Pupil well-being and the development of word meaning structure: Differences in school satisfaction resilience in the context of class teacher parenting style and school-related adverse experiences

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Summary

This article focuses on the relationships between pupil well-being at school and cognitive development. In educational settings, pupil well-being has been recognised as an important factor that appears relevant for the achievement of many educational aims, as it has been related to an individual's educational attainments, leaving school early and cutting class (e.g. Jonker, 2006; Fallis & Opotow, 2003; Lee & Breen, 2007). In particular, the author's interest lies in exploring relationships between the ability to maintain one's well-being in the context of school-related negative factors and the development of word meaning structure (Toomela, 2003a; Vygotsky, 1934/1999). Pupil well-being at school is conceptualised, in line with the subjective well-being research tradition (Diener, 1984; Diener et al., 1999), as *school satisfaction*. It represents one of the domain-specific experiences of well-being that relates to the pupil's positive and negative affects in this particular area. The ability to maintain one's school satisfaction in the face of unpleasant conditions at school is defined as the expression of psychological resilience (Rutter, 2006; Shiner & Masten, 2012).

Better resilience could theoretically be facilitated by the deployment of forms of word meaning structure occurring developmentally later. Specifically, it was hypothesised that better psychological resilience could be obtained by pupils who have begun to organise their knowledge based on the abstract structures coded in language (utilisations of scientific concepts) aside from organising knowledge in accordance with the relations appearing in actual situations (utilising everyday concepts). Thinking in scientific concepts may facilitate resilience by helping pupils

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to overcome the obstacles of concrete experiences and to find superficially distinct situations or specific aspects of the environment as relevant for him or her. This could improve the ability to regulate emotion and consequently experience less negative affects.

This longitudinal study of 495 pupils from Estonian primary schools in grades three to five was carried out to investigate the correspondence between the utilisation of scientific concepts and resilience. Here, the longitudinal design was applied in order to gain more profound evidence on, and explore the persistency of, this relationship. However, the deployment of a new word meaning structure does not relate to all actions and areas an individual is engaged in at once. The initial application of scientific concepts could be rather limited and inconsistent as well as include the use of linguistic expressions that are similar to the scientific concept although their further application proves them to be everyday concepts (Kikas, 1998; Tulviste, 1988; Vygotsky, 1934/1999). Therefore, the longitudinal approach was also preferred here, making it possible to indicate pupils who showed rather systematic use of scientific concepts across the three years, and furthermore, to explore their school satisfaction resilience compared to pupils with less systematic use of this type of concept.

Over the three year period, pupil school satisfaction and subjectively specified negative affects at school were assessed using the *School satisfaction questionnaire* (Ots, 2010) at the beginning of each school year. On the same occasions, pupil use of scientific concepts was measured using the *Word meaning structure test* (Toomela, 2003b). The characteristics of class teacher parenting style were assessed cross-sectionally based on the *Classroom management practices questionnaire* (Hinn, 2009; Uibu & Kikas, 2012), which teachers fulfilled during the data collection in the fourth grade.

The configural frequency analysis method – CFA (von Eye, 1990) was used to analyse the data. In cross-tabulation, the CFA compares expected and observed frequencies in every cell of the categorical variable in order to distinguish types (observed frequency is significantly larger than could be by chance) and antitypes (observed frequency is significantly smaller). Here, the EXACON module in the SLEIPNER 2.1 package (Bergman & El-Khouri, 2002) was used to specify types and antitypes. An exact test for the comparison of observed frequency with expected frequency was the binomial test.

In order to detect the existence of school satisfaction resilience, first, pupils' school satisfaction was contrasted with their subjectively specified

negative affects at school as well as the characteristics of their class teachers' parenting style. Cross-sectional analyses showed that a higher level of negative affect among pupils concurs with low school satisfaction in grades four and five. A similar tendency was indicated among pupils in the third grade. An exploration of the relationships between pupil school satisfaction and teacher parenting style showed that a high level of encouragement and affection reflected in classroom management practices appears together with more frequent school satisfaction, whereas higher levels of psychological and behavioural control seem to more often yield dissatisfaction. Even though not evident in cross-sectional analyses, the pupils with higher resilience were detected in longitudinal analyses where, first, the group was distinguished as a type whose members' persistent high school satisfaction appeared together with a constant high level negative affect. Second, the type emerged whose members regained their greater school satisfaction during a year, regardless of their class teachers' disturbing management practices.

Further exploration of longitudinal relationships between the development of word meaning structure and the resilience of school satisfaction indicated that, in line with expectations, a more systematic use of scientific concepts is related to better resilience in the context of subjectively defined negative affects. In addition, pupils who used scientific concepts more systematically appeared more often to be satisfied with their schools if their teacher's parenting style was supportive. Even though this finding does not conform to expectations (i.e. that school satisfaction appears despite disturbing teaching practices), it may do so indirectly by indicating a better ability to take advantage of satisfaction enhancing features in one's environment.

The results appear in agreement with the conceptualisation of subjective well-being and viewing the experience of well-being as relating to a wider range of specific affects. The correlations between subjectively specified negative affects and school satisfaction were indicated in cross-sectional as well as longitudinal analyses. However, class teachers' parenting style, as a feature of the school environment that is not dependent on pupil evaluations, also related to school satisfaction. The interpretation here could be that the school environment has characteristics that can have an effect on the well-being of many pupils, but a more precise understanding of the situation of an individual pupil could be obtained if his or her unique experiences are accounted for.

The present results are also in line with the assumed accord between the development of word meaning and the resilience of school satisfaction;

it was also evident that not all pupils who persistently use scientific concepts show better resilience. Naturally, the appearance of better resilience can be based on different factors. In addition, a heterogeneity of thinking (Tulviste, 1988) means that the deployment of scientific concepts in a certain area does not have to result in similar developments in other areas. Therefore, the present finding may suggest that the development of scientific concepts could have the potential to support pupil well-being, but this potential is not always realized or is not necessary. Scientific concepts develop extensively at school (Luria, 1976; Vygotsky, 1934/1999). Therefore, the teaching of thinking skills (e.g. categorisation, reasoning, problem solving) and practicing such skills in different subjects may enhance pupil well-being by improving their resilience.

Keywords: psychological resilience, development of word meaning structure, subjective well-being, primary school, parenting styles, negative affect