Scotland's Suicide Prevention Action Plan

Exploring Measures for Utilisation by a Suicide Bereavement Service

(Action 4)

By Heather McClelland and Steve Platt
Academic Advisory Group (AAG)
Date : 21st April 2020

National Suicide Prevention Leadership Group (NSPLG)

Contents

1. Introduction

Members of Action 4 requested the AAG to advise on existing outcome measures for the evaluation of service efficacy and service user psychological wellbeing following a suicide bereavement intervention. Action 4 Delivery Leads (DL) provided an initial list of potential measures which were under consideration for the pilot service, for a summary of these measures see Appendix 1. It was agreed within the AAG team that this request would be split into two separate actions:

1. a scoping search of recent studies to identify and summarise the types of outcomes and associated measures used, their psychometric properties and any other measure characteristics (e.g. time to complete the measure, or mode of completion) which have been used in previous bereavement services, and;
2. Search for any measures or similar domains addressed in Appendix 1 which have not otherwise been covered within the prior scoping search of this paper.

2. Methods

The current review collated widely used measures applied in bereavement services. The search strategy is summarised in appendix 2. After duplicates were removed, 29 papers were reviewed for relevance with eight meeting criteria. Within the included reviews, citation chaining was used to gather further details of the measures used within the reviews included here. Psychometric measures are grouped by the domain they were most commonly assigned to within the studies reviewed here. These groupings in the text below are reflected in Table 1, which summarises the measure characteristics (including number of items, cost, availability, subscales and report method) and Table 2 summarises psychometric properties (sensitivity, specificity and reliability) where available.

3. Results

The following section lists all measures identified within the scoping search. Each domain is listed in alphabetical order, the order of the measures is reflected in Table 1.

3.1 Adaptive functioning

Three measures of adaptive functioning were identified; Work and Social Adjustment Scale (WSAS; Mundt et al., 2002), Social Adjustment Inventory for Children and Adolescents (SAICA; John et al., 1987) and; the Social Adjustment Scale (SAS, Weissman 1979), all of which explored the behaviour of the individual within day-to-day environments (work, home, school etc.).

Both WSAS and SAS are designed for the self-assessment of adults. The WSAS is a brief, widely used self- report assessment for evaluating social and work-based functioning with a specific problem in mind (e.g. bereavement). The WSAS has been found to be both highly reliable, sensitive (though no empirical data for this was stated) and commonly used by clinicians (Mundt et al., 2002; Zahra et al., 2014). Zisook et al. (2018) reported no significant differences between WSAS scores between suicide bereavement groups compared to other bereavement groups, or within groups pre-post-vention.

The Social Adjustment Scale is an assessment of social functioning commonly used in both research and clinical practice (Gameroff et al., 2012). Although no empirical data was reported, Weissman

and Bothwell (1976) reported that the SAS was sensitive to change in schizophrenia patients pre and post treatment, as well as demonstrating reliability between self and interviewer assessments. Constantino et al. (2001) reported that the most significant changes observed within their bereavement study for this measure was between 6-12 months postvention.

Within this scoping search the SAICA was the only adaptive functioning measure applicable under 18-year olds. Within an ADHD population, this measure was found to have strong inter-reliability between child and parent reports on all four functionality domains assessed, with excellent reliability, validity and includes the sensitivity required to distinguish between psychiatric and general populations (Biederman et al., 1992). Pfeffer et al. (2002) reported significant differences in SAICA scores between groups at baseline, however no significant change in scores was detected between baseline and follow-up measures 12 weeks later.

3.2. Anxiety

Anxiety was measured by Pfeffer et al. (2002) and De Groot et al. (2010) who used separate measures: Revised Children's Manifest Anxiety Scale (RCMAS; Reynolds and Richmond, 1985), and Schedules for Clinical Assessment in Neuropsychiatry (SCAN 2.1; Dutch version; Giel & Nienhuis, 1996).

The RCMAS is an assessment designed for children and is a self-report measure. Although psychometric reports of the RCMAS were lacking, Wu et al (2016) reported that the RCMAS-2 was both a reliable and valid measure in cancer populations, however they did not comment on its specificity or sensitivity and raised some concerns regarding the reliability of its composite 'physiological anxiety 'subscale.

In contrast, SCAN 2.1 is a widely used clinical measure developed by the World Health Organisation to assess psychiatric disorders. Rjinders et al. (2000) and Schutzwohl et al. (2007) both reported the SCAN 2.1 to be a reliable measure, with good sensitivity (86%) and almost perfect specificity (99%). At 13-month follow-up De Grot et al. (2010) reported that the SCAN 2.1 could distinguish both anxiety and depression between suicide bereft and control groups.

3.3 Behaviour

The Youth Self-Report (YSR; Achenbach, 1991) and Child Behaviour Checklist (CBCL; Achenbach, 1991) are widely used measures designed to assess a child and young person's emotions and behaviour. The YSR and CBCL complement one another in that the YSR is a self-report measure completed by the young person, while the CBCL is a parent-report asking similar questions. Despite this review only identifying two studies which used the YSR (Hazell and Lewin, 1993) or CBCL (Sandler et al., 2016), these measures are used throughout psychology research, as well as in therapeutic settings worldwide. The CBCL is reported to have low (71%) sensitivity but high (92%) specificity within general populations (Novik et al. 1992) and strong reliability (Achenbach and Edelbrock, 1981). Between attention-deficit hyperactivity (ADHD) and non-ADHD groups, Conners et al. (1997) concluded that the YSR had both acceptable sensitivity (81.4%) and specificity (83.7%). These measures have also been found to have high inter-reliability (Bordin et al., 2013) and can be used jointly or individually within studies. Additionally, despite the YSR being limited to children 11 years and older, Ebesutani et al. (2011) found evidence that this measure is acceptable from seven years of age. Both the CBCL and YSR measures charge a licensing fee for use. Appraisal of the sensitivity and specificity of the English versions of these measures is absent. In addition, a third measure identified in this review was the Risk Behaviour Survey. However, no details regarding this measure were found. Use of these measures within bereavement studies identified here included Hazell and Lewin (1993) who reported no significant between-group differences for YSR internalising

or externalising behaviours at follow-up. Additionally, Sandler et al. (2016) included the CBCL as a covariate; however, the authors reported no data regarding this variable.

3.4 Coping

The Utrecht Coping List (UCL English version; Schreurs ven de Wilige et al., 1993) was the only measure of coping identified in this search and was used by one study only; Wittouck et al. (2014). The UCL is reported by Wittouck et al. (2014) to have moderate-high internal consistency and moderate-high reliability compared to other coping measures (e.g. COPE, Carver et al., 1989). Turner et al. (2012) found strong internal consistency within the subscales of this measure except for 'expression of emotion 'and 'avoidance' subscales in male participants. Observations of sensitivity and specificity have not been reported.

3.5 Depression

Second to grief, depression was the most commonly measured person-centred outcome variable following bereavement postvention. Of the studies included in this review, three measures of depression were identified across nine studies**.** The most common measure used was a form of the Beck Depression Inventory (BDI-I, Beck et al., 1979; Beck-II, Beck et al., 1996), followed by the Centre for Epidemiologic Studies Depression Scale (CES-D, Radloff, 1977).

The BDI has been shown to have excellent internal consistency with clinical and non-clinical populations as reported by the American Psychological Association (2020). Despite no empirical data available, Pearson (2020a) reports the BDI to have high sensitivity and excellent specificity. However, some authors argue that the sensitivity of the BDI-I is not sufficient for general populations (Forkman et al., 2009). Alternatively, the BDI-II has shown evidence of being the superior measure with improved specificity (88%) and sensitivity (85%) compared to the BDI-I, as well as being applicable to the general population (Kjærgaard et al., 2013). Despite this Kjærgaard et al. (2013) proposed reduced cut-off scores for the BDI-II to avoid low sensitivity. Constantino et al. (2001) found BDI-I scores reduced dramatically immediately after postvention compared to prevention, and this decrease remained stable across remaining follow-up timepoints. Both Pfeffer et al. (2002) and Constantino and Bricker (1996) reported no significant differences in BDI-I scores between intervention groups over time and neither author commented on the overall trend of these scores between the two timepoints. With regard to the BDI-II, Wittouck et al. (2014) reported significant differences between study groups, as well as within the intervention arm between baseline and follow-up.

The CES-D has been identified as an appropriate measure for the general population (Vilagut et al., 2016). Additionally, in a 27-study systematic review and meta-analysis by Vilagut et al., (2016), the authors report that the CES-D had both good sensitivity (87%) and specificity (70%). However, it was recommended that the depression cut-off score should be adjusted for detection of depression in general populations. De Groot et al. (2007) found no significant reduction in depression at 13-month follow-up, while De Groot et al. (2010) used the CES-D as a covariate and did not comment on the changes of depression over time.

The only child and young person-specific measure of depression identified was the Children's Depression Inventory (CDI; Kovaks, 1992). This measure was reported by Masip et al. (2010) to have near perfect sensitivity (94.7%) and specificity (95.6%) and almost perfect accuracy (98%) in distinguishing between clinical and non-clinical populations. However, similarly to the CES-D, Masip et al. (2010) recommended that the cut-off score should be adjusted to improve sensitivity. Pfeffer et al. (2002) reported significant intervention effect changes in children's self-reported depression at follow-up.

<u>Depression summary</u>

Based on the information available, the BDI-II and CES-D were the most sensitive and specific

measures identified within this review for assessing changes in depression among bereaved adult samples. Both measures are widely used, therefore enabling comparisons to be drawn with other sample populations. However, both measures have received recommendations for adjustment of cut-off scores. The CDI was the only identified measure of depression suitable for children and young people and has been reported to be highly sensitive, specific and reliable.

3.6 Distress

Two studies measured distress, with both using the Brief Symptom Inventory (BSI). This measure is designed for individuals aged 13 years or over (the current scoping search identified no psychometric measures to assess distress in children or pre-adolescents). The BSI has good internal consistency, with moderate validity depending on the measure of comparison (Derogatis, 1975, p. 32-44). However, Petkus (2009) recommended changing the cut-off score to 50 to ensure acceptable sensitivity of the measure. Constantino et al., (2001) reported that there were no statistically significant changes observed using BSI across the 8 weeks of postvention, while Constantino and Bricker (1996) found no statistically significant differences at baseline or at follow-up.

3.7 Grief

The most commonly applied outcome variable used to evaluate a bereavement service or intervention was a grief measure. Across the eight reviews explored here, 13 individual measures were used. Each measure is discussed below in alphabetical order.

The Complicated Grief Clinical Global Impression Scale (CG-CGG-I; Shear et al., 2005) was designed as a research tool and has since been applied clinically to record a clinician's overall impression of their patient's condition. No literature regarding the features or psychometric properties of this measure could be identified and few other studies were found to have used it. In the current scoping search, Zisook et al. (2018), included the 'improvement 'subscale of this measure. No significant between-group differences were reported at follow-up.

