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Student burnout and engagement: Relationship with adolescent use of alcohol and attitudes towards authority



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Abstract

Background/Objective: The burnout syndrome has been related to development of transgressive attitudes toward norms that facilitate risk behaviors in youth, such as drinking alcohol. On the contrary, academic engagement is related to positive attitudes toward authority which can slow down its use. The objective was to analyze the relationships between burnout and academic engagement, attitudes toward authority and use of alcohol. **Method:** The sample included a total of 1,287 high school students who anonymously filled out the Maslach Burnout Inventory-Student Survey, the Utrecht Work Engagement Scale for Students and the Scale of Attitudes toward Institutional Authority in adolescents, along with questions on drinking alcohol. **Results:** It was observed that cynicism had a significant effect on positive attitude toward rule-breaking, and this in turn, on frequency of drinking. The engagement dedication factor was shown to have a significant direct effect on positive attitude toward institutional authority, and this on drinking frequency. **Conclusions:** Promoting measures for decreasing burnout in youth and stimulating academic engagement could have repercussions on attitudes toward rules and the presence of risk behavior.

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PALABRAS CLAVE

Burnout;
Compromiso;
Adolescentes;
Alcohol;
Estudio transversal

Agotamiento y compromiso de los estudiantes: Relación con el consumo de alcohol en adolescentes y actitudes hacia la autoridad**Resumen**

Introducción/Objetivo: El síndrome de burnout ha sido relacionado con el desarrollo de actitudes transgresoras hacia las normas que facilitan las conductas de riesgo en los jóvenes, como el consumo de alcohol. Por el contrario, el compromiso académico se relaciona con actitudes positivas hacia la autoridad que pueden frenar el consumo. El objetivo fue analizar las relaciones entre burnout y compromiso académico, actitudes hacia la autoridad y consumo de alcohol. *Método:* Participaron un total de 1.287 alumnos de Educación Secundaria Obligatoria, quienes cumplieron de manera anónima el *Maslach Burnout Inventory-Student Survey*, la Encuesta de Bienestar en el Contexto Académico y la Escala de Actitudes hacia la Autoridad Institucional en Adolescentes, junto a preguntas sobre el consumo de alcohol. *Resultados:* El cinismo tiene un efecto significativo sobre la actitud positiva hacia la transgresión y este, a su vez, sobre la frecuencia de consumo. Se muestra un efecto directo significativo del factor Dedicación del compromiso sobre la actitud positiva hacia la autoridad institucional y este sobre la frecuencia de consumo. *Conclusiones:* Fomentar medidas destinadas a la disminución del burnout entre los jóvenes y la estimulación del compromiso académico podrían repercutir sobre las actitudes hacia las reglas y la presencia de conductas de riesgo en este colectivo.

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Adolescence is a period of transition to adulthood characterized by a multitude of biological, cognitive, emotional and physical changes (Wang et al., 2018; Lin & Chiao, 2020). Schools are fundamental at this stage, since the school context influences the intellectual, social and emotional development of adolescents, however, it can be accompanied by academic and psychological adjustment problems (Eccles & Roeser, 2011). During this stage, the increasing level of demands for academic success can lead to stress (Romeo, 2013), which can cause exhaustion, anxiety and externalization problems (Gómez-Ortiz et al., 2019; Meylan, Doudin, Curchod-Ruedi, Antonietti et al., 2015; Sonmark & Modin, 2017), negatively influencing wellbeing (Burger & Samuel, 2017; Wersebe et al., 2018).

Student burnout is defined as a syndrome characterized by feelings of exhaustion at school due to high academic demands, cynical behavior toward the value of school, detachment and a feeling of inefficacy and incompetence in schoolwork (Gerber et al., 2018; Salmela-Aro et al., 2009; Vizoso-Gómez & Arias-Gundín, 2018). According to this definition, academic exhaustion in adolescents is caused by decreased motivation and fatigue associated with overload, which generates attitudes of indifference toward school, loss of interest in one's own achievements and lowered efficacy, associated with a feeling of lack of motivation and academic success (Schaufeli et al., 2002). Student burnout can also negatively affect academic performance, increasing the risk of leaving school and low scholastic success (Bask & Salmela-Aro, 2013; Hughes & Cao, 2018; Tuominen-Soini & Salmela-Aro, 2013).

This syndrome causes a negative emotional reaction associated with highly stressful situations, which can lead adolescents to consume alcohol and illegal substances to face them (Costa, Santos, Santos, Melo, & Andrade, 2012),

and also addiction to the internet (Tomaszek & Muchacka-Cymerman, 2019) and development of aggressive behavior (Gázquez et al., 2015; Lee et al., 2017). It has also been shown how a high level of self-efficacy, low social support and deficient stress management can cause burnout in young people (Pérez-Fuentes et al., 2019).

