RUNNING HEAD: DEVELOPMENT OF THE SDES

The Development of the Short Defeat and Entrapment Scale (SDES).

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Abstract

Previous research has suggested that defeat (conceptualized as a failed social struggle) and entrapment (conceptualized as a perceived inability to escape from aversive situations) form a single construct that reliably predicts psychopathological outcomes in clinical and community settings. However, scales designed to assess defeat and entrapment measure the constructs separately, whereas recent evidence suggests a single scale would be appropriate. Existing scales may also be too lengthy to have clinical utility. The present study developed and evaluated a short scale that measured both defeat and entrapment. Exploratory and confirmatory factor analysis demonstrated that defeat and entrapment were best defined by a single factor and eight items were selected that best represented this construct to form the short scale. The scale had high internal consistency (α = .88 - .94), showed criterion validity with hopelessness (*r* = .45 - .93) and incremental validity for caregiver burden when controlling for depression and positive symptoms of psychosis when controlling for hopelessness (*β* = .45 - .60). Additionally, the scale had excellent test-retest reliability using single measures absolute agreement Intra-Class Coefficients across 12 months (*r*icc = .88 - .92) within four samples; people with posttraumatic stress disorder, people with psychosis, care home employees and people from a community sample. The scale demonstrated known group validity through discrimination between clinical and non-clinical groups of participants. This scale could be implemented within therapeutic settings to help clinicians identify patients experiencing defeat and entrapment and incorporate these factors into their clinical assessment and case formulations for treatment.

KEY WORDS: defeat; entrapment; psychopathology; depression; PTSD

**The Development of the Short Defeat and Entrapment Scale (SDES)**

 The concepts of defeat, representing a failed social struggle, and entrapment, representing a blocked motivation to escape from aversive situations (Gilbert & Allan, 1998), have been implicated in the development and maintenance of mental health problems amongst clinical and non-clinical populations (Taylor et al., 2011a). Although initially viewed as separate concepts, most recent theory and research has conceptualized defeat and entrapment as a single construct encompassing feelings of failure without any escape routes (e.g. Taylor et al., 2009) or as sub-facets within a higher order construct commonly termed ‘involuntary subordination’ (Sturman, 2011). Within this construct, it has been theorized that the acceptance of defeating and entrapping situations is crucial in whether involuntary subordination becomes prolonged and manifests in depressive symptoms (Sturman et al., in press). Taylor and colleagues (2011a) suggested that following an aversive event, defeat and entrapment form a self-reinforcing mechanism whereby the experience of one influences the other continuously, leading them to co-occur to such an extent that they cannot be separated. Additionally, Johnson, Gooding, and Tarrier’s (2008) model suggested that defeat and entrapment involve identical themes representing a biased appraisal of an aversive situation and a lack of escape options available to the individual, which precedes the experience of mental health problems. Furthermore, Sturman (2011) proposed that the experiences of defeat and entrapment are overlapping sub-facets of the perception of involuntary subordination, which plays a role in the development of mental health problems. Each of these models view defeat and entrapment as a single construct, or a sub-facet of a single higher order construct, that plays a transdiagnostic role in the development and maintenance of psychopathological disorders.

 Most previous research investigating the link between defeat, entrapment and mental health problems has used the 16-item *Defeat Scale* and the 16-item *Entrapment Scale*, which were developed separately to measure defeat and entrapment as discrete constructs (Gilbert & Allan, 1998). A review of studies investigating defeat, entrapment and psychopathological distress by Taylor et al. (2011a), and a further literature search using key words of “defeat” and “entrapment” in psychINFO for studies published between 2011 and 2013, found that 62% of studies used these scales to measure defeat and entrapment. Whilst the scales show very good reliability and validity, they correlate with each other very highly (e.g., *r* = .74, O’Connor et al., 2013, *r* = .83, Panagioti et al., 2012; *r* = .85, Taylor et al., 2010), suggesting that they are measuring a single construct. Several factor analyses have also been conducted using the items from both scales and have shown that a clear single factor emerges, which represents both the defeat and entrapment items (Griffiths et al., 2014; Sturman, 2011; Taylor et al., 2009). Correlations of this magnitude and results from factor analyses suggest that a single combined defeat and entrapment score should be formed when these factors are measured, as the two scales measure the same latent construct, and because it would be statistically inappropriate to conduct regression, or other analyses, on two predictors that are correlated this highly. Indeed, some recent studies have used a combined defeat and entrapment score (e.g. Panagioti et al., 2012), although the reliability and validity of this composite variable has not yet been fully explored.

 Nevertheless, the *Defeat Scale* and *Entrapment Scale* – either as single or joint predictors – have shown strong cross-sectional and longitudinal relationships with outcome measures of mental health problems in clinical and non-clinical settings. On the basis of these results, a recent systematic review has suggested that defeat and entrapment form a fundamental single transdiagnostic process that strongly relates to various aspects of mental distress amongst different populations (Taylor et al., 2011a). Defeat and entrapment have been shown to correlate with depression as measured by the *Center for Epidemiologic Studies Depression Scale* (CES-D; Radloff, 1977) scores in student populations (*r* = .58, Allan & Gilbert, 2002; *r* = .64 - .73, Gilbert & Allan, 1998; *r* = .65 - .68; Gilbert et al., 2005; *r* = .72, Wyatt & Gilbert, 1998) and a population of informal caregivers (*r* = .63, Stommel et al., 1990). Defeat and entrapment also correlated with depression as measured by scores on the *Beck Depression Scale* (BDI; Beck, Ward, Mendelson, Mock, & Erbaugh, 1961) in samples recruited from clinical settings (*r* = .84, Clare & Singh, 1994; *r* = .54 - .77, Gilbert & Allan, 1998; *r* = .81 - .86, Panagioti et al., 2012) and non-clinical settings (*r* = .70 - .74, Goldstein & Willner, 2002; *r* = .64 - .81, Troop & Baker, 2008; *r* = .71 - .77, Willner & Goldstein, 2001). Defeat and entrapment have been associated with suicidal ideation in clinical populations (*r* = .57 - .71, Rasmussen et al., 2010; *r* = .52 - .56, Taylor et al., 2010a) and non-clinical populations (*r* = .45 - .49, Taylor et al., 2010b; *r* = .60, Taylor et al., 2011b) and defeat also predicted the onset of psychosis in high-risk individuals (*r* =.45, Stowkowy & Addington, 2012). Furthermore, combined defeat and entrapment scores have been associated with suicidal behaviour within a population of individuals with PTSD as a single predictor (*r* = .75, Panagioti et al., 2012). Entrapment has been associated with anxiety in non-clinical populations (*r* = .39 - .59, Gilbert et al, 2002; *r* = .71, Sturman & Mongrain, 2005) and also predicted depression in formerly depressed students after 16 months (*r* = .21; Sturman & Mongrain, 2008a). Scores of hopelessness, as measured by the *Beck Hopelessness Scale* (BHS; Beck, Weissman, Lester, & Trexler, 1974), have been shown to correlate with defeat and entrapment in individuals with schizophrenia spectrum disorders (*r* = .70 *- .*71, Taylor et al., 2010), individuals with depression (*r* = .61- *.*65, Gilbert & Allan, 1998) and individuals with PTSD (*r* = .82 - .84, Panagioti et al., 2012).
 In summary, defeat and entrapment have been widely measured in psychopathological research, although there are suggestions that it would be preferable to measure both as a single construct (e.g. Taylor et al., 2009; Sturman, 2011) and therefore measure defeat and entrapment within a single scale. Further, there are suggestions that the lack of a short measurement tool is restricting clinical research in the area as well as preventing the repeated and routine use of the measurement of defeat and entrapment within clinical settings, for initial case formulation or to measure the progress of therapeutic interventions over time.
 As outlined above, the majority of research measuring defeat and entrapment has measured these using the *Defeat Scale* and *Entrapment Scale* (Gilbert & Allan, 1998). However, in response to recent suggestions that defeat and entrapment should be measured as a single construct, Sturman (2011) developed an *Involuntary Subordination Questionnaire* (ISQ), derived of items from the *Defeat Scale, Entrapment Scale, Social Comparison Scale* and *Submissive Behaviour Scale* (Gilbert & Allan 1998; Allan & Gilbert, 1995; Gilbert & Allan, 1995). Although this scale provides a broader overview of how individuals perceive their feelings in comparison to their perceptions of others, there remains a need for a briefer scale, as this scale also consists of 32 items. Underlying the need for a short validated scale, several researchers have used shorter measures of defeat and entrapment that have not been validated, or capturing perceptions of defeat and entrapment through semi-structured interviews (e.g. O’Connor, 2003; Gilbert, Gilbert, & Sanghera, 2004b; Leblanc et al., 2004), possibly due to the participant burden of administering the *Defeat Scale* and *Entrapment Scale* (32 items; Gilbert & Allan, 1998). The increasing proliferation of multiple unvalidated short scales is problematic as each scale developed measures outcomes slightly differently, and without validation within several populations, it cannot be established which scale provides the most accurate representation of the construct (Streiner & Norman, 2008). Furthermore, despite the popularity Gilbert and Allan’s (1998) scales, the use of separate scales may not be appropriate in light of research demonstrating that defeat and entrapment should be considered as one factor. As the existing short unvalidated scales for defeat and entrapment measure the constructs separately, we chose to develop a short single factor scale based on a combination of items from the *Defeat Scale* and *Entrapment Scale* (Gilbert & Allan, 1998)*;* the most widely used and well validated of the measures currently available.
 During recent years, demand for economy of measurement within clinical research has increased, as demonstrated by the increasing number of short psychological assessments being developed (Mühlan et al., 2008). As the priority within clinical settings is delivering effective therapeutic interventions rather than conducting research, shorter measures are particularly relevant to increasing the utility of health measures in these settings (Joyce et al., 2011). A shorter scale measuring defeat and entrapment could be used in therapeutic settings as a measure of progress during therapeutic treatment for mental health problems, to distinguish changes on a session-by-session basis. Such a use is indicated by the strong correlations between defeat, entrapment and mental health problems, as well as theoretical positions that see the construct as a key transdiagnostic factor underlying several disorders (Taylor et al., 2009).
 To develop a short scale that measures both defeat and entrapment, participants were recruited from clinical and non-clinical settings. Although we expected all samples to include participants who were experiencing defeat and entrapment, based on previous work linking defeat and entrapment to mental health difficulties, we expected participants from both clinical groups to report higher levels of defeat and entrapment, as measured by the newly developed scale, than the non-clinical groups. These participants are more likely to experience problems with mental health and may feel entrapped by their distress, as well as defeated as a result of trying to cope with their symptoms. We predicted that participants experiencing psychosis would have the highest average scores on the scale, based on clinical severity and the percentage of participants with clinical diagnoses, as well as the high amount of stigma attached to having a diagnosis of a psychotic disorder, which may act as a barrier to recovery (Link, Struening, Nesse-Todd, Asmussen, & Phelan, 2001). Furthermore, defeat and entrapment related appraisals are specifically related to negative outcomes such as depression in those with schizophrenia-spectrum disorders (Birchwood et al., 1993) We expected the sample of individuals with PTSD to have the second highest average scores on the scale based on the high comorbidity between PTSD and depression (Kessler, Chiu, Demler, & Walters, 2005), which has been consistently linked to defeat and entrapment. We expected the non-clinical samples to have lower scores of defeat and entrapment on the scale and this was tested within the study by comparing scores on the newly developed scale across the different samples.
 Within the current study, it was expected that caregiver burden, defined as the poor physical and emotional health that results from excessive caregiving demands (Given et al., 1992) and a known occupational hazard of formal caregiving (Miyamoto, Tachimori, & Ito, 2010), would be predicted by the newly developed scale above and beyond depression. It was also expected that following Taylor et al. (2010a), the newly developed scale would predict the positive symptoms of psychosis (e.g. paranoia, hallucinations, delusions) above and beyond depression and hopelessness. This relationship was expected as psychotic symptoms are reported at elevated levels in people with anxiety and depression (Van Os, Verdoux, Maurice-Tison, Gay, Liraud, Salamon, & Bourgeois, 1999) and have been found to predict depression over time in samples identified as high risk for psychosis (Verdoux, Van Os, Maurice-Tison, Gay, Salamon, & Bourgeois, 1999).
 The current study sought to develop and evaluate a short scale that measures both defeat and entrapment, named the Short Defeat and Entrapment Scale (SDES) following the guidelines of Keszei et al. (2010). We expected that defeat and entrapment would form a single factor when measured using the *Defeat Scale* and *Entrapment Scale*, analysed using Exploratory Factor Analysis, and that this structure would be confirmed using Confirmatory Factor Analysis. The internal consistency of scales of different lengths would then be explored to determine the optimal number of items for the scale. We expected that the SDES would show high test-retest reliability across 12 months and would correlate with measures of depression, anxiety and hopelessness, based on evidence from studies that measured defeat and entrapment using the original scales (Gilbert & Allan, 1998). Finally, we expected that the SDES would predict the experience of caregiver burden above and beyond the level that can be predicted by depression and the presence of the positive symptoms of psychosis above and beyond the level that can be predicted by depression and hopelessness.

