The development and initial validation of a brief daily hassles scale suitable for use with adolescents

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Abstract

Three studies led to the development and initial validation of a brief daily hassles scale that could be used with adolescents. Study 1 drew on hassles identified in existing scales, hassles from the literature, a focus group with adolescents, and expert feedback to generate and finalise 67 daily hassle items. In Study 2, the items were administered to a sample of 212 adolescents. We then used item and exploratory factor analysis to reduce the number of items to 14, which represented two homogenous and internally reliable subscales of family and peer/other hassles. In Study 3, the brief daily hassles scale was administered to a second sample of 236 adolescents. Here we tested the initial structure using confirmatory factor analysis and examined construct validity by testing the scale’s relationship with measures of depression, anxiety and life satisfaction.
Daily hassles are “irritating, frustrating demands that occur during everyday transactions with the environment” (Holm & Holroyd, 1992, p. 465). They need to be differentiated from significant life events, which refer to “environmental circumstance[s] that [have] an identifiable onset and ending and may carry the potential for altering an individual’s present state of mental and physical well-being” (Goodyer, 2001, p. 204). Significant life events, such as the death of a family member or having a parent move out of home, typically occur infrequently and have readily identifiable onsets and endings. Daily hassles, on the other hand, such as those that come when interacting with family or friends, occur with regular frequency and have less readily identifiable beginnings and endings. Previous research has suggested that the stress from ongoing daily hassles is detrimental to the wellbeing of adolescents (Sim, 2000), and may be more important than significant life events for psychological adjustment in this population (Goodyer, 2001).

There are few measures of daily hassles for adolescents. Some researchers have measured the experience of day-to-day difficulties by asking adolescents to complete diaries outlining their experiences. Participants can either write notes about their daily events, which are then coded into themes or types (Bowker, Bukowski, Hymel, & Sippola, 2000), or they can be provided with a checklist of events where they can record any hassles that they experienced during the day (Stone, Neale, & Shiffman, 1993).

Other researchers have devised scales to assess daily hassles. The Kanner Hassles Scale (Kanner, Coyne, Schaeffer, & Lazarus, 1981) is the scale most widely used for this purpose. This scale produces scores on eight dimensions of time pressures, work, financial responsibilities, health, neighbourhood/environment, inner concerns, household responsibilities and future security. The scale has been criticised on a number of grounds: (a) that it uses both frequency and severity ratings in the response
format, which can lead to an inflated relationship between hassles and negative well-being (Reich, Parrella, & Filstead, 1988); (b) that it includes items which overlap in content and wording with outcome measures of stress (Kohn, Lafreniere, & Gurevich, 1990); and (c) that it is not suitable for use with adolescents as it was based on the experiences of middle-aged adults (Wolf, Elston, & Kissling, 1989).

The Kanner Hassles Scale was revised to address the concern that it artificially inflated the relationship between hassles and emotional outcomes by including items that were similar to symptoms of adjustment (Delongis, cited in Maybery & Graham, 2001). However, similar to the Kanner Hassles scale, the Delongis scale remains problematic as it asks respondents to rate the frequency and severity of each event, and it was developed for use with an adult rather than an adolescent population. This scale covers six domains of work, finances, health, environmental/social issues, household/home maintenance, personal life, and family and friends.

One scale, the Adolescent Perceived Events Scale (Compas, Davis, Forsythe, & Wagner, 1987), was developed for use with younger individuals aged between 12 and 20 years. Three forms are available: (a) the 164-item young adolescent version for ages 12 to 14 years; (b) the 202-item middle adolescent version (15 to 17 years); and (c) the 210-item older adolescence version (18 to 20 years). Each version contains 157 core items along with items unique to that particular age group. The scale measures both significant life events and daily hassles. It has been used in both adolescent and college student samples, and has the advantage that the items were derived for young people. However, the scale was developed over 20 years ago, contains items that may not be relevant to the experience of young people today, and does not contain items (e.g., on internet and mobile phone hassles) that may be relevant. This scale also retains response formats for frequency and impact of events, which is not desirable. Finally, the Adolescent Perceived Events Scale, like the Kanner Hassles Scale and the
Delongis scale is very long when, preferably, a smaller, simpler scale would capture the experience of daily hassles in adolescents.