The Grief Cognitions Questionnaire (GCQ; Boelen et al., 2003a) is a reliable and effective measure for assessing negative thinking following bereavement (Boelen and Lensvelt-Mulders, 2005). Boelen and Lensvelt-Mulders (2005) reported that this measure had moderate sensitivity (84%) and specificity (89%). This measure was used by Wittouck et al. (2014) only. The authors reported no significant changes between pre- post- intervention assessments.

The Grief Experience Inventory (GEI; Sanders et al.,1985) was used by two studies (Constantino et al., 2001; Constantino and Bricker, 1996). Information about its sensitivity and specificity could not be identified. According to Sanders et al. (1985), the reliability of this measure was low, ranging from 52- 87%. Changes were detected at 8-week follow-up by Costantino and Bricker (1996); however, these were not statistically significant. In contrast, Costantino et al. (2001) reported a significant reduction in GEI scores across four timepoints spanning a 12-month period.

The Grief Experience Questionnaire (GEQ; Barrett and Scott, 1989) is specifically designed to assess grief reactions following suicide, originally specifically for spousal suicide and could differentiate between other forms of bereavement. One study (Kovak and Range, 2000), reported this measure to be more sensitive than the Impact of Events Questionnaire (IEQ). Furthermore, Kovak and Range (2000) reported that six-week pre- post- intervention comparisons showed only significant differences in the grief reaction subscale but not the other ten subscales. No analysis of the sensitivity or specificity of this measure have been reported so far.

The Grief Recovery Questions (GRQ; Lehman et al., 1986; Lehman et al., 1987) is a brief, self-report measure exploring participants perceptions of their grief overall. The validity and reliability of this

measure has not yet been investigated. Kovaks and Range (2000) was the only study to include this as an assessment tool, reporting it to have moderate-strong reliability (76-97%). Across a 6-week pre-post intervention assessment, Kovaks and Range (2000) reported a significant reduction in GRQ scores.

Hogans Grief Reaction Checklist (HGRC; Hogan et al., 2001) encompasses six factors associated with grief (see table 1) and is commonly used to investigate peer support. HGRC results by Barlow et al. (2010) showed significant changes in the predicted directions 4-months after baseline. Despite the HGRC being used by only one study in this review (Barlow et al., 2010), it appears to be widely used in grief and bereavement studies. The only research exploring the psychometric properties of the HGRC were written in Persian. However, the conclusion states that this measure was able to effectively distinguish between general and clinical populations with good reliability and validity (Fatehizade et al. 2013)

The Inventory of Complicated Grief (ICG, Prigerson, et al.,1995) is a popular measure (Boelen and Smid, 2017) of pathological grief, including disbelief and hallucinations and has a widely validated cut-off point (APA, 2020b). Despite being referred to as the 'gold standard' of grief distress (Guldin et al. 2011), no literature was identified regarding the specificity or sensitivity of the measure itself. In the present scoping search, the ICG was measured by Zisook et al. (2018) only, with authors reporting that changes in ICG scores at 20-week postvention follow-up were significantly reduced compared to baseline but comparable between the medication and CBT intervention groups assessed, equally, Braiden et al. (2011) also found significant results between baseline and all follow-up timepoints.

The Impact of Events (IES, Horowitz et al., 1979) tool assesses a broad range of bereavement (e.g. accidental death, expected death). This measure has proven to detect changes in status of bereaved outpatients over time. Sack et al. (1998) reported the IES to have good specificity for post-traumatic stress. However, its sensitivity was modest and therefore had a reportedly moderate level of performance overall. Kovaks and Range (2000) was the only study in this review to use the IES and found a significant reduction in scores postvention compared to baseline scores six weeks earlier. However these scores did not significantly differ between study groups (a revised version of this scale is located in appendix 13 as the original IES could not be located).

Intrusive Grief Thoughts Scale (IGTSl; Program for Prevention Research, 1999) assesses unwanted thoughts regarding death. Sandler et al. (2016) included this measure as a covariate within their 15-year longitudinal study; however, no details were provided regarding change in scores over time. Comments on the psychometric properties of this measure were not identified.

Inventory of Traumatic Grief (ITG; Prigerson and Jacobs, 2001) was the most commonly applied grief measure identified within this review (4 studies; Kramer et al., 2015; De Groot et al., 2007; De Groot et al., 2010; Wittouck et al., 2014). The measure has shown to have good reliability and validity (Boelen et al., 2003). The Dutch version of the measure was found to have moderate sensitivity (86%) and poorer specificity (76%) (Boelen et al., 2010). De Groot et al. (2007) reported a significant unadjusted reduction in traumatic grief at 13-month follow-up. However, this significance disappeared once baseline variables were controlled.

Structured Clinical Interview for Complicated Grief (SCI-CG) is a clinician administered assessment of complicated grief. Bui et al. (2015) has conducted the only known psychometric analysis of the tool, reporting that it has acceptable internal consistency and strong reliability; however, the sensitivity

and specificity of this measure remains unknown. Although Zisook et al. (2018) included this measure within their study, they did not comment on changes in participant group scores over time.

The Traumatic Grief Evaluation of Response to Loss (TRGR2L, Prigerson, Kasl, & Jacobs, 1998) has only been investigated Boelen et al. (2010) to assess the validity of the TRGR2L, reporting it to be moderate; however, there is no published literature regarding the sensitivity or specificity of this measure. At 13- month follow-up, De Groot et al. (2010) found that grief reduced significantly in those who reported suicidal ideation compared to those who did not. However, the authors did not comment on how these changed within groups over time. Additionally, the authors acknowledged that, as the reliability of this measure is under-researched, conclusions based on this measure should be drawn tentatively.

Grief Measures Summary

Several of the grief measures reviewed above had not had their psychometric properties fully evaluated. Therefore, the usefulness of these measures for reliably measuring grief remains unknown. Kovaks and Range (2000) was the only study to include and compare several grief measures within the same study, concluding that the GEQ, rather than the IES or GRQ, may be most appropriate to measure grief in suicide bereaved participants. However, the ICG is widely used and has been referred to as the gold standard of grief assessments, while the CGQ has been found to have both good sensitivity and specificity. Of all the measures reviewed here where psychometric data were available, the CIDI was reported to have the poorest sensitivity.

3.8 Guilt and Shame

Guilt, also referred to as shame, was measured by De Groot et al. (2007). The questions used were designed specifically for the study (see table 1) and were found to be relatively reliable, although sensitivity and specificity were not reported. These questions showed a distinction in guilt between the two groups measured by De Groot et al. (2007)

3.9 Hopelessness

The Beck Hopelessness Scale (BHS) is the most widely used scale for measuring hopelessness and has been translated into several languages (Kleim et al., 2018). Grano et al. (2017) reported that the BHS had acceptable sensitivity (70%) and specificity (78%) within adolescent populations experiencing suicidal ideation or psychosis. Grano et al. (2017) recommends using a cut-off score lower than that stated by the measure authors, in order to ensure sensitivity. This measure has proven to be more effective than depression measures in predicting suicidal ideation and self-harm (Neufeld et al., 2010). Wittouck et al (2014) included hopelessness as an outcome measure, however no changes in hopelessness were detected between pre and post-vention for either control or intervention groups.

3.10 Post-traumatic Stress Syndrome (PTSD)

The Child Post Traumatic Stress Reaction Index (CPTS-RI; Pynoos et al., 1987) is a widely used measure to assess child PTSD. In a general population of children, Ollilac et al. (2014) found the measure to demonstrate perfect sensitivity (100%), low specificity (62.6%) and low reliability (67%). The only measure of PTSD identified in this search was applied to a child sample with no significant pre-post intervention differences identified(Pfeffer et al., 2002).

3.11 Problem-solving

Problem solving was assessed by Sandor et al. (1994) using the Adolescent Problem-Solving Assessment. No information regarding the psychometric properties of this measure were found. However, Sandor et al. (1994) reported strong within-measure reliability. Sandor et al. (1994) also

reported that a significant improvement in problem-solving was observed between pre- and post-intervention timepoints and this effect remained stable over time (i.e. no significant change between postvention and follow-up 2 months later).

3.12 Self-Efficacy

The Self-Efficacy Scale - General Self-Efficacy subscale (SES; Sherer et al., 1982) has been reported as a reliable and valid measure (Imam, 2007); however, no empirical data were provided. At baseline, Sandor et al. (1994) identified no significant differences between suicide bereaved adolescents compared to control participants. However, significant improvements were identified in the bereavement group immediately following the intervention and these were sustained at follow-up.

3.13 Self-perception

The Self-Perception Profile for Adolescents (HSP; Harter, 1988) measures an adolescent's perception of their level of acceptance by peers and others. No psychometric details were available regarding this measure; however, Sandor et al. (1994) reported variable reliability within each of the subscales at each timepoint. Sandor et al. (1994) reported significantly increased post-vention scores in the intervention group for the 'social acceptance' and 'job competence' subscales of the HSP; however, no between-group differences were identified at follow-up.

3.14 Service evaluation

Service evaluations of bereavement interventions were only reported by Kramer et al. (2015). The questions created for the purposes of the study were not published or assessed for psychometric robustness.

3.15 Suicidal ideation and behaviour

3.15.1 Measures used by Sandler et al. (2016)

Five measures, the CBCL , the Diagnostic Schedule for Children (fourth edition, DISC-IV; National Institute of Mental Health Diagnostic Interview, 1979), Young Adult Behaviour Check List (YABCL; Achenbach, 1997), YSR and the Young Adult Self Report (YASR; Achenbach & Rescorla, 2001) were used by Sandler et al. (2016) to produce a collective suicidality score at baseline and at all follow-ups. Each measure is listed below.

The CBCL (psychometric characteristics are summarised in section 1.2.2), includes a single-item assessment regarding self-harm behaviour and suicide attempt. This item is widely used and has shown to be an effective question to identify suicide behaviour based on the parent's perspective.

The Diagnostic Schedule for Children (fourth edition, DISC-IV; National Institute of Mental Health Diagnostic Interview, 1979), can be either completed by a caregiver or the child themselves and includes measures of suicidal ideation and behaviour. Sensitivity of the DISC2.1 spanned 73-100% (Fisher et al., 1993), with newer versions reportedly having higher sensitivity.

Young Adult Behaviour Check List (YABCL; Achenbach, 1997) was superseded by the Adult Behaviour Checklist and the Adult Self-Report in 2005 and was therefore discontinued by its publishers. No further details about the psychometric characteristics of the YABCL were found.

The Young Adult Self Report (YASR; Achenbach & Rescorla, 2001) has good sensitivity (84%) and moderate specificity (74%; Wiznitzer et al., 1992).

