

Bullying, basic psychological needs, responsibility and life satisfaction: connections and profiles in adolescents

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Título: Acoso escolar, necesidades psicológicas básicas, responsabilidad y satisfacción con la vida: relaciones y perfiles en adolescentes.

Resumen: El objetivo fue evaluar las interacciones entre el acoso escolar, las necesidades psicológicas básicas, la responsabilidad y la satisfacción con la vida de los adolescentes. 1785 estudiantes de Educación Secundaria y Bachillerato, con edades comprendidas entre los 12 y los 17 años de edad ($M = 14.44$, $DT = 1.50$), de 16 centros educativos de tres zonas de España: norte (Asturias), centro-norte (León) y centro-sur (Cuenca y Albacete), accedieron a participar. 590 contestaron cuestionarios referidos a la asignatura de Matemáticas, 596 a la de Lengua Castellana y Literatura y 599 a la de Educación Física. Para determinar los perfiles en función de las seis dimensiones de la dicotomía frustración-satisfacción de las necesidades psicológicas básicas se realizó un Análisis de Perfiles Latentes –LPA– utilizando el programa Mplus 7.11. Los resultados mostraron cinco perfiles de estudiantes: uno adaptativo (clase 3) con niveles altos de satisfacción de las necesidades psicológicas básicas y bajos de frustración de las mismas, además de los niveles más altos de satisfacción con la vida, responsabilidad personal y social y los más bajos de victimización y agresión, y otros cuatro perfiles más desadaptativos. Por lo tanto, la satisfacción de estas necesidades debe ser promovida desde la escuela para prevenir y/o mitigar problemas de acoso escolar.

Palabras clave: Acoso escolar. Secundaria. Necesidades psicológicas básicas. Violencia. Adolescentes.

Abstract: The goal was to assess the interactions between bullying and adolescents' basic psychological needs, responsibility and life satisfaction. 1785 students from secondary education (year eight, $n = 404$; year nine, $n = 390$; year 10, $n = 364$; year 11, $n = 376$), and Baccalaureate (year 12, $n = 251$), from 16 schools located in three different areas of Spain: north (Asturias), central-north (León), and central-south (Cuenca y Albacete) agreed to participate. 590 answered the questionnaire used referring to Math, 596 to Literature and 599 to Physical Education. Results showed five profiles: one adaptive (class three) with high levels of basic psychological needs satisfaction, low levels of basic needs frustration, and high levels of life satisfaction, personal and social responsibility, and the lowest levels of victimization and aggression, and four other less adaptive profiles. Therefore, the satisfaction of these needs must be promoted in the schools to prevent and/or mitigate bullying problems.

Keywords: Bullying. Secondary education. Basic psychological needs. Violence. Adolescents.

Introduction

Currently, violence is a major public health problem recognized by the World Health Organization (WHO) in 2002, increasingly extensive with a meaningful impact in society. WHO (2002, p.3) defined violence as:

The intentional use of physical force or power, threatened or actual, against oneself, another person, or against a group or community, that either results in or has a high likelihood of resulting in injury, death, psychological harm, development or deprivation

This institution divides violence into three main types: self-directed violence: related to suicidal behaviour; interpersonal: includes violence between family members, intimate partners and other individuals; and, finally, collective: which uses the violence as an instrument by people who identify themselves as members of a group for achieving economic, social or political purposes. Within interpersonal, school violence alludes to the violence happening in educational con-

texts and involving teachers, students, families or different educational agents (Castro-Pulido, 2011). More specifically, school violence includes bullying, one of the most important phenomena that the educational community faces (Bartolomé & Díaz, 2020; Menéndez et al., 2020).

Olweus (1983) defined bullying as a behaviour of physical and psychological persecution carried out by a student over another whom he selects as a repeated victim. Therefore, the great difference between violence and bullying is the scale: while violence can be an isolated act, bullying is characterized by its intentionality, persistence, and power imbalance (Graham, 2016; Menéndez & Fernández-Río, 2018). In recent years, and with the significant boom in Information and Communication Technologies, a new type of bullying has emerged: cyberbullying, consisting of bullying using electronic devices (Garaigordobil & Martínez-Valderrey, 2015).

Conversely, bullying has been analysed through different lenses, although one of the most accepted is the double profile of bullying/victimization. From this point of view, two profiles emerge: the bullies, the one who perpetrates continuous violent action; and the victim, who is repeatedly exposed to bullying actions due to an imbalance of forces (Harbin et al., 2019). Latest research identified 3.8% and 2.4% bullying prevalence in the case victims and bullies respectively (Díaz-Aguado et al., 2013). Moreover, others stud-

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(Article received: 10-02-2020; revised: 13-04-2020; accepted: 05-06-2020)

ies, such as Save the Children (2016), indicated that 9.3% of 21,487 high school students have received bullying recently, while González-Cabrera et al. (2017) reported that 9.3% of 25,582 high-school students have suffered a single bullying action frequently, and 2.4% have suffered two or more actions continuous and persistently.

