Educational leadership and teacher attrition

A quantitative investigation of how principal leadership affects early-career teachers' intentions to quit within socioeconomic diversity

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Abstract

Uitval van beginnende docenten in het primair en secundair onderwijs is een dusdanig groot probleem dat het wordt gezien als een gevaar voor onderwijskwaliteit en -gelijkheid wereldwijd, met name in gebieden waar sprake is van relatief lage sociaaleconomische status (SES). In de literatuur en praktijk wordt er focus gelegd op inductieprocessen die beginnende docenten ondersteunen tijdens de zware eerste jaren van hun carrière. Deze processen kunnen worden gefaciliteerd door schoolleiders, welke vaak een cruciale rol spelen in het vestigen van een goed onderwijsklimaat voor zowel leerling als docent. Dit onderzoek beoogt daarom de volgende vraag te beantwoorden: *wat is de relatie tussen schoolhoofdleidershap en intenties om te stoppen bij beginnende docenten, en hoe zou SES van een leerlingsamenstelling deze relatie kunnen modereren?* Daarnaast verkent dit onderzoek de vraag welk element van leiderschap het blijven van docenten faciliteert. Om deze vragen te beantwoorden heeft dit onderzoek antwoorden op een enquête geanalyseerd, afgenomen bij 190 Nederlandse docenten uit het primair en secundair onderwijs. De vragen over schoolhoofdleiderschap zijn gebaseerd op het werk van Moolenaar en collega's (2010). De resultaten toonden een significante negatieve correlatie tussen kwaliteit van schoolhoofdleiderschap en intenties om te stoppen bij de docenten, maar zonder grote verschillen tussen SES-niveaus. Daarnaast werd visievorming als significant element van schoolhoofdleiderschap geconstateerd om lagere intenties om te stoppen te voorspellen. De resultaten van dit onderzoek bevestigen de belangrijke rol die schoolleiders kunnen spelen en pleiten bovendien voor sterke leiderschapsontwikkelingsinitiatieven die een positief onderwijsklimaat goed mogelijk maken, opdat uitval onder beginnende docenten wordt geminimaliseerd.

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1. Introduction

Teacher attrition has been a subject of study and policy for several decades, yet proves to be a persistent problem (Ingersoll, 2001; Ingersoll & May, 2012). Taking into account the fact that teacher shortages are an internationally occurring phenomenon, high attrition rates pose challenges for schools worldwide struggling with continuous vacancies (Borman & Dowling, 2008). The issue of attrition among early-career teachers in particular, who are more likely to leave the profession within their first few years of teaching, is one important factor contributing to the chronic teacher shortage (Ingersoll, 2001). Furthermore, according to Gezel (2020) and Van Nuland and colleagues (2022), Dutch schools with students from low socioeconomic status (SES) backgrounds typically have greater attrition rates. In turn, consequences of high rates of teacher turnover include high costs and lower school performances (Darling-Hammond, 2003), potentially increasing educational inequality further (Severiens et al., 2018). These elements underline how crucial it is to address early-career teacher attrition, especially in high-needs schools where teacher turnover is generally greatest. Frequently found reasons for early career teacher attrition include high workloads and lack of professional support, as well as low perceived self-efficacy and dissatisfaction, both leading to high levels of stress and, ultimately, higher chances of teacher turnover (Helms-Lorenz et al., 2013).

As a result, for the sake of meeting their countries' demands of educational quality, school managements are often tasked with extra efforts to recruit and retain qualified teachers (UNESCO & International Task Force on Teachers for Education 2030, 2024). As such, in order to minimize the chances of teachers leaving the profession early in their careers due to excessive stress, these efforts often include a focus on teacher induction. Teacher induction can be defined as a process intended to support and integrate new teachers into the professional environment of educators, improving their short-term teaching experiences and helping them to establish higher levels of competency in the long term, which improves chances of retention (Feiman-Nemser et al., 1999). Different kinds of induction support have been associated with lower attrition rates among first-year teachers in the United States (Ronfeldt & McQueen, 2017). Thus, in order to achieve retention, efforts have been made, and will

need to continue to be made, to enhance induction (Helms-Lorenz et al., 2020). Since the first year of a beginning teacher's career seems to be the most crucial when it comes to successful induction into the profession (Noordzij & Van de Grift, 2020) and preventing teacher turnover, teacher induction can be a critical phase in a teacher's career, aiming to bridge the gap between theoretical knowledge gained during pre-service education and the practical demands of classroom teaching (Helms-Lorenz et al., 2013).

