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EDUCATIONAL ASSESSMENT & EVALUATION | RESEARCH ARTICLE

Wellbeing and Social Safeness Questionnaire (WSSQ): Initial psychometric assessment of a short digital screening instrument for primary school children

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Abstract: In the Netherlands, all schools are required to develop a wellbeing and social safeness policy. Despite this legislation, there is currently no adequate instrument available to measure the wellbeing and social safeness. Therefore, the present study investigates the psychometric properties of the Wellbeing and Social Safeness Questionnaire (WSSQ). The WSSQ is a Dutch online questionnaire and was filled in by 1468 students (grade 5–8, age 8–12) from 14 Dutch primary schools. Exploratory and confirmatory factory analysis showed an adequate fit for a two factor structure consisting of (1) School-Related Wellbeing and Social Safeness, and (2) Generic Wellbeing. Adequate reliability and construct validity were demonstrated for both factors. Conceptually, it was found that school-related social safeness and wellbeing are not empirically separate factors, however, generic wellbeing may deserve separate consideration. The initial psychometric properties of the WSSQ are promising. This online instrument could potentially be used as a screening tool for teachers to measure social safeness and wellbeing of students.

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Jochem M. GoldbergThis research was conducted in the context of the PhD-research of the first author (Jochem Goldberg). Jochem Goldberg is affiliated with the department "Psychology, Health and Technology" of the University of Twente in the Netherlands. This department uses psychological expertise in designing and evaluating technological innovations, that contribute to well-being, health and effective healthcare. The PhD-research of Jochem Goldberg focuses on the implementation of positive psychology in schools (Positive Education), to increase the wellbeing of students.

PUBLIC INTEREST STATEMENT

Increasing the social safeness and wellbeing of children at schools is of the utmost importance; it is related to feelings of acceptance, less anxiety and desired academic outcomes. In the Netherlands, this even led to a nation-wide policy to monitor the social safeness and wellbeing of children at schools. The current research describes the development and validation of an instrument (the Wellbeing and Social Safeness Questionnaire, WSSQ) to measure the social safeness and wellbeing of children, aged 8-12. The WSSQ is an online instrument, giving teachers/practitioners direct insight in the scores of the students. The results of the current study give a first indication that the WSSQ is a reliable and valid instrument. Conceptually there was no distinction to be found between social safeness and wellbeing, resulting in the subscale: School-related Wellbeing and Social Safeness. Additionally, a subscale was formed with items concerning Generic Wellbeing.

Subjects: Behavioral Sciences; Mental Health; Positive Psychology; Education; School Psychology

Keywords: wellbeing; social safeness; questionnaire; digital; primary schools; secondary schools

1. Introduction

The impact of bullying has led to national anti-bullying legislation in e.g. The Netherlands, Canada, Australia, United States, Austria, United Kingdom, New Zealand. In the Netherlands, the national anti-bullying legislation obligates schools to monitor the social safeness of their students. Schools therefore need to have an efficient active safety policy in place, to do everything needed in securing a safe environment for their students. Monitoring the social safeness of the students provides information to implement this policy. A school is only able to act on their policy when they have insight in the objective and subjective social safeness of their students (Ministerie van Onderwijs, Cultuur en Wetenschap, 2016), resulting in a need for an effective measurement instrument.

Extensive research has been carried out in relation to the concept of social safeness in adults (Gilbert et al., 2009; Kelly, Zuroff, Leybmam & Gilbert, 2012), but there is a dearth of research on children's social safeness. Gilbert et al., (2009, p. 136) define social safeness in adults as the "warm, calming affective experience of feeling cared about, reassured by and connected to other people". Kelly et al. (2012) state that social safeness is important for the health and wellbeing of an individual and is related to feelings of being accepted. Additional research by Gilbert et al. (2008), Gilbert (2010)) shows that social safeness correlates negatively with feelings of depression, anxiety, hostility and feelings of inferiority amongst adults. The World Government Summit in collaboration with the International Positive Education Network states that, to achieve socially valued outcomes, wellbeing is instrumental (World Government Summit, 2017).

When looking at the wellbeing of children more specifically, it is found that their wellbeing is influenced by external and internal child factors. External factors are for example: social economic status, quality of family relationships, quality of social network and a healthy and safe environment. Internal factors are for example: optimism, confidence, locus of control and social skills (Hicks, Newton, Haynes, & Evans, 2011; Laevers, Heylen, & Daniëls, 2014; Lippman, Moore, & McIntosh, 2009; Michaelson, Mahony, & Schifferes, 2012; Thompson & Aked, 2009; UNICEF, 2007). Wellbeing is associated with better learning outcomes (Berger, Alcalay, Torretti, & Milicic, 2011; Fredrickson, 2001; Martin & Marsh, 2008 &, 2009; Oswald, Proto, & Sgroi, 2015; Pietarinen, Soini, Pyhältö, 2014; Rowe, Hirsch & Anderson, 2007), greater creativity and holistic thinking (Fredrickson, 2001).

