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TITLE PAGE

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An Examination of the Psychometric Properties of Scores on the Family Strain Index (FSI) in a General Community Sample

Rikke Lambek¹, Anne-Mette Lange², Natasja Petersen¹, & Anne Mette Gorrissen¹

¹Department of Psychology and Behavioral Sciences, Aarhus University, Denmark

²Centre for Child & Adolescent Psychiatry, Research Department, Aarhus University Hospital, Risskov, Denmark

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26 MAIN DOCUMENT

27 Abstract

28 Given the potentially harmful effects of parenting stress on parents, children, and
29 their relationship, it is critical to have a reliable and valid measure of parenting stress
30 in clinical and community samples. The Family Strain Index (FSI) is a brief
31 questionnaire designed to measure stress and demand on parents of children with
32 ADHD. The present study is the first to evaluate the psychometric properties of
33 scores on the FSI in a general community sample. Parents (89% mothers) of 550
34 preschool children (aged 2 to 5 years; 50% boys) sampled through 17 kindergartens
35 located in Danish cities and villages completed the FSI, the ADHD Rating Scale
36 (RS)-IV Preschool Version, and a background questionnaire. FSI scores were
37 characterized by restricted range and floor effects. The scale's construct validity was
38 not supported and the measurement repeatability after one month was low. The scale
39 did have convergent validity as levels of parenting stress were associated with
40 perceived ADHD behavior in off-spring, but overall, results did not encourage the
41 use of the FSI as a measure of parenting stress in the general population. Measures
42 that include more normative events may be more appropriate when attempting to
43 capture parenting stress in general community samples.

44
45
46 *Key words:* Family Strain Index, parenting stress, community sample, preschool
47 children, psychometric properties.

51 **INTRODUCTION**

52 Navigating through the many and varied tasks involved in child rearing place
53 considerable demands on most parents. If perceived parenting demands and
54 available resources do not match, parenting stress may ensue (Deater-Deckard,
55 1998). While it is not uncommon for parents to experience some degree of parenting
56 stress (Crnic & Greenberg, 1990), elevated levels have been associated with
57 negative parenting behaviors (Morgan, Robinson, & Aldridge, 2002) and negative
58 child outcomes (Crnic, Gaze, & Hoffman, 2005). Child factors such as illness and
59 psychopathology have also been associated with elevated levels of parenting stress
60 (Cousino & Hazen, 2013; Hayes & Watson, 2013; Theule, Wiener, Tannock, &
61 Jenkins, 2013). A transactional model where child behavior influences and is
62 influenced by the level of parenting stress in the caregiver may best describe the
63 association between parenting stress and child behavior (Mackler, Kelleher,
64 Shanahan, Calkins, Keane, & O'Brien, 2015; Neece, Green, & Baker, 2012). Given
65 the potentially harmful effects of parenting stress on parents, children, and their
66 relationship, it is critical to have a reliable and valid measure of parenting stress for
67 use in clinical as well as community samples.

68 The Family Strain Index (FSI) is a brief parent-report questionnaire designed to
69 measure stress and demand associated with parenting a child with ADHD (Riley et
70 al., 2006). For parents of school-age children with this disorder, Riley et al. found
71 scores on the FSI to have good internal consistency and to correlate moderately with
72 the child's total and subscale scores on the ADHD-RS-IV (DuPaul, Power,
73 Anastopoulous, & Reid, 1998). A principal components analysis (PCA) supported a
74 one-component solution suggesting that the FSI had a single underlying dimension.
75 More recently, Silva, Houghton, Hagemann, Jacoby, Jongeling, and Bower (2015)

76 examined the factor structure of scores on the FSI in a community sample of parents
77 of children diagnosed with ADHD using confirmatory factor analysis (CFA). They
78 found a one factor model to have a non-significant chi-square (χ^2) and a root mean
79 square error of approximation (RMSEA) of .11, which is above the recommended
80 standards for adequate fit (below .08; Browne & Cudeck, 1993, Hu & Bentler,
81 1999). They found the scale scores to be reliable, but given the high RMSEA value
82 further examination of the FSI structure is warranted.

