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Research paper

Self-compassionate teachers are more autonomy supportive and structuring whereas self-derogating teachers are more controlling and chaotic: The mediating role of need satisfaction and burnout☆

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HIGHLIGHTS

- The higher the teacher self-compassion the more they perceive their needs satisfied.
- Self-derogation relates to teacher need frustration.
- Need satisfaction shapes the adoption of a motivating style though personal accomplishment.
- Need frustration relate with adoption of a demotivating style through the mediation of burnout.

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ABSTRACT

This study examined whether teacher self-compassion can lead to adoption of autonomy supportive and structuring motivating styles rather than de-motivating controlling and chaotic styles. Teacher psychological need satisfaction and burnout were considered as possible mediators. Self-report questionnaires assessing self-compassion, need satisfaction, burnout and use of (de)motivating teaching styles were completed by 318 teachers. The results showed that the more teachers rated themselves as self-compassionate, the higher their need satisfaction, personal accomplishment and use of autonomy-supportive and structuring motivating styles. The higher the teachers' tendency to self-derogate, the higher their need frustration, burnout and use of controlling and chaotic motivating styles.

The behaviors teachers routinely use to engage their students ("teachers' motivating style"; see Reeve, 2016) play a key role in students' motivation to learn. Two motivating teaching styles (autonomy-supportive and structuring), and two de-motivating teaching styles (controlling and chaotic) have been described extensively in the literature (Aelterman et al., 2019). They differ in the extent to which they support or frustrate students' three basic psychological needs for autonomy, competence, and relatedness as posited by Self-Determination Theory (SDT: Ryan & Deci, 2000; 2017; Vansteenkiste et al., 2020). Although considerable research has dealt with the positive effects of autonomy-supportive or structuring styles and the negative consequences of controlling or chaotic styles (e.g., Diseth, Breidablik, & Meland, 2018; Haerens et al., 2018; Moè, Katz, & Alesi, 2018; Mouratidis, Michou, Aelterman, Haerens, & Vansteenkiste, 2018), much less is known about the interplay of factors related to teachers' preference for a specific style (Reeve et al., 2018).

Previous research has mainly investigated social-contextual factors as antecedents of teachers' preferences for a motivating or de-motivating style (Pelletier et al., 2002; Pelletier & Sharp, 2009). Only a few studies have explored teachers' individual characteristics such as personality traits (Reeve et al., 2018), the satisfaction of teachers' own psychological needs (Aelterman et al., 2019; Moè &

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Katz, 2020), or burnout (Soenens et al., 2012). Overall, the findings suggest the need for a better understanding of the relationships among teachers' personal characteristics and adoption of (de) motivating styles.

1. (De)motivating teaching styles

Aelterman et al. (2019) defined four (de)motivating styles they termed autonomy-supportive, structuring, controlling and chaotic, which differ in terms of the support teachers provide to students. Autonomy-supportive teachers seek to identify students' interests and try to involve them in learning activities they find meaningful, thus favoring choice. They display patience and accept expressions of negative affect (e.g., Aelterman et al., 2019; Assor et al., 2002; Jang et al., 2016; Patall et al., 2010). For instance, if students appear uninterested or tend to disengage, they listen to the students' point of view and pay attention to input or suggestions for making the topic more interesting and feasible, thus manifesting an interest in how the students feel. Structuring teachers typically display guidance. They provide help, assistance, and suggest strategies that enable students to feel more competent. They may suggest which strategies work better and the advantages of using them (e.g. Katz & Assor, 2007; Jang et al., 2010; Vansteenkiste et al., 2012). For instance, they explain how to solve a new problem step by step, and then ask students to work by themselves at their own pace to find their best strategies. These two styles are considered to be motivating because they satisfy students' basic psychological needs for autonomy, competence, and relatedness (Aelterman et al., 2019), as defined by STD. By contrast, controlling teachers tend to put unreasonable pressure on students, be demanding, and not permit engagement or the exercise of choice, and show a poor understanding of students' perspective and feelings, to the extent of asking them to accomplish the 'impossible'. These teachers decide how and when a task must be done and may punish or make students feel guilty or ashamed if they fail to follow instructions (e.g., Bartholomew et al., 2011; Soenens et al., 2012). Chaotic teachers are characterized by a laissez-faire attitude and are not clear in their expectations. They relinquish their role as leaders and leave the initiative up to students who are unsure what to do and what is expected. The controlling and chaotic styles are considered demotivating since students feel the teacher has abandoned them, which can make them feel undeserving, incompetent and unimportant (e.g., Mouratidis et al., 2013; Sierens et al., 2009). This frustration of the basic psychological needs for competence, autonomy and relatedness can lead to disengagement and ill-being (e.g., Assor et al., 2005; Haerens et al., 2016; Vansteenkiste & Ryan, 2013).