To the authors' knowledge, there is no research available on the relationship between wellbeing and social safeness in children. Previous research, however, indicates a relationship between social experiences (e.g. social support or bullying) and wellbeing in children. A meta-analysis comparing 246 correlational studies found a small but positive association between social support and well-being of children and adolescents (Chu, Saucier, & Hafner, 2010). Natvig, Albrektsen, and Qvarnstrøm (2003) found in their study with 887 adolescents that social support from teachers enhanced student happiness significantly and that the happiest pupils experienced significantly more support than students who reported to be unhappy. Tian, Zhao, and Huebner (2015) state in their research that social contextual factors (e.g. teacher support, classmate support) are crucial for adolescents' optimal subjective wellbeing in school. Additionally, research with over fifteen thousand children in public and private schools showed an association between bullying and poor psychosocial adjustment (Nansel et al., 2001). A more specific study with 1058 schoolchildren aged ten to twelve, showed that social bullying negatively correlated with indicators of subjective wellbeing (Navarro, Ruiz-Oliva, Larrañaga, & Yubero, 2015).

To date, there is no instrument available in the Netherlands that can measure social safeness and wellbeing in schools. Existing questionnaires for children tend to focus on either psychological problems (e.g. SDQ (Goodman, 2001)) or Health Related Quality of Life (e.g. Kidscreen (Ravens-Sieberer et al., 2007) or KINDL (Ravens-Sieberer & Bullinger, 1998)). Although these instruments show good psychometric properties, they do not include all aspects that are particularly important for wellbeing and social safeness. The identification of low scoring individuals on these topics can stimulate teachers to implement interventions, aimed at increasing the wellbeing and social safeness of their children. This in turn, can lead to a wide range of beneficial outcomes (e.g. learning outcomes, creativity, psychological adjustment), as described earlier.

This paper therefore describes the first findings of the development and psychometric qualities of such an instrument, the Wellbeing and Social Safeness Questionnaire (WSSQ). This Dutch instrument intends to measure wellbeing and social safeness of primary school students aged 8–12. The current research describes the construction and preliminary validation of the WSSQ.

2. Methods

2.1. Pilot study

Before conducting the current research, 553 students filled in a draft version of the WSSQ on an IPad and 40 students were interviewed in focus groups (Berends & Eenshuistra, 2016). Results from this pilot study indicated that the students were enthusiastic about the design of the tool and reported no difficulties in completing the questionnaire. The students had some suggestions to improve the wordings of several specific items. The results from this pilot study informed a revision of the questionnaire, taking into account the students' recommendations (Berends & Eenshuistra, 2016).

2.2. Participants

In April 2016, schools were recruited through convenience sampling. To ensure that the composition of the sample was similar to the composition of the Netherlands as a whole (Central Bureau of Statistics, CBS), the schools were recruited based on the social economic status, ethnicity and urbanity of their students. This information was gathered using CBS-data presented per zip code. The sample consisted of 1468 grade 5–8 students divided over 14 primary schools. The students were equally divided amongst grades (5–8) and age (8–12). 51.4% of the participants was male.

2.3. Procedure

Prior to filling in the WSSQ, parents were informed about the goals of the research and about the possibility to object against using the data of their children. When parents did not object, passive informed was given for using the data. To ensure a uniform data collection, a researcher visited the schools and gave the students a verbal standardized introduction, explaining how to fill in the WSSQ and explaining the difficult terms (as described in Berends & Eenshuistra, 2016). To avoid order effects, half of the students filled out the digital WSSQ first, followed by two theoretically related paper-and-pencil questionnaires, whereas the other half of the students filled out the measurements the other way around. To be able to match the data, while guaranteeing anonymity, students were given a unique student number.

As the WSSQ is a digital questionnaire (online application), the WWSQ-data were collected via an Ipad. There was no option for the students to fill in "don't know" or to skip a question, resulting in fully completed questionnaires with no missing data. Both Likert scales and intensity items were used in the WSSQ. The range of answer categories was modified per item (e.g. very unhappy—very happy; totally disagree—totally agree). The layout of the WSSQ involves emoticons with matching colours, and is therefore both easy and fun to fill out for the students. The emoticons are provided in the appendix (Figure 1).

2.4. Scale construction

The items for the WSSQ were developed based on concepts relevant to social safeness and wellbeing at the school level (Table 1). Subject matter experts were involved in the construction of these items. The formulation of the items of the WSSQ is deliberately concise and concrete, to make the questions understandable for young children. To conceptualize and measure wellbeing, Keyes (2005) describes three main components of wellbeing: emotional wellbeing, social wellbeing and psychological wellbeing. High levels on these factors indicate a state of flourishing. Laevers et al. (2014) state that flourishing in schools can be seen in signals of satisfaction, contentment and experiencing virtue. The child is feeling good in general and is content with his or her life (hedonic wellbeing), but also lives towards optimal personal development (eudemonic wellbeing). When applying Keyes' definition of wellbeing at a school level, Long, Huebner, Wedell, and Hills (2012) identified four factors critical to wellbeing in their study with 921 adolescents. These included positive emotions, negative emotions, fear-related negative emotions, and school satisfaction.

Based on the above described conceptualization of wellbeing, six items were formulated towards the concepts of hedonic wellbeing (emotional wellbeing), with four items reflecting different school situations in which the student can experience positive emotions, one item reflecting general satisfaction with life and one item reflecting vitality. Also, six items were formulated towards the concepts of eudemonic wellbeing (psychological and social wellbeing), with one question for each of the concepts: optimism, resilience, positive relations, self-appreciation, autonomy and meaning in life.

