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Original Article

The Role of Social Categories and the Social Climate for the Development of Well-Being in Elementary School Students

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Abstract: School well-being is shaped by person- and context-specific factors and is a target criterion of educational processes. However, only little is known about the development of students' school well-being during elementary school, including the role of (intersecting) social categories and the social context. The present study examines changes in elementary students' school well-being (liking to go to school), the link to students' gender and immigrant background, their intersection, and the perceived class climate. The sample included data from 2,395 third- and fourth-graders (48 % girls; M_{AgeT1} = 9.31 years, SD_{AgeT1} = 0.47) from a German longitudinal study. Linear growth curve models demonstrated a significant decline in school well-being over time. Boys without an immigrant background reported particularly low school well-being; class climate was positively related to students' well-being. The study contributes to a better understanding of the intersectionality of various social categories and contextual influences related to developmental changes in elementary students' school well-being.

Keywords: school well-being, gender, migration background, elementary school, social climate

Die Rolle sozialer Kategorien und des sozialen Klimas für die Entwicklung des Wohlbefindens von Grundschulkindern

Zusammenfassung: Schulisches Wohlbefinden wird von personen- und kontextspezifischen Faktoren beeinflusst und ist ein Zielkriterium für Bildungsprozesse. Wenig erforscht ist jedoch die Entwicklung schulischen Wohlbefindens in der Grundschule, einschließlich der Rolle (intersektionaler) sozialer Kategorien sowie des sozialen Kontexts. Daher werden in dieser Studie die Veränderung des schulischen Wohlbefindens (Freude am Schulbesuch) von Grundschulkindern untersucht sowie der Zusammenhang zum Geschlecht und Migrationshintergrund, zu deren Intersektion und zum wahrgenommenen Klassenklima. Die Stichprobe umfasste Daten von 2395 Kindern der dritten und vierten Klasse (48 % Mädchen; $M_{AlterT1}$ = 9.31 Jahre, $SD_{AlterT1}$ = 0.47) einer deutschen Längsschnittstudie. Lineare Wachstumskurvenmodelle zeigten einen signifikanten Rückgang des schulischen Wohlbefindens über die Zeit. Jungen ohne Migrationshintergrund berichteten ein besonders niedriges schulisches Wohlbefinden; das Klassenklima stand in positivem Zusammenhang zum Wohlbefinden. Die Studie trägt zu einem besseren Verständnis der Intersektionalität verschiedener sozialer Kategorien und von Kontexteinflüssen im Zusammenhang mit Veränderungen des schulischen Wohlbefindens in der Grundschule bei.

Schlüsselwörter: schulisches Wohlbefinden, Geschlecht, Migrationshintergrund, Grundschule, soziales Klima

Students' school well-being is important for their successful learning and development (e.g., Hascher & Hagenauer, 2011). Therefore, it is concerning that previous studies show a decline in different aspects of school well-being from elementary to secondary school and during secondary school years (e.g., Kleinkorres et al., 2023; Raccanello et al., 2020). The model of well-being in school (Hascher, 2004) assumes that both person-specific and context-specific factors influence students' school well-being. Accordingly, it has also been empirically shown that the development of (secondary school) students' school well-being, such as their emotions in school or experienced school stress, varies by social category, such as gender or immigrant background (e.g., Alivernini et al., 2020), and by social context, including

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the social climate or relationships in school (Haugan et al., 2021). However, many studies have examined social categories in isolation from one another, even though individuals' social identities and life experiences are based on multiple interconnected social categories. We propose that adopting an intersectional perspective (e.g., Crenshaw, 1989; Else-Quest & Hyde, 2016) provides deeper insight into students' school well-being development.

Against this theoretical background, this study particularly focuses on the social categories of gender and immigrant background, including their intersections. Socialization models (e.g., Wigfield & Eccles, 2020) suggest that children's and adolescents' socialization processes are shaped by their socializers' gendered and cultural beliefs, and that these social categories interact in predicting students' development (Parker et al., 2020). Further, by drawing on the model of well-being in school (Hascher, 2004) and bioecological theory (Bronfenbrenner & Morris, 1998), we propose that including the role of the school context and particularly the social climate in class – as students' academic and social development is influenced by the social climate within the learning group (Wang et al., 2020) – is also essential to understanding students' school well-being. Thus, besides the social categories, we also examine the role of the social climate in class in the development of students' school well-being as perceived by the students. We study (older) elementary school students to determine whether social categories and the social context impact students' school experiences even at this young age, because prior studies have mainly focused on changes in school well-being in the transition from elementary to secondary school (e.g., Raccanello et al., 2020) or in adolescence (e.g., Kleinkorres et al., 2023). Furthermore, older elementary school students face particular challenges stemming from the upcoming transition to secondary school, such as increasing pressure to perform. The social climate in their classroom is already well established by this time, as most elementary school students in Germany are taught in the same class since first grade. The findings can help inform targeted interventions to improve the school well-being of (older) elementary school students.

