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# RELATIONSHIP BETWEEN AUTONOMY SUPPORT AND STUDENTS' SCHOOL WELL-BEING: THE MEDIATING ROLE OF NEED FOR COMPETENCE

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## Abstract

Within a *Self-Determination Theory* perspective (SDT; Deci and Ryan, 2000), this study aims to examine the relationship between students' perception of autonomy support provided by teachers and their school well-being (439 students, mean age = 12.2 years; 51% male). SDT proposed the existence of three universal, innate psychological needs of all human beings: autonomy, relatedness and competence. In the school context, the need for autonomy refers to students' desires to experience a sense of self-determination of their behavior. The need for relatedness refers to students' desires to experience a sense of connection with teachers and classmates. The need for competence refers to students' desires to interact effectively with the school environment. The satisfaction of these needs plays an important role in several educational outcomes (e.g. school satisfaction and motivation), particularly when teachers support students' autonomy, attempting to understand, acknowledge, and where possible, be responsive to students' perspectives. In the school specific domain, many recent empirical studies have used the SDT as a conceptual framework, to show that an autonomy-supportive teaching style tends to predict adolescents students' needs satisfaction and school well-being (Ryan and Deci, 2020). Satisfaction of need for competence seems to be a particularly strong predictor of adolescent students' subjective well-being at school (Tian, Han and Huebner, 2014). According to Tian (2008), subjective well-being in school includes students' school satisfaction and affect, that is the frequency with which students experience positive emotions.

In Italy, research based on the SDT in schools is limited, particularly as regards the effect of students' needs satisfaction on their well-being. The present paper looks carefully at the mediating role of need for competence considering the relation between the support for autonomy provided by teachers and the adolescents students' positive and pleasant emotions at school, using a Structural Equation Modelling. The posited model fitted the data quite well:  $\chi^2 = 225$  (df = 101),  $p < .001$ ; TLI = .968; SRMR = 0.037; RMSEA = 0.053, 90% CI [.044, .062]. Results show that a greater perception of support for autonomy has a positive effect on the students' positive emotions, and this effect is partially mediated by the satisfaction of the need for competence. This finding suggest that students' psychological needs should be considered and teachers should not only be aware of the importance of autonomy-supportive teaching, but also of how they can improve their teaching style (Vandekerckhove et al., 2019).

**Keywords:** *Autonomy support, teaching style, students' well-being, self-determination theory, basic psychological needs.*

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## 1. Introduction

In the school specific domain, many recent empirical studies have used the *Self-Determination Theory* (SDT; Deci and Ryan, 2000) as a conceptual framework to show that an autonomy-supportive teaching style tends to predict students' needs satisfaction at school. This can lead to various different educational outcomes, such as students' autonomous self-regulation for learning, academic achievement and well-being at school (e.g.: Bureau et al., 2022; Reeve & Cheon, 2021; Ryan & Deci, 2020).

According to the Organisation for Economic Co-operation and Development (OECD; 2021), well-being is defined as the way people think and feel about their lives. It is a multi-faceted concept that requires careful measurement of people achievements and satisfaction in multiple aspects of their lives. The multidimensional definition of the students' well-being, used in the *Programme for International Student Assessment* in 2015 (PISA; Borgonovi & Pål, 2016; OECD, 2017), includes both objective aspects and subjective aspects of well-being. *Subjective well-being* (SWB; Diener, 2012) reflects people's assessments of their lives in cognitive and emotional terms. Tian (2008) proposes a theoretical model of SWB in the school context, based on two components: cognitive and affective. The first component refers

to students' school satisfaction, in terms of the cognitive assessment that students make of their experience at school. The second component includes two types of emotional experience, referring to the frequency of positive and negative emotions of students at school. Some studies demonstrate the importance of the affective component of well-being as a variable associated with students' motivation to learn and their academic achievement (Alivernini et al., 2019; OECD, 2017, 2021; Tian, Chen & Huebner, 2014).

SDT (Deci & Ryan, 2000; Ryan & Deci, 2017) proposed the existence of three universal, innate psychological needs of all human beings: autonomy, relatedness and competence. The satisfaction of these needs plays an important role in students' well-being at school. In the school context, the need for autonomy refers to students' desires to experience a sense of self-determination of their behavior. The need for relatedness refers to students' desires to experience a sense of connection with teachers and classmates. The need for competence refers to students' sense of success and growth and their desires to interact effectively with the school environment. Autonomy support and the satisfaction of basic needs may become significant factors for students' well-being especially during adolescence (Su, Tian & Huebner, 2021).

