared to healthy controls, individuals with a current or a previous ED diagnosis experienced significantly higher levels of external shame (Cardi et al., 2014). Thus, even aften recovery from an ED, individuals still experience high levels of external shame, suggesting that external shame could be a vulnerability factor for EDs. Research has demonstrated that early childhood adversity may predict ED due to the impact on low social rank (Connan, Troop, Landau, Campbell, & Treasure, 2007). Thus, it may be that individuals that develop EDs are prone to high levels of external shame and have a heightened sensitivity to negative evaluation and social rejection. Due to the importance placed on physical

appearance (Gunnard et al., 2012), ED symptoms become a way to defend against external shame, manage social threat or increase their social rank. However, Kelly and Waring (2018) found that a 2-week compassion writing intervention reduced external shame, but not AN symptoms. If a bidirectional relationship existed, one would expect a decrease in external shame to reduce ED symptoms. However, there was no follow up in this study and there could be a time-lag between reduction in external shame and a decrease in AN symptoms. Future research should study the longer-term efficacy of social rank/external shame interventions in the treatment of EDs to enhance our understanding of the relationship between these variables.

Clinical relevance

The finding that external shame is related to EDs has important clinical implications. Current NICE (2017) recommended psychological interventions for ED largely focus on the cognitive and behavioural aspects of an ED, with limited focus on the emotional experience of ED. Shame is a painful multifaced emotion that has been associated with maladaptive effects across the lifespan (Mahtani et al., 2018). Thus, ED interventions that address external shame may be effective in reducing ED symptoms and vulnerability to relapse. For example, two studies (Pinto-Gouveia et al., 2017; Pinto-Gouveia et al., 2019) found that contextual-behavioural approaches that utilised mindfulness, self-compassion and value-based committed action signtificantly reduced external shame and ED symptoms in individuals with BED. Contextual-behavioural approaches promote changing the way an individual relates to their internal experiences and being kind to oneself. Emotional regulation theories of ED suggest that ED symptoms are a way to regulate and avoid or escape aversive painful emotions, cognitions and sensations (Lavender et al., 2015; Kristeller, Baer, & Quillian-Wolever, 2006). When external shame is triggered

through unfavourable comparison or negative self-evaluation, ED behaviours become a way to reduce distress and gain social desirability. Thus, it follows that bringing awareness to emotional states, encouraging individuals to sit with their experiences and respond non-judgementally may be effective in addressing the emotional experience of external shame, reducing engagement in ED, and reduce vulnerability to relapse. This idea is consistent with emerging evidence of mindfulness-based approaches (Kristeller et al., 2016) and compassion-focused approaches in the treatment of ED (Goss and Allan, 2010), which arguably target similar processes in the treatment of ED. However, studies in this review had no comparison intervention and were limited to BED. It is unclear how contextual behavioural approaches will compare against evidence-based approaches such as CBT. Therefore, future research should compare contextual-behavioural approaches to other evidence-based interventions across different ED diagnoses and examine the impact on external shame and ED symptoms.

Limitations

It is important to consider the limitations of this systematic review. This review was limited to full texts published in English. Seventeen full texts were not available, and nine articles were not available in English, therefore it is possible that articles relevant to the research question were excluded. Also, a large number of the papers were from the same research team, therefore there may be sampling bias. Ten of 11 studies in the review were rated as weak using the QATQS (Thomas et al., 2004). The QATQS was developed to assess for high quality studies that can provide evidence for public health interventions. Thus, studies that are not randomised controlled trials are more likely to be rated as weak. Seven of the studies included in the review were cross-sectional which could explain the frequency of ‘weak’ ratings.

Future reviews may therefore consider using the appraisal tool for Cross-Sectional Studies (AXIS; Downes, Brennan, Williams & Dean, 2016). However, although the AXIS provides an assessment of issues that are found within cross-sectional studies, it does not reference broader limitations of cross-sectional research (i.e., causality, comparison groups, manipulation). As the current review yielded a mixture of experimental and cross-sectional studies, the QATAS was used to assess the quality. Readers are encouraged to consider the quality ratings in light of broader strengths and weakness as well as the synthesis of results when interpreting findings from this review.

This review was interested in research that included individuals with a diagnosis of an ED, including AN, BN or BED. However, the results consisted of clinical ED groups with a mix of diagnoses, with some studies categorising clinical samples by ED symptoms (e.g. restraint) rather than diagnosis. This makes it difficult to make inferences about the relationship between external shame and different ED diagnoses. It may have been beneficial to limit the search criteria to specific ED measures so that differences between external shame and ED could have been contrasted more easily. However, as this review is the first to explore the relationship between external shame and EDs, it was first important to see if the constructs were overall related.

The mixed ED groups and categorisation based on ED symptoms used by studies in this review may represent a wider issue within ED literature. Identifying different ED behaviours or assigning diagnostic categories suggests symptoms of ED are static and unlikely to change. For example, it assumes an individual with AN restricting type will not engage in purging. Diagnostic drift is well documented within the literature and reflects individuals with an ED drifting from one diagnostic category

to the other (Fairburn, Cooper, Shafran, & Wilson, 2008). Thus, conducting research by limiting individuals to ED behaviours and diagnostic categories may constrain our understanding of ED aetiology. In light of this, transdiagnostic approaches to ED have been proposed to account for the common processes seen across ED diagnoses (Fairburn, Cooper, & Shafran, 2003). However, this focuses on key cognitive and behavioural mechanisms, without consideration of the role of shame. The Research Domain Criteria (RDoC) aims to overcome categorical and symptom-based limitations within research by focusing on dimensions across categories that account for within-group variability (Wildes & Marcus, 2015). Future research could consider the dimension of shame to investigate mechanisms associated with eating difficulties to enhance our understanding of ED to ultimately improve treatments.

Conclusions

This review provides evidence that there is a moderate to strong relationship between external shame and ED in clinical populations. The review also provides preliminary evidence for the role of external shame in the development and maintenance of ED symptoms, providing support for Gilbert's evolutional model of shame and social rank theories of ED. The results regarding the contribution of external shame in specific ED diagnoses were mixed. Evidence suggests that there may not be differences, whilst others highlight a possible contribution of external shame in AN, but not BN. Methodological challenges are discussed, along with limitations in the measurement of EDs. Future research could address some of these methodological issues by investigating the underlying dimensions of shame that are associated with eating difficulties. The review found preliminary evidence that contextual-behavioural approaches may be beneficial for BED, and results are discussed in relation to emotional regulation difficulties within ED.

Glossary

Anorexia Nervosa: Refers to individuals that are a low weight. Individuals with anorexia nervosa restrict their food intake or engage in excessive exercise or other compensatory behaviours as a way to lose weight.

Binge Eating Disorder: Individuals engage in an uncontrollable episode of eating large quantities of food, usually of foods high in fat.

Body shame: The idea that people feel ashamed of their body because of its particular shame, size or appearance. Body shame is related to what a particular culture places value on and a failure to meet these ideals.

Bulimia Nervosa: Describes the cycle of an individual eating large quantities of food and engaging in a behaviour to compensate for over eating. Individuals may purge by vomiting, taking laxatives, excessively execising or fasting.

External shame: The belief that the self is viewed negatively by others which leads to emotional, physical and behavioural, social and components of distress.

Internal shame: A global evaluation that the self is flawed or inferior which leads to emotional, physical and behavioural, social and components of distress.

Other Specified Feeding and Eating Disorder (OSFED): Is a disorder of eating that does not meet criteria for the other eating disorder diagnoses in DSM5. Previously called eating disorder not otherwise specified (EDNOS) in DSMIV and earlier versions.

Shame: A social and self-conscious emotion that is often experienced in relation to another individual, group or society. In this respect, the experience of shame is co-

constructed. It is a complex and multifaceted emotion that consists of emotional, physical and behavioural, social and components.

Shame-proneness: This refers to the idea that whilst shame may have an adaptive evolutionary function and everyone, not everyone will be prone to high levels of shame. A proneness to experiencing high levels of shame is likely to develop from early experiences and is more likely to be related to maladaptive coping styles.

Social rank: The position an individual has within society. This can also relate to how an individual perceives their social position. Research suggests that people want to avoid low social rank due to the negative affect and possible rejection associated with having a low social rank.

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Appendices

Appendix A: Quality assessment tool for quantitative studies

QUALITY ASSESSMENT TOOL FOR QUANTITATIVE STUDIES

EPHPP
Effective Public Health Practice Project

COMPONENT RATINGS

A) SELECTION BIAS

(Q1) Are the individuals selected to participate in the study likely to be representative of the target population?

1 Very likely
2 Somewhat likely
3 Not likely
4 Can't tell

(Q2) What percentage of selected individuals agreed to participate?

1 80 - 100% agreement
2 60 – 79% agreement
3 less than 60% agreement
4 Not applicable
5 Can't tell

RATE THIS SECTION	STRONG	MODERATE	WEAK
See dictionary	1	2	3

B) STUDY DESIGN

Indicate the study design

1 Randomized controlled trial
2 Controlled clinical trial
3 Cohort analytic (two group pre + post)
4 Case-control
5 Cohort (one group pre + post (before and after))
6 Interrupted time series
7 Other specify _____
8 Can't tell

Was the study described as randomized? If NO, go to Component C.

No Yes

If Yes, was the method of randomization described? (See dictionary)

No Yes

If Yes, was the method appropriate? (See dictionary)

No Yes

RATE THIS SECTION	STRONG	MODERATE	WEAK
See dictionary	1	2	3

C) CONFOUNDERS

(Q1) Were there important differences between groups prior to the intervention?

1 Yes
2 No
3 Can't tell

The following are examples of confounders:

1 Race
2 Sex
3 Marital status/family
4 Age
5 SES (income or class)
6 Education
7 Health status
8 Pre-intervention score on outcome measure

(Q2) If yes, indicate the percentage of relevant confounders that were controlled (either in the design (e.g. stratification, matching) or analysis)?

1 80 – 100% (most)
2 60 – 79% (some)
3 Less than 60% (few or none)
4 Can't Tell

RATE THIS SECTION	STRONG	MODERATE	WEAK
See dictionary	1	2	3

D) BLINDING

(Q1) Was (were) the outcome assessor(s) aware of the intervention or exposure status of participants?

1 Yes
2 No
3 Can't tell

(Q2) Were the study participants aware of the research question?

1 Yes
2 No
3 Can't tell

RATE THIS SECTION	STRONG	MODERATE	WEAK
See dictionary	1	2	3

E) DATA COLLECTION METHODS

(Q1) Were data collection tools shown to be valid?

1 Yes
2 No
3 Can't tell

(Q2) Were data collection tools shown to be reliable?

1 Yes
2 No
3 Can't tell

RATE THIS SECTION	STRONG	MODERATE	WEAK
See dictionary	1	2	3

F) WITHDRAWALS AND DROP-OUTS

(Q1) Were withdrawals and drop-outs reported in terms of numbers and/or reasons per group?

1 Yes
2 No
3 Can't tell
4 Not Applicable (i.e. one time surveys or interviews)

(Q2) Indicate the percentage of participants completing the study. (If the percentage differs by groups, record the lowest).

1 80 -100%
2 60 - 79%
3 less than 60%
4 Can't tell
5 Not Applicable (i.e. Retrospective case-control)

RATE THIS SECTION	STRONG	MODERATE	WEAK	
See dictionary	1	2	3	Not Applicable

G) INTERVENTION INTEGRITY

(Q1) What percentage of participants received the allocated intervention or exposure of interest?

1 80 -100%
2 60 - 79%
3 less than 60%
4 Can't tell

(Q2) Was the consistency of the intervention measured?

1 Yes
2 No
3 Can't tell

(Q3) Is it likely that subjects received an unintended intervention (contamination or co-intervention) that may influence the results?

4 Yes
5 No
6 Can't tell

H) ANALYSES

(Q1) Indicate the unit of allocation (circle one)

community organization/institution practice/office individual

(Q2) Indicate the unit of analysis (circle one)

community organization/institution practice/office individual

(Q3) Are the statistical methods appropriate for the study design?

1 Yes
2 No
3 Can't tell

(Q4) Is the analysis performed by intervention allocation status (i.e. intention to treat) rather than the actual intervention received?

1 Yes
2 No
3 Can't tell

GLOBAL RATING

COMPONENT RATINGS
Please transcribe the information from the gray boxes on pages 1-4 onto this page. See dictionary on how to rate this section.

