

Formal Mentoring in Teacher Induction – the Role of Basic Need Satisfaction

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Theory

Constructivist mentoring (cm) characterises an instructional support in the form of mentee-centered, collaborative reflection and inquiry (Feiman-Nemser, 2001; Richter et al., 2013). First evidence highlights its beneficial effects on novice teachers' competence and well-being during induction when compared to a more behaviorist approach labeled 'Transmissive Mentoring' (Richter et al., 2013; Voss et al., 2017).

The current study aims to

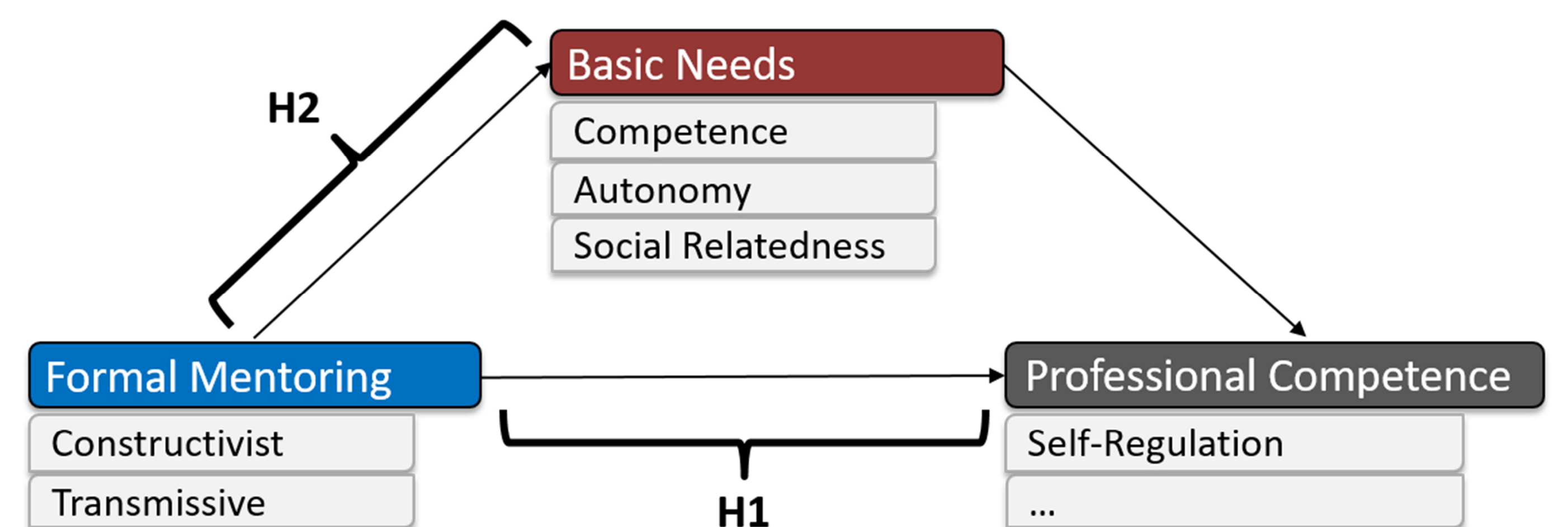
- (1) build on and extend previous findings on the positive effect of cm to different domains of professional teacher competence (Baumert & Kunter, 2006), and
- (2) explore the mechanisms underlying these associations by drawing on a Self-Determination Theory-based approach (Ryan & Deci, 2000).

Hypotheses

H1: Constructivist (rather than transmissive) mentoring has a beneficial effect on beginning teachers' professional competence in the domains of

- H1.1 Self-regulation (*Emotional Surface Acting*),
- H1.2 Motivation (*Teacher Self-Efficacy*), and
- H1.3 Well-being (*Emotional Exhaustion*).

H2.1 - 2.3: Basic need fulfillment partially mediates these effects.