Need satisfaction develops in social environments that support the three needs and SDT suggests that teachers' support for autonomy is the best predictor of students' needs satisfaction at school (Reeve, 2016; Reeve & Cheon, 2021). Teachers support students' autonomy when they take the student's point of view, vitalize inner motivational resources, explain the reasons underlying their requests, acknowledge and accept students' expressions of negative affect, use informational, non pressuring language and display patience. Support for autonomy not only satisfies the need for autonomy, but also the need for competence and relatedness.

Satisfaction of need for competence seems to be a particularly strong predictor of adolescent students' SWB at school (Tian, Han & Huebner, 2014). SWB is an important indicator, which reflects not only the quality of life of adolescents but also the quality of school system (Park, 2004).

In Italy, research based on the SDT in schools is limited, particularly as regards the effect of students' needs satisfaction on their well-being. Within a SDT perspective, this study aims to examine the relationship between students' perception of autonomy support provided by teachers and their school well-being.

## 2. The present study

The present study is part of a larger longitudinal research (still in progress) that aims to define a framework of teachers' Motivational Behaviors, appropriate to the Italian school context and teacher training. This paper presents initial data on the relation between students' perception of autonomy support provided by teachers and their positive emotions at school, assuming that this relation is mediated by the satisfaction of the need for competence at school.

### 2.1. Participants

The convenience sample is composed by 439 students (mean age = 12.2 years; 51% male) from two middle schools, located in an urban area near Rome (in Lazio, Italy). In Italy, middle school is compulsory, lasts 3 years (grades 6-8), and it is for students aged 11–14 years.

### 2.2. Measures

*Students' perception of autonomy support.* Teacher support for autonomy was measured using the Italian version of the *Learning Climate Questionnaire* (LCQ; Alivernini & Lucidi, 2011). In the scale students were asked to answer eight questions using a 7-point Likert scale (from 1 - strongly disagree - to 7 - strongly agree). Questions regard teachers behaviors in class (e.g. "My teachers tries to understand how I see things before suggesting a new way to do things"; "My teachers communicate their confidence in my ability to become what I want to become"; "I feel understood by my teachers").

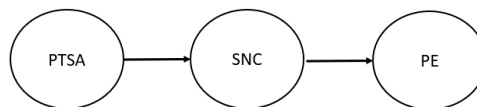
*Satisfaction of the need for competence.* To assess students' satisfaction of need for competence at school, we administered the subscale *Satisfaction Need for Competence* of the Italian version of the *Basic Psychological Need Satisfaction and Frustration at school Scale* (Buzzai et al., 2021). Students were asked to answer four questions using a 5-point Likert scale (from 1 - strongly disagree - to 5 - strongly agree). Questions regard students' feeling of mastery in academic activities (e.g. "I feel capable at what I do at school").

*Positive emotions.* To assess Positive emotions we used the subscale *Positive Emotions* (PE) of the *School Well-being Scale* (Alivernini & Manganelli, 2015). Students were asked to indicate how often they have experienced the feelings specified in each item (e.g. "I felt happy") over the past few months at school using a 5-point Likert scale (from 1 - never - to 5 - very often).

### 2.3. Data Analysis

Data analyses were conducted using the *Jamovi 2.0*<sup>1</sup> software. Firstly, we conducted an Exploratory Factor Analysis (EFA) and a reliability analysis (Cronbach's alpha) for the validity of instruments. Consequently the process of data analysis was carried out using *Structural Equation Modeling* (SEM) with latent variables in order to examine the association between the relationships hypothesized. The fit of the model was assessed using the corrected chi-squared test statistic and the following fit indices: the Root Mean Square Error of Approximation (RMSEA) the Tucker–Lewis index (TLI), and the Standardized Root Mean Square Residual (SRMR). The results of the fit indices were evaluated following the conventional criteria (Hu & Bentler, 1999). The model (Figure 1) featured one exogenous variable (support for autonomy) and two endogenous variables (satisfaction of need for competence and positive emotions).

