Measuring parental dimensions: A psychometric evaluation of the parents as social context questionnaire, Swedish version

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Abstract: The relationship between a parent and an adolescent is dynamic. A parent may do better in certain areas or during certain phases of the adolescent’s life, and the adolescent’s needs or demands on the parent may vary accordingly. Parental dimensions have been used to evaluate the quality of a parent–child relationship. The present study explored the structure of a translated version of the Parents as Social Context Questionnaire (PASCQ), both a parent and an adolescent version. The participants were 1556 Swedish adolescents 16–18 years (mean age = 17.4 years, 58.3% females), and 1477 parents, including 1345 parent–adolescent dyads. The results of the confirmatory factor analyses provided a significant model fit of the six parental dimensions (Warmth, Rejection, Structure, Chaos, Autonomy support and Coercion) of PASCQ regarding both the parent- and adolescent reports. Therefore, the Swedish version of the PASCQ parent and adolescent reports is suitable for measuring the six parental dimensions of the PASCQ. However, the concordance between the two reports was low, suggesting that the parent report may be suitable for measuring the parent’s view of the relationship, but may be less representative of the adolescent’s experiences and vice versa.

ABOUT THE AUTHOR
The research group SALVe (Survey of Adolescent Life in Västmanland) studies social, psychological and biological factors in relation to psychological and psychiatric health problems in several quantitative research populations. Even though there are different methods to assess parental styles, parenting research often depends on self-reports of parents. The accuracy of parental scales can differ depending on cultural context, that is, between countries. Cultural contexts and norms affect parenting and parenting styles, but also the adolescent’s perception of the parental style. Therefore, it is important to evaluate translated scales. The present study evaluated the psychometric properties of the Swedish version of the Parents as Social Context Questionnaire (PASCQ) regarding its dimensional structures and investigated concordance between the parent and adolescent reports.

PUBLIC INTEREST STATEMENT
Parents are the most influential individuals in children’s lives from infancy to adulthood, independent of how well they parent. The accuracy of parental scales can differ depending on culture, well-being, age, sex or individual perception. Methods to assess parenting are e.g., interviews, self-reports and rating scales. We evaluated the Swedish version of the Parents as Social Context Questionnaire (PASCQ) and explored concordance between parent-and adolescent reports. PASCQ is suggested to be suitable for measuring parenting, however, a discrepancy between parent and adolescent reports was found. Thereby, the parent report may primarily be suitable for measuring the parental view of the relationship but possibly less representative of the adolescent’s experiences and vice versa. Clinicians, social workers, teachers, and other professionals involved in adolescent mental health and development could benefit from a valid measurement on parenting since there is a known link between parenting and mental health outcomes.
These results can contribute to future work on parenting in general and parental dimensions in association with adolescents in particular.

**Keywords:** adolescence; child; parenting; psychometric evaluation; scale

1. **Introduction**

Parents are the most significant people in children’s lives from infancy, through adolescence and into early adulthood (Alfredsson, 2018; Sroufe, 2005; Williamson et al., 2017). The relationship between a parent and a child is dynamic, whereby a parent may do better during certain areas or phases of life. The parent–child relationship establishes social and emotional resources that are important for future development (Chew & Wang, 2013; Choate & Engstrom, 2014; Egeli et al., 2015; Flamm & Grolnick, 2013). Children differ in the same way as parents, and their needs and demands on their parents vary (Choate & Engstrom, 2014).

The way in which the parent manages, supports and influences the child can be understood in terms of the relationship as a whole (Choate & Engstrom, 2014). The ability to parent well and the quality of the relationship are both influenced by an interplay of contextual and environmental factors such as the family, its surroundings and culture (Alfredsson, 2018; Patterson et al., 2017). Children learn how to communicate and respond to their surroundings; they adapt basic norms and form their attitudes and ethics, and their mental health develops within the relationship with their parents (Belsky, 1999; Chew & Wang, 2013; Ebrahimi et al., 2017; Flamm & Grolnick, 2013). Growing up in a family filled with support and warmth might decrease or even prevent the development of psychiatric illness even if the environment is harsh (Odgers et al., 2012; Sanders et al., 2014). Therefore, parenting may moderate or counteract risk (Flamm & Grolnick, 2013; Williamson et al., 2017).

The measurement of parenting has bearing in several contexts. For example, parenting has been a useful instrument when evaluating factors related to adolescent anxiety (Olofsdotter et al., 2018) or depression (Gamble & Yu, 2008), when evaluating psychological needs among adolescents (Costa et al., 2019), in the planning of nursing interventions among disabled children (Ekim & Ocakci, 2016), in the evaluation of alcohol related problems in clinical and non-clinical samples (Vrettou et al., 2019), and in relation to independency and school engagement among adolescents (Marbell-Pierre et al., 2019).

