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Developmental trajectories of school burnout: Evidence from two longitudinal studies

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ABSTRACT

To examine school burnout trajectories, in Study 1, 15-year-old adolescents ($N = 614$) completed the School Burnout Inventory twice during their final term of comprehensive school and twice after the transition to upper secondary high school or vocational school. In Study 2, school burnout in 17-year-old adolescents was measured twice annually ($N = 575$) during their upper secondary education. In Study 1, growth mixture modeling for school burnout yielded a four-latent-group solution: 60% of the adolescents showed a low and stable level of school burnout, 29% increasing burnout, 3% strongly increasing burnout and 8% high-decreasing school burnout. In Study 2, we identified two latent groups of school burnout: 94% moderate and slightly decreasing, and 6% high-increasing. In support of the demands–resources model during the educational transition, more changes were observed in the trajectories of school burnout, while during the stable post-transitional period, the trajectories of school burnout were mostly stable.

A few studies have adopted a person-oriented approach and examined the heterogeneous trajectories of school burnout during the educational transitions that occur in middle and late adolescence (Jung & Wickrama, 2008). By drawing on data on two longitudinal studies, the first during the education transition period from comprehensive school to upper secondary schooling, and the second during the more stable educational stage of upper secondary schooling, the aim of the present study was to examine heterogeneity in the trajectories of school burnout during both transition and stable educational stages. Based on the demands–resources model (Demerouti, Bakker, Nachreiner, & Schaufeli, 2001; Salmela-Aro & Upadyaya, 2014), we predicted that during the educational transition period, we would identify heterogeneous trajectories showing changes — both increasing and decreasing — in school burnout, in accordance with increasing and decreasing demands, while during more stable educational stages, the school burnout trajectories would mainly differ only in their level of stability.

While the majority of young people manage adolescence without experiencing any severe problems, some have difficulties in adapting to the transitions and changes of this age period: the rates of negative and stressful life events rise dramatically during adolescent years (Hankin & Abrahamson, 2001). School burnout is a new phenomenon consisting of exhaustion due to school demands, a cynical and detached attitude toward one's school, and the feelings of inadequacy as a student (Salmela-Aro, Kiuru, Leskinen, & Nurmi, 2009a). School burnout can be considered as a continuous phenomenon running from school-related stress to major burnout. In line with this, the present study focuses on school burnout symptoms as a continuum, and examines school burnout as a single concept consisting of the three theoretically-derived dimensions of school burnout.

Some research has been conducted on the course of school burnout throughout adolescence (Salmela-Aro, Savolainen, & Holopainen, 2009b): Overall, considerable stability has been found in the overall mean level of school burnout. However, during educational transitions, heterogeneous trajectories might appear. A key educational transition of adolescence in many European educational systems and a challenge for school adjustment is the transition to post-comprehensive education. This determines the quality and types of school-related demands, resources and learning opportunities among students and their exposure to different peers and teachers. We argue that educational transitions contribute to school burnout as educational transitions can be disruptive and demanding (Demerouti et al., 2001; Eccles & Midgley, 1989) and lead to heterogeneous pathways.

According to the demands–resources model (Demerouti et al., 2001; Salmela-Aro & Upadyaya, 2014), the fit between adolescents' needs and resources in the context of changing school-related demands influences their school-related burnout. Adolescents' emotional, cognitive, and social resources change as they mature (Eccles & Midgley, 1989). Based on the demands–resources model, optimal development takes place when there is a good fit between the demands and resources of the developing individuals and the opportunities afforded them by their social environments. Eccles (2004) argued that if schools are to provide the kind of social context that will continue to motivate students' engagement as they

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mature, then schools need to change in developmentally appropriate ways. To the extent that this does not occur, as they mature during adolescence, adolescents disengage from school first psychologically and then physically.

Recently, it has been shown that educational transitions may represent phases in which school burnout is susceptible to destabilization (Parker & Salmela-Aro, 2011). However, for some, transitions are opportunities for positive change, while for others these transitions can be quite disruptive. Nevertheless, moderate stability in school burnout was found across the transition to post-comprehensive education (Parker & Salmela-Aro, 2011). However, a major limitation of the previous studies is that they have all focused on examining the developmental course of school burnout at an average level within the population over time. For example, although latent growth modeling, which has been used in research on school burnout among adolescents (Salmela-Aro, Kiuru, & Nurmi, 2008), offers an efficient tool, it nevertheless assumes that the observations are all from one population. Thus, there is a need for the use of more person-oriented or idiographic methods, such as growth mixture modeling (Muthén & Muthén, 2000) to detect trajectories of school burnout over time.