Figure 1. Posited Model; PTSA (perceived teacher support for autonomy), SNC (satisfaction of the need for competence, PE (positive emotions).

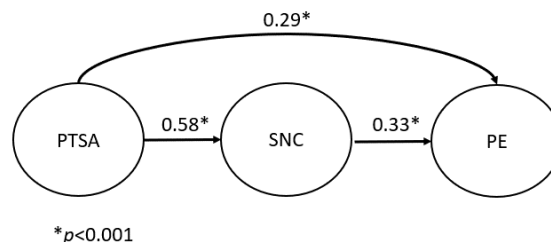


### 3. Results

The results of the EFA showed good fit indices of the scales with the empirical data. Cronbach's alpha was 0.88 for the *Learning Climate Questionnaire*, 0.89 for the scale *Satisfaction Need for Competence* and 0.88 for the scale *Positive Emotions*.

The results of the SEM analysis are shown in Figure 2. The posited model fitted the data quite well:  $\chi^2 = 225$  (df = 101),  $p < .001$ ; TLI = .968; SRMR = 0.037; RMSEA = 0.053, 90% CI [.044, .062]. As shown in Figure 2, all the hypothesized paths in the model are significant. Results show that a greater students' perception of support for autonomy has a positive effect on the satisfaction of need for competence ( $\beta = 0.58$ ) and students' positive emotions ( $\beta = 0.29$ ). The satisfaction of need for competence increases positive emotions ( $\beta = 0.33$ ).

Figure 2. Posited Model: Structural coefficients from the completely standardized solution ( $\beta$ ).



Data also highlights that autonomy support has an indirect effect on students' positive emotions when is partially mediated by the satisfaction of the need for competence (Figure 3). Finally, the overall model explained 33% of the variance in the satisfaction of need for competence and 30% of the variance in positive emotions.

Figure 3. Indirect effect.

Label	Description	Parameter	Estimate	SE	95% Confidence Intervals		$\beta$	z	p
					Lower	Upper			
Indirect Effect	AutonomySupport $\Rightarrow$ CompetenceNeedSatisfaction $\Rightarrow$ PositiveEmotions	p17*p18	0.164	0.033	0.099	0.229	0.192	4.931	< .001

<sup>1</sup>The Jamovi project (2021). *Jamovi*. (Version 2.0) [Computer Software]. <https://www.jamovi.org>.

#### 4. Conclusions

SDT suggests that a supportive educational context can facilitate the satisfaction of basic psychological needs. A supportive teaching style promotes the satisfaction of students' need for competence by providing them with explicit guidance, optimal challenges and feedback fostering improvement of skills, as well as clarifying teachers' expectations (Ahmadi et al., 2022). A formal intervention program is needed to help teachers improve their teaching style. "What teachers learn during an autonomy-supportive intervention is how to provide instruction in autonomy-satisfying ways" (Reeve & Cheon, 2021, p. 67). Autonomy-supportive teaching interventions have been highly successful in increasing students' satisfaction of basic needs at school. "Most teachers who participate in an autonomy-supportive intervention cognitively assimilate its autonomy-supportive message, respond favorably to the recommended instructional behaviors, and display objective evidence that they have become more autonomy supportive toward students during their classroom instruction" (Reeve & Cheon, 2021, p. 69).

The results of this study highlight the importance of students' need for competence in promoting school well-being. This suggests that students' psychological needs should be considered, and teachers should not only be aware of the importance of autonomy-supportive teaching, but also of how they can improve their teaching style (Vandekerckhove et al., 2019).

Future studies in the Italian school context should implement interventions based on the SDT focused on the satisfaction of student's needs, in order to improve teaching practices and approaches that can enhance students' well-being at school.