The assessment of parenting is complex, owing to its unclear definition (Hurley et al., 2016; O’Connor, 2002). A central task for researchers has been to identify core parental dimensions and to evaluate their essence and impact (Baumrind, 1971; Ekim & Ocakci, 2016; Wendy S. Grolnick, 2003; Guilamo-Ramos et al., 2006; Hurley et al., 2014; Skinner et al., 2005). The problematic aspect is expressed through continual development of theories that focus on particular characteristics of parenting and the lack of an inclusive unifying theory of these (O’Connor, 2002). One way to address this matter is to cluster parenting into individual behaviours and varieties, a basic strategy that has been extensively used (Doinita & Maria, 2015; Holden & Edwards, 1989). These qualities and behaviours have been clustered into parental dimensions to represent a theoretical framework upon which the study of parenting is based (Skinner et al., 2005). Several methods are used to assess parental dimensions, such as open interviews, questionnaires, self-reports and rating scales (Holden & Edwards, 1989; Hurley et al., 2014; Morsbach & Prinz, 2006; Skinner et al., 2005; Smith, 2011).

The Parents as Social Context Questionnaire (PASCQ) was originally developed by Skinner et al. (2005) to assess the six parental dimensions of Warmth, Rejection, Structure, Chaos, Autonomy support, and Coercion. The three positive dimensions of Warmth, Structure, and Autonomy support are considered to be the respective bipolar opposites to the three negative dimensions of Rejection, Chaos and Coercion (Baumrind, 1991; Chew & Wang, 2013; Darling & Steinberg, 1993; Ekim & Ocakci, 2016; Lamborn et al., 1991; Maccoby & Martin, 1983; Patterson et al., 2017; Skinner Rebecka et al., Cogent Psychology (2020), 7: 1757856 https://doi.org/10.1080/23311908.2020.1757856
et al., 2005; Williamson et al., 2017). However, these dimensions are dynamic, and a high estimate for one dimension does not equal a low estimate for the opposite dimension (Egeli et al., 2015; Larzelere et al., 2013; Skinner et al., 2005). The positive dimensions are expected to promote and encourage innate psychological needs, thereby contributing to an adolescent’s motivation to self-regulate his/her behaviour in concurrence with internalized social values, whereas the negative dimensions are predicted to result in parent-adolescent conflicts and emotional and/or behavioural problems for the adolescent (Egeli et al., 2015; Grolnick & Farkas, 2002; Skinner et al., 2005).

In the measurement of parenting, it has been suggested that the child’s developmental phase has an impact on estimation. Increased age of the child is associated with parental encouragement of independence, thereby changing the construction and dynamic of the relationship (Park & Lau, 2016). Furthermore, parental influence decreases as the child ages (Baumrind, 1991), so adolescence could represent a break point after which parents no longer play a vital role.

Because of the complexity of assessing parenting, it is important to use a good measure. Not only can a poor scale lead to misinterpretation of theories, but can also result in inconsistency in research findings (DeVellis, 2011). Furthermore, the accuracy of a scale can differ in relation to the validity of its constructs depending on cultural context, that is, between countries. Cultural contexts and norms affect parenting and parenting styles, but also the child’s or adolescent’s perception of the parental style (Kakihara et al., 2010). Therefore, it is important to evaluate scales when they are translated into different cultural contexts.

To date, both parent and child/adolescent English versions of the PASCQ have been validated in two studies (Chew & Wang, 2013; Egeli et al., 2015), subsequent to validation of the original scale (Skinner et al., 2005). Chew and Wang (2013) validated the factorial validity of the PASCQ adolescent report for a Singaporean youth sample (13–18 years old). Both a unipolar six-factor model and a bipolar three-factor model were evaluated through confirmatory factor analysis (CFA). Adolescents’ perceptions of both mothers’ and fathers’ parenting dimensions were assessed. The findings suggested that the unipolar six-factor solution was a better fit to the sample than the three-factor solution (Chew & Wang, 2013).

Egeli et al. (2015) validated a revised version of the PASCQ (R-PSCQ) for parents of children aged 2–18 years. An exploratory factor analysis suggested a six-factor solution. Moreover, no differences were found when parent reports of different age groups of the children were compared (Egeli et al., 2015).

The family context in general, and parenting behaviour in particular, have strong impact on the mental health of children (Odgers et al., 2012; Sanders et al., 2014). Parenting is suggested to moderate or counteract the risk for development of mental illness (Flamm & Grolnick, 2013; Williamson et al., 2017). Further, parenting practices provide an important framework in terms of treatment effects in family-based treatments (Henderson et al., 2009; Kitzmann et al., 2008). Thereby, the access to valid parenting instruments, adapted to different cultural contexts, is important.