A	**SELECTION BIAS**	**STRONG**	**MODERATE**	**WEAK**	
		1	2	3	
B	**STUDY DESIGN**	**STRONG**	**MODERATE**	**WEAK**	
		1	2	3	
C	**CONFOUNDERS**	**STRONG**	**MODERATE**	**WEAK**	
		1	2	3	
D	**BLINDING**	**STRONG**	**MODERATE**	**WEAK**	
		1	2	3	
E	**DATA COLLECTION METHOD**	**STRONG**	**MODERATE**	**WEAK**	
		1	2	3	
F	**WITHDRAWALS AND DROPOUTS**	**STRONG**	**MODERATE**	**WEAK**	
		1	2	3	Not Applicable

GLOBAL RATING FOR THIS PAPER (circle one):

1	STRONG	(no WEAK ratings)
2	MODERATE	(one WEAK rating)
3	WEAK	(two or more WEAK ratings)

With both reviewers discussing the ratings:

Is there a discrepancy between the two reviewers with respect to the component (A-F) ratings?

No Yes

If yes, indicate the reason for the discrepancy

1	Oversight
2	Differences in interpretation of criteria
3	Differences in interpretation of study

Final decision of both reviewers (circle one):

1	**STRONG**
2	**MODERATE**
3	**WEAK**

Appendix B: Quality assessment tool dictionary

Quality Assessment Tool for Quantitative Studies Dictionary

The purpose of this dictionary is to describe items in the tool thereby assisting raters to score study quality. Due to under-reporting or lack of clarity in the primary study, raters will need to make judgements about the extent that bias may be present. When making judgements about each component, raters should form their opinion based upon information contained in the study rather than making inferences about what the authors intended. Mixed methods studies can be quality assessed using this tool with the quantitative component of the study.

A) SELECTION BIAS

(Q1) Participants are more likely to be representative of the target population if they are randomly selected from a comprehensive list of individuals in the target population (score very likely). They may not be representative if they are referred from a source (e.g. clinic) in a systematic manner (score somewhat likely) or self-referred (score not likely).

(Q2) Refers to the % of subjects in the control and intervention groups that agreed to participate in the study before they were assigned to intervention or control groups.

B) STUDY DESIGN

In this section, raters assess the likelihood of bias due to the allocation process in an experimental study. For observational studies, raters assess the extent that assessments of exposure and outcome are likely to be independent. Generally, the type of design is a good indicator of the extent of bias. In stronger designs, an equivalent control group is present and the allocation process is such that the investigators are unable to predict the sequence.

Randomized Controlled Trial (RCT)
An experimental design where investigators randomly allocate eligible people to an intervention or control group. A rater should describe a study as an RCT if the randomization sequence allows each study participant to have the same chance of receiving each intervention and the investigators could not predict which intervention was next. If the investigators do not describe the allocation process and only use the words 'random' or 'randomly', the study is described as a controlled clinical trial.

See below for more details.

Was the study described as randomized?

Score YES, if the authors used words such as random allocation, randomly assigned, and random assignment.

Score NO, if no mention of randomization is made.

Was the method of randomization described?

Score YES, if the authors describe any method used to generate a random allocation sequence.

Score NO, if the authors do not describe the allocation method or describe methods of allocation such as alternation, case record numbers, dates of birth, day of the week, and any allocation procedure that is entirely transparent before assignment, such as an open list of random numbers of assignments.
If NO is scored, then the study is a controlled clinical trial.

Was the method appropriate?

Score YES, if the randomization sequence allowed each study participant to have the same chance of receiving each intervention and the investigators could not predict which intervention was next. Examples of appropriate approaches include assignment of subjects by a central office unaware of subject characteristics, or sequentially numbered, sealed, opaque envelopes.

Score NO, if the randomization sequence is open to the individuals responsible for recruiting and allocating participants or providing the intervention, since those individuals can influence the allocation process, either knowingly or unknowingly.

If NO is scored, then the study is a controlled clinical trial.

Controlled Clinical Trial (CCT)
An experimental study design where the method of allocating study subjects to intervention or control groups is open to individuals responsible for recruiting subjects or providing the intervention. The method of allocation is transparent before assignment, e.g. an open list of random numbers or allocation by date of birth, etc.

Cohort analytic (two group pre and post)
An observational study design where groups are assembled according to whether or not exposure to the intervention has occurred. Exposure to the intervention is not under the control of the investigators. Study groups might be non-equivalent or not comparable on some feature that affects outcome.

Case control study
A retrospective study design where the investigators gather 'cases' of people who already have the outcome of interest and 'controls' who do not. Both groups are then questioned or their records examined about whether they received the intervention exposure of interest.

Cohort (one group pre + post (before and after)
The same group is pretested, given an intervention, and tested immediately after the intervention. The intervention group, by means of the pretest, act as their own control group.

Interrupted time series
A study that uses observations at multiple time points before and after an intervention (the 'interruption'). The design attempts to detect whether the intervention has had an effect significantly greater than any underlying trend over time. Exclusion: Studies that do not have a clearly defined point in time when the intervention occurred and at least three data points before and three after the intervention

Other:
One time surveys or interviews

C) CONFOUNDERS

By definition, a confounder is a variable that is associated with the intervention or exposure and causally related to the outcome of interest. Even in a robust study design, groups may not be balanced with respect to important variables prior to the intervention. The authors should indicate if confounders were controlled in the design (by stratification or matching) or in the analysis. If the allocation to intervention and control groups is randomized, the authors must report that the groups were balanced at baseline with respect to confounders (either in the text or a table).

D) BLINDING

(Q1) Assessors should be described as blinded to which participants were in the control and intervention groups. The purpose of blinding the outcome assessors (who might also be the care providers) is to protect against detection bias.

(Q2) Study participants should not be aware of (i.e. blinded to) the research question. The purpose of blinding the participants is to protect against reporting bias.

E) DATA COLLECTION METHODS

Tools for primary outcome measures must be described as reliable and valid. If 'face' validity or 'content' validity has been demonstrated, this is acceptable. Some sources from which data may be collected are described below:

Self reported data includes data that is collected from participants in the study (e.g. completing a questionnaire, survey, answering questions during an interview, etc.).

Assessment/Screening includes objective data that is retrieved by the researchers. (e.g. observations by investigators).

Medical Records/Vital Statistics refers to the types of formal records used for the extraction of the data.

Reliability and validity can be reported in the study or in a separate study. For example, some standard assessment tools have known reliability and validity.

F) WITHDRAWALS AND DROP-OUTS

Score **YES** if the authors describe BOTH the numbers and reasons for withdrawals and drop-outs.

Score **NO** if either the numbers or reasons for withdrawals and drop-outs are not reported.

Score **NOT APPLICABLE** if the study was a one-time interview or survey where there was not follow-up data reported.

The percentage of participants completing the study refers to the % of subjects remaining in the study at the final data collection period in all groups (i.e. control and intervention groups).

G) INTERVENTION INTEGRITY

The number of participants receiving the intended intervention should be noted (consider both frequency and intensity). For example, the authors may have reported that at least 80 percent of the participants received the complete intervention. The authors should describe a method of measuring if the intervention was provided to all participants the same way. As well, the authors should indicate if subjects received an unintended intervention that may have influenced the outcomes. For example, co-intervention occurs when the study group receives an additional intervention (other than that intended). In this case, it is possible that the effect of the intervention may be over-estimated. Contamination refers to situations where the control group accidentally receives the study intervention. This could result in an under-estimation of the impact of the intervention.

H) ANALYSIS APPROPRIATE TO QUESTION

Was the quantitative analysis appropriate to the research question being asked?

An intention-to-treat analysis is one in which all the participants in a trial are analyzed according to the intervention to which they were allocated, whether they received it or not. Intention-to-treat analyses are favoured in assessments of effectiveness as they mirror the noncompliance and treatment changes that are likely to occur when the intervention is used in practice, and because of the risk of attrition bias when participants are excluded from the analysis.

Component Ratings of Study:

For each of the six components A – F, use the following descriptions as a roadmap.

A) SELECTION BIAS

Good: The selected individuals are very likely to be representative of the target population (Q1 is 1) **and** there is greater than 80% participation (Q2 is 1).

Fair: The selected individuals are at least somewhat likely to be representative of the target population (Q1 is 1 or 2); **and** there is 60 - 79% participation (Q2 is 2). 'Moderate' may also be assigned if Q1 is 1 or 2 and Q2 is 5 (can't tell).

Poor: The selected individuals are not likely to be representative of the target population (Q1 is 3); **or** there is less than 60% participation (Q2 is 3) **or** selection is not described (Q1 is 4); and the level of participation is not described (Q2 is 5).

B) DESIGN

Good: will be assigned to those articles that described RCTs and CCTs.

Fair: will be assigned to those that described a cohort analytic study, a case control study, a cohort design, or an interrupted time series.

Weak: will be assigned to those that used any other method or did not state the method used.

C) CONFOUNDERS

Good: will be assigned to those articles that controlled for at least 80% of relevant confounders (Q1 is 2); **or** (Q2 is 1).

Fair: will be given to those studies that controlled for 60 – 79% of relevant confounders (Q1 is 1) **and** (Q2 is 2).

Poor: will be assigned when less than 60% of relevant confounders were controlled (Q1 is 1) **and** (Q2 is 3) **or** control of confounders was not described (Q1 is 3) **and** (Q2 is 4).

D) BLINDING

Good: The outcome assessor is not aware of the intervention status of participants (Q1 is 2); **and t**he study participants are not aware of the research question (Q2 is 2).

Fair: The outcome assessor is not aware of the intervention status of participants (Q1 is 2); **or** the study participants are not aware of the research question (Q2 is 2).

Poor: The outcome assessor is aware of the intervention status of participants (Q1 is 1); **and** the study participants are aware of the research question (Q2 is 1); **or b**linding is not described (Q1 is 3 and Q2 is 3).

E) DATA COLLECTION METHODS

Good: The data collection tools have been shown to be valid (Q1 is 1); **and** the data collection tools have been shown to be reliable (Q2 is 1).

Fair: The data collection tools have been shown to be valid (Q1 is 1); **and** the data collection tools have not been shown to be reliable (Q2 is 2) **or** reliability is not described (Q2 is 3).

Poor: The data collection tools have not been shown to be valid (Q1 is 2) **or** both reliability and validity are not described (Q1 is 3 and Q2 is 3).

F) WITHDRAWALS AND DROP-OUTS - a rating of:

Good: will be assigned when the follow-up rate is 80% or greater (Q1 is 1 and Q2 is 1).

Fair: will be assigned when the follow-up rate is 60 – 79% (Q2 is 2) **OR** Q1 is 4 or Q2 is 5.

Poor: will be assigned when a follow-up rate is less than 60% (Q2 is 3) or if the withdrawals and drop-outs were not described (Q1 is No or Q2 is 4).

Not Applicable: if Q1 is 4 or Q2 is 5.

Appendix C: Preparation and Submission Requirements for the Journal of Eating Disorders

Aims and scope

Journal of Eating Disorders is the first open access, peer-reviewed journal publishing leading research in the science and clinical practice of eating disorders. It disseminates research that provides answers to the important issues and key challenges in the field of eating disorders and to facilitate translation of evidence into practice.

The journal publishes research on all aspects of eating disorders namely their epidemiology, nature, determinants, neurobiology, prevention, treatment and outcomes. The scope includes, but is not limited to anorexia nervosa, bulimia nervosa, binge eating disorder and other eating disorders. Related areas such as important co-morbidities, obesity, body image, appetite, food and eating are also included. Articles about research methodology and assessment are welcomed where they advance the field of eating disorders.

Preparing your manuscript

The information below details the section headings that you should include in your manuscript and what information should be within each section.

Please note that your manuscript must include a 'Declarations' section including all of the subheadings (please see below for more information).

Title page

The title page should:

present a title that includes, if appropriate, the study design e.g.:

"A versus B in the treatment of C: a randomized controlled trial", "X is a risk factor for Y: a case control study", "What is the impact of factor X on subject Y: A systematic review"

or for non-clinical or non-research studies: a description of what the article reports

list the full names and institutional addresses for all authors

if a collaboration group should be listed as an author, please list the Group name as an author. If you would like the names of the individual members of the Group to be searchable through their individual PubMed records, please include this information in the “Acknowledgements” section in accordance with the instructions below

indicate the corresponding author

Abstract

The Abstract should not exceed 350 words and should be structured with a background, main body of the abstract and short conclusion. Please minimize the use of abbreviations and do not cite references in the abstract.

Keywords

Three to ten keywords representing the main content of the article.

Background

The Background section should explain the background to the article, its aims, a summary of a search of the existing literature and the issue under discussion.

Main text

This should contain the body of the article, and may also be broken into subsections with short, informative headings.

Conclusions

This should state clearly the main conclusions and include an explanation of their relevance or importance to the field.

List of abbreviations

If abbreviations are used in the text they should be defined in the text at first use, and a list of abbreviations should be provided.

SCHOOL OF PSYCHOLOGY

DOCTORATE IN CLINICAL PSYCHOLOGY

EMPIRICAL PAPER

Does poverty-related shame mediate the link between poverty and depression and poverty and aggression in young adults?