(School) Well-Being and Its Development

Subjective well-being refers to individuals' cognitive and affective evaluations of their lives (Diener et al., 2003), which is particularly high when positive cognitions and pleasant emotions outweigh negative ones (Hascher & Hagenauer, 2011). Researchers often distinguish between *hedonic* (feeling good) and *eudemonic* (living meaningfully) aspects of well-being, though conceptualizations may widely differ (cf. Bürger et al., 2023; Govorova et al., 2020; Holzer et al., 2021). Furthermore, well-being can be considered generally across all areas of life or domain-specific (Diener et al., 2003). Researchers have defined school well-being as one domain of young people's subjective well-being, corresponding to their cognitions (e.g., attitudes) and emotions "toward school life and members of the school community" (Morinaj & Hascher, 2022a, p. 201). Hascher (2004) developed a model of well-being in school that included both positive dimensions (e.g., positive cognitions and emotions toward school) and negative dimensions (e.g., physical complaints in school). The author argues that both person-specific characteristics (e.g., gender, age, and cultural background) and context-specific characteristics (e.g., social climate in class) influence students' school well-being.

Students' school well-being is considered a resource for and an outcome of successful learning in school (Morinaj & Hascher, 2022a), such as students' cognitive and behavioral adaptability or academic achievements (e.g., Putwain et al., 2020; Raccanello et al., 2020). Although researchers demonstrate a general decline in children's subjective well-being starting at the age of 10 (Casas & González-Carrasco, 2019) and a decline in students' school well-being in particular, e.g., from elementary to secondary (with medium effect size) or during secondary school (e.g., in Luxembourg, Switzerland, or Italy; Hadjar & de Moll, 2022; Raccanello et al., 2020), changes in elementary school have largely been neglected. Studies of elementary school students include either data for only one grade level (Raccanello et al., 2020), data starting with grade four (Morinaj & Hascher, 2022b), data aggregated across several elementary school grade levels (e.g., Hadjar & de Moll, 2022), or without examining changes across grade levels for (Chinese) elementary school students (Yang et al., 2018). Hence, we know very little about developmental changes in school well-being throughout elementary school, especially in the German context. Our study aims to overcome this deficit by using data from the German school system and drawing on the model of well-being in school (Hascher, 2004), proposing that school well-being changes with students' age, which is highly connected to students' grade level, as well as on findings pointing toward increasing performance pressure at the end of elementary school (Griebel & Berwanger, 2006).

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Elementary school in Germany includes only 4 years[1], which is relatively short compared to other European countries (see Kleine, 2014). In the final year, students enter a selection process into academic or nonacademic school tracks. Students' school performance guides this selection and pressures young students to perform (Griebel & Berwanger, 2006). It is, therefore, not surprising that motivation to learn declines in fourth-grade students in German elementary schools (Stahn & Ditton, 2017; Weidinger et al., 2017). Accordingly, if learning requirements and environments change because of their grade level, students' school well-being might already decline during (the end of) elementary school.

The Influence of Gender and Immigrant Background on Students' School Well-Being

Another model – like Hascher's model of well-being in school (2004) – that underlines interindividual differences in the development of students' affective and socioemotional characteristics is the situated expectancy-value theory (SEVT; Wigfield & Eccles, 2020), which suggests that socializers' beliefs and behaviors are influenced by (gender-)stereotypical cultural beliefs, and that such gender-specific beliefs and behaviors in turn shape youth identities, goals, motivations, and choices in gender-stereotypical ways. Empirical research confirms this claim, showing that (secondary school) students' positive and negative affects in school differ by specific social categories, such as gender or immigrant background (e.g., in Italy, Alivernini et al., 2020).

In line with the assumption of SEVT that gender socialization processes affect girls' and boys' motivational and socioemotional development, most research finds that girls report higher school well-being in elementary and secondary school than boys (e.g., Hadjar & de Moll, 2022; Liu et al., 2016; Raccanello et al., 2020). One explanation for such gender differences in well-being might be that girls and boys experience gender-stereotyped expectations and beliefs in social interactions in school (Holder & Kessels, 2017), which might affect their well-being. Accordingly, findings revealed that teachers perceive boys as indifferent toward school and achievements (Perander et al., 2020), or that boys perceive less positive and more negative feedback from their elementary school teachers than girls (Hoya, 2021). However, a few studies also demonstrate that boys in secondary school report greater attitudes and more positive emotions toward school than girls (e.g., Vyverman & Vettenburg, 2009). Only very few studies have investigated the role of gender in the change of students' school well-being, with diverse results (see studies from Spain and Hong Kong: González-Carrasco et al., 2017; Shek & Liang, 2018).

