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Short report: Self-compassion and satisfaction with life in Danish adolescents with Developmental Language Disorder (DLD): 'We are all in the same boat'

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ABSTRACT

Background: Adolescents with Developmental Language Disorder (DLD) are at risk of emotional health problems and low self-esteem. However, little is known about their self-compassion (SC) and satisfaction with life (SWL). The present study compared self-compassion and satisfaction with life reported by Danish adolescents with DLD compared to typically developing (TD) peers, and whether severity of language difficulty is associated with SC and SWL.

Methods: Results were obtained from 10 Danish adolescents with DLD compared with 14 age-matched TD adolescents and 132 TD peers, aged 15 years.

Results: For SC and SWL results showed that adolescents with DLD reported more positive feelings compared to the TD adolescents. Interestingly for SC, the negative, but not the positive, domain differentiated the two groups, as adolescents with DLD reported less symptoms on self-judgment, isolation and overidentification. SC and SWL was strongly correlated with language abilities for the DLD group, but not for the TD group.

Conclusions: Results from our pilot study showed that Danish adolescents with DLD reported being less harsh on themselves. Language abilities were associated with self-compassion for the DLD, but not for the TD group. Whether these group differences are due to environmental factors such as the specific Danish school setting of the DLD group or internal factors are discussed and requires further research.

1. Introduction

Developmental Language Disorder (DLD) is a neuropsychological disorder affecting at least 7 % of children (Norbury et al., 2016), and characterized by deficits in production or/and comprehension of language that are not accompanied by any obvious neurological damage. DLD has a significant impact on the individuals' everyday social interactions, educational pathway, as well as emotional health and self-esteem (Conti-Ramsden & Botting, 2008; Wadman et al., 2008). Individuals with DLD report significantly more symptoms of depression and anxiety compared to TD peers (Botting et al., 2016; Conti-Ramsden & Botting, 2008) and delayed social

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emotional development such as theory of mind (Nilsson & Jensen de López, 2016).

Adolescence is an important period for development of identity, self-confidence, and a sense of being. Individuals with DLD have relatively good prosocial skills compared to their emotional abilities (Conti-Ramsden et al., 2013), which suggests that for some adolescents with DLD, mental health challenges may be related to language difficulties in combination with long-term negative experiences in social and peer settings rather than poor social skills per se.

The extent of social emotional symptoms may be expected to correlate with severity of language disorder. However, longitudinal research on links between language level and reported quality of life or psychiatric outcomes beyond childhood show mixed results (see Conti-Ramsden & Botting, 2008). This could in part be due to parent-reported and self-reported symptomology for wellbeing of children with DLD not always aligning (Kenyon et al., 2021), and for older children it therefore seems crucial that their own voices are heard.

Research on emotional health of adolescents with DLD has been restricted to identification of negative effects of growing up with DLD and revolved around the concepts of depression, anxiety, low self-esteem, or social phobia (Durkin & Conti-Ramsden, 2007; Forest et al., 2018; Voci et al., 2006). Broader aspects of mental and emotional well-being including positive feelings and positive functioning in life, such as subjective well-being, flourishing, and coping with adversity (Keyes, 2002) have sparsely been addressed. French children and adolescents (8–18 years) with DLD reported worse wellbeing (Hubert-Dibon et al., 2016) and British young adults reported less self-efficacy (Botting et al., 2016; Durkin et al., 2017), when compared to TD groups. Self-efficacy was associated with language abilities for the individuals with DLD, but not for their TD peers.

Positive healthy self-attitudes and relationships to oneself, such as the capacity of *self-compassion* (SC) (Neff, 2003) have recently been addressed in psychology of wellbeing. SC refers to how individuals treat themselves when facing adversity and SC is constituted by the mutual influence of opposing components: 1) increased self-kindness and reduced self-judgment, 2) identifying adversity more as common for humanity and feeling less isolated, and 3) reacting with increased mindfulness and reduced over-identification. A high level of self-compassion is expected to be a protection against negative vulnerabilities, reducing negative emotions and might mitigate emotional health challenges associated with clinical groups.

Self-compassion has not previously been researched in individuals with DLD and may be important for understanding variability in mental health development of this group, and for interventions supporting children with DLD. Furthermore, research depicting trajectories of mental health related to DLD has concentrated on children in English-speaking countries. Countries differ substantially regarding secondary educational institutions, settings, and didactics, and thus research from different countries and cultures are informative for understanding mental health challenges that may be common across cultures and to understand how different environmental settings may affect mental well-being in individuals with DLD.