The aim of the present study was to evaluate the psychometric properties of the Swedish version of the Parents as Social Context Questionnaire (PASCQ) regarding dimensional structures and investigate concordance between the parent and adolescent reports.

2. Methods
The Survey of Adolescent Life in Västmanland Cohort Study (SALVe Cohort) is a prospective cohort study that started during 2012. It included adolescents born during 1997 or 1999 with their guardians in Västmanland, Sweden. The present study includes 1556 adolescents (16–18 years old) and 1477 guardians from the second data collection in 2015. Drawn from the study population were 1345 parent-adolescent dyads matched by ID number. For participants to be included in the analysis, a complete response to the PASCQ was necessary.
Västmanland is a medium-sized county considered to be representative of Swedish society in terms of the allocation of urban and rural areas, education levels, disposable income (median range for single-parent/two-parent households in 2012: €1,550–2,580/€4,640–5,670), and employment and immigration levels (SCB, 2012; Vadlin et al., 2015). The study population is also representative of the general population of Västmanland in terms of proportions of employed parents (92%), separated parents (30%), single-parent households (19%) as well as foreign-born adolescents (9%) (Vadlin et al., 2015).

2.1. Ethical considerations
Participants received cinema tickets for their participation. The study was approved by the Ethical Review Board of Uppsala (Dnr. 2012/187).

2.2. Translation
The PASCQ was translated by researchers in the SALVe cohort group. The validity of the translated scales was then evaluated in comparison with the original scale. The evaluation was performed by three professional evaluators (a psychiatrist, a sociologist and a social worker) and three adolescent/young adult lay people. The evaluators’ comments and suggestions for rephrasing were compared, and the translated scale was adjusted accordingly. The scale was then retranslated into English by a professional translator, and a comparison of the retranslated and original scales indicated that the essence of the scale remained intact. This entire process followed a recommended procedure (Nelson, 2007; Whitaker, 2012). The Swedish version of the scale is presented in the Appendix.

2.3. Measures
The PASCQ consists of the six dimensions of Warmth, Rejection, Structure, Chaos, Autonomy support and Coercion. The adolescent version includes four items per dimension (24 items in total), whereas the parent version includes five items per dimension (30 items in total). The participants graded each statement on a scale of 1 (Not at all true), 2 (Not very true), 3 (Sort of true) or 4 (Very true) (Skinner et al., 2005; Taylor & Francis, 2017).

2.4. Statistical analysis
Medians, means, quartiles, and standard deviations were assessed for the descriptive analyses. Mean values for the dimensions were assessed according to the total sum for each dimension divided by the number of items in the dimension for the parent and adolescent reports, respectively. The Kruskal–Wallis test was used for between-group analyses based on mean values. The Mann–Whitney U test was used to analyse sex differences in the parent report.

Spearman’s rho was used for the correlation analyses of the matched parent–adolescent pairs. An independent samples t-test was used to compare the dimensions of the PASCQ by matched parent–adolescent dyads. Cronbach’s α was used to assess the reliability of the PASCQ (parent and adolescent reports), the cut-off values for the Cronbach’s α were set to >.9 excellent, > .8 good, > .7 acceptable, > .6 questionable, > .5 poor, and ≤ .5 unacceptable (George & Mallery, 2016). Item-inter correlations were used to assess the reliability of each parental dimension with a cut-off of .2 to .4 (Briggs & Cheek, 1986). CFA was used to confirm the internal structure of the PASCQ parent and adolescent reports. The cut-off values were set to the following recommended values: χ² df to < 2–3 (Schreiber et al., 2006). The relative fit indices (RFIs) are based on the assumption that a null hypothesis would mean that the variables in the model were uncorrelated (McDonald & Ho, 2002). The RFIs presented were Root Mean Square Error of Approximation (RMSEA) < .06–.07, and Standardised Root Mean Square Residual (SRMR) <.09 (Hooper et al., 2008; Hu & Bentler, 1999; Steiger, 2007).

All analyses were conducted using the Statistical Package for the Social Sciences (IBM SPSS Statistics for Windows, Version 24.0, Armonk, NY: IBM Corp.) and AMOS (Arbuckle, 2016).
3. Results

3.1. Descriptive of the study sample
Among the adolescents of the study sample 47.5% were 16–17 years old (299 males, 439 females) and 52.5% were 17–18 years old (342 males, 475 females). The guardians of the study sample were divided by biological mothers (80%), biological fathers (18%) and other relations (2%).