Further, although research demonstrates challenges at school for students with an immigrant background – typically assessed via the students' and/or their parents' country of birth (Will, 2019) – including victimization (e.g., Strohmeier et al., 2011), these students often show higher educational aspirations than students without an immigrant background (so-called *immigrant optimism*; Salikutluk, 2016). Such motivational beliefs related to school education positively influence students' satisfaction with school, as a study by Van Petegem et al. (2008) showed for secondary school students. This agrees with studies with samples from Luxembourg, Switzerland, and Belgium, showing that students from another country or with an immigrant background report higher school well-being in upper-level elementary school than students without an immigrant background (e.g., Morinaj & Hascher, 2022b; Verkuyten & Thijs, 2002). Others failed to find associations between elementary students' school well-being – while assessing only with one item – and their immigrant background (Hadjar & de Moll, 2022). We need more research on the topic to more clearly understand the underlying relations.

In line with intersectional perspectives (e.g., Crenshaw, 1989; Else-Quest & Hyde, 2016), individuals do not just belong to different but intertwined social categories coming with particular (dis-)advantages depending on the social context, including inequalities and power dynamics. Originally investigated with qualitative approaches, the role of intersecting social categories is also explored in quantitative research, including educational psychological research (e.g., Parker et al., 2020). However, regarding school well-being, social categories are still viewed mainly in isolation (e.g., Hadjar & de Moll, 2022). Taking an intersectional perspective and understanding the variability within each group (see also Cole, 2009) can help to interpret previous findings regarding the role of gender or immigrant background in students' school well-being, especially the experiences of students who belong to two social categories at the same time, such as gender and immigrant background. However, we identified only one

[1] Exceptions are the elementary schools in the federal states of Berlin and Brandenburg, which last 6 years but are not part of the sample for this study.

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study that focused on intersecting social categories regarding students' school well-being: Vyverman and Vettenburg (2009) found that – albeit only for adolescent girls – parents' educational qualifications are positively associated with school well-being, possibly because girls experience a stronger bond with their parents than boys do (e.g., Van Wel et al., 2000). The same might be true for the role of gender and other indicators of students' sociocultural background, such as their immigrant background. Given that male students and students without an immigrant background in elementary and secondary school report fewer positive attitudes toward school (e.g., Morinaj & Hascher, 2022b), this may be particularly pronounced when students belong to both social categories.

The Influence of the Social Climate in Class on Students' School Well-Being

In addition to intersectional approaches (e.g., Else-Quest & Hyde, 2016) and the model of well-being in school (Hascher, 2004), the role of the social context in human experiences and development is also particularly highlighted in bioecological theory (Bronfenbrenner & Morris, 1998). This theory proposes that proximal and distal, interconnected social systems influence children's daily experiences and development, including their well-being. In addition to the family, this also includes the school environment, e.g., the social climate in class: how teachers and students treat each other. Several empirical studies support this proposition, demonstrating positive relations between social climate and the different indicators of student well-being (for a review and meta-analysis, see Wang et al., 2020). For example, in Belgium, secondary school students' satisfaction with their school relates to teachers' student-perceived relational behavior (Van Petegem et al., 2008); in Norway, the classroom climate of upper secondary school students, operationalized as peer and teacher support, was negatively connected to students' experiences of school stress (Haugan et al., 2021); and socioemotional support in the classroom played a powerful role in children's socioemotional stress, as shown in a meta-analysis by Wang et al. (2020). Hence, how people treat each other in class seems to directly affect students' well-being, maybe because their need for connectedness (cf. self-determination theory, Deci & Ryan, 2000) is more satisfied in a more pleasant social environment. However, existing research focuses mainly on secondary school students and investigates diverse aspects of students' general well-being without examining school well-being in particular.

The Present Study

Based on the literature review and research desiderata presented above, this study investigates the level and developmental change of school well-being among elementary school students in grades three and four in Germany. In line with the model of well-being in school (Hascher, 2004), assuming that both person- and context-specific factors influence students' school well-being, we also examine the role of gender, immigrant background, and their intersection as well as the importance of the social climate in class. We focus on students' liking to go to school as a central aspect of well-being. This conceptualization is a hedonistic view of school well-being, which most of the cited literature focuses on, and refers to positive emotions and attitudes toward school (cf. positive dimensions of the model of well-being in school; Hascher, 2004). The present study thus proposes the following hypotheses:

Hypothesis 1 (H1): In line with the model of well-being in school (Hascher, 2004), proposing that well-being changes with age, which is highly connected to students' grade level, and because of students' increasing pressure to perform well in the learning environment at the end of elementary school (Griebel & Berwanger, 2006), we assume a decline in school well-being already by the end of elementary school.