Methods

Measures

Construct	Scale	Example	Items	Range	α	Source
Mentoring Quality	Constructivist	My mentor helps me to improve independently.	4	1 - 4	.90	Richter et al. (2013)
	Transmissive	My mentor tells me what I have to do differently in lessons.	3	1 - 4	.89	
Self-Regulation	Emotional Surface Acting	How often do you have to show emotions that are not consistent with your truly felt emotions at work?	4	1 - 5	.83	Zapf et al. (1999)
Motivation	Teacher Self-Efficacy	I know I will be able to stay in good contact with parents even in difficult situations.	10	1 - 4	.78	Schwarzer & Jerusalem (1999)
Well-Being	Emotional Exhaustion	I often feel exhausted at work.	4	1 - 4	.86	Kunter et al. (2010)
Basic Need Satisfaction	Competence, Autonomy and Social Relatedness	I can manage my working tasks my own way.	9	1 - 4	.82-.90	Kunter et al. (2017)

Note. α = Cronbach's alpha; all instruments applied were self-report measures.

Sample

- N = 583 beginning teachers in 2nd trimestre of induction
- Age: $M = 27.65$ ($SD = 3.41$)
- 68.7 % female
- All participants hold a first degree in teacher education.

Statistical Analysis

- Multiple Mediation Model Analyses using the 'Process' macro for SPSS by Hayes (2012).
- All data stem from a research project evaluating the teacher in-service training in Rhineland-Palatinate, Germany (Imhof, 2016).