Trainee Name: **Natasha Griffiths**

Primary Research Supervisor: **Dr Nick Moberly**

Senior Lecturer, School of Psychology, University of Exeter

Secondary Research Supervisor: **Dr Pia Pechtel**

Wellcome Trust Research Follow, University of Exeter

Target Journal: British Journal of Social Psychology

Word Count: 7,622 words (excluding abstract, table of contents, list of figures, references, footnotes, appendices)

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Abstract

The association between childhood poverty and mental health difficulties has been well established. However, the mechanisms by which poverty leads to mental health difficulties are less understood. This study examines the role of poverty-related shame in poverty. Specifically, this study looks at the mediating role of poverty-related shame between child poverty and depressive symptoms and aggression in young adults. While the results suggest that high levels of child poverty are associated with increased rates of poverty-related shame, this was not related to depressive symptoms or aggression. However, methodological issues limit the conclusions that can be made. To the best of my knowledge, this study is the first to quantitatively measure poverty-related shame and highlights the need for further research to improve our understanding of the impact of poverty-related shame, protective factors and early interventions.

Keywords: childhood poverty, shame, poverty-related shame, depression, aggression

Introduction

Childhood poverty

For the first time in over a decade poverty is increasing in the UK (JRF, 2017). It is estimated that 30% of children are living in poverty in the UK (JRF, 2017). As there are many facets of poverty, agreeing a single definition is difficult. Poverty is often defined as having an income 60% less than the national median (Treanor, 2014). Yet, it needs to be acknowledged that poverty can also be a lack of economic and material power as well as a lack of basic resources (e.g., shelter, clothing, food), skills and education (Chambers, 2006).

Young people who grow up in poverty are two to three times more likely to develop mental health difficulties during their childhood (Reiss, 2013). Specifically, high levels of depression and aggression have been associated with childhood poverty (Tracy, Zimmerman, Galea, McCauley, & Stoep, 2008). If a child remains in poverty, research indicates that depression is likely to persist and aggressive behaviours are likely to increase, highlighting the detrimental impact childhood poverty can have on an individual's life trajectory (Strohschein, 2005). With half of all lifelong mental health difficulties beginning by age 14 (Kessler et al., 2005), understanding the importance of poverty on mental health in young people is critical to implement support early in development. Despite some well-established links, there is a lack of understanding regarding the mechanism by which poverty is associated with depression and aggression. Bronfenbrenner's (1979) ecological systems theory indicates the role context has on child development. A child develops in a complex interrelated system from the micro (e.g. immediate environment) to the macro (social and cultural). For example, a childs attachment to their primary caregiver will be influenced at multiple levels throughout the system and contribute to

shaping a child's concept of self. Thus, the ideological power of poverty and subsequent negative constructions of the poor may influence child development through multiple interrelated systems. This study aims to explore the role of poverty-related shame in linking childhood poverty and depressive symptoms and aggression in young adults.

Shame

Shame is a complex social and moral emotion that appears to be experienced in relation to another person, group or society (Tangney & Dearing, 2003). In the past, shame has often been subsumed under definitions of guilt. As one of the earliest distinctions, Lewis (1971) describes shame as an evaluation of the self, whilst guilt derives from one's action. Shame is concerned with the global evaluation one makes of themselves, e.g., 'I am defective' which can be manifested as a schema and remain unconscious (Lewis, 1971). The experience of shame is often described as feelings of powerlessness, inferiority and worthlessness (Tangney, 1995; Tangney, Wagner, Hill-Barlow, Marschall, & Gramzow, 1996).

It has been suggested that shame may be experienced as early as two years old and promotes adaptive social behaviour (Bastin, Harrison, Davey, Moll, & Whittle, 2016). However, Tangney and Dearing (2003) argue that whilst everyone can experience shame, not everyone will be prone to shame. Shame has a distinct social and self-conscious aspect, in that individuals who feel shame want to protect and defend themselves from others seeing their shame. Thus, to conceal their feelings of shame, individuals may develop coping strategies that are maladaptive such as attacking the self or others (Nathanson, 1994). Such strategies may cause additional distress, creating a circular pattern of distress and shame (Mahtani, Melvin, & Hasking, 2018). Tangney and Dearing (2003) found that children at age

eight who scored highly on measures of shame-proneness displayed more angry outbursts, suicide attempts and drug use at 18 years of age. Similarly to poverty, shame in childhood predicts both depression (e.g. suicide) and aggression in late adolescence (Tangney & Dearing, 2003). The psychological impact of poverty has been well documented, however, rarely has research considered the role of poverty-related shame as a mechanism for depression and aggression for those who grow up in poverty.

Poverty-related shame

Research has emphasized that shame is at the core of poverty (Sen, 1983). Walker and colleagues (2013) found that poverty-related shame (i.e., shame about being poor) is global and generalises across Western and Eastern cultures. Often individuals in poverty experience stigma because of their poverty, which can lead to feelings of inadequacy and shame (Boardman, Dogra, & Hindley, 2015). The ideological power within society results in cultural constructions of the poor, e.g., individuals being portrayed as being ‘welfare claimants’ (Johnstone et al., 2018), which may be internalised and compound feelings of inferiority and shame. Despite this, the shame experienced by those in poverty is often ignored, with evidence that affluent individuals do not believe that individuals would be ashamed of their poverty (Park, Chase, & Walker, 2013). Thus, the shame of poverty is powerful, perpetuated by structures that result in a loss of dignity for those in poverty who often describe feeling silenced and ignored.

Internal and external poverty-related shame

Whilst there is some evidence that poverty-related shame is related to mental health, it is not clear why an individual feeling ashamed of their poverty may be more likely to display depression or aggression. One of the reasons for this may be that a

global shame construct incorporates distinct sub-constructs and that their impact on mental health has not been studied separately. Critically, researchers have suggested that shame can be experienced internally and externally (Gilbert, 1998). While internal shame is an individual's global negative view of themselves (e.g., 'I am worthless'), external shame is said to be how individuals believe they are viewed by others (e.g., 'Others think I am useless'). Although qualitative research in this area does not explicitly distinguish between internal and external poverty-related shame, qualitative research highlights that the social dynamics of poverty mean that shame about poverty is almost always co-constructed of internal judgements of the self and anticipated judgement of others (Chase & Walker, 2012). Qualitative research into the shame of poverty found that participants make a distinction between their own personal inadequacy (e.g. 'I'm rotten'), but also how they are perceived by others with status and power (e.g. they 'look down on us') (Chase & Walker, 2012). Thus, participants report both feeling shame and being shamed by others about their poverty. Internal or external poverty-related shame are unlikely to be experienced independently of each other as shaming by others (real or imagined) may reinforce internal shame. Different individuals may be more susceptible to experiencing higher levels of internal or external shame (Kim, Thibodeau, & Jorgensen, 2011). Thus, it might be that investigating the specific role of internal and external shame could improve our understanding of how poverty is linked to depression and aggression in order to tailor early intervention to individuals' needs.

Qualitative research on the shame of poverty found that there are several responses to poverty-induced shame. Baumberf, Bell and Gaffney (2012) found that focus group participants reported the stigma of being on benefits had a impact on their own sense of self worth. Chase and Walker (2012) identified themes of

withdrawal and pretence among participants. Their research highlighted that having limited resource to afford gifts, drinks or a smart outfit became a barrier to socialising and as a result participants stopped socialising, leaving them feeling isolated. Respondents report feeling like ‘there ain’t no point socialising’. Loss of agency and control also emerged as a theme and related to participants persistent sense of failure. Participants report feeling depressed and suicidal because of their perceived shortcomings (Chase & Walker, 2012). In Beck, Rush, Shaw and Emery’s (1979) cognitive model, depression is associated with withdrawal and global, negative beliefs about the self being useless. Thus, depressive symptoms may be more likely to be related to coping with internal poverty-related shame. Conversely, others in poverty have talked about the anger and frustration in response to poverty-related shame. This is demonstrated in the emergence of ‘them and ‘us’ discourse among those in poverty (Chase & Walker, 2012). Anger is often directed towards others, such as the ‘system’ for failing to understand or others in poverty as a way to distance themselves from the cultural conceptions of the poor (Walker & Bantebya-Kyomuhendo, 2014). This is consistent with Beck’s (1999) cognitive theory that suggests when the self is viewed negatively by others, individuals may deflect the experiences of shame and hatred by using violence and aggression (Velotti, Garofalo, Bottazzi, & Caretti, 2017). Thus, it is possible that high levels of external poverty-related shame may be related to aggression.

To date no research has considered the specific role of internal and external poverty-related shame in understanding the link between childhood poverty and depressive symptoms and aggression. Furthermore, as research into poverty-related shame is largely qualitative (Ali et al., 2018; Gupta & Blumhardt, 2018; Walker et al., 2013), there currently is no recognised measure of poverty-related shame, making it

difficult to draw conclusions about the impact of poverty-related shame and mental health.

Aims and research questions

The current study aims to overcome current methodological issues in assessing shame by developing an experimental measure of poverty-related shame (Study 1). Secondly, the role of poverty-related shame as a mediator between childhood poverty and depression and aggression will be investigated. Specifically, I will explore if poverty-related internal shame (experienced for self) and poverty-related external shame (how one feels perceived by others) mediates the link between childhood poverty and depression and aggression, respectively (Study 2).

Primary question.

1. Does poverty-related shame mediate the link between poverty and depression and poverty and aggression in young adults?

Secondary questions.

2. Does internal poverty-related shame mediate the link between childhood poverty and depression in young adults?
3. Does external poverty-related shame mediate the link between poverty and aggression in young adults?

Study 1

Research into poverty-related shame has mainly relied on qualitative designs and there is currently no quantitative measure of poverty-related shame. Although there are several self-report measures of shame, these might be limited due to response bias and the unconscious aspects of shame (Sabag-Cohen, 2009).

Therefore, paradigms that measure implicit self-schema such as self-referential processing may be more advantageous.

Self-referential processing suggests that information is interpreted in relation to an individual's beliefs about themselves (Rogers, Kuiper, & Kirker, 1977). Research on memory encoding has compared memory for different types of stimulus and concluded that self-referential encoding significantly improves memory for information. For example, Derry and Kuiper (1981) found that depressed individuals remember more depressed words compared to non-depressed individuals. The Self-Referential Encoding Task (SRET; Kuiper & Derry, 1982) was developed to investigate implicit self-schema. Participants are presented with a positive or negative word and indicate if the word *'describes them'*. They are then asked to recall words after a short delay. It has been proposed that individuals recall more words that fit with their implicit self-schema, which is well supported within the literature (Bentley, Greenaway, & Haslam, 2017). Therefore, internal and external poverty-related shame was measured using SRET. As participants were required to respond to words presented on a screen, words that relate to internal and external poverty-related shame were required for the task. Study 1 focused on validating poverty-related shame words for the SRET. The SRET was then used to assess poverty-related shame in Study 2.

Method

Design

A survey using an opportunity sample assessed the extent to which a series of words are associated with poverty-related shame or depression. Depression was used as a comparison condition due to the similarity in the constructs.

Participants

Participants aged 18 or older were eligible to take part. The study was advertised online via social media. Of 29 subjects who agreed to take part, 14 completed the survey. Fifteen participants started but did not complete the survey and therefore were not included in the analyses. It is unclear why there was a high dropout as in line with General Data Protection Regulation (GDPR) principles of collecting the minimum amount of personal information, no demographics were collected for Study 1. In addition, as Study 1 had low intrinsic reward and there was no incentive for participation, the researcher hoped to reduce potential barriers to participation by not collecting personal information. The lack of incentive may have contributed to the high drop out in this study. Ethical approval was granted from the University of Exeter Ethics Committee (Appendix A).

Measures

Word survey. Negative poverty-related shame-based words were generated by the researcher through a review of media sources and literature. The researcher drew on narratives of the poor within society that are often constructed by individuals in positions of power and influence. Baumberg et al., (2012) found that from 2008 there has been a shift in the language used within media coverage towards the poor, a more negative ‘scrounger’ discourse. Media coverage contributes to shaping attitudes within society about individuals in poverty (e.g. benefit frauds). Therefore, the researcher drew on the discourse of the mainstream press (e.g. newspapers) of those in poverty. In addition, the researcher reviewed existing qualitative research on the shame of poverty (Walker & Bantebya-Kyomuhendo, 2014). As stated, qualitative research highlights that those in poverty internalise societal beliefs about being poor, reporting feeling ashamed (I’m rotten) and real or imagined negative

judgement of others (e.g. they look down on us). The Internalised Classism Scale (Hagan, 2018) was developed to measure the internalisation of negative sterotypes of the poor and how these influence an individuals self-concept and associated affect (e.g. people below middle class are irresponsible, lazy, not as intelligent, expect handouts). Thus, the researcher also used this scale to generate a list of words that related to poverty-related shame. This process resulted in a list of words that was reviewed and shared with colleagues in an iterative process. A final list of 60 words were used in the word survey.