Hypothesis 2 (H2): Based on socialization models like SEVT (e.g., Wigfield & Eccles, 2020) and previous findings (e.g., Liu et al., 2016; Raccanello et al., 2020), we hypothesize that girls will show higher school well-being than boys (H2a). In accordance with the finding that students with an immigrant background may hold higher educational aspirations than students without an immigrant background (Salikutluk, 2016), which may lead to higher motivation to attend school and, therefore, higher school well-being (cf. Van Petegem et al., 2008), we also hypothesize that children with an immigrant background will report higher school well-being than students without an immigrant background (H2b). We exploratively investigate whether both social categories are related to developmental changes in students' school well-being.

Hypothesis 3 (H3): In line with intersectional perspectives that emphasize the role of belonging to multiple social categories at the same time (e.g., Else-Quest & Hyde, 2016) and socialization models that emphasize the role of the social context that shapes variations in motivational and socioemotional development within gender

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groups (e.g., Eccles & Wigfield, 2020), we assume that students' gender interacts with their immigrant background regarding students' school well-being. We expect that girls with an immigrant background will report particularly high school well-being, whereas boys without an immigrant background will report particularly low school well-being. We also exploratively examine the role of this intersection in developmental changes to students' school well-being.

Hypothesis 4 (H4): Based on bioecological theory (Bronfenbrenner & Morris, 1998), which proposes that the social environment, including the class context, highly influences children's well-being, as well as on previous empirical research (e.g., Haugan et al., 2021), we anticipate that the social climate in class will be positively associated with students' school well-being. Additionally, we exploratively investigate the role of the social class climate in developmental changes to students' school well-being.

Based on the assumption of self-determination theory (Deci & Ryan, 2000), that experiencing competence leads to increased well-being, and on empirical evidence showing that students' achievement positively influences their school well-being (e.g., Morinaj & Hascher, 2022a), we include students' reading and mathematics competence as covariates in our analyses.

Method

Procedure and Sample

We draw on data from a national large-scale longitudinal panel study (BIKS 8–14, see Artelt et al., 2013). We included data from the second term of the third grade (Time 1; collected in the spring of 2006), the beginning of the fourth grade (Time 2; collected in the fall of 2006), and the second term of the fourth grade (Time 3; collected in the spring of 2007). Homuth et al. (2014) provide more information about the study and its design. Our sample included 2,395 students from 155 classes at 82 schools (M_{ageT1} = 9.31 years, SD_{ageT1} = 0.47; 48 % girls) located in two federal states of Germany (Bavaria and Hesse). Most students reported that both parents had been born in Germany (76.4 %). Lorenz et al. (2013) provide a more detailed description of the study and its procedure. Written informed consent was provided before participation, and the study was consistent with the ethical principles that apply when conducting research on human subjects.

Measures

Students' School Well-Being

We measured one aspect of students' well-being in school – the extent to which students like to go to school – with three items adapted from the FEESS 3–4 scale (Rauer & Schuck, 2003): "I like to go to school," "Everything would be better without school" (recoded), and "School is pretty annoying" (recoded). Response scales ranged from 1 (*not true at all*) to 4 (*very true*). Reliability was good at all measurement times (T1: ω = .82; T2: ω = .85; T3: ω = .86).

Gender and Immigrant Background

We assessed student gender as a binary variable, coded 0 = girls and 1 = boys. In line with the International Programme of Student Assessment (PISA; OECD, 2016), we defined immigrant background in terms of the parents' birth country. Participating students indicated whether their parents had been born in Germany (0 = without immigrant background, 1 = immigrant background: more precisely, at least one parent born outside of Germany).

Social Climate in Class

We measured student-perceived social climate using three (adapted) items of a scale by Rauer and Schuck (2003). Items were: "We stick together in our class," "We help each other," and "My classmates are friendly to me." Response scales ranged from 1 (*not true at all*) to 4 (*very true*). Reliability was acceptable (T1: ω = .72).

Covariates

We included students' reading and mathematics competence measured at Time 1 as covariates in our analyses. We measured their reading competence using the validated text comprehension subscale of the German reading assessment for first to sixth grade (ELFE 1–6; Lenhard & Schneider, 2006). On average, students achieved 11.95 (*SD* = 4.39) out of 20 points; reliability was good (α = 0.86). We assessed the students' mathematics competence with the validated arithmetic subscale of the German math assessment for third grade (DEMAT 3+; Roick et al., 2004). On average, students achieved 6.82 (*SD* = 3.14) out of 15 points; reliability was good (α = 0.76).