2. Factors associated with adoption of (de)motivating teaching styles

Most previous research on (de)motivating teaching styles has examined the role of contextual factors such as pressure from above (Pelletier & Sharp, 2009), student misbehavior in the classroom (Pelletier et al., 2002), and teachers' attempts to model themselves on other teachers' methods (Taylor et al., 2009).

Only a few studies have dealt with teachers' personal characteristics in predicting their motivating style. Pelletier et al. (2002) suggested that teachers' motivation to teach and their perceptions of their students' motivations shape the style they prefer. Reeve et al. (2018) showed that personality factors such as openness to experience and agreeableness predicted an autonomy-supportive style, whereas a control orientation and authoritarianism favored a controlling de-motivating style. In other studies (e.g. Reeve, 2009), teachers' need frustration was shown to increase the likelihood of using a controlling style. Teachers' need satisfaction was shown to be related to their tendency to use autonomous or structuring styles whereas need-frustration was linked to demotivating styles (Aelterman et al., 2019). Teachers' experience of "burnout" was also considered as a possible antecedent of a demotivating style. Several studies (e.g., Aelterman et al., 2019; Jennings, 2015; Soenens et al., 2012; Van den Berghe et al., 2014) confirmed that burnout was associated with de-motivating styles. However, there is scant research on the personal factors that may affect teacher's motivating styles, one of which is self-compassion.

3. Self- compassion

Self-compassion, which derives from Buddhist thought, is defined as a positive attitude towards oneself characterized by a non-judgmental attitude of understanding, openness, and acceptance of one's own suffering, shortcomings and inadequacies (Neff, 2003a). Self-compassion involves expressing one's own true self, being authentic, being attentive to one's inner states, a positive and kind attitude towards oneself, the perception of being as worthy as other people, and emotional balance deriving from mindfulness (e.g., Neff, 2003a; Neff, 2011; Neff et al., 2005). Self-compassionate individuals reflect on events with a caring attitude, display behaviors indicative of self-kindness, realize that everybody can make mistakes, are warm towards themselves and do not identify with their failures. By contrast, self-derogating individuals tend to be self-judgmental, take a critical attitude, and consider themselves to be failures in comparison to others.

Previous studies have found that self-compassion may be a key component in individuals' wellbeing (e.g., Saricaoglu & Arslan, 2013), and can impact their attitudes and behavior towards others (e.g., Neff & Beretvas, 2013). This may suggest that the more people are self-compassionate, the more they may act on the basis of volitionally endorsed and personally meaningful goals rather than external pressures (e.g., avoiding shame or obtaining rewards). Self-compassionate people may feel their basic psychological needs of competence, autonomy, and relatedness are more likely to be satisfied rather than frustrated (Deci & Ryan, 2000). Findings confirm that people who rank high on self-compassion are more likely to endorse autonomous goals (Hope et al., 2014), and perceive that their basic psychological needs have been satisfied (Ghorbani et al., 2012).

4. The current study

To the best of our knowledge, the current study is the first to directly investigate the putative associations between teachers' self-compassion and (de)motivating teaching styles. Studies conducted in other educational contexts lend weight to this rationale. For example, Jennings (2015) showed that teachers' self-compassion was associated with their greater emotional support of challenging students. Wiklund Gustin and Wagner (2013) investigated nursing teachers and showed that the ability to be sensitive, nonjudgmental and respectful towards oneself contributed to a compassionate approach towards others. Neff and Beretvas (2013) examined romantic relations and reported that being self-compassionate was linked to being more caring and supportive as compared to controlling or being verbally aggressive toward one's partner. Lindsay and Creswell (2014) found that self-compassion enhanced pro-social behaviors. In general, these studies suggest that self-compassion may be associated with more caring and supportive behaviors towards others, whereas self-derogation is likely to be more highly correlated with controlling, tough, and inflexible behaviors towards others. Here, we posited that the higher teachers' self-compassion, the greater their need

satisfaction and the lower their burnout, which are proxies for well-being. These teachers were predicted to have better resources to be supportive (Wiklund Gustin & Wagner, 2013), and thus to display a higher tendency to use autonomy-supportive and structuring styles. By contrast, the higher the teachers' tendency to engage in self-judgment and criticism (self-derogation), the greater their need frustration and burnout, which is likely to result in ego depletion and the tendency to implement a chaotic or controlling style.