Additional to the social components embedded in hedonic and eudemonic wellbeing, eight items were formulated specifically aimed at measuring experienced bullying and subjective social safety evaluations. Including these items aligns with the policy of the Dutch government (Ministerie van Onderwijs, Cultuur en Wetenschap, 2016) and with the (fear related) negative emotions in the operationalization by Long et al. (2012). Of these eight items, four were generated based on actually experienced social behaviour, which is the amount of incidents in which a student was the victim (or felt a victim) as a result of actions of someone else. The incidents can consist of personally experienced bullying behavior or indirectly witnessed bullying of others. The remaining four items measure the degree in which a student experiences worries about victimization and included feeling safe in the classroom, getting along with classmates and feeling safe under supervision.

2.5. Measures

In order to get an indication of the convergent and discriminant validity of the WSSQ, two paper and pen questionnaires that were considered to be theoretically related to the constructs "well-being" and "social safeness", were completed by the students: Kidscreen −27 (Ravens-Sieberer et al., 2007)) and Successful Schools questionnaire (Berend, 2015).

The Kidscreen-27 contains 27 items addressing the experience of health and wellbeing (quality of life) of the student. The instrument is specifically suitable for children older than 8 years. The Kidscreen addresses quality of life in the following areas: 1. Physical Well-Being (e.g. Have you felt fit and well?); 2. Psychological Well-Being (e.g. Has your life been enjoyable?); 3. Autonomy & Parents (e.g. Have you had enough time for yourself?); 4. Peers & Social Support (e.g. Have you spent time with your family?); and 5. School Environment (e.g. Have you been happy at school?). A psychometric evaluation of the Kidscreen-27 showed sufficient construct validity, an interpretable factor structure that explained 56% of the variance, and acceptable reliability of the total scale and all subscales with Cronbach Alpha's above .70 (Ravens-Sieberer et al., 2007). In the current research, the total score showed good reliability (Cronbach's Alpha of .83), the individual subscales showed questionable to acceptable Cronbach's Alpha's ranging from .61 to .72, with subscale 4 "peers & social support" as an exception showing a poor Cronbach's Alpha of .47.

Table 1. Scale construction

Concept	Meaning	Items
Positive feelings	The child enjoys, is having fun, smiles, sings, makes contact	1) How do you feel right now? 2) How do you feel most of the time?
		3) How do you feel most of the time at school?
		4) How do you feel when there is no adult present during breaks?
Satisfaction with life	The child is flourishing within his or her opportunities and his or her environment	5) How content are you with your life?
Vitality	The child feels healthy, is energetic, feels relaxed	6) I feel healthy
Optimism	The child expects a positive outcome in most situations. The child has an external locus of control	7) If I have a problem at school, it usually ends well
Resilience	The child regulates negative emotions in the case of setbacks	8) If I have a bad experience at school, I will be happy soon after
Relationships with others	The child is happy to engage in contact with others, receives support from those contacts and feels appreciated by others	9) I have nice friends
Self-appreciation	The child feels self-worth and that his life is important; is satisfied with his or her abilities	10) I like myself
Autonomy	The child makes his or her own decisions about his or her life, within his or her age appropriate boundaries	11) I can choose at school what I want to do
Meaning in life	The child values his or her life as important and worthwhile	12) It is good that I exist
Experienced bullying	The degree in which students personally have experienced victimization	13) Classmates bully me (emotionally, verbally or both) 14) Classmates hit me or kick me (physically)
	The degree in which students noticed victimization at others	15) Classmates fight with each other 16) In this class you get laughed at when you ask a silly question
Subjective social safety evaluations	The degree in which students experience the environment to be safe	17) I feel safe in this class (globally) 18) I feel safe with this teacher (under supervision)
	The degree in which students experience the environment to be positive	19) I enjoy my class 20) I get along with most of my classmates

Therefore, subscale 4 wasn't analyzed independently. Answer categories of the Kidscreen-27 ranged from never (1) to always (5).

The Successful Schools questionnaire consists of 12 items addressing the degree to which the students experience unsafe situations at school (bullying, threatening, abusing, theft or victimization) and the degree to which they feel unsafe (Berends, 2015). Since no validated social safeness questionnaire was available to use in this study, this non-validated questionnaire was selected as on the base of its face-validity. In the current research, the reliability was found to be good (Cronbach's Alpha of .81). Sample questions from this instrument include: "Do other children bully you sometimes at school?" and "Do you feel unsafe in the classroom?". Answer categories ranged from never (1) to always (3).

3. Results

3.1. Exploratory factor analysis

The dataset was randomly divided in two separate samples of respectively 733 and 734 participants. To analyse the factor structure of the WSSQ, first an exploratory factor analysis with robust maximum likelihood estimation was conducted on the data of the first sample in the statistical programme Mplus 7.11 (Muthén & Muthén, 1998-2010). The number of factors underlying the WSSQ items was determined using parallel analysis (Hayton, Allen, & Scarpello, 2004), as the number of factors in the real data with eigenvalues greater than the average eigenvalue from random data.