Statistical Analyses

We first tested school well-being for measurement invariance across measurement occasions using nested models, including configural, metric, and scalar invariance in line with Byrne (2004). To evaluate the invariance constraints, we calculated the change in the comparative fit

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index (ΔCFI) and the RSMEA or SRMR values, and we used cutoff criteria in line with Chen (2007) for sample sizes > 300. In the second step, we examined the ICC1 values; the results showed that the ICC1 of students' school well-being was largely above 5% (T1: 8%; T2: 10%; T3: 9%), indicating that some of the variance in student school well-being can be explained by the students' classrooms (LeBreton & Senter, 2008). Consequently, we accounted for the nested structure of the data by correcting standard errors using the complex sampling option in M*plus* (type = complex).

Next, we fit a series of latent linear growth curve models to the data to examine the developmental changes in students' school well-being. All models were specified in M*plus* Version 8.3 (Muthén & Muthén, 1998–2019). We assessed model fit with reference to the Yuan–Bentler scaled χ^2 (mean-adjusted test statistic robust to nonnormality), the root mean square of approximation (RMSEA), the comparative fit index (CFI), the Tucker and Lewis index (TLI), and the standardized root mean residual (SRMR) values using the criteria suggested by Hu and Bentler (1999). The models included three measurement occasions. We first ran a model that included both the intercept and slope for students' school well-being (Model 1). We then included the students' social categories (gender and immigrant background) and covariates (reading and mathematics competence) relating to the intercept and slope of their well-being (Model 2). Subsequently, we entered the interaction of gender and immigrant background (Model 3). Finally, we included student-perceived social climate at Time 1 as a predictor (Model 4). We report standardized coefficients to facilitate interpretability for Models 2 to 4.

Some data were missing in the present study because of incomplete responses or attrition. Missing data affected n = 197 (8.2%) at Time 1, n = 239 (10.0%) at Time 2, and n = 369 (15.4%) at Time 3 in student school well-being, and n = 209 (8.7%) in social climate. Missing data analyses showed that missing values for school well-being at Time 3 were weakly but significantly associated with students' immigrant background (r = .10, p < .001), with reading competence at Time 1 (r = −.11, p < .001), and with mathematics competence at Time 1 (r = −.09, p < .001), but not with students' gender (r = .01, p = .785). To handle missing data, we used full-information maximum likelihood (FIML) estimation, which can also be applied for data missing at random (Enders & Bandalos, 2001) and outperforms ad hoc approaches, such as listwise deletion (e.g., Jeličić et al., 2009). However, we also calculated all latent linear growth curve models using listwise deletion, yielding an overall similar pattern of results, as detailed in Table E1 in Electronic Supplementary Material ESM 1.

Results

Descriptive Results and Measurement Invariance

The results of the measurement invariance showed strong measurement invariance across measurement occasions (see Table E2 of ESM 1). Table 1 displays the means and standard deviations for all variables, including bivariate correlations. On a descriptive level, boys reported lower levels of social climate and demonstrated lower levels of reading competence but higher mathematics competence than girls. Students with an immigrant background reported lower social climate and showed lower mathematics and reading competence than students without an immigrant background. Gender and immigrant background were not related.

Latent Growth Curve Models

Table 2 reports the results of all models. Model 1 showed a good fit[2], χ^2 = 73.15, df = 30, p < .001, RMSEA = .03, CFI = .99, TLI = .99, SRMR = .02. The results of this model demonstrated a significant average decline in student school well-being over time (M_{slope} = −.08, SE = .014, p < .001). There was significant variability in the intercept (Var = 0.49, p < .001) and slope (Var = 0.09, p < .001), indicating interindividual differences in students' initial well-being and the change of well-being. Interestingly, students' school well-being at Time 2 was not significantly different to Time 1, Wald χ^2 = 1.27, p = .259. Hence, the drop in school well-being occurred only at the last measurement time. Model 1 significantly explained variance in well-being (Time 1: 69.6%; Time 2: 69.5%; Time 3: 90.8%).

Model 2 also showed a good model fit, χ^2 = 99.99, df = 58, p < .001, RMSEA = .02, CFI = .99, TLI = .99, SRMR = .02. Boys and students without an immigrant background reported a significantly lower level of school well-being at Time 1 than girls and students with an immigrant background. However, neither gender nor an immigrant background was associated with the slope of well-being. Model

[2] As the chi-squared test tends to reach significance easily with large samples (e.g., Bergh, 2015), the primary focus should be on the other model fit indices, all suggesting a good fit.