Our aim was to identify distinct subgroups of adolescents who follow similar longitudinal trajectories of school burnout across their transition to post-comprehensive education, and during their upper secondary education. The hypotheses are presented in the context of the demands–resources model:

(1) What kinds of developmental trajectories do adolescents show in school burnout during their transition to post-comprehensive education? We assumed that most would pass through this period with a low level of school burnout (Hypothesis 1a). This is based on earlier findings that a majority of young people manage adolescence without experiencing any severe problems, while some have difficulties in adapting to the transitions and to the changes of this life phase (Eccles, 2004). Based on the demands–resources model (Hypothesis 1b), we assumed that the students undergoing the transition would show heterogeneous pathways: some would experience an increase, and some a decrease in school burnout over the follow-up during the educational transition.

(2) What kinds of developmental trajectories do adolescents show in school burnout during the stable stage of their upper secondary education? We assumed that most would pass through this period without burnout (Hypothesis 2a). Moreover, we assumed that the heterogeneous trajectories would differ mainly by level (Hypothesis 2b) and that, among a small minority, burnout would increase in line with the increasing demands encountered at the end of the upper secondary education (Hypothesis 2c).

(3a) To what extent students' gender predict their school burnout trajectory membership?

(3b) To what extent students' educational expectations predict their school burnout trajectory membership?

(3c) To what extent students' latent trajectory membership in school burnout predict their fulfilled educational expectations at the end of the study? As this is the first study to examine this issue these analyses are exploratory and no hypotheses are stated.

1. Study 1

1.1. Method

Study 1 is part of the ongoing FinEdu study. At the beginning of the study, the participants were ninth-graders facing the transition to their post-comprehensive schooling. Students from eight schools in a medium-sized town (population = 88000) in Central Finland were recruited for the study (N = 773). Two measurements were carried out before their transition to either upper secondary education (academic track) or vocational education (vocational track): at the beginning (Age = 15, Time 1) and at the end of the final term of the comprehensive school (Age = 16, Time 2). The next two measurements were carried out after their transition to their choice of post-comprehensive schooling (January 2005; Time 3, Age = 17 and January 2006, time 4, Age = 18), and the last measurement was carried out 2 years after that (Time 5, in 2008). At Time 1, 614 (289 females, 325 males) of the 773 students attending the schools participated in the study. During the next waves, as the students made the transition to either a vocational or upper secondary school track, the questionnaires were also given to possible new classmates, and thus the number of participants slightly rose, At Time 2, the number of participants was 630 (313 females, 317 males), at Time 3 it was 732 (359 girls, 373 boys), at Time 4, it was 619 (321 girls, 298 boys), and at Time 5, it was 589 (323 females, 266 males). The median age of the participants was 15 at the first measurement (M = 15; SD = 0.34).

In the attrition analyses, the adolescents who participated in the study at each measurement point were compared with those for whom data were missing at some measurement point. The results indicated no selection effect with respect to the school burnout variables. By using the missing data procedure (see details below in the description of the time strategy used in the analysis), we were able to supply data for all the participants (N = 863) in the analyses. The majority of the participants (99%) were Finnish-speaking.

1.2. Measures

The School Burnout Inventory (Salmela-Aro, Kiuru, Leskinen, & Nurmi, 2009a) consists of 9 items measuring three components of school burnout: (1) exhaustion at school, (2) cynicism toward the meaning of school and (3) sense of inadequacy at school to be rated on a 6-point scale (1 = *strongly disagree*; 6 = *strongly agree*). The total sum score was used. Cronbach's alpha reliability was Time 1 = .83; Time 2 = .86; Time 3 = .87, and Time 4 = .88.

Educational expectations (Time 1) were measured by asking the participants "*If you think about your future, what is the highest degree you are going to attain?*" coded as 1 = university degree, 2 = polytechnics, 3 = vocational school, and 4 = no degree/other.

Educational track after comprehensive school (Time 3) was measured by asking: (1) *Are you in education at the moment?* (1 = *yes*, 0 = *no*); (2) *If you are in education, what is the name of your school*? coded as: 1 = upper secondary high school (58.3%), 2 = vocational school combined with upper secondary high school courses (4.3%), 3 = vocational school (28.0%), 4 = tenth grade voluntary (6.9%), and 5 = outside formal education (2.5%). Educational track variable was created by comparing those on an academic track with those on a vocational track. Adolescents who were in vocational school and those in vocational school who were also doing upper secondary high school courses were considered vocational students.

Fulfilled educational expectations were measured by asking about current educational qualification and life situation at Time 5 (e.g., "*What is your current employment study situation?*"; "*What is the highest degree you are going to attain?*"). The answers were coded as follows: 1 = the highest expected degree is higher than the one completed or being studied for at the moment, and 2 = the highest expected degree is the same.

Gender 1 = girl, 2 = boy.

The first aim was to examine whether adolescents that show different developmental trajectories in school burnout during the transition to post-comprehensive education were examined by Growth Mixture Modeling (GMM; Muthén & Muthén, 2000). GMM provides an excellent tool for examining heterogeneity in growth by identifying homogeneous subgroups of participants that differ with respect to their developmental trajectories. It estimates mean growth curves for each identified class of participants and captures individual variation in these growth curves by estimation of the variance of the level and growth factor for each class (Muthén & Muthén, 2000).