Induction is often comprised of both formal and informal elements. Informal support may entail, for example, collegial supportive communication or emotional support from the teacher's personal network outside the school community (Smith & Ingersoll, 2004). Formal support, on the other hand, is generally realized by the educational organization itself. It may consist of mentorship by experienced instructors, ongoing assessment and feedback mechanisms, and professional development activities (Ingersoll & Strong, 2011).

Although formal programs have demonstrated potential in facilitating induction processes and lowering early-career teacher attrition rates, further exploration is still ongoing to determine what other factors can positively affect the induction process and retention rates. The influence of principal leadership on teachers' induction and professional experiences is one such factor. According to Leithwood and colleagues (2004), principals are essential in developing a supportive school climate and provide instructional leadership that promotes the productivity and wellbeing of teachers, which in turn has an impact on student learning outcomes. Nevertheless, nearly 60% of resigning teachers attribute their choice to leave the profession to high workload or dissatisfaction with school management, according to Helms-Lorenz and colleagues (2020). Moreover, poor leadership quality and instable relationships between teachers and school management have been linked to higher rates of early-career teacher attrition in the Netherlands (Den Brok et al., 2007). When it comes to school management, certain leadership styles have also been found to be more effective than others in reinforcing teacher retention (Mitchell, 2021; Van der Vyver et al., 2020). However, the extent to which

principal leadership influences an early-career teacher's intention to quit, particularly in schools with a low-SES student body, remains a topic that deserves further investigation.

With these considerations in mind, this study aims to address the following research question: *What is the relationship between principal leadership and early-career teachers' intention to quit, and how might student SES composition moderate this relationship?*

By examining the interaction between principal leadership, teacher attrition and student SES demographics, this study seeks to contribute to informing policies and practices aimed at enhancing teacher retention and improving educational outcomes for all students.

2. Theoretical framework

2.1 Teacher shortage: Understanding the context

The issue of teacher shortage is a complex challenge which education systems worldwide are facing. Aiming for universal access to high-quality education by 2030, Sustainable Development Goal (SDG) 4 requires the hiring of around 31 million more teachers for the secondary level worldwide (UNESCO & International Task Force on Teachers for Education 2030, 2024). Economically developing countries often face long-standing teacher vacancies, while developed regions tend to struggle more with high turnover rates. These phenomena lead to teaching being known as a 'revolving door' profession worldwide.

Studies have indicated alarming trends of teacher shortages across various countries, albeit with not just attrition to blame. For instance, in the United Kingdom, the Education Policy Institute reported that the national pupil to teacher ratio has drastically risen over the past years, mostly due to a rising number of students. However, teacher attrition in the UK does seem especially high among early-career teachers (Education Policy Institute, 2018).

Zooming into the Dutch context, data from the Ministry of Education, Culture and Science indicated that the Netherlands was experiencing a shortage of approximately 13,600 fte in primary and secondary education in 2023. The problem is deemed particularly critical in primary education and certain subject areas in secondary education; especially in STEM-subjects ('Science, Technology, Engineering and Mathematics') and languages (Ministerie van Onderwijs, Cultuur en Wetenschap, 2023). Gezel (2020) noted that some Dutch schools have also been struggling with long-standing vacancies, particularly in low SES areas. Gezel (2020) also mentioned that a limited school budget negatively influences job satisfaction, which may, in turn, increase teacher attrition rates.

2.2 Teacher shortage in low-SES areas

Further elaborating on the relationship between socioeconomic status (SES) and teacher shortages, Borman and Dowling (2008) and Van Nuland and colleagues (2022) corroborated this finding,

indicating that schools in low SES areas tend to experience greater attrition rates among teachers. Research within the Dutch context shows that teachers at schools with a relatively high amount of low SES students experience less professional satisfaction and confidence, further negatively impacting their professionalization capacity when it comes to diversity (Severiens et al., 2018). This contextual factor thus amplifies the challenges that come with teacher shortages. The shortage of teachers in these areas not only undermines the quality of education but also perpetuates existing inequalities, according to Severiens and colleagues (2018), since it is especially students with a low SES background that often exhibit a need for quality teachers that are capable of building strong relationships with them.