**Method**

**Participants**

 Participants in the current study were recruited within four samples; a community sample, an occupational sample and two samples from clinical settings. These samples were selected to develop and validate the scale within clinical and non-clinical populations. The inclusion of a community sample was based upon previous work viewing defeat and entrapment to exist on a continuum, upon which people from the general population would be expected to fall on the lower end (Griffiths et al., 2014). The inclusion of samples of individuals with psychosis and posttraumatic stress disorder was based on evidence that has demonstrated that defeat and entrapment are key constructs within these mental health problems (e.g. Taylor et al., 2010a; Panagioti et al., 2012). The occupational sample was selected as formal caregivers have specifically been outlined as a group particularly vulnerable to the experience of burnout and poor psychological health (Moniz-Cook et al., 1997) and who frequently experience high levels of enduring psychological stress related to their occupation (von Dras et al., 2009), both of which are linked to the experience of defeat and entrapment among individuals caring for others (Willner & Goldstein, 2001).
**Sample 1 (community sample).**A sample of262 participants (age range 18-85 years; *M* = 26.86 years, *SD* = 10.49; 26% male) was recruited on an opportunistic basis from Facebook, an online social networking site (*n* = 159), and various community settings (people visiting the University and people in public areas around the city) in Manchester, England (*n* = 103). There were no significant differences based on age [*t* (598) = 1.23, *p* = .11] or differences between males and females [*t* = (598) = .493, *p* = .31] on scores for defeat and entrapment, although participants recruited from community settings had significantly lower defeat and entrapment scores [*t* (598) = 3.47, *p* <.001].
 **Sample 2 (formal caregiver sample).**A sample of 163 formal caregivers (Care Practitioners, Nurses, Activities Coordinators and Care Support Workers) was recruited from adverts placed in a care organization in North Wales that consists of seven care homes for young adults with neurological problems, adults with dementia and older adults requiring residential or nursing care. The majority of participants were female (84%), consistent with the demographics of the health care sector (Yar, Dix, & Madhavi, 2006). Participants’ ages ranged from 18 to 66 years (*M* = 38.23 years, *SD* = 12.24) and participants had been employed as formal caregivers for between 6 months and 40 years (*M* = 8.63 years, *SD* = 8.98).
**Sample 3 (sample of mental health service users with psychosis).**Seventy-eight participants experiencing symptoms of psychosis were recruited through advertisements sent to outpatient services including community mental health teams, early intervention services, assertive outreach services and voluntary organizations across North West England. Service users were eligible to participate if they had a chart diagnosis of a schizophrenic spectrum disorder, diagnosed using the ICD-10 criteria (World Health Organisation, 1992). Participants were attending an outpatient service, therefore were not acutely ill at the time of participation. Participants were diagnosed with schizophrenia (91%), schizoaffective disorder (5%), atypical psychosis (1%) or psychosis not otherwise specified (3%). Potential participants were identified through their clinicians and key workers before being contacted to confirm whether they wished to participate in the research. A researcher was present whilst participants completed measures. As we recruited exclusively from outpatient settings and no participants appeared to have difficulties completing the measures as a result of psychotic symptoms, we do not believe that any participants had problems with completing measures as a result of psychotic symptoms (Taylor et al., 2010c).Participants were aged between 19 and 73 years (*M* = 42.4 years, *SD* = 11.7) and the majority were male (72%). This sample was selected as defeat and entrapment have been shown to be particularly high in this group and are linked to the disorders etiology (Taylor et al., 2010a; Taylor et al., 2011a).
**Sample 4 (sample of people diagnosed with PTSD).**Ninety-six people who were identified as having previously experienced a traumatic experience (age range 18-55 years, *M* = 28.7 years, *SD* = 10.4) were recruited from Manchester, England. Participants were recruited from advertisements placed in mental health services, newspapers, within the University of Manchester and on online advertising sites. Participants were screened for posttraumatic stress disorder (PTSD) diagnosis using the Clinician Administered PTSD Scale (CAPS; Blake et al., 1995), a 30-item structured interview that was conducted by a trained doctoral student. Participants were assessed as either having a current diagnosis of PSTD (*n* = 53), a lifetime diagnosis of PTSD (*n* = 27) or not fulfilling the criteria for PTSD (*n* = 16). The majority of participants were female (73%). Fifty-five participants from this sample who met the criteria for current or lifetime PTSD diagnosis and had the highest scores on the CAPS were selected to complete the measures at a second time point. As with psychosis, defeat and entrapment are particularly high in this group and are theoretically linked to the etiology of the disorder (Panagioti et al., 2012), which underpinned the recruitment of this sample for the current study.