The parallel analysis in the exploratory factor analysis on the first sample, indicated a two factor structure. Out of all the items, fifteen items loaded predominantly on the first factor (factor loadings ranging from .24 to .74) and five items loaded predominantly on the second factor (factor loadings ranging from .49 to .65). Factor 1 consisted of all items related to school and factor 2 consisted of all general items (item 2, 5, 6, 10 and 12). The cumulative proportion explained variance of both factors was found to be 27.44%. Since the factor loading of item 4 (.24) was clearly lower than all other items and below the recommended .32 (Tabachnick & Fidell, 2013), it was decided to leave this item out of the confirmatory analyses.

3.2. Confirmatory factor analysis

To cross-validate the factor structure, confirmatory factor analysis with robust maximum likelihood was conducted using the data of the second sample. The factor model derived from the exploratory analysis was tested with respect to fit to the data and compared with a strict unidimensional model in which all items loaded on a single dimension. The comparative fit index (CFI), the standardized root mean square residual (SRMR) and the root mean square error of approximation (RMSEA) were used to examine and compare the fit of the models. To be considered respectively an acceptable or good fit, CFI values should be ≥.90 or ≥.95, SRMR values should be ≤.10 or ≤.08, and RSMEA values should be ≤.08 or ≤.06 (Browne & Cudeck, 1993; Hu & Bentler, 1998). Additionally, the difference in fit between both models was statistically tested using the Mplus DIFFTEST procedure, which appropriately computes differences in chi-square values of nested models, with a p-value ≤ 0.05 indicating a better fit for the least restrictive model.

The two factor structure showed a clearly better fit on CFI, RMSEA and SMRM (Table 2). The Chi-Square test for difference testing compared both the fits and also indicated a better fit for the two factor model (X^2 = 103.18, p < .001). RMSEA and SRMR indicated adequate and good fit for the correlated two-fact model, but CFI was below the threshold for adequate fit.

3.3. Error correlations

Initial models were based on the restrictive assumption that the error terms of the items were uncorrelated. However, findings of correlated error terms are common in psychological measures (Byrne, Baron, Larsson, & Melin, 1995). The presence of correlated error terms may also indicate method effects, such as perceived redundancy or overlap in item content (Byrne, 2005). A model can be further improved by allowing such error terms to correlate, but only when this can be justified and interpreted substantively. When the best fitting model did not achieve acceptable fit, the constraints

Table 2. Fit indices confirmatory factor analysis with robust maximum likelihood

Model	X^2	*df*	CFI	RMSEA	SRMR	ΔX^2	*p*
One factor	539.62	152	0.78	0.059	0.065		
Two factor	426.91	151	0.84	0.050	0.057	103.18	.000
Two factor with error correlations	319.56	146	0.90	0.041	0.047		

CFI = comparative fit index, SRMR = standardized root mean square residual, RMSEA = root mean square error of approximation.

of the models were relaxed one at a time by allowing the error terms with the largest modification index within each factor to correlate, provided that this made substantive sense.

Based on overlap in item content, five error correlations were allowed (item 7 with 8, 8 with 9, 9 with 10, 18 with 19 and 5 with 13). The final two-correlated factor model demonstrated good fit according to both the RMSEA and SRMR and adequate fit according to the CFI. The final items of the WSSQ are provided in the appendix (Table 5), together with their corresponding factor loadings.

3.4. Internal consistency and discriminant validity

Reliability of the WSSQ was assessed by calculating Cronbach's Alpha and McDonald's Omega values. Alpha and Omega of .70 and above were considered to be acceptable for research purposes (Cicchetti, 1994). Additionally, Pearson intercorrelations between observed factors were determined. To be considered a related but sufficiently distinct factor, the factors are expected to be significantly but no more than moderately correlated (correlation coefficient lower than .70 as stated in Hinkle, Wiersma, and Jurs (2003).

The Cronbach's Alpha and McDonald Omega of the first subscale (resp. 0.83 and 0.76) and the second subscale (resp. .74 and .79) indicated an adequate reliability. There were no options to increase the reliability of the scales by deleting any of the items. A significant moderate Pearson correlation of .57 was found between both factors of the WSSQ, confirming that both subscales are related but sufficiently distinct to deserve separate status.

3.5. Convergent and divergent validity

Pearson correlations were calculated between (subscales of) the WSSQ and two theoretically related questionnaires (Table 3). Based on the scale construction, it was expected that subscales (partly) consisting of social behaviour items would correlate highly with the Successful Schools scale and that subscales (partly) consisting of wellbeing items would correlate highly with the Kidscreen-27 (convergent validity). It was also expected that subscales without social behaviour or wellbeing components would correlate low or moderate with respectively the Successful Schools scale or the Kidscreen-27 (divergent validity). To assess the significance of the difference between two correlation coefficients, the Fisher r-to-z transformations was used to calculate z-scores, followed by an asymptotic z-test (Steiger, 1980).

The first subscale of the WSSQ consisted of social behaviour items as well as wellbeing items and therefore was called "School-related Social Safeness and Wellbeing". Mean scores on this subscale correlated highly with the total scores of the Successful Schools Questionnaire as well as the Kidscreen-27. This subscale is formed by 14 items, tallied to possible total scores between 25 and 70.