Results

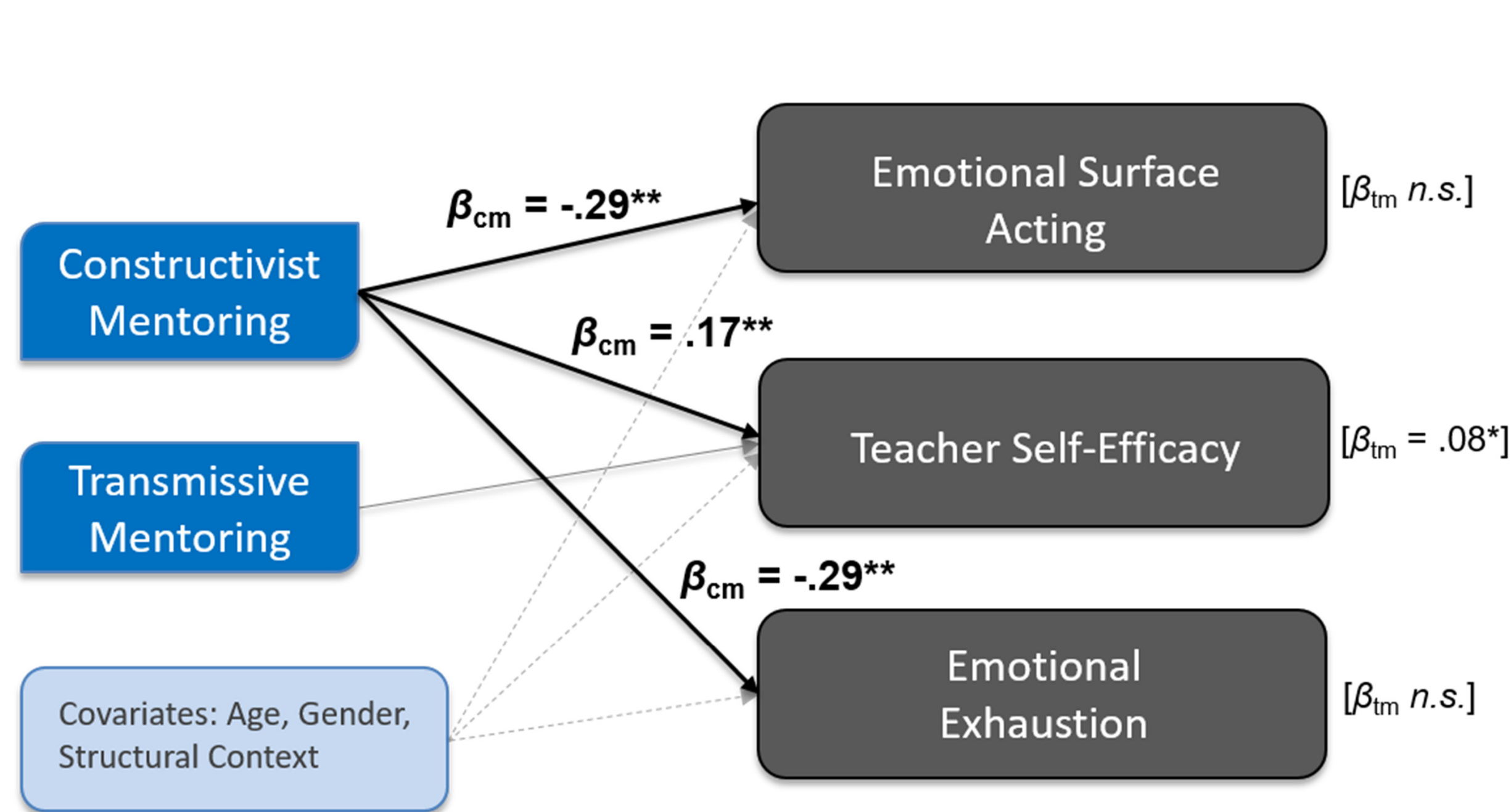


Figure 1. Hierarchical regression of competence outcomes on mentoring qualities.

Notes. cm = constructivist mentoring, tm = transmissive mentoring, n.s. = non-significant. * $p < .05$, ** $p < .01$, β = standardized regression coefficients.

- ✓ H1.1-H1.3: Constructivist mentoring is negatively associated with emotional surface acting ($F(5, 572) = 10.92^{**}$, $\Delta R^2 = .08$) and exhaustion ($F(5, 572) = 9.86^{**}$, $\Delta R^2 = .08$), and positively correlated to self-efficacy ($F(5, 572) = 5.69^{**}$, $\Delta R^2 = .04$) [Fig. 1].

