

Six-Star Student Well-Being Survey: Development of a universal wellbeing screening tool for schools and students

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Abstract

Schools have been called upon to play an important role in managing students' psychological well-being and early detection of mental health concerns. Schools have also been identified to develop positive psychological skills in students. The objective of the current paper was to report on the reliability of a new multidimensional, universal screening tool for monitoring student well-being – the Six Star Student Well-Being Survey. The instrument comprises measures of mood, resilience, school engagement, communication, relaxation, and positivity. Altogether, 1,424 Australian students completed the survey. Results revealed very good reliability and predictive validity. These findings suggest that the instrument is a promising tool for schools and professionals to screen mental health and well-being, as well as utilizing the survey results to develop both preventative and positive psychology programs. Other implications of the results are discussed, and future research directions are recommended.

Keywords: Well-being, Student, School, Mental health, Screening, Universal

Mental health conditions in students are both prevalent and debilitating; with research suggesting that around 14% of Australian youth have significant mental health problems (Australian Bureau of Statistics, 2007). Early intervention and prevention, however, have been shown to alter this course (Weist, Rubin, Moore, Adelsheim & Wrobel, 2007). In turn, schools have been called upon to play a vital role in early detection and help manage well-being (Kern, Waters, Adler, & White, 2014; Levitt, Saka, Romanellis, & Hoagwood, 2007).

Well-being defined

Researchers have found the construct of well-being to be multifaceted and complex (Foregard, Jayawickreme, Kern, & Seligman, 2011). Consequently, there exist differing views of how well-being should be defined and measured (Fraillon, 2004; Keyes, 2007). Historically, well-being has been viewed within a medical model and has utilised uni-dimensional assessment tools which have primarily focused on mental-illness diagnosis and severity. However, the broader psychosocial view of well-being, especially with the positive psychology movement, stimulated an increasing interest in the concept of well-being and improvement in assessment (Diener, Wirtz, Biswas-Diener, Tov, Kim-Prieto, Choi, & Oishi, 2009; Seligman, 2011). This shifting view was reflected by the World Health Organisation (WHO, 2014) definition of mental health as “a state of well-being in which an individual realises his or her own potential, can cope with the normal stresses in life, can work productively and fruitfully, and is able to contribute to his or her community.” Based on this definition, it is apparent that psychological well-being extends beyond mental illness and now takes into consideration healthy emotional functioning.

DeSocio and Hootman (2004) described an association between well-being and mental health, whereby a clinical diagnosis in psychopathology in adolescents was found to be frequently preceded by difficulties in academic and social functioning. These difficulties have been recognised as sub-clinical behaviours that can potentially lead to future clinical pathologies. Research consistently demonstrates that both the presence of distress and absence of well-being are independently associated with negative impacts on the social, interpersonal and academic functioning of students (Gonzalez-Tejera, Canino, Ramirez, Chavez, Shrout, Bird & Bauermeister, 2005; Suldo & Shaffer, 2008; Suldo, Thalji, & Ferron, 2011).

Conversely, positive determinants of well-being have been related to positive outcomes in students. Seligman (2011) suggested that a model of well-being should include

positive emotions, engagement, relationships and accomplishments as they form the foundation for a flourishing life. In turn, a well-being tool which can integrate both positive and negative constructs would be useful to provide information on both mental-health concepts, as well as positive psychology concepts simultaneously. Such a view impacts on the choice of assessment or screening tool for well-being and which stakeholders should be responsible for initiating, conducting and following up the information collected. Certainly, all of these factors have been discussed as important considerations when selecting well-being instruments to use in schools (Glover & Albers, 2007).

Schools as a Screening Hub for Well-Being

Schools have been called upon to play an important role in managing students' psychological well-being and early detection of mental health concerns (Duncan, Forness, & Harsough, 1995; Peterson, 2006; Seligman, Ernst, Gillham, Reivich, & Likins, 2009). There has been a long history of failure to identify and treat mental health concerns in school age children (Briggs-Gowan, Carter, McCarthy, Augustyn, Caronna, & Clark, 2013). However, researchers have indicated that screening programs carried out in school settings can reach large segments of child and adolescent populations in a time-efficient manner (Splett, Fowler, Weist, McDaniel, & Dvorsky, 2013). In an investigation into the screenings carried out at school-based health centres, Gall, Pagano, Desmond, Perrin, & Murphy (2000) reported that up to 80% of children receiving mental health services did so only at school, making the education system the de facto system of care for youth with mental health problems.