Kohn and Milrose (1993) developed a series of population-specific hassles scales, including a 41-item measure for use with high school students, called the Inventory of High School Students’ Recent Life Experiences, which reflects eight factors of social alienation, excessive demands, romantic concerns, loneliness and unpopularity, assorted annoyances and concerns, social mistreatment, and academic challenges. The authors argued that this measure was “decontaminated” as it assesses the frequency of daily hassles but not the impact or severity. However, the wording of the measurement scale remains problematic. Students are asked to make judgements about the extent to which a hassle is “part of their life”, which may be interpreted as the extent to which they are affected by this hassle, regardless of how often it occurs. Further, the wording of some items on the scale is problematic as it relates conceptually to depression. Low self-esteem, for example, is tapped by items such as “dissatisfaction with your looks”, and fatigue is tapped by the item “not enough time for sleep”. Finally, the scale was developed by simplifying and rewording items from the adult and college student versions of the scale and not developed directly from the experiences of adolescents.

Given the problems identified with the existing scales, we aimed to develop a brief measure of adolescent daily hassles. In this task, we differentiated between significant life events and daily hassles and only included items that were likely to occur regularly and did not have readily identifiable onsets and endings. Each item was designed to measure the frequency of the occurrence of each hassle only. This was done to minimise the possibility that items would directly assess adjustment or well-being. The response format was carefully worded to ensure that it could not be misconstrued as a measure of the impact of the daily hassle. While we did draw on the
Brief daily hassles scale 5

hassles literature and previous hassles scales, adolescents helped to develop the items to ensure that the hassles incorporated were specific to the culture and experience of the population to be assessed. After testing the factor structure of the initial scale, a confirmatory factor analysis was employed with a second sample to assess the validity of the factor structure. The reliability and initial validity of the resultant measure were then assessed.

Study 1

*Item Development*

The aim of this Study was to generate sufficient items to form the basis of the scale. In the first step, we examined the hassles literature, identified hassles included in previous hassles inventories, and drew on our own experiences working with adolescents. We then conducted a formal focus group with three Year 10 students (one boy and two girls; aged 15-16 years). The students in the focus group were each asked to write down between ten and twenty daily hassles, without discussing their responses with the other students. After they had done this, they were given possible daily hassle domains (e.g., school, family, friends; which the authors had previously identified) and were encouraged to brainstorm other possible hassles that could be added to the list. The hassles generated through these two process were then shown to an additional nine adolescents (four boys and five girls; aged 14-16 years), who were given the task of reading the list to (a) confirm that they recognized these as hassles for themselves, and (b) to indicate any other hassles that were not on our list. This process generated nearly one hundred items. These items were independently examined and we removed or rewrote items that overlapped with other domains (e.g., items related to self-esteem, such as “problems related to how I look”), represented significant life events rather than daily hassles (e.g., “having a family member die”), or were redundant (e.g., items that were similar). This process left us with sixty-seven daily
Brief daily hassles scale

hassles items. These items were then shown to experts in child psychology and psychometrics. This latter process resulted in some items being revised, and two further suggestions being added.

Study 2 - Method

*Item and Exploratory Factor Analysis*

We used test development procedures from classical test theory (Ellis & Mead, 2002) to (a) identify items that should be retained in the scale, and (b) identify an initial structure of adolescents’ daily hassles. Some authors recommend that at least ten items are needed for a reliable scale or subscale (Kline, 2000), whereas others suggest that this can be accomplished with as few as three (Cook, Hepworth, & Warr, 1981). As a daily hassles scale for adolescents is likely to be used in conjunction with other measures, we aimed to identify daily hassle subdomains that could be represented by between three and ten items. In line with Kline (2000), we conducted item analyses initially and then tested the items in an exploratory factor analysis.