The scientific community has analysed bullying, as well as all it entails, in a substantive way (Pastor-Gil & Blázquez, 2019). Studies have reported the importance of educational interventions focused on prosocial learning aspects (e.g., empathy or help) to prevent bullying (Menéndez & Fernández-Río, 2016). Silva et al. (2018) performed a meta-analysis on the effects of social skills programmes on bullying in adolescents with positive findings about the possibilities redirecting this phenomenon, although it is necessary to investigate other interventions in different situations, contexts and subjects involved in bullying.

On the other hand, the Self-Determination Theory (SDT; Deci & Ryan, 1985) is one of the most consistent frameworks analysing and studying the motivation in human behaviour, widely researched in different fields (e.g. work, clinical, educational or sports). Its purpose is the development of individuals' behaviours in a self-determined way (i.e. with the highest level of reflection and voluntariness (Ryan & Deci, 2002). SDT has increased its value boosted by six sub-theories that comprise it (Vansteenkiste & Ryan, 2020).

First, the Cognitive Assessment Theory aims to analyse how rewards affect people's intrinsic motivation. Second, the Organic Integration Theory details different ways of regulating behaviours of extrinsic nature, as well as the way in which contextual factors can affect this regulation. In this sense, a continuum of self-determination has been established from non-self-determined to self-determined behaviour, which includes different types of motivation: amotivation, extrinsic motivation (external regulation, introjected, identified and integrated), and intrinsic motivation. Third, the Theory of Causal Orientations analyse the basis of regulations, motivations and the degree of self-determination among three approaches: autonomous (high capacity for choice), controlled (high control about the environment or themselves) and impersonal (perceived incompetence to regulate behaviour). Fourth, the Content of Goals Theory focused on distinguishing extrinsic goals (e.g. fame, physical appearance or money) and intrinsic goals seeking the fulfilment of individuals' basic psychological needs. Fifth, the Motivation of Relationships Theory studied relationship as a primary need of any individual seeking relationships with peers. Sixth, the Basic Psychological Needs Theory is the subject of this study.

This sub-theory hypothesizes that people have three inherent needs affecting their motivational regulations and health (Ryan & Deci, 2002): competence, when an individual feels effective in a specific context; autonomy, a person have full control and decision over his/her behaviours from a deliberate and self-referenced point of view; and relationship, which refers to the feeling of belonging to a group. Thus,

their satisfaction, as Vallerand (2001) points out, is associated with high levels of self-determined motivation, which could influence decisive variables such as depression or anxiety (Moreno-Murcia & Martínez, 2006). However, Vansteenkiste and Ryan (2013) also highlighted the opposite term: frustration not only a low satisfaction of the needs could damage people' behaviours, but also their frustration can have negative outcomes, accelerating behavioural conditions.

There have been limited investigations analysing the satisfaction-frustration of basic psychological needs related to bullying. Young-Jones et al. (2015) evaluated the link between both variables in 130 high school students, concluding that bullying victims have less academic motivation. The basic psychological needs' satisfaction-frustration was investigated in relation with other significant variables such as passion for exercise (Alcaraz-Ibáñez et al., 2016) or motivation and school commitment (Cuevas et al., 2018).

On the other hand, responsibility implies a moral commitment for people with themselves and others (Menéndez & Fernández-Río, 2016). It is an important variable due to the increased presence of negative behaviours among children and adolescents (e.g. violence, bullying or absenteeism; Sánchez-Alcaraz et al., 2019). Hellison (2011) held that responsibility has many dimensions: respect to everyone's opinions and rights, support and leadership for social responsibility; and engagement, effort, and autonomy for personal responsibility. In this sense, Carbonero et al. (2015) examined 235 compulsory education students relating social and personal responsibility to academic performance. Menéndez and Fernández-Río (2017) analysed social responsibility, basic psychological needs, intrinsic motivation, and friendship goals in 402 high school students, concluding that the first three variables predicted positively friendship goals. They highlight the influence of creating contexts oriented to the autonomy, competence and relationship development, in order to promote social bonds among students as a relevant factor to prevent bullying (Menéndez & Fernández-Río, 2016). Likewise, Garaigordobil and Durán (2006) assessed the links between self-concept and self-esteem with emotional stability, sociability and responsibility in adolescents. The findings showed that responsibility correlated positively with self-esteem and self-concept, correlated in turn with happiness or lower levels of anxiety and depression.