With this in mind, and considering that the vast majority of youth attend school, education systems offer an opportune setting to screen for mental health and well-being and to promote these concepts in students. Further, it has been suggested that schools can overcome barriers that limit access to mental health in this young population (Pagano, Cassidy, Little, Murphy & Jellinek, 2000). Generally, there is more support available in school systems, along with familiar staff that students are more likely to trust for discussion and self-disclosure (Shaffer & Gould, 2000). From a practical perspective, schools set standards for age appropriate expectations and provide a longitudinal view of students' functioning in a normative controlled setting, as well as enabling intervention to be more cost effective to parents and carers (Gall, et al., 2000). In addition, schools are often ideally suited to support and develop skills that facilitate personal development in students with low well-being and sub-clinical levels of mental health (Wyn, Cahill, Holdsworth, Rowling, & Carson,

2000). Kern, et al. (2014) summarised that characteristics developed through positive education have been linked to a range of academic, social and physical outcomes.

Information collected from screening mental health and well-being factors can serve as justification to implement preventative programs and foster well-being in a positive way. Once a school embraces this path, the next challenge is to determine the type of screening tool to implement. Indeed, identifying and making available an appropriate instrument may assist and encourage a school to adopt a reliable and valid screening tool and to subsequently develop and integrate preventative intervention well-being programs into their school.

Measures of Well-Being in Schools

Renshaw et al. (2014) commented that although the practice of school wide mental health screening is emerging, the majority of available screening instruments are designed to assess risk factors or clinical symptoms (Pollard & Lee, 2003; Diener, et al., 2009). Such examples include: the Child Depression Inventory (Kovacs, 1985); Beck Depression Inventory II (Beck, Steer, & Brown, 1996); Reynolds Adolescent Depression Scale (RADS-2 Reynolds, 2002) and the Depression Anxiety Stress Scale (DASS; Lovibond and Lovibond, 1995). While these tools are psychometrically sound they focus on the early detection and treatment of specific mental disorders and do not consider the larger construct of psychological well-being. Also, when these tools are applied to large populations, such as schools, as with any large scale clinical assessment, they are resource intensive, narrow in focus and therefore only identify a very small clinical group who warrant follow-up and professional treatment. In addition, these clinical assessments provide limited information for direct intervention opportunities and minimal opportunities for personal development across the larger school population. What is required is a broader tool that will measure both sub-clinical conditions and students' level of well-being, as well as provide a range of information that lends itself to personal development.

In order to gather information that is relevant to all students within a school, screening should preferably focus on multiple components of well-being including both positive and sub-clinical constructs. Examples of some broad or multidimensional well-being assessments that are currently available include the Strengths and Difficulties questionnaire (Goodman, 1997); Perceived Competence Scale for Children (Harter, 1982); Rosenberg Self-Esteem Scale (Rosenberg, 1965); Perceived Wellness Survey (Adams & Benzer, 2000); and, the Personal Well-being Index for School Children (Cummins & Lau, 2005). These instruments

provide broad information on the functioning of students including recognising strengths, development areas, and a range of optimal social, emotional and behavioural outcomes. However, these assessment tools fail to include an assessment component that directly explores the sub-clinical mental health domain. In addition, these instruments could be viewed as specific or narrow and do not readily lend themselves to developing broad intervention opportunities.

Considering that barriers to utilising universal screening tools include time and challenges related to satisfaction of sub-categories (Pollard & Lee, 2003), it is likely a tool that includes both clinical and positive psychology domains would be both more appealing and useful to schools and their students (Suldo & Shaffer, 2008; Kern et al., 2014). Levitt et al. (2007) suggest that broad screening instruments are most appropriate for universal screening. This method allows confirmation of those students who are not a concern, while identifying students who may require more specialised or targeted screening. Students that are identified as having clinical mental health concerns in a broad screening may be referred to undertake more specific clinical assessments.

In consideration of the above discussion, it is suggested that a universal screening instrument relevant for whole school populations should be multidimensional and focus on both positive well-being factors, as well as provide information on sub-clinical mental health in children and adolescents. In addition, any universal tool recommended to a school should be practical and socially relevant to maximise the likelihood of school administrators, well-being staff, Psychologist's and other health professionals utilising such an instrument (Splett et. al., 2013). Therefore the aim of the present research is to present a new universal multidimensional screening tool: The Six-Star Student Well-Being Survey and to report on the reliability and validity of this instrument in student populations.