Moreover, in addition to these hypothesized direct relationships among self-compassion, self-derogation and the four motivating styles, the mediation of need-satisfaction, need-frustration and burnout was also hypothesized.

5. The mediating role of need satisfaction and burnout

Teacher need satisfaction and personal accomplishment serve as emotional resources that favor adoption of an autonomy supportive and structuring style (Aelterman et al., 2016; Cheon, Reeve, Yu, & Jang, 2014; Katz & Shahar, 2015). By contrast, need frustration and burnout deplete these emotional resources leading to an increase in the teachers' tendency to be controlling or chaotic (e.g., Hakanen, Bakker, & Schaufeli, 2006; Skaalvik & Skaalvik, 2010; Soenens et al., 2012).

Only one study (Ghorbani et al., 2012) has directly investigated the relationship between self-compassion and need satisfaction, confirming that the higher the teachers' self-compassion, the higher their need satisfaction and the lower their need frustration. However, the associations with self-compassion were investigated on a range of well-being dimensions which can be considered proxies for need-satisfaction, such as endorsement of autonomous goals, life satisfaction, self-esteem, vitality, positive affect, and emotion-focused coping (Barnard & Curry, 2011; Hope et al., 2014). These associations have been found to be positive for a range of populations, including students (e.g., Gunnell, Mosewich, McEwen, Eklund, & Crocker, 2017; Hope et al., 2014; Neff et al., 2005) and teachers (e.g., Jennings, 2015).

Similarly, self-compassion may be related negatively to burnout (Allen & Leary, 2010). Burnout is defined as "a prolonged response to chronic emotional and interpersonal stressors on the job" (Maslach & Leiter, 2016, p. 351). This job-related psychological strain can lead to emotional exhaustion, which is characterized by low energy and vitality, cynicism or depersonalization which refers to the tendency to give up on attempts to repair relationships and the tendency to treat others impersonally. In this sense, the antithesis of burnout is personal accomplishment, which is characterized by perceived realization and a good fit between one's personal and achieved goals (for a review see Maslach, Schaufeli. & Leiter, 2001). Symptoms of burnout are typical of any profession, but mainly those based on constant relationships with others or those involving a responsibility for them such as in the nursing and teaching professions (De Silva et al., 2009).

Based on the distinction between a "brighter" and a "darker" path (Bartholomew et al., 2011; Costa et al., 2015), we hypothesized a two-path model. The "brighter" path guided by self-compassion was predicted to account for teachers' tendency to use autonomy-supportive and structuring styles, mediated by need-satisfaction and personal accomplishment. The "darker" path, galvanized by self-derogation, was predicted to characterize teachers' tendency to use controlling and chaotic styles mediated by need-frustration and burnout. Given that studies have shown that the higher the need satisfaction and autonomous regulation (e.g., Fernet, Guay, Senécal, & Austin, 2012; Fernet et al., 2017) the lower the burnout, whereas the higher the need frustration, the higher the burnout (e.g., Jennings, 2015; Soenens et al., 2012; Van den Berghe et al., 2014), we hypothesized that need satisfaction/frustration would be related to burnout and not the reverse.

6. Hypotheses

Specifically, we hypothesized that:

H1. Self-compassion and self-derogation will be (a) positively associated with need satisfaction and need frustration but (b) negatively associated with need frustration and need satisfaction;

H2. Need satisfaction and need frustration will be (a) positively associated with personal accomplishment and burnout and (b) negatively associated with burnout and personal accomplishment;

H3a. Personal accomplishment will be associated with autonomy-supportive and structuring teaching styles;

H3b. Burnout will be associated with controlling and chaotic teaching styles;

H4. Overall, we predicted a model in which teachers' self-compassion and self-derogation were exogenous independent variables, teachers' need satisfaction, need frustration, personal accomplishment and burnout were mediating variables, and teachers' autonomy-supportive, structuring, controlling and chaotic styles were the outcome variables. We assessed this model while controlling for two variables that could potentially affect the results: social desirability and years of teaching.

