Adolescents’ perceptions of covitality and academic performance: The moderating role of school climate

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KEYWORDS
adolescents' perceptions, covitality, psychosocial adjustment, school climate, school performance

ABSTRACT
Children’s and adolescents’ psychosocial adjustment has been studied in relation to various factors at an individual and system level aiming at identifying the variables that contribute, as protective factors, to the promotion of their social and emotional health and covitality. This study examined the link between covitality, which describes the co-occurrence of basic positive psychology constructs, and the perceptions of Greek junior high school students regarding school climate. The sample consisted of 745 adolescent students (mean age 14.4 years) from randomly selected junior high schools in the broader area of Athens, Greece. The Social-Emotional Health Survey–Secondary (SEHS–S), CHKS Supplemental School Climate Module, students’ academic performance, and a questionnaire of socio-demographic data were used. Findings indicated the existence of statistically significant relations between adolescents’ perceptions of social and emotional health and school climate. Furthermore, significant differences were found in relation to school performance and parents’ unemployment. Conditional process analyses showed that several school climate dimensions (i.e. Support for learning, Discipline, and Order, Peer relations, Social-emotional support, Environment) moderated the direct effect of school performance on covitality. Furthermore, father’s unemployment added to the prediction of covitality by school climate. The results provide a better understanding of adolescents’ development and highlight the critical role of positive school climate on students’ psychosocial adjustment providing implications for developing effective interventions in school communities.

The development of positive psychology and the emphasis on factors related to well-being and positive development resulted in studying concepts such as gratitude, empathy, happiness, or hope. The interest in positive aspects of life referred not only to individuals but systems as well, such as schools, where the relationship between positive characteristics (e.g. positive relationships with peers, school performance) and students’ psychosocial adjustment became an important research domain (Benson & Scales, 2012; Gilman et al., 2009).

As a result, new theoretical approaches and concepts were suggested such as “covitality” (Jones et al., 2013). In particular, the term “covitality” has been described as the result of positive mental health resulting from the interaction between many positive psychological factors. In statistical terms, it is "the latent, second-order positive mental health construct accounting for the presence of several co-occurring, first-order positive mental health indicators" (Furlong et al., 2013, p. 1013).
The above indicators have been found to include four specific dimensions: (a) **belief-in-self**, that is related to healthy psychosocial competence and reduced experience of negative emotions, (b) **emotional competence**, that is associated with the absence of internalized emotional difficulties, (c) **engage in living** that describes engagement in activities which in turn provides positive emotions, satisfaction of life and feeling of joy and (d) **belief-in-others**, that refers to people’s feeling that they are supported and cared by others across various contexts (peers, school, family) (Furlong et al., 2009; Werner, 2013).

Family and school are important systems for adolescents’ development and adjustment. Therefore, research studies on covitality placed a special emphasis on variables related to these contexts in an effort to fully understand their role in adolescents’ well-being and positive growth.

**Covitality, family and school characteristics**

Family is crucial in promoting psychosocial adjustment and well-being during puberty. A positive parent-adolescent relationship is positively related to self-esteem, social well-being, and the general mental health of adolescents (Helsen et al., 2000; Lampropoulou, 2018a, 2018b). There are various factors that affect family environment and adolescents’ psychosocial adjustment such as parents’ education, occupation, family income, or socio-economic status (Wadsworth et al., 2016).

A large number of studies suggest that the socio-economic situation during childhood is an important environmental indicator that often contributes to the occurrence of psychosocial adjustment difficulties in adult life (Galobardes et al., 2006a, 2006b). Occupation of parents is also linked to social status and exposure to difficult working conditions that may contribute to the level of anxiety experienced by children at home. In addition, an insufficient income is an indicator of deprivation of resources needed for a healthy life, such as adequate food, housing, and access to health care (McLaughlin et al., 2011).