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Table 1. Means, standard deviations, and bivariate correlations of study variables

		M (*SD*)	1	2	3	4	5	6	7
1	School well-being T1[a]	2.94 (1.03)							
2	School well-being T2[a]	2.93 (0.99)	.54***						
3	School well-being T3[a]	2.78 (1.01)	.47***	.65***					
4	Gender[b]	.52 (.50)	−.20***	−.25***	−.24***				
5	Immigrant background[c]	.24 (.42)	.12***	.11***	.10***	.01			
6	Social climate T1[a]	3.24 (0.85)	.17***	.14***	.13***	−.10***	−.07***		
7	Reading competence T1[d]	11.95 (4.39)	.04	.06*	.08***	−.07***	−.17***	.05*	
8	Math competence T1[e]	6.82 (3.14)	.00	−.01	.01	.13***	−.09***	.04	.37***

Note. [a]range: 1–4; [b] 0 = girls, 1 = boys; [c] 0 = without immigrant background, 1 = at least one parent born outside of Germany; [d]range: 1–20; [e]range: 1–15; N = 1,858–2,395; *p < .05, **p < .01, ***p < .001.

2 explained substantial variance in the intercept of well-being (11.2 %) but not its slope (1.0 %).

Model 3 showed a good model fit, $\chi^2 = 462.87$, $df = 70$, $p < .001$, RMSEA = .05, CFI = .95, TLI = .94, SRMR = .05. The results demonstrated a significant interaction effect of gender and immigrant background on students' intercept but not the slope of well-being. Table 3 reports group comparisons of all four groups using Wald χ^2 tests and shows that boys without an immigrant background reported lower levels of school well-being than boys with an immigrant background at Time 1 and lower levels of school well-being than girls with and without an immigrant background across all time points. Girls with an immigrant background reported higher levels of school well-being than boys without an immigrant background at all time points as well as than boys with and girls without an immigrant background at Times 2 and 3. Model 3 explained 11.8 % of the variance in the intercept of well-being at Time 1 and 1.4 % of the variance in the slope of well-being; however, the latter was not significant.

Model 4 also showed a good model fit, $\chi^2 = 522.34$, $df = 108$, $p < .001$, RMSEA = .04, CFI = .95, TLI = .94, SRMR = .04, and indicated that the perceived social climate in class was significantly and positively associated with the intercept of students' well-being but not the slope. Model 4 explained 21.4 % of the variance in students' intercept of well-being at Time 1, and 2.3 % in the slope of well-being; however, the latter was not significant.[3]

Discussion

Drawing on intersectional perspectives (e.g., Crenshaw, 1989; Else-Quest & Hyde, 2016), SEVT (Eccles & Wigfield, 2020), and bio-ecological theory (Bronfenbrenner & Morris, 1998), this study explores the role of (intersecting) social categories and the relevance of students' social experiences in class for the state and development of elementary school students' school well-being. In the following, we discuss our findings in light of existing research, provide ideas for future research, and elaborate on the shortcomings of this study.

Previous research indicates a decline in well-being during school (e.g., Kleinkorres et al., 2023; Raccanello et al., 2020). However, there is little evidence to date on how school well-being, as one domain of subjective well-being, develops throughout elementary school. The present study addresses this gap and demonstrates that school well-being (slightly) decreases at the end of elementary school, supporting our first assumption (H1). The drop in school well-being occurs shortly before the change to secondary school and agrees with research showing a

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decline in students' motivation to learn in grade four (Stahn & Ditton, 2017). When the pressure to perform rises, this might negatively affect students' well-being at school. Future research should examine this explanation by considering the role of performance pressure during these years, for example, by conducting comparative analyses across countries with different educational systems. If performance pressure negatively influences students' school well-being, we would expect a delayed decline for educational systems or schools with postponed differentiation based on student performance. Although it has already been shown that the general subjective well-being of children in all countries – regardless of whether the transition to secondary school takes place earlier or later – decreases from the age of 10 (Casas & González-Carrasco, 2019), little research is available on the specific domain of school well-being. However, it is also possible that the decline in students' school well-being found in this study may (partly) occur because of a more accurate self-evaluation over time, as students' self-perception increases during elementary school (cf. Spinath & Spinath, 2005). Then, the decline in school well-being should not be different in different educational systems.