1.1. The present study

This study examined self-compassion and life satisfaction in Danish adolescents with DLD and adolescents with no history of language impairments. We examined associations between self-compassion and life satisfaction with severity of language impairment and asked:

1. How do Danish adolescents with DLD experience self-compassion (SC) and life satisfaction (SWL) compared to TD peers?
2. Is severity of language difficulty associated with self-compassion and life satisfaction in adolescents with and without DLD?

2. Method

2.1. Participants

142 adolescents mean age 15;8 (SD 15.0) years participated in our study. Ten adolescents had DLD (two girls) and attended an *efterskole* (Danish residential school) for adolescents in need of special support within the area of reading, while 132 (eighty-six girls) adolescents were typically developing with no identified language difficulties. The data was collected while the students were in their 8 months of the academic school year and recruitment was through schools in the same region. Written consent was obtained from parents.

All 132 TD adolescents (including an age-matched group) served as control group for the self-compassion scale and a subgroup of 111 adolescents served as control group for the life satisfaction scale. Information about language and cognitive measures as well as SC and SWL measures is summarized in [Appendix A](#).

A subgroup of 14 TD adolescents (mean age = 14;8 years; SD = 12.30) served as an age-matched-control group. To analyze and compare associations between self-compassion, life satisfaction, and language abilities the subgroup of 14 TD adolescents and the DLD group were assessed with two language subtests from the CELF-4. In addition, the DLD group was assessed with the TROG-2 language test. All DLD adolescents performed below the standard score of 86 on all language measures (see [Appendix A](#)).

2.2. Procedure

Participants were assessed in a quiet room at their school or home. The questions on the self-reported measures were read aloud to adolescents with DLD and presented in written form to the TD adolescents. Focus was to ensure that participants with poor receptive language abilities were able to understand the questions and the rating scale (Botting et al., 2016).

2.3. Statistical analysis

Statistical analyses were performed using Statistical Package for the Social Sciences (SPSS). Independent t-tests were applied to compare participants with and without DLD on baseline characteristics. Internal consistency within the SC subscales was measured using Cronbach's alpha coefficients. Comparisons of self-compassion and satisfaction with life were performed using non-parametric Mann-Whitney tests. Spearman's rho was used to investigate correlations between self-compassion and language skills. Results at the 0.05 level were considered significant.

3. Results

3.1. How do Danish adolescents with DLD experience self-compassion and satisfaction with life compared to TD peers?

Results from Mann-Whitney tests showed that adolescents with DLD reported statistically significant higher levels of total SC compared to TD peers ($Md = 20, n = 10$ and $Md = 17.3, n = 132$) $U = 406, z = -2.03, p = .04, r = .017$. (See Table 1).

We compared the distribution of scores for the two groups on the total SC scale illustrated with a boxplot (see Fig. 1). The median for the DLD group was higher compared to the median for the TD group with some TD adolescents responding lower than the DLD adolescents. We identified one outlier in the DLD group that scored 13.65.

An analysis of the subscales of the SC for the outlier's scores showed particularly low scores for two of the positive subscales; self-kindness (1) and common humanity (1.5), but not for the subscale mindfulness (2.75). In addition, this adolescent reported lowest on the SWL scale and was the most challenged on the language tasks (TROG-2 = 70, 74 percentile, sentence recall = 34, scale score = 1 and word classes = 13, scale score = 7).

Group comparisons for the domains of SC (positive and negative) did not differ significantly on the positive domain ($Md = 8.03, n = 10$ and $Md = 8.42, n = 132$) $U = 555, z = -.84, p = .40, r = .07$, whereas for the negative domain the DLD group reported significantly lower levels compared to the TD group ($Md = 6.48, n = 10$ and $Md = 9.28, n = 132$) $U = 247, z = -3.29, p < .001, r = .28$.

The results for the domain analyses of self-compassion revealed that adolescents with DLD were less harsh on themselves in that they reported significantly lower scores on the negative subscales compared to their TD peers.

The median for the Satisfaction with Life Scale was significantly higher for adolescents with DLD compared to their TD peers ($Md = 29.6, n = 10$ and $Md = 26, n = 111$) $U = 347, z = -1.97, p = .049, r = .018$ with a small effect size.

3.2. Is severity of language difficulty associated with self-compassion and life satisfaction in adolescents with and without DLD?

In investigating the associations between language SC and SWL we used the positive versus negative domain of the SC as well as the total scores.

