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Evaluating the Overstudy Climate at School and in the Family: The Overstudy Climate Scale (OCS)

Yura Loscalzo*, Marco Giannini

School of Psychology, Department of Health Sciences, University of Florence, Via di San Salvi 12 – Padiglione 26, 50135 Florence, Italy

Corresponding Author:** ***Yura Loscalzo, *School of Psychology, Department of Health Sciences, University of Florence, Via di San Salvi 12 – Padiglione 26, 50135 Florence, Italy,* ***Email:*** *yura.loscalzo@gmail.com*

Abstract: *This study aims to propose an instrument for evaluating the overstudy climate both at school and in the family, from primary school to University. We developed a pool of 30 items covering both parents and teachers' pressure toward hard study and overt comments concerning students' academic performance. By means of Exploratory and Confirmatory Factor Analyses conducted on a sample of 530 College students aged between 18 and 56 years (M = 22.27 ± 3.74) we reduced the test to 18 items and three factors: Parents Overstudy Climate (P-OSC); Teachers overstudy climate – Pressure toward hard study (T-OSC-HS); Teachers overstudy climate – Overt comments related to the students' academic performance (T-OSC-OC). The three scales have good internal reliability and they have a statistically significant negative correlation with the Grade Point Average of the students. Moreover, overstudy climate, and the T-OSC-OC scale especially, is positively correlated with the time spent studying. In conclusion, this study proposes a new instrument with good psychometric properties to be used in future research aiming to evaluate the role of overstudying climate in positive and negative attitudes toward studying, and hence for developing preventive interventions aiming to favor students' wellbeing and to prevent their dropout from school.*

Keywords: *Academic performance; GPA; overstudy climate; students; study addiction; study obsession; studyholism; wellbeing; workaholism; work addiction.*

1. INTRODUCTION

Loscalzo and Giannini [1] recently proposed the construct of Studyholism, or obsession toward study, which is a new potential clinical condition characterized by high levels of Studyholism symptoms (e.g., not being able to relax due to worries about study) and by low or high levels of Study Engagement (i.e., pleasure derived from study and intrinsic motivation toward study). Hence, they highlighted that Studyholism is a different construct as compared to Study Addiction [2], which is conceptualized instead in the addiction framework and which does not take into account the positive dimension of Study Engagement in its definition.

Studyholism could have its onset during pre-adolescence, when there is a raise in the time and the effort required for studying [1]. Loscalzo and Giannini [1] stressed that study is the main activity for students, as well as work it is for workers; hence, they speculated some analogies with the construct of Workaholism (i.e. work addiction). For this reason, based on Loscalzo and Giannini's [3] model of Workaholism, they proposed a comprehensive model for the analysis of Studyholism, aiming to address its outcomes and antecedents both at an individual and situational level. As for example, they proposed low academic performance as an individual outcome of Studyholism, and aggressive behaviors at school as a situational outcome. Moreover, they suggested personality traits among Studyholism individual antecedents, and overstudy climate as a situational antecedent.

More specifically, as far as the overstudy climate is concerned, they defined this new construct, in line with Mazzetti et al.'s [4] definition of overwork climate, as "the students' perception that their own school and family are characterized by a climate that expects them to overstudy, for example heavily studying on the weekend" ([1], p. 10). This definition highlights that the overstudy climate could be spread both at school and in the family. As for example, higher-level schools such as high schools could press more toward overstudying than lower level schools, as professional institutes. In the

same vein, this climate could be more marked in the last years of school, when students are nearer to their final exams, than in the first year of school. About the family overstudying climate, Loscalzo and Giannini [1] speculated that workaholic parents could press their sons or daughters to overstudy, as well as parents with a low level of education, since they could desire that their son/daughter get a high-level work and hence they favor an overstudy climate.

However, despite it would be interesting to analyze the role of overstudy climate in the development of Studyholism, with the aim of developing preventive interventions for improving students' wellbeing and their engagement in study, in the literature there are not instruments for evaluating it neither at a school nor at a family level. In addition, Mazzetti et al.'s [4] 8-item scale for evaluating overworking climate is focused on the organizational climate that fosters Workaholism, but not on the family one. Moreover, beside few items, most of them are not suitable to be adapted for the school context. For these reasons, this study aims to propose an instrument for evaluating overstudy climate both at school and in the family and that could be used with College students, as well as with children and adolescents. This instrument could help analyzing the role of overstudy climate in Studyholism and Study Engagement, and hence to develop preventive interventions aiming to favor students' wellbeing and academic success, and to prevent their dropout from school.