3.2. Concordance between parents- and adolescent’s reports
The PASCQ showed an internal consistency of $\alpha = .481$ for the adolescent report and $\alpha = .617$ for the parent report. Correlations between the parent and adolescent reports, using matched parent–adolescent dyads, ranged from $r = .164$ (Structure) to $r = .366$ (Coercion) (Table 1).

Correlation analyses, separated by sex, between male/female adolescent reports and parent reports ranged from $r = .079$ (Structure, males) to $r = .384$ (Coercion, females). No significant correlations were noted between the parent and male adolescent reports for Structure (Table 1). A Mann–Whitney U test showed small but significant sex differences between mothers’ and fathers’ reports regarding Warmth ($Z = —4.716, p < .001$), Rejection ($Z = —2.190, p = .028$) and Autonomy support ($Z = —3.394, p < .001$) (not shown in Tables).

Sex and age differences in adolescent estimations of the parental dimensions are shown in Table 2. The estimations of parental Warmth and Structure was highest in 16-year-old males, and lowest in 18-year-old males. The estimation of parental Rejection was lowest among 16-year-old males and highest among 16-year-old females. The estimation of parental Coercion was lowest among 18-year-old females, whereas 16-year-old males estimated Coercion highest. The estimations of the parental dimensions Autonomy support and Chaos did not significantly differ between the groups (Table 2).

Regarding the parent reports, the estimations of the parental dimensions differed depending on the age and sex of the adolescents (Table 2). The estimation of parental Warmth was highest among parents to 16-year-old females and lowest among parents to 18-year-old males. The estimation of parental Autonomy support was highest among parents to 18-year-old females, and lowest among parents to 18-year-old males. Parents to adolescent males estimated the parental dimension of Rejection as lowest, in contrast to parents to adolescent females. The estimation of parental Coercion was highest among parents to 16-year-old males, and lowest among parents to 18-year-old females. The parents’ estimations of the parental dimensions Structure and Chaos did not significantly differ depending on the age and sex of the adolescents (Table 2).

3.3. Confirmatory factor analyses
The standardized factor correlation estimates revealed a reversed pattern of correlations between the positive and negative parental dimensions for both parent and adolescent reports (Figure 1). The inter-item correlations ranged between .3 and .5 for adolescents and between .3 and .4 for parents (Figure 2).

The 24 items of the PASCQ adolescent report were arranged in a six-dimensional model using CFA. The model fit indices for the model regarding SRMR met the cut-off criteria’s and the RMSEA was in the range of an acceptable value and had significant $\chi^2$ values (Table 3). The factor loading estimates of all scale items ranged from .310 to .763, with one item failing to demonstrate convergent reliability of > .4 (Figure 1).

The 30 items of the PASCQ parent report were arranged in a six-dimensional model using CFA. The model fit indices for the model regarding RMSEA and SRMR met the cut-off criteria’s and had significant $\chi^2$ values (Table 3). The factor loading estimates of all scale items ranged from .383 to .757, with one item failing to demonstrate convergent reliability of > .4 (Figure 2).
Table 1. Descriptive statistics for the PASCQ (matched dyads)—whole groups and divided by sex of the adolescent

| Dimension | Adolescents 1 | Parents 2 | Spearman's rho |
|-----------|---------------|-----------|----------------|
|           | Mean | SD | Median | Q1-Q3 | Mean | SD | Median | Q1-Q3 |             |
| Warmth    | 3.690 | .457 | 4.000 | 3.500-4.000 | 3.340 | .399 | 3.400 | 3.000-3.600 | .271** |
| Rejection | 1.340 | .525 | 1.000 | 1.000-1.500 | 1.500 | .458 | 1.400 | 1.200-1.800 | .270** |
| Structure | 2.970 | .610 | 3.000 | 2.250-3.350 | 3.420 | .391 | 3.400 | 3.200-3.800 | .164** |
| Chaos     | 1.700 | .589 | 1.500 | 1.250-2.000 | 1.520 | .446 | 1.400 | 1.200-1.800 | .244** |
| Autonomy support | 3.450 | .527 | 3.500 | 3.250-3.750 | 3.610 | .391 | 3.800 | 3.400-4.000 | .232** |
| Coercion  | 1.920 | .612 | 1.750 | 1.500-2.250 | 1.670 | .534 | 1.600 | 1.200-2.000 | .366** |