Procedure

An online weblink directed participants to an information sheet (Appendix B) and a consent form (Appendix C). To progress, participants confirmed that they had read the information sheet and give consent to take part. To orientate participants to shame, the following description was presented: "*Shame is a painful social and moral emotion whereby an individual at their core feels they are not good enough*".

Participants were presented with the list of 60 words and asked to rate them for their relevance to poverty and depression. To measure the extent to which words related to internal poverty-related shame, participants were asked to rate "*how likely it is that a person who feels ashamed of their poverty would think of themselves using the following words*". Each of the 60 words were rated using a five-point Likert scale from one (*not at all likely*) to five (*extremely likely*). The instructions were then adjusted to "*how likely it is that a person feeling depressed would think of themselves using the following words*" to measure the extent to which words relate to depression.

To measure the extent to which words related to external poverty-related shame or depression, participants were asked "*how likely it is that a person feeling*

ashamed of their poverty would think that other people would describe them using the following words" and "*how likely it is that a person feeling depressed would think that other people would describe them using the following words*", respectively. The same 60 words were presented in identical order across all four conditions.

Analysis

Means and standard deviations were calculated to determine what words most closely related to the constructs of internal and external poverty-related shame. Words were selected for both internal and external poverty-related shame if they a) had a mean higher than four and b) did not have a higher mean score on another construct. Words that are more familiar are more likely to be recalled, therefore, to reduce confounding variables, selected poverty-related shame words were paired with a positive word matched for familiarity using The British National Corpus.

Results

As shown in Table 1, 10 words with a mean higher than four were selected for internal and external poverty-related shame. Eight of the internal poverty-related shame words had a mean higher than four for depression (see Appendix D), whilst none of the external-poverty related shame words had a mean higher than four on any of the other constructs, suggesting that some of the words for internal poverty-related also related to depression. Therefore, words were included as a measure of internal poverty-related shame if they have been shown to measure shame in other measures, e.g., Internalised Shame Scale (Cook, 1988). A total of 40 words were identified for use in the SRET in Study 2; 10 internal poverty-related shame words, 10 external poverty related-shame words and 20 positive words.

Table 1

Final Word Selection Based on Selection Criteria and Matched for Familiarity

Internal poverty-related shame word	**Mean**	**SD**	**Frequency**	**Matched positive word**	**Frequency**
Deprived	4.29	0.61	52297	Cherished	39762
Humiliation	4.29	0.83	27993	Surpassing	18342
Vulnerable	4.07	1.07	296302	Supreme	385524
Unimportant	4.43	0.65	20173	Considerate	21880
Hopeless	4.21	0.43	415117	Impressive	597195
Embarrassment	4.64	0.5	48375	Lavish	43242
Insignificant	4.29	0.83	41658	Captivating	42830
Inferior	4.57	0.85	95825	Acclaimed	106465
Inadequate	4.5	0.52	100256	Ambitious	152338
Poor	4.64	0.5	1159359	Super	1350937
External poverty-related shame				**Matched positive word**	
Sponger	4.75	0.43	399	Aboveboard	278
Scrounger	4.21	0.47	514	Upholder	547
Irresponsible	4.43	0.76	35566	Marvellous	22718
Freeloader	4.5	0.65	1242	Dignitary	1178
Beggar	4.43	0.65	10759	Conqueror	15334
Trash	4.5	0.52	208172	Perfection	143028
Dishonest	4.07	0.83	31099	Superiority	43599
Quitter	4.43	0.65	2631	Sprightly	3112
Waster	4.5	0.52	2842	Gleeful	3817
Slouch	4.36	0.84	9118	Whiz	10571

Note. SD = standard deviation, frequencies taken from British National Corpus

Discussion

The aim of Study 1 was to validate words that relate to the constructs of internal and external poverty-related shame to be used in the SRET (Study 2). Ten words met the selection criteria (Mean > 4) for each condition and were therefore considered as a valid measure of poverty-related internal and external shame to be included in the SRET task. However, some methodological aspects require consideration when interpreting the result. Firstly, there was a large drop out in this study, with over 50% of participants starting but not completing the survey, therefore words could have been biased. Secondly, demographic information was not collected, therefore it is not possible to determine whether poverty-related shame word ratings differed by demographic. However, this was not part of the research question. Finally, some of the words included as a measure of internal poverty-related shame also related highly to depression. Therefore, words included may relate to both internal poverty-related shame and depression. As one of the dependent variables in Study 2 is depression, this may make it difficult to draw conclusions regarding the relationship between internal poverty-related shame and depression. It could be that internal poverty-related shame is related to depressive symptoms due to the high level of depressed words in the construct. However, as research has shown that shame and depression are related (Kim et al., 2011), it may have been difficult to find words that were completely independent of depression. Furthermore, not all of the selected words were highly associated with depression. However, as poverty-related shame has not been measured using a SRET, standardised measures of shame will also be used in Study 2 to examine acceptability of this as a measure or poverty-related shame and to provide further validation.

Study 2

Study 2 aimed to see if poverty-related shame mediated the link between childhood poverty and depression and aggression. In addition, the researcher investigated the role of poverty-related internal shame as a mediator of the relationship between childhood poverty and depressive symptoms, and poverty-related external shame as a mediator of the relationship between childhood poverty and aggression in young adults.

Hypotheses

1. There is a significant indirect effect in that poverty will predict poverty-related shame, as measured by number of all recalled shame words on the SRET, which in turn will predict greater depressive symptoms.
2. There is a significant indirect effect in that poverty will predict poverty-related shame, as measured by number of all recalled shame words on the SRET, which in turn will predict greater aggression.
3. There is a significant indirect effect in that poverty will predict internal poverty-related shame, as measured by number of internal poverty-related shame words recalled on the SRET, which in turn will predict an increase in depressive symptoms.
4. There is a significant indirect effect in that poverty will predict external poverty-related shame, as measured by number of external poverty-related shame words recalled on the SRET, which in turn will predict aggression.

Method

Design

A cross-sectional, correlational design was used to examine the relationship between variables.

Participants

Participants were eligible to take part if they were aged between 18 – 25 years and literate and fluent in English as the study required reading and responding to written words. As child poverty was measured as a culturally sensitive composite, participants were required to have lived in the UK from 14 years of age.

Forty-four participants were recruited through a university and community organisation. Although it is not possible to definitely say that participants were not taking part in Study 1 and Study 2, this is deemed to be unlikely. Recruitment for Study 1 relied on social media (e.g. facebook and twitter) and was not targeted towards university students or those in poverty, whilst Study 2 did not rely on recruitment via social media. Four participants did not meet inclusion criteria (n = 2 < 18 years old, n = 1 under the influence of substances, n = 1 did not live in the UK from age 14). The final sample consisted of 40 participants (M_{Age} = 19.56, SD = 1.57) of whom 80% were female (n = 32), 18% were male (n = 7), and 2% were transgender male (n = 1). All participants received a £5 reimbursement for their time or university course credits.

Ethical Considerations

The study received ethical approval from the University of Exeter Ethics committee (Appendix E). Participants were given an information sheet and written informed consent was obtained. The risk of harm was low for participants. However,

as the research asked about experiences of depression and suicide, participants had to be registered with a general practitioner (GP) and agree to share this information with the researcher so that the risk protocols could be followed. The researcher completed the university's risk assessment for those participants (*n* = 2) who endorsed question 9 on the Patient Health Questionnaire (*'Do you have thoughts of being better off dead or hurting yourself?'*). All participants were debriefed and received contact details of how to seek further help (e.g., local helplines; Appendix N).

Power Analyses

The available literature on shame and psychological distress found medium to large effect sizes (Kim et al., 2011). A power analysis for the correlational analysis was calculated using G*power. For 80% chance of detecting a medium correlation (one-tailed) with an alpha of .05, 67 participants are required. The power to detect an indirect effect can be found using published data (Fritz & MacKinnon, 2007). This suggests that for 80% power, using bias-corrected bootstrap, a sample size of 54 is required to detect a medium-large effect size from path a and path b.

Materials

Demographics. The demographic questions consisted of questions about participants' age, gender and ethnicity.

Childhood poverty. Poverty can be assessed directly by measuring an individuals material deprivation or indirectly by measuring income (Treanor, 2014).Yet, it has been argued that measuring poverty solely on material deprivation is flawed as people may choose not to have certain goods (McKay, 2004). Similarly,

focussing only on income measures of poverty often result in different groups of people being identified as being in poverty (Bradshaw & Finch, 2003). Thus, combined measures of income and material deprivation have been shown to be a more robust measure of poverty (Pantazis et al., 2006). Therefore, in this study child poverty was measured using a composite score of material deprivation, parental occupation and parental education.

Material deprivation. The Material Deprivation Index (Pantazis, Gordon, & Levitas, 2006) consists of 21 questions asking whether at age 14 participants' families could afford essential items (e.g., 'keep your home adequately warm). There were three potential responses: '*we had this'*, '*we would have liked this, but could not afford it'*, and '*we did not want/need this, but could afford it*' (see Appendix H). The Poverty and Social Exclusion (PSE; Pantazis et al., 2006) method of counting the number of items that respondents were unable to afford was used to calculate a score for material deprivation, with higher scores indicating higher material deprivation.

Parental occupation. Parental occupation was used as a measure of childhood socioeconomic status. Participants were asked what best describes the work of the main income earner in their household when they were 14 years of age. They were presented with nine possible responses from, '*professional'* to '*long term unemployed*' (Civil Service, 2018; see Appendix I).

Parental education. Parental education was also used as a measure of childhood socioeconomic status. Participants were asked '*what is the highest qualification achieved by either parents by the time you were 18?*'. They were

presented with six possible responses and lower parental educational attainment was indicative of lower socioeconomic status (Civil Service, 2018; see Appendix I).

Self-Referent Encoding Task. An adapted SRET (Kuiper & Derry, 1982) was used to measure participants' internal and external poverty-related shame. Participants completed a practice SRET followed by the two experimental conditions to measure internal and external poverty-related shame. Conditions (internal/external) were randomised to reduce order effects and participants were not aware of what condition they were in. Internal poverty-related shame was measured by asking participants '*does this word describe how you view yourself?*'. External poverty-related shame was measured by asking participants '*does this word describe how others view you?*'. To ensure that participants knew that this could be different from how they viewed themselves, they were presented with an example. Following the instruction screen, participants were presented with a fixation point for 500ms followed by the stimulus. The stimulus remained on the screen until a response was made. Participants responded by pressing '*z'* for yes and '*m'* for no. A filler task of digit span was completed for two minutes, following which participants were asked to write down as many words as they could remember in three minutes. Reaction times (RT) were recorded to check for outliers. The number of internal and external shame words recalled was used to provide a measure of poverty-related shame.

Patient Health Questionnaire. Depressive symptoms were measured using the PHQ-9 (Kroenke, Spitzer, & Williams, 2001). The PHQ-9 is a nine-item self-report questionnaire (Appendix K). Participants were asked to rate each item on a four-point Likert scale from 0 (*not at all*) to 3 (*nearly every day*). Scores were added

together with a higher score indicative of higher levels of depression. The measure is reported to have good validity and consistency, with a Cronbach alpha coefficient of .87 in the general population (Kocalevent, Hinz, & Brähler, 2013) and a Cronbach alpha coefficient of .83 in the current sample.

Buss-Perry Aggression Questionnaire. To measure aggression, the BPAQ (Buss & Perry, 1992) a 29-item measure was used (Appendix L). The measure consists of four subscales and scores from each subscale were added to provide a total score for aggression. Participants rated each item on a 5-point Likert scale from 1 (*Extremely uncharacteristic of me*) to 5 (*Extremely characteristic of me*). The BPAQ has demonstrated good reliability with a Cronbach alpha coefficient of .89 for the full aggression score (Buss & Perry, 1992) and a Cronbach alpha coefficient of .88 in this sample.

Internalised Shame Scale. The ISS was used to see if the measure of internal poverty-related shame used in this study was related to standardised measures of internal shame. The ISS (Cook, 1988) is a 30-item self-report measure of internal shame (Appendix J). Participants were asked to indicate to what extent a statement describes them on a 5-point Likert scale (*0 – never* to *4 – almost always*) of which twenty-four items related to shame and six items to self-esteem. The current research only used the 24 shame items, which have been shown to have good internal consistency from .56 to .73, with a Cronbach alpha coefficient of .95, and a Cronbach alpha coefficient of .95 in this sample.

Other as Shamer Scale. The OAS was used to see if the measure of external poverty-related shame used in this study was related to standardised measures of external shame. The OAS (Goss, Gilbert, & Allan, 1994) is a self-report

measure of external shame that has been adapted from the ISS. The measure consists of 18-items. Participants were asked to rate on a 5-point Likert scale (*0 – never* to *4 – almost always*) the frequency with which they perceive negative evaluation by others (e.g., others see me as; Appendix M). The OAS has been shown to have overall good reliability with Cronbach's alpha of .92 (Goss et al., 1994) and a Cronbach alpha coefficient of .92 in this sample.

