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Research paper

The adolescent grief inventory: Development of a novel grief measurement

Karl Andriessen*, Dusan Hadzi-Pavlovic, Brian Draper, Michael Dudley, Philip B. Mitchell

School of Psychiatry, University of New South Wales, Sydney, Australia

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ABSTRACT

Background: To develop an empirically derived, reliable and valid measure of grief in adolescents, aged 12–18 years old.

Methods: An online survey comprising 59 items derived from a qualitative study of 39 bereaved adolescents, the Hogan Inventory of Bereavement Children and Adolescents (HIB), the Depression, Anxiety and Stress Scales (DASS-21), the Multidimensional Scale of Perceived Social Support (MSPSS), and a series of death- and mental health-related questions, targeted adolescents bereaved when aged 12–18 years, with 176 adolescents (80.6% girls) completing the survey.

Results: Factor Analysis of the 59-items resulted in a final solution, the Adolescent Grief Inventory (AGI) comprised of 40 items and 6 factors: Sadness, Self-blame, Anxiety and Self-harm, Shock, Anger and Betrayal, and Sense of Peace, with indices of good fit (RMSEA = 0.057, CFI = 0.952, TLI = 0.948). There was strong evidence of convergent (HIB) and divergent (MSPSS) validity. Adolescents bereaved by suicide scored higher on Self-blame, Anger and Betrayal while those with a history of suicidal behaviour or having a mental health diagnosis scored higher overall than those who had not.

Limitations: Study limitations include the self-selected, mostly female, sample, a high proportion of participants with a mental health and self-harm history, and reliance on self-reported data.

Conclusions: The AGI is a novel, comprehensive and valid measure of grief in adolescents. It can be used broadly, including with bereaved adolescents at-risk of mental health ramifications.

1. Introduction

About half of adolescents experience the death of a significant other such as a family member or a friend over a year (Rheingold et al., 2004), and most adolescents lose a relative or friend before adulthood (Harrison and Harrington, 2001). Experiencing a death potentially affects the bereaved adolescent's short- and long-term quality of life (Balk, 2014; Stroebe et al., 2008). Due to biopsychosocial changes in the transition from childhood to adulthood, bereaved adolescents in particular have increased risks of problems related to physical, and mental health and social functioning (Feigelman et al., 2017). Typical adolescent acute grief reactions include shock, sadness, numbness, yearning, guilt, anger, and distress. They frequently report feeling ill, physical pain, and sleeping problems (Luecken, 2008). Bereaved adolescents often struggle with 'meaning-making', forgo the sense of personal invulnerability, and have increased risks of depression, anxiety, post-traumatic stress disorder, and suicidal ideation in the first months after the bereavement (Brent et al., 2009; Stikkelbroek et al., 2016). Bereaved adolescents may commence risky behaviors such as smoking, drinking or fighting, particularly during the first years after the loss (Feigelman et al., 2017; Hamdan et al., 2012). Adolescents losing a parent have higher long-term risks of psychiatric problems, attempted suicide, and violent behaviour (Berg et al., 2016; Jakobsen and Christiansen, 2011; Wilcox et al., 2010).

Conversely, bereaved adolescents may experience long-term positive reactions: increased appreciation of life, maturity, empathy and compassion for others (Andriessen et al., 2017, 2018a; Balk, 2014). Whereas a variety of grief reactions are possible, including positive reactions, the pathways of personal growth of bereaved adolescents are yet to be studied (Meyerson et al., 2011). Research with young adults indicates that a minimum level of distress is necessary for personal growth, but there is no linear relationship between the levels of distress and personal growth (Taku et al., 2015). Attachment styles (including the continuing bond with the deceased), coping styles (e.g., self-disclosure), relationships (e.g., social support), and psychological factors (e.g., resilience and meaning making) affect the pathways of personal growth after suicide (Genest et al., 2017). According to a contemporary grief model, the Dual-Process Model of coping with bereavement (Stroebe and Schut, 2010), grieving individuals oscillate between loss-oriented and restoration-oriented stressors, though research with

* Corresponding author.
E-mail address: k.andriessen@unsw.edu.au (K. Andriessen).

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bereaved adolescents is needed.

Several factors may affect the intensity or duration of the grief. However, specifically among adolescents the effect of these factors is inconclusive. The sex and age of the bereaved adolescent, the kinship and psychological closeness of the relationship, the number of deaths experienced, the expectedness of the death, and time since the loss, are inconclusive mainly because of a shortage of research (Balk, 2014). Social support facilitates grief outcomes; however, finding appropriate and sufficient social support is a challenge for bereaved adolescents (Andriessen et al., 2016). Family may be preoccupied with their own grief, friends may lack the necessary skills, and in general, adolescent grief may go unnoticed for others. High self-reliance is common among bereaved adolescents and they may not feel a need to share their grief even if social support (family or friends) is available (Andriessen et al., 2018a).