The results also support our hypothesis that girls report higher school well-being than boys (H2a), which agrees with the majority of research mainly conducted with older students (e.g., Hadjar & de Moll, 2022; Raccanello et al., 2020) and might be due to the findings that girls receive more positive feedback from teachers (Hoya, 2021) and have more adaptive attitudes toward school than boys (Van Houtte, 2004), even as early as elementary school. Regarding students' immigrant background, our study shows that children with an immigrant background experience higher school well-being than students without an immigrant background (H2b). We explain our result in light of *immigrant optimism* (e.g., Salikutluk, 2016) and assume that migrant families might foster their children's educational aspirations more strongly, as these can aid in upward social mobility. Since students' school motivation is connected to their school satisfaction (Van Petegem et al., 2008), children with an immigrant background feel better at school than children without an immigrant background.

Because individuals naturally belong to multiple social categories, because each combination comes with specific experiences and opportunities, and because intersecting social categories are deeply rooted within societal power structures and privileges depending on the social context (Else-Quest & Hyde, 2016), such as the elementary school context in Germany, it is imperative to consider intersecting social categories in educational research, including research on school well-being. In line with our assumptions (H3), our findings show that gender and immigrant background interact in predicting school well-being: Boys without an immigrant background experience the lowest school well-being and girls with an immigrant background report the highest. This finding is congruent with a previous study showing interactions between (female) gender and (higher) educational qualifications of parents for students' school well-being (Vyverman & Vettenburg, 2009). However, our finding is new for students' immigrant background, this age group, and the German context. It demonstrates how important it is to take an intersectional perspective to understanding and examining the role of (interconnected) social categories, and it reveals the cumulative impact of disadvantages facing boys without an immigrant background regarding their school well-being in elementary school, something not shown before. This finding may be explained because girls often experience a stronger bond to their parents than boys (e.g., Van Wel et al., 2000), possibly leading to more influence of their parents' attitudes, in this case, immigrant families' higher educational aspirations (cf. Salikutluk, 2016). Hence, based on our results, boys without an immigrant background should be a particular focus of interventions aiming to increase school well-being, even as early as elementary school.

Both intersectional approaches (e.g., Else-Quest & Hyde, 2016) and bioecological theory (e.g., Bronfenbrenner & Morris, 1998) emphasize the role of social contexts in individuals' subjective experiences. Our findings are consistent with this assumption (H4), as we demonstrate the importance of the social climate in class for students' school well-being, also in elementary school. However, whereas Geerling and Diener (2020) found that the subjective well-being of adults from all over the world was mainly predicted by the social context and only slightly by sociodemographic data (such as their gender), our study also points to the decisive role of the social context – in terms of the social climate in class – for young students' school well-being, while also revealing the approximately equal effect of gender. Hence, the context and domain of the well-being measured determine the extent to which gender relates to people's well-being.

Finally, the intersectional approach of the current study helps identify differences in students' initial level of school well-being, which can be best explained by the interplay of multiple social categories and the social

[3] Covariates, including student competence in reading and mathematics, were not substantially associated with the intercept or change of school well-being across all models.

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Table 2. Model estimates for student school well-being

	Model 1			Model 2			Model 3			Model 4		
Parameter	Est.	*SE*	*p*	Est.	*SE*	*p*	Est.	*SE*	*p*	Est.	*SE*	*p*
Intercept												
Mean	**3.04**	**0.03**	**< .001**									
Variance	**0.49**	**0.03**	**< .001**									
Gender[a]				**-0.29**	**0.03**	**< .001**	**-0.33**	**0.04**	**< .001**	**-0.31**	**0.04**	**< .001**
Immigrant background[b]				**0.16**	**0.03**	**< .001**	**0.10**	**0.04**	**.008**	**0.11**	**0.04**	**.004**
Interaction gender*immigrant background							**0.09**	**0.04**	**.030**	**0.10**	**0.04**	**.017**
Reading competence T1[c]				0.04	0.03	.160	0.04	0.03	.174	0.04	0.03	.168
Math competence T1[d]				0.05	0.03	.188	0.05	0.03	.159	0.04	0.03	.187
Social climate T1[e]										**0.32**	**0.05**	**< .001**
R^2				**0.11**	**0.02**	**< .001**	**0.12**	**0.02**	**< .001**	**0.21**	**0.03**	**< .001**
Slope												
Mean	**-0.08**	**0.01**	**< .001**									
Variance	**0.09**	**0.02**	**< .001**									
Gender[a]				-0.07	0.04	.083	-0.05	0.04	.279	-0.05	0.04	.223
Immigrant background[b]				-0.02	0.04	.584	0.03	0.05	.470	0.03	0.05	.499
Interaction gender*immigrant background							-0.08	0.06	.175	-0.08	0.06	.168
Reading competence T1[c]				0.06	0.04	.145	0.06	0.04	.127	0.06	0.04	.116
Math competence T1[d]				-0.03	0.04	.461	-0.03	0.04	.422	-0.03	0.04	.429
Social climate T1[e]										-0.09	0.06	.107
R^2				0.01	0.01	.180	0.01	0.01	.126	0.02	0.02	.116
Correlation of intercept and slope	**-0.05**	**0.02**	**.001**	**-0.25**	**0.06**	**< .001**	**-0.25**	**0.06**	**< .001**	**-0.24**	**0.06**	**< .001**