Method

Instrument

The development of the Six Star Student Well-Being Survey (SIX-STAR STUDENT WELLBEING SURVEY) was based upon the constructs thought to underlie well-being, as determined by contemporary well-being research and 20 years of practise in psychology. To select appropriate questions and variables to include in the Survey, positive psychology and mental health, both clinical and sub-clinical range were considered by a team of Educational

Psychologists. Over a three year period a number of trials of different questions were conducted with school samples, and data were analysed with RMIT University. The current Six-Star Wellbeing Survey consists of 50 items, and the questions were deliberately designed to contain readable statements for the wide age group (Grade 5 to Year 12) the survey was intended for. The purpose of the instrument was to provide a holistic measure of well-being that would appeal to schools and could be universally applied.

An explanation of and rationale for each sub-category is outlined below:

Mood: The mood sub-category provides information on depressive and anxiety symptoms that are potential precursors for future mental health problems. It is paramount that schools are committed to screening students in the area of mood (Weist et al., 2007). According to the National survey of Mental Health and Well-being (Sawyer et al., 2010), 14% of Australian children and adolescents aged 4-17 have mental health or behavioural problems. These figures are even more alarming; with research suggesting that adolescents with mental health problems reported a high rate of suicidal thoughts and other health-risk behaviours, including smoking, drinking and drug use (Sawyer et al., 2010). Assessing mood allows for the identification of students that require further targeted testing. Such information also allows for specific staff within schools to play a critical role in preventative mental health programs with students or determine which students may be appropriate for external referral for specialist support.

Resilience: Resilience represents successful adaptation in the face of adversity (Luthar, Cicchetti, & Becker, 2000). This sub-category measures an individual's capacity to value effort, stay determined, and bounce back from challenges. Resilience is also an important target for treatment in anxiety, depressive and stress reactions. Schools also perceive that they have a critical role in developing resilience in students, however research has identified a distinct lack of measurement tools in resilience and in particular for adolescence (Wyn, Cahill, Holdsworth, Rowling, & Carson, 2000). Resilience is a category that appeals to school administrators, as it is recognised as a positive well-being construct rather than a negative clinical construct (Tennant, Hiller, Fishwick, Platt, Joseph, Weich ... Brown, 2007). Additionally, research suggests that resilience is modifiable and can improve with treatment and preventative programs (Cunningham, Brandon, & Frydenberg, 1999).

Engagement: School engagement is beneficial for continuous learning and personal development (Kuh, 2009a; 2009b). The engagement sub-category provides information about effort, feeling safe at school, and feeling comfortable with peers and teachers. This has recently been recognised as relevant to the area of well-being (Diener, Wirtz, Biswas-Diener, Tov, Kim-Prieto, Choi, & Oishi, 2009). Aderman (2002) identified “belonging” or connectedness with one’s school as being related to positive academic, psychological and behavioural outcomes in students. School “satisfaction” has also been recognised as a unique construct (Tomyn & Cummins, 2011). Engagement can also be related to motivation which many teachers and schools are interested in or link with school retention.

Communication: Communication is critical for students to be able to function in a school environment. This sub-category encompasses questions related to listening, expression and the critical area of help-seeking behaviour, which has been increasingly shown to be relevant to well-being (Rickwood, Deane, Wilson, & Ciarrochi, 2005). It is also a sub-category that lends itself to intervention possibilities that may be conducted within schools.

Relaxation: This sub-category is an inverse reflection of frustration and anger. Considering the depth of literature on the need to identify both internalizing and externalising behaviours, assessing anger has been considered an essential aspect of a broad multidimensional instrument. Research has also specifically recognised that anger co-exists with depression and anxiety in children, although they cannot be readily distinguished (Patrick, Dyck, & Bramson, 2010). The capacity for children and adolescents to be able to relax, both physically and emotionally has also been recognised as an important mental skill, as well as being shown to be able to be developed as a skill with intervention (Goldbeck & Schmid, 2003; Reynolds & Coates, 1986; Stueck & Gloeckner, 2005).

Positivity: There is growing evidence that being positive through a range of strategies, including recognising one’s strengths can play an important role in protecting a person from mental health concerns and enabling them to flourish (Seligman, 2011). Considering that positivity is an area that many mental and allied health professionals are involved with in schools, this sub-category specifically enables assessments of specific interventions that have been conducted to occur. The sub-category also provides information on optimism and confidence which are positively related to well-being (Furlong, Gilman, & Huebner, 2014).