2.3 The role of attrition in the problem

Teacher attrition serves as a contributing factor to the persistent problem of teacher shortage, particularly among early-career teachers. Ingersoll (2001) and Noordzij and Van de Grift (2020) emphasized that early-career teachers are more susceptible to leaving the profession within their first few years, further exacerbating the shortage. Darling-Hammond (2003) highlighted the consequences of high rates of teacher turnover, including increased costs and lower school performance. Other consequences of teacher turnover include diminishing teaching effectiveness (Sorensen & Ladd, 2018) and a worsening reputation of the profession (Kraft & Lyon, 2024). As such, the reputation of the teaching profession affects both existing teachers and aspiring teachers. For these reasons, addressing attrition among early-career teachers, especially in high-needs schools, is important in order to mitigate the adverse effects of teacher shortage on educational quality and equality.

2.4 Induction

In order to combat high attrition rates among early-career teachers, efforts have been put into the facilitation of induction (Smith & Ingersoll, 2004). The process of induction can have multiple purposes for beginning teachers: from supporting them emotionally or professionally, to teaching them to adapt to school-specific issues and helping them cope with the strains that come with the teaching profession

(Feiman-Nemser et al., 1999). This aims to lead to both better student outcomes and, more importantly in the face of attrition problems, a more steadfast and positive integration into the teaching profession in the short term. Ideally, however, a successful induction process also pays off in the long term, by providing teachers with the right skills and tools to continually improve their practices (Feiman-Nemser et al., 1999).

2.5 Principal leadership: A catalyst for change

The what, how, and why

Principal leadership (PL) plays an important role in shaping school culture, fostering teacher development, and ultimately influencing student outcomes. Leithwood and colleagues (2004) defined principal leadership as the actions and behaviours exhibited by school leaders to establish a supportive climate and promote instructional effectiveness, which ultimately influences student learning outcomes in a positive way. Moreover, principals serve as instructional leaders, providing guidance and support to teachers, setting clear expectations, and fostering a collaborative learning environment (Mitchell, 2021). The significance of PL lies therefore in its ability to create conditions conducive to teacher retention and student success.

Effective PL encompasses various dimensions, including transformational leadership, distributed leadership, and instructional leadership (Leithwood et al., 2004). Transformational leaders inspire and motivate teachers by articulating a compelling vision for the school and empowering them to enact change (Van der Vyver et al., 2020). Distributed leadership involves delegating responsibilities and building capacity among staff members to contribute to decision-making and school improvement efforts (Helms-Lorenz et al., 2020; Leithwood et al., 2004). Instructional leadership entails providing support and feedback to teachers, aligning instructional practices with student needs, and promoting professional growth (Leithwood et al., 2004). This study focuses on transformational leadership and three subdimensions within: vision building, individualized consideration and intellectual stimulation (Moolenaar et al., 2010).

Transformational leadership is defined as a leadership style that strives to inspire and encourage followers to accomplish achievements previously not thought possible and to transcend their own self-interest for the greater benefit of the business or community, according to Moolenaar and colleagues (2010). Charisma, vision, intellectual stimulation, and thoughtful attention to detail are characteristics of transformational leaders that help their followers feel more empowered, ideally resulting in higher motivation. In addition to overseeing daily operations, transformational leadership aims to question the status quo, foster creativity, and advance organizational learning and development. The latter can be especially relevant in the educational context, in order to maintain job satisfaction and a positive attitude towards the teaching profession (Moolenaar et al., 2010).

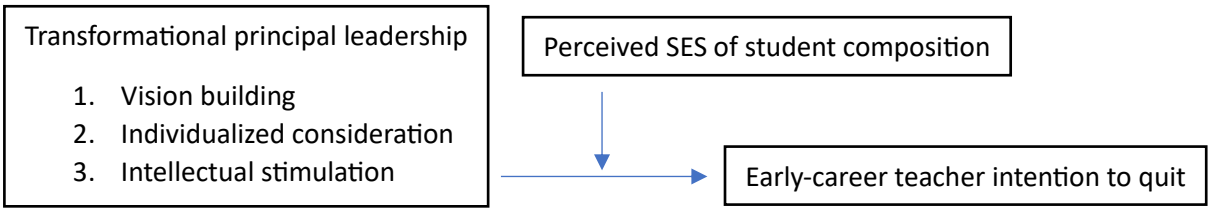
Ultimately, the importance of principal leadership comes from its potential to foster a positive school climate, enhance teacher job satisfaction, and eventually improve student outcomes. Principals who demonstrate effective leadership practices contribute to a sense of community and belonging among staff, which, in turn, fosters teacher retention and commitment to the profession (Van der Vyver et al., 2020).