7. Method

Participants. A total of 318 Italian teachers (82% females) participated on a voluntary basis. An a-priori power analysis showed that the minimum sample size required for detecting a medium effect size was $n = 155$; hence, the sample was large enough for our correlational design. The participants taught different subjects such as Italian ($n = 84$, 26%), second languages ($n = 42$, 13%), mathematics and science ($n = 92$, 29%), arts or technology ($n = 27$, 8%), PE ($n = 7$, 2%), or others ($n = 66$, 22%), in primary ($n = 24$, 8%), middle ($n = 140$, 44%) and high ($n = 154$, 48%) school. Their mean age was 42.45 ($SD = 11.02$, range = 23–65 years). They had been teaching for 12.15 years with a $SD = 11.32$, ranging from less than 1 year to 40 years in different schools located in various areas of Italy: 73% in the North, 16% in the Center, 11% in the South.

8. Measures

Need Satisfaction and Need Frustration. We used the validated Italian version (Costa et al., 2018) of the Basic Psychological Need Satisfaction and Frustration scale (BPNSNF: Chen et al., 2015). Participants were asked to rate 24 items on a 5-point Likert scale ranging from 1 = *completely disagree* to 5 = *completely agree* preceded by the stem 'At school' to assess satisfaction or frustration of each of the three basic psychological needs. Example items are 'I feel that my decisions reflect what I really want', and 'I feel pressured to do too many things', for need satisfaction and frustration respectively. Two scores were computed by summing the need satisfaction (Cronbach alpha = .84) and need frustration (Cronbach alpha = .83) items, then dividing by 12.

Self-compassion. We used the Self-Compassion Scale (Neff, 2003b), Italian validation (Petrocchi et al., 2014). It consists of 26 items, 13 of which assess facets of self-compassion (self-kindness, common humanity, mindfulness; example items are 'When I'm going through a very hard time, I give myself the caring and tenderness I need' and 'When I feel inadequate in some way, I try to

remind myself that feelings of inadequacy are shared by most people'), and 13 facets of self-derogation (self-judgment, isolation, over-identification; example items are 'I'm disapproving and judgmental about my own flaws and inadequacies', and 'When I fail at something important to me I become consumed by feelings of inadequacy'), which were rated on a 5-point-Likert scale ranging from 1 = *almost never* to 5 = *almost always*. Two mean scores were computed respectively for self-compassion and self-derogation (the Cronbach alphas were respectively .83 and .90).

Burnout. This was assessed using the scale developed by Maslach and Jackson (1981). This instrument was preferred over more recent ones such as the Oldenburg Burnout Inventory (OBI: Demerouti et al., 2001), because it is validated in Italian (Sirigatti et al., 1988). It contains 22 items assessing Personal Accomplishment (an example item is 'I have accomplished many worthwhile things in this job') which refers to lack of burnout, Emotional Exhaustion (example item 'I feel frustrated by my job') as in the OBI, and one form of Disengagement, namely Depersonalization (example item 'I don't really care what happens to some students') which express burnout. Participants were asked to rate each item on a 6-point Likert scale ranging from 0 = *never* to 6 = *every day*. The Cronbach alphas were .83, and .87 respectively for Personal Accomplishment and Burnout.

Social Desirability. To control for social desirability, we used the Balanced Inventory of Desirable Responding (BIDR: Paulhus, 1991), in the Italian validation by Bobbio and Manganelli (2011). It presents 16 items assessing self-deceptive enhancement (the tendency to provide honest but biased self-reports; example item 'I am a completely rational person') and impression management (the tendency to try to make a good impression, sometimes based on lying; example item 'I always obey laws, even if I'm unlikely to get caught'). Participants are asked to rate each item on a 6-point Likert scale ranging from 1 = *strongly disagree* to 6 = *strongly agree*. Two scores were computed by averaging the 8 items corresponding to the two facets of social desirability. The Cronbach alphas were .73 and .75 respectively for self-deceptive enhancement and impression management.