Adolescent males 3

| Warmth    | 3.683 | .464 | 4.000 | 3.500-4.000 | 3.309 | .389 | 3.400 | 3.000-3.600 | .255** |
| Rejection | 1.281 | .465 | 1.000 | 1.000-1.250 | 1.457 | .440 | 1.400 | 1.200-1.600 | .246** |
| Structure | 2.952 | .612 | 3.000 | 2.500-3.250 | 3.438 | .375 | 3.400 | 3.200-3.800 | .079ns |
| Chaos     | 1.667 | .579 | 1.500 | 1.250-2.000 | 1.524 | .432 | 1.400 | 1.200-1.800 | .201** |
| Autonomy support | 3.452 | .506 | 3.500 | 3.250-3.750 | 3.591 | .381 | 3.600 | 3.400-4.000 | .173** |
| Coercion  | 1.930 | .599 | 1.750 | 1.500-2.250 | 1.678 | .519 | 1.600 | 1.200-2.000 | .333** |

Adolescent females 4

| Warmth    | 3.702 | .446 | 4.000 | 3.500-4.000 | 3.378 | .396 | 3.400 | 3.100-3.600 | .281** |
| Rejection | 1.361 | .541 | 1.000 | 1.000-1.500 | 1.512 | .449 | 1.400 | 1.200-1.800 | .285** |
| Structure | 3.000 | .598 | 3.000 | 2.500-3.500 | 3.414 | .399 | 3.400 | 3.200-3.800 | .224** |
| Chaos     | 1.698 | .593 | 1.500 | 1.250-2.000 | 1.497 | .445 | 1.400 | 1.200-1.800 | .277** |
| Autonomy support | 3.465 | .536 | 3.500 | 3.250-4.000 | 3.632 | .383 | 3.800 | 3.400-4.000 | .272** |
| Coercion  | 1.882 | .612 | 1.750 | 1.500-2.250 | 1.641 | .520 | 1.600 | 1.200-2.000 | .384** |

** p < .001 ns = Non significant 1 n = 1345, items per dimension = 4 2 n = 1345, items per dimension = 5 3 n = 568 4 n = 777
4. Discussion

Even though there are several methods to assess parental dimensions, such as open interviews, questionnaires, and rating scales (Holden & Edwards, 1989; Hurley et al., 2014; Morsbach & Prinz, 2006; Skinner et al., 2005; Smith, 2011), parenting research often depends on the self-reports of parents (Morsbach & Prinz, 2006). In evaluation of parental self-reports a well-known problem is the lack of a gold standard (Morsbach & Prinz, 2006). Previous research has suggested that validity can be increased by multiple informant methods where the same construct, i.e. parenting, is measured (Morsbach & Prinz, 2006).

The present study evaluated the psychometric properties of the Swedish version of the Parents as Social Context Questionnaire (PASCQ) regarding its dimensional structures and investigated concordance between the parent and adolescent reports.

Mean values for the adolescent and parent reports were generally similar to those of previous evaluation studies (Chew & Wang, 2013; Egeli et al., 2015; Skinner et al., 2005). Mean differences in the parental dimensions, depending on the sex and age of the adolescent, were found in both the adolescent and parent reports. The concordance between parent and adolescent reports were generally weak. The strongest concordance was found for Coercion and the weakest for Structure. In the adolescent report, Coercion had an inter-item correlation that suggested an unstable fit. Similarly, an unstable fit was found for Coercion in the study by Chew and Wang (2013), who recommended a careful examination of Coercion in future research owing to its unstable pattern. Interestingly, the dimension of Structure showed no significant correlation between parent and male adolescent reports.

The internal consistency of the PASCQ adolescent report with $\alpha = .481$ was below the cut-off and therefore unacceptable (George & Mallery, 2016). However, the items in the PASCQ are not consistent due to the six separate dimensions and therefore the low alpha value was expected, and in this setting desirable, since the six dimensions should not be equal to each other. The internal consistency of the PASCQ parent report acted in the same manner with an internal consistency of $\alpha = .617$ and therefore questionable (George & Mallery, 2016). However, as the

| Table 2. Kruskal–Wallis test showing the median ranking on six parental dimensions, divided by sex and age of the adolescents |
|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|
| Adolescent report¹ | Males | Males | Females | Females | $\chi^2$ (df) | $p$ |
|----------------|----------------|----------------|----------------|----------------|----------------|----------------|
| 1. Warmth | 818.03 | 724.88 | 792.19 | 777.93 | 9.067 (3) | .028 |
| 2. Rejection | 736.38 | 751.11 | 818.53 | 786.11 | 8.912 (3) | .030 |
| 3. Structure | 843.78 | 699.33 | 817.77 | 756.47 | 21.783 (3) | <.001 |
| 4. Chaos | 820.22 | 761.57 | 757.44 | 763.75 | NS | NS |
| 5. Autonomy support | 794.57 | 737.27 | 767.44 | 806.65 | NS | NS |
| 6. Coercion | 840.62 | 772.61 | 826.40 | 697.72 | 26.583 (3) | <.001 |
| Parent report² | Males | Males | Females | Females | $\chi^2$ (df) | $p$ |
|----------------|----------------|----------------|----------------|----------------|----------------|----------------|
| 1. Warmth | 721.02 | 660.13 | 793.51 | 720.94 | 19.001 (3) | <.001 |
| 2. Rejection | 713.57 | 671.82 | 752.82 | 754.82 | 9.490 (3) | .023 |
| 3. Structure | 738.58 | 737.26 | 749.84 | 693.16 | NS | NS |
| 4. Chaos | 760.76 | 726.82 | 760.76 | 711.87 | NS | NS |
| 5. Autonomy support | 715.05 | 675.42 | 746.75 | 757.05 | 8.519 (3) | .036 |
| 6. Coercion | 778.07 | 711.43 | 755.37 | 680.47 | 12.099 (3) | .007 |