The low socio-economic level of the family is often associated with psychosocial adjustment difficulties. Conger, Conger, & Elder (1997), however, did not find any correlation between financial shortage and difficulties in adolescents. In general, economic hardship is linked to difficulties in various aspects of covitality of children and adolescents, such as bio-health, academic performance, and cognitive, emotional, and social development. Subsequently, these difficulties seem to be associated with and/or enhance mental health problems, and vice versa (Hanson et al., 2011).

School is also an important context for adolescents. School performance, in particular, has been considered as one of the key issues related to students’ well-being and positive adjustment. Studies suggest that successful school adjustment promotes both covitality and well-being and that students with low school performance belong to a high-risk group for occurrence of psychosocial difficulties (Maag & Reid, 2006). The opposite, however, may occur, when, for example, a student who feels good, has an adequate self-image, is confident and satisfied with what he/she has accomplished, is better adapted in school and achieves a better school performance (Tangney et al., 2018).

Additionally, it has been found that both the presence of psychological distress and the absence of psychological well-being are associated with low school performance and that consideration of both positive and negative indicators of mental health has additive value in predicting students’ attendance and academic achievement over time (Suldo et al., 2011). Moreover, it has been indicated that higher covitality levels are significantly associated with better academic achievement, one of the various factors that play a significant role in students’ perceptions regarding one of the most important concept in school studies, the “school climate” (Furlong et al., 2013).

**School climate**

The term “school climate” refers to the quality and character of school life and it reflects rules, goals, values, interpersonal relationships, teaching and learning methods, and organizational structures in a school
A positive school climate has been linked to the promotion of psychosocial development and learning of children and adolescents since it includes rules, values, and expectations that help students feel socially, emotionally, and physically secure (Aldridge et al., 2016). However, there are some basic dimensions of school life that should be explored when assessing the school climate that relate to the following domains (Cohen, 2013; Lam et al., 2016; Thapa et al., 2013): (a) sense of security (physical and psychosocial, limits, discipline and adherence to school rules) that promotes school performance and resilience of students, (b) education and learning (students’ perceptions of the learning process, aspirations for student success, learning support, praise and social, political and emotional education) associated with school engagement and students’ satisfaction with school, (c) interpersonal relationships (peer support, mutual understanding, respect to diversity, adults support), (d) environment that includes organizational aspects of school life (e.g. number of students) and the natural environment (e.g. school facilities, aesthetic aspects of the school environment, audiovisual material, supervisory tools, cleaning school engagement related to the extent to which staff and students make an effort to preserve the school building) and (e) school engagement related to the active participation of students in school life (e.g. participation in celebrations, school trips, etc.), the emotional responses and learning, and the cognitive strategies that students use in the learning process.

Findings indicate that there is an important link between academic success and students’ perceptions of school climate which can predict their school performance (Buckley et al., 2003). It has been argued that a negative school climate is an obstacle to school success. In particular, it has been found that in schools with high rates of dropout or teacher rotation, low school engagement, and low student literacy in the basic lessons, a negative school climate existed (Bryk et al., 2010).

Studies suggest that a less positive school climate is associated with low levels of school engagement, low academic incentives, and reduced performance (Voight & Hanson, 2012). In addition, it was found that students with high levels of school engagement were more satisfied with their school and more likely to continue their studies beyond compulsory education. Furthermore, students who experienced positive and supportive interpersonal relationships had more positive academic behaviors and values and exhibited higher levels of school engagement (California Department of Education, 2011).

**School climate and parents’ unemployment**

The current global economic recession had a significant impact on school communities. Difficult socio-economic conditions and the burden of financial worries make all members of the school community particularly vulnerable, creating or worsening difficulties and problems related to psychosocial competence and adaptation (Ackerman & Brown, 2006; McConnell et al., 2011).

Although there are limited studies regarding economic recession and school climate, it seems that there are important consequences in relation to school life, such as: (a) poor school operation due to reduced education funds (staff shortages, large number of children in the classes, lack of the logistics infrastructure, building and other deficiencies, security issues); (b) changes in everyday school life (e.g. reduced participation in cultural and other events) and (c) significant wage cuts for teachers and school staff (UNICEF, 2007). In addition, studies have increasingly highlighted the effects of the global socio-economic crisis on the well-being of students with implications for physical and mental health of students (Hatzichristou et al., 2012).

