

ANALYSIS OF CORRELATIONAL FACTORS OF SCHOOL DROPOUT INTENTION IN AN ITALIAN UPPER SECONDARY SCHOOL

ANALISI DEI FATTORI CORRELAZIONALI DELL'INTENZIONE DI ABBANDONARE GLI STUDI IN UNA SCUOLA SECONDARIA DI SECONDO GRADO



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ABSTRACT

This paper examines the correlations between school burnout and school well-being in relation to drop out intention. The study was conducted in an upper secondary school in Foggia, Italy. The results, as hypothesized, show positive correlations between intention to drop out intention and school burnout, while negative correlations between drop out intention and school well-being.

Nel presente articolo vengono esaminate le correlazioni del burnout scolastico e del benessere scolastico in relazione all'intenzione di lasciare gli studi. Lo studio è stato condotto in una scuola secondaria superiore di Foggia, Italia. I risultati, come ipotizzato, mostrano correlazioni positive tra l'intenzione di lasciare gli studi e il burnout scolastico, e correlazioni negative tra l'intenzione di lasciare gli studi e il benessere scolastico.

KEYWORDS

School dropout; School well-being; School Burnout; Secondary school
Dispersione scolastica; Benessere scolastico; Burnout scolastico, scuola secondaria.

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Introduction¹

School dropout can generally be defined as leaving compulsory education without having obtained the minimum required credentials (De Witte et al., 2013). It is a problematic phenomenon of modern societies, as it is a process that often shows correlations with phenomena such as delinquency and unemployment, as well as substance use (Lazzeri et al., 2020; Heradstveit et al., 2024). The topic of school dropout is also strongly related to adolescent well-being, as a major concern worldwide (Parviainen et al., 2020). Not by chance, the relation between school drop out and mental health is also widely discussed (Eicher et al., 2014; Orpinas et al., 2015; Hjorth et al., 2016; Andersen et al., 2021; Lazzeri, 2022).

A growing literature is discussing the drop out as a processual phenomenon where the actual drop out is only the final step of a complex period of diminished school engagement (Samuel and Burger, 2020).

The systematic study of this phenomenon is relatively recent, since in the past it was thought that it could be configured as an immutable dynamic, almost as if it were a natural process, due to demographic factors, ethnicity and parental upbringing.

In contemporary research, there has, however, been a realization of the extreme complexity of the phenomenon, both in terms of its clear definition and, more importantly, in line with the different nuances that this dynamic acquires within schools and in relation to individual experience. Institutional factors, such as the composition of classes and the psychological and learning profile of students, should be studied in their complex interactions. For these and other reasons, research has begun to assess drop out according to different factors, where “school related factors” are only one of the aspects considered. In this debate, we also find “family related factors,” which inevitably involve social class or socioeconomic status, about which there is still much debate (Samuel and Burger, 2020). The most explored and complex to understand dimensions, however, as predictive factors, we find them in the psychological dimensions.

Before going into this, it is important to note that school drop out should be distinguished into various forms. Indeed, there are distinctions between the so-called temporary or permanent drop out, as well as the use of night schools or comprehensive institutions (Dupere et al., 2013) which would open up a further nuance of school dynamics to be investigated.

¹ The present work is the joint work of the authors; however, for the purposes of attribution of the individual parts, it is subdivided as follows: Davide Perrotta §§ 1,2,3,4; Stefania Morsanuto Introduction, §§ 4 and Conclusions; Angelo Basta data collection; Anna Dipace is Supervisor of research.

Defining indicators of dropout is not easy. Many studies resort to statistics provided by the Ministry of Education, investigating predictor variables with math and language tests, as well as dropout and credit accumulation. These studies show significant data but remain outside the real psychological and pedagogical issues that the student or teachers experience within schools.

In addition, the intention to drop out of school is also a very relevant variable in the research, from whose analysis we cannot exempt ourselves (Vasalampi et al., 2018, Marôco et al., 2020; Liinamaa et al., 2022).