¹ N = 1556
² N = 1455
Figure 1. Model of six factors of the adolescent report of parenting dimensions, $n = 1556$
Figure 2. Model of six factors of the parent report of parenting dimensions, n = 1447
The CFA showed that the models for both the parent and adolescent reports fit the sample data according to the fit indices. The \( \chi^2 \) values were significant, suggesting a discrepancy between the sample and fitted covariance matrices (Hu & Bentler, 1999). However, \( \chi^2 \) is sensitive to sample size, meaning that the use of a large sample often results in a significant \( \chi^2 \) value, thereby leading to erroneous rejection of a decent model (Hooper et al., 2008). The sample size of the present study was fairly large, possibly explaining the significant \( \chi^2 \) values.

The RMSEA value was .070 for the adolescent model and .054 for the parental model. The cut-off for RMSEA has been pending in previous research (Hooper et al., 2008), although values close to .06 are considered acceptable as a rule of thumb (Hu & Bentler, 1999). According to previous research (Hooper et al., 2008; Hu & Bentler, 1999) the RMSEA value is recommended to be combined with SRMR. In the present study, the SRMR value met the cut-off criteria for both the adolescent and the parental models. Taking the estimates into consideration, the results indicate that the model fit was good for both parent and adolescent reports of the PASCQ, Swedish version.

Family context and parenting are important in the framework of treatment where characteristics of the family not only impacts the treatment results (Kitzmann et al., 2008) but improves them as well (Henderson et al., 2009). In terms of children’s behaviour and emotional stability, parental dimensions may affect such aspects and different parental programs are suggested as effective interventional tools for nurses (Ekim & Ocakci, 2016). As the prevalence of mental health problems among children increases with an earlier onset and heightened risk of future mood disorders (Hidaka, 2012), the need for early treatment interventions grows. Previous research has found that while waiting for children’s mental health treatment parents value an opportunity to improve their parental skills (Cunningham et al., 2015). The paucity of data on this topic is often noted in reviews as it hampers further understanding of parents’ role in evidence-based interventions (Flamm & Grolnick, 2013; Odgers et al., 2012; Sanders et al., 2014; Williamson et al., 2017).

Table 3. Model fit indices of PASCQ for adolescent and parental six factor models

| PASCQ   | \( \chi^2 \) | df | RMSEA | SRMR | \( p \) |
|---------|--------------|----|-------|------|------|
| Adolescents\(^1\) | 2037.09 | 237 | .070  | .063 | <.001 |
| Parents\(^2\)    | 2075.34 | 390 | .054  | .061 | <.001 |

\(^1\) \( n = 1556 \)
\(^2\) \( n = 1477 \)

Both parent and child/adolescent English versions of the PASCQ have been validated previously (Chew & Wang, 2013; Egeli et al., 2015), subsequent to evaluation of the original scale (Skinner et al., 2005). Egeli et al. (2015) evaluated the parent report of a revised version of PASCQ, called the R-PSCQ. An exploratory factor analysis suggested a six-factor solution (Egeli et al., 2015). The study found no age differences when comparing the age groups of the children aged 2–18 years (Egeli et al., 2015). Previous research has suggested that parental influence decreases as the child ages (Baumrind, 1991). Increased age of the child is associated with parental encouragement of independence, thereby changing the construction and dynamic of the relationship (Park & Lau, 2016). Thereby, the child’s developmental phase might have an impact on the estimation of parental dimensions. The findings of Egeli et al. (2015) suggest that PASCQ is a valid measurement for parental estimation of parental dimensions even during late adolescence. This finding was confirmed in the present study. However, the concordance between the parent- and adolescent reports was low for all six parental dimensions. (Park & Lau, 2016). Thereby, the parent
report may primarily be suitable for measuring the parental view of the relationship but possibly less representative of the adolescent’s experiences and vice versa.