Greece has been affected by the economic recession more than any other European country and unemployment rates have risen dramatically. Nowadays, although the crisis is not at its peak, its effects are obvious in multiple aspects of everyday life. Data regarding the impact of economic recession on adolescents’ covitality and well-being are consistent with the results of international studies. In particular, it has been
found that difficulties such as addictive behavior, depression, anxiety disorders, behavioral disorders in adolescents and decrease in adolescents' self-esteem over previous measurements are related to the difficult socio-economic situation in Greece (Anagnostopoulos & Soumaki, 2013; Lazaratou et al., 2015).

The experience of economic recession has been associated with a sense of insecurity and inadequacy, increased levels of stress, dropout and low school performance, feelings of anxiety, fear and lack of self-confidence (Hatzichristou et al., 2018; Hatzichristou et al., 2017; Williams & Crockett, 2012). Moreover, the indirect effect of financial difficulty on the quality of teaching and the commitment of teachers to their work has been pointed out (Harper & Jones, 2011).

Therefore, it is quite clear that the consequences of the economic recession for the school community are related to a variety of dimensions of school climate, such as learning, school engagement, positive relationships with peers, social and emotional support, physical school environment or students' psychosocial and school adjustment (Fowler, 2007; Hatzichristou, 2013, 2017; Hatzichristou et al., 2014; Hatzichristou & Lianos, 2016).

Based on the literature review and the limited studies on the positive effect of school climate on students' well-being, the present article aims to investigate junior high school students' perceptions regarding school climate and covitality in relation to academic performance. The following research questions were formulated: (Q1) How is school climate affecting students' covitality in relation to their academic performance? (Q2) How is school climate affecting students' covitality in relation to their parents' unemployment? The research hypothesis purports that: parents' employment and positive school climate moderate the relationship between academic performance and covitality, so that a more positive school climate limits the negative impact of unemployment and low school performance on covitality.

Methodology

Data collection

Primary data were collected via self-report questionnaires, integrating both quantitative and qualitative responses from the participants. Questionnaires and document analyses (answers on open-ended questions) were utilized. Permission for the study was granted by the Ministry of Education and the Institute of Educational Policy. Every student was eligible to take part, after their parents’ given consent.

Sample characteristics

Seven hundred and forty-five students (mean age 14.4 years) of four junior high schools located in the wider region of Attica, representing areas of different socio-economic status, completed the survey. The students attended the first (n=264), the second (n=311), and the third grade (n= 170). Out of the participants, 382 (51.2%) were boys and 352 (47.2%) were girls. Thirteen percent (n=97) of the fathers and 30.3% (N=226) of the mothers were unemployed for more than two years.

Measures

For the purpose of the study, the following questionnaires were used: (a) CHKS Supplemental School Climate Module part of California Healthy Kids Survey (CHKS), developed for the California School Climate, Health, and Learning Surveys (Cal-SCHLS) (California Department of Education, 2011; Hanson & Voight, 2014; Zullig et al., 2010). Fifty-six questions on a five-grade Likert scale yielded the following factors: “Academic mindset and learning engagement (α=.85)” (e.g., Students pay attention in class), “Support for Learning and academic rigor” (α=.90) (e.g. This school is a supportive and inviting place for students to learn), “Discipline/order” (α=.73) (e.g., Students are well behaved), “Positive Peer Relations” (α=.83) (e.g. Students enjoy doing things with each other in school activities), “Social and Emotional Support” (α=.83) (e.g., Students are often given
rewards for being good), “Bullying Prevention” (α=.74) (e.g., Teachers here make it clear to students that bullying is not tolerated), “Respect for Diversity” (α=.60) (e.g., My class lessons include examples of my racial, ethnic, or cultural background), “Physical environment scale” (α=.91) (e.g., My school is usually clean and tidy) (Hatzichristou et al., 2018; Stasinou, 2018). The study team used alpha value of .60 as the cutoff for determining acceptable internal consistency reliability for the scales (Furlong et al., 2005); (b) Social-Emotional Health Survey-Secondary (Furlong et al., 2013), a 37-item questionnaire on a five-grade Likert scale yielding the following factors: Emotional Competence (e.g., I accept responsibility for my actions), Engaged Living (e.g., Overall, I expect more good things to happen to me than bad things), Belief-In-Self (e.g., I can work out my problems) and Belief-In-Others (e.g., At my school there is a teacher or some other adult who always wants me to do my best). The four subscales are included in a higher-order (positive) factor called “Covitality”, which was eventually used in the present study. Cronbach’s α was .86 for the present study, approximating the original study’s Cronbach’s alpha for the full assessment reported as 0.92 (Furlong et al., 2013); and (c) a demographic survey including questions regarding gender, students’ academic performance (i.e., last semester mean grade) and parents’ employment.