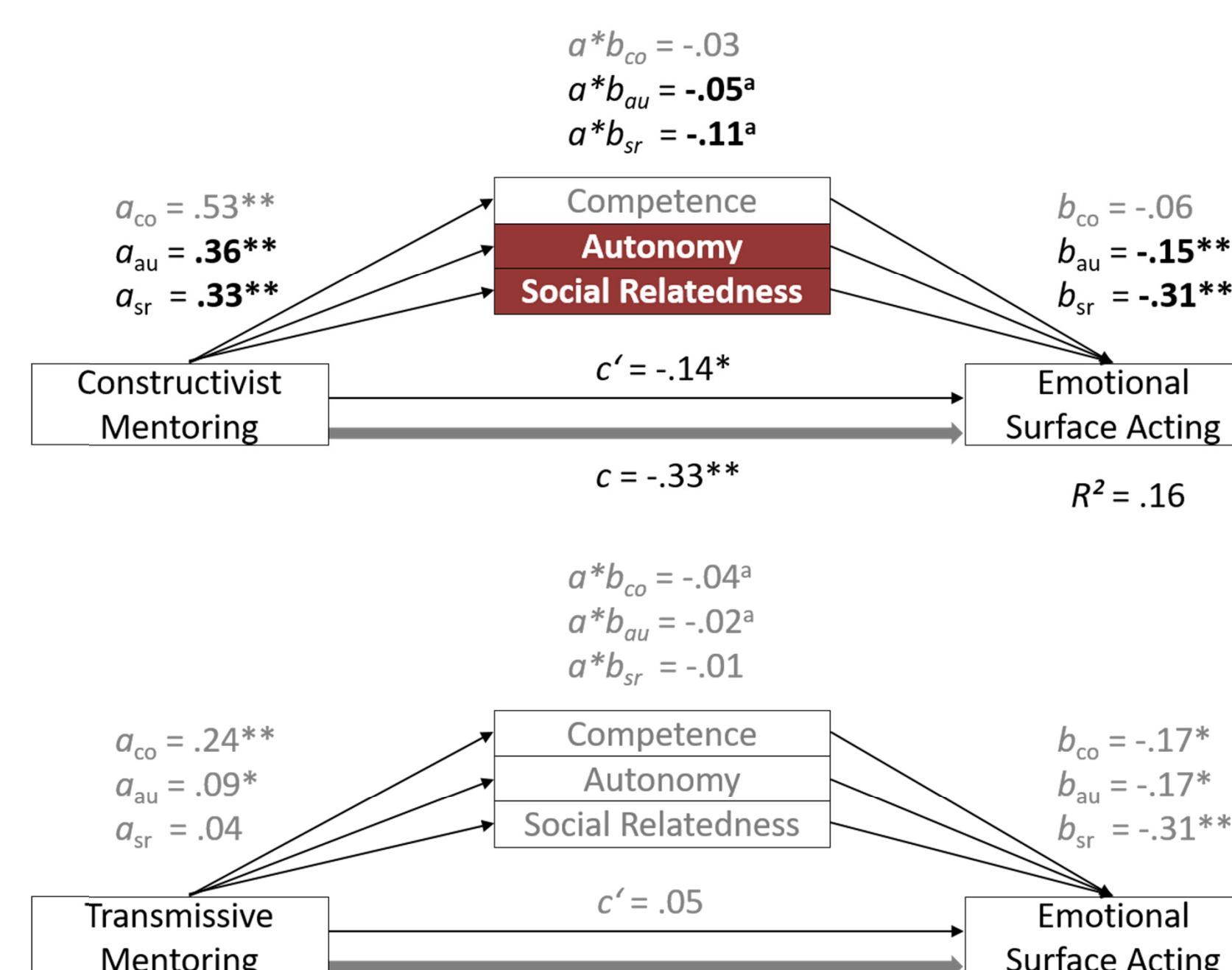


Figure 2. Exemplary multiple mediation model for Emotional Surface Acting.

Notes. * $p < .05$, ** $p < .01$, *Significant point estimate (10,000 Bootstrap Resamples).

- ✓ H2.1: Autonomy (Aut.) and social relatedness need fulfillment partially mediate the effect of constructivist mentoring (cm) on surface acting (Fig. 2; $F_{total}(7, 570) = 16.37^{**}$).
- ✓ H2.2: Aut. fully mediates the effect of cm on self-efficacy (Table 1; $F_{total}(7, 570) = 5.82^{**}$, $R^2_{total} = .07$).
- ✓ H2.3: Aut. fully mediates the effect of cm on exhaustion (Table 1; $F_{total}(7, 570) = 26.82^{**}$, $R^2_{total} = .25$).

Table 1. Multiple mediation models for constructivist mentoring as independent variable (IV)

MV	DV	a	b	c'	ab_{cs}	c
Bn-Co	Emo-Exh	.53**	-.10	-.06	-.07	-.29**
Bn-Au	Emo-Exh	.36**	-.40**	-.06	-.14 ^a	-.29**
Bn-Sr	Emo-Exh	.34**	-.08	-.06	-.03	-.29**
Bn-Co	Teach-SE	.53**	.06	.04	.06	.10**
Bn-Au	Teach-SE	.36**	.06*	.04	.04 ^a	.10**
Bn-Sr	Teach-SE	.34**	.02	.04	.01	.10**

Notes. MV = mediator variable, DV = dependent variable, a = effect of IV on MV, b = effect of MV on DV, c' = direct effect, ab_{cs} = completely standardized indirect effect, c = total effect. Bn-Co = basic need for competence, -Au = autonomy, -Sr = social relatedness; Emo-Exh = emotional exhaustion, Teach-SE = teacher self-efficacy. * $p < .05$, ** $p < .01$. ^a = significant point estimate (10,000 bootstrap resamples).

Discussion

- A constructivist mentoring support lowers emotional exhaustion and fosters self-efficacy primarily by satisfaction of novice teachers' basic need for autonomy.
- Constructivist mentoring further reduces the perceived need for emotional surface acting via autonomy and social relatedness need fulfillment.
- These findings highlight the potential of a systematic mentoring training for cooperating teachers prior to their mentoring activity.
- Due to the cross-sectional structure of the data used, these relationships and effects are intended to be further explored in longitudinal latent modeling.

A constructivist mentoring approach adds to basic need fulfillment and thereby fosters competence and health in beginning teachers.

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