Teaching Style. We used the Situations-in-School (SIS) questionnaire (Aelterman et al., 2019), translated into Italian and back-translated into English by two native speakers of both languages. It presents 15 vignettes (e.g., "You are thinking about classroom rules. So you …".) followed by four potential behaviors corresponding to the four (de)motivating styles: autonomy-supportive, characterized by participation and attuning behaviors (e.g., 'Invite students to suggest a set of guidelines that will help them to feel comfortable in class'), structuring, which provides guidance and clarification (e.g., 'Make an announcement about your expectations and standards for being a cooperative classmate'), controlling, being demanding and dominating (e.g., 'Post your rules. Tell students they have to follow all the rules'), and chaotic, characterized by waiting and laissez-faire (e.g., 'Don't worry too much about the rules and regulations'). The participants were asked to rate each of the 4 alternatives for each scenario on a 7-point Likert scale ranging from 1 = *does not describe me at all* to 7 = *describes me extremely well*. The Cronbach alphas were .84, .86, 0.84, and 0.86 respectively for the autonomy-supportive, structuring, controlling, and chaotic styles.

9. Procedure

After having obtained approval from the institutional Ethical Committee (protocol number 2861), teachers from a wide range of schools, partly contacted by one of the authors, partly by research assistants, were invited to fill in an online survey (through the schools, social websites or personal contacts). In return, if they so requested, they were sent a short report of the main results including tips for motivating students and themselves, after providing their e-mail address (74% did so).

After a descriptive page stating that the researchers were studying motivation and well-being in teachers and asking them to sign the consent form, the five questionnaires were presented in the order described above, followed by a few demographic questions (age, years of teaching, gender, school type, subject taught), and a thanking message.

10. Data analysis and results

We first calculated Pearson correlations among all the research variables, and their correlations with the control variables of social desirability and years of teaching. As shown in Table 1, the latter were correlated with all the other variables except for controlling style. More years of teaching experience were associated with greater self-compassion, personal accomplishment and adoption of an autonomy supportive and structuring style, and fewer years of teaching with self-derogation. Confirming H1a, self-compassion and self-derogation were positively associated with need satisfaction and need frustration, respectively. Confirming H1b, self-compassion and self-derogation were negatively associated with need frustration and need satisfaction respectively. Need satisfaction was positively associated with personal accomplishment whereas need frustration was positively associated with burnout, and negatively associated with personal accomplishment (confirming H2a). Need satisfaction was negatively associated with burnout, and need frustration was negatively associated with personal accomplishment (confirming H2b). The autonomy-supportive and structuring styles were positively associated with personal accomplishment (confirming H3a), whereas the controlling and chaotic styles were positively associated with burnout (confirming H3b). This set of correlations suggested the feasibility of investigating the hypothesized mediation model (H4).

To test H4, we used structural equation modelling (SEM) with maximum likelihood estimation via AMOS 21 (Arbuckle & Wothke, 2006), while controlling for the years of teaching and social desirability effects on the dependent variables (see Table 2 and Fig. 1). The model fit to data was adequate: $\chi^2/df = 2.297$, $p = .001$; $NFI = 0.96$; $CFI = 0.97$; $TLI = 0.94$; $RMSEA = 0.06$: Hu and Bentler (1998). The relationships between self-derogation and teachers' controlling and chaotic styles were both direct and indirect (through the partial mediation of need-frustration and burnout). The relations between self-compassion and autonomy-supportive and structuring style were not direct and were fully mediated by need satisfaction and personal accomplishment.

11. Testing alternative models

Although the analysis supported the hypothesized model, the findings did not rule out the possibility that other models could fit the data, perhaps better. Thus, to provide further support for the hypothesized relationships, we tested the fit of three alternative models.

In the first alternative model we entered teaching (de)motivating styles as the exogenous independent variables and personal accomplishment and burnout as the outcome variables. This model was tested because there is evidence that some teaching styles appear to contribute to burnout prevention (Ghanizadeh & Jahedizadeh, 2016). The fit of this model to the data was poor ($\chi^2/df = 7.209$, $p < .001$; $NFI = 0.81$; $CFI = 0.83$; $TLI = 0.76$; $RMSEA = 0.14$). We then tested a second model in which need satisfaction/frustration were the exogenous independent variables and the motivating styles were the outcomes. The fit of this model

Table 1
Descriptive statistics and correlations across variables n = 318.