**Measures**
 All participants completed the *Defeat Scale* and *Entrapment Scale* (Gilbert & Allan, 1998), which were administered together. Each scale consists of 16 items and assesses individuals’ perceptions of losing rank position and failed struggle during the past seven days (e.g. “I feel defeated by life”) , and their motivation to escape from such situations (e.g. “I can see no way out of my current situation”). Items are rated on a Likert scale ranging from “0 – not at all like me” to “4 – extremely like me”. The scales have been shown to have high internal consistency of between *α* = .88 and *α* = .93 for the *Entrapment Scale,* and between *α* = .93 and *α* = .94 for the *Defeat Scale* (Gilbert & Allan, 1998) with groups of students and individuals with depression. Amongst the four samples recruited in the current study, the *Entrapment Scale* showed high internal consistency (*α* = .96, Sample 1; *α* = .95, Sample 2; *α* = .95, Sample 3; *α* = .96, Sample 4) and the *Defeat Scale* showed similarly high internal consistency (*α* = .95, Sample 1; *α* = .80, Sample 2; *α* = .86, Sample 3; *α* = .96, Sample 4). Both of these scales have demonstrated concurrent validity with hopelessness when controlling for depression, *r* = .35 (defeat), *r* = .38 - .46 (internal and external entrapment; Gilbert and Allan, 1998). Additionally, the scales have demonstrated discriminant validity from the presence of social support, *r* = -.41 (defeat), *r* = .40 (internal and external entrapment; Rasmussen et al., 2010). ( Test-retest reliability of the scales across 12 months has demonstrated single measures absolute agreement Intra-Class Coefficients (ICC) of *ricc*  = .88 for the Defeat Scale and *ricc* = .90 for the Entrapment Scale (Griffiths et al., 2014).
 Participants from three samples completed one of two measures of depression. The *Beck Depression Inventory* (BDI; Beck, 1961) was completed by clinical samples and the *Center for Epidemiologic Services Depression Scale* (CES-D; Radloff, 1977) was completed by non-clinical samples. This combination of scales was preferred as the BDI assesses the more severe aspects of depression, making it appropriate for use with clinical populations, whereas the CES-D assesses the full range of depression as a continuum, making it particularly appropriate for community samples (Joseph & Wood, 2010; Wood & Joseph, 2010). The BDI assesses depression through 21 items that measure how participants have felt during the past week on a four-point scale, for example “0 – I do not feel like a failure” to “3 – I feel I am a complete failure as a person”. The BDI has shown high sensitivity (85%) and specificity (86%) to a clinical diagnosis of depression, using a cutoff score of 10 (Oliver & Simmons, 1984). The scale has been shown to have internal consistency of *α* = .89 for a sample of outpatients with mood and anxiety disorders (Beck, Steer, Ball, &, Ranieri, 1996) and within the present study, the measure also showed similar internal consistency amongst a sample of individuals experiencing symptoms associated with psychosis (*α* = .84). Although the wording of the BDI-I is less recent than the (proprietary) BDI II, the two correlate at *r* = .93 (Beck et al., 1996), demonstrating that it is still suitable for use in research settings, and we have previously used it successfully with these populations. The BDI has been shown to have convergent validity with the depression and dysphoria subscales of the IDAS (*r* = .81 - .83, Watson et al., 2007) and discriminant validity with symptoms of anxiety, as measured by the Beck Anxiety Inventory (*r* = .48, Beck, Epstein, Brown, & Steer, 1988). The second questionnaire used to measure depression, the CES-D, consists of 20 items that measure depressive symptoms within the general population based on how participants have felt during the past week (e.g., “I felt lonely”) on a scale from “0 – rarely or none of the time” to “3 – most or all of the time”. The scale has been shown to have internal consistency of *α* = .84 (Radloff, 1977) to *α* = .91 (Gilbert & Allan, 1998). A cut-off score of 16 on the CES-D has been shown to successfully detect diagnosable depressive disorders within a community sample of individuals with a diagnosis of a chronic pain condition, with specificity of *r* = .95 and sensitivity of *r* = .72 to diagnosis of a mood disorder (Julian et al., 2011), using the Mini-International Neuropsychiatric Interview (MINI; Sheehan et al., 1998). The scale has test-retest reliability of *r* = .88 across twelve months within a sample of healthy participants recruited from the general population and negatively correlated with both satisfaction with life (*r* = -.45) and quality of life (*r* = -.43; Schroevers, Sanderman, van Sonderen, & Ranchor, 2000).
 The *Beck Hopelessness Scale* (BHS; Beck et al., 1974), which consists of 10 items that measure participants’ motivations, expectations and attitudes towards the future (e.g. “my future seems dark to me”), was completed by two samples. The scale has been found to have high internal consistency in samples of individuals with depression (*α* = .97; Bouvard, Charles, Guérin, Aimard, & Cottraux, 1992) and healthy controls (*α* = .79; Bouvard et al., 1992). Within the present study, the scale was found to have high internal consistency amongst a sample of individuals with PTSD diagnoses (*α* = .92). A meta-analysis found the BHS to have high sensitivity (74%-82%) and adequate specificity (38%-45%) to non-fatal self-harm and high sensitivity (68%-90%) and adequate specificity (41%-44%) to suicide (McMillan, Gilbody, Beresford, & Neilly, 2007). Additionally, the scale has been shown to converge with clinician ratings of hopelessness (*r* = .62 - .74, Taylor et al., 2010b).
 Participants from the sample of formal caregivers also completed the *Zarit Burden Interview* (ZBI; Zarit et al., 1980) modified by the original authors to be suitable for healthcare staff. This modification replaces the word ‘relative’ with ‘resident’. This scale was designed to measure the personal strain experienced by caregivers of adults with dementia (e.g. “do you feel you could do a better job caring for your resident?”), although is now one of the most frequently used measures of caregiver burden for caregivers of patients with a wide spectrum of disorders and illnesses (O’Rourke & Tuokko, 2003). Items are responded to using a Likert scale ranging from “0 – Never” to “4 – Always”. Limited research has considered the reliability or validity of the scale within formal care settings, although the scale has acceptable internal consistency with healthcare staff (*r* = .74-.87) and assessed burden satisfactorily (Sourial, McCusker, Cole, & Abrahamowicz, 2001).Within the present study, the measure demonstrated higher internal consistency than existing literature amongst a sample of formal caregivers (*α* = .84).
 The *Brief Psychiatric Rating Scale Expanded version* (BPRS-E; Ventura, Green, Shaner, & Liberman, 1994) was administered by researchers to measure the presence of psychiatric symptoms in individuals in *Sample 3*. This is a 24-item assessment of common psychopathological symptoms including depression, hallucinations and suicidality (e.g. “Do you ever seem to hear your name being called?”). Items are rated for frequency and severity by the interviewer and the interview lasts between 10 and 40 minutes. Each item is rated on a scale ranging from “1 - not present” to “5 - extremely severe”. The measure has been shown to effectively distinguish between those with schizophrenic spectrum disorders and those with mood or anxiety disorders (Lykke, Hesse, Austin, & Oestrich, 2008). The measure has adequate internal consistency when administered to a sample of individuals with schizophrenia spectrum disorders, affective disorders and personality disorders (*α* = .55 - .76; Dingesman, Linszen, Lenior, & Smeets, 1995). The sub-scales of the measure have been shown to have discriminant validity from suicidal ideation (*r* = .11 - .42; Taylor et al., 2010a). The sub-scales of the measure have also been shown to have convergent validity with the relevant sub-scales of the Behaviour Observation System, an observational measure of psychopathological behaviours (Mogge, LePage, Del Ben, & Murphy, 2002). Within the present study, the measure also demonstrated adequate internal consistencyamongst a sample of individuals who were experiencing symptoms of psychosis (*α* = .72).

**Missing Data**

 Missing value analysis was also conducted to establish if any patterns existed within missing data. Generally, as the majority of questionnaires were completed with a researcher present, there was a very limited amount of missing data and across all samples, it was not necessary for any cases to be removed due to missing data on measures. To establish whether imputation of missing data was necessary, the Missing Completely At Random test was used for each sample (MCAR; Little, 1998). This test was non-significant; indicating that any missing data was missing completely at random.

 Within the current study, any missing data was dealt with using Multiple Imputation (MI; Rubin, 1987). This technique creates complete data sets by generating several possible values for any missing values. Analyses are then conducted across all of these datasets and outputs provide estimates for each dataset about the results that would have been expected if there had been no missing values in the original dataset (Allison, 2000).

**Results**

**Structure**

 A principal-axis exploratory factor analysis (EFA) was conducted on the correlation matrix of the 32 items from the *Defeat Scale* and *Entrapment Scale* (Gilbert & Allan, 1998) completed by *Sample 1*, to establish the optimal factor structure of the data. This sample was selected as it was most representative of the general population and therefore provided the greatest generalizability. Bartlett's test confirmed that an EFA was appropriate for the sample (*χ2* [496] = 6878.41, *p* < .001) and a Keiser–Meyer–Olkin (KMO) test indicated an adequate participant:item ratio of 8:1 (KMO = .96).
 Preliminary analyses of the items of the *Defeat Scale* and *Entrapment Scale* before conducting the EFA demonstrated that the data had positive skew (*M* = 1.67) and kurtosis (*M* = 3.25), which was expected for a community sample, as the majority of participants would have low levels of defeat and entrapment. Therefore a principal-axis EFA was conducted, as this makes no assumptions about the distribution of the data and furthermore, no data transformation was required before analysis (Fabrigar, Wegener, MacCallum, & Strahan, 1999). The first ten initial eigenvalues (and % of variance accounted for) extracted from the EFA were 17.06 (53.32%), 1.88 (5.89%), 1.31 (4.09%), 1.08 (3.37%), 0.94 (2.95%), 0.81 (2.54%), 0.76 (2.38%), 0.71 (2.26%), 0.65 (2.04%) and 0.56 (1.75%). All 32 items loaded above the .40 cut off considered a reasonable loading on a factor (Velicer, Peacock, & Jackson, 1982) and 88% loaded above .60 (see Table 1).
 A parallel analysis was conducted to establish how many factors should be extracted. Parallel analysis creates datasets with the same number of cases and variables as the actual dataset, filled with random numbers. An EFA is then performed on each dataset and any factors within the actual dataset with eigenvalues that exceed those that emerge in 95% of the datasets of random numbers are defined as not having arisen due to chance variation within the data. A parallel analysis of 1000 datasets using the 95% cut-off (O’Connor, 2000) was conducted. The first five eigenvalues (and % of variance accounted for) extracted for 95% of the simulated datasets were equal to or less than 2.25 (2.43%), 2.06 (2.20%), 1.93 (2.04%), 1.81 (1.91%) and 1.71 (1.80%). In the actual data set, only the first eigenvalue of 17.06, which explained 53.32% of the variance, exceeded chance values, suggesting that one factor underlies the data.
 As a further test, a second EFA was conducted to force the extraction of two factors, using oblique rotation based on the assumption that the two constructs being measured were related. No item from either scale loaded on the second factor above the .40 cut off considered a reasonable loading on a factor (Velicer et al., 1982).