YSR (summarised in section 2.2) includes a single item measure assessing suicidal ideation and behaviour and is complimentary to the CBCL.

Sandler et al. (2016) combined scores from the CBCL, DISC-IV, YABCL, YASR and YSR to gain a single suicidality score at baseline and throughout. At six-year follow-up Sandler et al (2016) reported a difference in study group scores which approached (but did not achieve) statistical significance. However at 15-year follow-up a statistically significant between-group difference was identified.

3.15.2 Measures of suicidal ideation and behaviour identified in other studies

The Mini-International Neuropsychiatric Interview-Plus (MINI-Plus) measures a range of DSM-IV diagnoses. In a schizophrenic population, Mackenzie et al., (2017) demonstrated the MINI-Plus to have moderate sensitivity (70%) and specificity (85%). Kramer et al. (2015) was the only paper identified here to use the Mini-Plus for the collection of data on suicidal ideation and behaviour following a bereavement intervention. Within this study, the MINI-Plus questions were presented in a self-report format instead of the original structured interview style. Significant improvements in behaviour were identified at both postvention timepoints compared to baseline.

Paykel's Suicidality Items (PSI; Paykel et al., 1974) was used in two studies. However, summaries of the psychometric properties of this measure could not be obtained at the time of this review. The PSI was applied by both De Groot et al. (2007) and De Groot et al. (2010) to explore recent suicidal ideation. De Groot et al. (2010) concluded that using this measure helped to predict the efficacy of grief therapy three months after bereavement by a suicide death, while De Groot et al. (2007) found no significant difference in suicidal ideation scores at follow-up 13 months after baseline.

Suicide outcomes summary

Psychometric data regarding the sensitivity, validity and specificity of most measures discussed throughout section 2.14 are significantly limited, due to inaccessibility or absence of relevant literature. However, the CBCL, DISC-IV and Mini-Plus have been identified as popular measures of suicidal ideation and behaviour. Limitations of these measures are that few were available online to explore and that several charge a fee for licensing and use.

3.16 Overall summary of outcome measures identified in bereavement services or studies

Most studies reviewed here commonly measured grief and depression, with other outcomes being more variable (e.g. a large minority measured behaviour and suicidal ideation or behaviour). Most of the measures demonstrated good sensitivity and moderate-high specificity; however, these findings were typically not based on a bereavement sample. The majority of studies reported significant differences between groups or between timepoints, thereby illustrating that most measures discussed here were sensitive to change. The majority of the measures listed in table 1 are free to use; however, those which require a fee were observed to be more widely used.

Multiple depression measures were identified in this review. The CES-D was reported as being the most applicable to the general population according to a recent meta-analysis, with evidence suggesting that it is both highly sensitive and specific to detecting depression. However, as with all depression measures summarised here, it was recommended that the CES-D cut-off score be adjusted to ensure accurate sensitivity. Additionally, a number of grief measures were identified, with the GEQ and IDC being among the most psychometrically robust. A limitation of this review is that a number of measures discussed here did not report any psychometric analysis. It should be noted, however, that absence of empirical evidence does not necessarily indicate lack of reliability or validity of these measures.

4 Further searches for named measures

None of the measures listed in Appendix 1 (apart from the WSAS) were identified in the scoping search above. Therefore, targeted searches were conducted for these specified measures. Their characteristics and psychometric properties are described in Table 3, in order of the domains outlined in Appendix 1.

4.1 Anxiety

The Hospital Anxiety and Depression Scale (HADS, Zigmond and Smith, 1983) is a widely used measure for assessing both anxiety and depression in adult populations. In the most recent literature review, Bjelland et al. (2002) reported sensitivity and specificity of the anxiety subscale to be around 80%. Although a study applying this measure to a suicide bereavement service could not be identified, Anderson et al. (2008) reported significant changes in anxiety at follow-up compared to baseline in relatives of patients in intensive care units where bereavement can be experienced. This study therefore demonstrates sensitivity to change in emotions similar to those experienced in bereavement.

The measure of Generalised Anxiety Disorder (GAD-7; Spitzer et al., 2006) has good sensitivity (89%) and specificity (82%) as well as internal consistency (86%; Spitzer et al., 2006). However, no reports could be found of bereavement services using this measure.

4.2 Depression

The BDI-short form (BDI-SF; Beck et al., 1974) has been shown to have high sensitivity (94%) in detecting moderate-severe depression (Furlanetto et al., 2005). Beck et al. (1974) concluded that the short form is as effective as the full-scale measure. However, Furlanetto et al. (2005) recommended an alteration to the cut-off score in order to achieve high specificity. Although a paper applying this measure to suicide bereavement could not be found, Leahy (1993) reported that the measure was able to distinguish between women who were experiencing differing forms of bereavement (i.e. spouse, parent and child death).

The Composite International Diagnostic Interview (CIDI; Robins et a., 1988) is a comprehensive measure looking at current behaviour and history of depression, including family history. The CIDI is available in both hardcopy and computer-based forms. Despite often having acceptable internal consistency ($\alpha > 0.7$) and specificity (72.2%), Gelaye et al. (2013) reported that the CIDI had low sensitivity (51%) in participants with major depressive disorder. The Depression subscale of the CIDI was used by Pitman et a. (2016). There was no significant difference in depression scores between those who had and had not been bereaved by suicide.

The HADS is summarised in section 3.1. Similar to the anxiety subscale, the depression subscale was reported by Bjelland et al. (2002) to score around 80% for both specificity and sensitivity. Based on participants who had relaitives (often children) who were in intensive care units, Anderson et al. (2008) reported that there was no significant reduction in depression at follow-up.

The Patient Health Questionnaire (PHQ-9, Lowe et al., 2002) is an 9-item measure commonly used for depression; although designed for adults, an adolescent version is available. Kroenke et al. (2001) reported the PHQ-9 as having 88% accuracy for both sensitivity and specificity relating to a sample with major depression. Hamdan et al. (2019) reported that PHQ-9 was able to distinguish between controls and the bereaved, though no significant differences were identified between forms of bereavement (suicide, accident, other). No studies were identified where this measure was applied to a bereavement service longitudinally.

Summary

No studies were identified where the three depression measures were applied longitudinally to a bereavement service. Nevertheless, the HADS-depression, PHQ-9 scale and the BDI-SF demonstrated

excellent sensitivity; recommendations for alterations to the BDI-SF cut-off scores were advised for improved specificity however (Fulanetto et al., 2005). Conversely, the CIDI showed moderate specificity and poor sensitivity; no recommendations for this measure were identified.

4.3 Distress

The Clinical Outcomes in Routine Evaluation – Outcome Measure (CORE-OM is a self-report measure commonly used in clinical practice to appraise and track patient distress. The CORE assessment is available for young people (YP-CORE), parent reports as well as adult self-reports (18 years and over). Two versions of each measure are available to mitigate possible bias resulting from participants' remembering their previous answers. Although the full measure comprises 34 items, there is a brief version (10-items) available for both age groups which also has high reliability and validity. Evans et al. (2002) reported that the CORE-OM has good validity compared to several other measures, high sensitivity to change and is applicable to both clinical and general populations. Although the full text of Spink et al. (2014) was unavailable at the time of the review, the abstract indicated that the CORE-OM was able to detect significant changes in in all subscales following a counselling bereavement intervention compared to baseline.

The Perceived Global Distress scale (PGD; GGG-group, 2009) is a visual analogue scale. As summarised by Ivarsson et al. (2011), validity assessments for this tool are limited but promising. Evidence suggests that the PGD can distinguish between clinical and general populations; however, more robust analysis is required. No studies using this measure explored bereavement services or interventions.

<u>Distress summary</u>

Based on the information available, at present the CORE-OM (and corresponding versions for other populations) appears to be the most reliable and prevalent measure for assessing distress. Although the PGD may have potential, the CORE-OM has been applied to bereavement services in the past with positive results.

4.4 Grief

The Grief-Related Avoidance Questionnaire (GRAQ; Shear et al., 2007) measures avoidance of reminders of loss. Both Shear et al. (2007) and Baker et al. (2016) illustrated that this measure is sensitive to change in participants with complicated grief. No longitudinal studies were found to use the GRAQ for suicide bereavement.

4.5 Stigma

Stigma of Suicide and Suicide Survivor (STOSASS; Scocco et al., 2012) assesses the level of perceived stigma felt by an individual following suicide bereavement. The STOSASS has demonstrated high reliability and validity. Although no studies were identified in which the STOSASS was administered to those bereaved by suicide, Scocco et al. (2019) the STOSASS scores were significantly different between those bereaved by suicide compared to controls.

4.6 Suicidal ideation and/ behaviour

The Adults Psychiatric Morbidity Survey (APMS), designed by the UK Office of National Statistics for census, is routinely administered to a random sample of British households every seven years. No studies were identified where this measure was used to assess a bereavement intervention.

The Beck Scale of Suicidal Ideation (BSS; Beck et al., 1988) is a comprehensive and focused measure of suicidal ideation, which can be used in conjunction with the BDI and BHS to give a robust overview of an individual's psychological state or mood. There are no current published data from longitudinal

studies where this measure has been used to evaluate a suicide bereavement service. However, Wagner et al. (2020) are currently in the process of conducting such a study.

Columbia-Suicide Severity Rating Scale (C-SSSRS) is an evidence-supported measure used internationally (available in 103 languages) in educational, clinical and judicial settings as well as in research studies. The measure has a qualitative component and explores suicidal ideation, behaviour and attempts over an individual's lifetime and during the last three months. An inpatient study conducted by Maden et al. (2016) reported the sensitivity and specificity of the measure as 69% and 65%, respectively. Zisook et al. (2018) used this assessment to monitor grief prevention and then 20 weeks postvention; however, the results of this study have not been published.

The psychometric properties of the Texas Revised Inventory of Grief (TRIG; Faschingbauer et al., 1987) are unknown. Bailey et al. (1999) included the measure in a cross-sectional study where no significant difference in TRIG scores between the suicide bereavement group and other groups of bereavement were found.

4.7 Wellbeing

Warwick-Edinburgh Mental Wellbeing Scale (WEMWBS; NHS Health Scotland, 2006) is designed for assessing the individual's mental wellbeing and is applicable to both clinical and non-clinical settings. Although no empirical data were accessible at the time of this report, Trousselard et al. (2016) reported that the scale is sensitive to change and reliable. Furthermore, the WEMWBS is available in a variety of languages, has been described as a valid measure in a number of cultures (Stewart-Brown et al., 2011), and has proven to be an acceptable measure for participants as young as 13 years old (Clarke et al. 2011). Braiden et al. (2011) reported significant improvements in the wellbeing of bereaved parents (including those bereaved by suicide) at follow-up compared to baseline.