83 Since its publication, the FSI has been applied to measure stress in parents of
84 children with ADHD (e.g., see Guerro-Prado, Mardomingo-Sanz, Ortiz-Guerra,
85 García-García, & Soler-López, 2015; Lange, Daley, Frydenberg, Houmann,
86 Kristensen, Rask, Sonuga-Barke, Søndergaard-Baden, Udipi, & Thomsen, 2018;
87 Svanborg, Thernlund, Gustafsson, Hägglöf, Schacht, & Kadesjö, 2009) and in
88 families caring for children with health care needs (Hinojosa, Knapp, & Woodworth,
89 2015). Given the generic formulation of the individual FSI items it is possible that
90 the questionnaire can also measure parenting stress in the general population.
91 However, the reliability and validity of scores on the FSI in general community
92 samples have not previously been examined. Consequently, it is unclear whether the
93 FSI is suitable as a potential means for examining parenting stress more generally.

94 The aim of this study is to evaluate the psychometric properties of scores on the
95 FSI in a general community sample. The psychometric evaluation was carried out in
96 three linked stages and based on a series of a priori criteria set up at each stage. At
97 the first stage, scores of the six FSI indicators were evaluated with respect to basic
98 criteria for variability and homogeneity. At the second stage, the construct validity
99 of the factor structure of the FSI indicators was tested according to traditional fit
100 criteria. At the final stage, the overall FSI scale score was examined based on criteria

101 for homogeneity, measurement stability, and convergent validity. The impact of
102 child gender and age on levels of parenting stress was also examined.

103 **METHOD**

104 Data were collected as part of a study that also examined the psychometric
105 properties of scores on the ADHD Rating Scale (RS)-IV Preschool Version
106 (Alexandre, Lange, Bilenberg, Gorrissen, Petersen, & Lambek, 2018) and the
107 Parenting Sense of Competency Scale (Lambek, Lange, Petersen, & Gorrissen, in
108 preparation).

109 *Participants*

110 Approximately 82% of Danish children aged 2-5 years attend a centre-based day-
111 care facility (i.e., kindergarten or age-integrated facility; Statistics Denmark, n.d.). In
112 the present study, parents of 1376 children attending kindergarten were invited to
113 participate and parents of 580 children agreed to do so (response rate = 42.2%).

114 Following the exclusion of questionnaires with incomplete data and invalid
115 information, as well as questionnaires from co-parents (mother reports were
116 prioritized); the mother ($n = 489$) or the father ($n = 61$) of 550 children were
117 included in the present study. Participant characteristics are presented in Table 1.

118 Parents were predominantly married (65.6% vs. 24.4% cohabiting vs. 10.0% single).
119 Their age ranged from 23 to 51 years and the majority (69.5%) had attained a
120 bachelor's degree or higher. Children were between the ages of 2 years and 8 months
121 and 5 years and 11 months with a 50/50 gender representation.

122 >Insert Table 1<

123 *Procedures*

124 In order to obtain a representative sample of preschool children and their parents, 22
125 kindergartens in 10 different Danish cities/villages of varying size (i.e., 8

126 kindergartens located in large cities with 100.000+ inhabitants, 9 in small cities with
127 40.000-100.000 inhabitants, and 5 in small cities/villages with <40.000 inhabitants)
128 were selected, and their managers contacted via telephone, and informed about the
129 study. Seventeen kindergartens (77.3%) in 9 different cities/villages agreed to
130 participate. Invitation letters were distributed to parents via the kindergartens.
131 Letters included information to parents about the study, a login to an online
132 questionnaire battery, and information about how to contact the researchers in case
133 of questions. Parents with more than one child enrolled in the kindergarten were
134 asked to complete the questionnaire based on their youngest child. A total of 136
135 parents (125 mothers and 11 fathers) completed the questionnaire again after 1
136 month (plus/minus one week).

137 Each kindergarten received a small gift basket as an appreciation of their
138 participation and were entered in a competition where the kindergarten with the
139 highest percentage of responders could win 5.000 DKK to be used for the benefit of
140 the children. Parents gave their consent to participate in the study by checking a box
141 in the questionnaire and participation was anonymous. According to Danish
142 legislation, questionnaire-based studies do not require ethics committee approval.
143 The study was approved by the Danish Data Protection Agency.