Finally, quality of life is a widely investigated concept in different subjects: educational, work, sports and, above all, health (Mastrantonio & Coduras, 2020). The term's definition has been discussed over the years by many authors (Urzúa & Caqueo-Úrizar, 2012). Velarde and Ávila (2002) reviewed several definitions of quality of life, stressing its multidimensional character, which it includes objective and subjective components. Therefore, following Durán et al. (2017, p.91), quality of life:

depends on the individual and each social group perceptions and their thoughts about the state of well-being,

taking into account their access to some goods and services, as well as the exercise of their rights and full respect for their values.

This meaning agrees with the one from the WHO (1997), that define quality of life as an “individual’s perception of their position in life in the context of the culture and value systems in which they live and in relation to their goals, expectations, standards and concerns” (p. 1). Moreover, quality of life is consistently related to bullying. Chester et al. (2017) examined links between bullying and quality of life in 5335 high school students with significant and negative correlation between both. These results are in line with those reported by Haraldstad et al. (2019), who also found a negative correlation in 723 adolescents, highlighting that bullying and victimization profiles are negatively and significantly related, although the victims had the lowest profiles.

Based on the foregoing, the main purpose of the present research was to evaluate the interactions among bullying, basic psychological needs, responsibility and adolescents’ quality of life. The initial hypothesis is that, on the basis of the variables considered, several different profiles will be detected; at least one with high levels of basic psychological needs satisfaction (Young-Jones et al., 2015), responsibility (Sanchez-Alcaraz et al., 2019), quality of life (Haraldstad et al., 2019) and low levels of needs frustration, victimization and bullying. The first one is expected to be the largest and the second one the less numerous from the existing data (González-Cabrera et al., 2017).

Method

Participants

A total of 1785 students (50.3% males), from secondary education (year eight, $n = 404$, year nine, $n = 390$, year 10, $n = 364$, year 11, $n = 376$) and Baccalaureate (year 12, $n = 251$), with an age range of 12-17 years ($M = 14.44$, $SD = 1.5$) from 16 different school in three Spanish regions: north (Asturias), centre-north (León) and centre-south (Cuenca ad Albacete) agreed to participate. 590 answered the questionnaires referred to Mathematics, 596 to Spanish Language and Literature and 599 to Physical Education. Convenience sampling was used. Considering the universe of the study (2018-19 school year), for a 95% confidence interval and a 50% heterogeneity (worst conditions), the minimum sample size with a 5% error margin would be 384 individuals (it has been widely exceeded in this study). With the sample size used, an error margin of 2.3 has been assumed.

Procedure

In first place, permission from the researchers’ ethics committee was obtained. Later, the principals of several schools were contacted to ask for their participation. Then, the research team administrated the questionnaire to the participating students, in paper, 20 minutes approximately,

guaranteeing anonymity and with a signed written consent. 169 answers were eliminated due to different problems, and they were disregarded from the analyses.

Instruments

Basic psychological needs. The Spanish validated version of the Satisfaction and Frustration of the Basic Psychological Needs was used (NSFS; Longo et al., 2018). It includes six subscales that assess each need (autonomy, relatedness, competence), and within each one its satisfaction or frustration: autonomy satisfaction (i.e., “I feel that I’m given a lot of freedom in deciding how I do things”), relatedness satisfaction (i.e., “I feel the people I interact with really care about me”), competence satisfaction (i.e., “I feel that I am pretty good at what I do”), autonomy frustration (i.e., “I feel forced to follow directions regarding what to do”), relatedness frustration (i.e., “Sometimes, I feel rejected by others”), and competence frustration (i.e., “I doubts whether I am able to carry out my tasks properly”). Items were preceded by the stem: “In the (Math, Spanish Language, Physical Education) class...”. Response range varied between one (totally disagree) and seven (totally agree). Confirmatory factor analyses were conducted and results were very positive: Math: $S-B\chi^2(120) = 191.22$, $p < .001$; *CFI = 0.99; *RMSEA (90% CI) = 0.032 (0.023-0.040); SRMR = 0.03; Spanish Language: $S-B\chi^2(120) = 191.88$, $p < .001$; *CFI = 0.99; *RMSEA (90% CI) = 0.032 (0.023-0.040); SRMR = 0.03; Physical Education: $S-B\chi^2(120) = 189.94$, $p < .001$; *CFI = 0.99; *RMSEA (90% CI) = 0.031 (0.022-0.039), SRMR = 0.03. Finally, reliability estimates for the different subscales in the present study were (satisfaction, frustration): Math: .93, .86, .91, .89, .89, .88, Spanish Language: .91, .88, .87, .86, .90, .86 and Physical Education: .90, .88, .91, .86, .90, .86.