2. METHODS

2.1. Participants

We recruited a sample of 530 College students aged between 18 and 56 years (M = 22.27 ± 3.74; 83.2% females) and attending University in many Italian cities, with Florence being the most represented (24.5%). More specifically, we recruited a first sample of 258 students in order to reduce the pilot version of the test by means of Exploratory Factor Analysis, and then a sample of 272 students in order to cross-validate the factor structure by means of a Confirmatory Factor Analysis on this second sample.

The participants of the first sample (n = 258) were aged between 18 and 56 years (M = 22.43 ± 4.38; 79.8% females). The proportions of students in years 1 to 5 of college study were 18.6%, 26.4%, 19.8%, 16.3%, and 19%. The majors most represented were Psychology (24.4%), Medicine (17.4%), Math, Physic, and Natural Sciences (11.2%), and Literature, Philosophy, and Cultural Estate (10.9%).

The participants of the second sample (n = 272) were aged between 18 and 43 years (M = 22.11 ± 3.01; 86.4% females). The proportions of students in years 1 to 5 of college study were 21.7%, 18.8%, 26.1%, 14.3%, and 19.1%. The majors most represented were, as like as in the first sample, Psychology (25.7%), Medicine (15.4%), Literature, Philosophy, and Cultural Estate (14.3%), and Math, Physic, and Natural Sciences (10.7%).

2.2. Materials

2.2.1. Overstudy Climate Scale

We developed a pool of 30 items covering family (15 items) and teachers' (15 items) overstudying climate, referring to behaviors favoring the striving for high standards, hard studying, and the competition with classmates, friends, or family members. Many of the items are the same for both the family and the school scales. The items are followed by a 5-point Likert scale ranging between 1 (*Completely disagree*) to 5 (*Completely agree*). The participants have to fill the questionnaire by indicating how much they agree with each of the sentences. We administered the 30-item pilot version to the first sample, while the participants of the second sample filled the 18-item reduced version. The instructions and the items of the test are designed in order to be administered to College students, but also to children, pre-adolescents, and adolescents.

2.2.2. Academic Indicators

We asked the participants to report approximately their daily and weekly time investment in studying (i.e., how many hours a day and how many days a week they spent studying) both generally and before exams. Moreover, we asked their Grade Point Average (GPA).

2.3. Procedure

First, we get the authorization to conduct the study by the Department of Health Sciences of the University of Florence. Then, we administered an online questionnaire that included some demographic (i.e., age and gender) and study-related (e.g., GPA) questions and the Overstudy Climate Scale. The first page of the online questionnaire presented the aims of the research and the information about the anonymity and the right to stop filling the questionnaire at any time. Then, we specified

that by keep on filling the questionnaire on the next page, the participants gave their informed consent to take part to the research.

2.4. Data Analysis

We performed the analyses with SPSS.24 and AMOS.22. We used Exploratory Factor Analysis (EFA; Principal Axis Factoring and Promax Rotation) in order to reduce the number of items of the Overstudy Climate Scale (OCS) on the first sample of participants (n = 258). Then, we ran a Confirmatory Factor Analysis (CFA) on the second sample (n = 272) in order to further evaluate the factor structure of the test. Finally, we assessed the internal reliability (Cronbach's alpha) and the correlation (Pearson) between the OCS and some academic indicators (i.e., GPA and hours of study a day and days of study a week generally and before exams) on the total sample (n = 530).

3. RESULTS

First, we conducted an Exploratory Factor Analysis (EFA; Principal Axis Factoring, Promax Rotation) on the first sample (n = 258), aiming to obtain a shorter version of the test and to evaluate its factor structure.

We extracted three factors as suggested by both the scree plot and the criterion of the eigenvalues greater than one. The first factor explains the 34.36% of the variance, the cumulative variance explained by the second is 51.70%, and finally the cumulative variance explained by the three factors is of 60.50%. The values of communalities of the final three-factor and 18-item version of the test are high, with values ranging between .35 and .69. More specifically, factor 1 covers parents overstudying climate, including both students' perception that their parents want they overstudy and the parents' overt behaviors related to their academic performance. Factors 2 and 3 cover instead teachers overstudying climate. While factor 2 concerns students' perception about their teachers' expectation that they have to study very hard; factor 3 covers teachers' overt comments related to the students' academic performance (Table 1 shows the saturation values of the three factors).