*Participants, Materials and Procedure*

Participants were 212 students who were enrolled in Years 10, 11 or 12 in two middle-level socioeconomic status, suburban high schools in a medium sized city in Queensland, Australia. There were no significant ethnic groupings, reflecting the cultural nature of the Australian population. There were 137 girls (65%) and 75 boys, whose mean age was 15.35 years (SD = .79). This sample represents about half of the students enrolled at the school, and represents all but a few students who were available on the day to complete the survey. Students who did not complete the survey were either away from the school (e.g., on excursions) or were in classes that were not available for survey. The sample does not reflect a random sample of students available; rather it reflects availability of students based on school arrangements.
This sample size meets the minimum requirements recommended for exploratory factor analysis (Hair, Anderson, Tatham, & Black, 1998). The sixty-nine items generated in Study 1 were included in a survey along with descriptive items asking about age and gender. The stem question for the items was, “These questions ask about day-to-day hassles. Record how often each one happened in the past month”; responses were requested on a 5-point Likert scale with descriptors of never/ at least once per month/ at least once per week/ almost daily/ and daily. Research assistants and teachers administered the survey to students at school in class time. Both parents and students gave permission for the students to participate. The study was conducted with approval from the authors’ university ethics committee.

**Study 2 - Results**

*Item Analysis*

Four indices were used in the item analysis. First, we examined the histogram for each item and removed any item that exhibited a severely skewed distribution. Second, we examined the inter-item correlations and removed any item that was highly correlated ($r > .9$) with another item. Third, we examined the corrected item-total correlations and removed any items with a near-zero or negative correlation with the total. Finally, using t-tests, we compared boys and girls on each item and removed items that were gender biased. We removed 20 items during item-analysis.

*Exploratory Factor Analysis*

Following guidelines provided by Kline (2000), the remaining 49 items were subjected to a principal axis factor analysis using a varimax rotation. An item was retained if it loaded $\geq .4$ on one factor alone. Items that had cross-loadings or loadings $< .4$ were eliminated. Using these decision rules, the 49 items were reduced to 17 that loaded on two factors: 10 items that reflected hassles from parents and 7 items that reflected hassles from friends and others. We removed the three lowest loading items.
from the parent hassle subscale to bring the number of items in line with the other 7-item subscale. In a final factor analysis, these 14 items accounted for 53.3% of the variance, with each factor having an eigenvalue > 1.9. The Kaiser-Meyer-Olkin Measure of Sampling for this analysis was .87, and Bartlett’s Test of Sphericity was significant at $p < .001$. The internal reliability coefficient for the two factors were .86 (parents) and .83 (friends and others). See Table 1 for items and factor loadings.

Insert Table 1 about here

Study 3 - Method

This study set out to test the factor structure of the hassle scale on a second sample and to assess the scale’s construct validity. We tested the factor structure using confirmatory factor analysis, and assessed construct validity by correlating scores from the hassle scale with scores from measures of negative mood, anxiety and life satisfaction. Previous research has shown that exposure to daily hassles is positively correlated with negative mood in university students (Maybery, 2003) and adolescents (Chang & Sanna, 2003), and negatively correlated with adjustment and well-being (Goodyer, Herbert, Tamplin, & Altham, 2000).

Participants

Participants were a second sample of 236 students enrolled in Years 10, 11 or 12 in two metropolitan-based schools. Recruitment arrangements paralleled those for Study 2. There were 110 girls (46.6%) and 126 boys, whose mean age was 16.1 years ($SD = .75$).

Measures

Daily Hassles. This was the 14-item brief adolescent daily hassles scale developed in Studies 1 and 2 (see Table 1). The internal reliability coefficients for the two factors were .88 (parents) and .82 (friends and others).
Depression. We used 29 of the 30 items from the Reynolds Adolescent Depression Scale (Reynolds, 2002), which was devised to assess depressive symptoms in students aged 13 to 18 years. The item, “I feel like hurting myself”, which was not essential to the project, was removed at the schools’ request. Students were asked how much they experienced 29 symptoms during the past two weeks using a 4-point Likert response with endpoints of almost never and most of the time. Sample items were “I feel lonely” and “I have trouble sleeping”. Reynolds and Mazza (1998) assessed the reliability and validity of the 30-items in a sample of 89 young adolescents. They found internal reliability coefficients of .91 on initial assessment and .93 on a retest 1-5 weeks later, and a test-retest correlation of .76. Validity was demonstrated by correlating the scale with the Hamilton Depression Rating Scale (Hamilton, 1967). The internal reliability in the current study was .92.