School bullying. The Spanish validated version (Ortega et al., 2016) of the *European Bullying Intervention Project Questionnaire* (Brighi et al., 2012) was used. It includes 14 items: seven linked to victimization (i.e., “Someone has hit me, kicked me or pushed me”) and seven to aggression (i.e., “I have verbally abused someone”). The questionnaire began with the stem: “In the (Math, Spanish Language, Physical Education) class...”. Response range varied between one (totally disagree) and five (totally agree). Confirmatory factor analyses were conducted and results were very positive: Math: $S-B\chi^2(76) = 86.32$, $p < .001$; *CFI = 0.93; *RMSEA (90% CI) = 0.061 (0.053-0.094); SRMR = 0.05; Spanish Language: $S-B\chi^2(120) = 94.76$, $p < .001$; *CFI = 0.94; *RMSEA (90% CI) = 0.049 (0.044-0.086); SRMR = 0.065; Physical Education: $S-B\chi^2(120) = 101.34$, $p < .001$; *CFI = 0.95; *RMSEA (90% CI) = 0.041 (0.039-0.078), SRMR = 0.04. Finally, Cronbach’s alphas were (victimization, aggression): Math: .79, .83, Spanish Language: .83, .84, and Physical Education: .79, .82.

Responsibility. The Spanish validated version (Escartí et al., 2011) of the *Personal and Social Responsibility Questionnaire* (PSRQ; Li et al., 2008) was used. It includes 14 items

grouped in two factors: social responsibility (i.e., “I respect others”) and personal responsibility (i.e., “I strive, even if I don’t like the task”). Participants responded in a 6-point Likert scale from one (totally disagree) to six (totally agree). The questionnaire began with the stem: “In the (Math, Spanish Language, Physical Education) class...”. In the present study items six, seven, 13 and 14 were disregarded to make a shorter version of the questionnaire. To assess its suitability, confirmatory factor analyses were conducted and results were very positive: Math: S-B χ^2 (19) = 53.72, $p < .001$; *CFI = .97; *RMSEA (90% CI) = 0.056 (0.000-0.073), SRMR = 0.04; Spanish Language: S-B χ^2 (19) = 48.29, $p < .001$; *CFI = .96; *RMSEA (90% CI) = 0.058 (0.000-0.079), SRMR = 0.04; Physical Education: S-B χ^2 (19) = 64.28, $p < .001$; *CFI = .98; *RMSEA (90% CI) = 0.051 (0.000-0.063), SRMR = 0.03. Finally, Cronbach’s alphas were (personal, social): Math: .86, .90, Spanish Language: .87, .89, and Physical Education: .84, .87.

Life satisfaction. The Spanish validated version (Atienza et al., 2000) of the *Satisfaction with Life Scale* (SWLS; Diener et al., 1985) was used. It includes five items (i.e., “In most respects, my life is the way I want it”). Participants responded in a 5-point Likert scale from one (totally disagree) to five (totally agree). Confirmatory factor analyses were conducted and results were very positive: S-B χ^2 (5) = 5.722, $p = .334$; *CFI = 1.00; *RMSEA (90% CI) = 0.016 (0.000-0.061), SRMR = 0.01; Spanish Language: S-B χ^2 (5) = 6.64, $p = .250$; *CFI = 1.00; *RMSEA (90% CI) = 0.023 (0.000-0.065), SRMR = 0.0; Physical Education: S-B χ^2 (5) = 8.70, $p = n.121$; *CFI = 1.00; *RMSEA (90% CI) = 0.035 (0.000-0.073), SRMR = 0.02. Finally, Cronbach’s alphas were (personal, social): Math: .86, Spanish Language: .85, and Physical Education: .84.

Data analyses

To determine participants’ profiles regarding the six dimensions of the frustration-satisfaction dichotomy of the basic psychological needs in adolescents, a Latent Profile Analysis –LPA– was conducted (Lanza et al., 2003) using Mplus 7.11 (Muthén & Muthén, 2012), and adding to the target model consecutive latent classes. The optimal number was determined using the Lo–Mendell–Rubin Adjusted Likelihood Ratio Test (LMRT; Lo et al., 2001), the Akaike Information Criteria (AIC), the Schwarz Bayesian Information Criteria (BIC), the adjusted BIC to the sample size (SSA-BIC) and the entropy score. To assess the true discriminatory power of the latent class analyses a MANOVA was conducted with the six dimensions of the frustration-satisfaction dichotomy of the basic psychological needs as dependent variables and the latent classes as independent variables. A MANCOVA using personal and social responsibility, victimization, aggression and life satisfaction as dependent variables and the latent classes as independent variables. Gender, grade and subject were introduced as covariables. Univariate

analyses were also conducted to determine the differences among variables. Finally, Tuckey *post hoc* test was used.

Results

Latent profiles

Several latent profile models were adjusted to the data (models from two to six classes). The model fit was stopped at six classes, because a non-significant LMRT was obtained (LMRT = 252.47; $p > .05$). The LMRT also indicated that the five-class model provides a better fit than the four-class one (LMRT = 321.54 $p < .001$; AICM4 > AICM5; BICM4 > BICM5; SSA-BICM4 > SSA-BICM5). The five-class model does not have a class with a sample size smaller than 1% and has a larger entropy than the four-class one (entropy = .876). Table 1 shows each class and the number of participants in each one, both global (n) and relative (%). The majority were included in class 3 (60.1%). The accuracy of this distribution is shown diagonally with three scores above 94% and two over 83%.