In view of the above, it is indispensable to determine the resources that could be acting as protective factors to avoid early leaving and low academic performance (Im et al., 2016; Lombardi et al., 2019). Thus, engagement has been established as an indispensable dimension, focused on quality and level of learning, improvement of students' academic performance, persevering instead of leaving school, and implying their personal and cognitive development (Kahu, 2013; Ribeiro et al., 2019; Rosário et al., 2016). In education, engagement is defined as a positive and satisfactory motivational construct, determined by factors such as vigor, dedication and absorption (Schaufeli & Bakker, 2003; Schaufeli et al., 2002). Vigor refers to high levels of energy and involvement, as well as capability for mental resilience while studying, willingness to invest that effort in study and persistence, even though problems may arise. Dedication involves being firmly committed to study and facing academic activities with interest, enthusiasm, decision and challenge. Finally, absorption refers to student concentration and involvement in homework or while studying, becoming engrossed and finding it hard to become detached from their studies (Carmona-Halty et al., 2019; Martos et al., 2018; Schaufeli et al., 2019).

Thus, studies have shown a positive relationship between student commitment and academic performance, as it shows how students who participate actively in academic activities have a higher probability of improving it (Abbott-Chapman et al., 2014; Boulton et al., 2019; Reeve & Tseng, 2011).

The first years of high school are therefore fundamental, because it is in this stage when the decisions on persistence and commitment develop and can influence adolescent behavior (Ketonen et al., 2016). When the educational context is adequate to the needs, expectations and purposes students wish to attain, the result is strong academic commitment, increased motivation, and more wellbeing (Mikami et al., 2017; Reeve & Lee, 2014; Tayama et al., 2019; Upadaya & Salmela-Aro, 2013).

The presence of school burnout can lead to development of affective and cognitive symptoms, such as disrespectful, negative attitudes toward other students, the school and life in general (Aypay, 2017; Bai et al., 2020). For example, in university students, cynicism has been found to correlate negatively with support for sociocultural values and norms (Jia et al., 2009). Cynicism particularly acts as a cognitive shield protecting adolescents from very stressful situations by displaying negative attitudes toward rules and even developing violent behavior (Bakioğlu & Kiraz, 2019). As noted by Kiuru et al. (2008), the fact that young people with burnout tend to show a multitude of behavior problems may be due to the existence of other problems that reduce available resources for dealing with schoolwork. According to the Theory of Conservation of Resources under stress, if one's resources are limited, demands seem higher, and therefore, it is likely they will not be undertaken effectively (Hobfoll, 1989).

One of the reasons that adolescents develop cynical behavior toward their studies and tend to break rules is the lack of discipline by parents and schools, which do not set restrictive rules on certain negative behaviors and have poor communication with adolescents about norms that must be complied with (Del Moral et al., 2019; McDonough et al., 2016; Obradors-Rial et al., 2020). Such inconsistent discipline by the school is associated with a lack of keeping classroom rules and their compliance by students, promoting their positive attitudes toward rule-breaking (Halgunseth et al., 2013; Ortega-Barón et al., 2017).

Furthermore, the stress and exhaustion they feel throughout high school, leads students to adopt risk behaviors associated like the use of alcohol (Oller-Perret & Walburg, 2018), so high levels of student burnout may be associated with an increase in frequency of alcohol use (Blumenthal et al., 2010; Muzafar et al., 2015; Vorster et al., 2019; White et al., 2016). In this regard, Meylan, Doudin, Curchod-Ruedi, & Stephan (2015) found that youths with emerging problematic frequency of use showed high levels of emotional exhaustion and cynicism, and emphasized that this result could be due to adolescents using substances to calm the stress of school. Similarly, Nteveros et al. (2020) found differences between users/nonusers of alcohol in burnout dimensions. In particular, youths who drank had more symptoms of cynicism and fewer feelings of efficacy than those who did not. Thus, substance use could be an adjustment strategy against school burnout, and in turn, could worsen problems at school, increasing exhaustion (Wallburg et al., 2015). In this vein, according to the Theory of Conservation of Resources (COR) (Hobfoll, 1989), people have a basic motivation for acquiring, maintaining and protecting their resources, that is, what they value. When these personal resources are threatened or lost, burnout becomes likely. This theory shows the concept of social support as an

important resource (Hobfoll & Shirom, 2001), which protects the individual against stress and exhaustion, as does the conscientiousness personality trait. Students who are very conscientious and who have vast resources of emotional support adopt coping strategies based on the problem instead of one based on emotions in school-related stress or exhaustion (Alarcón et al., 2011). Whereas youths with academic burnout would have few resources for maintaining academic wellbeing, and in turn, would try to cope with this situation using ineffective emotion-focused strategies such as drinking alcohol (Shaver et al., 2013).

The Theory of Conservation of Resources also postulates that individuals with academic engagement show strong dedication to schoolwork and make an effort in it, which assumes creation of more resources in their activity as students (Çam & Öğülmüş, 2019). This abundance of resources enables them to effectively cope with problems, for example, by protecting the student from stress and dropping out (Salanova et al., 2010). Therefore, academic engagement could diminish development of strategies and behaviors that place youths' current resources at risk, such as drinking alcohol. Some publications have shown that high levels of academic engagement exert a protective factor against drinking alcohol and problematic behavior. Thus, adolescents who have a firm bond with scholastic commitment tend to delay starting alcohol use (Roebroek & Koning, 2016).