4.8 Summary of named measures

The majority of the measures included in this section have been used to assess bereaved populations. However, approximately half of the studies in which the measured have been used have been of cross-sectional design and therefore unable to provide evidence about sensitivity to change. This was particularly relevant to measures of depression (which on the whole were demonstrated high sensitivity and specificity). The PGD was the only measure in this review which used a visual approach to self-reporting a state (in this case, distress). The CORE-OM series of questionnaires have been validated and made available to a range of populations. Of the four suicidal ideation and/or behaviour measures, the BSI appeared to be the most widely used and most appropriate for short interventions, while the AMPS was found to be effective for capturing national trends of suicidal ideation and/or behaviour. All psychological domains discussed here appear to be acceptable and appropriate areas to assess within a bereavement service.

References

Achenbach, T. M. (1991). Manual for the Youth Self-Report and 1991 profile. Burlington, VT: University of Vermont, Department of Psychiatry. Beck, A. T., Rush, A. J., Shaw, B. F., & Emery, G. (1979). *Cognitive Therapy Of Depression*. New York: The Guilford Press

Achenbach, T., & Edelbrock, C. (1981). Behavioral Problems and Competencies Reported by Parents of Normal and Disturbed Children Aged Four Through Sixteen. *Monographs of the Society for Research in Child Development*, 46(1), 1-82. doi:10.2307/1165983

American Psychology Association (2020a). Beck Depression Inventory (BDI): Construct: Depressive Symptoms. URL https://www.apa.org/pi/about/publications/caregivers/practice-settings/assessment/tools/beck-depression

American Psychology Association (2020). Inventory of Complicated Grief (ICG): Construct: Complicated grief symptoms. URL: https://www.apa.org/pi/about/publications/caregivers/practice-settings/assessment/tools/complicated-grief

Anderson, W. G., Arnold, R. M., Angus, D. C., & Bryce, C. L. (2008). Posttraumatic stress and complicated grief in family members of patients in the intensive care unit. *Journal of general internal medicine*, *23*(11), 1871-1876.

Andriessen, K., Krysinska, K., Hill, N.T.M. et al. Effectiveness of interventions for people bereaved through suicide: a systematic review of controlled studies of grief, psychosocial and suicide-related outcomes. BMC Psychiatry 19, 49 (2019). https://doi.org/10.1186/s12888-019-2020-z

Bailley, S. E., Kral, M. J., & Dunham, K. (1999). Survivors of suicide do grieve differently: Empirical support for a common sense proposition. *Suicide and Life-Threatening Behavior*, 29(3), 256. Retrieved from http://ezproxy.lib.gla.ac.uk/login?url=https://search-proquest-com.ezproxy.lib.gla.ac.uk/docview/1297940359?accountid=14540

Baker, A. W., Keshaviah, A., Horenstein, A., Goetter, E. M., Mauro, C., Reynolds III, C. F., Zisook, S., Katherine Shear, M. and Simon, N. M. (2016). The role of avoidance in complicated grief: a detailed examination of the grief-related avoidance questionnaire (GRAQ) in a large sample of individuals with complicated grief. *Journal of Loss and Trauma*, *21*(6), 533-547.

Barlow, C. A., Schiff, J. W., Chugh, U., Rawlinson, D., Hides, E. and Leith, J.(2010) An Evaluation of a Suicide Bereavement Peer Support Program, *Death Studies*, 34:10, 915-930, DOI: 10.1080/07481181003761435

Barrett, T. W., & Scott, T. B. (1989). Development of the grief experience questionnaire. *Suicide and Life-Threatening Behavior*, *19*(2), 201-215.

Beck, A. T., Weissman, A., Lester, D., & Trexler, L. (1974). The measurement of pessimism: The hopelessness scale. Journal of Consulting and Clinical Psychology, 42, 861-865.

Beck A. T, Steer RA, Ranieri W. F. (1988). Scale for suicide ideation: psychometric properties of a self-report version. *J Clin Psychol*. 44(4):499–505.

Beck, A. T., & Beck, R. W. (1972). Screening depressed patients in family practice: A rapid technic. *Postgraduate medicine*, 52(6), 81-85.

Beck, A. T., Rial, W. Y., & Rickels, K. (1974). Short form of Depression Inventory: Cross-validation. *Psychological Reports, 34*(3, Pt 2), 1184–1186.

Biederman, J., Faraone, S. V., & Chen, W. J. (1993). Social Adjustment Inventory For Children And Adolescents: Concurrent Validity In ADHD hildren. *Journal Of The American Academy Of Child & Adolescent Psychiatry,* 32(5), 1059-1064.

Bjelland, I., Dahl, A. A., Haug, T. T., & Neckelmann, D. (2002). The validity of the Hospital Anxiety and Depression Scale: an updated literature review. *Journal of psychosomatic research,* 52(2), 69-77.

Boelen, P. A and Smid, G. E (2017) The Traumatic Grief Inventory Self-Report Version (TGI-SR): Introduction and Preliminary Psychometric Evaluation, *Journal of Loss and Trauma*, 22:3, 196-212, DOI: 10.1080/15325024.2017.1284488

Boelen, P. A., Den Bout, J. V., De Keijser, J. O. S., & Hoijtink, H. (2003). Reliability and validity of the Dutch version of the Inventory of Traumatic Grief (ITG). *Death studies*, *27*(3), 227-247.

Boelen, P. A., and Lensvelt-Mulders, G. J. (2005). Psychometric properties of the grief cognitions questionnaire (GCQ). *Journal of Psychopathology and Behavioral Assessment*, 27(4), 291-303. Https://Doi.Org/10.1007/S10862-005-2409-5

Boelen, P. A., Van den Bout, J., & Van den Hout, M. A. (2003a). The role of cognitive variables in psychological functioning after the death of a first degree relative. *Behaviour Research and Therapy,* 41, 1123–1136.

Bordin, I. A., Rocha, M. M., Paula, C. S., Teixeira, M. C. T., Achenbach, T. M., Rescorla, L. A., & Silvares, E. F. (2013). Child Behavior Checklist (CBCL), Youth Self-Report (YSR) and Teacher's Report Form (TRF): an overview of the development of the original and Brazilian versions. *Cadernos de Saúde Pública*, 29, 13-28.

Braiden, H. J., McDaniel, B., Duffy, J., & McCann, M. (2011). A pilot study of the Incredible Years BASIC parenting programme with bereaved families. *Journal of Children's Services*.

Bui, E., Mauro, C., Robinaugh, D.J., Skritskaya, N.A., Wang, Y., Gribbin, C., Ghesquiere, A., Horenstein, A., Duan, N., Reynolds, C., Zisook, S., Simon, N.M. and Shear, M.K. (2015), The Structured Clinical Interview For Complicated Grief: Reliability, Validity, And Exploratory Factor Analysis. *Depress Anxiety*, 32: 485-492. doi:10.1002/da.22385

Carver, C. S., Scheier, M. F., & Weintraub, J. K. (1989). Assessing coping strategies: A theoretically based approach. *Journal of Personality and Social Psychology*, 56, 267–283.

Clarke, A., Friede, T., Putz, R., Ashdown, J., Martin, S., Blake, A., Adi, Y., Parkinson, J., Flynn, P., Platt, S. and Stewart-Brown, S., (2011). Warwick-Edinburgh Mental Well-being Scale (WEMWBS): Validated for teenage school students in England and Scotland. A mixed methods assessment. BMC Public Health 11, 487 . https://doi.org/10.1186/1471-2458-11-487

Conners, C. K., Wells, K. C., Parker, J. D., Sitarenios, G., Diamond, J. M., & Powell, J. W. (1997). A new self-report scale for assessment of adolescent psychopathology: factor structure, reliability, validity, and diagnostic sensitivity. *Journal of Abnormal Child Psychology*, 25(6), 487-497.

Constantino, R. E., Sekula, L. K., & Rubinstein, E. N. (2001). Group intervention for widowed survivors of suicide. *Suicide and Life-Threatening Behavior*, *31*(4), 428-441.

Constantino, R. E., & Bricker, P. L. (1996). Nursing postvention for spousal survivors of suicide. *Issues in Mental Health Nursing*, *17*(2), 131-152.

de Groot, M., de Keijser, J., Neeleman, J., Kerkhof, A., Nolen, W., & Burger, H. (2007). Cognitive behaviour therapy to prevent complicated grief among relatives and spouses bereaved by suicide: cluster randomised controlled trial. *Bmj*, *334*(7601), 994.

de Groot, M., Neeleman, J., van der Meer, K., & Burger, H. (2010). The effectiveness of family-based cognitive-behavior grief therapy to prevent complicated grief in relatives of suicide victims: the mediating role of suicide ideation. *Suicide and Life-Threatening Behavior*, *40*(5), 425-437.

Derogatis, L. R., & Spencer, P. M. (1993). Brief symptom inventory: BSI. Upper Saddle River, NJ: Pearson. Horowitz M, Wilner N, Alvarez W. Impact Of Event Scale: A Measure Of Subjective

Ebesutani, C., Bernstein, A., Martinez, J. I., Chorpita, B. F., & Weisz, J. R. (2011). The youth self report: Applicability and validity across younger and older youths. *Journal of Clinical Child & Adolescent Psychology,* 40(2), 338-346. Stress (1979). Psychosom Med,;413:209–218.

Evans, C., Connell, J., Barkham, M., Margison, F., Mcgrath, G., Mellor-Clark, J., & Audin, K. (2002). Towards a standardised brief outcome measure: Psychometric properties and utility of the CORE–OM. *The British Journal of Psychiatry*, 180(1), 51-60.

Faschingbauer, T. (1981). *The Texas Inventory of Grief--Revised*. Houston, TX: Honeycomb Publishing.

Fatehizade, M., & Ahmadi, S. A. (2013) Psychometric Properties of the Hogan Grief Reaction Checklist in Iranian Bereaved Families. *Knowledge and Research in Applied Psychology*. 14: 67-79.

Fisher, P. W. , Shaffer, D. , Piacentini, J. C. , Lapkin, J. , Kafantaris, V. , Leonard, H. & Herzog, D. B. (1993). Sensitivity of the diagnostic interview schedule for children, 2nd edition (disc-2.1) for specific diagnoses of children and adolescents. *Journal of The American Academy of Child & Adolescent Psychiatry,* 32(3), 666–673.

Forkmann, T., Vehren, T., Boecker, M., Norra, C., Wirtz, M., & Gauggel, S. (2009). Sensitivity and specificity of the Beck Depression Inventory in cardiologic inpatients: how useful is the conventional cut-off score?. Journal of psychosomatic research, 67(4), 347-352.

Furlanetto, L. M., Mendlowicz, M. V., & Bueno, J. R. (2005). The validity of the Beck Depression Inventory-Short Form as a screening and diagnostic instrument for moderate and severe depression in medical inpatients*. Journal of affective disorders*, 86(1), 87-91.