Table 1. Latent classes and participants on each class (global = n and relative = %).

	1	2	3	4	5	N
Class 1	.837	.047	.115	.001	.000	187
Class 2	.045	.862	.072	.021	.000	282
Class 3	.033	.025	.942	.000	.000	1073
Class 4	.000	.040	.000	.947	.013	186
Class 5	.000	.000	.000	.026	.974	57

Table 2 shows direct and standardized scores of the five latent classes. Statistically significant differences, large in magnitude, were found among the five classes in the six variables that integrate the profiles: autonomy satisfaction (AUS) = $F(4,1780) = 65.856$, $p < .001$, $\eta_p^2 = 0.129$; relatedness satisfaction (RES) = $F(4,1780) = 273.691$; $p < .001$; $\eta_p^2 = 0.381$; competence satisfaction (COS) = $F(4,1780) = 178.93$; $p < .001$; $\eta_p^2 = 0.287$; autonomy frustration (AUF) = $F(4,1780) = 51.895$; $p < .001$; $\eta_p^2 = 0.104$; relatedness frustration (REF) = $F(4,1780) = 4042.005$; $p < .001$; $\eta_p^2 = 0.901$; competence frustration (COF) = $F(4,1780) = 368.50$; $p < .001$; $\eta_p^2 = 0.453$.

Figure 1 shows the graphical representation of those profiles, using the standardized measures. The only one that showed an adaptive profile, with high levels of satisfaction and low levels of frustration of the basic psychological needs, was class 3. It also showed a balanced profile in terms of gender, grade and subject. The others, with higher or lower scores, showed maladaptive profiles. The worst one was class 5, which showed high scores in the frustration of the three basic needs and the lowest on relatedness satisfaction. It included a balanced number of males and females, higher number of students in grades nine and 10 and in Maths and lower in Physical Education. Class 4 also showed higher levels, although smaller, in relatedness and competence frustration and low in relatedness and competence satisfaction. Class 2 showed lower scores in the three basic needs satis-

faction and high in frustration. Finally, class 1 showed a low- edness satisfaction and frustration, and high in autonomy frustration.

Table 2. Descriptive statistics of the five profiles and the six dimensions of the frustration-satisfaction dichotomy of the basic psychological needs.

	Class 1 (n = 187)		Class 2 (n = 282)		Class 3 (n = 1073)		Class 4 (n = 186)		Class 5 (n = 57)		TOTAL	
	M (s.d.)	SD	M (s.d.)	SD	M (s.d.)	SD	M (s.d.)	SD	M (s.d.)	SD	M	SD
AUS	3.30 (-.82)	1.51	4.36 (-.17)	1.47	5.05 (.25)	1.52	4.30 (-.20)	1.48	3.71 (-.57)	1.71	4.64	62
RES	5.45 (-.15)	1.22	4.96 (-.53)	1.12	6.19 (.44)	.75	4.26 (-1.09)	1.33	3.53 (-1.67)	1.76	5.63	25
COS	3.00 (-1.29)	1.19	4.63 (-.09)	1.13	5.25 (.36)	1.04	4.20 (-.42)	1.44	3.87 (-.66)	1.68	4.76	35
AUF	4.25 (.59)	1.53	3.59 (.17)	1.34	2.96 (-.24)	1.48	3.81 (.31)	1.46	4.53 (.77)	1.60	3.33	55
REF	1.43 (-.37)	.49	2.47 (.48)	.41	1.21 (-.54)	.30	4.04 (1.76)	.51	5.94 (3.30)	.61	1.88	22
COF	4.30 (1.33)	1.35	2.54 (.07)	1.03	1.80 (-.47)	.81	3.63 (.85)	1.41	4.32 (1.35)	1.62	2.45	38
Gender												
Males n (%)	65 (34.8%)		151 (53.5%)		565 (52.7%)		89 (47.8%)		28 (49.1%)		898 (50.3%)	
Females n (%)	122 (65.2%)		131 (45.2%)		508 (47.3%)		97 (52.2%)		29 (50.9%)		887 (49.7%)	
Grade												
8	37 (19.8%)		66 (23.4%)		243 (22.6%)		46 (24.7%)		12 (21.1%)		404 (22.6%)	
9	36 (19.3%)		56 (19.9%)		234 (21.8%)		47 (25.3%)		17 (29.8%)		390 (21.8%)	
10	36 (19.3%)		71 (25.2%)		208 (19.4%)		34 (18.3%)		15 (26.3%)		364 (20.4%)	
11	36 (19.3%)		55 (19.5%)		234 (21.8%)		44 (23.7%)		7 (12.3%)		376 (21.1%)	
12	42 (22.5%)		34 (12.1%)		154 (14.4%)		15 (8.1%)		6 (10.5%)		251 (14.1%)	
Subject												
Math	94 (50.3%)		90 (31.9%)		326 (30.4%)		58 (31.2%)		22 (38.6%)		590 (33.1%)	
Spanish Language	41 (21.9%)		92 (32.6%)		366 (34.1%)		76 (40.9%)		21 (36.8%)		596 (33.4%)	
Physical Education	52 (27.3%)		100 (35.3%)		381 (35.5%)		52 (28.0%)		14 (24.6%)		599 (33.6%)	