**Results**

Table 1 presents means, standard deviations, and the correlation matrix between all variables. The Spearman rho correlations between school climate factors and academic performance were significant but low, ranging from .07 to .14. Three School Climate factors (Academic mindset and learning engagement, Discipline/order, and Respect for diversity) produced no correlations with Academic Performance. The correlation between school climate factors and covitality was significant and higher but at a moderate level ranging from .21 between Environment and covitality to .45 between Support for learning and academic rigor and covitality. Kolmogorov-Smirnov tests indicate that all School Climate dimensions do not follow a normal distribution (p<.001) and are considered heavily skewed. However, due to the discrepancies that non-parametric tests can produce on large samples, t-test comparisons were chosen instead (Fagerland, 2012). Results of the two-independent samples t-test show that academic performance differs between females (M = 16.37, SD = 2.19, n = 352) and males (M = 15.76, SD = 2.34, n = 383) at the .05 level of significance (t (733) = -3.65, p<.001). On average, girls tend to have general higher grades in junior high school than boys.

Table 2 presents the results of the two-independent samples t-test for covitality, academic performance, and school climate by parents’ unemployment. There are statistically significant differences, at the .05 level of significance, between students with unemployed and employed mothers in several school climate factors, but not with covitality or academic performance. Results show that students with unemployed mothers had higher academic mindset scores, experienced more support in learning, more social and emotional support, and felt more respect for diversity.

Likewise, there are statistically significant differences, at the .05 level of significance, between students with unemployed and employed fathers in covitality, academic performance, and several school climate factors. Results show that students with unemployed fathers reported lower covitality and academic performance. However, they tend to experience higher academic mindset scores, felt more respect for diversity, and pay more attention to the physical environment as an important factor for school climate.
### Table 1.
Means, standard deviations, and inter-correlations of the variables

<table>
<thead>
<tr>
<th>Variables</th>
<th>1</th>
<th>2</th>
<th>3</th>
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<th>7</th>
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<tr>
<td>2. Support for learning and academic rigor</td>
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<tr>
<td>3. Discipline/order</td>
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<td>.60**</td>
<td>1.00</td>
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<tr>
<td>4. Positive peer relations</td>
<td>.55**</td>
<td>.47**</td>
<td>.49**</td>
<td>1.00</td>
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<td></td>
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<td></td>
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<tr>
<td>5. Social and emotional support</td>
<td>.56**</td>
<td>.73**</td>
<td>.64**</td>
<td>.50**</td>
<td>1.00</td>
<td></td>
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<tr>
<td>6. Bullying prevention</td>
<td>.48**</td>
<td>.63**</td>
<td>.52**</td>
<td>.48**</td>
<td>.64**</td>
<td>1.00</td>
<td></td>
<td></td>
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<tr>
<td>7. Respect for diversity</td>
<td>.39**</td>
<td>.39**</td>
<td>.40**</td>
<td>.35**</td>
<td>.45**</td>
<td>.41**</td>
<td>1.00</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>8. Physical environment</td>
<td>.48**</td>
<td>.51**</td>
<td>.41**</td>
<td>.32**</td>
<td>.47**</td>
<td>.44**</td>
<td>.30**</td>
<td>1.00</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1. ACADEMIC PERFORMANCE</td>
<td></td>
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<tr>
<td>2. COVITALITY</td>
<td>.24**</td>
<td>.45**</td>
<td>.36**</td>
<td>.32**</td>
<td>.42**</td>
<td>.41**</td>
<td>.26**</td>
<td>.21**</td>
<td>.17**</td>
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<td>Mean</td>
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<td>3.34</td>
<td>3.21</td>
<td>3.28</td>
<td>3.22</td>
<td>3.61</td>
<td>3.08</td>
<td>3.01</td>
<td>16.05</td>
<td>116.58</td>
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<td>Standard deviation</td>
<td>.78</td>
<td>.75</td>
<td>.52</td>
<td>.83</td>
<td>.79</td>
<td>.79</td>
<td>.59</td>
<td>1.09</td>
<td>2.28</td>
<td>14.94</td>
</tr>
</tbody>
</table>