	YT r	*SoD r*	1	2	3	4	5	6	7	8	9	10
1. Self-Compassion	.222**	.274**	–									
2. Self-Derogation	-.246**	-.296**	-.635**	–								
3. Need-Satisfaction	.131*	.242**	.369**	-.424**	–							
4. Need-Frustration	-.075	-.136*	-.305**	.550**	-.544**	–						
5. Personal accomplishment	.275**	.309**	.281**	-.340**	.501**	-.425**	–					
6. Burnout	-.070	-.111*	-.242**	.419**	-.475**	.603**	-.448**	–				
7. Autonomy-Supportive style	.200**	.142*	.128*	.017	.261**	-.063	.431**	-.166*	–			
8. Structuring style	.340**	.278**	.190*	-.169**	.325**	-.182*	.449**	-.214*	.709**	–		
9. Controlling style	.060	.077	-.038	.179**	-.175*	.216**	-.159**	.253**	-.092	.009	–	
10. Chaotic style	-.104	-.237**	-.074	.233**	-.242**	.325**	-.216**	.308**	-.145**	-.252**	.453**	–
Mean	12.15	3.64	3.30	2.64	3.76	2.28	4.24	2.14	4.95	5.38	3.39	2.08
SD	11.32	0.79	0.71	0.81	0.53	0.63	0.83	1.19	0.84	0.76	0.96	0.71

Note. YT= Years of Teaching; SoD = Social Desirability; n = 318 * p < .05, **p < .001.

Table 2
Results of structural equation modelling controlling for social desirability and years of teaching.

			β	B	S.E.	C.R.	p
Self-Compassion	→	Need Satisfaction	.166	.117	.045	2.570	.010
Self-Derogation	→	Need Frustration	.597	.466	.047	9.950	<.001
Self-Compassion	→	Need Frustration	.073	.061	.051	1.211	.224
Self-Derogation	→	Need Satisfaction	-.318	-.208	.042	−4.918	<.001
Need Satisfaction	→	Personal Accomplishment	.338	.519	.085	6.134	<.001
Need Frustration	→	Burnout	.489	.666	.071	9.400	<.001
Need Satisfaction	→	Burnout	-.209	-.314	.085	−4.022	<.001
Need Frustration	→	Personal Accomplishment	-.238	-.306	.071	−4.310	<.001
Personal Accomplishment	→	Autonomy-Supportive Style	.426	.438	.055	7.933	<.001
Personal Accomplishment	→	Structuring Style	.341	.310	.047	6.668	<.001
Burnout	→	Controlling Style	.210	.233	.063	3.698	<.001
Burnout	→	Chaotic Style	.247	.203	.046	4.402	<.001
Self-Compassion	→	Autonomy-Supportive Sty.	.014	.015	.059	.260	.740
Self-Compassion	→	Structuring Style	.014	.013	.049	.273	.785
Self-Derogation	→	Controlling Style	.155	.182	.070	2.607	.009
Self-Derogation	→	Chaotic Style	.127	.111	.051	2.164	.030
Social Desirability	→	Autonomy-Supportive Style	-.001	-.001	.058	-.012	.099
Social Desirability	→	Structuring Style	.148	.140	.049	2.872	.004
Social Desirability	→	Controlling Style	.136	.166	.068	2.439	.015
Social Desirability	→	Chaotic Style	.004	.003	.050	.067	.947
Years of Teaching	→	Autonomy-Supportive Style	.115	.009	.004	2.212	.027
Years of Teaching	→	Structuring Style	.239	.016	.003	4.767	<.001
Years of Teaching	→	Controlling Style	.099	008	.005	1.825	.068
Years of Teaching	→	Chaotic Style	-.049	-.003	.003	-.915	.360

was also poor (χ^2/df = 12.808, p < .001; *NFI* = 0.68; *CFI* = 0.67; TLI = 0.63; *RMSEA* = 0.19). Finally, the third model had burnout and personal accomplishment as the exogenous independent variables, and teaching styles as outcomes. The fit of this model was also unsatisfactory (χ^2/df = 11.477, p < .001; *NFI* = 0.70; *CFI* = 0.71; *TLI* = 0.69; *RMSEA* = 0.18), thus supporting the hypothesized relationships and model.

12. Discussion

The findings of this study underscore the relationships between self-compassion/self-derogation, the use of (de) motivating teaching styles, and the mediation of teacher need-satisfaction/frustration and personal accomplishment/burnout. Consistent with previous research (e.g. Haerens et al., 2016; Moè & Katz, 2020), the results suggested that self-compassion may act as a personal resource that can not only inform well-being (Barnard & Curry, 2011), but may also enable teachers to engage in an autonomy-supportive and structuring style. The greater the teachers' self-derogation the higher their need-frustration and burnout and the lower their need satisfaction, a key resource favoring well-being and motivation (Deci & Ryan, 2011; Ryan & Deci, 2017). Extending studies that have highlighted the negative consequences of need frustration on ego strength and well-being (Costa et al., 2015; Haerens, Aelterman, Vansteenkiste, Soenens, & Van Petegem, 2015; 2016) the findings here point to the possible deleterious consequences of self-derogation.