Note. AUS = Autonomy Satisfaction; RES = Relatedness Satisfaction; COS = Competence Satisfaction; AUF = Autonomy Frustration; REF = Relatedness Frustration; COF = Competence Frustration.

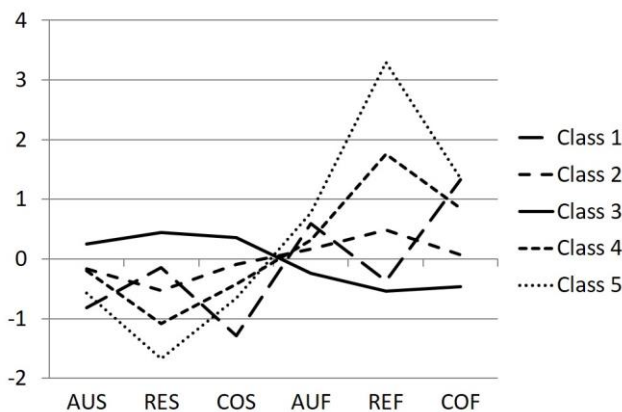


Figure 1. Graphical representation of the five latent class profiles.

Note. AUS = Autonomy Satisfaction; RES = Relatedness Satisfaction; COS = Competence Satisfaction; AUF = Autonomy Frustration; REF = Relatedness Frustration; COF = Competence Frustration.

Multivariate analyses

Regarding the differences in the profiles detected, controlling for gender, grade and school subject, results from the MANCOVA showed that there were statistically significant differences: λ de Wilks = .693, $F(20, 5430) = 31.69, p < .001, \eta_p^2 = 0.087$. The effects of the three covariables was also significant: gender: $F(5,1637) = 7.858, p < .001, \eta_p^2 = 0.023$; grade: $F(20, 5430) = 5.924, p < .001, \eta_p^2 = 0.018$ and

subject: $F(10, 3274) = 3.023, p = .001, \eta_p^2 = 0.007$. Significant differences were also observed in the subject*gender interaction: $F(20,5430) = 2.207, p = .001, \eta_p^2 = 0.007$, and the subject*grade interaction: $F(20,5430) = 2.426, p < .001, \eta_p^2 = 0.023$. Inter-individual tests showed statistically significant differences in all variables regarding class profile: life satisfaction: $F(1,1784) = 94.145, p < .001, \eta_p^2 = 0.187$, Victimization: $F(1,1784) = 87.398, p < .001, \eta_p^2 = 0.176$, Aggression: $F(1,1784) = 17.742, p < .001, \eta_p^2 = 0.041$, personal responsibility: $F(1,1784) = 40.992, p < .001, \eta_p^2 = 0.091$ y social responsibility: $F(1,1784) = 35.484, p < .001, \eta_p^2 = 0.080$. Post-hoc testing showed, again, that class 3 was the most adaptive (Table 3). It showed statistically significant differences in all variables assessed with all the other classes, showing the highest levels in live satisfaction, personal and social responsibility, and the lowest in victimization and aggression. The most maladaptive profile was, again, class 5, which showed the highest levels of victimization and aggression, the lowest in life satisfaction and low in personal and social responsibility. Followed by class 5, which showed low levels in life satisfaction and high in victimization and aggression, and similar to class 5 in responsibility. Class 2 also showed a maladaptive profile, but lower than both class 5 and 4. Finally, class 1 showed a profile less maladaptive with intermediate levels of victimization and aggression and low levels of responsibility and life satisfaction (Figure 2).

Table 3. Multivariate analyses.