One of the most important innovations in recent international studies is the introduction of “dropout intention”, which becomes a key variable in the search for the causes and prevention of drop out. While actual dropout, as in the case of definitive dropout is measurable through objective variables, dropout intention is measured with individual items. In other words, talking about “intention” enables us to introduce a psychological rather than sociological fact. Dropout intention is therefore examined through the use of psychometric instruments. Interestingly, the literature suggests the possibility of measuring this construct through individual items. Despite the apparent simplicity of these methods, these items have shown a strong correlation between several of these instruments, whereas Cronbach’s α shows an inter-item correlation of .79 (Vasalampi et al., 2018; Anttila et al., 2023). The significant correlations studied and found with other constructs through this method are numerous. We briefly present a list and then investigate these dimensions in the next sections in more detail: number of negative events measured with dichotomous responses; perceived self-efficacy; and perceived social support. As might be expected, while negative events correlate positively with dropout intention, factors such as self-efficacy and perceived support correlate negatively, being able to be defined as protective factors (De Witte et al., 2013).

In this study we are mostly interested in school burnout and school well-being, especially in relation to drop out intention.

At the best of our knowledge, there is no perfect correspondence between the Italian QBS 8-18 and another measurement of School well-being in international studies. Other dimensions cover a similar construct (Kalan and Dağlı, 2022), but it is not easy to claim a perfect correspondence. However, many scales are shared by distinct questionnaires, like student-teacher relationship and student-student relationship, and related factors (Jennings et al., 2009; Lessard et al., 2010; Romano et al., 2021; Wink et al., 2021; Contreras et al., 2022). A similar model comes from Hascher (2020) whereas school well-being includes positive emotions toward school and three negative dimensions like worries in school and social problems in

school. Another related construct is school climate, that share with these models many constructs (Daily et al., 2020; Molinari and Grazia, 2023). The QBS 8-18 works on five sub scales that all together score for the School well-being. (Molinari and Grazia, 2024).

Through correlational analysis, we hypothesize that school burnout scales positively correlate with a higher score of drop out intention, while school well-being is considered a protective factor of drop out, expecting a negative correlation with drop out intention.

1. Methods

Participants

In the present study we collected data from many first year and second year higher secondary school students. The sample of this study consisted in $N = 351$ (134 female, 213 male, 4 other). Participants filled out three online self-report questionnaires during regular school hours. The three surveys measured school burnout, school well-being and drop out intention.

Measures

School burnout

The School burnout inventory (SBI) Italian version (Fiorilli et al., 2014) comprises three scales: sense of inadequacy as a student (e.g. I often feel inadequate at school), Cynicism toward school (e.g. I feel a lack of motivation toward school and often feel about giving up), Exhaustion at school (e.g. I feel overwhelmed by school work).

School well-being

The school Well-being was measured through the QBS 8-18 (Molinari and Grazia, 2024). This Self-report questionnaire includes a single scale of School-being which is made of the sum of 4 subscales: Satisfaction and recognition: ("my parents are happy with how I go to school"); Relationship with teachers: ("my teachers know how to convince me to try my hardest "); Relationship with classmates: ("my classmates like to work with me") 5 items Emotional attitude at school: ("I have fun with my classmates"; Sense of self-efficacy: ("I am able to think fast"). There is a further subscale that is not comprised in the scoring of school well-being: the causal attribution mechanisms scale: it includes 3 items that are not part of the School Well-Being scores but help to understand this additional psychological aspect.

Drop out intention

The drop out intention was measured through the use of two items: “Have you ever considered dropping out of school or changing your course of study?”; “Have you ever considered leaving the school you are currently in or changing your current course of study?”

2. Statistical analysis

We collected data from 363 students at a Southern Italy upper secondary school. In summary, we removed 12 subjects who lacked information on variables of interest or demographic data. Outliers were also eliminated, with a final sample of $N = 351$.

Due to lack of observations ($N = 4$) we did not compare the “other” gender with male and female. While we performed individual t-tests with gender as a group. To explore the relation between school burnout, school well-being and drop out intention, we performed three separate Spearman correlation matrixes.

Descriptive statistics of the School Burnout Inventory are shown on table 1, of the QBS 8-18 in table 2 and of the drop out intention in table 3.