As shown in the studies by Lee et al. (2015), because adolescents who are immersed in their studies are highly dedicated to them, have adequate academic preparation and invest their time and effort in improving their academic performance, showing positive feelings toward the school, adapting to classroom rules, meeting the expectations of teaching staff, and accepting academic contexts and norms (Bryce et al., 2018; Mizel et al., 2016). Therefore, academic engagement could be understood as a construct promoting rejection of behavior that breaks rules, such as school absenteeism.

On the contrary, other studies have shown how adolescent aggressive behavior is related to negative attitudes toward authority and school, which leads to low academic engagement (Estévez et al., 2018), diminishing their academic performance, and increasing the probability that they will leave school (Bogg et al., 2016). It has been demonstrated that academic engagement is negatively related with disobedience of school rules and alcohol use (Roebroek & Koning, 2016).

Following the Theory of Conservation of Resources, this study was based on the assumption that exhaustion leads to coping strategies which predominantly involve withdrawal of attitudinal or behavioral resources to avoid their loss (Taris, 1999; Wright & Hobfoll, 2004). Thus, the inability of adolescents to confront academic demands would generate feelings of emotional exhaustion and depersonalization, and diminish personal realization. This loss of resources could then result in a continuous cascade of losses leading to negative effects, and distancing them from possible supporting resources which might otherwise be available. As suggested by Hobfoll et al. (2018), when one's resources are exhausted, the person enters an aggressive and even irrational defense mode to protect the self. With this increased distress and distancing attitudes contrary to following rules and authority are likely to emerge. Such aca-

demically exhausted youths develop attitudes favorable to rule-breaking. Gil-Monte and Peiró (1999), in a longitudinal study, showed that an attitude favorable to absenteeism appeared as a consequence of burnout, and not the other way around. This unfavorable, transgressive attitude could extend to the entire system of sociocultural norms which frame the context of adolescent development, not only academic. In this sense, cynicism is especially important, as this dimension of burnout leads to similar attitudes toward society and institutions (Salmela-Aro, 2017). This could also be because individuals, when faced with the feeling of loss, may fight the situation by reevaluating the value of the resources they are losing (Hobfoll, 1989). So, in a society that positively values educational growth and imposes rules to propitiate it, young people who cannot manage the stress of school failure could mitigate it by reducing the value placed on education and the rules imposed.

Furthermore, given the lack of resources, coping with academic stress would be approached with ineffective emotion-focused strategies alleviating distress, such as drinking (Shaver et al., 2013). In addition, drinking alcohol is transgressive behavior. More so, secondary students' intention of drinking alcohol is strongly influenced by attitudes and rules imposed by parents, and especially, by the community (Zhao et al., 2020). The model of being overwhelmed also shows that job stress does not remain isolated, but extends to the person's setting. This could result in negative coping such as drinking alcohol (Grunberg et al., 1999). However, this relationship is not linear, but would influence the individual's cognitions (Campos et al., 2016). Therefore, it is expected for high school students who show strong exhaustion and cynicism to drink more, based on their use of maladaptive coping strategies and an attitude favoring rule-breaking. On the contrary, adolescents who show strong engagement would reject such conduct or attitudes that could put their current resources at risk, in addition to showing effective ways of coping with stress, precisely because of this availability of resources (Salanova et al., 2010). Engagement influences behavior and attitudes, so the more engaged students feel, the more civic, conscientious and courteous their behavior will be (Rodríguez-Montalbán et al., 2014). That is, the presence of engagement suppresses attitudes and strategies that do not lead them to achievement of their goals (Zuluaga et al., 2012). We therefore understand that students who show high scores in academic engagement will obey rules and not drink, or drink less alcohol.

In view of all of the above, with the COR model as a theoretical basis, this study was conducted to provide an empirical test of the relationships proposed between student burnout, academic engagement, use of alcohol and adolescent attitudes toward authority.

Our research hypotheses were based on the theoretical evidence described above: (H1) School burnout is positively related to a favorable attitude toward rule-breaking, and higher with cynicism and emotional exhaustion; (H2) Academic engagement shows a positive relationship with a favorable student attitude toward authority; (H3) Engagement and school burnout are associated with drinking alcohol, so that the dimensions of burnout, especially cynicism and lack of efficacy, will affect the frequency of use, increasing it, and engagement will decrease it; (H4) In turn,

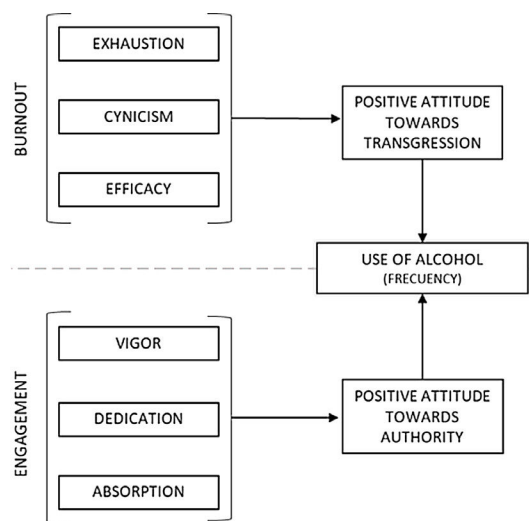


Figure 1 Hypothesized model.

this relationship will be influenced by the effect of school burnout and engagement variables on favorable attitudes contrary to rule-breaking. Figure 1.