Procedure

The researcher advertised the project on the university study sign up portal and established links with local youth organisations, community centres and hostels to request that they displayed information about the study in communal areas. The advertisement included the researcher's email address and those interested in taking part could email for further information. The researcher also spent time at a local organisation for young adults at risk of becoming homeless. Potential participants were given a timeslot. University students could sign up by booking a timeslot on the portal.

The researcher met with participants one-to-one in their local area (e.g., hostel) or at the University of Exeter. Participants received an information sheet and limits to confidentiality were discussed before written consent was sought (Appendix F and G). Participants completed the SRET on a university laptop using E-prime software (Schneider, Eschman, & Zuccolotto, 2002). To monitor risk, the PHQ-9 was given as a paper and pencil task immediately after the SRET. Following this, the remaining self-report measures were completed online using Qualtrics. The researcher was present during the data collection to support participants with

questions. All participants were reimbursed, debriefed and provided with contact details for organisations that could provide additional support.

Analyses

All variables were examined to assess for outliers and normality of the data. Data was analysed using IBM SPSS Statistics (Version 24) and the PROCESS macro (Hayes, 2017). A measure of childhood poverty was calculated by combining the Material Deprivation Index with parental education and occupation. To ensure that each of the three items were weighted equally, z-scores for each variable were calculated and averaged to provide a total child poverty score. A measure of poverty-related shame was calculated by adding the total words recalled across the four conditions and dividing the number of shame words recalled. Internal and external poverty-related shame was calculated by dividing total words recalled with the respective number of internal or external words recalled.

To date, no one has used a SRET to measure poverty-related shame, therefore correlational analyses between standardised measures of shame (ISS and OAS) was used to assess the acceptability of SRET as a measure of poverty-related shame. Correlations were also used to examine the relationship between variables. To test the hypotheses that poverty-related shame would mediate the relationship between childhood poverty and depression and aggression, the PROCESS macro was used (Hayes, 2017). Bootstrapping using 5,000 resamples using 95% confidence intervals was used to determine whether the indirect effect was significantly different from zero.

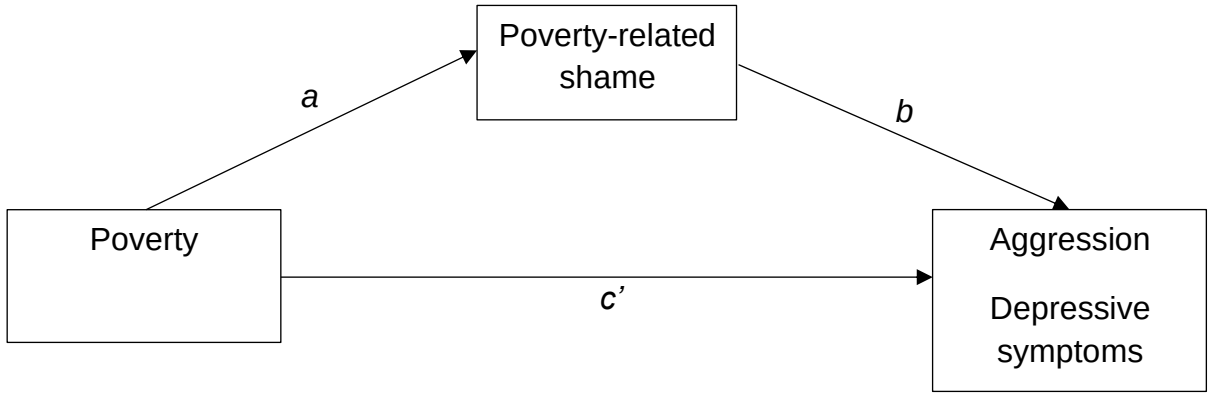

Figure 1. Proposed mediation model

Results

Data cleaning

The RT for the SRET was used to check for outliers. Jackson and McClelland (1979) found that in a simple word reading task, fast readers had a mean RT of 581ms. Therefore, a RT less than 500ms raises questions whether participants were paying attention to task instructions and data should be removed. In the current study, no participant had a RT of less than 500ms. Data for one participant was removed as their responses to the self-report questionnaires suggested to be invalid (i.e., same answer for all questions including reverse items). Thus, the final sample included in analysis was *n* =39.

Missing data

There were only two items of missing data across all participants on self-report measures, one item on the ISS and one item on the BPAQ. The missing item on each of the scales was replaced with the participant's mean score for that scale.

Tests of normality and outliers

All variables were checked for univariate outliers by examining z-scores. Z-scores with values >3.29 were considered outliers. Calculating standardised scores identified no outliers. Normality of data was checked to determine whether they met parametric assumptions of normality by examining histograms. The histograms for the majority of variables were consistent with an assumption of normality. Inspection revealed that the composite measure of child poverty was skewed; thus, the child poverty data was transformed using inverse transformation to improve consistency with assumptions of normality and reduce the impact of skewness. This reduced the skew of the data and inspection of the histogram revealed assumption of normality had been met. Data were then reversed by subtracting 22 from these scores so that higher scores indicated higher child poverty.

Descriptive statistics

Descriptive statistics, including frequencies, means and standard deviations are presented in Table 2. Socioeconomic status, as measured by parental education and occupation was high. The majority of participants reported that their parents had gained a university degree (*n* = 21) and worked at a professional or intermediate level (*n* = 27), suggesting individuals in this sample had a high socioeconomic background. A score of four or more on material deprivation indicates high levels of material deprivation (Treanor, 2014). In the current sample, there was a mean score of 2.28 (*SD* = 2.00), indicating a low level of material deprivation. There was a mean score of 5.36 (*SD* = 4.23) for depressive symptoms, indicating mild symptoms of depression in this sample. The score on the BPAQ, ISS and OAS were consistent

with averages found in the general population, suggesting low levels of aggression, internal and external shame.

Table 2

Frequencies for Demographics, Means and Standard Deviations

Variable		Frequencies (%)	Mean (*SD*)
Age			19.56 (1.57)
Gender	Male	7 (18%)	
	Female	31 (80%)	
	Transgender male	1 (2%)	
Ethnicity	White	33 (85%)	
	Mixed	2 (5%)	
	Asian	2 (5%)	
	Other	2 (5%)	
Parental education	Degree	21 (54%)	
	A-levels	17 (44%)	
	No qualification	1 (2%)	
Parental occupation	Professional	15 (38%)	
	Intermediate	12 (31%)	
	Non-manual skilled	7 (18%)	
	Manual skills	3 (8%)	
	Unskilled	1 (2.5%)	
	Long term unemployed	1 (2.5%)	
Maternal deprivation Index			2.28 (3)
PHQ-9			5.36 (4.23)

BPAQ	68.18 (16.74)
ISS shame subscale	31.65 (17.81)
OAS	20.10 (12.25)

Note: SD = standard deviation; PHQ-9 = Patient Health Questionnaire; BPAQ = Buss and Perry Aggression Questionnaire; ISS = Internalised Shame scale; OAS = Other as Shamer scale

Correlational analyses

Correlations for the study variables of interest are presented in Table 3.

Table 3

Correlation Matrix for all Variables

	1	2	3	4	5	6	7	8
1. Child Poverty	-							
2. Depression PHQ-9	.24	-						
3. Aggression BPAQ	.35*	.04	-					
4. Poverty-related shame	.37*	.12	.21	-				
5. Internal poverty-related shame	.50***	.22	.20	.69***	-			
6. External poverty-related shame	-.28	-.17	-.05	.15	-.61**	-		
7. Internalised Shame (ISS)	.24	.71***	.35*	.14	.18	-.10	-	
8. Other as Shamer scale (OAS)	.21	.66***	.38*	.13	.09	.01	.84**	-

Note: * = significant at the *p* = .05 level; ** = significant at the *p* = .01 level; *** = significant at the *p* =.001 level

Child poverty and shame

There was a significant positive correlation between child poverty and poverty-related shame (r (38) = .37, p < .05) suggesting those with greater childhood poverty experience higher levels of shame related to their poverty. When looking at internal and external poverty-related shame, however, only internal poverty-related shame was significantly correlated with child poverty (r (38) = .50, p < .001). This suggests that increased levels of childhood poverty are associated with higher levels of internal poverty-related shame, but not external poverty-related shame. Interestingly, there was no significant correlation between childhood poverty and standardized self-report measures of internal and external shame.

Child poverty and depression

There was no significant correlation between childhood poverty and depressive symptoms (r (38) = .24, p = .13), suggesting that high levels of childhood poverty do not relate to increased depressive symptoms. The indirect effect will be tested using Hayes (2017) mediation approach.

Child poverty and aggression

There was a significant positive correlation between childhood poverty and aggression (r (38) = .35, p < .05), suggesting that higher levels of childhood poverty are related to increased aggression.

Shame and depression

There were no significant relationships between any measures of poverty-related shame and depression. There was a significant positive correlation between self-report measure of internal shame (ISS) and depression (r (38) = .71, p < .001)

and self-report measure of external shame (OAS) and depression (r (38) = .66, p < .001). Results suggest that only increases in self-reported internal and external shame, but not any aspect of poverty-related shame, are related to an increase in depressive symptoms as measured by the PHQ-9.

Shame and aggression

There were no significant relationships between any measures of poverty-related shame and aggression. There was a significant positive correlation between self-report measure of internal shame (ISS) and aggression (r (38) = .35, p < .05) and self-report measure of external shame (OAS) and aggression (r (38) = .38, p < .05). Results suggest that only increases in self-reported internal and external shame, but not any aspect of poverty-related shame are related to an increase in aggression as measured by the BPAQ.

Shame and poverty-related shame

Interestingly, there were no significant correlations between self-report measures of shame and any of the measures of poverty-related shame. As the research questions aim to examine if aspects of poverty-related shame mediate the association between poverty and aggression and poverty and depressive symptoms, mediation analyses using measures of poverty-related shame only will be presented.

Mediation analyses

Separate mediation analyses were completed to test primary and secondary hypotheses and the statistical significance of the indirect effect.

Primary research question. To answer whether poverty-related shame mediates the link between poverty and depressive symptoms (Hypothesis 1), a

mediation analysis with depressive symptoms as the outcome variable, child poverty as the predictor, and poverty-related shame as the mediator was completed. Child poverty did not significantly predict depressive symptoms, *B* = 115.87, SE(B) = 86.28, β = .23, *p* = .19, 95% [CI -59.11, 290.85]. Child poverty significantly predicted poverty-related shame, *B* = 6.93, SE(B) = 2.86, β = .37, *p* = .02, 95% [CI 1.14, 12.73], but poverty-related shame did not predict depressive symptoms, *B* = .77, SE(B) = 4.61, β = .03, *p* = .87, 95% [CI -8.58, 10.11]. The estimated indirect effect of poverty-related shame was not significant, *B* = 5.32, SE(B) = 33.93, 95% CI [-67.32, 76.09], suggesting that poverty-related shame does not mediate the relationship between childhood poverty and depression.

To answer that poverty-related shame mediates the link between poverty and aggression (Hypothesis 2), a mediation analysis with aggression as the outcome variable, child poverty as the predictor and poverty-related shame as the mediator was completed. Child poverty did not significantly predict aggression, *B* = 617.51, SE(B) = 329.09, β = .31, *p* = .07, 95% [CI -49.92, 1284.94]. Child poverty significantly predicted poverty-related shame, *B* = 6.93, SE(B) = 2.86, β = .37, *p* = .02, 95% [CI 1.14, 12.73], but poverty-related shame did not predict aggression, *B* = 9.59.93, SE(B) = 17.57, β = .09, *p* = .59, 95% [CI -26.05, 45.23]. The estimated indirect effect of poverty-related shame was not significant, *B* = 66.51, SE(B) = 95.64, 95% CI [-104.45, 277.37], suggesting that poverty-related shame does not mediate the relationship between childhood poverty and aggression.

Secondary research questions. To answer that internal poverty-related shame mediates the link between childhood poverty and depression (Hypothesis 3), a mediation analysis with depression as the outcome variable, child poverty as the

predictor and internal poverty-related shame as the mediator was conducted. Child poverty did not significantly predict depressive symptoms, *B* = 121.19, SE(B) = 79.08, β = .24, *p* = .13, 95% CI [-39.05, 281.43]. Child poverty significantly predicted internal poverty-related shame, *B* = 11.73, SE(B) = 3.32, β = .50, *p* = .001, 95% CI [5.00, 18.46], but internal poverty-related shame did not predict depressive symptoms, *B* = .2.64, SE(B) = 3.94, β = .12, *p* < .51, 95% CI [-5.35, 10.64]. The estimated indirect effect of internal poverty-related shame was not significant, *B* = 31.03, SE(B) = 53.64, 95% CI [-79.41, 142.21], suggesting that internal poverty-related shame does not mediate the relationship between childhood poverty and depression.