144 *Measures*

145 *Parenting stress.* The Family Strain Index (Riley et al., 2006) is a six-item parent
146 questionnaire measuring stress and demand on parents and families. Items 1 and 3
147 are hypothesized to measure emotional stress associated with being parent to a child
148 displaying symptoms of ADHD. Items 2, 4, 5, and 6 are hypothesized to measure the
149 social restrictions that parents may experience because of their child's problems.
150 Parents rate each item on a 5-point Likert scale ranging from 0 (never) to 4 (always),

151 indicating how often they perceive their child as having been the cause of emotional
152 or restricting experiences during the last four weeks. The FSI yields a total score
153 (range 0-24) with higher FSI scores indicating higher levels of parenting stress. The
154 FSI has been translated into Danish (Lange & Frantzen, 2012) according to standard
155 guidelines for the translation of questionnaires (Beaton, Bombardier, Guillemin, &
156 Ferraz, 2000).

157 *ADHD behaviour.* The ADHD Rating Scale (RS)-IV Preschool Version (McGoey et
158 al. 2007) is a modified version of the ADHD RS-IV (DuPaul et al., 1998) with
159 developmentally appropriate examples of preschool activities and play. The
160 respondent is required to rate 18 DSM-IV/5 congruent ADHD symptoms in the
161 child. Items are rated on a 4-point Likert scale ranging from 0 (the
162 symptom/behavior is “never/rarely” present) to 3 (the symptom/behavior is “very
163 often” present). As recent studies suggest that a three-factor model best fit ratings on
164 the scale (Alexandre et al., 2018; McGoey, Schreiber, Venesky, Westwood,
165 McGuirk, & Schaffner, 2015), three subscale scores (Inattention [range 0-27],
166 Hyperactivity [range 0-18], and Impulsivity [range 0-9]) were examined in the
167 present study. A high score is indicative of more perceived ADHD behaviour in the
168 child. Scores on the Danish version of the ADHD-RS Preschool Version (Lange,
169 Bilenberg, & Lambek, 2012) have previously been found to have acceptable
170 psychometric properties (Alexandre et al., 2018).

171 *Background information.* A brief questionnaire was applied to collect descriptive
172 data such as child age and gender, family type, parent age, and parental educational
173 attainment (i.e., the highest degree of education completed by the parent).

174 *Analytic Strategy*

175 The analytic strategy was devised to assess the distribution and psychometric
176 properties of FSI scores based on the guidelines proposed by Gorecki, Brown, Cano,
177 Lamping, Briggs, Coleman, Dealey, McGinnis, Nelson, Stubbs, Wilson, and Nixon
178 (2013) and Streiner, Norman, and Cairney (2014). First, the distribution of the FSI
179 indicators were assessed according to three criteria: (1) restricted range (no
180 responses in a given category), (2) floor/ceiling effects (> 70% of responses in the
181 category indicating minimum/maximum stress), and (3) asymmetry (skewness < -1
182 or > 1). Homogeneity was evaluated based on item redundancy (inter-item
183 correlation > .80).

184 Second, the construct validity of scores on the FSI was examined using CFA.
185 Two models were specified based on previous research. Model 1 specified one latent
186 variable on which all six FSI items were specified to load, and represented the one
187 component-solution found in the study by Riley et al. (2006). Model 2 specified two
188 latent variables “emotional stress” on which items 1 and 3 were specified to load and
189 “social restriction” on which items 2, 4, 5, and 6 were specified to load; this model
190 reflected the one originally hypothesized by Riley et al. The latent variables were
191 specified to be correlated and all error variances were uncorrelated. Model
192 parameters were estimated first using robust maximum likelihood (MLR) and
193 second using robust weighted least squares (WLSMV) with a probit link based on
194 the polychoric correlation matrix of latent continuous response variables. MLR *and*
195 WLSMV were used because the evidence is equivocal about which estimator should
196 be used with 5-category Likert scales (Beauducel & Herzberg, 2006; Rhemtulla,
197 Brosseau-Liard, & Savalei, 2012). The models were evaluated based on a range of
198 fit indices: (1) χ^2 ($p > .05$ suggests adequate fit), (2) the comparative fit index (CFI >
199 .90 suggests adequate fit), (3) the Tucker-Lewis index (TLI > .90 suggests adequate