INSERT TABLE 1

 The results of the PA combined with poor item loadings on a second factor within the EFA suggested that items from the *Defeat Scale* and *Entrapment Scale* are best represented by a single factor and also suggested that defeat and entrapment should be measured by a single scale.

**Item Selection and Consistency** Based on the above analyses, eight items were chosen to form the SDES. To ensure full representation of the construct, the four highest loading items assessing defeat and the four highest loading items representing entrapment were selected for inclusion in the shortened scale. All selected items loaded on the factor between .77 and .81. As both the fourth and fifth highest loading items assessing entrapment identically loaded at .796, we selected the fifth item, which appeared to enable a broader coverage of the construct, due to greater theoretical distinctiveness from other items. Our preference for having four items representing defeat and four items representing entrapment was determined *a priori* to balance the need for a short scale against broad coverage of the construct. However, for each of the samples, we tested whether forming scales of different lengths significantly affected Cronbach’s alphas. Table 2 shows the Cronbach’s alphas for scales consisting of four, six, eight and ten items within all four samples to establish the optimal number of items, with each scale formed of an equally balanced number of the highest loading items assessing defeat and assessing entrapment (respectively 2, 3, 4 and 5 items for each). This demonstrates that the eight-item scale exceeds the standard value suggesting optimal internal consistency with eight items in all samples (≥.90; Nunnally, 1978), whereas neither the four or six item scales reached this level. Additionally, the inclusion of ten items was felt to be unnecessary given the aim to develop a short scale. Furthermore the inclusion of more items and subsequent increased length of time that would be required to complete the measure cannot be justified. On this basis, we developed the SDES with eight items.

INSERT TABLE 2

**Confirmatory Factor Analysis**

 As the EFA showed a one-factor solution was the best fit for the data, we tested this structure using a maximum likelihood Confirmatory Factor Analysis (CFA) on the eight items of the SDES. This was conducted using the lavaan package for use in R (Rosseel, 2014) using the WLSMV estimation, to identify whether this structure provided the best fit of the data in *Samples 2-4* (*N* = 337). In accordance with recommendations there were five response options for items on the scale when participants completed them (Byrne, 2004). A Kolmogorov-Smirnov test demonstrated that the data was not normally distributed (*p* < .001). The fit of the model was determined by the *χ2*(chi-square)test, where good fit of the model would be demonstrated by a non-significant value. However this test is extremely sensitive to sample size, therefore other indices were considered. We also considered the Comparative Fit Index (CFI; Bentler, 1990), where conventionally a good fit is indicated by CFI >.95, the Non-Normed Fit Index, where NNFI >.95 is indicative of good fit (Hu & Bentler, 1999), and the RMSEA, where good fit is demonstrated by RMSEA <.05 (MacCallum, Browne & Sugawara, 1996). We initially conducted a one-factor CFA fit (*χ2=* 73.16, *df* = 20, *p* < .001), which indicated strong support for a one-factor solution (CFI = .99, NNFI = .99, RMSEA = .04). Additionally, we examined the individual loadings for each of the samples (see Table 3) and whilst loadings do vary between samples, all were consistently above .40, considered a reasonable loading on a factor (Velicer et al., 1982). Furthermore, all fitted residuals within the model were much lower than recommendations (Byrne, 2001; Kline, 2011). Overall, we concluded that the model provided reasonable support for the structure of the scale, whilst highlighting the need to validate the scale separately within different populations and acknowledging the methodological limitations within this analysis.

 A second CFA specifying the defeat and entrapment item loadings on separate factors was conducted (*χ2=* 35.11, *p* = .01, *df* =19), which showed good fit for a two-factor solution (CFI = .99, NNFI = .99, RMSEA = .01).Furthermore, within this analysis, defeat and entrapment were shown to correlate at *r* = .91,suggesting that the two factors are best represented by a single latent factor, as multicollinearty > .60 can lead to substantial Type II error rates (Grewal et al., 2002), where separate scales are formed for each factor and entered simultaneously in future regression analyses. Additionally, no items were shown to load above .40, which is considered a reasonable loading of an item on a factor (Velicer et al., 1982). This, therefore, suggests that a two-factor solution is not appropriate for the measurement of defeat and entrapment.

INSERT TABLE 3

**Test-Retest Reliability**

 The test-retest reliability of the shortened scale was calculated based on repeated completion of the SDES approximately 12 months apart by *Sample 4*. The 55 participants with the highest scores for PTSD were asked to complete measures at the second time point. All of the selected sub-sample completed measures at the second time point. This time scale was selected based on previous research that has utilised a 12-month period for repeated measurement with the original scales (Griffiths et al., 2014; Taylor et al., 2011b). The mean Time 1 scores (*M* = 8.04, *SD* = 8.39) did not significantly differ from Time 2 scores (*M* = 7.84, *SD* = 6.81; *t* = .250, *p* = .80). The two-way mixed intra-class coefficient (ICC) was calculated to establish the consistency between scores at Time 1 and Time 2. This was calculated at *ricc* = .88. This demonstrated excellent ICC of >.80 (Bruton et al., 2000), showing both rank and mean level stability of the scale over twelve month periods.

**Criterion Validity**

 Criterion validity was tested by establishing whether the shortened scale correlated with measures of depression, anxiety and hopelessness which the original *Defeat Scale* and *Entrapment Scale* have previously been shown to correlate within the existing literature, amongst clinical and non-clinical samples. The shortened scale significantly correlated with the depression, anxiety and hopelessness measures at values comparable to previous research, with the exception of the measure of depression within the sample of individuals with psychosis (see Table 4).

INSERT TABLE 4

 Additionally, in order to determine whether there was potential loss of information through item rejection on the SDES, in comparison to the original *Defeat Scale* and *Entrapment Scale*, the tests for criterion validity were repeated with the original scales (see Table 8). A short version of any scale should correlate with the same criterion variables as the full scale and these correlations should be to the same magnitude (Richins, 2004). For these analyses an overall score was calculated for combined defeat and entrapment. This demonstrated similar correlations for both the short and original scales at the same levels of significance and suggests that there is no significant loss of information as a result of item rejection.

INSERT TABLE 5

**Incremental Validity**

 In testing for incremental validity an outcome needs to be selected for which defeat and entrapment would be expected to explain additional variance beyond that which a third variable already accounts for. Two-step hierarchal regression analyses were conducted with participants from *Sample 2* (non-clinical) using CES-D to measure depression and CBI to measure caregiver burden and participants from *Sample 3* (clinical) using BPRS to measure positive symptoms associated with psychosis BDI to measure depression and also BHS to measure hopelessness.
 In the first regression, we aimed to test whether the SDES was able to predict the experience of caregiver burden above and beyond depression as a predictor. In Step One of a hierarchal multiple regression, depression was included as a predictor of caregiver burden (*β* = .13, *p* = .01). In Step Two of the analysis, when the SDES score was also included as a predictor, there was an R2 change of .10 (R2 = .39, F(2, 158) = 19.21, *p* <.001, *ηp2* = .10) and the two predictors accounted for 44% of the variance. The SDES was a significant predictor of caregiver burden (*β* = .49, *p* <.001) and depression was no longer a significant predictor (*β* = -.07, *p* = .27). These analyses demonstrated that the shortened scale had incremental predictive value in the measurement of caregiver burden beyond levels that could be predicted by depression.
 In the second regression, we aimed to test whether the SDES was able to predict the experience of the positive symptoms of psychosis above and beyond the prediction of depression and hopelessness. In Step One of a hierarchical multiple regression analysis depression and hopelessness were included as predictors of the positive symptoms associated with psychosis. This demonstrated that depression was a significant predictor of these symptoms (*β* = .48, *p* <.001), whilst hopelessness was not a significant predictor (*β* = -.14, *p* = .27). For Step Two, when the SDES was included as an additional predictor there was a *R2*change of .10 (*R2* = .19, F(2, 161) = 18.64, *p* <.001, *ηp2* = .10) and together the predictors accounted for 43% of the variance. The SDES was a significant predictor of symptoms (*β* = .53, *p* <.001) and with the effect of defeat and entrapment controlled, neither depression (*β* = .20, *p* = .08) nor hopelessness (*β* = .04, *p* = .72) were significant predictors of positive symptoms. This is consistent with previous work demonstrating that defeat and entrapment mediate the effect of other variables on psychopathology, such as the symptoms of PTSD on subsequent suicidal behaviour (Panagioti et al., 2012). Taken together, the two tests, in different samples, showed that the SEDS is meaningfully different from both depression and hopelessness with which it is correlated.
 **Known Group Validity**

 It was expected that within all samples there would be participants who were experiencing defeat and entrapment, although we expected participants from both clinical groups to report higher levels than those from the non-clinical groups. The mean scores for the samples followed this hypothesis, as the psychosis group (*Sample 3; M* = 12.83, *SD* = 9.09) scored higher than all other samples [Community Sample (*Sample 1; M* = 5.79, *SD* = 6.12), Formal Caregivers (*Sample 2; M* = 3.72, *SD* = 5.34) and individuals with PTSD (*Sample 4; M* = 8.04, *SD* = 8.39)]. As expected, the clinical groups had higher levels of defeat and entrapment than the non-clinical groups, which demonstrated that the shortened scale accurately captures differences between clinical and non-clinical populations. An ANOVA demonstrated that there were significant differences between the mean scores on the SDES for the four samples [F(3, 595) = 33.17, *p* <.001, *ηp2* = .14]. Bonferroni corrected paired-samples t-tests demonstrated that the differences between all samples were significant; the sample of individuals with psychosis scored significantly higher than the community sample (*t* (3, 77) = 7.04, *p* <.001, *d* = 1.60), the sample of formal caregivers (*t* (3, 162) = 9.12, *p* <.001, *d* = 1.43) and the sample of individuals with PTSD (*t* (3, 94) = 4.79, *p* <.001, *d* = .98). Individuals with PTSD also scored significantly higher than the community sample (*t* (3, 94) = 2.25, *p* = .03, *d* = .46) and the formal caregivers sample (*t* (3, 162) = 4.32, *p* <.001, *d* = .68).