* Note. **p < .01

### Table 2.
Results of t-test and descriptive statistics for covitality, general grade, and school climate dimensions by parents’ unemployment

<table>
<thead>
<tr>
<th>Mothers</th>
<th>Employed (n=490)</th>
<th></th>
<th>Unemployed (n=248)</th>
<th></th>
<th>t (736)</th>
<th>Cohen’s d</th>
</tr>
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<tr>
<td></td>
<td>M</td>
<td>SD</td>
<td>M</td>
<td>SD</td>
<td></td>
<td></td>
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<tr>
<td>-Covitality</td>
<td>116.86</td>
<td>14.79</td>
<td>116.08</td>
<td>15.12</td>
<td>-.67</td>
<td>.05</td>
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<td>-General grade</td>
<td>16.06</td>
<td>2.24</td>
<td>15.99</td>
<td>2.37</td>
<td>-.37</td>
<td>.03</td>
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<td>-Academic mindset and learning engagement</td>
<td>2.87</td>
<td>.77</td>
<td>3.00</td>
<td>.78</td>
<td>2.23**</td>
<td>.17</td>
</tr>
<tr>
<td>-Support for learning and academic rigor</td>
<td>3.30</td>
<td>.76</td>
<td>3.44</td>
<td>.73</td>
<td>2.51**</td>
<td>.18</td>
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<tr>
<td>-Discipline/order</td>
<td>3.20</td>
<td>.52</td>
<td>3.23</td>
<td>.51</td>
<td>.81</td>
<td>.06</td>
</tr>
<tr>
<td>-Positive peer relations</td>
<td>3.24</td>
<td>.83</td>
<td>3.36</td>
<td>.83</td>
<td>1.81</td>
<td>.14</td>
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<tr>
<td>-Social and emotional support</td>
<td>3.18</td>
<td>.78</td>
<td>3.32</td>
<td>.80</td>
<td>2.34**</td>
<td>.18</td>
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<td>-Bullying prevention</td>
<td>3.58</td>
<td>.79</td>
<td>3.67</td>
<td>.79</td>
<td>1.45</td>
<td>.11</td>
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<tr>
<td>-Respect for diversity</td>
<td>3.05</td>
<td>.57</td>
<td>3.15</td>
<td>.61</td>
<td>2.28**</td>
<td>.17</td>
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<tr>
<td>-Physical environment</td>
<td>2.98</td>
<td>1.07</td>
<td>3.09</td>
<td>1.12</td>
<td>1.37</td>
<td>.10</td>
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* Note. **df=142.533 (Satterthwaite approximation employed due to unequal group variances).
* p < .05. ** p < .01. *** p < .001
Moderation by school climate and parents’ employment

Conditional process analyses were performed to assess whether academic performance interacts with school climate and parents’ unemployment to predict academic performance. A moderated moderation model is proposed in which school climate dimensions moderate the effect of academic performance on covitality, with that mechanism varying by parents’ employment. The macro PROCESS Procedure (v. 3.1) for SPSS 24 was used for the analysis (Hayes, 2018). Bias-corrected bootstrap tests with a 95% confidence interval were conducted in order to evaluate the significance level of the indirect effects in Figure 1. Using random samples with replacement from the original data set, 5,000 bootstrap samples were estimated.