200 fit), and (4) RMSEA (as already noted $< .08$ suggests reasonable approximate fit).
201 When MLR was applied (5) the standardized root mean square residual (SRMR $<$
202 $.08$ indicate adequate fit), (6) the Akaike information criteria (AIC), and (7) the
203 Bayesian information criterion (BIC) were also examined with lower AIC/BIC
204 values indicating better fit. Finally, chi-square difference testing was applied to
205 compare the relative fit of the two models ($p < .05$ suggests that the less restrictive
206 model should be retained). The Satorra-Bentler scaled chi-square difference test
207 (TRd; Satorra & Bentler, 2001) was applied when using MLR, whereas the
208 DIFFTEST option in MPLUS was used for WLSMV.

209 Third, the homogeneity of the FSI scale score was tested according to two
210 criteria: (1) association between item and total score (corrected item-total correlation
211 $> .30$) and (2) internal reliability (Cronbach's alpha [α] $> .70$ and composite
212 reliability [CR] $> .70$). Measurement repeatability across two time-points was also
213 assessed (Pearson's correlation coefficient [r] $> .70$). Convergent validity was
214 considered to be supported if the correlation between scores on the FSI and scores
215 on the ADHD-RS-IV was statistically significant and at least moderately strong ($r \geq$
216 $.30$). The impact of child gender and age on parenting stress was examined using a 2
217 (gender) x 4 (age: 2, 3, 4, and 5 years) ANOVA with the FSI scores as the dependent
218 variable.

219 The CFA was conducted using Mplus 7.4 (Muthén & Muthén, 1998-2016) and
220 the CR was calculated with the composite reliability calculator (Colwell, 2016). The
221 remaining analyses were conducted using IBM SPSS Statistics V24.0 (IBM Corp,
222 2016).

223 RESULTS

224 Results from the item-level distribution and homogeneity analyses are presented in
225 Table 2. There were no empty response categories. However, response frequencies
226 in categories indicating high level of stress were often low (e.g., ranging from .04%
227 to 1.5% across items in the category indicating maximum stress). This suggests at
228 least some degree of restricted range. Three FSI indicators (items 3, 5, and 6) had
229 more than 70% of responses in the category indicating minimum stress, which
230 suggests the presence of a floor effect. As these three indicators were also positively
231 skewed (values > 1), they appear to have reduced ability to generate score
232 variability. There was no redundancy of scores (i.e., no inter-item correlations >.80)
233 suggesting item homogeneity.

234 >Insert Table 2<

235 When CFA with MLR was conducted, neither Model 1 ($\chi^2 = 88.06$, $df = 9$, $p <$
236 $.001$; CFI = .84; TLI = .73; AIC = 6951.65, BIC = 7029.23; RMSEA = .13, 90% CI
237 = [.10, .15], SRMR = .06) nor Model 2 ($\chi^2 = 93.37$, $df = 8$, $p <$.001; CFI = .82; TLI =
238 .67; AIC = 6953.65, BIC = 7035.54; RMSEA = .14, 90% CI = [.12, .17], SRMR
239 = .06) provided good data fit. Models provided slightly better fit when CFA with
240 WLSMV was conducted as CFI and TLI values climbed above the .90 benchmark
241 for adequate fit (see Table 3). However, the models continued to have a statistically
242 significant χ^2 and RMSEA values above .08, suggesting that overall neither model
243 fitted the data well. Difference testing using either estimator was non-significant
244 (MLR: TRd = .00, $df = 1$, $p = .97$; WLSMV: $\chi^2 = .00$, $df = 1$, $p = .96$) indicating that
245 the more restrictive model (i.e., the one-factor model) should be retained. Factor
246 loadings for Model 1 are presented in Table 4. Although the one-factor model does
247 not provide a convincing fit and provides limited support for the construct validity of
248 the FSI, a summed score of all the items will be examined in the remaining analyses.