Method

Participants

A total of 1,287 students aged 14 to 18, with a mean age of 15.11 ($SD = 0.91$) at several public high schools in Almería province (Spain) participated in this study. Of the original sample of 1317 students, 30 were discarded because of incongruent, random or incomplete answers. The sex distribution was 47.10% ($n = 606$) male and 52.90% ($n = 681$) female, with mean ages of 15.12 ($SD = 0.94$) and 15.10 ($SD = 0.88$), respectively. Of these students, 55% ($n = 707$) were in 3rd year and 45% ($n = 577$) in 4th year.

Instruments

An ad hoc questionnaire was prepared to collect sociodemographic data (age, sex, Grade) and questions related to use of alcohol. The participants were asked if they used alcohol ("Do you drink alcohol?"), answered yes/no, and frequency ("How often do you drink alcoholic beverages?"), with answer choices on a six-point scale from "Very few times in my life" to "Several times a day."

Maslach Burnout Inventory-Student Survey (MBI-SS; Schaufeli et al., 2002). This instrument is comprised of 15 items which evaluate academic exhaustion in adolescents. It has three dimensions: emotional exhaustion with five items (e.g., "I feel emotionally exhausted by my studies"), cynicism with four items (e.g., "I have become less enthusiastic about my studies) and academic efficacy with six items (e.g., "In my opinion, I am a good student"). It uses a seven-point Likert-type scale (from *Never/Hardly ever* to *Always/Every day*). Internal consistency for the Exhaustion factor had an omega coefficient of .82 and a GLB = .88, Cynicism had an $\omega = .82$ and GLB = .85, and Academic inefficacy $\omega = .79$ and GLB = .79.

Utrecht Work Engagement Scale for Students (UWES-S; Schaufeli & Bakker, 2003). The questionnaire is made up of 17 items which measure adolescent feelings of commitment in the school. It has six items evaluating vigor (e.g., "When I'm doing my work as a student, I feel bursting with energy"), five items measuring dedication (e.g., "I think my studies are meaningful") and six items that measure absorption in study (e.g., "I get carried away by my studies"), on a seven-point scale (from *Never* to *Always/Every day*). The scale reliability was found to have an omega of .81 and GLB = .85 for Vigor, $\omega = .83$ and GLB = .84 for Dedication, and $\omega = .84$ and GLB = .85 on Absorption.

Adolescent Attitudes toward Institutional Authority Scale (AAI-A; Cava et al., 2013). The instrument is comprised of nine items which evaluate the attitude of adolescents toward institutional authority and socially established norms. This instrument is made up of two dimensions: Positive attitudes toward authority with five items (i.e., "The teachers evaluate fairly"), and positive attitudes toward transgression with four items (i.e., "It is normal to break the law if it doesn't hurt anybody"). Answers are rated on a four-point Likert-type scale (1 = *do not agree*; 2 = *somewhat agree*, 3 = *quite agree*, 4 = *totally agree*). The omega coefficient for the Positive attitudes toward authority scale was .64 and the GLB = .66, and for the Positive attitudes toward transgression, the omega coefficient was .75 and the GLB = .79.

Procedure

Before collecting data, the principals at each school were contacted to arrange a meeting to inform them of the objectives of the study and guarantee confidential data processing. When the sessions had been scheduled, two members of the research team went to the schools to administer the questionnaires. The tests were given in the classroom normally assigned to each group in the presence of the corresponding teacher/counselor. At the beginning of the session, before going on to filling in the questionnaires, the students were given the appropriate instructions and asked if they had any questions. Then they were guaranteed the anonymity of their answers, and thus, respect for their privacy in statistical data treatment. The students filled in the tests anonymously and individually, in an estimated mean time of 25-30 minutes/session. In all cases, ethical standards of research were complied with in an informed consent sheet. The study was approved by the University of Almería Bioethics Committee (Ref: UALBIO2018/015).

Data analysis

First, to identify the relationship between the variables, a Pearson's bivariate correlation analysis was performed. To compare the alcohol user/non user groups related to the burnout and engagement dimensions, a Student's *t*-test for independent samples was done and the effect size was determined with Cohen's *d* (1988): < 0.50 small, 0.50-0.80 medium, and ≥ 0.80 large effect. In those cases where the differences had a *p*-value < .05 or were tendential, the Vovk-Sellke maximum *p*-ratio or maximum diagnosticity of a

two-sided *p*-value was computed (Sellke et al., 2001; Vovk, 1993).

Then two structural equation models were evaluated with IBM SPSS Amos software version 23.0 (Arbuckle, 2014), using the maximum likelihood method. Student burnout and academic engagement were taken as the predictors, in each case, of the frequency of alcohol use and positive attitudes toward transgression and toward authority as modulating variables, respectively. To evaluate goodness of fit of the two models, the following indicators were used: (a) the chi-square (χ^2)/degrees of freedom (χ^2/df), for absolute fit; (b) the comparative fit index (CFI) and the Tucker-Lewis Index (TLI), for comparative fit; and (c) other indices, such as the root mean squared error of approximation (RMSEA). Fit was considered acceptable when $\chi^2/df < 5$ (Bentler, 1989), CFI $\geq .95$, TLI $\geq .95$, and RMSEA < .08, or very close (Ruiz et al., 2010).

