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Projekttitel	**Psychobiologischer Stress bei Lehrpersonen** Associations between Teachers' Psychological Strain and Allostatic Load, the Classroom Environment, And Student Development **ATLAS**
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Abstract	**Background and rationale**: Teachers are a particularly stressed occupational group with above-average burnout rates compared to other professions. Teacher stress significantly challenges teachers' health, social interactions within the classroom environment, and positive student development. Thus, it is crucial to identify central factors for future stress prevention and intervention in teachers. ATLAS contributes to the foundation for the future development of prevention and intervention programs. **Aims**: We aim to explore the longitudinal associations between teachers' psychological strain and allostatic load (physiological consequences of prolonged chronic stress), interactions in the classroom environment, and student development in 180 teachers and 2790 students (grades from 5th to 9th) over two years. We pursue a transactional approach to teacher stress and focus on three primary sources of teacher stress: (a.) individual factors, (b.) organizational factors (e.g., classroom and school environment), and (c.) transactional factors (e.g., person x environment interactions). **Research Questions** 1. *Teacher.* 1.1) Which individual, organizational, and transactional factors predict teachers' psychological strain and allostatic load over two years? 1.2) Which risk and protective factors moderate or mediate the association between diverse stressors and stress outcomes? 1.3) How are psychological strain and allostatic load related longitudinally? 2 *Classroom Environment.* How are teachers' psychological strains and allostatic load associated with social interactions in the classroom environment? 3 *Student development.* How do teachers' psychological strain, allostatic load, and the classroom environment affect student development? **Methods**: This longitudinal study includes four waves: baseline (t0), 6-month (t½), 1-year (t1), and 2-year follow-up (t2). We will assess: 1. Teachers' risk and protective factors, perceived classroom environment, and psychological strain through self-reports and teachers' allostatic load through biomarkers (i.e., BMI, blood pressure, hair cortisol). 2. The classroom environment through aggregated student ratings as an approximation of observed classroom processes. 3. Students' motivation, engagement, academic achievement, exhaustion, and well-being through self-reports.

	Expected results: This study sets out to 1) identify teachers' central risk and protective factors and shed light on the longitudinal predictive associations with psychological strain and allostatic load, 2) explore the effects of teachers' psychological strain and allostatic load on the classroom environment, and 3) on students' development. **Impact on the field and beyond:** ATLAS aims to improve teacher and student performance and health by identifying central factors offering crucial evidence for future prevention and intervention programs. A better understanding of the interplay between psychophysiological stress in teachers, the classroom environment, and student development may help teacher education, schools, and healthcare providers mitigate adverse health outcomes and ultimately improve education quality.
Schlagworte	teacher stress, psychological strain, allostatic load, hair cortisol, blood pressure, classroom environment, student development, longitudinal multilevel analysis
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