![Diagram of the conceptual model](image)

*Figure 1 Conceptual model of the academic performance-covitality association moderated by parents’ employment and school climate (Model 3)*

<table>
<thead>
<tr>
<th>Table 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Conditional Process Model Coefficients for the direct effect of Academic Performance and Covitality (DV) moderated by Fathers’ Employment and School Climate dimensions (significant)</td>
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<table>
<thead>
<tr>
<th></th>
<th>b</th>
<th>se</th>
<th>t</th>
<th>p</th>
<th>LLCI</th>
<th>ULCI</th>
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<tr>
<td>constant</td>
<td>177.24</td>
<td>35.64</td>
<td>4.97</td>
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<td>107.28</td>
<td>247.20</td>
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<tr>
<td>GG</td>
<td>-6.07</td>
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<td>-2.61</td>
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<td>D&amp;O</td>
<td>-21.68</td>
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<td>-2.17</td>
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<td>-41.26</td>
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<td>GGx D&amp;O</td>
<td>1.96</td>
<td>.65</td>
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<td>.01</td>
<td>.69</td>
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<td>FE</td>
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<td>GGxFE</td>
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<td>D&amp;OxFE</td>
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<td>GGxD&amp;OxFE</td>
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<td>.72</td>
<td>-1.85</td>
<td>.07</td>
<td>-2.74</td>
<td>.08</td>
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$R^2=.24 \quad F(7,738)=33.11 \quad p<.001$

<table>
<thead>
<tr>
<th></th>
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<th>t</th>
<th>p</th>
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<td>constant</td>
<td>224.24</td>
<td>58.55</td>
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<td>.02</td>
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<td>D&amp;O</td>
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</table>

$R^2=.18 \quad F(7,738)=23.45 \quad p<.001$
Academic performance and school climate dimensions were entered separately in the first step of the regression analysis. In the second step, the interaction between these variables was entered. In the third step, parents' employment was entered as a dichotomous moderator (i.e. employed/unemployed), followed by consequent steps including the interaction between performance and employment (fourth step), school climate dimensions and employment (fifth step) and a triple interaction between performance, school climate dimensions and parents' employment. Significant interactions were identified in the answers of students with unemployed fathers but not with unemployed mothers (Table 3).

A significant increase in covitality was identified, due to the interaction between academic performance, support for learning, and fathers' employment, \( R^2 = .24, F(7,738) = 33.113, p < .001 \). Support for learning was a significant moderator of the relationship between academic performance and covitality, for both the students with unemployed fathers but not with unemployed mothers (Table 3).

The unstandardized simple slope for the students with unemployed fathers was found significant only for 1 SD below the mean (\( b = 1.96, F(1,738) = 9.143, p = .003 \)) and employed (\( b = .63, F(1,738) = 4.056, p = .044 \)) fathers. The unstandardized simple slope for the students with unemployed fathers was found significant only for 1 SD above the mean (\( b = 1.95, t(738) = 3.09, p < .01 \)), but not significant for 1 SD below the mean (\( b = -1.01, t(738) = -1.28, p > .05 \)) and the mean level (\( b = .48, t(738) = .92, p > .05 \)) of support in learning (see Figure 2a). The unstandardized simple slope for the students with employed fathers was found significant for the mean level [\( b = .66, t(738) = 2.80, p < .01 \)] and for 1 SD above the mean [\( b = 1.14, t(738) = -2.56, p < .001 \)], but not significant for 1 SD below the mean [\( b = .19, t(738) = .57, p > .05 \)] of support in learning (see Figure 2b). The
effect of support in learning on the relationship between academic performance and covitality was significant when it was perceived by students with employed fathers at an average or a high level, and at a high level by students with unemployed fathers but not significant at lower values.