Then, we cross-validated this factor structure on the second sample (n = 272) by means of a Confirmatory Factor Analysis. The fit indices indicate that the three-factor model fits the data well: χ^2 /df = 1.81; GFI = .91; CFI = .96; TLI = .95; RMSEA = .055. The fit is even better allowing four item residuals to be correlated based on the modification indices suggestions (error 1 with error 4, error 1 with error 8, error 3 with error 9, and error 8 with error 7): χ^2 /df = 1.47; GFI = .93; CFI = .97; TLI = .97; RMSEA = .042 (see Figure 1 for the graphical representation of this model).

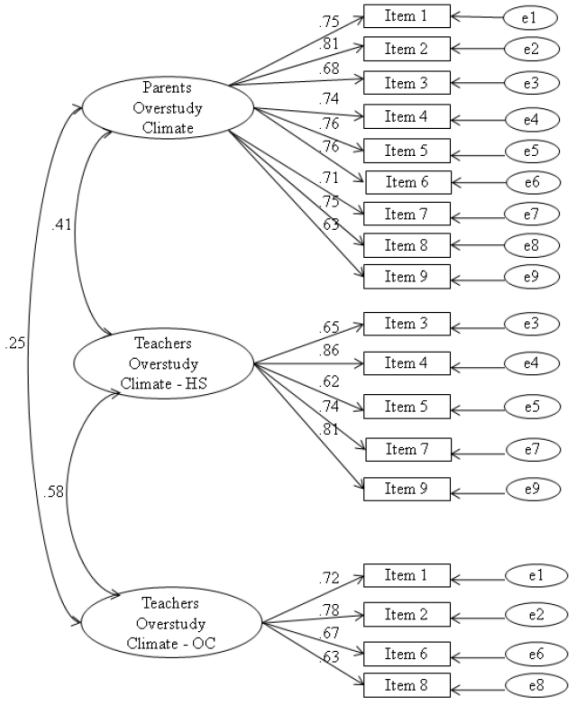

Figure 1. *Three-Factor Model, Overstudy Climate Scale, n=278*

Note: *The correlations between errors are not represented; HS=Pressure toward hard study; OC=Overt comments related to the students' academic performance*

Finally, given the good factor structure of the test, we evaluated the internal reliability of the three OCS scales on the total sample (n = 530) and the correlation with some academic-related variables: GPA, time spent studying daily and weekly.

All the OCS scales have excellent internal reliability (see Table 1). Moreover, as far as the correlation with the academic variables is concerned, we found low, although statistically significant, negative values of correlation between the three scales of the OCS and the GPA. In addition, we found statistically significant and positive correlations between the Teachers -Overt Comments scale and the hours per day and day per week spent studying generally and before exams (see Table 2 for all the values of correlation).

Table 1. *Exploratory Factor Analysis (EFA) of the Overstudy Climate Scale (OCS; n = 258).*

OCS Item	Parents	Teachers 1(HS)	Teachers 2 (OC)
I miei insegnanti… ***My teachers…***			
1. fanno spesso confronti relativi ai voti degli studenti. *often make comparisons related to students' grades.*			.64
2. mi fanno sentire in colpa quando prendo un voto più basso del solito. *make me feel guilty when I get a lower grade than usual.*			.74
3. considerano normale dover prendere sempre ottimi voti. *consider it normal that we must always get excellent grades.*		.58	
4. considerano normale studiare nel weekend. *consider it normal to study on the weekend.*		.84	
5. sono molto critici nei confronti di chi non studia molto. *are very critical of those who do not study much.*		.47	
6. mi chiedono spiegazioni se prendo un voto più basso del solito. *ask me for explanations if I get a lower grade than usual.*			.72
7. considerano normale dare la precedenza allo studio anziché al divertimento e allo sport. *consider it normal to give priority to study rather than to fun and sports.*		.74	
8. si congratulano per l'ottimo risultato e rimproverano per il voto basso davanti a tutti. *congratulate us for an excellent result, and criticize us for a low grade, in front of everybody.*			.62
9. considerano normale studiare durante le festività (Natale, Pasqua, …) e durante l'estate. *consider it normal to study during holidays (Christmas, Easter, ...) and during Summer.*		.79	
I miei genitori (o uno dei due)… ***My parents (or one of the two)…***			
1. confrontano spesso il mio voto con quello dei miei compagni, amici e/o fratelli. *often compare my grades with that of my classmates, friends and/or siblings.*	.71		
2. mi fanno sentire in colpa quando prendo un voto più basso del solito. *make me feel guilty when I get a lower grade than usual.*	.82		
3. considerano normale studiare durante le festività (Natale, Pasqua, …) e durante l'estate. *consider it normal to study during holidays (Christmas, Easter, ...) and during Summer.*	.70		
4. favoriscono la competizione con i miei compagni, amici e/o fratelli. *favor the competition with my classmates, friends and/or siblings.*	.68		
5. si aspettano che io studi moltissime ore al giorno. *expect me to study a lot of hours a day.*	.73		
6. sono molto critici nei confronti di chi non studia molto. *are very critical of those who do not study much.*	.70		
7. considerano normale dare la precedenza allo studio anziché al divertimento e allo sport. *consider it normal to give priority to study rather than to fun and sports.*	.67		
8. se esco durante la settimana, e non solo nel weekend, mi dicono che devo studiare di più. *tell me I have to study more if I go out during the week, and not only on the weekend.*	.72		
9. spesso dicono quanto sia importante studiare. *often say how important it is to study.*	.58		
α	.90	.85	.80