Chew and Wang (2013) validated the factorial validity of the original PASCQ with a Singaporean youth sample. They evaluated a unipolar six-factor model as well as a bipolar three-factor model using CFA. Adolescents’ perceptions of both mothers’ and fathers’ parenting dimensions were assessed (Chew & Wang, 2013). The unipolar six-factor solution was a better fit to the sample than the three-factor solution for both scales, in line with the validation of the original scale by Skinner et al. (2005). The model fit in the study by Chew and Wang (2013) was slightly better than that in the present study, which may be explained by language and cultural differences.

Perceived parenting has previously been linked to mental health among adolescents independent of several confounders (Eun et al., 2018), yet the assessment of parenting is complex (Hurley et al., 2014; O’Connor, 2002). The lack of standardized measurements that assess parental dimensions can cause discrepancy across studies (Eun et al., 2018). The present study contributes to the research field of parenting by presenting a psychometric evaluation of the PASCQ and presenting different aspects on the measure of parental dimensions. The findings of the psychometric evaluation of the PASCQ might have implications for prevention, intervention, and treatment that incorporate the family as a contextual framework, where this instrument could be useful.

4.1. Strengths and limitations
The present findings should be interpreted in light of several strengths and limitations. The overall consideration when translating a scale is to keep the essence of the questions intact. Here, we followed the suggested translation guidelines (Nelson, 2007), applying the use of expert raters to evaluate the Swedish wording and the essence of the meaning compared with the original scale, and using a professional Swedish–English translator for the retranslation of the scale.

One possible limitation of the present study is that we used a combined parental scale instead of the separate maternal and paternal scales of the PASCQ, which naturally gave us a mean score for parents instead of separate scores for mothers and fathers. However, a previous study that evaluated the PASCQ using both maternal and paternal scales found no differences between the sexes (Chew & Wang, 2013). Regarding the matched parent and adolescent dyads, another limitation was that although the dyads were matched by ID number, we could not ensure that the adolescent had the participating parent in mind when responding to the PASCQ. Therefore, the low concordance could be due to a mismatch in dyads. Another possible explanation for the low concordance may be the high mean age of the adolescents. The parent report may be more suitable for children than for adolescents/young adults, due to the more intimate relationship between younger children and their parents (Park & Lau, 2016). However, when comparing different age groups on the R-PSCQ, Egeli et al. (2015) found no differences. Moreover, because only 16–18-year-old adolescents were included, the findings are limited to that age group.

The sample size was fairly large and representative of the general Swedish population (Vadlin et al., 2015). There was a skewed sex distribution among the parents, whereby mothers were over-represented in the sample. Small but significant sex differences were found between mothers’ and fathers’ reports regarding Warmth, Rejection and Autonomy support. Nevertheless, we chose to cluster the parents into one group independent of sex for the validation analyses, owing to the small sample of participating fathers. In addition, the PASCQ relies solely on self-reporting, which entails a risk of reporting bias.

5. Conclusions
Family context and parenting are important in the framework of family-based treatments (Henderson et al., 2009; Kitzmann et al., 2008), thereby emphasizing the need for valid parental measurements. Our findings suggest that the PASCQ Swedish version parent and adolescent report is suitable for measuring the dimensions of the PASCQ for the Swedish population. Although the
parent report and the adolescent report showed adequate model fit, the concordance between parent and adolescent reports was low. The parent report may therefore be suitable for measuring the parental view of the relationship but possibly less representative of the adolescent’s experiences and vice versa. In future research it would be of interest to compare the validity of the PASQ Swedish version for different age groups. Studies of siblings would be motivated by the individual estimations of their parents compared with parental estimations of relationships with both children. The influence of PASQ in relation to child and adolescent mental health regarding risk and protective effects would also be of interest to investigate.

The findings of the present study could have implications for contextual frameworks incorporating family factors, such as prevention, intervention, and treatment, where the PASQ instrument might be useful.

**Funding**
This work was supported by the Söderström König Foundation [SLS-559921]; Söderström König Foundation [SLS-655791]; Working Life and Welfare [FORTE] [2015-00897]; the Swedish Research Council for Health; Åke Wiberg Stiftelse [M15-0239].

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**correction**
This article has been republished with minor changes. These changes do not impact the academic content of the article.

**Citation information**
Cite this article as: Measuring parental dimensions: A psychometric evaluation of the parents as social context questionnaire, Swedish version, Keijser Rebecka, Nilsson W. Kent & Åslund Cecilia, Cogent Psychology (2020), 7: 1757856.