	Class 1		Class 2		Class 3		Class 4		Class 5	
	<i>M</i> (<i>SD</i>) ^a	<i>SD</i>	<i>M</i> (<i>SD</i>) ^b	<i>SD</i>	<i>M</i> (<i>SD</i>) ^c	<i>SD</i>	<i>M</i> (<i>SD</i>) ^d	<i>SD</i>	<i>M</i>	<i>SD</i>
Life Satisfaction	3.42 (-.58) ^a	.92	3.64 (-.31) ^b	.74	4.20 (.36) ^c	.64	3.33 (-.68) ^a	.96	3.05 (-1.01) ^d	1.07
Victimization	1.44 (.09) ^a	.44	1.52 (.28) ^b	.45	1.25 (-.31) ^c	.30	1.79 (.86) ^d	.61	2.05 (1.41) ^e	.78
Aggression	1.33 (.09) ^a	.38	1.36 (.16) ^a	.44	1.23 (-.16) ^b	.32	1.45 (.39) ^c	.54	1.56 (.67) ^d	.70
Personal Responsibility	4.36 (-.56) ^a	1.12	4.72 (-.18) ^b	.87	5.10 (.22) ^c	.81	4.55 (-.36) ^d	1.08	4.62 (-.29) ^{abd}	1.05
Social Responsibility	4.94 (-.30) ^a	.88	4.94 (-.29) ^a	.76	5.35 (.24) ^b	.60	4.77 (-.52) ^c	.91	4.77 (-.52) ^c	1.13

Note: Different superscripts in the same row indicate statistically significant differences at $p < .05$.

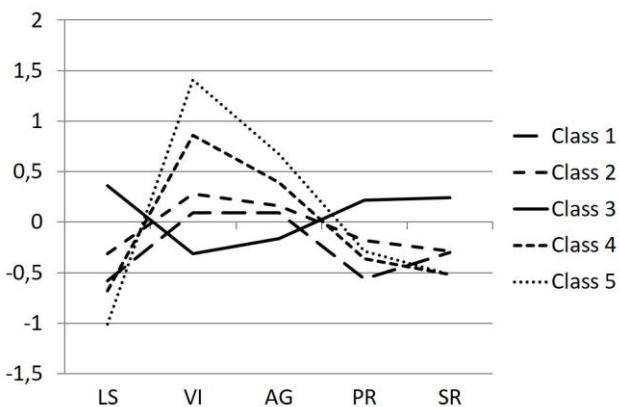


Figure 2. Graphical representation of the five variables assessed in the five latent class profiles.

Note: LS = Life Satisfaction; VI = Victimization; AG = Aggression; PR = Personal Responsibility; SR = Social Responsibility.

Discussion

The main goal of this research was to assess the connections between bullying, basic psychological needs, responsibility and life satisfaction in adolescents. Results showed five students' profiles: one very adaptive (class 3) and other four very maladaptive.

Class 3 was characterized by having high levels of basic psychological needs' satisfaction (SBPS) and low levels of frustration (FBPN), besides high levels of life satisfaction, personal and social responsibility and the lowest levels of victimization and aggression. Therefore, class 3 was the only profile that could be considered fully adaptive, and, fortunately, with the largest number of students, with a total of 1073 out of 1785 participants. Results found in this class connect clearly with previous research. As regards to relatedness, Lam y Law (2015) point out that teacher perceived support had significant effects on reducing the chances of being both victim and bully. This reflects that an adequate satisfaction of this need could be considered a bullying protect factor. In this sense, the last review of the scientific literature has reported that students who are not involved in the bullying phenomena and has low levels of victimization and aggression scored high on social skills (Antoniadou et al., 2019). It makes sense since these students had good social skills, they were capable of maintaining good relationships with their mates, fostering membership in one or more peer groups. Membership in group of friends, that is, friendship, is a key element that helps reduce bullying behaviour, espe-

cially victimization (Barcaccia et al., 2018). On the other hand, maladaptive classes, especially class 5, reflected high relatedness frustration. Previous studies have showed that this variable was linked to feelings of social exclusion or isolation, two variables that are connected with both bully and victim profiles (Machinbarrena et al., 2019). Therefore, it seems obvious that an adolescent who has high levels of frustration of this variable, also scores high in aggression and victimization variables.

As regards with competence, individuals who had this variable satisfied, showed good academic performance (Badri et al., 2014). This is of great importance, because other studies, as the one reported by Cook et al. (2010) has showed that academic performance is a negative predictor of victimization. That is, those who perform well academically are less likely to be victims. Thus, it makes sense that those students who consider that they can face any task in any subject with confidence and competence, has high self-esteem or self-efficacy, variables that significantly influence bullying (Tsaousis, 2016). On the contrary, other studies has reported that both bullies, and especially victims, are characterised by having low academic performance (Espelage et al., 2013). In seems consistent that high levels of competence frustration, reflected in this case by maladaptive classes, had negative effects on bullying. If a student do not perceive that he can execute actions competently, he is more likely to be seen by bullies as a target, since literature has reported that individuals with a greater tendency to suffer bullying are vulnerable groups such as immigrants or students with special educational needs, who tend to have a low competence perception and poor academic performance (Díaz-Aguado et al., 2013). Therefore, knowledge but, especially, the way in which a student perceive that he can use that knowledge in an effective way to solve problems, in might be a bullying protective factor, which reinforces the idea of the importance of academic and competence performance in classrooms.