The second subscale of the WSSQ consisted solely of wellbeing items not focused on a specific school situation, and therefore was called "generic wellbeing". Mean scores on this subscale only correlated highly with the total score of the Kidscreen-27. This subscale is formed by 5 items, tallied to possible total scores between 5 and 25.

The correlations of both the subscales with the Successful Schools Questionnaire differed significantly ($z = 8.12$, $p < .001$), indicating a significantly higher correlation between the Successful Schools Questionnaire and the School-related Social Safeness and Wellbeing subscale. The correlations of both the subscales with the total score of the Kidscreen-27 were not significantly different from each other.

Concerning the subscales of the Kidscreen-27, the scores on "Physical Wellbeing" were significantly higher correlated with the Generic Wellbeing subscale ($z = -1.71$, $p = .044$), whereas the scores on "School Environment" ($z = 3.78$, $p < .001$) were significantly higher correlated with the School-related Social Safeness and Wellbeing subscale.

Table 3. Pearson's correlation coefficients between the WSSQ, successful schools total, Kidscreen-27 total and subscales of the Kidscreen-27

	Successful Schools	Kidscreen-27					
	Total	Total	Subscale 1	Subscale 2	Subscale 3	Subscale 4**	Subscale 5
School-related Social Safeness and Wellbeing	.63*	.65*	.44*	.50	.38	-	.58*
Generic Wellbeing	.33*	.62	.50*	.46	.39	-	.45

Kidscreen-27 subscales are respectively: 1. Physical Wellbeing, 2. Psychological Wellbeing, 3. Autonomy and Parent Relation, 4. Social Support and Peers, 5. School Environment; *$p \leq 0.05$ (2-tailed); **subscale 4 was not analyzed independently based on its poor reliability*

3.6. Influences of age, grade and gender

T-tests with independent samples were conducted to test associations with age, grade and gender. Preliminary normative values were computed and decile scores were calculated.

In general, students scored high on both School-related Social Safeness and Wellbeing (M = 4.15, SD = 0.47) and Generic Wellbeing (M = 4.35, SD = 0.48). No significant difference was found between gender, age or grade on either of the two subscales. Mean scores are presented in the appendix (Table 4), providing insight in the small differences in decile scores.

4. Discussion

The present study is the first to investigate the psychometric properties of a Dutch wellbeing and social safeness instrument for school children. The need for such an instrument is evident, since developing a wellbeing and social safeness policy in schools is placed on national agendas (e.g. Ministerie van Onderwijs, Cultuur en Wetenschap, 2016; SCSEEC, 2013). The instrument developed and investigated in this research shows adequate reliability and validity to measure social safeness and wellbeing in grade 5–8 students.

A two factor model was identified in the WSSQ, resulting in two subscales. The first subscale "School-related Social Safeness and Wellbeing" consists of fifteen school-related items about wellbeing and social behaviour at school. As would be expected, it correlated highly with both the theoretically related dimensions of wellbeing and social safeness, as measured with other instruments. The second subscale "Generic Wellbeing" consists of five general wellbeing items about wellbeing in non-school-related situations. Compared with the School-related Social Safeness and Wellbeing Subscale, the Generic Wellbeing subscale correlated significantly lower with the Successful Schools Questionnaire and the subscale "School Environment" from the Kidscreen-27. This pattern of correlations indicates both the convergent and discriminant construct validity of both subscales. This indication was strengthened by the moderate correlation between both the factors. Both the factors of the WSSQ also showed good reliability, with no relevant options to increase the reliability by removing any of the items.

Factor analysis did not show a clear distinction between school-related wellbeing and social safeness, which was expected a-priori. This aligns with the unclear definition of social safeness in children. The extent to which a child experiences wellbeing, is the result of a continuous interaction between external and internal factors, like "a healthy and safe environment" and "social skills" (Hicks et al., 2011; Laevers et al., 2014; Lippman et al., 2009; Michaelson et al., 2012; Thompson & Aked, 2009; UNICEF, 2007). Therefore, social safeness may be an integral aspect of school-related wellbeing and not a separate construct. Long et al. (2012) found a similar result, showing that the absence of fear-related negative emotions (feeling unsafe) is part of school-related subjective wellbeing. It can be

argued that school-related wellbeing encompasses social safeness in schools. Social safeness for students can then be seen as a specific form of wellbeing applicable to the school environment.

4.1. Practical implications

The majority of students scored very high on the WSSQ, which makes it easier to identify low scoring individuals, but harder to differentiate between high scoring individuals. This suggests that the WSSQ will be useful in identifying students at risk. The WSSQ can, therefore, be seen as a screening instrument, rather than an outcome instrument. Using this instrument, it is possible for the teacher to identify which student is experiencing problems and what aspect of wellbeing or social safeness the problem relates to. Since the different concepts in the WSSQ are addressed with one or two questions, more comprehensive measurements might be needed to further explore the needs of the individual student.