**Discussion**

 The above analyses report the development of an eight-item scale that measures defeat and entrapment. An EFA demonstrated that a one-factor solution was most appropriate for defeat and entrapment, which was confirmed by a multigroup CFA. This is consistent with theories that defeat and entrapment are best defined as a single construct (Johnson et al., 2008; Taylor et al., 2009; Taylor et al., 2011a) and on this basis should be measured by a single scale.

 The psychometric properties of the SDES were examined across four samples. The scale significantly correlated with outcome measures of depression and hopelessness previously shown to correlate with the original defeat and entrapment scales (e.g. Gilbert & Allan, 1998; Sturman & Mongrain, 2008b; Panagioti et al., 2012). The SDES effectively distinguishes between individuals who would be expected to experience different levels of defeat and entrapment, as participants’ mean scores on the scale were significantly higher in samples recruited from clinical settings than non-clinical settings. This was expected based on previous clinical work and provided further support for the clinical utility of the scale. High test-retest reliability across twelve months for the scale was also demonstrated (*r*icc = .88); suggesting that responses on the measure are stable across time amongst individuals whose situation does not change.
 The scale has unique value in the prediction of sample specific psychopathological outcomes when controlling for depression and hopelessness. We found the SDES to be a significant predictor of positive psychotic symptoms, when controlling for depression and hopelessness, and caregiver burden, when controlling for depression. This demonstrates that although defeat and entrapment have been shown to correlate with depression (e.g. Griffiths et al., 2014; Panagioti et al., 2012), the SDES measures a unique factor that cannot be captured through the measurement of depression.
 Additionally, the currently study provided further evidence that defeat and entrapment are best defined as a single factor, supporting existing literature (e.g. Griffiths et al., 2014; Taylor et al., 2009). The development of the SDES allows defeat and entrapment to be measured using a single scale and also provides greater clinical utility; however this can sometimes be at the expense of psychometric validity. Within the current study, we demonstrated that the SDES correlates with outcome measures at the same magnitudes as the original scales. Therefore, whilst the *Defeat Scale* and *Entrapment Scale* may not be seen as particularly lengthy, the increasing proliferation of unvalidated short scales suggested that researchers were indeed finding the original scales too lengthy, whereas the use of the SDES allows for a quick assessment of perceptions of defeat and entrapment. It is hoped that the development of this scale provides both clinical and research utility for the measurement of defeat and entrapment.

 Although defeat and entrapment have been measured as predictors of mental health problems, their infrequent assessment within therapeutic settings may be partly due to a lack of a valid short measure of both constructs that could be regularly administered to patients across treatment programmes to provide an indication of their current status. As defeat and entrapment have been shown to predict psychopathology, they may act as a barrier to progress in therapeutic settings (Taylor et al., 2011a). The scale developed in the current study contains eight items and therefore increases the feasibility of defeat and entrapment being measured on a session-by-session basis in therapeutic settings. This would help therapists to identify patients experiencing defeat and entrapment and incorporate these factors into their clinical assessment and case formulations for treatment (Tarrier, 2006). For example, emphasizing to patients that their mental health problems can be conceptualized as a reasonable response to feelings of defeat and entrapment (Taylor et al., 2011a) and using cognitive-behavioral techniques to modify individuals’ appraisals of situations could reduce their sensitivity towards defeat signals (Johnson et al., 2008; Swallow, 2000). Therefore increased awareness of defeat and entrapment within therapy settings and emphasizing to individuals the resilience they have shown through regular measurement of these factors, could improve client well-being (Taylor et al., 2011a).
 However, whilst the SDES could help to identify patients who are experiencing perceptions of defeat and entrapment, and also measure how these change over time, there are certain situations where use of this scale may not be appropriate. In situations where perceptions of defeat and entrapment are particularly pertinent and are causing distress to the patient, we would advise use of the original scales in order to gain a more thorough understanding of the origin and maintenance of these perceptions, to focus on these within therapeutic interventions.
 Additionally, existing literature suggests that there are some personality styles, (namely self-critical, perfectionistic, and neurotic) with which clients would be expected to frequently present to their therapists. This is relevant for therapists for two reasons. Firstly, such personality styles have been associated with the experience of depression (e.g. Blatt, 2008) and secondly these personality styles may leave such clients more vulnerable to experiencing and generating perceptions of defeat and entrapment (Sturman, Rose, McKeighan, Burch, & Evanico, in press). It has specifically been noted that self-criticism interacts with negative life events to predict depressive symptoms developing (Blatt & Zuroff, 1992). Supporting this, research has demonstrated that involuntary subordination, of which combined defeat and entrapment is a component, mediates the relationship between self-criticism and depression (Sturman & Mongrain, 2005). Furthermore, self-criticism has been shown to predict a higher number of defeat related events and depressive symptoms at a second time point seven weeks later (Sturman et al., in press), suggesting that self-criticism directly impacts on perceptions of defeat and the experience of depression. Perfectionism is also known to impact on individuals’ judgments of defeat and entrapment, and is implicated in the risk of suicidal behaviour (O’Connor et al., 2007). Perfectionism has also been shown to mediate the relationship between social rank status (including measures of defeat and entrapment) and anorexic symptoms, within a sample of individuals with eating disorders (Troop & Baker, 2008). One potential implication of the influence of personality styles on perceptions of defeat and entrapment is that clinicians could focus on the way in which these perceptions are generated and dealt with by clients (Sturman et al., 2014). Regular measurement of perceptions of defeat and entrapment could help clinicians to identify which specific personality characteristics may be influencing clients’ perceptions and mental health.

 However there are two important limitations associated with the development of this scale. Firstly, a CFA demonstrated that a single-factor solution was not a good fit for the model on all fit indices. Although, as the factor loadings were consistently above .40, representing a reasonable loading on a factor (Velicer et al., 1982) and the structure was supported across the samples, this highlights the need for the scale to be validated within different populations. Secondly, although samples were selected to represent clinical and non-clinical populations, the scale needs further validation amongst individuals experiencing symptoms and disorders that defeat and entrapment have specifically linked to, for example individuals with depression and anxiety (e.g. Gilbert & Allan, 1998; Griffiths et al., 2014). Additionally, within this study, we did not assess the presence of comorbid disorders. We acknowledge that this limits our ability to fully describe the samples, however as we recruited individuals to these samples to represent participants commonly seen in clinical practice, where co-occurrence is the norm, the presence of comorbid diagnoses would not affect the abilities of participants to be eligible for or included within the study. Future research that aims to validate the SDES in different populations should ensure that comorbid disorders are appropriately identified.

 Furthermore, whilst defeat and entrapment can be measured together, and evidence has shown that for depression, anxiety and PTSD this is an effective form of measurement, there are many existing mental health problems that defeat and entrapment have not yet been examined in relation to. Further research is needed to establish the relationship between defeat and entrapment and mental health problems such as bipolar disorder. Additionally, as there is a lack of current evidence of interventions that aim to specifically target defeat and entrapment, it is possible that they may require different interventions for the treatment of mental health problems. The evaluation of the delivery of such interventions would help to establish the optimal way of focusing on defeat and entrapment in the treatment of mental health problems.
 Future research should establish how distinct defeat and entrapment are from a measure of negative affect. As defeat and entrapment have been shown to relate to depression (e.g. Gilbert & Allan, 1998; Griffiths et al., 2014), it would be expected that there would be some overlap between these constructs, however this is yet to be examined. Furthermore, there may be some specific situations in which individuals feel defeated but not entrapped. Gilbert and Allan (1998) suggested that being defeated but not entrapped is less problematic than experiencing perceptions of both concurrently. This is supported by suggestions that individuals who experience a defeat situation may not necessarily become entrapped, for example, individuals who experience a major financial loss. This is further supported by evidence from individuals with psychosis that when there is recovery of symptoms, which would suggest that they no longer feel entrapped by their illness, their negative appraisals do not also recover (Upthegrove, Ross, Brunet, McCollum, & Jones, 2014). However, these are specific situations and it is thought for the majority of individuals, defeat and entrapment occur concurrently and are best defined as a single construct (e.g. Taylor et al., 2009). This was supported by our EFA and CFA, which demonstrated that there was a robust single factor underlying the scale, showing strong empirical evidence that amongst the diverse samples within this study, defeat and entrapment co-occurred.
 The current research suggested that defeat and entrapment operate as a single construct in the prediction of mental health problems. However, less is currently known about how the relationship between defeat and entrapment develops and changes over time. Specifically, it is unknown whether there are any situations in which defeat and entrapment may underlie and lead to different outcomes, rather than operating as a single construct. This issue could be addressed by future research. An experience sampling design could look at individuals’ shifts in perceptions of both defeat and entrapment in response to specific stressors, identifying whether changes in defeat and entrapment co-vary. If these perceptions were shown to change at different rates, or over different periods of time, this may provide evidence of two overlapping but distinct constructs. However, if these perceptions were shown to change at the same rate, this would serve to strengthen the evidence for defeat and entrapment being conceptualized as a single construct.
 In conclusion, this initial test of the validity and reliability of the SDES suggests that the scale effectively measures defeat and entrapment within samples recruited from clinical and community populations. This scale is quick for practitioners to administer and score and also less of a burden for participants to complete in comparison to the original scales in terms of time and effort. The scale demonstrated concurrent and divergent validity, test-retest reliability and incremental validity with the specific criteria used in this study, consistently across several samples, specifically a sample of formal caregivers, a community sample, a sample of individuals diagnosed with PTSD and a sample of mental health services users with psychosis. As defeat and entrapment are reliable predictors of the experience of mental health problems, it is hoped the development of this scale will lead to their regular measurement in therapeutic settings and the greater use of validated scales within defeat and entrapment research where response burden is currently an issue.