Note. [a]0 = girls, 1 = boys; [b]0 = without immigrant background, 1 = at least one parent born outside of Germany; [c]range: 1–20; [d]range: 1–15; [e]range: 1–4; *N* = 2,114–2,376. **Bold** highlights significant results.

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Table 3. Group comparisons using wald χ^2 tests

	Boys with immigrant background (n = 277; Group 1)		Boys without immigrant background (n = 877; Group 2)		Girls with immigrant background (n = 245; Group 3)		Girls without immigrant background (n = 814; Group 4)		Wald χ^2					
	M	*SD*	*M*	*SD*	*M*	*SD*	*M*	*SD*	Group 1-Group 2	Group 1-Group 3	Group 1-Group 4	Group 2-Group 3	Group 2-Group 4	Group 3-Group 4
Wellbeing T1	3.12	0.84	2.74	0.93	3.36	0.72	3.20	0.78	8.04*	6.71	1.01	22.89***	14.20**	5.35
Wellbeing T2	2.96	0.82	2.70	0.90	3.36	0.63	3.17	0.77	4.82	27.54***	9.34*	30.18***	17.09***	9.71*
Wellbeing T3	2.84	0.82	2.55	0.89	3.29	0.70	3.10	0.79	5.53	26.14***	10.65**	35.71***	22.31***	8.08*

Note. The level of significance was corrected using Bonferroni-correction; *$p < .008$, ** $p < .002$, ***$p < .001$.

context. However, the present study has not revealed any main or interaction effects regarding the developmental change (slope) of students' school well-being. Thus, school well-being decreased the same for everyone – at least at the timepoints measured in this study – and respective gender- and/or immigrant background-related (dis-)advantages may have already existed in lower grades. To further clarify this issue, future studies could include students of lower grades and investigate changes in class climate over time related to students' developmental changes in school well-being.

Limitations and Conclusions

Despite its strengths stemming from the large and longitudinal sample of students in elementary school and its unique focus on the change in students' school well-being, the intersectionality of gender, immigrant background, and the social environment, the present study also has several limitations, as is common in empirical research. First, the study sample consists of third- and fourth-grade elementary school students from two federal states of Germany collected in 2006 and 2007. Hence, other outcomes may be possible for lower grades, other federal states or nations, other educational systems, or more (recent) measurement points, limiting the generalization of our results and providing impetus for future research. Second, the operationalization of school well-being in this study focuses mainly on a rather hedonic, emotional component of school well-being and neglects students' evaluations of their academic learning and perceptions of school relationships, eudaimonic aspects of students' school-related experiences, as well as negative dimensions of well-being, which are also part of conceptualizations of students' school well-being (e.g., Holzer et al., 2021; Morinaj & Hascher, 2022a). Future research should validate our results using more detailed operationalizations of school well-being. Third, to better understand the effect of students' immigrant background, prospective research could (1) analyze the role of students' educational aspirations to find out whether these explain the effect found for students' immigrant background, (2) investigate the role of belonging to specific ethnic minorities to better understand potential differences between students with an immigrant background, (3) compare results for first- and second-generation immigrants to explore whether the effect found remains stable or vanishes over time, and (4) examine potential influences of other social categories, such as students' socioeconomic status, on students' school well-being, also in combination with their gender and immigrant background. In this study, we could only

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present initial hypotheses that still need to be further examined.

The added value of this study is the finding that students' school well-being already begins to decrease at the end of elementary school, especially for boys without an immigrant background. Furthermore, the present study underlines the importance of considering both (intersecting) social categories and the social context when investigating school well-being among elementary school students. Practical implications of the study include, in particular, the call for more attention to older elementary school students' school well-being – and not just secondary school students. Further, the findings focus on boys without an immigrant background. Increasing the perceived social climate in class for boys can be an important starting point. In any case, well-being should not disappear from the scope of educational practice, particularly in times when many elementary school children in Germany are failing to reach basic competence levels (McElvany et al., 2023).

Electronic Supplementary Material

The electronic supplementary material is available with the online version of the article at https://doi.org/10.1026/0049-8637/a000288

ESM 1. The tables show model estimates for student school well-being using listwise deletion and measurement invariance tests across time.

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