Moreover, a significant increase in covitality was identified, due to the interaction between academic performance, perception of discipline/order, and fathers’ employment, \( R^2 = .18, F(7,738) = 23.454, p < .001 \). Discipline/order was a significant moderator of the relationship between academic performance and covitality, for the students with unemployed fathers \( (b=3.03, F[1,738]=6.747, p = .010) \), but not for employed ones \( (b=.53, F[1,738]=1.225, p = .269) \). The unstandardized simple slope for the students with unemployed fathers was found significant only for \( 1 \) SD above the mean \( (b=2.15, t[738] = 3.10, p < .01) \), but not significant for \( 1 \) SD below the mean \( (b=-.99, t[738] = 1.08, p > .05) \) and the mean level \( (b=.58, t[738] = 1.08, p > .05) \) of discipline/order (see Figure 3a). The unstandardized simple slope for the students with employed fathers was found significant \( 1 \) SD below the mean \( (b=.72, t(738) = 2.09, p < .01) \), for the mean level \( (b=1.00, t(738) = 4.10, p < .001) \) and for \( 1 \) SD above the mean \( (b=1.27, t(738) = 3.68, p < .001) \) of discipline/order (see Figure 3b). The effect of discipline/order in school on the relationship between academic performance and covitality was differentiated when it was perceived by students with unemployed fathers at a high level but not at a low or moderate level. Students with employed fathers exhibited differences in the relationship between academic performance and covitality regardless of values of discipline/order in the school context.

The direct effect of academic performance on covitality was moderated by positive peer relations and fathers’ employment, \( R^2 = .15, F(7,738) = 19.042, p < .001 \). Positive peer relations was a significant moderator of the relationship between academic performance and covitality, for the students with unemployed fathers \( (b=2.57, F[1,738]=11.729, p < .001) \), but not for employed ones \( (b=-.05, F[1,738]=.027, p > .05) \). The unstandardized simple slope for the students with unemployed fathers was found significant only for \( 1 \) SD above the mean \( (b=2.57, t[738] = 3.53, p = .001) \), but not significant for \( 1 \) SD below the mean \( (b=-1.71, t[738] = -1.848, p = .065) \) and the mean level \( (b=-.43, t[738] = -.782, p = .434) \) of positive peer relations (see Figure 4a). The unstandardized simple slope for the students with employed fathers was found significant \( 1 \) SD below the mean \( (b=.87, t(738) = 2.52, p = .012) \), for the mean level \( (b=.83, t(738) = 3.34, p = .001) \) and for \( 1 \) SD above the mean \( (b=.79, t(738) = 2.27, p = .023) \) of discipline/order (see Figure 4b). The effect of positive peer relations in school on the relationship between academic performance and covitality was differentiated when perceived by students with unemployed fathers at a high level but not at a low or moderate level. Students with employed
fathers exhibited differences in the relationship between academic performance and covitality regardless of their perception of peer relations in the school context.

Figure 3 The conditional effect of academic performance on students’ covitality as a function of father’s employment and discipline/order from a moderated moderation model

Figure 4 The conditional effect of academic performance on students’ covitality as a function of father’s employment and positive peer relations from a moderated moderation model

A significant increase in covitality was identified, due to the interaction between academic performance, social-emotional support, and fathers’ employment, $R^2 = .21$, $F(7,738) = 27.137$, $p < .001$. Social and emotional support was proven a significant moderator of the relationship between academic performance and covitality, for the students with unemployed fathers ($b=1.90$, $F[1,738]=8.050$, $p = .005$), but not for students with employed fathers ($b=.18$, $F[1, 738]=.356$, $p = .551$). The unstandardized simple slope for the students with unemployed fathers was found significant only for 1 SD above the mean ($b=1.92$, $t[738] = 2.67$, $p < .01$), but not significant for 1 SD below the mean ($b=-1.08$, $t[738] =-1.39$, $p > .05$) and the mean level ($b=.42$, $t[738] =.79$, $p > .05$) of social-emotional support (see Figure 5a). The unstandardized simple slope for the students with employed fathers was found significant for the mean level [$b=.67$, $t(738) = 2.84$, $p < .01$] and for 1 SD
above the mean [\(b=.83, t(738) = 2.41, p<.05\)], but not significant for 1 SD below the mean [\(b=.54, t(738) = 1.61, p>.05\)] of social-emotional support (see Figure 5b). The effect of social-emotional support on the relationship between academic performance and covitality was significant at an average or a high level when perceived by students with employed fathers but not significant at lower values. Likewise, high levels of social-emotional support were significant in the relationship between academic performance and covitality when perceived by students with unemployed fathers.