Gameroff, M. J., Wickramaratne, P., & Weissman, M. M. (2012). Testing the Short and Screener versions of the Social Adjustment Scale–Self-report (SAS-SR). *International Journal of Methods in Psychiatric Research*, 21(1), 52-65.

Geibel, S., Habtamu, K., Mekonnen, G., Jani, N., Kay, L., Shibru, J., ... & Kalibala, S. (2016). Reliability and Validity of an Interviewer-Administered Adaptation of the Youth Self-Report for Mental Health Screening of Vulnerable Young People in Ethiopia. *PloS one*, 11(2), e0147267-e0147267.

GGG-Group of the Quality Star Network (2009). Users Instruments and manual. Present English version published by Karlstad University in cooperation with the Quality Star Network. Available through authors.

Giel, R., & Nienhuis, F. J. (1996). SCAN-2.1: Schedules for clinical assessment in neuropsychiatry. *Geneve/Groningen: WHO*.

Granö, N., Oksanen, J., Kallionpää S. & Roine M. (2017) Specificity and sensitivity of the Beck Hopelessness Scale for suicidal ideation among adolescents entering early intervention service, Nordic *Journal of Psychiatry*, 71:1, 72-76, DOI: 10.1080/08039488.2016.1227370

Harter, S. (1988). *Self-perception profile for adolescents*. University of Denver.

Hazell, P., & Lewin, T. (1993). An evaluation of postvention following adolescent suicide. *Suicide and Life-Threatening Behavior*, 23(2), 101. Retrieved from http://ezproxy.lib.gla.ac.uk/login?url= https://search-proquest-com.ezproxy.lib.gla.ac.uk/docview/1297930967?accountid=14540

Hogan, N. S., Greenfield, D. B. And Schmidt, A. (2001) Development And Validation of the Hogan Grief Reaction Checklist, *Death Studies*, 25:1, 1-32, DOI: 10.1080/07481180125831

Horowitz, M., Wilner, N., & Alvarez, W. (1979). Impact of Event Scale: A measure of subjective stress. *Psychosomatic medicine*, *41*(3), 209-218.

Imam, S. S. (2007, May). Sherer et al. general self-efficacy scale: Dimensionality, internal consistency, and temporal stability. In *Proceedings of the redesigning pedagogy: Culture, knowledge and understanding conference, Singapore* (pp. 1-13).

Ivarsson, B., Malm, U., & Norlander, T. (2011). The self-assessment perceived global distress scale-reliability and construct validity—Perceived global distress scale. *Psychology*, 2(04), 283.

Jassi, A., Lenhard, F., Krebs, G., Gumpert, M., Jolstedt, M., Andrén, P., Nord, M., Aspvall, K., Wahlund, T., Volz, C. and Mataix-Cols, D., (2020). The Work and Social Adjustment Scale, Youth and Parent Versions: Psychometric Evaluation of a Brief Measure of Functional Impairment in Young People. *Child Psychiatry Hum Dev* (2020). https://doi.org/10.1007/s10578-020-00956-z

Jones, J. E., Siddarth, P., Gurbani, S., Shields, W. D., & Caplan, R. (2013). Screening for suicidal ideation in children with epilepsy. *Epilepsy & Behavior*, *29*(3), 521-526.

Leahy, J. M. (1993). A Comparison of Depression in Women Bereaved of a Spouse, Child, or a Parent. OMEGA - *Journal of Death and Dying*, 26(3), 207–17. https://doi.org/10. 2190/YLG9-P4R7-W2VW-KAFR

Lehman, D. R., Wortman, C. B., & Williams, A. F. (1987). Long-Term Effects of Losing A Spouse Or Child In A Motor Vehicle Crash. *Journal of Personality And Social Psychology,* 52, 218-231.

Löwe, B. L. S. R., Spitzer, R. L., Zipfel, S., & Herzog, W. (2002). Gesundheitsfragebogen für patienten (PHQ-D). Komplettversion und Kurzform. Testmappe mit Manual, Fragebögen, chablonen, 2, 5-7.

John, K. , Gammon, D. G. , Prusoff, B. A. & Warner, V. (1987). The Social Adjustment Inventory For Children And Adolescents (SAICA). *Journal Of The American Academy Of Child & Adolescent Psychiatry,* 26(6), 898-911.

Kjærgaard, M., Arfwedson Wang, C. E., Waterloo, K. & Jorde, R. (2013). A study of the psychometric properties of the Beck Depression Inventory-II, the Montgomery and Åsberg Depression Rating Scale, and the Hospital Anxiety and Depression Scale in a sample from a healthy population. *Scandinavian Journal of Psychology* 55, 83–89.

Kliem, S., Lohmann, A., Mößle, T. et al. Psychometric properties and measurement invariance of the Beck hopelessness scale (BHS): results from a German representative population sample. BMC Psychiatry 18, 110 (2018). https://doi.org/10.1186/s12888-018-1646-6

Kramer, J., Boon, B., Schotanus-Dijkstra, M., van Ballegooijen, W., Kerkhof, A., & Van Der Poel, A. (2015). The mental health of visitors of web-based support forums for bereaved by suicide. *Crisis.*

Kroenke K, Spitzer RL, Williams JB; The PHQ-9: validity of a brief depression severity measure*. J Gen Intern Med*. 2001 Sep 16(9):606-13.

MacKenzie R. Peltier, Seandra J. Cosgrove, Kelechi Ohayagha, Kathleen A. Crapanzano & Glenn N. Jones (2017) Do they see dead people? Cultural factors and sensitivity in screening for schizophrenia spectrum disorders, *Ethnicity & Health,* 22:2, 119-129, DOI: 10.1080/13557858.2016.1196650

Madan A, Frueh BC, Allen JG, et al. Psychometric Reevaluation of the Columbia-Suicide Severity Rating Scale: Findings From a Prospective, Inpatient Cohort of Severely Mentally Ill Adults. T*he Journal of Clinical Psychiatry.* 2016 Jul;77(7):e867-73. DOI: 10.4088/jcp.15m10069.

Masip, A. F., Amador-Campos, J. A., Gómez-Benito, J., & del Barrio Gándara, V. (2010). Psychometric properties of the Children's Depression Inventory in community and clinical sample. *The Spanish journal of psychology*, 13(2), 990-999.

Mundt, J., Marks, I., Shear, M., & Greist, J. (2002). The Work and Social Adjustment Scale: A Simple Measure Of Impairment In Functioning. *British Journal of Psychiatry*, 180(5), 461-464. Doi:10.1192/Bjp.180.5.461

Neufeld, E., O'Rourke, N. and Donnelly, M. (2010) Enhanced measurement sensitivity of hopeless ideation among older adults at risk of self-harm: Reliability and validity of Likert-type responses to the Beck Hopelessness Scale, *Aging & Mental Health*, 14:6, 752-756, DOI: 10.1080/13607860903421052

Nøvik, T. S. (1999). Validity of the Child Behaviour Checklist in a Norwegian sample. *European child and adolescent psychiatry*, *8*(4), 247-254.

Olliac, Bertrand et al. "Validation of the French version of the Child Post-Traumatic Stress Reaction Index: psychometric properties in French speaking school-aged children." *PloS one* vol. 9,12 e112603. 2 Dec. 2014, doi:10.1371/journal.pone.0112603

Paykel, E., Myers, J. K., Lindenthal, J. J., & Tanner, J. (1974). Suicidal feelings in the general population: A prevalence study*. British Journal of Psychiatry*, 124, 460–469.

Petkus, A.J., Gum, A.M., Small, B., Malcarne, V.L., Stein, M.B. and Wetherell, J.L. (2010), Evaluation of the factor structure and psychometric properties of the brief symptom inventory—18 with homebound older adults*. Int. J. Geriat. Psychiatry*, 25: 578-587. doi:10.1002/gps.2377

Pfeffer, C. R., Jiang, H., Kakuma, T., Hwang, J., & Metsch, M. (2002). Group intervention for children bereaved by the suicide of a relative. Journal of the American Academy of Child & Adolescent *Psychiatry,* 41(5), 505-513.

Pitman A. L., Osborn DPJ, Rantell K, et al (2016) Bereavement by suicide as a risk factor for suicide attempt: a cross-sectional national UK-wide study of 3432 young bereaved adults *BMJ* Open (6):. doi: 10.1136/bmjopen-2015-009948

Posner, K., Brent, D., Lucas, C., Gould, M., Stanley, B., Brown, G., Fisher, P., Zelazny, J., Burke, A., Oquendo, M.J.N.Y. and Fisher, J. (2008). Columbia-suicide severity rating scale (C-SSRS). New York, NY: Columbia University Medical Center.

Prigerson, H. G., Kasl, S.V., & Jacobs, S. C. (1998).Traumatic Grief Evaluation Of Response To Loss (TRGR2L). Unpublished Manuscript

Prigerson, H. G., Maciejewski, P. K., Reynolds, C. F. III, Bierhals, A. J., Newsom, J. T., Fasiczka, A., Frank, E., Doman, J., & Miller, M. (1995). The Inventory Of Complicated Grief: A Scale To Measure Maladaptive Symptoms Of Loss. *Psychiatry Research*, 59(1-2), 65-79.

Pynoos RS, Frederick C, Nader K, et al. Life Threat and Posttraumatic Stress in School-age Children. *Arch Gen Psychiatry*. 1987;44(12):1057–1063. doi:10.1001/archpsyc.1987. 01800240031005

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

Reynolds, C.R., and Richmond, B.O. (1985). Revised Children's Manifest Anxiety Scale. RCMAS Manual. Los Angeles: *Western Psychological Services.*

Rijnders, C., van den Berg, J., Hodiamont, P. et al. Psychometric properties of the schedules for clinical assessment in neuropsychiatry (SCAN-2.1). *Soc Psychiatry Psychiatry* Epidemiol 35, 348–352 (2000). https://doi.org/10.1007/s001270050249

Robins LN, Wing J, Wittchen HU, et al. The Composite International Diagnostic Interview: An Epidemiologic Instrument Suitable for Use in Conjunction With Different Diagnostic Systems and in Different Cultures. *Arch Gen Psychiatry.* 1988;45(12):1069–1077. doi:10.1001/archpsyc.1988.01800360017003

Sack, W. H., Seeley, J. R., Him, C., & Clarke, G. N. (1998). Psychometric properties of the Impact of Events Scale in traumatized Cambodian refugee youth. Personality and Individual Differences, 25(1), 57-67.

Sanders, C. M., Mauger, P. A., Strong, P. N., A Manual For The Grief Experience Inventory, Consulting Psychologist Press, *Palo Alto, California*, 1985.

Sandler, I., Tein, J. Y., Wolchik, S., & Ayers, T. S. (2016). The effects of the family bereavement program to reduce suicide ideation and/or attempts of parentally bereaved children six and fifteen years later. *Suicide and Life-Threatening Behavior*, 46, S32-S38.