For adolescents with DLD, language abilities on all domains were strongly associated with both domains of SC, however these did not reach significance. The association for total SC and language was strong and statistically significant for TROG-2. The association for SWL was strong for sentence recall, and low to moderate for the additional two language measures, however these associations were non-significant (see Table 2a).

For the TD adolescents the association between total SC and word classes was strong and this was also the case for the positive domain of SC and word classes. Total SC and the positive domain of SC were weakly associated for sentence recall, however none of the associations reached significance. Associations between SWL and the language measures were low and non-significant (see Table 2b).

Table 1

Scores for total self-compassion, neg. & pos. domains of SC, subscales of SC, and satisfaction with life for DLD and TD adolescents.

	DLD N = 10	TD N = 132
Self-Compassion Total	19.32 (2.59)	17.44 (3.16)
SC Subscales*		
<i>Negative domain</i>	6.68 (1.92)	9.14 (2.07)
Self-Judgment	2.28 (0.71)	2.93 (0.78)
Isolation	2.33 (0.90)	3.07 (0.88)
Over-Identification	2.08 (0.76)	3.14 (0.81)
<i>Positive domain</i>	8.00 (1.86)	8.57 (1.95)
Self-Kindness	2.42 (0.76)	2.77 (0.78)
Common Humanity	2.83 (0.84)	2.89 (0.90)
Mindfulness	2.75 (0.67)	2.91 (.70)
Satisfaction with Life _a	29 (4.76)	25.61 (5.32)

* In the negative domain, lower scores indicate more self-compassion; in the positive domain, higher scores indicate more self-compassion. ^aTD group N = 111.

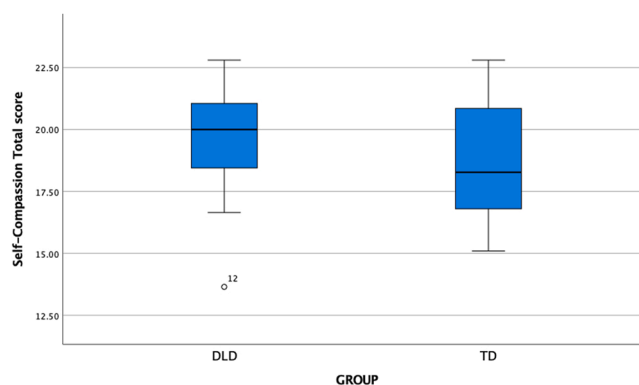


Fig. 1. Boxplot for total SC by group.

Table 2a

Correlations between self-compassion, life satisfaction and language for DLD group (Spearman's correlations).

N = 10	1	2	3	4	5	6
1. TROG-2	–					
2. Word classes	.44	–				
3. Recall sentences	.82 ^a	-.19	–			
4. SC ^{Positive domain}	.45	.56	.42	–		
5. SC ^{Negative domain}	-.56	.13	-.58	.09	–	
6. SC ^{Total}	.68 ^b	.54	.56	.72 ^b	-.55	–
7. SWL ^{Total}	.21	-.36	.59	-.03	-.54	.20

^anegative scales were not reversed coded.

^a $p < 0.01$.

^b $p < 0.05$.

Table 2b

Correlations between self-compassion, life satisfaction and language for TD group (Spearman's correlations).

N = 14	1	2	3	4	5
1. Word classes	–				
2. Recall sentences	.35	–			
3. SC ^{Positive domain}	-.50	-.35	–		
4. SC ^{Negative domain}	.19	.02	-.33 ^a	–	
5. SC ^{Total}	-.53	-.27	.90 ^a	-.64 ^b	–
6. SWL ^{Total}	-.16	-.18	.24	.01	.20

^anegative scales were not reversed codes.

^a $p < 0.01$.

^b $p < 0.05$.

4. Discussion

In the present study, we compared self-reported self-compassion and satisfaction with life in Danish adolescents with DLD compared to TD adolescents. Results showed that adolescents with DLD reported statistically significant higher levels of self-compassion compared to the TD group. Adolescents with DLD were less harsh on themselves as reported on the negative domain, i. e., they were less self-judging, isolated (feeling cut-off from others) and over-identifying (fixating on negative aspects when being in a painful situation), while reporting similar feelings as the TD group on positive domain of SC e.g., self-kindness.

Satisfaction with life was similarly higher in the DLD group compared to the TD group. One explanation may be that when reaching adolescent-hood, some individuals with DLD have come to accept their difficulties in a more positive way and have developed mental mechanisms to cope in their difficult situation.

This differs somewhat from studies showing that self-efficacy is lower for British adolescents with DLD compared to peers (Botting et al., 2016; Durkin et al., 2017).