249 >Insert Table 3<

250 >Insert Table 4<

251 The item-total correlations ranged between .44 and .54 (revisit Table 2)
252 suggesting that no item was inadequately associated with the overall FSI scale. The
253 Cronbach's α was .74 and the CR was .75 indicating acceptable internal reliability.
254 The correlation between parent ratings on the FSI at two time points was medium,
255 positive, and statistically significant ($r = .54, n = 136, p < .001$), but below the
256 benchmark of .70. Finally, there was a moderate, positive, and statistically
257 significant correlation between parenting stress as measured by the FSI and child
258 inattention ($r = .53, n = 550, p < .001$), hyperactivity ($r = .42, n = 550, p < .001$), and
259 impulsivity ($r = .35, n = 550, p < .001$) as measured by the subscales on the ADHD
260 RS-IV Preschool Version, thereby supporting the construct validity of the FSI. The
261 main effects for gender and age were not significant, but there was a statistically
262 significant interaction (although the effect size was small; see Table 5). Inspection of
263 plots and simple effects suggested that levels of parenting stress differed slightly for
264 boys and girls at age 4, for boys at age 3 and 4, and for girls at age 3, 4 and 5, but no
265 discernible trend emerged and no values remained significant
266 after Bonferroni correction.

267 >Insert Table 5<**DISCUSSION**

268 The psychometric properties of parent ratings on the FSI were examined in a Danish
269 community sample and a number of findings emerged.

270 The psychometric evaluation of the FSI at item-level indicated the presence of
271 restricted range (and this was the case for all six items) as the categories indicating
272 maximum stress were rarely used by parents. In the original FSI study by Riley et al.
273 (2006), approximately 3.6-15.2% of parents used the maximum stress category

274 (compared to .04-1.5% in the present study). Possibly, response options indicating a
275 high level of stress are more relevant for parents of children with disorders such as
276 ADHD, although the substantial sample size in the Riley study ($n = 1500$) may by
277 itself have resulted in greater variability. We found half of the items (items 3, 5, and
278 6) to be characterized by substantial floor effects and skewness. These items appear
279 to describe various social restrictions experienced by the parent, such as not being
280 able to go certain places with the child or feeling uncomfortable inviting people to
281 the home because of the child's behavior (Riley et al., 2016). We can only speculate
282 as to why so few parents opted for a response other than "never" in relation to these
283 items. It is possible that they simply reflect experiences that are less common among
284 parents in a community sample. However, 37-44% of parents of children with
285 ADHD in the study by Riley et al. also indicated that they "never" experienced this
286 type of parenting stress, which may suggest that these experiences are less common
287 regardless of sample examined. It is also important to consider that some FSI items
288 may reflect experiences that are regarded as less socially acceptable and therefore
289 parents may be more reluctant to report them. The remaining items (items 1, 2, and
290 4) showed no floor effects. These items appear to describe parenting experiences
291 such as feeling stressed and having little time to relax (Riley et al.) and may reflect
292 more typical experiences. Taken together, the results from the present study suggest
293 that the FSI items (and in particular items 3, 5, and 6) do not generate sufficient
294 score variability to capture differences in levels of stress among parents in a
295 community sample.

296 The results from the CFA suggested that neither a one- nor a two-factor model
297 fitted the data well. Consequently, limited support for the construct validity of the
298 FSI was provided in the current study. Silva et al. (2015) also conducted CFA based

299 on scores from 358 parents of children with an ADHD diagnosis and obtained a
300 RMSEA value comparable to ours (.11 and .11 respectively). As a RMSEA value
301 below .08 is traditionally recommended, this could suggest that a one-factor model
302 may not capture the underlying structure of scores on the FSI adequately. A one-
303 component solution was supported in the Riley et al. (2006) study based on PCA. In
304 PCA, the number of components to be retained are traditionally determined based on
305 inspection of eigenvalues and scree plots whereas fit indices are applied to determine
306 the "best" model when using CFA. Consequently, we cannot directly compare our
307 results to the results by Riley et al. Future studies may gain important information
308 from examining the dimensionality using CFA in larger samples of parents of
309 children with and without psychopathology.