To answer that external poverty-related shame mediates the link between childhood poverty and aggression (Hypothesis 4), a mediation analysis with aggression as the outcome variable, child poverty as the predictor and external poverty-related shame as the mediator was conducted. Child poverty significantly predicted aggression, *B* = 714.42, SE(B) = 319.00, β = .36, *p* = .03, 95% CI [67.45, 1361.40]. Child poverty did not significantly predict external poverty-related shame, *B* = -4.73. SE(B) = 2.69, β = -.28, *p* = .09, 95% CI [-10.17, .72], and external poverty-related shame did not predict aggression, *B* = 6.43, SE(B) = 18.74, β = .06, *p* = .73, 95% CI [-31.57, 44.44]. The estimated indirect effect of external poverty-related shame was not significant, *B* = -30.41, SE(B) = 102.71, 95% CI [-275.23, 154.16], suggesting that external poverty-related shame does not mediate the relationship between childhood poverty and aggression.

Discussion

The main aim of the current study was to examine whether different aspects of poverty-related shame mediate the relationship between childhood poverty and depressive symptoms, and childhood poverty and aggression. These hypotheses were not supported.

The study found no significant indirect effect of any aspects of poverty-related shame on depressive symptoms or aggression on childhood poverty. Furthermore, inconsistent with qualitative research highlighting the impact of poverty-related shame on mental health difficulties (Walker & Bantebya-Kyomuhendo, 2014), there was no relationship between any measures of poverty-related shame and depressive symptoms or aggression. This is interesting given the concern about the possible overlap between the measure of internal poverty-related shame and depression in Study 1. Results of Study 2 suggest that these constructs may indeed not be related. Priori power analysis identified that a sample size of 54 would be required to detect a medium to large indirect effect. However, the challenges of recruiting young adults that have experienced poverty during childhood meant that a sample of 40 were recruited. Therefore, the study may be underpowered in detecting important effects and as such caution should be taken when interpreting the results.

In this study, internal poverty-related shame did not mediate the association between childhood poverty and depression, whilst external poverty-related shame did not mediate the relationship between childhood poverty and aggression. However, consistent with the literature (Kim et al., 2011), standardised measures of shame were related to depressive symptoms and aggression. Together, this could suggest that internal and external shame, but not poverty-related shame, relates to depressive symptoms and aggression. However, as this is the first study to assess

the specific contribution of internal and external poverty-related shame using a SRET, further research is required. It is possible that the SRET was not an adequate measure of poverty-related shame, which may explain the lack of association between internal and external poverty-related shame and self-report measures of internal and external shame. Yet it could also be speculated that the reason for a missing link between poverty-related internal and external shame and the respective self-report measures could be that they indeed tap into meaningful differences between these constructs. This would require additional research in a larger sample.

Consistent with qualitative research that observed high levels of poverty-related shame in poverty (Ali et al., 2018; Gupta & Blumhardt, 2018; Walker et al., 2013), this study found that childhood poverty was associated with increased levels of poverty-related shame, but not with self-report measures of internal and external shame (i.e., ISS, OAS). This is an important finding as it suggests those in poverty may be ashamed about being poor which is often ignored. The shame of poverty may be specific rather that global, therefore it may be specifically targeted through support to prevent the negative sequelae of poverty. Future research should consider the development and validation of a measure of poverty-related shame in a larger sample so that research can explore the impact and protective factors of poverty-related shame.

Distinguishing between internal and external poverty-related shame was a key element of this project. Internal poverty-related shame, but not external poverty-related shame was found to be significantly related to childhood poverty. External poverty-related shame is thought to reflect the societal stigma of growing up in poverty leading to a belief that others view the self negatively. To measure external poverty-related shame participants were asked ‘others describe me as’ and

presented with a word on a screen. It could be that this instruction fails to capture the impact of societal stigma and participants may have responded with how their friends and family view them, which could be different to their beliefs about how society views them. This may explain the small negative correlations between the measure of external poverty-related shame and other variables. Future research could include two conditions in the SRET, one asking ‘my friends and family would describe me as’ and the other asking ‘society would describe me as’. This could potentially identify important differences in how individuals who have experienced childhood poverty perceive they are viewed by society compared to their peers.

Surprisingly, childhood poverty did not predict depressive symptoms or aggression. This is an unexpected finding given that extensive research has highlighted the association between childhood poverty and depression and aggression (Reiss, 2013). However, the sample in the current study predominantly consisted of participants from higher socioeconomic backgrounds, therefore conclusions about child poverty and mental health that can be drawn from the current study are limited. It is also possible that this study failed to adequately measure poverty. Although poverty includes socioeconomic factors such as income as measured in this study, it may also consist of factors that have not been captured such as culture and identity. Cultural aspect of poverty may also provide a strong sense of identity that serve as a protective factor for poverty-related shame and mental health difficulties, an aspect not considered in this study. Future research into poverty should investigate these complex aspects of poverty to gain a better understanding of mechanisms that may be vulnerability or protective factors for mental health difficulties.

Clinical implications

Poverty has been implicated in depression and aggression in childhood and the effects of childhood poverty are reported to have lasting effects into adulthood (Strohschein, 2005). Therefore, understanding what it is about poverty that increases an individual's risk of poor mental health is pivotal. This study provides support that higher levels of poverty were associated with increased levels of poverty-related shame. Inequality and the shame of poverty is often ignored, which perpetuates feelings of shame and has detrimental effects on wellbeing (Park et al., 2013). Therefore, the shame of poverty needs to be acknowledged within clinical contexts to challenge feelings of inadequacy, exclusion and powerlessness. The Power Threat Meaning Framework (Johnstone et al., 2018) proposes a model for understanding distress through developing a narrative of an individual's life. Specifically, the framework suggests that distress can be understood by considering how negative power has operated in an individual's life, how they made sense of it and what they did to survive. The framework supports individuals to create meaningful, hopeful narrative about their lives, instead of seeing themselves as deficient. Thus, interventions that voice the shame and inequality of poverty, identify strengths and survival skills may begin to readdress the power, increase compassion and may reduce psychological distress.

Strengths and limitations

To achieve varability on child poverty within the sample for analysis, the recruitment strategy aimed to recruit half of the sample from a university and the other half from the community. Over the course of the study, significant challenges emerged to meet the recruitment target from the community population of young adults with experience of poverty. The researcher underestimated the groundwork

required to set up working relationships with community and third sector organisations. Moreover, the financial incentive given to participants was too low for some organisations to support the project as they required participant payments of at least £10. Therefore, the sample consisted predominantly of participants from a higher socioeconomic background, meaning the study design has been limited in being able to answer the research questions. Learning outcomes from this experiences include establishing links with organisations ealier on in the research process to co-design the study with young adults who have experience of poverty. Future studies should consider sufficient budgets for the project. There were low levels of aggression and depressive symptoms in the sample. The lack of variation in these measures may have reduced probability of finding an effect. Furthermore, the study did not consider and control for confounding variables of individual reading speed and verbal fluency. This may have been particularly important considering the sample mix of university-educated young adults and a community sample of young adults and the adverse effects poverty can have on cognitive function (Miller et al., 2018). Therefore, a task that relies on participants reading and understanding words may be biased by individuals word comprehension.

As discussed, poverty is multifaceted and can include aspects of cultural identity that could be protective. This project focused on one aspect of poverty, poverty-related shame, therefore it may have not sufficiently addressed the diversity of poverty. Poverty-related shame was measured using a SRET based on words being rated by a a small sample of participants (n = 14), but initially selected by the researcher. Thus, the extent to which the SRET managed to capture the phenomenon of poverty-related shame is unclear. It may have been more appropriate to use qualitative research methods to identify words and themes to help

develop a measure of poverty-related shame. Interviews and focus groups with individuals that have experienced poverty could provide a deeper understanding of the meaning of poverty-related shame. A co-production approach to research may also have been beneficial for the research methods (i.e., different ways to measure or capture variability) and recruitment strategies (i.e., how to engage yound adults). In addition to benefits in study design, this approach could have also formed a critical step towards overcoming a lack of power and resources experienced by those in poverty by sharing power and responsibility in the co-construction of research studies on their experiences (Johnstone et al., 2018).

Conclusion

To sum, this study was the first to study poverty-related shame using an adapted SRET to examine the relationship between poverty and depressive symptoms and poverty and aggression. Results highlighted the relationship between poverty-related shame and poverty but failed to find an indirect effect of poverty-related shame on the relationship between poverty and depressive symptoms and poverty and aggression. Methodological issues within the study mean caution should be taken when interpreting study results. Future research should consider the development and validation of a measure of poverty-related shame to improve our understanding of the role poverty-related shame has on mental health so that protective factors and early interventions can be developed.

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Appendices

Appendix A: Ethics letter of approval for word survey

CLES – Psychology
Psychology
College of Life and Environmental Sciences
University of Exeter
Washington Singer Building
Perry Road
Exeter
EX4 4QG
Web: www.exeter.ac.uk

CLES – Psychology Ethics Committee

Dear Natasha Griffiths

Ethics application - eCLESPsy001245
Poverty-related shame word survey

Your project has been reviewed by the CLES – Psychology Ethics Committee and has received a Favourable opinion.

The Committee has made the following comments about your application:

- Please view your application at https://eethics.exeter.ac.uk/CLESPsy/ to see comments in full.
If you have received a Favourable with conditions, Provisional or unfavourable outcome you are required to re-submit for full review and/or confirm that committee comments have been addressed before you begin your research.

If you have any further queries, please contact your Ethics Officer.

Yours sincerely

Date: 25/04/2020

CLES – Psychology Ethics Committee

Appendix B: Information sheet Study 1

Participant Information Sheet

Title of Project: Word survey

Researcher name: Natasha Griffiths

Invitation and brief summary:
Thank you for your interest in this study. Please take the time to consider the information carefully. This word survey is interested in participants opinions on a number of words.

Purpose of the research:
Shame is a painful emotion and often poorly understood within the literature. The survey aims to improve our understanding of shame.

Why have I been approached?
I am approaching adults from a range of backgrounds to complete the word survey. This may allow for a variety of different responses and increase our understanding of shame words.

What would taking part involve?
By agreeing to take part you will be taken to an online survey. The online survey will contain a list of words and you will be asked to rate the words and how much you feel the describe different concepts. The survey should take approximately 30 minutes to complete.

What are the possible benefits of taking part?
By taking part you will be contributing to our understanding of shame and future research into this area. Students from the University of Exeter will receive a course credit for taking part.

What are the possible disadvantages and risks of taking part?
You will not be required to provide any identifiable information; therefore, your opinions will be anonymised. The survey may include words that you may find mildly upsetting, however these are words that you may see in day to day life e.g. in the media.

What will happen if I don't want to carry on with the study?
You can withdraw at any time by closing your online browser. Data will only be stored if you complete the survey and submit answers. As participants will not

provide any identifiable information, if you complete the survey your data cannot be withdrawn.

What will happen to the results of this study?
The results of the survey will be used to design a further study into shame.

Who has reviewed this study?
This project has been reviewed by the Research Ethics Committee at the University of Exeter (Reference Number)

Further information and contact details

If you would like further information you can use the following contact details.

Researcher: Natasha Griffiths ng344@exeter.ac.uk
Supervisor: Nick Moberly n.j.moberly@exeter.ac.uk
Supervisor: Pia Pechtel p.pechtel@exeter.ac.uk

You can also contact:
Gail Seymour, Research Ethics and Governance Manager
g.m.seymour@exeter.ac.uk, 01392 726621

Thank you for your interest in this project

Appendix C: Consent form study 1

Consent Form

Please tick 'I agree' if you consent to taking part and to continue with the survey

1. I confirm that I have read the information sheet dated for the above project. I have had the opportunity to consider the information.

2. I understand that my participation is voluntary and that I am free to withdraw at any time without giving any reason and without my legal rights being affected.

3. I understand that taking part involves anonymous questionnaire responses to be used for the purposes of future research projects.

I agree to take part in the above project

Appendix D: Table of Means and Standard Deviations

Means and standard deviations for word survey across conditions, shame words included in bold.

