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Teacher autonomy support and psychological control, gender and academic engagement in secondary school students

Apoyo a la autonomía y control psicológico del docente, género y compromiso académico en estudiantes de educación secundaria

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#### **Abstract**

#### Objective: The Present Study Analyzed Relationships Between Autonomy Support, Teacher Psychological Control, Gender And Engagement. Methodology: The Sample Consisted Of 324 High School Students Aged 10 To 13 Years (M = 12.88 Years, SD = 1.52) From Six Public High Schools Located In Different School Zones Of The State Of Durango. Results: Multiple Linear Regression Results Indicate That Student Autonomy Support Favors Academic Engagement, While Teacher Students' Psychological Control Is Negatively Associated With Students' Academic Engagement. Furthermore, Gender Does Not Seem To Be Associated With Students' Levels Of Academic Engagement. Contribution: It Is Concluded That Autonomy Support And Psychological Control Are Predictors Of Academic Engagement Of Secondary School Students.

# Autonomy, Psychological Control, Engagement Academic

#### Resumen

Objetivo: El Presente Estudio Analizó Las Relaciones Entre El Apoyo A La Autonomía, El Control Psicológico Del Docente, El Género Y El Compromiso Académico. Metodología: La Muestra Está Compuesta Por 324 Estudiantes De Educación Secundaria Con Edades Entre Los 10 Y 13 Años (M = 12.88 Años, DE = 1.52) De Seis Escuelas Secundarias Públicas Ubicadas En Diferentes Zonas Escolares Del Estado De Durango. Resultados: Los Resultados De La Regresión Lineal Múltiple Indican Que El Apoyo A La Autonomía Del Estudiante Favorece El Compromiso Académico De Los Estudiantes, Mientras Que El Control Psicológico Del Docente Se Asocia Negativamente Al Compromiso Académico De Los Estudiantes. Aunado A Ello, El Género No Parece Estar Asociado A Los Niveles De Compromiso Académico De Los Estudiantes. Contribución: Se Concluye Que El Apoyo A La Autonomía Y El Control Psicológico Son Predictoras Del Compromiso De Los Estudiantes De Académico Educación Secundaria.

Autonomía, Control Psicológico, Compromiso Académico

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## Introduction

Academic engagement is a concept that attracts the attention of researchers in the field of education, especially for its protective effect against endemic problems in school communities such as low achievement and school dropout. In Mexico, the problems of underachievement and school dropout were exacerbated as a result of the COVID-19 pandemic.

According to official data, the pandemic has left around 5 million students out of the education system in the last three years (INEGI, 2022). In this sense, according to estimates by the Ministry of Public Education, the dropout rate in secondary education increased by 7.8% between the school years 2019-2020, 2020-2021 and 2021-2022, as a direct result of the COVID-19 pandemic (SEP, 2023). In addition, it is estimated that there has been a setback in the expected learning outcomes of Mexican students, a situation that exacerbates the historical problems of low learning achievement among secondary school students (CONEVAL, 2020; OECD, 2018).

In this context, it should be noted that both dropout and underachievement are sensitive and worrying phenomena for the scientific community due to their permanent negative effects not only on the student but also on their respective communities because of their impact on their productivity, competitiveness and development.

Academic engagement is considered an important predictor of school achievement and completion (Finn & Zimmer, 2012; López-Angulo et al., 2021; Gutiérrez, 2018). It is considered in the literature as a protective factor against dropout and low school achievement as the construct refers to student participation in academic and extracurricular activities reflected in their behaviour, emotions and cognition (Christenson et al., 2012; Fredricks et al., 2004). Conversely, students' level of academic engagement is often threatened by factors both inside and outside the school. While external factors focus on problems related to the home environment, school disengagement has the greatest impact on academic engagement among school-related factors.

Disinterest in school, translated into little or no academic engagement, in addition to affecting students' participation in academic and school activities, in the worst cases leads to dropout (Molina *et al.*, 2014).

Some authors point out that interest, translated into the level of student engagement, is not an immutable attribute, but one that changes through teaching and institutional practices (Fredricks *et al.*, 2016; Miranda-Zapata *et al.*, 2018; Parada-Contreras & Pérez Villalobos, 2014; Schaufeli *et al.*, 2002), which is why the role played by the teacher in these changes is fundamental. Africano (2021) point out that the lack of commitment to school stems from a significant wear and tear on the mood and minds of students, as a result of teaching that lacks stimulus, is full of authoritarianism and is saturated with information that is far removed from the student's reality.

In this sense, Pineda-Espejel *et al.* (2019) found that low student engagement with school is associated with inhibitory, oppressive and imperious teacher behaviours. Rigo & Donolo (2019) suggest that students who are engaged in their classes tend to have teachers who support their autonomy and provide them with socioemotional support, i.e., avoid coercive and controlling actions in their school dynamics.