310 All six items were associated with the overall FSI scale and the scores on the
311 FSI had acceptable internal consistency. It should be noted that values were lower
312 than what has been reported previously in samples of children with ADHD for the
313 FSI (see Riley et al., 2006 and Silva et al., 2015). The test-retest-reliability value for
314 parent ratings on the FSI was below the .70 benchmark. This may be attributed to
315 the nature of parenting stress, the length of the retest-period, and/or the number of
316 items on the questionnaire. First, parenting stress may be variable in nature (and
317 perhaps more so in a community sample), fluctuating over time as life circumstances
318 change and the child develops (Crnic et al., 2005). Second, and relatedly, parenting
319 stress may be less stable, the longer the time period between assessments (Crnic et
320 al., 2005). Finally, short questionnaires tend to obtain lower retest values as they are
321 more vulnerable to change. A benchmark of .70 may therefore have been overly
322 restrictive. The present study is, to the best of our knowledge, the first to examine
323 traditional test-retest reliability of scores on the FSI, although a few studies have

324 examined the effect of intervention on parenting stress across various time intervals
325 using the FSI (e.g., see Guerro-Prado et al., 2015 and Lange et al., 2018). It is
326 possible that parenting stress, as measured by the FSI, is more stable in parents of
327 children with more chronic problems. However, this remains to be examined in
328 future studies.

329 A moderate, significant association between scores on the FSI and scores on the
330 ADHD RS-IV Preschool Version (Inattention, Hyperactivity, and Impulsivity
331 subscales) was found. Consequently, a high FSI score (indicating a high level of
332 parenting stress) was related to higher scores on the ADHD RS-IV Preschool
333 Version (indicating a higher level of ADHD associated behaviour in the child). This
334 is in line with previous research examining the association between scores on the
335 FSI and ADHD measures in older children (Guerro-Prado et al., 2015; Riley et al.,
336 2006) and supports the convergent validity of the FSI.

337 Finally, no significant main effects for gender or age on parenting stress were
338 found, but a small significant interaction between gender and age suggests that
339 future studies could further examine the potential impact of these factors on
340 parenting stress.

341 The study has several strengths. Firstly, it is the first to examine the
342 psychometric properties of scores on the FSI in a general community sample.
343 Secondly, a large group ($n = 550$) of parents and children were sampled through 17
344 different kindergartens located in 9 different Danish cities and villages of varying
345 size. Finally, the study was the first to examine measurement repeatability across
346 two time-points independently of treatment. The study also has several limitations.
347 First, the relatively low response rate and high level of parental educational
348 attainment constitute a potential limitation and inclusion of more parents, and

349 parents with more diverse educational backgrounds, might have resulted in more
350 score variability. Second, the study did not include measures of parental mental
351 health (e.g., depression or ADHD) or physical well-being, and the extent to which
352 parents own mental or physical health problems may have affected ratings of
353 parenting stress in the present study could not be established. Third, ADHD often
354 co-exists with other conditions and difficulties, even in preschool children
355 (Goldstein, Harvey, & Friedman-Weieneth, 2007; Greenhil, Posner, Vaughan, &
356 Kratochvil, 2008), but as the present study only included a measure of ADHD
357 behavior, it was not possible to ascertain whether other child behavioural or
358 developmental problems influenced the association between child ADHD behaviour
359 and parenting stress. Finally, as parents reported their own stress *and* the ADHD
360 behaviour of the child an informant bias may have been introduced and future
361 studies could attempt to include multiple informants of child behaviour.

362 **CONCLUSION**

363 In conclusion, this study examined the psychometric properties of scores on the
364 Danish version of the FSI in a general community sample, and found that FSI scores
365 were characterized by restricted range and floor effects. The scale's construct
366 validity was not supported and the measurement repeatability was low – although
367 this may reflect the nature of parenting stress in a community sample. The scale did
368 have convergent validity as levels of parenting stress were associated with perceived
369 ADHD behaviour in off-spring, but overall, these results do not encourage the use of
370 the FSI as a measure of parenting stress in the general population. Not only does
371 floor effects suggest that the questionnaire is not able to differentiate between the
372 majority of parents with respect to level of stress, but the lack of construct validity
373 also questions whether items together reflect a coherent underlying construct. The

374 relatively low response rate and high parental educational attainment should,
375 however, be taken into consideration when interpreting the results. To examine
376 parenting stress in the general population, measures that reflect more normative
377 events may be more appropriate. In addition, future studies could investigate cut-off
378 values on the FSI for identifying parents in community samples with clinically
379 significant levels of stress that need follow up. Finally, it is important to note that the
380 current study aimed to examine the psychometric properties of scores on the FSI and
381 it cannot be determined, based on the current study design, whether experienced
382 parenting stress was a parent effect, a child effect, or (more likely) a transactional
383 effect.