Note: *Principal Axis Factoring, Promax Rotation; Factor loadings below .30 are not presented. HS = Pressure toward hard study; OC = Overt comments related to the students' academic performance. The Overstudy Climate Scale may be freely used for research purpose only and after having asked permission to the first author.*

Table 2. *Correlations between the Overstudy Climate Scale (OCS) and academic indicators (n = 530).*

OCS Scale	GPA	Hours a day of study	Days a week of study	Hours before exams	Days before exams
OCS – Parents	-.16***	.06 ns	.03	.11**	.02
OCS – T-HS	-.10*	.09*	.05	.10**	.02
OCS – T-OC	-.15***	.18***	.16***	.26***	.13***

Note: **** = p < .001; ** = p < .01; * = p < .02; GPA = Grade Point Average; T-HS = Teacher - Pressure toward hard study; T-OC = Teacher - Overt comments.*

4. Discussion and Conclusion

This study aims to propose a new instrument, the Overstudy Climate Scale (OCS), and to evaluate its psychometric properties. The OCS allows measuring the overstudy climate, namely the students' perception that parents and teachers expects them to overstudy [1], which could be used in future research aiming to analyze how this climate could influence Studyholism (or obsession toward study) and Study Engagement.

First, we developed a pool of 30 items covering family (15 items) and school (15 items) overstudy climate, addressing both the feeling to be pressed to hard study and the overt comments about the academic performance. By means of Exploratory Factor Analysis (n = 258) and Confirmatory Factor Analysis (n = 272) on Italian College students, we reduced the test to 18 items and three factors: Parents overstudy climate (P-OSC); Teachers overstudy climate – Pressure toward hard study (T-OSC-HS); Teachers overstudy climate – Overt comments related to the students' academic performance (T-OSC-OC). These three scales have good internal reliability (respectively, α = .90, .85, and .80).

Since in literature there are not instruments for evaluating the overstudy climate, we have not been able to assess the convergent validity of the test; however, we evaluated the correlation with some academic indicators. We found for all the three OCS scales negative values of correlation with the Grade Point Average, which means that the highest is the overstudy climate the lowest is the academic performance. Moreover, the overstudy climate (and especially the T-OSC-OC scale) is positively associated with the hours of study a day before exams. Finally, the T-OSC-OC scale is positively associated with the days a week of study before exams, and with the hours a day and days a week of study generally.

Hence, it seems that a higher overstudy climate (especially in its teacher's overt comments component) is associated with a higher time investment in study, but with a lower academic performance as well. This could suggest that an overstudy climate should be avoided both at school and in the family in order to favor a positive academic performance of the students.

The main limit of this study is due to the sample that is made of College students only, even if the instrument has been designed in order to be administered to students of all grades: from primary school to University. Hence, future studies should evaluate the psychometric properties of the OCS on a sample of younger students. However, our sample is heterogeneous concerning the Italian city and the major of study. Finally, the main merit of this study is that it is the first to propose an instrument for evaluating the overstudy climate, which could be used in future research aiming to analyze its role in positive and negative attitudes toward studying. Hence, it could be useful for analyzing which specific components of it should be addressed by preventive interventions that aim to prevent Studyholism and to favor Study Engagement and students' psychological wellbeing and academic success.

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