**References**

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

Allan, S., & Gilbert, P. (2002). Anger and anger expression in relation to perceptions of social rank, entrapment and depressive symptoms. *Personality and Individual Differences, 32*, 551–565. doi: 10.1016/S0191-8869(01)00057-5

Allison, P. D. (2000). Multiple imputation for missing data: A cautionary tale. *Sociological Methods and Research, 28,* 301-309. doi: 10.1177/0049124100028003003

Beck, A. T., Steer, R. A., Ball, R., & Ranieri, W. F. (1996). Comparison of Beck Depression Inventories IA and II in Psychiatric Outpatients. *Journal of Personality Assessment, 67,* 588-597.

Beck, A. T., Ward, C. H., Mendelson, J., Mock, J., & Erbaugh, J. (1961). An inventory for measuring depression. *Archives of General Psychiatry, 4,* 561-571.

Beck, A.T., Weissman, A., Lester, D., & Trexler, L. (1974). The measurement of
pessimism: The Hopelessness Scale. *Journal of Consultant Clinical
Psychology, 42,* 861-865.

Bentler, P. M. (1990). Comparative fit indexes in structural models. *Psychological Bulletin, 107,* 238-246. doi: 10.1037/0033-2909.107.2.238

Bentler, P. M., & Bonett, D. G. (1980). Significance tests and goodness of fit in the
analysis of covariance structures. *Psychological Bulletin, 88*, 588-606.

Bouvard, M., Charles, S., Guérin, J., Aimard, G., & Cottraux, J. (1992). Study of Beck’s hopelessness scale: Validation and factor analysis. *L’Encephale,18,* 237-240.

Bruton, A., Conway, J. H., Holgate, S. T. (2000). Reliability: what is it, and how is it
 measured? *Physiotherapy, 86,* 94–99. doi: 10.1016/S0031-9406(05)61211-4

Byrne, B. M. (2001). *Structural Equation Modeling with AMOS: Basic concepts,
 applications and programming.* Lawrence Erlbaum Associates: Hillsdale, NJ.

Byrne, B. M. (2004). Structural Equation Modelling with AMOS, EQS, and LISREL: Comparative approaches to testing for the factorial validity of a measuring   instrument. *International Journal of Testing, 1,* 55-86. doi: 10.1207/S15327574IJT0101\_4

Cattell, R. B. (1978). *The scientific use of factor analysis in behavior and life sciences.* New York: Plenum.

Clare, L., & Singh, K. (1994). Preventing relapse in psychotic illness: A psychological approach to early intervention. *Journal of Mental Health, 3*, 541-550. doi: 10.3109/09638239409003828

Department of Health and Social Security. (1980). *Inequalities in health: report of a
research working group,* DHSS, London.

Dingesman, P. M. A. J., Linszen, D. H., Lenior, M. E., & Smeets, R. M. W. (1995). Component structure of the expanded Brief Psychiatric Rating Scale. *Psychopharmacology, 122,* 263-267. doi: 10.1007/BF02246547

Fabrigar, L. R., Wegener, D. T., MacCallum, R. C., & Strahan, E. J. (1999).
 Evaluating the use of exploratory factor analysis in psychological research.
 *Psychological Methods, 4,* 272-299. doi: 10.1037/1082-989X.4.3.272

Gilbert, P. (2001). Depression and stress: A biopsychosocial exploration of evolved functions and mechanisms. *Stress, 4*, 121-135. doi: 10.3109/10253890109115726

Gilbert, P., & Allan, S. (1994). Assertiveness, submissive behaviour and social comparison. *British Journal of Clinical Psychology, 33,* 295–306.

Gilbert, P., & Allan, S. (1998). The role of defeat and entrapment (arrested flight) in depression: An exploration of an evolutionary view. *Psychological Medicine, 28*, 585-598. doi: 10.1017/S0033291798006710

Gilbert, P., Allan, S., Brough, S., Melley, S., & Miles, J. (2002). Relationship of anhedonia and anxiety to social rank, defeat, and entrapment. *Journal of Affective Disorders, 71*, 141-151. doi: 10.1016/S0165-0327(01)00392-5

Gilbert, P., Cheung, M., Irons, C., & McEwan, K. (2005). An exploration into depression-focused and anger-focused rumination in relation to depression in a student population. *Behavioural and Cognitive Psychotherapy, 33*, 273-283. doi: 10.1017/S1352465804002048

Gilbert, P., & Gilbert, J. (2003). Entrapment and arrested fight and flight in depression: An exploration using focus groups. *Psychology and Psychotherapy: Theory, Research and Practice, 76*, 173-188. doi: 10.1348/147608303765951203

Gilbert, P., Gilbert, J., & Irons, C. (2004). Life events, entrapments and arrested anger in depression. *Journal of Affective Disorders, 79*, 149-160. doi: 10.1016/S0165-0327(02)00405-6

Given, C. W., Given, B., Stommel, M., Collins, C., King, S., & Franklin, S. (1992). The caregiver reaction assessment (CRA) for caregivers to persons with chronic physical and mental impairments. *Research in Nursing & Health, 15,* 271-283.doi: 10.1002/nur.4770150406

Goldstein, R. C., & Willner, P. (2002). Self-report measures of defeat and entrapment during a brief depressive mood induction. *Cognition & Emotion, 16*, 629-642. doi: 10.1080/02699930143000473

Gorsuch, R. L. (1983). *Factor Analysis (2nd ed.).* Hillsdale, NJ: Erlbaum.

Grewal, R., Cote, J. A., & Baumgartner, H. (2002). Multicollinearity and
 Measurement Error in Structural Equation Models: Implications for Theory
 Testing. *Marketing Science, 23,* 519-529. doi: 10.1287/mksc.1040.0070

Griffiths, A. W., Wood, A. M., Maltby, J., Taylor, P. J., & Tai, S. (2014). The
 prospective role of defeat and entrapment in depression and anxiety: A 12-
 month longitudinal study. *Psychiatry Research, 216,* 52-59. doi: 10.1016/j.psychres.2014.01.037

Hu, L., & Bentler, P. M. (1999). Cutoff criteria for fit indices in covariance structure
 analysis: Conventional versus new alternatives. *Structural Equation Modeling,
 6,* 1-55. doi: 10.1080/10705519909540118

Jokela, M., Batty, G. D., Vahtera, J., Elovainio, M., & Kivimäki, M. (2013).
 Socioeconomic inequalities in common mental disorders and psychotherapy
 treatment in the UK between 1991 and 2009. *The British Journal of
 Psychiatry, 203,* 10-17. doi: 10.1192/bjp.bp.111.098863

Johnson, J., Gooding, P., & Tarrier, N. (2008). Suicide risk in schizophrenia: Explanatory models and clinical implications. *Psychology and Psychotherapy: Theory, Research and Practice, 81*, 55-77. doi: 10.1348/147608307X244996

Joseph, S., & Wood, A. M. (2010). Assessment of positive functioning in clinical psychology: Theoretical and practical issues. *Clinical Psychology Review*, *30*, 830-838. doi: 10.1016/j.cpr.2010.01.002

Joyce, A. S., MacNair-Semands, R., Tasca, G. A., & Ogrodniczuk, J. S. (2011). Factor Structure and Validity of the Therapeutic Factors Inventory -
Short Form. *Group Dynamics: Theory, Research, and Practice,* *15,* 201–219. doi: 10.1037/a0024677

Julian, L. J., Gregorich, S. E., Tonner, C., Yazdany, J., Trupin, L., Criswell, L. A., Yelin, E., & Katz, P. P. (2011). Using the Center for Epidemiologic Studies Depression Scale to screen for Depression in Systemic Lupus Erythematosus. *Arthritis Care and Research, 63,* 884-890. doi: 10.1002/acr.20447

Kessler, R. C., Sonnega, A., Bromet, E., & Nelson, C. B. (1995). Posttraumatic stress
 disorder in the National Comorbidity Survey. *Archives of General Psychiatry,
 52,* 1048-1060. doi: 10.1001/archpsyc.62.6.617

Kline, R. B. (2011). *Principles and practice of structural equation modeling.* Guilford
 Press: New York, NY.