Word	**Mean (SD)**			
	Internal poverty-related shame	**External poverty-related shame**	**Depression view of self**	**Depression view of other**
Lazy	3.29 (1.33)	4.79 (0.51)	4.36 (0.5)	4.5 (0.52)
Unmotivated	3.07 (1.07)	4.57 (0.51)	4.86 (0.36)	4.5 (0.65)
Worthless	4.57 (0.51)	4.57 (0.51)	4.93 (0.27)	4 (1.24)
Work shy	3.14 (1.17)	4.57 (0.65)	2.93 (0.83)	3.43 (1.09)
Sponger	3.57 (1.16)	**4.76 (0.43)**	2.76 (1.12)	3.21 (0.97)
Waster	4.29 (0.73)	**4.71 (0.47)**	3.93 (1.14)	3.79 (0.8)
Inadequate	**4.64 (0.63)**	4.43 (0.51)	4.86 (0.36)	4 (0.96)
Unwell	3.07 (0.92)	2.27 (1.54)	4.00 (0.88)	4.14 (0.77)
Failure	4.36 (0.84)	4.43 (0.51)	4.79 (0.43)	4 (1.04)
Despised	3.43 (1.16)	4.14 (0.77)	3.57 (1.16)	3.21 (1.12)
Inferior	**4.57 (0.85)**	4.36 (0.5)	4.57 (0.76)	3.93 (1.33)
Dependent	3.71 (0.99)	4.5 (0.65)	4.14 (0.77)	3.79 (0.89)
Lousy	3.29 (1.14)	4.14 (0.66)	4.57 (0.65)	3.71 (0.99)
Stupid	3.79 (1.05)	4.36 (0.5)	3.93 (1.33)	3.93 (1.07)
Disgrace	3.93 (0.92)	4.43 (0.51)	4.07 (1.14)	3.71 (1.44)
Poor	**4.64 (0.5)**	4.64 (0.74)	2.79 (0.97)	2.57 (1.02)
Layabout	2.86 (0.86)	4.36 (0.63)	3.36 (1.01)	4 (0.88)
Disappointment	4.29 (0.83)	4.07 (0.83)	4.43 (0.65)	4.07 (1.07)
Outsider	3.64 (1.08)	3.5 (1.16)	4.21 (0.89)	3.64 (1.22)
Unacceptable	3.43 (1.02)	4.07 (0.73)	4.14 (0.86)	3.57 (1.02)

Scrounger	3.57 (1.16)	**4.71 (0.47)**	2.71 (0.83)	3.21 (1.19)
Unemployable	3.71 (0.91)	4.21 (0.89)	4.07 (0.83)	3.57 (1.02)
Fraudster	3 (1.04)	3.93 (0.92)	2.57 (1.09)	3.36 (1.15)
Bum	3 (1.11)	4.36 (0.63)	2.71 (1.07)	3.43 (1.16)
Cheat	2.79 (1.05)	3.79 (0.97)	2.14 (0.95)	2.64 (0.93)
Undeserving	3.79 (1.19)	4.14 (0.95)	4.29 (0.91)	3.43 (1.28)
Waster	3.50 (1.22)	4.5 (0.52)	3.79 (0.97)	3.71 (1.20)
Insignificant	**4.29 (0.83)**	4.29 (0.61)	4.5 (0.52)	4.21 (1.05)
Embarrassment	**4.64 (0.5)**	4.07 (0.92)	4.14 (0.77)	3.93 (1.21)
Leech	3.14 (1.03)	4.14 (0.86)	2.57 (1.02)	3.29 (0.99)
Disgrace	4.07 (0.73)	4.29 (0.61)	4.21 (0.58)	3.50 (1.29)
Hopeless	**4.21 (0.43)**	3.71 (0.83)	4.93 (0.27)	3.93 (1.14)
Different	3.93 (0.92)	3.93 (0.92)	4.50 (0.52)	4 (1.11)
Corrupt	2 (0.96)	3.71 (0.91)	1.86 (1.03)	2.14 (0.95)
Disgrace	3.79 (0.89)	4.43 (0.65)	4 (0.68)	3.79 (1.05)
Unsatisfactory	3.79 (1.12)	4.14 (0.66)	4.14 (0.86)	3.64 (1.34)
Unhealthy	2.86 (0.95)	3.43 (1.40)	3.86 (0.77)	4 (0.96)
Slacker	3.5 (1.09)	4.57 (0.51)	3.5 (0.85)	3.71 (1.07)
Unimportant	**4.43 (0.65)**	4.43 (0.65)	4.36 (0.93)	4.07 (1.27)
Irresponsible	3.07 (0.92)	**4.43 (0.76)**	3.21 (1.19)	3.36 (1.22)
Slouch	3.21 (1.12)	**4.36 (0.84)**	3.29 (1.07)	3.43 (1.16)
Quitter	3.14 (0.77)	4.43 (0.65)	3.57 (0.85)	3.64 (1.28)
Freeloader	3.07 (1.14)	**4.5 (0.65)**	3.07 (0.92)	3.14 (1.17)
Beggar	3 (1.11)	**4.36 (0.74)**	2.36 (1.08)	2.57 (1.22)
Trash	3.93 (1.00)	**4.5 (0.52)**	3.36 (1.08)	3.29 (1.20)
Dishonest	2.57 (1.02)	**4.07 (0.83)**	2.64 (1.01)	2.86 (1.17)
Vulnerable	**4.07 (1.07)**	2.79 (1.19)	4 (1.11)	3.43 (1.16)
Defective	4 (0.68)	4.07 (0.27)	4.64 (0.50)	4.07 (1.07)
Humiliation	**4.29 (0.83)**	3.50 (1.29)	4 (0.78)	3.5 (1.16)

Deprived	**4.29 (0.61)**	3.64 (1.22)	3.21 (1.05)	2.5 (0.94)
Immoral	2.43 (0.85)	3.71 (0.91)	2.07 (1.00)	2.43 (1.02)
Beggar	2.93 (1.14)	**4.43 (0.65)**	1.86 (0.77)	2.5 (1.22)
Untrustworthy	2.36 (0.84)	4.29 (0.47)	2.29 (0.99)	2.57 (1.22)
Dissatisfactory	3.79 (0.89)	4.14 (0.77)	4.5 (0.52)	3.57 (1.28)
Vile	2.93 (1.07)	3.86 (1.03)	3.43 (1.09)	2.57 (1.40)
Rotten	3.07 (1.14)	3.5 (1.02)	4 (0.96)	2.5 (1.40)
Respected	1.50 (0.52)	1.64 (1.08)	1.64 (0.63)	2.21 (1.05)
Garbage	3.29 (1.33)	4.29 (0.61)	3.57 (1.09)	3 (1.18)

Note. SD = standard deviation

Appendix E: Ethical approval letter Study 2

CLES – Psychology
Psychology
College of Life and Environmental Sciences
University of Exeter
Washington Singer Building
Perry Road
Exeter
EX4 4QG
Web: www.exeter.ac.uk

CLES – Psychology Ethics Committee

Dear Natasha Griffiths

Ethics application - eCLESPsy000774
Does poverty-related shame mediate the link between poverty and depression and poverty and aggression in young adults?

Your project has been reviewed by the CLES – Psychology Ethics Committee and has received a Favourable opinion.

The Committee has made the following comments about your application:

- Please view your application at https://eethics.exeter.ac.uk/CLESPsy/ to see comments in full.
If you have received a Favourable with conditions, Provisional or unfavourable outcome you are required to re-submit for full review and/or confirm that committee comments have been addressed before you begin your research.

If you have any further queries, please contact your Ethics Officer.

Yours sincerely

Date: 26/08/2019

CLES – Psychology Ethics Committee

Appendix F: Information sheet Study 2

Participant Information Sheet

Title of Project:

Researcher name: Natasha Griffiths

Invitation and brief summary:

The project is specifically focused on young adults (18 – 25 years old). Please take time to consider the information carefully before deciding to take part. You may wish to discuss it with family or friends. Please also feel free to ask the researcher questions on the contact details below.

Purpose of the research:

Research has demonstrated that individuals from lower socioeconomic backgrounds have poorer mental and physical health. The purpose of the research is to develop a better understanding of the emotional impact of socioeconomic status to improve available services.

What would taking part involve?

If you wish to take part the researcher will arrange a time to meet and you will be asked to complete an online task and some short questionnaires. This will be completed on the researcher's laptop and will last approximately 1 hour.

You will be asked from personal details (including your GP details) and this information will be kept confidential and stored in a secure place. Results from the study will be confidential and the write up will not include any identifiable information.

What are the possible benefits of taking part?

By taking part in this study you will be contributing to understanding the health risks associated with coming from a low socioeconomic background and may contribute to interventions being developed in the future.

What are the possible disadvantages and risks of taking part?

Taking part in this study will require you to complete questionnaires that you could find difficult or upsetting. However, you will be given time to discuss these with the researcher. If the researcher is concerned about your wellbeing, you may also be supported to access further support from your GP or other services. The researcher will provide you with details of local services that could support you.

What will happen if I don't want to carry on with the study?

Your participation is completely voluntary and at any point you can choose to stop the study and your data will be withdrawn. You will be given a participant number, if you wish to withdraw your data after you have completed the study you will need to provide this number, as the data will be confidential.

Will I receive any payment for taking part?

To thank you for completing the study you will receive a £5 Amazon voucher.

What will happen to the results of this study?

The researcher intends to publish the results in an academic journal. The results of the research will also be shared with the participation group through presentations at community organisations. If you choose, your contact details (e.g. email) can be kept to provide you with dates and times so that you can attend.

Who has reviewed this study?

This project has been reviewed by the Research Ethics Committee at the University of Exeter.

Further information and contact details

If you would like further information and/or to take part, you can use the following contact details.

Researcher: Natasha Griffiths ng344@exeter.ac.uk

Supervisor: Nick Moberly n.j.moberly@exeter.ac.uk

Supervisor: Pia Pechtel p.pechtel@exeter.ac.uk

You can also contact the University of Exeter ethics committee at:

Gail Seymour, Research Ethics and Governance Manager

g.m.seymour@exeter.ac.uk, 01392 726621

Thank you for your interest in this project

Appendix G: Consent form Study 2

Participant Identification Number:

CONSENT FORM

Title of Project:

Name of Researcher: Natasha Griffiths

Please initial box

1. I confirm that I have read the information sheet dated XX for the above project. I have had the opportunity to consider the information, ask questions and have had these answered satisfactorily. ☐

2. I understand that my participation is voluntary and that I am free to withdraw at any time without giving any reason and without my legal rights being affected. ☐

3. I understand that relevant sections of the data collected during the study, may be looked at by members of the research team, individuals from the University of Exeter, where it is relevant to my taking part in this research. I give permission for these individuals to have access to my records. ☐

4. I understand that taking part involves confidential questionnaire responses to be used for the purposes of submission to the University of Exeter and academic journals. ☐

5. I agree to take part in the above project. ☐

Name of Participant	Date	Signature

Name of researcher taking consent	Date	Signature

When completed: 1 copy for participant; 1 copy for researcher/project file

Appendix H: Material Deprivation Index

Thinking back to when you were aged 14, did you and you family have...? Were your family able to afford...?

- We had this
- We would have liked this, but could not afford it
- We did not want/need it, but could afford it

1. Keep your home adequately warm
2. Two pairs of all weather shoes for each adult
3. Enough money to keep your home in a decent state of repair
4. A holiday away from home for one week a year, not staying with relatives
5. Replace any worn out furniture
6. A small amount of money to spend each week on yourself, not on your family
7. Regular savings (of £10 a month) for rainy days or retirement
8. Insurance of contents of dwelling
9. Have friends or family for a drink or a meal at least once a month
11. Replace or repair broken to let cool goods such as refrigerator or washing machine
12. A holiday away from home at least one week a year with his or her family
13. Swimming at least once a month
14. A hobby or a leisure activity
15. Friends round for tea on a snack once a fortnight
16. Enough bedrooms for every child over 10 of different sex to have his or her own bedroom
17. Leisure equipment (for example, sports equipment on a bicycle)
18. Celebrations on special occasions such as birthdays, Christmas or other religious festivals 19. Playgroup/ nursery/toddler group at least once a week for children of preschool age
20. Going on a school trip at least once a term for school-aged children.
21. Access to safe outdoor space nearby.

Appendix I: Measure of socioeconomic status

Parental qualifications

What is the highest level of qualifications achieved by either of your parent(s) or guardian(s) by the time you were 18?

- Degree level or Degree equivalent or above (for example first or higher degrees, postgraduate diplomas, NVQ/SVQ level 4 or 5, etc)
- Qualifications below degree level (for example an A-level, SCE Higher, GCSE, O-level, SCE Standard/Ordinary, NVQ/SVQ, BTEC, etc)
- No qualifications
- Do not know or cannot remember
- Prefer not to say
- Not applicable

Parent/guardian/carer occupation

Thinking back to when you were aged about 14, which best describes the sort of work the main/highest income earner in your household did in their main job?

Professional e.g. accountant, doctor, university teacher, clergyman

Intermediate e.g. pilot, farmer, manager, police officer, teacher

Non-manual skilled e.g. clerical worker, sales rep, shop assistant, secretary

Manual skilled e.g. butcher, bus driver, electrician

Semi-skilled e.g. waitress, packer, postal worker

Unskilled e.g. labourer, office cleaner, window cleaner

Long term unemployed (claimed Jobseeker's Allowance or earlier unemployment benefit for more than a year)

Don’t know

Not applicable (e.g. grew up in care) Prefer not to say

Appendix J: Internalised shame scale

by David R. Cook, Ed.D.