Regarding autonomy, class 3 includes students with high scores in autonomy satisfaction and low in victimization and aggression. In this sense, authors like Caurcel and Almeida (2008) pointed out that those students who feel autonomous have greater assertiveness, the reason why they confront conflicts in a more positive way, avoiding victimization behaviour. But it is not only reduced in the victims, but also the satisfaction of this need has a decisive influence on aggression behaviour, in line with the work by Fousiani et al. (2016), where aggressive conducts were reduced in *cyberbullying* situations. This could be explained by the fact that the

most autonomous students are in turn students with great social responsibility, which makes them respect their peers, teachers, etc., and avoiding aggressive behaviours (Menéndez and Fernández-Río, 2017). Furthermore, these authors also affirmed that those who score high in autonomy also tend to do so in friendship-approach. Students in class 3, with high levels of autonomy satisfaction, may have a greater tendency and interest in establishing friendly relationships with their peers, thus favouring social relationships, comradeship, etc. and, subsequently, avoiding both aggressive and victimized behaviours. On the other hand, maladaptive profiles reported low levels of satisfaction of this need, something that agree with previous studies, since victims tend to belong to vulnerable groups like special education needs students, who are characterized for being little autonomous (Díaz-Aguado et al., 2013).

Regarding personal and social responsibility, class 3 students, with high levels of basic psychological needs' satisfaction, have also high levels of responsibility. Personal responsibility behaviours directly affect aspects related to effort, participation or goal setting, variables that are closely related to these needs, especially competence and autonomy (Menéndez and Fernández-Río, 2017). Competence is also another need closely related to perceived effort, as reported by authors such as Leptokaridou, Vlachopoulos, and Papaioannou (2015). That is, students who think they are competent have a greater tendency to consider that being or not effective when carrying out a task depends mainly on their own effort and not on external sources. On the other hand, class 3 also reported high levels of social responsibility, something that connects especially with the need for relationships. It would not be possible for an individual to perceive that they belong to a group of friends or that they have close relationships with their peers if they were not able to respect them or help their peers when they need it. He/she had low levels of social responsibility. Maladaptive classes reported, on the opposite side, low levels of these two variables, something that connects with the previous literature, since low levels of respect or effort towards learning are correlated with behaviours of aggression and victimization (Graham, 2016). As previously mentioned, bully/victim students have low academic performance, linked to little personal responsibility (Badri et al., 2014).

As for life satisfaction, the most adaptive class (3) had the highest scores. These results clearly agree with the SDT, since, as the authors of this theory affirm, the satisfaction of the three basic psychological needs is the source of the individuals' happiness (Ryan y Deci, 2002). In this sense, works

such as Guo's (2018), with a sample of 418 adolescents, showed that the satisfaction of the three needs was significantly correlated with life satisfaction. For his part, maladaptive profiles were all characterized by negative values in life satisfaction. Previous studies have reported that both individuals who are victims of bullying and the aggressors themselves have a greater tendency to have lower quality of life (Zych et al., 2019). This could be explained by the low self-esteem that is usually associated, belonging to unstructured families, or the circumstance of bullying (especially for victims), which makes evident that they cannot have feelings of life satisfaction as they are constantly suffering complex situations that even lead to suicidal thoughts (Chester et al., 2017).

In conclusion, those adolescents who had profiles with high levels of satisfaction of the three basic psychological needs, competence, autonomy and relatedness, and low levels of frustration of them, also had high levels of life satisfaction, personal and social responsibility, and low of victimization and aggression. Therefore, the satisfaction of these needs must be promoted in the schools to prevent and/or fight school bullying.

As limitations of the study, it should be noted that only four regions (three autonomous communities) participated in the present study. It would have been important to collect information from other regions in order to have a more representative sample from the whole country. Another limitation of the study was that the participating schools included students of medium socio-economic level. It would have been necessary to incorporate students from low and high socio-economic levels. Finally, the sampling was intentional, not probabilistic. A probabilistic sampling (e.g. random) could have provided different data. Future lines of research should be directed to continue studying the phenomenon of bullying from different perspectives to find out its relationship with other variables in the possible victims (eg, anxiety, depression, assertiveness, etc.), in bullies (eg, aggressiveness, disruptive behaviours, conflict resolution) or in the context (eg, school, families, peers) that could be related to their development. Likewise, other lines of research should be oriented towards proposing / developing intervention programs based on active and student-centred methodologies such as cooperative learning or personal and social responsibility pedagogical, or the development of self-regulation, which have been shown as adequate to develop competencies in students that prevent or alleviate bullying (Garaigordobil, & Martínez-Valderrey, 2015; Hortigüela et al., 2019; Menéndez & Fernández-Río, 2016).

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