The fact that the WSSQ is an online questionnaire is beneficial for the screening purpose of the instrument. The online character of the instrument provides the teacher with the opportunity to get an easy and quick overview of low scoring students on School-related Social Safeness and Wellbeing or Generic Wellbeing. Based on these scores, teachers can choose to implement evidence-based strategies or interventions to support the development of students' wellbeing and social safeness. Teachers will also be able to choose whether they want to include the Generic Wellbeing scale in their measurements, or whether they are solely interested in the School-related factor.

4.2. Strengths, limitations and recommendations

The present study provides the first preliminary evaluation of a short measure of wellbeing and social safeness in children, using a large sample, similar to the composition of the Netherlands as a whole, based on criteria of the Central Bureau of Statistics. This results in robust norm scores.

Since not many studies have tried to assess wellbeing and social safeness in school children, there were no criterion measures and not many theoretically related questionnaires available to test the concurrent and construct validity of the WSSQ. The Successful Schools questionnaire was used as a theoretically related questionnaire for the concept of social safeness, but information about its psychometric properties was lacking. The Kidscreen-27, used as a theoretically related questionnaire for the concept of wellbeing, was validated extensively, but uses "health related quality of life" as their main concept, instead of "wellbeing". The true construct validity of the WSSQ requires further study, preferably by making use of the Multitrait-Multimethod approach (Campbell & Fiske, 1959); for instance by examining associations with teacher-observed ratings.

It would be valuable to examine the added value of using the WSSQ as a screening instrument in a quantitative and qualitative manner. Further research should be conducted to determine (i) if screening the students via the instrument provides teachers with more accurate information about student overall wellbeing and social safeness and (ii) how this information can be utilized to enhance the classroom and school environment thereby supporting children's social, emotional and academic development. Additionally, it would be valuable to research whether this instrument is also suitable for younger (age 4–8) and older children (age 12–16).

Additionally, it would be valuable to investigate whether there any factors that influence the scores on the subscales. Interestingly, in the current research, there is hardly any variation found in subscale scores across age and gender. Previous research is inconclusive about the exact influence of gender and age on the wellbeing in children. For example, Løhre, Moksnes, and Lillefjell (2014), find no influence of gender on wellbeing, whilst Konu and Lintonen (2006) state that girls and younger students experience more wellbeing. Concerning social safeness in children, to date, there is little research done towards the influence of age and gender.

It can be noted that the WSSQ makes use of both Likert-type items and intensity items. Whilst it is not recommended practice in survey research to vary item type and directionality, the emoticon was consistent across all items. This procedure appeared to be well received by the students, sitting within groups. It is assumed that the emoticon can provide an easily understood way in which young students can report affect along a meaningful negative to positive dimension. The use of the current questionnaire without some form of the non-verbal emoticon is not recommended.

5. Conclusion

The results from this study indicate that the Wellbeing and Social Safeness Questionnaire is a promising screening instrument to measure the social safeness and wellbeing of students. The initial psychometric properties of the instrument are adequate and the factor structure provides more insight in the theoretical framework of social safeness and wellbeing. The WSSQ helps schools with putting their social safeness and wellbeing policies in practice and the digital environment gives teachers an immediate insight in the social safeness and wellbeing of their students.

Supplementary Material
Supplementary data for this article can be accessed here.

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References

Berends, I. E. (2015). *Ervaren sociale veiligheid meten in het primair onderwijs (in acht vragen)*. Duivendrecht: PI Research.
Berends, I. E., & Eenshuistra, R. M. (2016). *Eigenwijzr – de handleiding*. Duivendrecht: PI Research.
Berger, C., Alcalay, L., Torretti, A., & Milicic, N. (2011). Socio-emotional well-being and academic achievement: Evidence from a multilevel approach. *Psicologia: Reflexão e Crítica*, *24*(2), 344–351.
Browne, M. W., & Cudeck, R. (1993). Alternative ways of assessing model fit. In K. A. Bollen & J. S. Long (Eds.), *Testing structural equation models* (pp. 136–162). Newbury Park, CA: Sage.
Byrne, B. M. (2005). Factor analytic models: Viewing the structure of an assessment instrument from three perspectives. *Journal of Personality Assessment*, *85*(1), 17–32. doi:10.1207/s15327752jpa8501_02
Byrne, B. M., Baron, P., Larsson, B., & Melin, L. (1995). The beck depression inventory: Testing and cross-validating a second-order factorial structure for Swedish nonclinical adolescents. *Behaviour Research and Therapy*, *33*(3), 345–356. doi:10.1016/0005-7967(94)E0050-S
Campbell, D. T., & Fiske, D. W. (1959). Convergent and discriminant validation by the multitrait-multimethod matrix. *Psychological Bulletin*, *56*(2), 81–105.
Chu, P. S., Saucier, D. A., & Hafner, E. (2010). Meta-Analysis of the relationships between social support and well-being in children and adolescents. *Journal of Social and Clinical Psychology*, *29*(6), 624–645. doi:10.1521/jscp.2010.29.6.624
Cicchetti, D. V. (1994). Guidelines, criteria, and rules of thumb for evaluating normed and standardized assessment instruments in psychology. *Psychological Assessment*, *6*(4), 284–290. doi:10.1037/1040-3590.6.4.284
Fredrickson, B. L. (2001). The role of positive emotions in positive psychology: The broaden- and-build theory of positive emotions. *American Psychologist*, *56*(3), 218–226.
Gilbert, P. (2010). *The compassionate mind: A new approach to life's challenges*. Oakland, CA: New Harbinger Publications.
Gilbert, P., McEwan, K., Mitra, R., Franks, L., Richter, A., & Rockliff, H. (2008). Feeling safe and content: A specific affect regulation system? Relationship to depression, anxiety, stress, and self-criticism. *Journal of Positive Psychology*, *3*(3), 182–191. doi:10.1080/17439760801999461
Gilbert, P., McEwan, K., Mitra, R., Richter, A., Franks, L., Mills, A., … Gale, C. (2009). An exploration of different types of positive affect in students and in patients with bipolar disorder. *Clinical Neuropathology*, *6*(4), 135–143.
Goodman, R. (2001). Psychometric properties of the strengths and difficulties questionnaire. *Journal of the American Academy of Child and Adolescent Psychiatry*, *40*(11), 1337–1345. doi:10.1097/00004583-200111000-00015
Hayton, J. C., Allen, D. G., & Scarpello, V. (2004). Factor retention decisions in exploratory factor analysis: A tutorial on parallel analysis. *Organizational*