Effects of principal leadership on induction

Principal leadership may play an important role in teacher induction, offering support to beginning teachers as they acclimatize to the profession. Helms-Lorenz and colleagues (2020) emphasized the role of induction in acclimating early-career teachers to the demands of the profession and minimizing attrition rates. Effective PL enhances the effectiveness of induction by creating a supportive environment conducive to teacher learning and growth. Principals who prioritize teacher development allocate resources, provide time for collaboration, and establish structures for mentorship and feedback (Helms-Lorenz et al., 2020). By fostering a culture of continuous improvement and professional learning, PL contributes to the retention and success of early-career teachers, ultimately being able to highly influence student performance indirectly (Louis et al., 2010).

The following three sub-questions may serve to provide a roadmap for the specific mechanisms of the main research question that will be explored:

1. How does principal leadership relate to early-career teacher attrition?
2. What subdimensions of transformational principal leadership are associated with teacher retention?
3. How does the perceived socioeconomic status composition of students moderate the relation between principal leadership and intention to quit?



3. Methodology

This study employed a cross-sectional research design and used an online questionnaire to help gain insights from professionals and ultimately answer the research questions. The target population this study intended to make statements about entails Dutch teachers of primary and secondary schools early in their careers, with a maximum of 7 years of experience. The sample included 190 such teachers, and a mean teacher seniority of 3.64 years in the profession. In addition to using students' personal networks and social media platforms, direct communication with teachers and school principals and management had made it possible to distribute the questionnaire.

First, the questionnaire asked the participants for their demographic information. It then formulated questions about the support that individuals receive from their peers, and in the last section, psychometric scales were included.

In this study, the dependent variable used was 'intention to quit'; an example question of this is: "I am contemplating leaving the teaching profession." Three survey questions were specifically about intentions to quit the teaching profession altogether. When checked for reliability, these survey questions attained a value for Cronbach's α of .93, which was deemed sufficiently internally consistent for this scale. The two independent variables were 'socioeconomic status' and 'principal leadership'. All survey questions used for this study included five-level Likert items, ranging from "strongly disagree" to "strongly agree".

The 18 survey questions regarding principal leadership were based on the psychometric scale as formulated by Moolenaar and colleagues (2010) and the three subdimensions of transformational principal leadership: vision building, individualized consideration and intellectual stimulation. An example question of the vision building subdimension is: "The school management discusses the consequences of the school's vision for everyday practice." Second, an example question of the individualized consideration subdimension is: "The school management listens carefully to team members' ideas and suggestions." Finally, an example question of the intellectual stimulation

subdimension is: “The school management encourages teachers to experiment with new didactic strategies.” When checked for reliability, these 18 survey questions together attained a value for Cronbach’s α of .95. Separately, the three subdimensions and their corresponding survey questions attained values for Cronbach’s α of .90 (vision building, 5 questions), .92 (individualized consideration, 5 questions) and .92 (intellectual stimulation, 8 questions). Therefore, this scale and its subdimensions were deemed sufficiently internally consistent.

Table 1 shows the descriptives of the three variables used in this study: ‘principal leadership’, ‘intention to quit’ and ‘socioeconomic status’, respectively.

Table 1
Descriptive statistics

	Mean_Leadership	Mean_IntenQuit	SES
N	186	186	188
Missing	4	4	2
Mean	3.45	2.27	3.94
Median	3.56	2.00	4.00
Standard deviation	0.833	1.21	1.23
Minimum	1.00	1.00	1
Maximum	5.00	5.00	6

It is also important to note that the survey question about SES is formalized as students’ SES as perceived by their teacher(s).

Data was analysed using statistical software Jamovi (The Jamovi Project, 2022).