Interestingly, teachers' years of experience which was used in this study as a control variable, presented a unique pattern of relations with self-compassion/derogation. While previous studies on teachers' self-compassion either did not assess years of teaching (Beshai et al., 2016), or found no association between years of teaching and self-compassion/derogation (Jennings, 2015; Roeser et al., 2013; Taylor et al., 2016), the findings here showed that more experienced teachers were more self-compassionate and less self-derogating. Future studies should thus include years of teaching to examine this variable in more depth.

The full mediation of need satisfaction and personal accomplishment in the relationship between self-compassion and motivating styles, and the partial mediation of need-frustration and burnout on the relationship between self-derogation and de-motivating styles are interesting. Basically, these patterns of mediation suggest that self-derogation not only has an indirect, but also a direct effect on teachers' use of de-motivating styles. By contrast, self-compassion was only related indirectly to teacher motivating styles and depended on the level of teacher need-

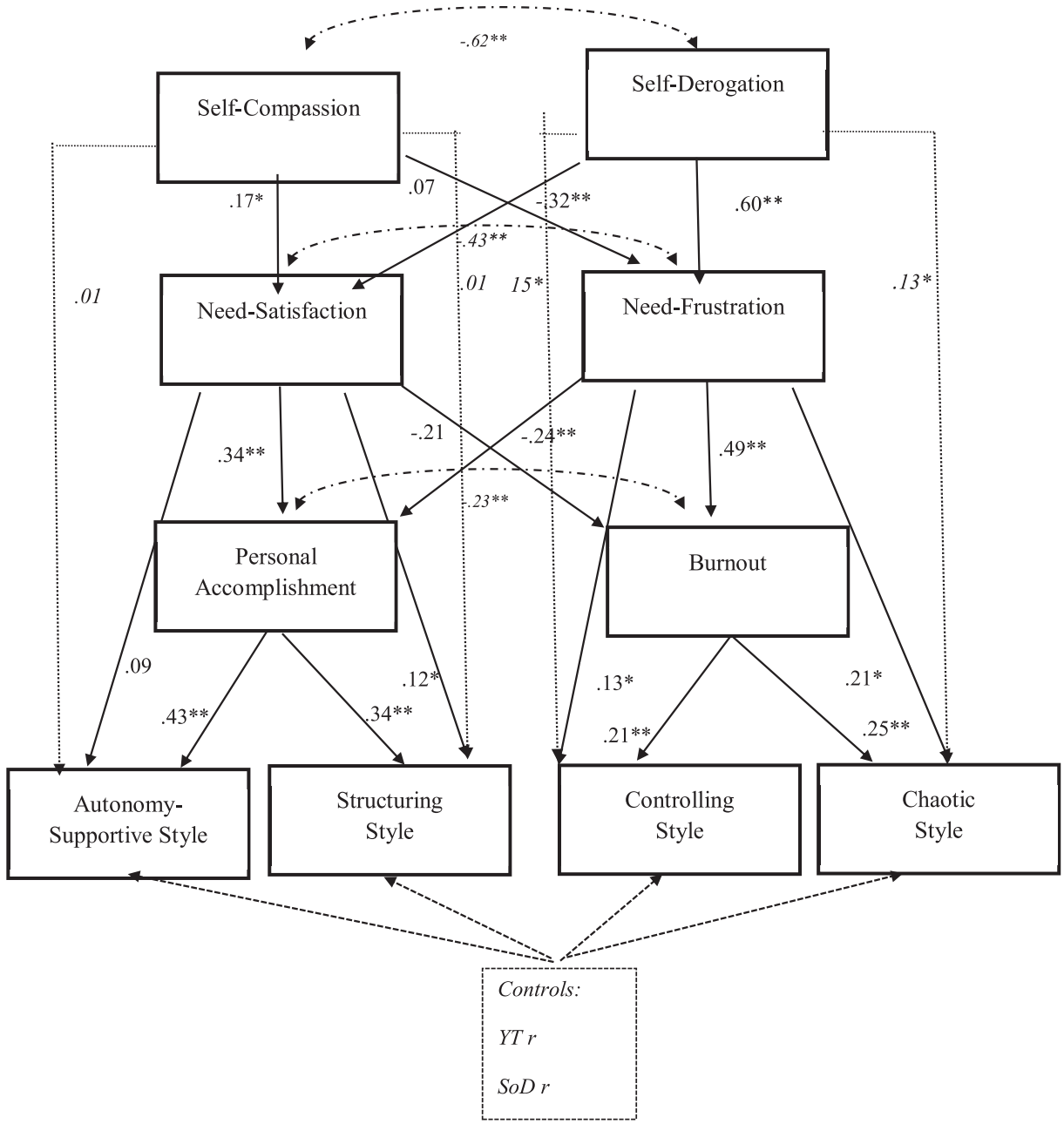

Fig. 1. Structural relations among self-compassion, self-derogation, need satisfaction or frustration, burnout and teaching (de)motivating styles when controlling for social desirability and years of teaching. Note: YT= Years of Teaching; SoD = Social Desirability; n = 318 *p < .05; **p < .01.

satisfaction and personal accomplishment. This may imply that self-derogation has a detrimental effect and results in ego depletion, which may engender a lesser ability to support others (Haerens et al., 2015; 2016). However, future studies should examine why self-derogation appears to impact negatively on teachers' well-being and behavior.

13. Practical implications for teachers and teachers' education

High self-compassion and low self-derogation emerged in the findings as possible resources supporting teacher well-being and motivating behaviors in their classrooms. This suggests that ways to foster self-compassion and reduce self-derogation could be integrated into practices aimed at encouraging teachers to implement effective motivating styles. Training programs may thus benefit from a greater emphasis on developing teachers' skills in reflecting on both self-compassion and self-derogation (Korthagen et al., 2006; Silva Mangiante & Moore, 2020). This could constitute a first step in the improvement of their own well-being and perhaps favors adoption of more supportive behaviors towards their students.

Additionally, burnout per se has been proven to be related to the adoption of a (de)motivating style, but it has also been shown to mediate the association between need satisfaction/frustration and the adoption of a (de)motivating style. From a practical point of view, this suggests that to increase teacher adoption of a motivating style it is important to promote need satisfaction, perhaps also by