Research Methods, *7*(2), 191–205. doi:10.1177/1094428104263675

Hicks, S., Newton, J., Haynes, J., & Evans, J. (2011). *Measuring children's and young people's well-being*. Cardiff: Office for National Statistics and BRASS.

Hinkle, D. E., Wiersma, W., & Jurs, S. G. (2003). *Applied statistics for the behavioral sciences*. Boston, Mass: Houghton Mifflin.

Hu, L. T., & Bentler, P. M. (1998). Fit indices in covariance structure modeling: Sensitivity to underparameterized model misspecification. *Psychological Methods*, *3*(4), 424–453. doi:10.1037/1082-989X.3.4.424

Kelly, A. C., Zuroff, D. C., Leybman, M. J., & Gilbert, P. (2012). Social safeness, received social support, and maladjustment: Testing a tripartite model of affect regulation. *Cognitive Therapy and Research*, *36*(6), 815–826. doi:10.1007/s10608-011-9432-5

Keyes, C. L. M. (2005). Mental illness and/or mental health? Investigating axioms of the complete state model of health. *Journal of Consulting and Clinical Psychology*, *73*(3), 539–548. doi:10.1037/0022-006X.73.3.539

Konu, A. I., & Lintonen, T. P. (2006). School well-being in Grades 4–12. *Health Education Research*, *21*(5), 633–642. doi:10.1093/her/cyl032

Laevers, F., Heylen, L., & Daniëls, D. (2014). *Ervaringsgericht werken met 6- tot 12-jarigen in het basisonderwijs*. Leuven: Cego.

Lippman, L. H., Moore, K. A., & McIntosh, H. (2009). Positive indicators of child well-being: A conceptual framework, measures and methodological issues. *Applied Research in Quality of Life*, *6*(4), 425–449. doi:10.1007/s11482-011-9138-6

Løhre, A., Moksnes, U. K., & Lillefjell, M. (2014). Gender differences in predictors of school wellbeing? *Health Education Journal*, *73*(1), 90–100. doi:10.1177/0017896912470822

Long, R. F., Huebner, E. S., Wedell, D. H., & Hills, K. J. (2012). Measuring school-related subjective well-being in adolescents. *American Journal of Orthopsychiatry*, *82*(1), 50–60. doi:10.1111/j.1939-0025.2011.01130.x

Martin, A. J., & Marsh, H. W. (2008). Academic buoyancy: Towards an understanding of students' everyday academic resilience. *Journal of School Psychology*, *46*(1), 53–83. doi:10.1016/j.jsp.2007.01.002

Martin, A. J., & Marsh, H. W. (2009). Academic resilience and academic buoyancy: Multidimensional and hierarchical conceptual framing of causes, correlates and cognate constructs. *Oxford Review of Education*, *35*(3), 353–370. doi:10.1080/03054980902934639

Michaelson, J., Mahony, S., & Schifferes, J. (2012). *Measuring well-being. A guide to practicioners*. London: New Economics Foundation.

Ministerie van Onderwijs, Cultuur en Wetenschap. (2016). Zorgplicht sociale veiligheid leerlingen op school. Retrieved from https://www.rijksoverheid.nl/documenten/brochures/2016/07/18/zorgplicht-sociale-veiligheid-leerlingen-op-school

Muthén, L. K., & Muthén, B. O. (1998-2010). *Mplus user's guide* (7th ed.). Los Angeles, CA: Muthén & Muthén.