The hypothesis to the main research question (including the first and third sub-questions) assumes a negative relationship between principal leadership quality and a stronger intention to quit, especially for those schools with a lower perceived SES student composition. The hypothesis to the second sub-question assumes that all three subdimensions of transformational leadership contribute to teacher retention significantly and to about the same degree.

4. Results

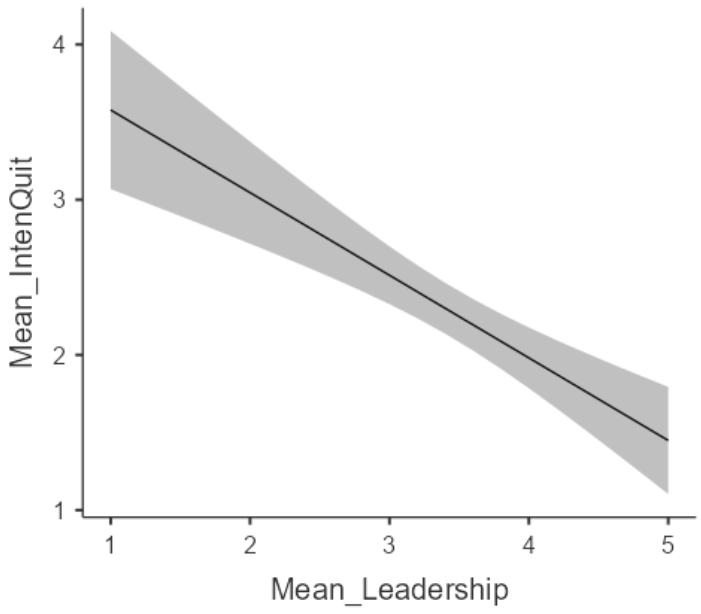
First, a linear regression analysis was conducted to investigate the extent to which principal leadership (the main independent variable) could predict early-career teachers' intention to quit. The results showed a statistically significant negative relationship between the two variables (β = -0.366, 95% C.I. [-0.502; -0.231], p < .001); the higher the score for principal leadership, the less likely a given teacher reports intentions to quit their profession. These results are shown in Table 2.

Table 2
Model coefficients ('intention to quit')

						95% Confidence Interval	
Predictor	**Estimate**	**SE**	**t**	**p**	**Stand. Estimate**	**Lower**	**Upper**
Intercept	4.110	0.3540	11.61	< .001			
Mean_Leadership	-0.532	0.0997	-5.34	< .001	-0.366	-0.502	-0.231

Using the unstandardized coefficient of -0.532, a visual model of this relationship was built, as shown in Figure 1.

Figure 1
Slope of unstandardized estimates



Next, a multiple regression analysis was conducted in order to investigate which subdimension of transformational leadership was found to have the strongest relative effect on teachers' intention to quit; either vision building ('Mean_VB'), individualized consideration ('Mean_IC') or intellectual stimulation ('Mean_IS'). Vision building was found to be the only subdimension with a statistically significant result (β = -0.209, 95% C.I. [-0.381; -0.0362]; p = .018). These results are shown in Table 3.

A mean Cook's distance of .006 suggests that individual data points do not have a large influence on the regression model.

Table 3
Multiple regression coefficients

						95% Confidence Interval	
Predictor	**Estimate**	**SE**	**t**	**p**	**Stand. Estimate**	**Lower**	**Upper**
Intercept	4.1807	0.360	11.612	< .001			
Mean_VB	-0.2742	0.115	-2.388	0.018	-0.2085	-0.381	-0.0362
Mean_IC	-0.0851	0.118	-0.720	0.473	-0.0746	-0.279	0.1299
Mean_IS	-0.1971	0.147	-1.343	0.181	-0.1474	-0.364	0.0692

A moderation analysis was ultimately conducted in order to investigate whether the perceived socioeconomic status of a teacher's students might affect the relationship between principal leadership and teachers' intention to quit. First, the moderator ('SES') was found to not be statistically significant as a separate independent variable (β = -0.0963, 95% C.I. [-0.227; 0.0347], p = .150). Moreover, the moderator was found to not be statistically significant as an interaction variable either (β = -0.0982, 95% C.I. [-0.234; 0.0373], p = .155). These results are shown in Table 4.