Statistical analyses were performed with Jamovi software (The Jamovi Project, 2022).

Tab 1. (Descriptive statistics of School Burnout inventory (SBI) Scales).

	Exhaustion in school	Cynicism toward the school	Sense of inadequacy at school
Media	2.72	2.75	2.62
Mediana	2.75	2.67	2.50
Deviazione standard	0.986	1.17	1.11

Tab 2. (Descriptive statistics QBS 8-18)

	Satisfaction and recognition	Relationship with teachers	Relationship with classmates	Emotional attitude at school	Sense of self-efficacy	School well-being
Media	1.06	1.07	1.37	0.961	1.51	5.97
Mediana	1.00	1.00	1.40	1.00	1.50	6.02
Deviazione standard	0.539	0.500	0.496	0.512	0.469	1.45

Tab 3. (Descriptive statistics drop out intention)

	1. Have you ever considered dropping out of school or changing	2. Have you ever considered leaving the school you are currentl
Media	2.33	2.32
Mediana	2	2
Deviazione standard	1.47	1.43

3. Results

Sample independent t-test reveals non-statistical differences between gender difference and School Burnout scale (all ps > 0.005).

Sample independent t-test shows a significant gender difference in School well-being ($t(345) = -3.59$ $p < 0.001$), due to the statistical difference in the Emotional attitude toward school ($t(345) = -5.55$ $p < 0.001$) and Sense of self-efficacy ($t(345) = 3.310$ $p < 0.005$).

Independent t-test reveals no significant difference of gender on drop out intention (all ps > 0.005).

We used the Spearman correlation to produce the following correlation matrixes. The correlation matrix between School Burnout and School Well-being is shown in Tab. 3.

School well-being was found as negatively correlated with Exhaustion in school ($r_s(349) = -0.34$ $p < 0.001$), Cynicism toward school ($r_s(349) = -0.30$ $p < 0.001$) and Sense of inadequacy at school ($r_s(349) = -0.32$ $p < 0.001$).

As for school Well-being subscales: Satisfaction and recognition was found negatively correlated with Exhaustion in school ($r_s(349) = -0.13$ $p < 0.01$), Cynicism toward the school ($r_s(349) = -0.36$ $p < 0.001$) and Sense of inadequacy in school ($r_s(349) = -0.31$ $p < 0.001$); Relationship with teachers was found negatively correlated with Exhaustion in school ($r_s(349) = -0.23$ $p < 0.001$), Cynicism toward the school ($r_s(349) = -0.28$ $p < 0.001$) and Sense of inadequacy in school ($r_s(349) = -0.27$ $p < 0.001$); Relationship with classmates was found negatively correlated with Exhaustion in school ($r_s(349) = -0.25$ $p < 0.01$), Cynicism toward the school ($r_s(349) = -0.15$ $p < 0.01$) and Sense of inadequacy in school ($r_s(349) = -0.20$ $p < 0.001$); Emotional attitudes toward the school was found negatively correlated only with Exhaustion in school ($r_s(349) = -0.37$ $p < 0.001$). Sense of Self efficacy did not show correlation with the three School burnout subscales (all ps > 0.005).

The correlation matrix between School Burnout and drop out Intention is shown in Tab. 5.

Item 1 of drop out intention show positive correlations with Exhaustion in school ($r_s(349) = 0.33$ $p < 0.001$), Cynicism toward school ($r_s(349) = 0.47$ $p < 0.001$) and Sense of inadequacy in school ($r_s(349) = 0,43$ $p < 0.001$). Item 2 of drop out intention shows positive correlation with Exhaustion in school ($r_s(349) = 0.25$ $p < 0.001$), Cynicism toward school ($r_s(349) = 0.42$ $p < 0.001$) and Sense of inadequacy in school ($r_s(349) = 0,39$ $p < 0.001$).

The correlation matrix between School well-being (QBS 8-18) and drop out intention is shown in Tab. 6.

Item 1 of drop out intention shows negative correlations with Sense of satisfaction and recognition ($r_s(349) = -0.19$ $p < 0.001$), Relationship with teachers ($r_s(349) = -0.16$ $p < 0.01$) Relationship with classmates ($r_s(349) = 0,24$ $p < 0.001$), School well-being ($r_s(349) = 0,21$ $p < 0.001$).