To examine the reliability of the instruments used for data collection, McDonald's Omega coefficient was estimated, following the proposal and guidelines of Ventura-León and Caycho (2017). The Greatest Lower Bound (GLB) was also estimated.

Results

Correlations and descriptive analyses

Table 1 shows the positive correlations between two of the burnout dimensions (exhaustion and cynicism) and frequency of alcohol use. The correlations of engagement with frequency of alcohol use were negative in all three dimensions (vigor, dedication and absorption), the last being the strongest. Finally, with regard to attitudes toward institutional authority, positive correlations were found for frequency of alcohol use with attitudes toward transgression and negative correlations with positive attitudes toward authority. The positive attitude toward aggression may also be seen to correlate positively with exhaustion and cynicism, while it correlates negatively with academic efficacy, vigor, dedication and absorption. Positive attitude toward authority showed positive correlations with the three dimensions of engagement and with academic efficacy. In this case, the relationships established with respect to exhaustion and cynicism were negative.

Table 2 presents the results of the comparison of means of the burnout dimensions between participants who said they drank alcohol and those who did not. The Student's *t*-test for independent samples found statistically significant differences in exhaustion and cynicism between the two groups ($p < .001$), where the group of alcohol users had higher mean scores than those who said they did not drink alcohol. In efficacy, the group of nonusers showed a slightly higher mean score ($p < .05$) than the group of users. The Vovk-Sellke maximum *p*-ratio: maximum diagnosticity of a two-sided *p*-value (Sellke et al., 2001; Vovk, 1993). For differences found in Efficacy, a $p = .04$ would lead to rejection of the null hypothesis, however, it is 2.76 times more likely under H_1 than under H_0 .

Table 3 shows that in the engagement dimensions, there were statistically significant differences ($p < .001$) in vigor and absorption, where those who said they drank alcohol had

Table 1 Pearson's correlation matrix.

Academic burnout		FAC	EXH	CYN	EFF
EXH	Pearson's r	.12**	—		
	Upper 95% CI	.19	—		
	Lower 95% CI	.04	—		
CYN	Pearson's r	.11**	.59**	—	
	Upper 95% CI	.19	.62	—	
	Lower 95% CI	.04	.55	—	
EFF	Pearson's r	-.01	-.12***	-.23***	—
	Upper 95% CI	.05	-.07	-.18	—
	Lower 95% CI	-.09	-.17	-.28	—
PAA	Pearson's r	-.12**	-.26***	-.27***	.21***
	Upper 95% CI	-.04	-.21	-.22	.26
	Lower 95% CI	-.19	-.31	-.32	.16
PAT	Pearson's r	.20***	.20***	.30***	-.08**
	Upper 95% CI	.27	.25	.35	-.02
	Lower 95% CI	.12	.15	.25	-.13
Academic Engagement		FAC	VIG	DED	ABS
VIG	Pearson's r	-.09*	—		
	Upper 95% CI	-.02	—		
	Lower 95% CI	-.17	—		
DED	Pearson's r	-.09*	.76***	—	
	Upper 95% CI	-.01	.78	—	
	Lower 95% CI	-.16	.74	—	
ABS	Pearson's r	-.10**	.86***	.77***	—
	Upper 95% CI	-.03	.88	.79	—
	Lower 95% CI	-.18	.85	.75	—
PAA	Pearson's r	-.12**	.29***	.31***	.27***
	Upper 95% CI	-.04	.34	.36	.32
	Lower 95% CI	-.19	.24	.26	.22
PAT	Pearson's r	.20**	-.13***	-.21***	-.13***
	Upper 95% CI	.27	-.08	-.15	-.07
	Lower 95% CI	.12	-.19	-.26	-.18

Note. EXH = Exhaustion, CYN = Cynicism, EFF = Efficacy, VIG = Vigor, DED = Dedication, ABS = Absorption, PAA = Positive attitude towards authority, PAT = Positive attitude towards transgression. * $p < .05$, ** $p < .01$, *** $p < .001$.

lower mean scores than those who did not. The Vovk-Sellke maximum p-ratio is shown for differences in Dedication, with a $p = .09$ (tentential), which would be 1.64 times more likely under H_1 than under H_0 .

Structural equation models

Figure 2 shows the model of hypothetical relationships of burnout, the positive attitude toward transgression and frequency of alcohol use. Fit indices for this model were satisfactory: $\chi^2/df = 4.40$, CFI = .958, TLI = .945, RMSEA = .051. Concerning the direct effects between variables, it may be observed that cynicism has a significant effect on positive attitude toward transgression, explaining 30% of the variance ($\beta = .30$, $p < .01$). Furthermore, the effect of the positive attitude toward transgression on the frequency of use was statistically significant ($\beta = .15$, $p < .001$).

Figure 3 presents the model of the hypothetical relationships of engagement, positive attitude towards authority and frequency of alcohol use. In this case, the indices

show adequate fit of the model: $\chi^2/df = 4.72$, CFI = .960, TLI = .947, RMSEA = .054. A significant direct effect of the dedication factor of engagement on positive attitude toward institutional authority may be observed, explaining 50% of the variance ($\beta = .50$, $p < .001$). Moreover, the effect of positive attitude toward authority on the frequency of use was also significant ($\beta = -.08$, $p < .01$), but in this case, negative.