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516 Table 1. *Participant characteristics*

Variable	Parents (<i>n</i> = 550)	
	Mean (SD)/total n (%)	Range
Parent age (years)	35.74 (4.86)	23-51
Parent gender		
Female	489 (88.91)	-
Male	61 (11.09)	-
Parent type		
Biological	543 (98.73)	-
Other ^a	7 (1.27)	-
Parental educational attainment		
Primary education	19 (3.45)	-
Upper secondary education	8 (1.45)	-
Vocational education and Training	55 (10.00)	-
Short cycle higher education	84 (15.27)	-
Bachelor ^b	219 (39.82)	-
Master or higher	163 (29.64)	-
Could not be determined	2 (0.36)	-
Origin		
Danish	524 (95.27)	-
Immigrant/descendant	26 (4.73)	-

Family type		
Married	361 (65.64)	-
Cohabiting	134 (24.36)	-
Single parent	55 (10.00)	-
Child age (years)	3.81 (0.92)	2-5
Child gender		
Female	276 (50.18)	-
Male	274 (49.82)	-

517 *Note.* ^aOther = Adoptive, foster, or stepparent. ^bBachelors programmes and vocational

518 bachelors educations.

519 Table 2. *Response option frequencies, skews, means (SDs), inter-item correlations, and corrected item-total correlations*

FSI item	Response category					Skew	Mean (SD)	Inter-item correlation range ^a	Corrected item-total correlation
	0	1	2	3	4				
	Never	Almost never	Sometimes	Almost always	Always				
1	12.4%	34.7%	47.6%	4.5%	0.7%	-.14	1.47 (.80)	.26-.41	.45
2	11.1%	30.4%	46.9%	10.2%	1.5%	-.03	1.61 (.87)	.25-.35	.44
3	82.5%	11.5%	4.2%	0.9%	0.9%	3.13	.26 (.66)	.28-.44	.51
4	24.2%	33.8%	39.8%	1.8%	0.4%	-.07	1.20 (.84)	.27-.41	.47
5	73.3%	17.8%	7.6%	0.7%	0.5%	2.08	.37 (.71)	.25-.58	.51
6	70.5%	20.4%	8.4%	0.2%	0.5%	1.88	.40 (.70)	.27-.58	.54

520 *Note.*^aAll correlations were significant at the 0.01 level (2-tailed).

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523 Table 3. *Fit statistics for the confirmatory factor analysis with WSLMV*

Model	χ^2 (df) <i>p</i>	CFI	TLI	RMSEA (90% CI)
1 (one-factor)	67.63 (9) .000	.95	.92	.11 (.09-.13)
2 (two-factor)	66.88 (8) .000	.95	.91	.12 (.09-.14)

524 *Note.* χ^2 = Chi-square; CFI = comparative fit index; CI = confidence interval; RMSEA = root mean square error of approximation; TLI = Tucker
 525 Lewis index.

526 Table 4. *Factor loadings and standard errors for the one-factor model with WSLMV*

Parents		
<i>(n = 550)</i>		
FSI	Factor	Standard
Item	loading	error
Item 1	.60	.04
Item 2	.56	.04
Item 3	.76	.03
Item 4	.61	.04
Item 5	.80	.03
Item 6	.78	.03

528 Table 5. *Effect of child gender and age on parenting stress*

Variable	Age group (years)	Boy			Girl			Tests		
		Mean	<i>SD</i>	<i>n</i>	Mean	<i>SD</i>	<i>n</i>	Gender <i>F</i> (df) <i>p</i> ηp^2	Age <i>F</i> (df) <i>p</i> ηp^2	Age x Gender <i>F</i> (df) <i>p</i> ηp^2
FSI	2	5.44	2.55	18	5.67	3.02	15	<.01	2.13	2.73
	3	5.86	3.17	100	5.51	3.06	94	(1, 542)	(3, 542)	(3, 542)
	4	4.69	2.99	80	5.68	3.26	88	.98	.10	.04
	5	5.32	2.87	76	4.48	2.74	79	.00*	.01*	.02*

529 *Note.* *Partial eta-squared (ηp^2) values denote a small effect (Cohen, 1988).

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