Item 2 of drop out intention shows negative correlations with Sense of satisfaction and recognition ($r_s(349) = -0.27$ $p < 0.001$), Relationship with teachers ($r_s(349) = -0.18$ $p < 0.01$) Relationship with classmates ($r_s(349) = 0,24$ $p < 0.001$), School well-being ($r_s(349) = 0,24$ $p < 0.001$).

Tab. 4 (Correlations matrix between School Burnout Inventory (SBI) scales and QBS 8-18)

		Exhaustion in school	Cynicism toward the school	Sense of inadequacy at school	Satisfaction and recognition	Relationship with teachers	Relationship with classmates	Emotional attitude at school	Sense of self- efficacy	School well- being
Exhaustion in school	Rho di Spearman	—								
	gdl	—								
	valore p	—								
Cynicism toward the school	Rho di Spearman	0.407 ***	—							
	gdl	349	—							
	valore p	< .001	—							
Sense of inadequacy at school	Rho di Spearman	0.438 ***	0.583 ***	—						
	gdl	349	349	—						
	valore p	< .001	< .001	—						
Satisfaction and recognition	Rho di Spearman	-0.138 **	-0.366 ***	-0.315 ***	—					
	gdl	349	349	349	—					
	valore p	0.010	< .001	< .001	—					
Relationship with teachers	Rho di Spearman	-0.236 ***	-0.283 ***	-0.270 ***	0.343 ***	—				
	gdl	349	349	349	349	—				
	valore p	< .001	< .001	< .001	< .001	—				
Relationship with classmates	Rho di Spearman	-0.251 ***	-0.157 **	-0.208 ***	0.118 *	0.277 ***	—			
	gdl	349	349	349	349	349	—			
	valore p	< .001	0.003	< .001	0.027	< .001	—			
Emotional attitude at school	Rho di Spearman	-0.375 ***	-0.030	-0.101	-0.023	-0.071	0.179 ***	—		
	gdl	349	349	349	349	349	349	—		
	valore p	< .001	0.579	0.059	0.669	0.184	< .001	—		
Sense of self-efficacy	Rho di Spearman	-0.051	-0.074	-0.045	0.133 *	0.209 ***	0.198 ***	0.137 *	—	
	gdl	349	349	349	349	349	349	349	—	
	valore p	0.339	0.167	0.401	0.013	< .001	< .001	0.010	—	
School well- being	Rho di Spearman	-0.348 ***	-0.307 ***	-0.321 ***	0.549 ***	0.579 ***	0.612 ***	0.427 ***	0.572 ***	—
	gdl	349	349	349	349	349	349	349	349	—
	valore p	< .001	< .001	< .001	< .001	< .001	< .001	< .001	< .001	—

Nota. * p < .05, ** p < .01, *** p < .001

Tab. 5 (Correlation matrix between the School Burnout Inventory (SBI) scales and drop out intention)

		Exhaustion in school	Cynicism toward the school	Sense of inadequacy at school	1. Have you ever considered dropping out of school or changing	2. Have you ever considered leaving the school you are currentl
Exhaustion in school	Rho di Spearman	—				
	gdl	—				
	valore p	—				
Cynicism toward the school	Rho di Spearman	0.407 ^{***}	—			
	gdl	349	—			
	valore p	< .001	—			
Sense of inadequacy at school	Rho di Spearman	0.438 ^{***}	0.583 ^{***}	—		
	gdl	349	349	—		
	valore p	< .001	< .001	—		
1. Have you ever considered dropping out of school or changing	Rho di Spearman	0.330 ^{***}	0.472 ^{***}	0.435 ^{***}	—	
	gdl	349	349	349	—	
	valore p	< .001	< .001	< .001	—	
2. Have you ever considered leaving the school you are currentl	Rho di Spearman	0.255 ^{***}	0.422 ^{***}	0.393 ^{***}	0.666 ^{***}	—
	gdl	349	349	349	349	—
	valore p	< .001	< .001	< .001	< .001	—

Tab. 6 (Correlation matrix between drop out intention and QBS 8-18).