The above suggests that old paradigms in the educational field should be questioned for the adaptation and redirection of teachers' competences and their work in the classroom (Moreno-Murcia *et al.*, 2019; Reeve, 2002; Trautwein & Koller, 2003). This premise is supported by some authors who consider support for teacher autonomy as a high-impact factor for optimising a state of student engagement (Grolnick *et al.*, 1991; Moreno-Murcia *et al.*, 2012; Vansteenkiste *et al.*, 2005).

Some studies indicate that there is a directly proportional relationship between autonomy support and engagement in learning activities (Bois *et al.*, 2015; Deci & Ryan, 2008; Gutiérrez *et al.*, 2018; Revee, 2002). In addition, academic engagement, stimulated by autonomy, has been found to generate the enhancement of human capabilities, personal growth and individual satisfaction. (Moreno-Murcia, Hernández, Alonso, *et al.*, 2019).

On the other hand, there are studies focused on teacher psychological control and its negative repercussions on student academic engagement (Ramos et al., 2020; Ramos & Gómez, 2019). The literature consulted refers to it as a manipulative style that undermines students' confidence. eniovment engagement (Gallegos et al., 2014; Trigueros-Ramos et al., 2019). In addition, Polyte et al. (2015) have found that teacher control produces high rates of cognitive and somatic anxiety in individuals who feel intimidated and frightened making their teachers, them more susceptible to disinterest and dropping out of school. Conversely, some authors (Espinoza, 2006; Moreno-Murcia et al., 2018) found no relationship between significant psychological control and student academic functioning.

Another factor that continues to be debated in the literature is student gender, as it is claimed that student engagement ordinarily depends on the gender of the individual (Mandermach, 2015; Kinzie *et al.*, 2007; Ni Fhloinn *et al.*, 2016). While Sontam & Gabriel (2012) have found that females have higher levels of academic engagement, Harper *et al.* (2004) have found that males have higher levels.

Therefore, the aim of the present study is to determine the correlations between autonomy support, teacher psychological control and gender with academic engagement of secondary school students. Three research hypotheses are derived from this:

- 1. A positive correlation is expected between teacher support for autonomy with academic engagement of secondary school students.
- 2. A negative correlation is expected between teachers' psychological control and secondary school students' academic engagement.
- 3. Being male is expected to be negatively related to the academic engagement expressed.

## Methodology to be developed

## **Participants**

A total of 324 students from six public secondary schools located in different school zones in the state of Durango were selected non-randomly. The study included 164 (51%) male students and 160 (49%) female students. Their ages ranged from 10 to 13 years (M = 12.88 years, SD = 1.52). Of the total, 117 (36.1%) were in their first year, 126 (38.8%) in their second year and 81 (25.1%) in their third year of secondary school.

## **Instruments**

## **Academic Engagement**

Based on the work done by some authors (Fredricks *et al.*, 2005; Kuh, 2009; Skinner *et al.*, 2008; Veiga *et al.*, 2014; Wang *et al.*, 2011) a scale was developed to measure the academic engagement of secondary school students in Mexico. The scale consists of 17 items following the use of inductive and deductive methods (Hinkin, 1995; DeVellis, 2017; Osterveld, 1996) during the item generation process.

The items are grouped into three dimensions:

- a) Behaviour, which refers to effort and positive participation in academic and extracurricular activities (six items, e.g., "I get up early every day to get to school on time",  $\alpha = .86$ ,  $\omega = .87$ ).
- b) Emotion, which refers to appreciation and enjoyment of learning and academic activities (seven items, e.g., "I know that when I go to school I have a good time",  $\alpha = .86$ ,  $\omega = .87$ )
- c) Emotion, which refers to appreciation and enjoyment of learning and academic activities (seven items, e.g., "I know that when I go to school I have a good time",  $\alpha = .86$ ,  $\omega = .87$ ), "I know that by going to school my future will be very good",  $\alpha = .90$ ,  $\omega = .90$ ).

d) Cognition, involves self-regulation in learning and the use of learning strategies for the achievement of higher order skills and knowledge (four items, e.g., "I search the internet (e.g., Google, YouTube) for information that helps me to better understand what I am taught at school.",  $\alpha = .71$ ,  $\omega = .69$ ). The response format used was Likert-type (0 = never to 4 = always).