Discussion

Student burnout generates negative feelings in adolescents associated with stress they are subjected to at school due to overload of activities and the strong demands of teachers and family (Schaufeli et al., 2002; Sonmark & Modin, 2017). As reflected in this study, exhaustion is related to increase in frequency of alcohol use, as also demonstrated in the study by Getachew et al. (2019), which found that use of alcohol derived from academic exhaustion leads to low academic performance, and therefore, development of risk behaviors (Fischer et al., 2016). Along this line, exhaustion has

Table 2 Academic burnout by alcohol use groups. Student's *t*-test and descriptive statistic plots.

	No			Yes			<i>t</i>	Mean Dif.	SE Dif.	95% CI		Cohen's <i>d</i>
	<i>n</i>	<i>M</i>	<i>SD</i>	<i>n</i>	<i>M</i>	<i>SD</i>				Lower	Upper	
EXH	624	13.66	6.40	663	15.41	5.75	-5.18***	-1.75	.33	-2.42	-1.09	-0.28
CYN	624	9.32	6.48	663	11.22	6.38	-5.29***	-1.90	.35	-2.60	-1.19	-0.29
EFF	624	14.78	5.09	663	14.20	5.25	2.03*	.58	.28	1.15	1.15	0.11

	No			Yes			<i>t</i>	Mean Dif.	SE Dif.	95% CI		Cohen's <i>d</i>
	<i>N</i>	<i>M</i>	<i>SD</i>	<i>N</i>	<i>M</i>	<i>SD</i>				Lower	Upper	
EXH	624	13.66	6.40	663	15.41	5.75	-5.18***	-1.75	.33	-2.42	-1.09	-.28
CYN	624	9.32	6.48	663	11.22	6.38	-5.29***	-1.90	.35	-2.60	-1.19	-.29
EFF	624	14.78	5.09	663	14.20	5.25	2.03*	.58	.28	1.15	1.15	.11

Note. EXH = Exhaustion, CYN = Cynicism, EFF = Efficacy. * *p* < .05, *** *p* < .001.

Table 3 Academic engagement by alcohol consumption groups. Student's *t*-test and descriptive statistic plots.

	No			Yes			<i>t</i>	Mean Dif.	SE Dif.	95% CI		Cohen's <i>d</i>
	<i>n</i>	<i>M</i>	<i>SD</i>	<i>n</i>	<i>M</i>	<i>SD</i>				Lower	Upper	
VIG	624	15.11	8.33	663	13.33	8.16	3.87***	1.78	.46	0.87	2.68	0.21
DED	624	17.46	7.23	663	16.79	7.17	1.66	.67	.40	-0.11	1.45	0.09
ABS	624	16.36	8.67	663	14.76	8.35	3.37***	1.60	.47	0.67	2.53	0.18

	No			Yes			<i>t</i>	Mean Dif.	SE Dif.	95% CI		Cohen's <i>d</i>
	<i>N</i>	<i>M</i>	<i>SD</i>	<i>N</i>	<i>M</i>	<i>SD</i>				Lower	Upper	
VIG	624	15.11	8.33	663	13.33	8.16	3.87***	1.78	.46	.87	2.68	.21
DED	624	17.46	7.23	663	16.79	7.17	1.66	.67	.40	-.11	1.45	.09
ABS	624	16.36	8.67	663	14.76	8.35	3.37***	1.60	.47	.67	2.53	.18

Note. VIG = Vigor, DED = Dedication, ABS = Absorption. *** *p* < .001.

been shown to be associated with positive attitudes toward transgression, and adolescents with high burnout levels may develop disruptive behaviors, ignoring classroom norms and even disobeying rules made by the teaching staff (Ortega-Barón et al., 2017). On the contrary, academic engagement is shown to be related negatively to frequency of alcohol use. This could be because adolescents who become

engrossed in their studies devote more time and effort to activities, and attribute more importance to schoolwork and improving their own academic performance to reach the academic goals they set or themselves (Lee et al., 2015). This construct also relates to positive attitudes toward authority. Adolescents with high academic engagement show respectful attitudes toward teachers and authority, adapt-