		Satisfaction and recognition	Relationship with teachers	Relationship with classmates	Emotional attitude at school	Sense of self-efficacy	School well-being	1. Have you ever considered dropping out of school or changing	2. Have you ever considered leaving the school you are currentl
Satisfaction and recognition	Rho di Spearman	—							
	gdl	—							
	valore p	—							
Relationship with teachers	Rho di Spearman	0.343 ***	—						
	gdl	349	—						
	valore p	< .001	—						
Relationship with classmates	Rho di Spearman	0.118 *	0.277 ***	—					
	gdl	349	349	—					
	valore p	0.027	< .001	—					
Emotional attitude at school	Rho di Spearman	-0.023	-0.071	0.179 ***	—				
	gdl	349	349	349	—				
	valore p	0.669	0.184	< .001	—				
Sense of self-efficacy	Rho di Spearman	0.133 *	0.209 ***	0.198 ***	0.137 *	—			
	gdl	349	349	349	349	—			
	valore p	0.013	< .001	< .001	0.010	—			
School well-being	Rho di Spearman	0.549 ***	0.579 ***	0.612 ***	0.427 ***	0.572 ***	—		
	gdl	349	349	349	349	349	—		
	valore p	< .001	< .001	< .001	< .001	< .001	< .001	—	
1. Have you ever considered dropping out of school or changing	Rho di Spearman	-0.196 ***	-0.160 **	-0.241 ***	-0.048	-0.025	-0.218 ***	—	
	gdl	349	349	349	349	349	349	—	
	valore p	< .001	0.003	< .001	0.366	0.647	< .001	< .001	—
2. Have you ever considered leaving the school you are currentl	Rho di Spearman	-0.271 ***	-0.189 ***	-0.247 ***	-0.043	0.048	-0.241 ***	0.666 ***	—
	gdl	349	349	349	349	349	349	349	—
	valore p	< .001	< .001	< .001	0.423	0.371	< .001	< .001	< .001

Nota. * p < .05, ** p < .01, *** p < .001

4. Discussion

This study explored correlations between School well-being, School burnout and drop out intention in an Italian upper secondary school.

While gender did not show significant differences in School burnout scales and drop out intention, Emotional attitudes toward school and Sense of self-efficacy did show significant differences. Such a difference between male and female students should be further explored, as our data suggest that this may be a gender characteristic that is not strongly related to the drop out intention, although it is relevant for pedagogical considerations. Indeed, significant correlations with drop out intention were found for other items, but not for Emotional attitudes toward school and Sense of recognition and Satisfaction, as we will explain next.

As expected, School burnout scales and Scholl well-being scales and subscales are negatively correlated, although in different ways. All three scales of School burnout, (Cynicism toward school, Sense of inadequacy, and Exhaustion in school) show a negative correlation with the School well-being scale ($p < 0.001$). In our opinion, School well-being may be suggested as a protective factor to reduce school burnout and prevent school drop out.

As for the correlation with the sub-scales of School well-being: Satisfaction and recognition as well as Relationship with teachers and Relationship with classmates were the main factors associated with School burnout scales, while Emotional attitudes toward school only correlate with Exhaustion in school.

These data suggest a possible interpretation: while Emotional attitudes toward school and Exhaustion in school may be correlated due to other uncontrolled factors, such as anxiety and stress, we can explain differently the reason why we did not find correlation with Cynicism toward school and Sense of inadequacy at school. In the same way that no significant correlations were found between Sense of self-efficacy and all the three School Burnout scales, these School well-being factors can be considered as related to other psychological factors, such as Self-esteem. On the contrary, results suggest that the Relationship with teachers and Relationship with classmates are relational variables, that may also explain the correlation with Satisfaction and recognition with the three School Burnout subscales. In our opinion, Satisfaction and Recognition are strongly related to relational factors, so to personality trait variables (e.g. Sense of self efficacy) and social-relational ones (relationship with classmates and teachers) may be explained in different ways. However, further and more detailed analysis would be required to confirm such an interpretation.