fostering self-compassion, as well as to prevent burnout (for a recent meta-analysis on effective interventions see Iancu et al., 2018).

14. Limitations and future avenues

The main strengths of this study are (a) its emphasis on the predictors rather than the outcomes of teaching (de)motivating styles, by probing teacher preferences for autonomy-supportive and structuring or more controlling-chaotic styles; (b) the exploration of self-compassion that has been studied in a range of populations, but not with teachers and even more rarely for its possible relationship with need satisfaction (e.g., Ghorbani et al., 2012), (c) its focus on the interplay of the three factors (instead of a single factor a time), by modelling potential mediating mechanism paths from self-compassion to adoption of a motivating style.

Nevertheless, this study has several limitations which should be noted. The data were collected at a single time-point. In other words, the design was cross-sectional and correlational. The correlational nature of this study thus precludes drawing causal conclusions. Future studies could consider including more time points to assess the directionality of relations. Second, all the variables were self-reported. While this is commonplace in educational research, future studies could include student-reported or observed data to assess teaching styles. Third, the teachers were all volunteers. Possibly teachers who were already interested in professional development took part: the findings would have differed if less engaged teachers had been included in the sample. Fourth, only a few variables were tested: future studies should examine other personal variables related to teachers' behavior in the classroom, such as locus of control (Cook, 2012).

15. Conclusion

The findings suggest that self-compassion can shape teachers' need satisfaction which in turn emerged as related to personal accomplishment and the implementation of a motivating style. Self-derogation related to need frustration, burnout and controlling or chaotic styles. These results contribute to the literature on the factors impacting teacher (de)motivating styles and the role played by the understudied factor of self-compassion. Recognizing and drawing on self-compassion to promote need satisfaction and prevent burnout are argued to encourage the adoption of autonomy-supportive and structuring styles.

Author statement

Moè Angelica: Conceptualization; Data curation; Funding acquisition; Investigation; Methodology; Project administration; Resources; Supervision; Writing – original draft; Writing – review & editing.

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Declaration of competing interest

The authors declare that they have no conflict of interest.

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