Anxiety. We used the 10-item Brief Multidimensional Anxiety Scale for Children (March, 1997), which generates a measure of global anxiety by tapping four basic anxiety dimensions: physical symptoms (e.g., “I feel restless and on edge”), harm avoidance (“I check to make sure things are safe”), social anxiety (“I’m afraid that other kids will make fun of me”) and separation (“The idea of going away to camp scares me”). Students responded by using a 4-point Likert format with endpoints of almost never and most of the time. The scale has demonstrated adequate internal consistency (.67; Rynn et al., 2006) and good test-retest reliability (.86 over three weeks; March, Sullivan, & Parker, 1999). Validity has been demonstrated by correlating the scale with the Revised Children’s Manifest Anxiety Scale (Reynolds & Richmond, 1994). The internal reliability in the current study was .71.

Life Satisfaction. We used one item to ask students to rate their global life satisfaction: “I would describe my satisfaction with my overall life as…”. Students responded on a 7-point Likert scale with endpoints of delighted and terrible.
**Procedure**

Research assistants and teachers administered the scales to students at school in class time. Both parents and students gave permission for the students to participate. The study was conducted with approval from the authors’ university ethics committee.

**Study 3 - Results**

**Confirmatory Factor Analysis**

We conducted a confirmatory factor analysis (AMOS; Arbuckle & Wothke, 1999) to test the factor structure of the two subscales of the Brief Adolescent Daily Hassles Scale. A confirmatory factor analysis tests how adequately obtained data fit a proposed factor structure. We tested two models. In the first, each cluster of 7 items identified in the Study 2 exploratory factor analysis was allowed to load freely on a latent factor. Items 1-7 were allowed to load freely on a single latent factor of parent hassles; item 8-14 were allowed to load freely on a single latent factor of friends and others, and the correlation between the two factors were freely estimated. In the second model, we allowed all 14 items to load on a single latent variable to test the viability of a unidimensional scale rather than a two-factor scale. The fit statistics reported in Table 2 indicate a satisfactory fit for the 2-factor model and a less than satisfactory fit for the unidimensional model. This supported the 2-factor scale identified in Study 2.

*Insert Table 2 about here*

**Construct Validity**

We further tested construct validity by examining the associations between the Brief Adolescent Hassles Scale and depression, anxiety and life satisfaction. Based on previous research we expected a positive association between daily hassles and depression and anxiety, and a negative relationship between daily hassles and life
satisfaction. As reported in Table 3, all correlations were significant (low to moderate; ranging from absolute .19 to .50) and in the expected directions, supporting the construct validity of the hassle scales. As a check of the suitability of the hassle scales for adolescents for this age group, we also tested the correlation between the two hassle scales and age and gender. Neither hassle subscale was significantly associated with gender ($r = .04$ and .02), indicating that boys and girls did not respond differently to the two subscales. Hassles (parents) was not significantly associated with age ($r = .01$); hassles (friends and others) had a weak, but significant association with age ($r = .13$, $p < .05$), with older students reporting more hassles (Table 3), indicating that there is little separation among these 15 to 17 year olds based on these types of hassles.

Insert Table 3 about here

Discussion

This study addressed a gap in the literature by developing a brief daily hassles scale that is suitable for use with school-based adolescents between 15 and 17 years of age. We followed the scale development procedures outlined by Hinkin (1998) for item generation and scale evaluation. Study 1 involved item generation and review. Study 2 involved initial item reduction through item analysis and exploratory factor analysis. Study 3 used a separate sample of adolescents to confirm the factor structure and assess the construct validity of the scale. The results of the three studies produced a brief scale that contained 14 items that reflected two factors of parental hassles and peer/others hassles. The scale showed good internal reliability. Content validity was demonstrated via the item development procedures, the use of experts as reviewers, and the exploratory and confirmatory factor analyses. Initial construct validity was demonstrated by finding significant associations between the brief daily hassles scale and measures of depression, anxiety and life satisfaction in the expected direction.
The scale was not associated with gender or age, confirming that gender specific items were not included, and indicating the value of the scale for use with adolescents across the age ranges used in the study.