However, it is important to note that self-efficacy captures abilities to be proactive while in our study we applied measures of self-compassion, which captures abilities to accept oneself in a positive way. Furthermore, self-efficacy refers to the individual's belief in his/her capacity to perform, whereas self-compassion refers to belief in abilities to deal with adversity without belittling oneself. The latter competence may perhaps be more changeable and highly influenced by contextual factors. Environmental factors such as culture

and different school systems (the British compared to the Danish educational system) may have influenced these subtle cross-cultural differences.

An important common hypothesis is that a positive stance towards oneself e.g., high self-efficacy and positive self-compassion may equally mediate positive mental health in adolescents with DLD.

Interpersonal relationships play an important role in forming adolescents' views of themselves and their well-being. We recruited adolescents with DLD from a Danish residential school *efterskole* for adolescents with special needs and our data was collected when the students had attended the school for approximately 8 months. An *efterskole* is a self-governing independent residential school for students between 14 and 18 years. The focus is equally on educational and personal development (for overview see [Efterskolerne, 2021](#)), and an *efterskole* is regarded junior of the Danish Folk High School, which held an important role in the development of democracy and transformation of the Danish society towards co-operative movements.

The values of an *efterskole* are based on enlightenment for life, thoughts, and conversations about the meaning of life, feelings, and life experiences ([Efterskolerne, 2021](#)) and the curriculum has focus on personal development including music, sports, gymnastics, media, theater, travel, or/and special didactics. Furthermore, *efterskole* is characterized by tight relationships with peers and informal relationships with teachers outside school hours. These experiences, as well as the fact that the school is for adolescents with common difficulties may have attuned the DLD adolescents towards viewing themselves with a less self-criticizing attitude.

In the [Forest et al. \(2018\)](#) study DLD children reported having significantly fewer close friends compared to TD peers but were equally happy with their friends. They also found that peer problems at age 7 mediated associations between language difficulties at age 5 and emotional problems at age 14. In a similar vein the adolescents with DLD in our study may have developed a feeling of "we are all in the same boat", which may have boosted their self-compassion and satisfaction with life in a positive way.

Our findings related to associations between language, self-compassion and satisfaction with life showed non-significant, but moderate and strong associations for the TD and the DLD group on word classes. In our study we used the receptive scores from word classes which is a task evaluating abilities in perceiving the association relationship between word concepts – which two of four words "go together" the best.

When comparing associations on sentence recall and TROG-2, which are considered golden standard tasks for diagnosing DLD we identified differences across the TD and DLD group. The associations for sentence recall and all SC measures as well as for sentence recall and SWL were strong for the DLD group, but moderate and low for the TD group. Unfortunately, we did not have TROG-2 data for the TD group, so we are not able to conclude regarding whether the strong and statistically significant association is particular for the DLD group.

Results from the British sample of adolescents with DLD ([Conti-Ramsden & Botting, 2008](#)) did not show associations between emotional health and language. It is important to point out that the measures in the British study included negative aspects (anxiety and depression), while our measure focused on positive aspects of life satisfaction. Furthermore, although the British adolescents were the same age as the adolescents in our study at the time emotional health was measured, their language measures were from mixed time points (14 and 16 years) and exclusively included expressive language, whereas our measures were mixed measures of expressive and receptive language and collected concurrently.

5. Conclusion

Our study suggests that Danish adolescents with DLD in an *efterskole*, report more self-compassion and better life satisfaction compared to TD peers. These results suggest that despite major challenges involved in growing-up with DLD certain environmental aspects might serve as protective factors (see [Jensen de López et al., 2021](#) for parental views). It is important for parents, professionals, and teachers working with individuals with DLD, or individuals with other neuropsychological disorders to gain knowledge about specific psychological tools that may facilitate the development of self-compassion and satisfaction with life to protect against negative vulnerabilities.

Future research should expand exploring dimensions of mental health in relation to aspects of life satisfaction for adolescents with DLD in an *efterskole* or school with a similar setting compared to TD peers or/and compared to DLD peers in mainstream schools. Further knowledge of which positive aspects of mental health and wellbeing are important and how they may serve as protective factors for children growing-up with DLD is warranted.

Ethical Considerations

The study was carried out in accordance with the Declaration of Helsinki. All parents provided written consent for their child to participate.

Data Availability

The authors do not have permission to share data.

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Appendix A. Supporting information

Supplementary data associated with this article can be found in the online version at [doi:10.1016/j.ridd.2022.104400](https://doi.org/10.1016/j.ridd.2022.104400).

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