## **Autonomy Support**

The Perceived Teacher Autonomy Support scale (Jang *et al.*, 2016) was adapted to measure Mexican secondary school students' perceptions of their teachers' support for their school and academic autonomy. This scale consists of thirteen items that indicate the extent to which the teacher motivates the student to regulate his or her academic motivation (e.g., "My teachers let me decide the topics I want to research and expose.",  $\alpha = .80$ ,  $\omega = .82$ ). Items were answered in Likert-type format with options from 0 (strongly disagree) to 4 (strongly agree).

## **Psychological Control**

Based on the work developed by several authors (Jang et al., 2016; Soenens et al., 2012; Trautwein et al., 2006) a scale was developed to measure the psychological control exercised by teachers over secondary school students in Mexico. The scale consists of 17 items following the use of inductive and deductive methods (Hinkin, 1995; DeVellis, Osterveld, 1996) during the item generation process. The scale consists of seven items indicating the extent to which the teacher uses intrusive techniques such as guilt and shame induction to pressure students to think, feel or behave in certain ways (e.g., "When I make mistakes in class my teachers say things that make me feel ashamed and afraid.",  $\alpha$  = .80,  $\omega$ = .82). Items were answered in Likert-type format with options from 0 (strongly disagree) to 4 (strongly agree).

## **Procedure**

Permission to conduct the research was granted by the Ethics Committee of the Instituto Tecnológico de Sonora. Subsequently, an invitation to participate in the study was sent to the authorities of multiple secondary schools located in the different municipalities of the state of Durango.

ISSN-2523-2452 ECORFAN® All rights reserved Following the acceptance of some school communities to participate in the study, parents were sent a letter of consent to authorise their children to participate in the study. Only students whose parents signed the informed consent were explained the project and the nature of their voluntary participation in the study. Confidentiality of participation was assured for parents and guardians as well as for participating students.

# Data analysis

Missing data were less than 3% for all items of the scales. These were treated using the multiple imputation method available in SPSS 27. First, means and standard deviations and correlations of the variables were calculated. Subsequently, a multiple regression with binary variables (dummys) was calculated. Finally, the effect size was analysed with G\*Power 3.1.9.7 software.

## Results

## Descriptive analysis and correlations

Table 1 reports the means, standard deviations and correlations of the variables included in the study (academic engagement, teacher support for autonomy, teacher psychological control and being a male student). The results of the means indicated that students placed their response in the "almost always" category, which indicates that students state that their behaviour, emotions and cognitive processes are focused on their academic activities.

Variables	M	DE	1	2	3	4
1. Academic commitment	3.60	.47	-			
2. Teacher support for	3.60	.77	.56**	-		
autonomy						
3. Psychological control	2.89	.47	32**	30**	-	
4. Male gender	2.86	0.64	.08	.44	.14	-

\*\*p < 0.01

**Table 1** Means, standard deviation and correlations between study variables

Source: Own Elaboration

On the other hand, the responses on the perception of teacher support for autonomy were placed in the category "sometimes", which indicates that students do not frequently perceive their teachers' support for the development of their school and academic autonomy.

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In addition, students placed their response in the "sometimes" category when questioned about the psychological control exercised by their teachers.

Finally, the results suggest that the variables included in the model explain a significant part of academic engagement in secondary school students (R2 = .34). The effect size is large (f2 = .61), indicating the practical value of the relationships found.

From the coefficient analysis ß it is inferred that teacher support for autonomy is positively related to academic engagement, while psychological control is negatively related to students' academic engagement. This implies that both variables have a significant effect on the degree of engagement of secondary school students (Table 2).

Steps and predictor variables	В	SE B	В	R2	$\Delta R2$
Step 1	3.47	.15	.51	.38*	.00
Teacher support for autonomy	10	.13	17	.33*	.000

<sup>\*\*</sup>p < 0.01

**Table 2** Hierarchical regression results for the predictors of academic engagement (N=324)

Source: Own Elaboration

#### Conclusions

The present study analyses the correlations between teacher support for autonomy, psychological control, being male and academic engagement of secondary school students. The results confirm the hypotheses put forward in the study. Consistent with expectations, autonomy support is found to be positively correlated with students' academic engagement. The results are consistent with those reported in the literature (Grolnick et al., 1991; Moreno-Murcia et al., 2012; Vansteenkiste et al., 2005), so the present study confirms the positive effect autonomy support on having academically engaged students, who not only stay in school, but also acquire the knowledge and skills necessary to continue with further studies.

Additionally, the results of the study contribute evidence of the negative effects of teacher psychological control on students' academic engagement. This result is consistent with that reported by Polyte *et al.* (2015) and adds evidence to the few studies that have explored this relationship in the literature.

Finally, the results indicate that being male is not negatively related to academic engagement, this result agrees with that reported by Leeras *et al.*, (2018), indicating that being male is not a predictor of low academic engagement, as suggested by some studies.

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