Nansel, T. R., Overpeck, M., Pilla, R. S., Ruan, W. J., Simons-Morton, B., & Scheidt, P. (2001). Bullying behaviors among US youth: Prevalence and association with psychosocial adjustment. *Journal of the American Medical Association*, *285*(16), 2094–2100. doi:10.1001/jama.285.16.2094

Natvig, G. K., Albrektsen, G., & Qvarnstrøm, U. (2003). Associations between psychosocial factors and happiness among school adolescents. *International Journal of Nursing Practice*, *9*(3), 166–175. doi:10.1046/j.1440-172X.2003.00419.x

Navarro, R., Ruiz-Oliva, R., Larrañaga, E., & Yubero, S. (2015). The impact of cyberbullying and social bullying on optimism, global and school-Related happiness and life satisfaction among 10-12-year-old schoolchildren. *Applied Research in Quality of Life*, *10*(1), 15–36. doi:10.1007/s11482-013-9292-0

Oswald, A. J., Proto, E., & Sgroi, D. (2015). Happiness and productivity. *Journal of Labor Economics*, *33*(4), 789–822. doi:10.1086/681096

Pietarinen, J., Soini, T., & Pyhältö, K. (2014). Students' emotional and cognitive engagement as the determinants of well-being and achievement in school. *International Journal of Educational Research*, *67*(1), 40–51. doi:10.1016/j.ijer.2014.05.001

Ravens-Sieberer, U., Auquier, P., Erhart, M., Gosch, A., Rajmil, L., Bruil, J., … Kilroe, J. (2007). The KIDSCREEN-27 quality of life measure for children and adolescents: Psychometric results from a cross-cultural survey in 13 European countries. *Quality of Life Research*, *16*(8), 1347–1356. doi:10.1007/s11136-007-9240-2

Ravens-Sieberer, U., & Bullinger, M. (1998). Assessing health-related quality of life in chronically ill children with the German KINDL: First psychometric and content analytical results. *Quality of Life Research*, *7*(5), 399–407.

Rowe, G., Hirsh, J. B., & Anderson, A. K. (2007). Positive affect increases the breadth of attentional selection. *Proceedings of the National Academy of Sciences*, *104*(1), 383–388. doi:10.1073/pnas.0605198104

Standing Council on School Education and Early Childhood. (2013). National safe schools framework. Retrieved from https://studentwellbeinghub.edu.au/docs/default-source/nationalsafeschoolsframework-pdf.pdf?sfvrsn=0

Steiger, J. H. (1980). Tests for comparing elements of a correlation matrix. *Psychological Bulletin*, *87*(2), 245–251. doi:10.1037/0033-2909.87.2.245

Tabachnick, B. G., & Fidell, L. S. (2013). *Using multivariate statistics* (*6th* ed.). Boston, MA: Pearson.

Thompson, S., & Aked, J. (2009). *A guide to measuring children's well-being. Backing the future: Practical guide 2*. London: New Economics Foundation.

Tian, L., Zhao, J., & Huebner, E. S. (2015). School-related social support and subjective well-being in school among adolescents: The role of self-system factors. *Journal of Adolescence*, *45*(8), 138–148. doi:10.1016/j.adolescence.2015.09.003

UNICEF. (2007). *Child poverty in perspective: An overview of child well-being in rich countries*. Florence: Author.

World Government Summit. (2017). *The state of positive education*. Retrieved January 22th, 2018, from https://www.worldgovernmentsummit.org/api/publications/document/8f647dc4-e97c-6578-b2f8-ff0000a7ddb6?mc_cid=7ba0f17ca8&mc_eid=7131579056

Appendix A.

Table 4. Raw and mean decile scores subscales WSSQ

	School-related Social Safeness and wellbeing		Generic Wellbeing	
Decile	**Raw total**	**Mean**	**Raw total**	**Mean**
1	50	3.6	19	3.8
2	53	3.8	20	4.0
3	56	4.0	21	4.2
4	58	4.1	22	4.4
5	59	4.2	22	4.4
6	60	4.3	23	4.6
7	62	4.4	23	4.6
8	64	4.6	24	4.8
9	65	4.6	25	5.0

Appendix B.

Table 5. item content and completely standardized factor loadings in the correlated two factor CFA model of the WSSQ

Items	School-related Social Safeness and Wellbeing	Generic Wellbeing
1) How do you feel right now?	0.469	
2) How do you feel most of the time?		0.605
3) How do you feel most of the time at school?	0.552	
4) How do you feel when there is no adult present during breaks?*	0.234	
5) How content are you with your life?		0.652
6) I feel healthy		0.595
7) If I have a problem at school, it usually ends well	0.580	
8) If I have a bad experience at school, I will be happy soon after	0.513	
9) I have nice friends	0.470	
10) I like myself		0.489
11) I can choose at school what I want to do	0.340	
12) It is good that I exist		0.522
13) Classmates bully me (emotionally, verbally or both)	0.491	
14) Classmates hit me or kick me (physically)	0.389	
15) Classmates fight with each other	0.346	
16) Classmates laugh, when you ask a silly question	0.381	
17) I feel safe in this class (globally)	0.742	
18) I feel safe with this teacher (under supervision)	0.689	
19) I enjoy my class	0.582	
20) I get along with most of my classmates	0.544	

*Item 4 was removed from analyses based on its factor loading; CFA = confirmatory factor analysis; WSSQ = Wellbeing and Social Safeness Questionnaire; Answer categories for item 1–4 ranging from "very unhappy" to "very happy", for item 5 ranging from "not content at all" to "very content", for item 6–12 ranging from "totally disagree" to "totally agree", for items 13–16 ranging from "always" to "never" and for items 16–20 ranging from "never" to "always".

Appendix C.

Figure 1. Emoticon answer categories, scored 1 to 5 per item.

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