Name: _____ Gender: M F (please circle one)

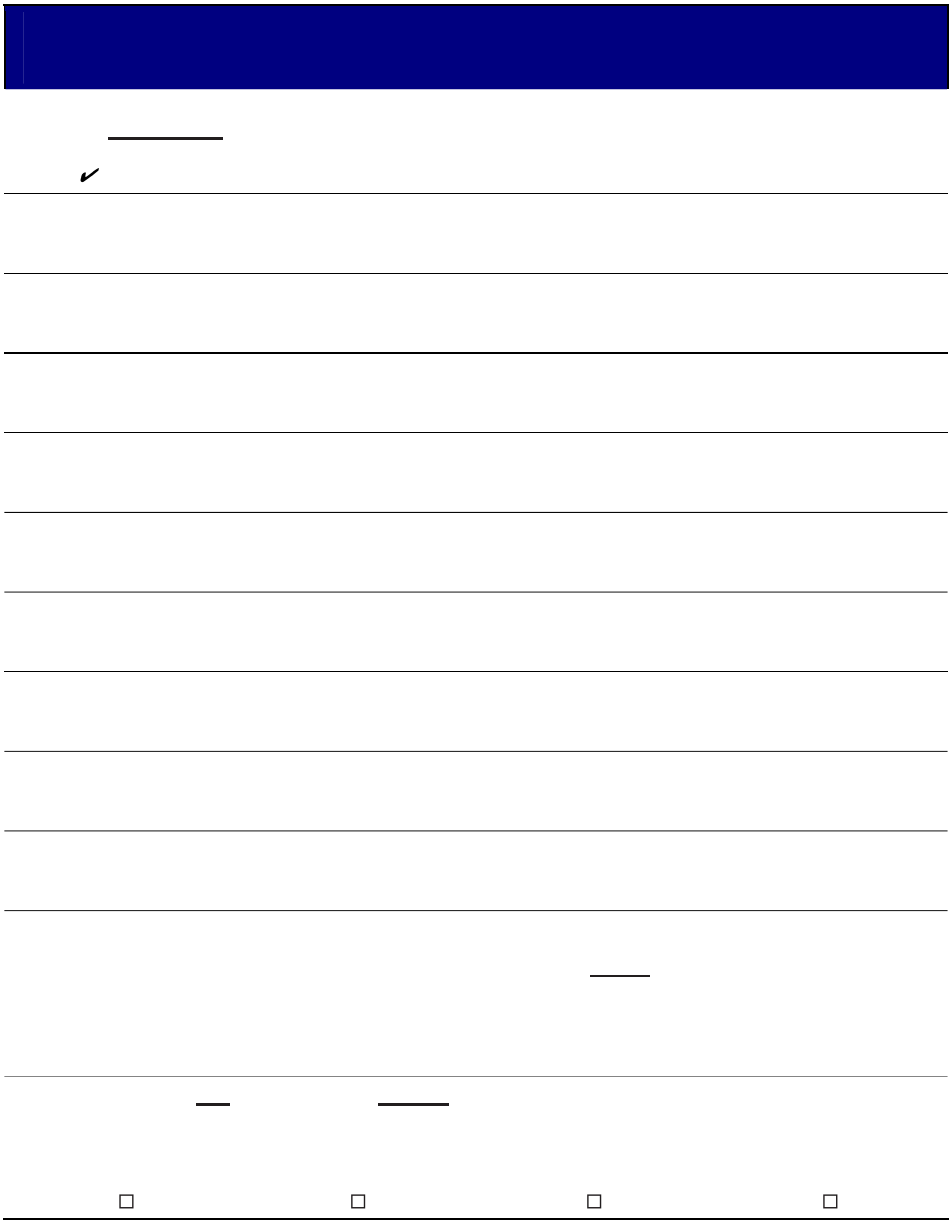
Today's Date: ___/___/___ (mm dd yyyy) Age: _____ Date of Birth: ____/____/____ (mm dd yyyy)

Below is a list of statements describing feelings or experiences that you may have. Read each statement carefully and circle the number to the right of each item that indicates the frequency with which you find yourself feeling or experiencing what is described in the statement. Use the scale below. Try to be as honest as you can when responding. Please answer all of the items.

Never 0 Seldom 1 Sometimes 2 Often 3 Almost Always 4

		Never	Seldom	Sometimes	Often	Almost Always
1.	I feel like I am never quite good enough.	0	1	2	3	4
2.	I feel somehow left out.	0	1	2	3	4
3.	I think that people look down on me.	0	1	2	3	4
4.	All in all, I am inclined to feel that I am a success.	0	1	2	3	4
5.	I scold myself and put myself down.	0	1	2	3	4
6.	I feel insecure about othersí opinions of me.	0	1	2	3	4
7.	Compared to other people, I feel like I somehow never measure up.	0	1	2	3	4
8.	I see myself as being very small and insignificant.	0	1	2	3	4
9.	I feel I have much to be proud of.	0	1	2	3	4
10.	I feel intensely inadequate and full of self-doubt.	0	1	2	3	4
11.	I feel as if I am somehow defective as a person, like there is something basically wrong with me.	0	1	2	3	4
12.	When I compare myself to others, I am just not as important.	0	1	2	3	4
13.	I have an overpowering dread that my faults will be revealed in front of others.	0	1	2	3	4
14.	I feel I have a number of good qualities.	0	1	2	3	4
15.	I see myself striving for perfection only to continually fall short.	0	1	2	3	4
16.	I think others are able to see my defects.	0	1	2	3	4
17.	I could beat myself over the head with a club when I make a mistake.	0	1	2	3	4
18.	On the whole, I am satisfied with myself.	0	1	2	3	4
19.	I would like to shrink away when I make a mistake.	0	1	2	3	4
20.	I replay painful events over and over in my mind until I am overwhelmed.	0	1	2	3	4
21.	I feel I am a person of worth at least on an equal plane with others.	0	1	2	3	4
22.	At times I feel like I will break into a thousand pieces.	0	1	2	3	4
23.	I feel as if I have lost control over my body functions and my feelings.	0	1	2	3	4
24.	Sometimes I feel no bigger than a pea.	0	1	2	3	4
25.	At times I feel so exposed that I wish the earth would open up and swallow me.	0	1	2	3	4
26.	I have this painful gap within me that I have not been able to fill.	0	1	2	3	4
27.	I feel empty and unfulfilled.	0	1	2	3	4
28.	I take a positive attitude toward myself.	0	1	2	3	4
29.	My loneliness is more like emptiness.	0	1	2	3	4
30.	I feel like there is something missing.	0	1	2	3	4

Appendix K: Patient Health Questionnaire-9



Appendix L: Buss and Perry aggression questionnaire

Aggression Questionnaire (Buss & Perry, 1992)

Instructions:

Using the 5 point scale shown below, indicate how uncharacteristic or characteristic each of the following statements is in describing you. Place your rating in the box to the right of the statement.

1 = extremely uncharacteristic of me
2 = somewhat uncharacteristic of me
3 = neither uncharacteristic nor characteristic of me
4 = somewhat characteristic of me
5 = extremely characteristic of me

1.	Some of my friends think I am a hothead	☐	A
2.	If I have to resort to violence to protect my rights, I will.	☐	PA
3.	When people are especially nice to me, I wonder what they want.	☐	H
4.	I tell my friends openly when I disagree with them.	☐	VA
5.	I have become so mad that I have broken things.	☐	PA
6.	I can't help getting into arguments when people disagree with me.	☐	VA
7.	I wonder why sometimes I feel so bitter about things.	☐	H
8.	Once in a while, I can't control the urge to strike another person.	☐	PA
9.*	I am an even-tempered person.	☐	A
10.	I am suspicious of overly friendly strangers.	☐	H
11.	I have threatened people I know.	☐	PA
12.	I flare up quickly but get over it quickly.	☐	A
13.	Given enough provocation, I may hit another person.	☐	PA
14.	When people annoy me, I may tell them what I think of them.	☐	VA
15.	I am sometimes eaten up with jealousy.	☐	H
16.*	I can think of no good reason for ever hitting a person.	☐	PA
17.	At times I feel I have gotten a raw deal out of life.	☐	H
18.	I have trouble controlling my temper.	☐	A
19.	When frustrated, I let my irritation show.	☐	A
20.	I sometimes feel that people are laughing at me behind my back.	☐	H
21.	I often find myself disagreeing with people.	☐	VA
22.	If somebody hits me, I hit back.	☐	PA
23.	I sometimes feel like a powder keg ready to explode.	☐	A
24.	Other people always seem to get the breaks.	☐	H
25.	There are people who pushed me so far that we came to blows.	☐	PA

Appendix M: Other as Shamer scale

OTHER AS SHAMER SCALE (OAS)

We are interested in how people think others see them. Below is a list of statements describing feelings or experiences about how you may feel other people see you.

Read each statement carefully and circle the number to the right of the item that indicates the frequency with which you find yourself feeling or experiencing what is described in the statement. Use the scale below.

0	1	2	3	4
Never	**Seldom**	**Sometime**	**Frequently**	**Almost always**

1. I feel other people see me as not good enough.	0 1 2 3 4
2. I think that other people look down on me	0 1 2 3 4
3. Other people put me down a lot	0 1 2 3 4
4. I feel insecure about others opinions of me	0 1 2 3 4
5. Other people see me as not measuring up to them	0 1 2 3 4
6. Other people see me as small and insignificant	0 1 2 3 4
7. Other people see me as somehow defective as a person	0 1 2 3 4
8. People see me as unimportant compared to others	0 1 2 3 4
9. Other people look for my faults	0 1 2 3 4
10. People see me as striving for perfection but being unable to reach my own standards	0 1 2 3 4
11. I think others are able to see my defects	0 1 2 3 4
12. Others are critical or punishing when I make a mistake	0 1 2 3 4
13. People distance themselves from me when I make mistakes	0 1 2 3 4
14. Other people always remember my mistakes	0 1 2 3 4
15. Others see me as fragile	0 1 2 3 4
16. Others see me as empty and unfulfilled	0 1 2 3 4
17. Others think there is something missing in me	0 1 2 3 4
18. Other people think I have lost control over my body and feelings	0 1 2 3 4

1

Appendix N: Debrief form

Participant Debrief Sheet

Thank you for participating in this research. The projected was interested in the experience of shame for young adults from a lower socioeconomic background. It was specifically interested to see if young adults experience shame related to their poverty and how this effects their wellbeing. We hope that you have not been upset by any of the topics discussed. However, if you have found any part of this experience to be distressing and you wish to speak to the researcher, please contact: ng344@exeter.ac.uk

You may also wish to contact your GP who will be able to provide information on local services. There are also a number of organisations listed below that you can contact for additional support. Local service leaflets are also available from the researcher.

Organisations	
Samaritans 116 123 (24 hour)	SANEline 0300 304 7000
Papyrus HOPEline 0800 068 4141	Rethink 0300 5000 927

Appendix O: Submission guidelines for British Journal of Social Psychology

2. AIMS AND SCOPE

The British Journal of Social Psychology publishes work from scholars based in all parts of the world, and manuscripts that present data on a wide range of populations inside and outside the UK. It publishes original papers in all areas of social psychology including:

- group processes
- intergroup relations
- self and identity
- social psychological aspects of personality, affect and emotion
- nonverbal communication
- language and discourse
- attitudes
- social influence
- social cognition

Submissions addressing these topics from a variety of approaches and methods, both quantitative and qualitative are welcomed. We publish papers of the following kinds:

empirical papers that address theoretical issues;

theoretical papers, including analyses of existing social psychological theories and presentations of theoretical innovations, extensions, or integrations;

review papers that provide an evaluation of work within a given area of social psychology and that present proposals for further research in that area;

methodological papers concerning issues that are particularly relevant to a wide range of social psychologists;

an invited landmark article as the first article in the first part of every volume;

registered reports are a form of empirical article in which the methods and proposed analyses are pre-registered and reviewed prior to research being conducted.

3. MANUSCRIPT CATEGORIES AND REQUIREMENTS

Articles should be no more than 7000 words (excluding the abstract, reference list, tables and figures). Online appendices are not included in the word limit; however footnotes are included.

We recognise that the presentation of high-quality work will sometimes result in the need to exceed the word limit. This is especially likely to apply to qualitative work and multi-study papers. Authors of such work should seek prior permission from the Editors, who retain discretion to publish longer papers in cases where the clear and concise expression of the scientific content requires greater length. Papers that are over the word limit without prior permission will be returned to the authors.

For **Registered Reports**, please refer to the separate guidelines. All systematic reviews must be pre-registered.

4. PREPARING THE SUBMISSION

Free Format Submission

British Journal of Social Psychology now offers free format submission for a simplified and streamlined submission process.

Before you submit, you will need:

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