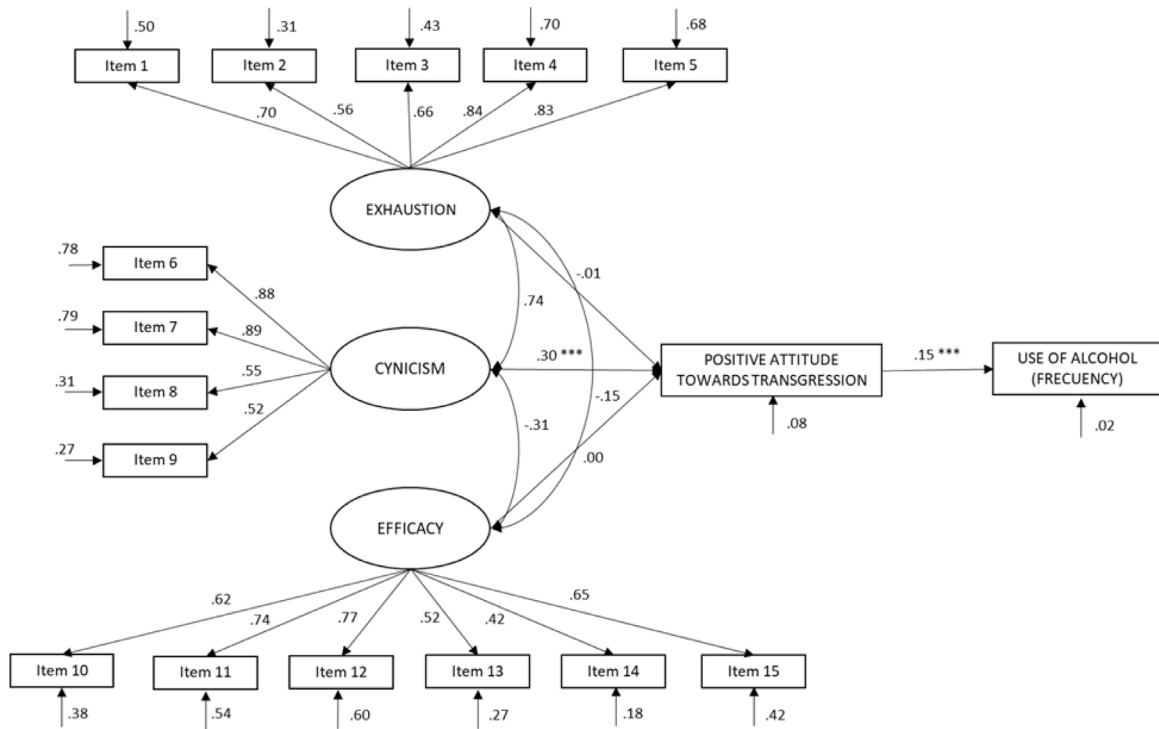


Figure 2 Structural equation model (Burnout). The coefficients of the structural model shown are standardized. Note. *** $p < .001$.

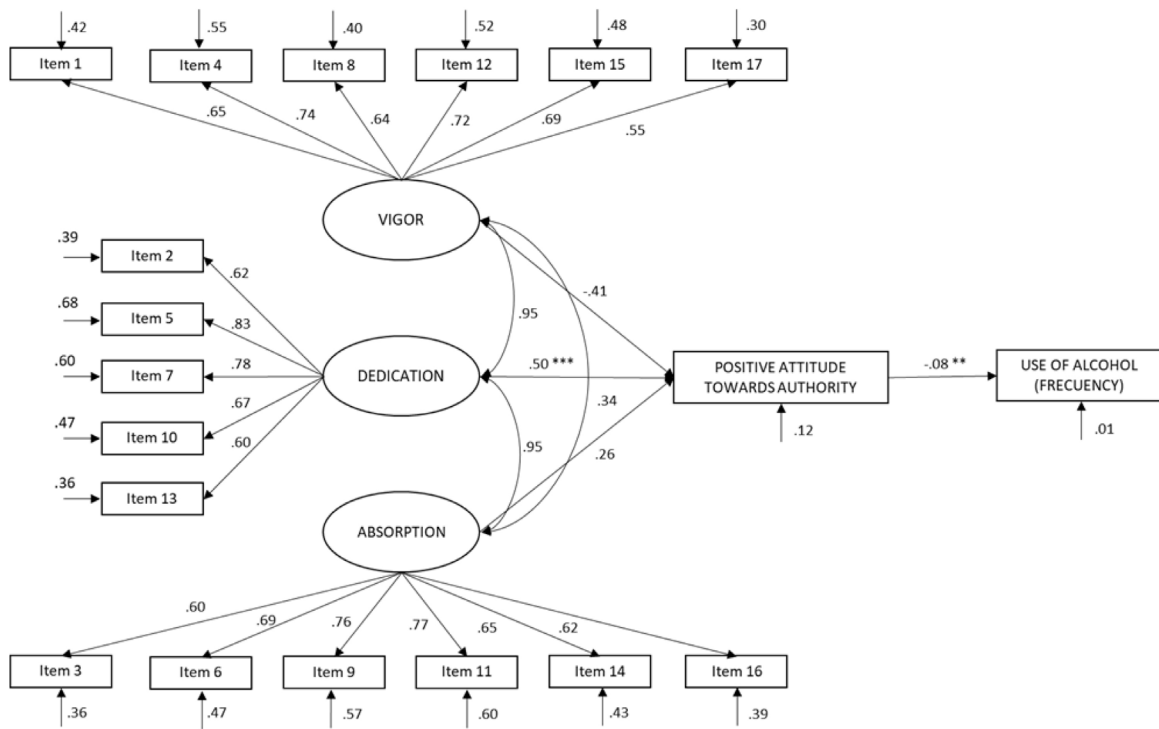


Figure 3 Structural equation model (Engagement). The coefficients in the structural model shown are standardized. Note. ** $p < .01$, *** $p < .001$.

ing to school rules (Bryce et al., 2018; Roebroek & Koning, 2016).