Participants

Participants were 1,424 students recruited from six schools across Australia. There were 990 females and 436 males, ranging in age from 9 to 17 years, from grade 4 through to year 12. The six schools were a combination of government and non-government, urban and rural and primary and secondary schools.

Participants to determine predictive validity were 181 male students and were a subset of the 1,424 participants and all were recruited from one school. They were in year 9 with an age range of 13 – 15 years.

Procedure

Schools were invited to complete the Survey online using computer software or as a hard copy. Head of counselling or relevant staff managed data collection in a classroom or similar setting, using an administration guideline provided. Students reported on ‘how you have been feeling overall for the past four weeks’. A 5-point likert scale was used (1 = none of the time; 2 = a little of the time; 3 = some of the time; 4 = most of the time; 5 = all of the time). Participants were encouraged to be open and honest in the responses, with instructions stating that ‘there are no right or wrong answers.’ Schools that elected to complete the Survey by hard-copy returned all Surveys by mail, where researchers entered data.

Results

1.0 General

The Six-Star Student Wellbeing Survey is a six sub-category, 50 item student well-being screening tool. The six factors are: Positivity; Mood; Resilience; Engagement; Communication and Relaxation. Table 1. indicates that all six factors are highly correlated with each other. This indicates that all factors are contributing to a unitary concept of student well-being.

Table 1: Inter-correlations of six factors of the well-being survey

	1	2	3	4	5	6
1. Positivity	1					
2. Mood	.671**	1				
3. Resilience	.836**	.615**	1			
4. Engagement	.687**	.564**	.679**	1		
5. Communication	.778**	.620**	.735**	.726**	1	
6. Relaxation	.622**	.737**	.616**	.529**	.583**	1

** . Correlation is significant at the 0.01 level (2-tailed).

2.0 Reliability: Internal consistency

To determine internal consistency [or Chronbach Alpha], a reliability analysis was generated on the whole scale and then for each of the six factors. Table 2 displays each factor, number of items per factor, examples of the items and the Cronbach Alpha. Note, the total scale Alpha was .96 which is excellent reliability for a significantly large (N = 50) scale.

Table 2. Summary table of internal consistency

Factor	N items	Example questions	Chronbach alpha
Positivity	8	19. I am confident in myself 37. I think my future will be good	.88
Mood	9	15. I am happy 38. My mood goes up and down	.83
Resilience	7	21. I can keep going and stay determined 39. I can deal with problems I face	.84
Engagement	9	4. I enjoy my school 17. I have friends at school	.86
Communication	9	13. I listen well 40. My communication skills are good	.86
Relaxation	8	12. I can stay calm 36. I get upset easily	.84
Total	50		.96

3.0 Reliability: Split-half reliability

A correlation between the scores on the first half of the scale (25 items) and scores of the items on the second half of the scale (25 items) was $r_p = .89$. This is a strong measure of reliability.

4.0 Predictive validity

Predictive validity is the extent to which a score on a scale predicts scores on some criterion measure. In this case the validity of the Six-Star Student Wellbeing Survey is assessed against the help-seeking behaviour of the students. The well-being scores for students who visited the school counsellor were compared to the well-being scores of students who did not seek help. Data was determined from a report by the Head School Counsellor for “students that had made at least one visit to a school counsellor”.

The results of the t-tests indicate that the overall well-being scale score predicts help-seeking behaviour and four sub-scales show significant differences. There is a statistically significant difference between students who visit and did not visit the school counsellor in terms of Total Well-being score and scores on the subscales: Mood, Resilience, Engagement and Positivity.

Table 3: Student t-test, visit versus non-visit difference by Total Well-being and the six sub-scales

Factor	Help seeking	N	Mean	t	df	Sig. (2-tailed)
Mood	No visit	106	3.8340	2.626	181	.009
	Visit	77	3.6247			
Resilience	No visit	106	3.9764	3.036	181	.003
	Visit	77	3.7182			
Engagement	No visit	106	4.2179	3.562	181	.000
	Visit	77	3.9143			
Communication	No visit	106	4.1642	1.913	181	.057
	Visit	77	4.0104			
Relaxation	No visit	106	3.9349	1.303	181	.194
	Visit	77	3.8221			
Positivity	No visit	106	4.0642	2.038	181	.043
	Visit	77	3.8870			
Total	No visit	106	24.1528	2.867	181	.005
	Visit	77	22.9558			

5.0 Reading age

A “Readability Consensus” assessment with SPSS statistical analysis conducted on the 50 survey items determined that, based on 8 readability formulas, the reading age of the survey is 6-8 years of age. This corresponds to year 1 and is described as “very easy to read”.