LeBlanc, A. J., Driscoll, A. K., & Pearlin, L. I. (2004). Religiosity and the expansion of caregiver stress. *Aging & Mental Health, 8*, 410–421. doi: 10.1080/13607860410001724992

Link, B. G., Struening, E. L., Neese-Todd, S., Asmussen, S., & Phelan, J. C. (2001). Stigma as a Barrier to Recovery: The Consequences of Stigma for the Self-Esteem of People with Mental Illnesses. *Psychiatric Services, 52,* 1621-1626. doi: 10.1176/appi.ps.52.12.1621

Little, R. J. A. (1998). A test of missing completely at random for multivariate data with missing values. *Journal of the American Statistical Association, 83*, 1198-1202. doi: 10.1080/01621459.1988.10478722

Lykke, J., Hesse, M., Austin, S. F., & Oestrich, I. (2008). Validity of the BPRS, the BDI and the BAI in dual diagnosis patients. *Addictive Behaviors, 33,* 292-300. doi: 10.1016/j.addbeh.2007.09.020

MacCallum, R. C., Browne, M. W., & Sugawara, H. M. (1996). Power analysis and determination of sample size for covariance structure modeling. *Psychological Methods, 1,* 130-149. doi: 10.1037//1082-989X.7.1.19

McMillan, D., Gilbody, S., Beresford, E., & Neilly, L. (2007). Can we predict suicide and non-fatal self-harm with the Beck Hopelessness Scale? A meta-analysis. *Psychological Medicine, 37,* 769-778. doi: 10.1017/S0033291706009664

Miyamoto, Y., Tachimori, H., & Ito, H. (2010). Formal caregiver burden in dementia: Impact of behavioral and psychological symptoms of dementia and activities of daily living. *Geriatric Nursing, 31,* 246-253. doi: 10.1016/j.gerinurse.2010.01.002

Mogge, N. L., LePage, J. P., Del Ben, K., & Murphy, J. (2002). The comparison of the behavioral observation system and the brief psychiatric rating scale-expanded. *Journal of Clinical Psychology, 58,* 847-852. doi: 10.1002/jclp.2004

Moniz-Cook, E., Millington, D., & Silver, M. (1997). Residential care for older people: job satisfaction and psychological health in care staff. *Health and Social Care in the Community, 5,* 124-133. doi: 10.1111/j.1365-2524.1997.tb00107.x

Mühlan, H., Bullinger, M., Power, M., & Schmidt, S. (2008). Short Forms of Subjective Quality of Life Assessments from Cross-Cultural Studies for Use in Surveys with Different Populations. *Clinical Psychology and Psychotherapy, 15,* 142-153. doi:10.1002/cpp.573

Nunnally, J. C. (1978). *Psychometric Theory*. New York: McGraw-Hill.

O'Connor, R. C. (2003). Suicidal behavior as a cry of pain: Test of a psychological model. *Archives of Suicide Research, 7*, 297-308. doi: 10.1080/13811110390226417

O’Connor, R. C., Smyth, R., Ferguson, E., Ryan, C., & Williams, J. M. G. (2013). Psychological processes and repeat suicidal behavior: A four-year prospective study. *Journal of Counselling and Clinical Psychology, 81,* 1137-1143. doi: 10.1037/a0033751

O’Rourke, N. & Tuokko, H. A. (2003). Psychometric properties of an abridged version of the Zarit Burden Interview within a representative Canadian caregiver sample. *The Gerontologist, 43,* 121-127. doi: 10.1177/0013164404268668

Oliver, J. M. & Simmons, M. E. (1984). Depression as measured by the DSM-III and the Beck Depression Inventory in an unselected adult population. *Journal of Consulting and Clinical Psychology, 52,* 892-898. doi: 10.1037/0022-006X.52.5.892

Panagioti, M., Gooding, P. A., & Tarrier, N. (2012). Hopelessness, defeat, and
entrapment in posttraumatic stress disorder: Their association with suicidal behaviour and severity of depression. *Journal of Nervous and Mental
Disease, 200,* 676-683. doi: 10.1097/nmd.0b013e3182613f91

Price, J., & Sloman, L. (1987). Depression as yielding behavior: An animal model based on Schjelderup-Ebbe's pecking order. *Ethology and Sociobiology, 8*, 85-98. doi: 10.1016/0162-3095(87)90021-5

Price, J., Sloman, L., Gardner, R., Gilbert, P., & Rhode, P. (1994). The social competition hypothesis of depression. *British Journal of Psychiatry, 164*, 309-315. doi: 10.1192/bjp.164.3.309

Radloff, L. S. (1977). The CES-D scale: A self-report depression scale for research in the general population. *Applied Psychological Measures, 1*, 385–401. doi: 10.1177/014662167700100306

Rasmussen, S. A., Fraser, L., Gotz, M., MacHale, S., Mackie, R., Masterton, G., & O’Connor, R. C. (2010). Elaborating the cry of pain model of suicidality: Testing a psychological model in a sample of first-time and repeat self-harm patients. *British Journal of Clinical Psychology, 49*, 15-30. doi: 10.1348/014466509X415735

Rosseel, Y. (2014). *The lavaan tutorial.* Retrieved from <http://lavaan.ugent.be/tutorial/tutorial.pdf> on August 20th 2014.

Rubin, D.B. (1987). *Multiple imputation for nonresponse in surveys*. New York, NY: John Wiley & Sons.

Schroevers, M. J., Sanderman, R., van Sonderen, E., & Ranchor, A. V. (2000). The evaluation of the Center for Epidemiologic Studies Depression (CES-D) scale: Depressed and Positive Affect in cancer patients and health reference subjects. *Quality of Life Research, 9,* 1015-1029. doi: 10.1023/A:1016673003237

Sheehan, D. V., Lecrubier, Y., Sheehan, K. H., Amorim, P., Janavas, J., Weiller, E., Hergueta, T., Baker, R., Dunbar, G. C. et al. (1998). The Mini-International Interview (M.I.N.I.): The development and validation of a structured diagnostic psychiatric interview for DSM-IV and ICD-10*. Journal of Clinical Psychiatry, 59 (S20),* 22-33. doi: 10.1016/S0924-9338(97)83296-8

Sloman, L. (2000). How the involuntary defeat strategy relates to depression. In L. Sloman & P. Gilbert (Eds.), *Subordination and defeat: An evolutionary approach to mood disorders and their therapy* (pp. 47-67). Mahwah, NJ: Lawrence Erlbaum Associates.

Sourial, R., McCusker, J., Cole, M., & Abrahamowicz, M. (2001). Agitation in Demented Patients in an Acute Care Hospital: Prevalence, Disruptiveness, and Staff Burden. *International Psychogeriatrics, 13,* 187-193. doi: 10.1017/S1041610201007578

Stommel, M., Given, C. W., & Given, B. (1990). Depression as an overriding variable explaining caregiver burdens. *Journal of Aging and Health, 2*, 81-102. doi: 10.1177/089826439000200106

Stowkowy, J. & Addington, J. (2012). Maladaptive schemas as a mediator between
social defeat and positive symptoms in young people at clinical high risk for
psychosis. *Early Intervention in Psychiatry, 6,* 87-90. doi: 10.1111/j.1751-7893.2011.00297.x

Streiner, D. L. & Norman, G. R. (2008). *Health measurement scales: A practical
 guide to their development and use*. Oxford University Press: Oxford.

Sturman, E. D. (2011). Involuntary subordination and its relation to personality, mood,
and submissive behaviour. *Psychological Assessment, 23,* 262-276. doi: 10.1037/a0021499

Sturman, E. D., & Mongrain, M. (2005). Self-criticism and depression: An evolutionary perspective. *British Journal of Clinical Psychology, 44*, 505-519. doi: 10.1348/014466505X35722

Sturman, E. D., & Mongrain, M. (2008a). The role of personality in defeat: A revised social rank model. *European Journal of Personality, 22*, 55-79. doi: 10.1002/per.653

Sturman, E. D., & Mongrain, M. (2008b). Entrapment and perceived status in graduate students experiencing a recurrence of major depression. *Canadian Journal of Behavioural Science, 40*, 185–188. doi: 10.1037/0008-400X.40.3.185

Swallow, S. R. (2000). A cognitive behavioural perspective on the involuntary defeat strategy. In L. Sloman & P. Gilbert (Eds.), *Subordination and defeat: An evolutionary approach to mood disorders and their therapy* (pp. 181–198). Mahwah, NJ: Lawrence Erlbaum Associates.

Tarrier, N. (2006). *Case formulation in cognitive behaviour therapy: The treatment of challenging and complex cases*. London: Routledge.

Taylor, P. J., Awenat, Y., Gooding, P. A., Johnson, J., Pratt, D., & Wood, A. M., & Tarrier, N. (2010c). The subjective experience of participation in schizophrenia research: A practical and ethical issue. *Journal of Nervous and Mental Disease, 198,*343-348. doi: 10.1097/NMD.0b013e3181da8545

Taylor, P. J., Gooding, P. A., Wood, A. M., Johnson, J., Pratt, D., & Tarrier, N. (2010a). Defeat and entrapment in schizophrenia: The relationship with suicidal ideation and positive psychotic symptoms. *Psychiatry Research, 178*, 244-248. doi: 10.1016/j.psychres.2009.10.015

Taylor, P. J., Gooding, P., Wood, A. M., & Tarrier, N. (2011a). The role of defeat and
entrapment in depression, anxiety, and suicide. *Psychological Bulletin, 137*, 391-420. doi: 10.1037/a0022935.

Taylor, P. J., Wood, A. M., Gooding, P., Johnson, J., & Tarrier, N. (2009). Are defeat and entrapment best defined as a single construct? *Personality and Individual Differences, 47*, 795-797. doi: 10.1016/j.paid.2009.06.011

Taylor, P. J, Wood, A. M., Gooding, T., & Tarrier, N. (2010b). Appraisals and suicidality: The mediating role of defeat and entrapment. *Archives of Suicide Research*, *14*, 236-247. doi: 10.1080/13811118.2010.494138

Taylor, P. J., Wood, A. M., Gooding, P. A., & Tarrier, N. (2011b). Prospective predictors of suicidality: Defeat and entrapment lead to changes in suicidal ideation over time. *Suicide and Life Threatening Behaviour, 41,* 297-306. doi: 10.1111/j.1943-278X.2011.00029.x.