Table 4
Moderation analysis

			95% Confidence Interval			
	Estimate	**SE**	**Lower**	**Upper**	**Z**	**p**
Mean_Leadership	-0.5419	0.1003	-0.739	-0.3452	-5.40	< .001
SES	-0.0963	0.0669	-0.227	0.0347	-1.44	0.150
Mean_Leadership ✻ SES	-0.0982	0.0691	-0.234	0.0373	-1.42	0.155

Additionally, the conditional effects of principal leadership on intention to quit showed corresponding results, as shown in Table 5. Principal leadership showed a statistically significant effect at both low SES (SES = -1 standard deviation) (β = -0.423, 95% C.I. [-0.653; -0.193], p < .001) and high SES (SES = +1 standard deviation) (β = -0.663, 95% C.I. [-0.946; -0.380], p < .001).

Table 5
Effects of principal leadership on intention to quit at different levels of SES

			95% Confidence Interval			
	Estimate	**SE**	**Lower**	**Upper**	**Z**	**p**
Average	-0.543	0.101	-0.741	-0.345	-5.38	< .001
Low (-1SD)	-0.423	0.117	-0.653	-0.193	-3.60	< .001
High (+1SD)	-0.663	0.145	-0.946	-0.380	-4.59	< .001

5. Discussion

5.1 Conclusion

Teacher attrition, particularly among early-career teachers and in low SES areas, remains a pressing issue worldwide, including in the Netherlands (Borman & Dowling, 2008; Den Brok et al., 2007). The consequences of high teacher turnover rates resulting from high workloads and excessive stress include high costs, a worsening reputation of the teaching profession and a decrease in educational effectiveness and equality (Darling-Hammond, 2003; Kraft & Lyon, 2024; Sorensen & Ladd, 2018). The process of acclimating early-career teachers to their profession, known as induction, plays a crucial role in teacher retention (Helms-Lorenz et al., 2020). One actor able to facilitate the induction process is often the school's principal. How a principal exerts their leadership practices may influence teacher wellbeing and, consequently, their intentions to either quit or to keep teaching (Leithwood et al., 2004).

By means of an online questionnaire filled in by 190 Dutch early-career teachers, this study aimed to investigate the relationship between principal leadership and early-career teachers' intention to quit, while also examining how the perceived socioeconomic status (SES) of students might moderate this relationship. The findings indicate a significant negative relationship between perceived principal leadership quality and teachers' intentions to leave the profession, emphasizing the important role of school leadership in teacher retention. The less a teacher deemed their principal's leadership to be effective, the more likely they were to experience intentions to quit their profession. However, no significant moderating effect was found, meaning the relationship between principal leadership and early-career teachers' intentions to quit did not differ for different levels of students' perceived SES. Moreover, this study also aimed to explore any possible differences in strength of relationship between each of the three subdimensions of transformational leadership (vision building, individualized consideration and intellectual stimulation) and intention to quit. Vision building was found to be the only statistically significant influence on teachers' intention to quit.

5.2 Discussion of results

The findings of this study emphasize the important role of principal leadership in mitigating early-career teacher attrition. In this way, principal leadership might act as a buffer to teacher attrition problems, since school leadership is known to have a large influence on teachers' decisions to either stay at or leave the profession (Boyd et al., 2011). The linear regression analysis revealed a statistically significant negative relationship between principal leadership and teachers' intention to quit, which is in line with previous studies that emphasize the influence of effective school leadership on teacher retention (Leithwood et al., 2004; Mitchell, 2021).

The three subdimensions of transformational principal leadership (vision building, individualized consideration, and intellectual stimulation) were investigated to determine their relative impact on teacher retention. Interestingly, vision building emerged as the only subdimension with a statistically significant effect, suggesting that the ability of school leadership to implement a compelling vision for the school is an important factor in fostering teacher commitment and reducing intentions to quit. This aligns with the work of Moolenaar and colleagues (2010), who highlighted the importance of visionary leadership in creating a sense of direction among staff; however, the purpose of the work of Moolenaar and colleagues (2010) was not to make any likewise comparisons of effect. Moreover, the results of this study partly align with the idea that certain leadership styles may be more effective in facilitating teacher wellbeing than others, as concluded by Van der Vyver and colleagues (2020).