Moreover, significant differences were observed between exhaustion and cynicism and frequency of alcohol use. As shown in the studies by Fischer et al. (2016) and Oller-Perret and Walburg (2018), adolescents with high levels of stress, homework overload and exhaustion are more prone to increase use of alcohol because they use it as a dysfunctional coping strategy. Several factors are related to increase in drinking and academic burnout, especially strong competition among students, heavy school workload, and the many academic tests they have while they are of school age (Blumenthal et al., 2010; Muzafar et al., 2015; Vorster et al., 2019; White et al., 2016). However, high scores in Efficacy were observed in those students who did not drink alcohol (Bugbee et al., 2019). That is, academic efficacy is associated with less use of alcohol and even its absence. Concerning the relationship between academic engagement and drinking alcohol, higher scores were observed in vigor and absorption than students who drank alcohol.

Finally, the results of the structural equation model found a direct relationship between cynicism and positive attitudes toward transgression (Bakioğlu & Kiraz, 2019; Bang & Reio, 2017; Fischer et al., 2016). The attitudes toward authority are related to the social image that adolescents project in their surroundings, built up on reactions of their peer group, and therefore, students show negative attitudes toward authority, projecting an image of rebellion and power in the group. This type of behavior leads to drinking alcohol to please the peer group (Del Moral et al., 2019; McDonough et al., 2016). In addition, permissive attitudes toward disobedience of rules by parent and schools involves young people showing positive attitudes toward transgression, and therefore, increasing frequency of drinking alcohol (Obradors-Rial et al., 2020).

In academic engagement, a positive attitude toward authority was observed to be associated with high academic dedication, so they are immersed in their studies, investing their time and effort in improving their academic performance, reducing use of alcohol (Bryce et al., 2018; Mizel et al., 2016; Roebroek & Koning, 2016).

According to our starting position, the Theory of Conservation of Resources (Hobfoll & Shirom, 2001) is useful for understanding this relationship. This theory proposes spiraling gains and losses, such that resources help construct new resources, while their lack can impede the possibility of acquiring new resources (Moreno-Jiménez & Gálvez Herrer, 2013). We therefore understand from our results that a cynical attitude toward study promotes disdain and breaking rules, which in turn promotes maladaptive, transgressive strategies such as drinking alcohol. Meanwhile, on the contrary, academic engagement facilitates flourishing behaviors and attitudes that promote greater gains (Çam & Öğülmüş, 2019), such as compliance with rules which, in turn diminish the development of risk behaviors like drinking. In this sense, the engagement dedication factor showed a significant effect on a positive attitude toward authority, and finally impacted on less frequent drinking. Therefore, fully dedicated students make an effort in their schoolwork, which creates more resources in their activity as students (Çam & Öğülmüş, 2019). Finally, although attitudes and behaviors supporting norms and citizenship in

relation to burnout have been evaluated within a labor context (Rodríguez-Montalbán et al., 2014), this study provides data on the relationship between school burnout and attitudes toward authority, beyond school absenteeism (Bryce et al., 2018; Mizel et al., 2016), which has been little studied to date.

This study had some limitations which should be taken into consideration. In the first place, even though student burnout is associated with transgressive attitudes as a resource for coping with the academic stress to which they are subjected, it would of interest to relate this construct to other variables, such as social support, self-efficacy or the conscientiousness personality trait, since previous studies have suggested its possible involvement in how individuals cut off the loss of resources as posed by the COR theory, but its role on the variables analyzed here is unknown. In the second place, in spite of the multitude of articles dealing with burnout and engagement in the school, only a small number of studies relate student burnout with positive adolescent attitudes toward aggression, or academic engagement with positive attitudes toward authority.

These results could lead to future lines of research, such as widening the sample size, including other levels of education, which would enable access to different sectors of the academic population. It would be of further interest to include other variables such as social support, personality or self-efficacy of youths, to find out their impact on drinking and attitudes toward authority. Lastly, longitudinal studies are needed to be able to find out the changes that could occur in the measurements made, and analyze the dynamic nature of these constructs. Based on the results reported, an intervention strategy could be designed to reduce student burnout in adolescents and the frequency of their use of alcohol.

Conclusions

In general, it was observed that burnout and academic engagement significantly influence risk behaviors, specifically the frequency of use of alcohol. Attitudes toward rule-breaking and authority were shown to be influential variables in the frequency of use of alcohol that must be taken into consideration. In particular, a cynical attitude toward the value of study can derive in positioning contrary to rules and authority among adolescents, which promotes development of risk behaviors, such as drinking alcohol. However, dedication to study exerts a direct effect on a positive attitude toward norms, promoting less involvement of adolescents in illegal behaviors such as drinking. It is therefore indispensable to implement intervention programs for improving the wellbeing of adolescents, diminishing their exhaustion, and reducing stress from the academic overload to which they are exposed daily and the demands of family and teachers.

Based on these results, academic engagement can benefit involvement in risk behaviors such as use of alcohol, by promoting positive attitudes toward study. This construct is fundamental for keeping young people from developing negative behaviors. Therefore, programs encouraging student involvement in school activities should be designed to ensure satisfactory academic results, reduce academic stress and violent behavior.

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