Discussion

The current paper evaluated a new well-being screening tool for students in Grade 5 – Year 12. The 50 item Six Star Student Well-Being Survey has demonstrated very good reliability and predictive validity. The tool appears to measure a unitary concept of student well-being with six sub-categories that all have very good to excellent reliability. The instrument also has excellent split-half reliability. Finally, the instrument statistically predicts help-seeking behaviour in a student population.

Schools can no longer afford to ignore the mental health concerns or well-being status of their students. The Six-Star Student Wellbeing Survey provides schools with a community screening tool that delivers an objective measure of student's well-being. The assessment tool captures a multidimensional universal approach to well-being, which includes both positive psychology domains and specific information on sub-clinical mental health. The psychometric analysis in this paper shows that the tool has very good reliability and predictive validity. Internal reliability [a minimum Cronbach alpha of 0.83 on the six sub-categories] and a Cronbach alpha of 0.96 on the total of 50 items indicate strong reliability and that the sub-categories function well as a unique cluster. The results of this study provide support to a new tool that Surveys schools, year levels, and individual students on well-being.

The specific goal of predicting students who are experiencing problems in school was achieved by assessing students' sub-clinical mental health concerns and correlating it with student services (as measured by at least one-visit to a school counsellor). This test fulfils the important role of a broad mental health screening instrument for students (Levitt et. al., 2007). The information allows schools to provide support and develop skills that facilitate personal development in students with low well-being (Tennat et. al., 2007; Wyn et. al., 2000). The tool may be used to proactively benchmark student well-being and assesses intervention programs to the student population. In addition, the information gathered may provide information to school counsellors or external professionals on students with more severe mental health problems. Another valuable step to consider regarding the utility of such a tool would be the inclusion of a re-administration of the survey post intervention to determine the effectiveness of school-based well-being programs.

The next step in improving the quality and potential utility of the Six-Star Student Wellbeing Survey is to provide normative data. While schools in this initial research used mean comparisons generated from their own student population, community screens often prefer to have national norms, which further assist assessors to be confident that each student's test results will lead to a reliable and valid diagnosis.

In terms of predictive validity, the ability of the tool to identify areas of concern could be further researched. Future research would benefit from more detailed analysis of specific sub-categories and the overall score in terms of predicting visits to school counsellors. For example, an overall well-being score and information on which factors significantly predict low levels of well-being will allow school counsellors to focus on specific concerns. More detailed information on visits to a school counsellor including case severity and total number of visits would also be beneficial in verifying predictive validity.

An area of consideration for the current researchers was also the quality of data provided to schools using the Six-Star Student Wellbeing Survey. Feedback from the survey available to schools included a score in the form of a graph for each of the six sub-categories for each individual student, as well as scores / graphs of specific sub-groups, such as year levels or "home-groups", gender, overall means for the student population and the relevant national norms for this population. The 10% of relative highest and lowest scoring questions were also presented for the overall group and for each sub-group. Presenting the information in this manner allowed for easy comparison and information for intervention that is specifically tailored to individuals, or if appropriate, groups.

One of the most important goals of the current paper was to develop a well-being survey that lends itself to intervention. Traditionally, school Psychologists and staff associated with assisting students' mental health, well-being and personal development are too often restricted to reactive roles. It is critical for such professionals to redefine their roles to a more proactive one (Splett et. al., 2013). In turn, the data and information generated from the Survey will enable school staff charged with supporting students' emotional well-being to engage with students in non-traditional ways more akin to coaching.

In conclusion, the Six-Star Student Wellbeing Survey was developed to be a user friendly universal screening tool that would appeal to schools through a unique combination of six relevant sub-categories. The six sub-categories of mood, resilience, school engagement, communication, relaxation and positivity do reflect very good reliability as a

unique cluster that may be categorised as well-being. Further, the intent was to be able to develop a tool that provided a combination of both sub-clinical mental health concerns and positive psychology factors into one survey, to enable schools to have important and relevant information available to them on individual students and groups. In addition, it was intended for the information collected to enable schools to develop preventative programs based on evidence. This would allow schools to better use resources and also measure the effectiveness of personal development programs either currently in place or that they intend to conduct. While there are a number of areas to consider for further investigation the present results suggest that the current version of the Six-Star Student Wellbeing Survey has solid psychometric properties and will be able to provide professionals and schools with confidence in its implementation.

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