In the study, we addressed the limitations and strengths of previous daily hassles scales. We drew on existing literature and scales, and worked with adolescents to generate items for inclusion in the measure to ensure that the items would be most relevant for this age sample. We assessed daily hassles in terms of their frequency, rather than their impact or severity, to ensure the scale was not compromised by overlap with measures of distress or adjustment. We used experts to test that there was no overlap in items with measures of well-being or adjustment, to make sure any associations between daily hassles and adjustment would not result from similarity in item content. Finally, we developed the scale using two samples, one to identify the factor structure of the scale, and the second to confirm the structure. The final scale demonstrated good internal reliability and encouraging initial content and construct validity. One of the strengths of the study was that we initially included a large number of items to be tested, and were very stringent in reducing these to the final items. This procedure should ensure that the structure identified is robust and able to be replicated in other samples.

Many of the earlier hassle scales identified multiple factors. For example, the 41-item Inventory of High School Students' Recent Life Experiences (Kohn & Milrose, 1993) decomposes to eight factors. However, despite including items that covered these content areas, the daily hassles scale developed in the current study identified two main hassle factors, hassles with parents and hassles with friends/others, which represent the most common life irritations for adolescents (see Zimmer-Gembeck & Skinner, 2008, for a review). Other possible factors, such as academic, community
and health hassles, were not supported as reliable factors in this scale. This result is consistent with the content of the Inventory of High School Students’ Recent Life Experiences, where the majority of factors identified relate to interactions with others (i.e., social alienation, excessive demands, romantic concerns, loneliness and unpopularity), and the academic challenges factor was the least important. Research generally with adolescents suggests that ongoing family and peer issues may be most salient. Young people’s striving for autonomy in the adolescence years can bring them into conflict with their parents’ wishes for continued control and guidance (Schlegal & Herbert, 1991; Zimmer-Gembeck & Collins, 2003) and with pressures brought to bear by their peers (Coleman & Hendry, 1999).

The development process for this scale drew on the current hassles’ literature and hassles from existing scales. We also generated and validated items with adolescents themselves. However, future studies need to test the usefulness of the scale with a wider group of young people. For example, the scale needs to be assessed with emerging adults and young people who have left school before it is recommended for use with these populations. The scale also needs to be evaluated with adolescents from different cultural and life backgrounds, as the samples used in the current studies reflect the cultural backgrounds typical of Australian students. Second, we calculated validity coefficients using data collected from the same students who completed the scale, and thus, the correlations may be inflated due to common method variance problems. It would be useful for future studies to test validity in more robust ways.

Despite these limitations, this brief scale will be a useful addition to the range of scales that assess daily hassles. It will be useful for assessing the irritations in school-aged and based adolescents, especially in the important area of social relationships. Daily hassle scales have traditionally attempted to measure the full range of hassles experienced by respondents, but this has meant they were unwieldy and cumbersome
to use. The brevity of the measure developed here means that it can be used when a short scale of important daily hassles is needed, and should be of value to practitioners who work with teenagers who are struggling with day-to-day social hassles from parents and peers.