Sandor, M. K. and Walker, L. O. and Sands, D. (1994) Competence-Building in Adolescents, Part II: Community Intervention for Survivors of Peer Suicide, Issues in Comprehensive Pediatric Nursing, 17:4, 197-209, DOI: 10.3109/01460869409078305

Schreurs, P. J. G., Willige, G. V. D., Brosschot, J. F., Telegen, B., & Graus, G. M. H. (1993). Handleiding Utrechtse Coping Lijst UCL (herziene versie). Lisse: Zwets & Zeitlinger.

Schützwohl, M., Kallert, T., & Jurjanz, L. (2007). Dimensionale Diagnostik mit der deutschsprachigen Version der Schedules for Clinical Assessment in Neuropsychiatry 2.1. Der Nervenarzt, 78(3), 304-313.

Scocco P, Castriotta C, Toffol E, Preti A. Stigma of Suicide Attempt (STOSA) scale and Stigma of Suicide and Suicide Survivor (STOSASS) scale: two new assessment tools. *Psychiatry Res*. 2012; 200(2–3):872–8.

Shaffer, D., Fisher, P., Lucas, C. P., Dulcan, M. K., & Schwab-Stone, M. E. (2000). NIMH Diagnostic Interview Schedule for Children Version IV (NIMH DISC-IV): description, differences from previous versions, and reliability of some common diagnoses. Journal of the American *Academy of Child & Adolescent Psychiatry*, 39(1), 28-38.

Shaffer, D., Fisher, P., Dulcan, M. K., Davies, M., Piacentini, J., Schwab-Stone, M. E., ... & Canino, G. (1996). The NIMH Diagnostic Interview Schedule for Children Version 2.3 (DISC-2.3): Description, acceptability, prevalence rates, and performance in the MECA study. *Journal of the American Academy of Child & Adolescent Psychiatry*, 35(7), 865-877.

Shear K, Shair H. (2005) Attachment, Loss, And Complicated Grief. *Dev Psychobiol*. 47(3), 253–267.

Shear, K., Monk, T., Houck, P. et al. An attachment-based model of complicated grief including the role of avoidance. Eur Arch Psychiatry Clin Neurosc 257, 453–461 (2007). https://doi.org/10.1007/s00406-007-0745-z

Shear K, Et Al. An Attachment-Based Model Of Complicated Grief Including The Role Of Avoidance. *European Archives Of Psychiatry And Clinical Neuroscience*. 2007;257(8):453–461.

Sheehan, D.V., Lecrubier, Y., Sheehan, K.H., Amorim, P., Janavs, J., Weiller, E., Hergueta, T., Baker, R. and Dunbar, G.C (1998). The Mini-International Neuropsychiatric Interview (MINI): the development and validation of a structured diagnostic psychiatric interview for DSM-IV and ICD-10. *The Journal of clinical psychiatry*.

Sherer, M., Maddux, J. E., Mercandante, B., Prentice-Dunn, S., Jacobs, B., & Rogers, R. W. (1982). The self-efficacy scale: Construction and validation. Psychological Reports, 5 I. 663-67 1.

Spink M, Magrill A, Burgess K, Rogers J, Agius M. Petals: An Assessment of the Outcomes of a Service for Bereavement during Childbirth. Psychiatria Danubina. 2014 Nov;26 Suppl 1:211-221.

Spitzer RL, Kroenke K, Williams JBW, Lowe B. A brief measure for assessing generalized anxiety disorder. *Arch Inern Med*. 2006;166:1092-1097.

Stewart-Brown S, Platt S, Tennant A, et al. The Warwick-Edinburgh Mental Well-being Scale (WEMWBS): a valid and reliable tool for measuring mental well-being in diverse populations and projects *J Epidemiol Community Health* 2011;65:A38-A39.

Turner, H., Bryant-Waugh, R., Peveler, R. and Bucks, R.S. (2012), A Psychometric Evaluation of an English Version of the Utrecht Coping List. *Eur. Eat. Disorders Rev*., 20: 339-342. DOI:10.1002/erv.2173

UK Government National Statistics (2016) Adult Psychiatric morbidity Survey Mental Health and Wellbeing, England, 2014. Ate retrieved 6th April 2020. URL: https://www.gov.uk /government/statistics/adult-psychiatric-morbidity-survey-mental-health-and-wellbeing-england-2014

Wagner, B., Hofmann, L., & Maaß, U. (2020). Online-group intervention after suicide bereavement through the use of webinars: study protocol for a randomized controlled trial. *Trials*, *21*(1), 1-13.

Walker, L. O., Sandor, M. K., & Sands, D. (1990). Competence building in adolescence: Self-help workbooks as a primary prevention vehicle. (Final Report). Nursing Research Emphasis (NRE) Grant (#I R21 NR013 16-01). Washington DC: National Center for Nursing Research, National Institutes for Health.

Weissman, M. M. (1999). Social Adjustment Scale – Self-Report Technical Manual. Toronto, OT: *Multi-Health Systems.*

Weissman, M. M., & Bothwell, S. (1976). Assessment of social adjustment by patient self-report. *Archives of general psychiatry*, *33*(9), 1111-1115.

Wittouck C, Van Autreve S, Portzky G, van Heeringen K. A CBT-based psychoeducational intervention for suicide survivors: a cluster randomized controlled study. *Crisis.* 2014;35:193–201 https://doi.org/10.1027/0227-5910/a000252.

Wiznitzer, M., Verhulst, F. C., Van den Brink, W., Koeter, M., Van der Ende, J., Giel, R., & Koot, H. M. (1992). Detecting psychopathology in young adults: the Young Adult Self Report, the General Health Questionnaire and the Symptom Checklist as screening instruments. *Acta Psychiatrica Scandinavica*, *86*(1), 32-37.

Wu, L. M., Liu, Y., Chen, H. M., Tseng, H. C., & Lin, W. T. (2016). Psychometric properties of the RCMAS-2 in pediatric cancer patients. *European Journal of Oncology Nursing*, 20, 36-41.

Van Vliet, I. M., & De Beurs, E. (2007). The MINI-International Neuropsychiatric Interview. A brief structured diagnostic psychiatric interview for DSM-IV en ICD-10 psychiatric disorders. Tijdschrift voor psychiatrie, 49(6), 393.

Vilagut, G., Forero, C. G., Barbaglia, G., & Alonso, J. (2016). Screening for Depression in the General Population with the Center for Epidemiologic Studies Depression (CES-D): A Systematic Review with Meta-Analysis. *PloS one*, 11(5), e0155431. https://doi.org/10.1371/journal. pone.0155431

Zahra, D., Qureshi, A., Henley, W., Taylor, R., Quinn, C., Pooler, J., ... & Byng, R. (2014). The work and social adjustment scale: reliability, sensitivity and value. *International Journal of Psychiatry in Clinical Practice*, *18*(2), 131-138.

Zigmond A. S, Snaith RP. The hospital anxiety and depression scale. Acta Psychiatr Scand. 1983; 67:361–370

Zisook, S., Shear, M. K., Reynolds, C. F., Simon, N. M., Mauro, C., Skritskaya, N. A., ... & Wetherell, J. L. (2018). Treatment of Complicated Grief in Survivors of Suicide Loss: A HEAL Report. *The Journal of clinical psychiatry*, *79*(2).

Appendix 1. Potential measures which were under consideration for the pilot service

- Distress
    - CORE-OM scale
    - Global distress
    - Commonly experienced problems of symptoms
    - Social/ life functioning ad risk to self and others
- Depression
    - PHQ-9 Depression
- Anxiety
    - GAD-7
- Wellbeing
    - WEMWBS
- Suicidal ideation and/ or behaviour
    - Reduction in suicide death, self-harm, attempts and ideation
        - ISD statistics
        - SFIU/ COPFS statistics
        - CSSRS
        - Beck
- Increased ability to work/ improved social functioning
    - Work and social adjustment scale (WSAS)

Appendix 2. Action 4 search strategy (under development)

Search engine	**EBSCO**	**Web of knowledge**
Databases	CINHAL MEDLINE PsychInfo PsychArticles Psychology and Behavioural Sciences	Web of Science Core Collection BIOSIS Citation Index BIOSIS Previews CABI: CAB Abstracts® Current Contents Connect Data Citation Index Derwent Innovations Index KCI-Korean Journal Database MEDLINE® Russian Science Citation Index SciELO Citation Index
Search terms	1. bereavement OR bereaved OR grief OR loss OR mourning OR death [IN ABSTRACT] 2. intervention OR program OR strategy OR postvention OR support [IN ABSTRACT] 3. suicide OR suicid* [IN ABSTRACT] Search AND #1, #2, #3	
Limitations	• English • Last 10 years • Review only	• English • Last 10 years • Review OR unspecified
Returns	5	24
Total after duplicates removed	29	
Total number papers included	8	

Table 1 Measures identified from scoping search

Topic	Measure (Author, year)	Subscales/ Domains	No. items	Demo-graphic	Collection strategy	Crohn bach alpha (α)/ Omega	Follow-up duration	Time to complete Cost Appendix #
Adaptive functioning	Social Adjustment Scale (SAS, Weissman, 1979)[1]	• Work (either as a paid worker, unpaid homemaker, or student, • Social and leisure activities • Relationships with extended family, • Role as a marital partner • Parental role • Role within the family unit, including perceptions about	54	≥17 years	Interview	*Not reported*	Constantino et al. (2001): 6 weeks, 6 months and 12 months after baseline Constantino and Bricker (1996) Baseline; 8 weeks	*No information available*

[1] Briefer versions available; 24-item SAS-SR: Short (24 items); 14-item SAS-SR: Screener (14-items) both with good consistency

		economic functioning.						
	The Social Adjustment Inventory for Children and Adolescents (SAICA) (John et al., 1987)	• School • Spare time activities • Peer relations • Home functioning	77	6-18 years	Semi-structured interview	*Not reported*	Pfeffer et al. (2002) Baseline; 12 weeks	*No information available*
	Work and Social Adjustment Scale (WSAS, Mundt et al., 2002)	None	5	*Unknown*	Self-report		Zisook et al. (2018) Baseline; 20 weeks	>2 minutes £ Unknown Appendix 3
Anxiety	Revised Children's Manifest Anxiety Scale (RCMAS; Reynolds and Richmond, 1985)	• Total anxiety • Lie • Corrected Lie • Physiological anxiety • Worry/ oversensitivity • Social concerns/ concentration	37	6-19 years	Self-report	*Not reported*	Pfeffer et al. (2002) Baseline; 12 weeks	10-15 minutes £ Free Appendix 4