#### References

- Ahmadi, A., Noetel, M., Parker, P., Ryan, R., Ntoumanis, N., Reeve, J., ... & Lonsdale, C. (2022). *A Classification System for Teachers' Motivational Behaviours Recommended in Self-Determination Theory Interventions*.
- Alivernini, F., & Lucidi, F. (2011). Relationship between social context, self-efficacy, motivation, academic achievement, and intention to drop out of high school: A longitudinal study. *The journal of educational research*, 104(4), 241-252.
- Alivernini, F., & Manganelli, S. (2015). First evidence on the validity of the students' relatedness scale (SRS) and of the school well-being scale (SWS). *Procedia-Social and Behavioral Sciences*, 205, 287-291.
- Alivernini, F., Cavicchiolo, E., Manganelli, S., Chirico, A., & Lucidi, F. (2019). Support for autonomy at school predicts immigrant adolescents' psychological well-being. *Journal of Immigrant and Minority Health*, 21(4), 761-766.
- Borgonovi, F. and J. Pál (2016), *A Framework for the Analysis of Student Well-Being in the PISA 2015 Study: Being 15 In 2015*, OECD Education Working Papers, No. 140, OECD Publishing, Paris, <https://doi.org/10.1787/5jlpszwghvnb-en>.
- Bureau, J. S., Howard, J. L., Chong, J. X., & Guay, F. (2022). Pathways to student motivation: A meta-analysis of antecedents of autonomous and controlled motivations. *Review of Educational Research*, 92(1), 46-72.
- Buzzai, C., Sorrenti, L., Costa, S., Toffle, M. E., & Filippello, P. (2021). The relationship between school-basic psychological need satisfaction and frustration, academic engagement and academic achievement. *School Psychology International*, 42(5), 497-519.
- Deci, E.L. & Ryan, R.M. (2000) 'The "what" and "why" of goal pursuits: Human needs and the self-determination of behavior', *Psychological Inquiry* 11: 227-68.
- Diener, E. (2012). New findings and future directions for subjective well-being research. *American psychologist*, 67(8), 590.
- Hu, L. T., & Bentler, P. M. (1999). Cutoff criteria for fit indexes in covariance structure analysis: Conventional criteria versus new alternatives. *Structural equation modeling: a multidisciplinary journal*, 6(1), 1-55.
- Niemiec, C. P., & Ryan, R. M. (2009). Autonomy, competence, and relatedness in the classroom: Applying self-determination theory to educational practice. *Theory and research in Education*, 7(2), 133-144.
- OECD (2021), *Measuring What Matters for Child Well-being and Policies*, OECD Publishing, Paris, <https://doi.org/10.1787/e82fded1-en>.
- OECD (2017), *PISA 2015 Results (Volume III): Students' Well-Being*, PISA, OECD Publishing, Paris. <http://dx.doi.org/10.1787/9789264273856-en>

- Park, N. (2004). The role of subjective well-being in positive youth development. *The Annals of the American Academy of Political and Social Science*, 591(1), 25–39.
- Reeve J. (2016). Autonomy-supportive teaching: what it is, how to do it. In: Liu W et al, editors. *Building autonomous learners*. Singapore: Springer, pp. 129–52.
- Reeve, J., & Cheon, S. H. (2021). Autonomy-supportive teaching: Its malleability, benefits, and potential to improve educational practice. *Educational Psychologist*, 56(1), 54-77.
- Ryan, R. M., & Deci, E. L. (2020). Intrinsic and extrinsic motivation from a self-determination theory perspective: Definitions, theory, practices, and future directions. *Contemporary educational psychology*, 61, 101860.
- Ryan, R. M., & Deci, E. L. (2017). *Self-determination theory: Basic psychological needs in motivation, development, and wellness*. The Guilford Press.
- Su, T., Tian, L., & Huebner, E. S. (2021). The reciprocal relations among prosocial behavior, satisfaction of relatedness needs at school, and subjective well-being in school: A three-wave cross-lagged study among Chinese elementary school students. *Current Psychology*, 40(8), 3734-3746.
- Tian, L. (2008). Developing scale for school well-being in adolescents. *Psychology Development and Education*, 3(24), 100–107.
- Tian, L., Chen, H., and Huebner, E. S. (2014). The longitudinal relationships between basic psychological needs satisfaction at school and school-related subjective well-being in adolescents. *Soc. Indic. Res.* 119, 353–372.
- Tian, L., Han, M., & Huebner, E. S. (2014). Preliminary development of the adolescent students' basic psychological needs at school scale. *Journal of adolescence*, 37(3), 257-267.
- Vandekerckhove, B., Soenens, B., Van der Kaap-Deeder, J., Brenning, K., Luyten, P., & Vansteenkiste, M. (2019). The role of weekly need-based experiences and self-criticism in predicting weekly academic (mal) adjustment. *Learning and Individual Differences*, 69, 69-83.