Bereavement research, including adolescent research, has been criticised for relying on psychiatric rather than grief scales (Neimeyer and Hogan, 2001). Though psychiatric scales may capture common grief feelings, such as depressed mood, they often overlook grief-specific characteristics such as yearning. Also, pathology-focused measurements dismiss grief as a natural reaction to major loss, and overlook positive grief feelings like relief, or outcomes like personal growth. Lastly, research into complicated or prolonged grief, distinct from other disorders, has stimulated development of designated measures such as the Inventory of Prolonged Grief (IPG) for Children and Adolescents (Spuij et al., 2012), derived from the adult version of the IPG. Though such diagnostic instruments provide insight into maladaptive or pathological reactions, arguably no claims regarding complicated grief are valid in the absence of reliable measurements of the variety of "normal" grief reactions (Neimeyer and Hogan, 2001). While the criticism was formulated over 15 years ago, it still holds true for adolescent bereavement research (Stroebe et al., 2013). Over the decades, most progress has been made in adult bereavement studies. Adolescent research is lagging behind, mainly due to a lack of validated measures, a focus on selected relationships (e.g., death of a parent), and reliance on clinical samples (Kaplow et al., 2012). The developmental context of bereaved children and adolescents would be more important than for adults. Hence, empirically derived adolescent grief instruments which have stronger internal validity than expert-based instruments, and mixed-methods approaches combining insights from qualitative research and quantitative data, have been recommended to further adolescent bereavement research (Kaplow et al., 2012; Neimeyer and Harris, 2011).

A review (Neimeyer et al., 2008) of grief instruments identified only one adolescent scale, the Hogan Sibling Inventory of Bereavement (HSIB) (Hogan, 1987; Hogan and DeSantis, 1996; Hogan and Greenfield, 1991), and we could not find any other measure of normal or uncomplicated grief in adolescents. The 46-item Hogan Inventory of Bereavement - Children and Adolescents (HIB) was derived partly empirical, partly expert-based from the 109-item HSIB to apply it to all adolescents, aged 12–18 years. However, apart from Blankemeyer (1993) we could not find a study that used the HIB. Also, though the two HIB factors appear to be valid for bereaved adolescents (Blankemeyer, 1993), it is conceivable that adolescent grief entails more characteristics than the two Grief, and Personal Growth factors. For example, an empirically developed grief instrument for adults consists of six factors (Hogan and Schmidt, 2002). Clearly, adolescent grief requires an empirically developed, contemporary, reliable and comprehensive instrument.

Our aim was to develop empirically a valid grief measurement for adolescents, aged 12–18 years; hereafter "Adolescent Grief Inventory (AGI)". We hypothesised: i) that the development of the AGI would identify novel items and important characteristics of adolescent grief not captured by the HIB; ii) the AGI scores would correlate strongly with the HIB Grief, a convergent measure; iii) the AGI would not correlate with HIB Personal Growth, a divergent measure; iv) the AGI would correlate positively with distress as measured by the Depression, Anxiety, and Stress Scales (DASS-21) (Lovibond and Lovibond, 1995), and with self-rated severity of impact of the other person's death; v) and no correlation with a divergent measure of social support, the Multidimensional Scale of Perceived Social Support (MSPSS) (Zimet et al., 1988), nor with age and sex of bereaved adolescents, number of deaths experienced, time since death of the significant other, self-rated closeness or expectedness of the other's death. Further, we wanted to investigate if the AGI discriminates between groups based on cause of death of the significant other, kinship with the deceased, and mental health status of participants.

2. Methods

2.1. Study design and sampling

First, we undertook a qualitative study to investigate the grief, mental health and help-seeking experiences of adolescents. Participants were eligible i) if a family member or friend died through any cause when participants were 12–18 years old, and ii) participants experienced the death between 6 months and ten years before participation. We conducted semi-structured telephone interviews with 39 participants who were 13–27 years old at the time of the interview. The methodology and results of that study are reported elsewhere (Andriessen et al., 2018a, 2018b). The AGI items were developed through an iterative process from NVivo-generated Node reports of acute and long-term grief experiences reported during the interviews (QSR, 2014). Attention was given to negative and positive grief reactions, and grief reactions after any cause of death. The process resulted in 59 statements reflecting the variety of adolescents' grief feelings, thoughts, sensations and behaviours. Wording was kept close to their statements.

Next, an online questionnaire was created using KeySurvey, which was accessible from April to June 2017. We applied the same eligibility criteria as above. Participants were recruited through grief and youth organizations, announcements on posters, flyers, websites, Facebook (Griefofadolescents.study), paid Facebook and Instagram advertisements, and they could enrol in a draw to win a $50.00 gift voucher. All participants provided online consent, and parental/guardian consent was obtained for those below age 18. The Human Research Ethics Committee of the University of New South Wales (HC15088) approved the study.

2.2. Measures

Adolescent Grief Inventory (AGI): Participants used a 5-point Likert scale, ranging from "1. Not at all" to "5. Extremely", to rate how much the 59 items of the draft AGI applied to them in the first month after the death (T1), as well as in their current situation (past month, T2). Sample items included: "2. I felt sad", and "39. I felt a sense of peace". Cronbach's alpha was 0.94 both for T1 and T2.

Hogan Inventory of Bereavement - Children and Adolescents (HIB): the 46-item scale measures Grief (for example, "6. I have no control over my sadness") and Personal growth (for example, "2. I believe I am a better person"). Items are rated on a 5-point Likert scale, ranging from "1. Does not describe me at all" to "5. Describes me very well". Scores are summed on each subscale. Higher scores indicate stronger grief symptoms (range 24–120), or more personal growth (range 22–110). Cronbach's alpha was established at 0.90–0.95 for the Grief factor, and 0.88–0.90 for the Personal Growth factor (Neimeyer et al., 2008). The values in our sample were 0.94 and 0.91, respectively.

Depression, Anxiety, and Stress Scales (DASS-21): Participants rate the 21 items on a 4-point scale on how much it applied to them during the past week, ranging from "0. Never" to "3. Almost always". Higher scores on each subscale (range 0–21) and the total scale (range 0–63) indicate more severe symptoms. Cronbach's alpha in a normative