In any case, to corroborate such a point, correlations are found between drop out intention items 1 and 2 and School well-being. Positive correlations were found

with School well-being, especially with Sense of satisfaction and recognition, Relationship with classmates, and Relationship with teacher scales ($p < 0.001$). In contrast to Emotional attitudes and Sense of self-efficacy, we found significant correlations on those items that are strongly related to relational and social factors, while no significant statistics on these that are more related to personal traits or identity.

The third correlation matrix with the two items of drop out intention and the School Burnout Inventory shows positive correlations with all three scales with both the items ($p < 0.001$).

The choice to use measures of drop out intention rather than actual drop out can be considered as a useful strategy to understand the psychological and educational variables that lead to actual drop out. According to studies, both burnout and school wellbeing are correlated with actual drop out, and the present study confirms that the drop out intention is correlated with those constructs as well.

The possibility of working on the drop out intention may open a new strategy to develop interventions before the occurrence of the real drop out. By working on constructs like School burnout and School well-being, it is possible to prevent drop out by considering school well-being as a protective factor while burnout as a predictive one.

Through the use of psychoeducational courses, intervention on didactics, or counseling for teachers, we do not exclude that such a strategy can be utilized to improve the general School well-being, reducing School burnout and consequently the actual drop out. However, future studies are needed to confirm such a hypothesis.

This preliminary study has many limitations. First, we focused on a specific Italian school of the city of Foggia. The same measurement should be replicated in schools of different regions in order to generalize the conclusion. Moreover, we focused on the first and second years, since it is the most important period when drop out occurs. With the end of mandatory school, at the age of sixteen, the risk of dropping out is reduced. However, this does not preclude that the same study is required to investigate the same phenomenon even at different years of upper secondary school.

In this study, other important variables were not included. Socio-demographic information, cultural and ethnic origin, religion, and other psychosocial factors should also be discussed within this literature as well, in order to understand if these variables are associated with the phenomenon of drop out. Of course, the choice to analyze a South Italian school does not allow us to easily generalize the results to the entire Italian population, despite the significant statistics. It is worth

noting that there are sociodemographic differences between Northern and Southern Italy, which can lead to different psychological and pedagogical conditions. A comparison with a school in Northern Italy may be relevant to exclude territorial factors or to generalize our findings.

Italy has also many norms about privacy in school that does not allow us to easily obtain information about the actual drop out. This is another limitation in terms of methodology, that can enjoy the introduction of the drop out intention measures. In the short term, for instance at the beginning and at the end of the semester, interventions can be developed in the attempt to monitor the drop out intention and the related constructs.

The two items we used, as introduced in literature, are both related to past assessments of considering drop out (e.g. "have you ever considered to drop out school?"). It is possible to suggest that may be relevant to validate new items that consider whether dropping out is being considered at the moment of the measurement, such as "are you actually considering to dropping out your school?", or "do you think it would be best for you to go to work instead of finishing school"? Such a statement is only a suggestion, but it arises in the light of the data discussed. A validation of these items may enable to manipulate the consideration of drop out at the moment of the measurement, trying to reduce the intention with a control of pre-post intervention.

Conclusions

The collection of data from the first and second years of the Italian superior secondary Italian school of Foggia provides us with significant correlations regarding the relation between school burnout scales and School well-being, as well as positive correlations with drop out intention and School Burnout scales and negative correlation with drop out intention and School Well-being.

As expected, the result confirmed our hypothesis, and also added some information. Males and females show significant difference in terms of emotional attitudes toward school, that would require further exploration to be clarified.

While school burnout shows inter-item correlation, since all three scales are significantly correlated to drop out intention, the correlation matrix with the QBS suggests us that the most important factors in determining School well-being are on the relational factors, both in relation to classmates and teachers. Such results can be considered as an indication to ideate possible pedagogical interventions in the attempt to improve the School well-being and presumably to reduce the drop out intention or the actual drop out.

Future studies may focus on different statistical techniques, such as multiple linear regression, in order to better understand which one of these factors may be considered as a predictor of drop out, in order to develop more targeted interventions.

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