	Schedules for Clinical Assessment in Neuropsychiatry (SCAN 2.1; Dutch version; Giel & Nienhuis, 1996)	*Unknown*	*Unknown*	≥18 years	Clinician-lead interview	*Not reported*	De Groot et al. (2010) Baseline; 13 months	Mins: unknown £750 Appendix unavailable
Behaviour	Child Behaviour Checklist (CBCL Achenbach,1991)	• Aggression and Oppositionality, • Anxiety, Attention Problems and Hyperactivity, • Depression and Mood • Personality Traits • Psychotic and Atypical Behaviour • Risk Taking and Impulsive Behaviour	*Unknown*	6-18 years	Caregiver report	~0.87	Sandler et al. (2016) Baseline; Post-test; 11 months; 6 years; 15 years	Mins: unknown £ Unknown Appendix 5

	• Social Interaction • Somatic Complaints • Substance Use						
Youth Self-Report (YSR, Achenbach, 1991)	• Aggression and Oppositionality, • Anxiety, Attention Problems and Hyperactivity, • Depression and Mood • Personality Traits • Psychotic and Atypical Behaviour • Risk Taking and Impulsive Behaviour • Social Interaction • Somatic Complaints	112	11-17 years	Self-report	*Not reported*	Hazell and Lewin (1993)	~10 minutes $295 per license Appendix unavailable

		• Substance Use						
Coping	Utrecht Coping List (UCL; Schreurs et al. 1993)	• Active tackling • Seeking social support • Palliative reacting • Avoiding • Passive reacting • Reassuring thoughts • Expression of emotions	44	Not available	Self-report	α: 0.52-0.84	Wittouck et al., (2014) Baseline; 8 months	*No information available*
Depression	Beck Depression Inventory[2] (BSI, Beck, Rush, Shaw, & Emery, 1979)	None	21	≥ 13 years	Self-report	General population: α 0.81 Psychiatric population: α: 0.86	Constantino et al. (2001): Baseline; 6 weeks; 6 months; 12 months Constantino and Bricker (1996) Baseline; 8 weeks Pfeffer et al. (2002) Baseline; 12 weeks	~10 mins £ Free Appendix 6

[2] Alternative version available (BDI short form, see Table 3)

Beck Depression Inventory II (Beck, Steer and Brown, 1996) [2]	None	21	13-80 years	Self-report	α: 0.89	Wittouck et al., (2014) Baseline; 8 months	~ 5 minutes $96 Appendix 7
Children's Depression Inventory3 (CDI; Kovacs, 1979) [4]	• Anhedonia • Negative self-esteem • Ineffectiveness • Interpersonal problems • Negative mood	27	7-17 years	Self-report	General population: α: 0.84 Clinilcal sample: α: 0.84	Pfeffer et al. (2002) Baseline; 12 weeks	<15 minutes £416.99 Appendix unavailable
Centre for Epidemiologic Studies Depression Scale (CES-D; Radloff, 1977)[5]	None	20	≥18 years	Self-report	General population: α ~0.85	De Groot et al. (2007) Baseline; 13 months De Groot et al. (2010) Baseline; 13 months	10 mins £ Free Appendix 8

[3] Childrens Depression Inventory -Short (CDI-S) is an equivalent measure with 10 items
[4] CDI- short version (CDI-S; Kovaks, 1992) is also available
[5] Childrens version (6-17 years) also available

Distress	Brief Symptom Inventory (BSI)	• Somatization • Obsessive-Compulsive • Interpersonal Sensitivity • Depression • Anxiety • Hostility • Phobic Anxiety • Paranoid Ideation • Psychoticism	53	≥13 years	Self-report or interviewer	α = 0.71-85	Constantino et al. (2001): Baseline; 6 weeks; 6 months; 12 months Constantino and Bricker (1996) Baseline; 8 weeks	8-12 minutes £ Free Appendix 9
Grief	Complicated Grief Clinical Global Impressions Scale – Improvement (CG-CGI-I; Shear et al., 2005)	*No information*	*No information*	*No information*	*No information*	*No information*	Zisook et al. (2018) Baseline; 20 weeks	*No information available*
	Grief Cognitions Questionnaire (GCQ; Boelen et al., 2003a)	• Self • World • Life • Future • Self-Blame • Others • Appropriateness of Grief	38	≥18 years	Self-report	*No information*	Wittouck et al., (2014) Baseline; 8 months	Duration unknown £ TBC Appendix: upon *request from authors*

	• Cherish Grief • Threatening Interpretation of Grief						
Grief Experience Inventory (GEI, Sanders et al.,1985)[6]	• Denial • Atypical response • Despair • Anger/ hostility • Guilt • Social isolation • Loss of control • Dependence • Social desirability	135	*No information*	Self-report	*No information*	Constantino et al. (2001): Baseline; 6 weeks; 6 months; 12 months; Constantino and Bricker (1996): Baseline; 8 weeks	*No information available*
Grief Experience Questionnaire (GEQ; Barrett and Scott, 1989)	• Somatic reactions • General grief reactions • Search for explanation • Loss of social support	55	*No information*	Self-report	General population: α = 0.89-0.97	Kovaks and Range (2000) Baseline; 6 weeks postvention	Time: NA £ Free Appendix 10

[6] Shorter version available

	• Stigmatization • Guilt • Responsibility • Shame • Rejection • Self-destructive behaviour • Reactions to a unique form of death						
Grief Recovery Questions (GRQ, Lehman, Wortman and Williams, 1987)	None	8	*No information*	Self-report	General population α= 0.83	Kovaks and Range (2000) Baseline; 6 weeks postvention	Duration unknown £ unknown Appendix 11
Hogan Grief Reaction Checklist (HGRC; Hogan et al., 2001)	• Personal growth • Despair • Panic behaviour • Blame and anger • Detachment	61	*No information*	Self-report	Overall: α= 0.9	Barlow et al., (2010) Baseline; 4 months	Time: NA £ unknown Appendix: Not available

	• Disorganisation						
Inventory of Complicated Grief (ICG, Prigerson, et al.,1995)	None	19	*No information*	Self-report	α = 0.94	Zisook et al. (2018) Baseline; 20 weeks	Time: £0 Appendix 12
Impact of Events Scale (IES, Horowitz et al., 1979)	Frequency of: • Intrusive cognitions • Avoidant cognitions	15	*No information*	Self-report	α = 0.78-82	Kovaks and Range (2000) Baseline; 6 weeks postvention	Time: <10 minutes £ Free Appendix: 13 (revised version)
Intrusive Grief Thoughts Scale (IGTS, Program for Prevention Research, 1999)	Frequency of the following grief-related experiences. • intrusive • negative • disruptive	9	Any age	Self-report	α >0.87	Sandler et al. (2016) Baseline; Post-test; 11 months; 6 years; 15 years	Time <10 minutes £ Unknown Appendix: Not available

	Inventory of Traumatic Grief (ITG, Prigerson and Jacobs, 2001)	None	34	*No information*	Self-report		De Groot et al (2007) Baseline; 13 months	*No information available*
	Schedules for Clinical Assessment in Neuropsychiatry (SCAN 2.1; Dutch version; Giel & Nienhuis, 1996)	*No information*					De Groot et al. (2010) Baseline; 13 months	*No information available*
	Structured Clinical Interview for Complicated Grief (SCI-CG, author unknown)	*No information*	31	*No information*	Clinician administered		Zisook et al. (2018) Baseline; 20 weeks	*No information available*
	The Traumatic Grief Evaluation of Response to Loss (TRGR2L,	None	17	*No information*	Structured clinician interview	Kappa: 0.71	De Groot et al (2007) Baseline; 13 months De Groot et al. (2010) Baseline;	*No information available*

	Prigerson, Kasl, & Jacobs, 1998)						13 months	
Guilt and shame	Self-constructed questions only	None	• I think I could have prevented the suicide. • I feel Statistical Analyses guilty about the suicide. • I am wondering what I have done wrong,	*Not applicable*	Self-report	α =0.77	De Groot et al. (2010) Baseline; 13 months	*No information available*
Hopelessness	Beck Hopelessness Scale (BHS, Beck et al., 1974)	None	20	17-80 years	Self-report	α = 0.81	Wittouck et al., (2014) Baseline; 8 months	<5 minutes £ Free Appendix 14

Post-Traumatic Stress Symptoms	Child Post-Traumatic Stress Reaction Index (CPTS-RI; Pynoos et al., 1987)	None	20	6-16 years	Self-report/ Parent version	α = 0.86	Pfeffer et al. (2002) Baseline; 12 weeks	Time unknown £ unknown Appendix unavailable
Problem solving	Adolescent Problem-Solving Appraisal (APSA; Walker et al., 1990)	None	22	*No information*	Self-report	α = 0.87-91	Sandor et al. (2009) Pre-vention; Post-vention; 2-months	*Awaiting further information*
Self-efficacy	Self-Efficacy Scale - General Self-Efficacy subscale (SES; Sherer et al., 1982)	None	17	*No information*	Self-report	α = 0.83-86	Sandor et al. (2009) Pre-vention; Post-vention; 2-months	*Awaiting further information*
Self-perception	Self-Perception Profile for Adolescents (HSP; Harter, 1988)	• Scholastic competence • Social acceptance • Athletic competence • Physical appearance • Job competence • Romantic appeal	45	*No information*	Self-report	α = 0.58-91	Sandor et al. (2009) Pre-vention; Post-vention; 2-months	*Awaiting further information*

		• Conduct/morality • Close friendship • Global self-worth						
Service evaluation	Tailored to service	*No information*					Kramer et al. (2015) post-vention	*No information available*
Suicidal ideation and/or behaviour	Child Behaviour Checklist (CBCL; Achenbach, 1991)	Ideation; Attempt	• Deliberately harms of attempts suicide	6-18 years	Caregiver report	α= 0.87	Sandler et al. (2016) Baseline; 6 years; 15 years	< 1 minute £ unknown Appendix 5
	Diagnostic Interview Schedule for Children (DISC; National Institute of Mental Health Diagnostic Interview, 1979)	Ideation, attempt	• Thoughts of death, suicide ideation, suicide attempt or plan	6-17 years	Parent/ adolescent report	*Not reported*	Sandler et al. (2016) Baseline; 6 years; 15 years	Time unknown £ unknown Appendix unavailable
	Mini-International Neuropsychi	17 sub-scales	Suicide module: 9 items	*No information*	Structured interview	*Not reported*	Kramer et al., (2015) Baseline; 6 months;	~ 15 minutes total

atric Interview-Plus (MINI-Plus, suicide module)						12 months	£ yes (exact cost unknown) Appendix: unavailable
Paykel's suicidality items (PSI; Paykel, Myers, Lindenthal and Tanner, 1974)[7]	• Life weariness • Death wishes • Suicidal ideation • Suicidal plans • Death wishes	5	*No information*	Self-report	*Not reported*	De Groot et al. (2007) Baseline; 13 months De Groot et al. (2010) Baseline; 13 months	<5 minutes £ unknown Appendix unavailable
Young Adult Behavior Check List (YABCL; Achenbach, 1997)	Ideation, attempt	• I deliberately try to hurt or kill myself	*No information*	Self-report	*Not reported*	Sandler et al. (2016) Baseline; 6 years; 15 years	Time: unknown $15 Appendix: unavailable
Young Adult Self Report (YASR; Achenbach & Rescorla, 2001)	Ideation, attempt	• Talks about killing self • I think about killing myself	≥18 years	Self-report	*Not reported*	Sandler et al. (2016) Baseline; 6 years; 15 years	Time unknown £ unknown Appendix unavailable