Troop, N. A., & Baker, A. H. (2008). The specificity of social rank in eating disorder versus depressive symptoms. *Eating Disorders, 16*, 331-341. doi: 10.1080/10640260802115993

Upthegrove, R., Ross, K., Brunet, K., McCollum, R., & Jones, L. (2014). Depression in first episode psychosis: The role of subordination and shame. *Psychiatry Research, 217,* 177-184. doi: 10.1016/j.psychres.2014.03.023

van Os, J., Verdoux, H., Maurice-Tison, S., Gay, B., Liraud, F., Salamon, R., & Bourgeois, M. (1999). Self-reported psychosis-like symptoms and the continuum of psychosis. *Social Psychiatry and Psychiatric Epidemiology, 34,* 459-463. doi: 10.1007/s001270050220

Velicer, W., Peacock, A., & Jackson, D. (1982). A comparison of component and
factor patterns: a MonteCarlo approach. *Multivariate Behavioral Research, 17,* 371-388. doi: 10.1207/s15327906mbr1703\_5

Ventura, J., Green, M. F., Shaner, A., & Liberman, R. P. (1994). Training and quality
assurance with the Brief Psychiatric Rating Scale: "the drift busters".
*International Journal of Methods in Psychiatric Research, 3,* 221-244.

Verdoux, H., van Os, J., Maurice-Tison, S., Gay, B., Salamon, R., & Bourgeois, L.
 (1999). Increased occurrence of depression in psychosis-prone subjects: A
follow-up study in primary care settings. *Comprehensive Psychiatry, 40,* 462-468. doi: 10.1016/S0010-440X(99)90091-3

von Dras, D. D., Flittner, D., Malcore, S. A., & Pouliot, G. (2009). Workplace stress
and ethical challenges experienced by nursing staff in a nursing home. *Educational Gerontology, 35,* 321-339. doi: 10.1080/03601270802605382

Watson, D., O’Hara, M. W., Simms, L. J., Kotov, R., Chmielewski, M., McDade-Montez, E., Gamez, W., & Stuart, S. (2007). Development and validation of the Inventory of Depression and Anxiety Symptoms (IDAS). *Psychological Assessment, 19,* 253-268. doi: 10.1037/1040-3590.19.3.253

Willner, P., & Goldstein, R. C. (2001). Mediation of depression by perceptions of
defeat and entrapment in high-stress mothers. *British Journal of Medical Psychology, 74*, 473-485. doi: 10.1348/000711201161127

Wood, A. M., & Joseph S. (2010). The absence of positive psychological
(eudemonic) well-being as a risk factor for depression: A ten year cohort study. *Journal of Affective Disorders*,*122*, 213-217. doi:10.1016/j.jad.2009.06.032

Wood, A. M., Taylor, P. T., & Joseph, S. (2010). Does the CES-D measure a continuum from depression to happiness? Comparing substantive and artifactual models. *Psychiatry Research, 177,* 120-123*.* doi: 10.1016/j.psychres.2010.02.003

World Health Organisation. (1992). *ICE-10 Classifications of Mental and
Behavioural Disorder: Clinical Descriptions and Diagnostic Guidelines.*
Geneva: World Health Organisation.

Wyatt, R., & Gilbert, P. (1998). Dimensions of perfectionism: A study exploring their relationship with perceived social rank and status. *Personality and Individual Differences, 24*, 71-79. doi: 10.1016/S0191-8869(97)00146-3

Yar, M., Dix, D., & Madhavi, B. (2006). Socio-demographic characteristics of the healthcare workforce in England and Wales – results from the 2001 census. *Health Statistics Quarterly, 32*, 44–56.

Zarit, S. H. (1980). Relatives of the impaired elderly: Correlates of feelings of burden.
*The Gerontologist, 20,* 649-655. doi: 10.1093/geront/20.6.649

Table 1. Standardized item loadings for a single factor encompassing defeat and entrapment, items in bold were selected for the final scale.

|  |  |
| --- | --- |
|  | Combined defeat and entrapment |
| 1. **I would like to escape from my thoughts and feelings (e)** |  .811 |
| 2. **I feel defeated by life (d)** | .808 |
| 3. **I would like to get away from who I am and start again (e)** | .802 |
| 4. **I would like to get away from other more powerful people  in my life (e)** | .797 |
| 5. I often have the feeling that I would just like to run away (e) |  .796 |
| 6. **I can see no way out of my current situation (e)** | .796 |
| 7. I want to get away from myself (e) | .788 |
| 8. I feel trapped by my obligations (e) | .787 |
| 9. **I feel that there is no fight left in me (d)** | .773 |
| 10. **I feel that I am one of life’s losers (d)** | .773 |
| 11. **I feel powerless (d)** | .773 |
| 12. I feel powerless to change things (e) | .759 |
| 13. I feel down and out (d) | .753 |
| 14. I feel completely knocked out of action (d) | .750 |
| 15. I feel that I have lost my standing in the world (d)  | .744 |
| 16. I feel that I have given up (d) | .737 |
| 17. I feel trapped by other people (e) | .731 |
| 18. I feel that I have sunk to the bottom of the ladder (d) | .728 |
| 19. I feel that I have lost important battles in life (d) | .727 |
| 20. I am in situation I feel trapped in (e) | .726 |
| 21. I have a strong desire to escape from things in my life (e) | .723 |
| 22. I am in a relationship I can’t get out of (e) | .723 |
| 23. I feel that my confidence has been knocked out of me (d) | .722 |
| 24. I feel I’m in a deep hole I can’t get out of (e)  | .706 |
| 25. I feel that I have not made it in life (d) | .666 |
| 26. I feel that life has treated me like a punch bag (d) | .640 |
| 27. I feel powerless to change myself (e)  | .613 |
| 28. I feel trapped inside myself (e)  | .606 |
| 29. I feel that I am a successful person (d) (R) | .594 |
| 30. I feel that I am basically a winner (d) (R) | .538 |
| 31. I feel able to deal with whatever life throws at me (d) (R) | .523 |
| 32. I have a strong desire to get away and stay away from  where I am now (e) | .471 |

Note: (R) denotes reverse coded item, (e) denotes item is from entrapment scale, (d) denotes item
is from defeat scale.

Table 2. Cronbach’s alphas for eight- and ten-item scales across five samples.

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | Sample size | Four-item scale | Six-item scale | Eight-item scale | Ten-item scale |
| Community (Sample 1)Formal Caregivers (Sample 2) | 264163 | .87.84 | .91.88 | .93.90 | .94.91 |
| Individuals with Psychosis (Sample 3)  | 78 | .84 | .88 | .91 | .93 |
| Individuals with PTSD (Sample 4) | 96 | .87 | .92 | .94 | .95 |

Table 3. Standardized factor loadings for each sample within a one-factor CFA

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  |  |  |  | Sample |  |
|  |  | Community | Individuals with Psychosis | Formal Caregivers | Individuals with PTSD |
|  | 1 | .829 | .738 | .853 | .694 |
|  | 2 | .832 | .759 | .865 | .656 |
|  | 3 | .839 | .782 | .873 | .805 |
| Item | 4 | .815 | .681 | .798 | .715 |
|  | 5 | .769 | .838 | .831 | .791 |
|  | 6 | .748 | .788 | .832 | .661 |
|  | 7 | .754 | .710 | .825 | .751 |
|  | 8 | .772 | .749 | .731 | .741 |

Note: All loadings p<.05

Table 4. Correlations between the shortened scale and outcome measures.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Sample | CES-D | BDI | BHS | ZBI |
| Formal Caregivers (Sample 2) | .712\*\* |  |  | .433\*\* |
| Psychosis Patients (Sample 3) |  | .237\* | .446\*\* |  |
| Trauma Patients (Sample 4) |  | .849\*\* | .926\*\* |  |

 Note: \* p <.05 \*\* p <.001
 CES-D = Center for Epidemiologic Services Depression Scale, BHS = Beck
 Hopelessness Score, BDI = Beck Depression Inventory, ZBI = Zarit Burden
 Inventory

Table 5. Correlations between the original *Defeat Scale* and *Entrapment Scale* and outcome measures.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Sample | CES-D | BDI | BHS | ZBI |
| Formal Caregivers (Sample 2) | .778\*\* |  |  | .462\*\* |
| Psychosis Patients (Sample 3) |  | .304\* | .663\*\* |  |
| Trauma Patients (Sample 4) |  | .882\*\* | .925\*\* |  |

 Note: \* p <.05 \*\* p <.001 CES-D = Center for Epidemiologic Services Depression Scale, BHS = Beck Hopelessness Score, BDI = Beck Depression Inventory, ZBI = Zarit Burden
 Inventory

Appendix A

**The Short Defeat and Entrapment Scale (SDES)**

For each of the following statements indicate the extent to which you think it represents your own view of yourself. Read each item carefully and circle the number to the right of the statement that best describes how you feel the statement reflects how you have felt during the **past seven days**, using the scale below. Please do not omit any item.

**SCALE**

**0 = Not at all 1 = A little bit 2 = Moderately 3 = Quite a bit 4 = Extremely**

**like me like me like me like me like me**

1. I can see no way out of my current situation 0 1 2 3 4
2. I feel defeated by life 0 1 2 3 4
3. I would like to get away from other more powerful 0 1 2 3 4
people in my life
4. I feel powerless 0 1 2 3 4
5. I would like to escape from my thoughts and feelings 0 1 2 3 4
6. I feel that there is no fight left in me 0 1 2 3 4
7. I would like to get away from who I am and start again 0 1 2 3 4
8. I feel that I am one of life’s losers 0 1 2 3 4
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