References


Table 1  
*Summary data for Principal Axis Factor Analysis with Varimax Rotation; N = 212*

<table>
<thead>
<tr>
<th>Item</th>
<th>Factor 1</th>
<th>Factor 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Parents not trusting me</td>
<td>.81</td>
<td>.18</td>
</tr>
<tr>
<td>2. Parents trying to tell me how to live my life</td>
<td>.71</td>
<td>.27</td>
</tr>
<tr>
<td>3. Parents being strict</td>
<td>.68</td>
<td>.12</td>
</tr>
<tr>
<td>4. Having to lie to my parents</td>
<td>.68</td>
<td>.19</td>
</tr>
<tr>
<td>5. Worrying about my parents finding out about something</td>
<td>.64</td>
<td>.25</td>
</tr>
<tr>
<td>6. Parents not listening to my opinion</td>
<td>.57</td>
<td>.22</td>
</tr>
<tr>
<td>7. Being “put down” by a family member</td>
<td>.49</td>
<td>.34</td>
</tr>
<tr>
<td>8. Feeling unsafe in the community (outside school)</td>
<td>.14</td>
<td>.71</td>
</tr>
<tr>
<td>9. People not treating me with respect</td>
<td>.26</td>
<td>.66</td>
</tr>
<tr>
<td>10. Not being accepted by other people my age</td>
<td>.25</td>
<td>.66</td>
</tr>
<tr>
<td>11. Being bullied or teased</td>
<td>.14</td>
<td>.65</td>
</tr>
<tr>
<td>12. Not feeling safe at school</td>
<td>.20</td>
<td>.58</td>
</tr>
<tr>
<td>13. Trouble with group assignments</td>
<td>.25</td>
<td>.55</td>
</tr>
<tr>
<td>14. Trouble with lack of facilities (e.g., computers, sporting goods, books)</td>
<td>.16</td>
<td>.52</td>
</tr>
</tbody>
</table>

*Note.* Factor 1: eigenvalue = 5.6, % of variance = 40.0; Factor 2: eigenvalue = 1.9, % of variance = 13.4.
Table 2
**Goodness-of-fit indices; N = 236**

<table>
<thead>
<tr>
<th>Model</th>
<th>df</th>
<th>$\chi^2$</th>
<th>GFI</th>
<th>IFI</th>
<th>TLI</th>
<th>CFI</th>
<th>RMSEA</th>
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</thead>
<tbody>
<tr>
<td>2-factor</td>
<td>73</td>
<td>156.30***</td>
<td>.92</td>
<td>.94</td>
<td>.92</td>
<td>.94</td>
<td>.07</td>
</tr>
<tr>
<td>1-factor</td>
<td>74</td>
<td>285.45***</td>
<td>.76</td>
<td>.77</td>
<td>.71</td>
<td>.77</td>
<td>.13</td>
</tr>
</tbody>
</table>

*Note:* GFI = Goodness of Fit, IFI = Incremental Fit Index, TLI = Tucker-Lewis Index, CFI = Comparative Fit Index, RMSEA = Root Mean Square Error of Approximation, *** = $p < .001$. 
Table 3
Bivariate Correlations between Daily Hassles and Depression, Anxiety and Life Satisfaction; N = 236

<table>
<thead>
<tr>
<th>Variable</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Daily Hassles (Parents)</td>
<td>-</td>
<td>.50***</td>
<td>.34***</td>
<td>.19**</td>
<td>-.40***</td>
<td>.01</td>
<td>.04</td>
</tr>
<tr>
<td>2. Daily Hassles (Friends/Others)</td>
<td>-</td>
<td></td>
<td>.34***</td>
<td>.35***</td>
<td>-.36***</td>
<td>.13*</td>
<td>.02</td>
</tr>
<tr>
<td>3. Depression</td>
<td>-</td>
<td></td>
<td></td>
<td>.63***</td>
<td>-.42***</td>
<td>-.08</td>
<td>.35***</td>
</tr>
<tr>
<td>4. Anxiety</td>
<td>-</td>
<td></td>
<td></td>
<td></td>
<td>-.33***</td>
<td>.07</td>
<td>.18**</td>
</tr>
<tr>
<td>5. Life Satisfaction</td>
<td>-</td>
<td></td>
<td></td>
<td></td>
<td>.10</td>
<td>-.09</td>
<td></td>
</tr>
<tr>
<td>6. Age</td>
<td>-</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>-.02</td>
<td></td>
</tr>
<tr>
<td>7. Gender</td>
<td>-</td>
<td></td>
<td></td>
<td></td>
<td></td>
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</tbody>
</table>

Note. * = p < .05, ** = p < .01, *** = p < .001