[7] The title of this measure varies between studies, these variations include: The Paykel Scale for Suicide and Paykels Questionnaire

	Youth Self-Report (YSR, Achenbach, 1991)	Ideation, attempt	• Talks about killing self/ I think about killing myself	11- 18 years	Self-report	*Not reported*	Sandler et al. (2016) Baseline; 6 years; 15 years	Time unknown £ unknown Appendix unavailable

Table 2 Sensitivity and specificity of reported measures

Topic	Measure (Author, year)	Comparison (author, year, population)	Sensitivity (%)	Specificity (%)
Adaptive functioning (social or work adjustment)	Social Adjustment Scale (SAS, Weissman, 1979)		*No information*	
	The Social Adjustment Inventory for Children and Adolescents (SAICA) (John et al., 1987)		*No information*	
	Work and Social Adjustment Scale (WSAS, Mundt et al., 2002)	Zahra et al., (2014)	46-54	*No information*
Anxiety	Revised Children's Manifest Anxiety Scale (RCMAS; Reynolds and Richmond, 1985)	*No information*		
	Schedules for Clinical Assessment in Neuropsychiatry (SCAN 2.1; Dutch version; Giel & Nienhuis, 1996)	Rijnders et al. (2000) Psychology students	86	99
Behaviour	Child Behaviour Checklist (CBCL Achenbach,1991)	Novik et al. (1998) Norwegian general population	71	92
	Youth Self-Report (YSR, Achenbach, 1991)	Conners et al. (1997) ADHD vs Controls	81.4	83.7
Coping	Utrecht Coping List (UCL; Schreurs et al. 1993)	*No information*		

Depression	Becks Depression Inventory (BSI, Beck, Rush, Shaw, & Emery, 1979)		*No information*	
	Becks Depression Inventory II (Beck, Steer and Brown, 1996)	Kjærgaard et al., 2013	85	88
	Children's Depression Inventory (CDI; Kovacs, 1979)	Masip et al. (2010)	94.7	95.6
	Centre for Epidemiologic Studies Depression Scale (CES-D; Radloff, 1977)	Vilagut et al., (2016) General population	87	70
Distress	Brief Symptom Inventory (BSI)		*No information*	
Grief	Complicated Grief Clinical Global Impressions Scale – Improvement (CG-CGI-I; Shear et al., 2005)		*No information*	
	Grief Cognitions Questionnaire (GCQ; Boelen et al., 2003a)	Boelen and Lensvelt-Mulders (2005) Bereavement sample	84	89
	Grief Experience Inventory (GEI, Sanders et al.,1985)	Sanders et al. (1985) Bereavement sample	*No information*	*No information*
	Grief Experience Questionnaire (GEQ; Barrett and Scott, 1989)		*No information*	
	Grief Recovery Questions (GRQ, Lehman, Wortman and Williams, 1987)	Kovaks and Range (2000) Bereavement sample	*No information*	*No information*

	Hogan Grief Reaction Checklist (HGRC; Hogan et al., 2001)		*No information*	
	Inventory of Complicated Grief (ICG, Prigerson, et al.,1995)		*No information*	
	Impact of Events Scale (IES, Horowitz et al., 1979)		*No information*	
	Intrusive Grief Thoughts Scale (IGTS, Program for Prevention Research, 1999)		*No information*	
	Inventory of Traumatic Grief (ITG, Prigerson and Jacobs, 2001)	Boelen et al., (2010) Bereaved sample	86	76
	Structured Clinical Interview for Complicated Grief (SCI-CG, author unknown)		*No information*	
	The Traumatic Grief Evaluation of Response to Loss (TRGR2L, Prigerson, Kasl, & Jacobs, 1998)		*No information*	
Hopelessness	Beck Hopelessness Scale (BHS, Beck, Weissman, Lester, & Trexler, 1974)	Grano et al. (2017) Adolescent clinical sample	70	78
Post-Traumatic Stress Symptoms	Child Post-Traumatic Stress Reaction Index (CPTS-RI; Pynoos et al., 1987)	(Olliac et al., 2014) General sample	100	62.6

Problem solving	Adolescent Problem-Solving Appraisal (APSA; Walker et al., 1990)	Sandor et al. (1994) bereavement sample	*No information*	*No information*
Self-efficacy	Self-Efficacy Scale - General Self-Efficacy subscale (SES; Sherer et al., 1982)	No information		
Self-perception	Self-Perception Profile for Adolescents (HSP; Harter, 1988)	No information		
Suicidal ideation and/or behaviour	Child Behaviour Checklist (CBCL; Achenbach, 1991)	Jones et al., (2013), (total measure data, children with epilepsy	79.4	63.9
	Diagnostic Interview Schedule for Children (DISC; National Institute of Mental Health Diagnostic Interview, 1979)	Fisher et al. (1993) Clinical child sample	73-100	No information
	Mini-International Neuropsychiatric Interview-Plus (MINI-Plus, suicide module)	Mackenzie et al., (2017) Clinical population	70	85
	Paykel's suicidality items (PSI; Paykel, Myers, Lindenthal and Tanner, 1974)	*No information*		
	Young Adult Behavior Check List (YABCL; Achenbach, 1997)	*No information*		
	Young Adult Self Report (YASR; Achenbach & Rescorla, 2001)	Wiznitzer et al. (1992) Young adult general population	84	74

	Youth Self-Report (YSR, Achenbach, 1991)	Geilbel et al. (2014) Ethiopian vulnerable adults	83.3	75.4

Table 3. Specified measures

Topic	Measure (Author, year)	Subscales/ Domains	No. items	Demographic	Collection strategy	Cronbach alpha (α)/ Omega	Follow-up time	Time to complete Cost (£) Appendix #
Anxiety	Generalised Anxiety Disorder (GAD7; Spitzer et al., 2006)	None	7	Adults	Self-report	*No data available*	*No data available*	<2 minutes £ Free Appendix 15
	Hospital Anxiety and Depression Scale (HADS-Anxiety; Zigmond and Smith, 1983)	• Anxiety • Depression	7	≥18 years[8]	Self-report	Not reported	Anderson et al. (2008) Baseline; 1 month; 6 months	<10 minutes £ Free Appendix 16
Depression	Beck Depression Inventory – Short Form (BDI-SF; Beck & Beck, 1972)	None	13	*No information*	Self-report	*No information*	*No information*	< 5 minutes £ Unknown Appendix: unavailable

[8] Other versions for younger populations are available

	Composite International Diagnostic Interview (CIDI; Robins et a., 1988)	• General Anxiety Disorder • Panic Disorder • Major depression	88		Self-report/ Computer assisted		Pitman et al. (2016) Cross-sectional	15 mins £ Free Appendix 17
	Hospital Anxiety and Depression Scale (HADS-Depression; Zigmond and Smith, 1983)	• Anxiety • Depression	7	≥18 years	Self-report	Not reported	Anderson et al. (2008) Baseline; 1 month; 6 months	<10 minutes £ Free Appendix 16
	Patient Health Questionnaire (PHQ-9, Lowe et al., 2002)[9]	• Depression • Anxiety • Somataform • Alcohol • Eating	9	≥18 years	Self-report[10]			< 5minutes £ Free Appendix 18
Distress	CORE-OM scale (author unknown)	• Subjective wellbeing • Anxiety problems • Depression problems • Physical problems	34	>16 years	Self-report	Subscales: α= 0.75-0.95 (Evans et al. (2002)	*No information*	<10 minutes £ Free Appendix 19

[9] 15-item version also available (PHQ-D)
[10] Other versions for younger populations are available

		• Trauma problems • Close functioning • General life functioning • Social functioning • Risk to self • Risk to others						
	Global Distress Scale (GDS, author unknown)	• Symptoms • Function • Social	30	Adults	Unknown	*No information*	*No information*	*No information available* Appendix 22
	Perceived global distress			*No information*				Details unknown
Grief	Grief-Related Avoidance Questionnaire[11] (GRAQ, Shear et al., 2007)	None	15	*No information*	Self-report	α= 0.87	*No information*	Time: Unknown $4.95 Appendix Not available
	Texas Revised Inventory of	• Past behaviour	18	*No information*	*No information*	Bailey et al. per subscale	*No information*	Time: Unknown

[11] This was originally reported by Andriessen et al. (2019) as being used within the Zisook et al. (2018) study, however this measure was not reported in the original paper.

	Grief (TRIG; Faschingbauer et al., 1987)	• Present feelings				≥0.86		£ Free Appendix unavailable
Stigma	Stigma of Suicide and Suicide Survivor (STOSASS; Scocco et al., 2012)	• Stigma towards the suicidal person • Stigma towards suicide survivor	12	*No information*	*No information*	Scocco et al. (2019) α= 0.88	Scocco et al. (2019) Cross-sectional	*No information available*
Suicidal ideation and/or behaviour	Adult Psychiatric Morbidity Survey (APMS)	Select items • Ideation • Self-harm • Attempt	3	≥16 years	Interview	*No information*	*No information*	<10 minutes £ Free Appendix 20
	Beck Scale for Suicidal Intent (BSS; Beck et al., 1988)	*No information*	21	≥ 17 years	Self-report	Wagner et al. (2020) α= 0.94	Wagner et al. (2020) Baseline; 3 months (postvention); 6 months	5-10 minutes $96 Appendix unavailable
	Columbia-Suicide Severity Rating Scale (C-SSRS; Posner et al. 2010)	• Ideation • Behaviour (including planning, attempt, and self-harm)	16	≥18 years	Semi-structured clinical interview	*No information*	Zisook et al. (2018) Baseline; 20 weeks	~15minutes £ Free Appendix 21

Wellbeing	Warwick-Edinburgh Mental Wellbeing Scale (WEMWBS; NHS Health Scotland)	None	14	13-74 years	Self-report	Braiden et al. (2011) *Not reported*	Braiden et al. (2011) Baseline: Postvention; 6 months	Duration unknown £ Free Appendix 22

Recommended citation:
McClelland, H. & Platt, S. (2020). *Exploring Measures for Utilisation by a Suicide Bereavement Service*. Unpublished manuscript.

Correspondence address:
Suicidal Behaviour Research Laboratory**,** School of Health and Wellbeing, University of Glasgow, UK