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Appendix

Parents as Social Context Questionnaire (PASCO), Parent report, Swedish version

Response scale for all items:
A) Stämmer inte alls (1)
B) Stämmer ganska dåligt (2)
C) Stämmer ganska bra (3)
D) Stämmer helt (4)

Warmth
1. Jag känner väl till vad som händer i mitt barns liv/vardag.
2. Jag vet verkligen hur mitt barn känner för olika saker.
3. Jag gör speciella saker tillsammans med mitt barn (utöver vardagen).
4. Jag avsätter tid för att prata med mitt barn om sådant som är viktigt.
5. Jag visar eller säger till mitt barn att jag älskar honom/henne.

Rejection
6. Jag förstår mig inte på mitt barn särskilt bra.
7. Ibland är mitt barn svårt att tycka om.
8. Ibland kräver mitt barn så mycket att det känns som en börda.
9. Mitt barn behöver mer än vad jag hinner ge honom/henne.
10. Ibland känner jag att jag inte kan vara där för mitt barn när han/hon behöver mig.

Structure
11. Jag är tydlig med vad som händer om mitt barn inte följer våra regler.
12. Jag gör det tydligt för mitt barn vad jag förväntar mig av honom/henne.
13. Jag förväntar mig att mitt barn följer våra familjeregler.
14. När jag säger till mitt barn att jag ska göra något, så gör jag det.
15. Om mitt barn har ett problem, så hjälper jag honom/henne att komma på hur han/hon ska lösa det.

Chaos
16. Jag låter mitt barn komma undan med saker som jag egentligen inte borde tillåta.
17. När mitt barn får problem/hamnar i svårigheter är min reaktion inte särskilt förutsägbar.
18. Mitt barn verkar inte veta vad jag förväntar mig av honom/henne.
19. Jag ändrar ofta reglerna hemma.
20. Jag kan bli arg på mitt barn utan förvarning.

Autonomy support
21. Jag uppmuntrar mitt barn att uttrycka sina känslor även när de är svåra eller jobbiga att höra.
22. Jag uppmuntrar mitt barn att uttrycka sina åsikter även när jag inte instämmer i dem.
23. Jag litar på mitt barn.
24. Jag uppmuntrar mitt barn att vara sann mot sig själv.
25. Jag förväntar mig att mitt barn säger vad han/hon verkligen tycker.
Coercion
26. Mitt barn bråkar jämt med mig.
27. För att få mitt barn att göra något, måste jag skrika åt honom/henne.
28. Jag kan inte tillåta att mitt barn bestämmer för många saker på egen hand.
29. Ibland känns det som att jag måste pressa mitt barn för att få honom/henne att göra saker.
30. Jag märker att jag hamnar i maktkamper med mitt barn.

Note. Translation of Parents as Social Context Questionnaire (PASCQ) (Skinner et al., 2005; Taylor & Francis, 2017).

Parents as Social Context Questionnaire (PASCQ), Adolescent report, Swedish version
Response scale for all items:
A) Stämmer inte alls (1)
B) Stämmer ganska dåligt (2)
C) Stämmer ganska bra (3)
D) Stämmer helt (4)

Warmth
1. Mina föräldrar visar att de älskar mig.
2. Mina föräldrar tycker om att vara med mig.
3. Mina föräldrar är alltid glada att se mig.
4. Mina föräldrar tycker att jag är speciell.

Rejection
5. Ibland undrar jag om mina föräldrar tycker om mig.
6. Mina föräldrar tycker att jag alltid är i vägen.
7. Mina föräldrar får mig att känna som att jag inte är önskad.
8. Ingenting jag gör är tillräckligt bra för mina föräldrar.

Structure
9. När jag vill göra något, visar mina föräldrar mig hur.
10. När jag vill förstå hur något fungerar, förklarar mina föräldrar det för mig.
11. Om jag har ett problem, hjälper mina föräldrar mig att komma på hur jag ska lösa det.
12. Mina föräldrar förklarar varför vi har våra familjeregler.

Chaos
13. När mina föräldrar lovar något, vet jag aldrig om de kommer att hålla det.
14. När mina föräldrar säger att de ska göra något, händer det att de inte alls gör det.
15. Mina föräldrar ändrar reglerna för mig hela tiden.
16. Mina föräldrar blir arga på mig utan förvarning.

Autonomy support
17. Mina föräldrar litar på mig.
18. Mina föräldrar accepterar mig som jag är.
19. Mina föräldrar låter mig göra de saker som jag tycker är viktiga.
20. Mina föräldrar försöker förstå min synvinkel.

Coercion
21. Mina föräldrar säger alltid åt mig vad jag ska göra.
22. Mina föräldrar bestämmer jämt över mig.
23. Mina föräldrar tycker att det finns ett enda sätt att göra saker på—deras sätt.
24. Mina föräldrar säger “nej” till allting.

Note. Translation of Parents as Social Context Questionnaire (PASCQ) (Skinner et al., 2005; Taylor & Francis, 2017).