The moderation analysis exploring the role of perceived student SES in the relationship between principal leadership and intention to quit did not yield statistically significant results. This result is, in part, in contrast to some earlier research that suggested that SES plays a greater role in teacher experiences and intention to quit (Gezel, 2020; Severiens et al., 2018; Van Nuland et al., 2022). One possible explanation for this discrepancy could be the subjective nature of SES perception by the teachers used in this study. Another explanation could be the fact that this study did not compare different SES areas to each other, so there is no way of speaking of 'high/low SES areas', but rather only

about individual data points. As such, two ways this study differs from the aforementioned studies are both the nature and the scope of the SES data.

5.3 Limitations

Despite the results and insights gained from this study, several limitations must be acknowledged. First and foremost is the cross-sectional design of the research. Cross-sectional studies capture data at a single point in time, which inherently limits the ability to infer causality (Wang & Cheng, 2020). While the findings indicate a significant relationship between principal leadership and teacher attrition, this study cannot definitively conclude that principal leadership causes changes in teacher attrition rates or how. Longitudinal studies, which follow the same subjects over time, would be necessary to establish a causal link between these variables (Schneider, 2019).

Another set of notable limitations is the reliance on teachers' perceptions of students' socioeconomic status (SES), rather than using objective measures. While teachers' perceptions can provide valuable insights, they are inherently subjective and may be influenced by various biases. Similarly, SES was not clearly defined for the purposes of this study and its methodology. Objective SES data retrieved from Dutch municipalities, such as family income, parental education levels, and access to resources, would provide a more accurate representation of the socioeconomic context within which the teachers operate. As they differ from teacher to teacher, even regarding the same students, the subjectivity of perceived SES data could potentially skew the results, making it difficult to draw conclusions about the moderating role of SES in the relationship between principal leadership and teacher attrition.

Another related limitation is the fact that this study did not analyse any effect of SES on principal leadership, which would raise the question: is principal leadership constant for all SES levels or does it differ greatly? SES may not only moderate the relationship between principal leadership and teacher attrition, but it may also have an effect on the efficacy and practices of principal leadership itself, turning it into a possible confounding variable. For example, compared to their colleagues at high-SES schools, principals in low-SES schools may face other unique challenges and resource constraints. This

could affect their methods of leadership and the ensuing effects on teacher retention. In order to better understand these dynamics, future research should consider analysing data on SES-related factors that may have an influence on principal leadership.

Another limitation is the survey's self-reporting data collection method. Response bias and social desirability bias are two biases that might affect self-reported data (Van de Mortel, 2008). Data may become distorted if teachers overreport good encounters or underreport negative ones. While some of these biases can be lessened by emphasizing anonymity and safe data management, they cannot be completely eliminated.

Lastly, this study did not account for other potential variables that might influence the relationship between principal leadership and teacher attrition. Factors such as teacher workload, class size and community involvement could also play some roles in both principal leadership and teacher attrition.

So, while this study provides some insight into the relationship between principal leadership and early-career teacher attrition, its limitations must be considered when interpreting the results. It will be important to address these limitations in further studies in order to strengthen the body of data and design practical plans that promote teacher retention.

5.4 Implications for research and practice

The findings of this study have several implications for both research and practice. From a research perspective, the significant relationship between principal leadership and teachers' intention to quit underscores the need for further investigation into the specific mechanisms through which leadership practices influence teacher retention. Future studies should consider employing longitudinal designs to establish causality and explore additional moderating factors, such as teacher workload and community involvement, to gain a more complete understanding of the dynamics at play. Additionally, the study suggests that objective measures of SES should be integrated into future research to accurately capture the socioeconomic context and its potential impact on teacher experiences. Schools

should also consider collecting and utilizing such data to inform targeted interventions aimed at supporting teachers in low-SES environments.

From a practical standpoint, the findings emphasize how important principal leadership is in encouraging teacher retention. Administrators and educational policymakers should give priority to leadership development initiatives that focus on intellectual stimulation, individualized consideration, and particularly vision building. Schools may foster more encouraging environments that motivate teachers to stay in the profession by providing principals with these abilities.

Overall, the implications of this study point to the need for ongoing research and practical efforts to enhance principal leadership and support teacher retention, ultimately contributing to the stability, quality and equality of education in diverse socioeconomic contexts.

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