![Figure 5](image)

*Figure 5* The conditional effect of academic performance on students' covitality as a function of father's employment and social-emotional support from a moderated moderation model

Eventually, the direct effect of academic performance on covitality was moderated by the perception of the environment and fathers' employment, \(R^2 = .10, F(7,738) = 11.067, p<.001\). Environment was proven a significant moderator of the relationship between academic performance and covitality for the students with unemployed fathers \((b=1.29, F[1,738]=8.157, p=.004)\), but not for students with employed fathers \((b=.40, F[1,738]=2.670, p=.103)\). The unstandardized simple slope for the students with unemployed fathers was found significant only for 1 SD above the mean \((b=1.98, t[738] = 3.03, p<.01)\), but not significant for 1 SD below the mean \((b=-.84, t[738] = -1.00, p>.05)\) and the mean level \((b=.57, t[738] =1.00, p>.05)\) of the environment scale (see Figure 6a). The unstandardized simple slope for the students with employed fathers was found significant for the mean level \((b=.88, t(738) = 3.41, p<.01)\) and for 1 SD above the mean \((b=1.31, t(738) = 3.49, p<.01)\), but not significant for 1 SD below the mean \((b=.44, t(738) = 1.22, p>.05)\) of the environment scale (see Figure 6b). The effect of environment on the relationship between academic performance and covitality was significant when it was perceived by students with employed fathers at an average or a high level, and at a high level by students with unemployed fathers but not significant at lower values.

**Discussion**

The goal of the present study was to investigate the perceptions of junior high school students about covitality and school climate with an emphasis on the role of several factors in shaping these perceptions. More specifically, it was examined whether individual (e.g. school performance) and systemic factors (e.g. dimension of school climate or parents’ unemployment) are related to students' covitality. The main hypothesis in this study was that a more positive school climate has the potential to limit the negative impact
The conditional effect of academic performance on students’ covitality as a function of father’s employment and physical environment from a moderated moderation model of unemployment and low school performance on covitality. This assumption was verified partly for fathers, but not for mothers. School climate moderated the direct effect of academic performance on covitality, especially for those students, whose fathers are unemployed. In other words, students whose perceptions are more positive about school climate, tend to report also higher levels of covitality when their academic achievement is high. On the contrary, when school climate is less positively perceived, students also reported lower levels of covitality, regardless of the level of school achievement. This finding was significant, however, only for the students with unemployed fathers.

In particular, students who had unemployed fathers experienced high levels of covitality, even as their grades increased and felt that they were receiving support in learning. This result corroborates previous findings that highlight the importance of learning support for students who have experienced hardships such as financial difficulties due to parental unemployment. More specifically, it has been argued that learning communities can ameliorate the impact of adverse conditions in students’ lives by providing opportunities for improving school engagement and learning supports that enable school to become a positive and enhancing context (Felner et al., 2007).

Students who had unemployed fathers experienced also high levels of covitality, even as their grades increased and felt that they were receiving social and emotional support. This finding is in agreement with many other findings, which have indicated the importance of a supportive school context in the advancement of academic performance and students’ subjective well-being. More specifically, studies have shown that students, who experience school climate in a positive way, are more likely to have better school performance, a more positive self-image and fewer difficulties in externalizing behaviors (Brown et al., 2010; Hatzichristou et al., 2017). Additionally, a positive school climate has been associated with higher levels of satisfaction for both students and parents. A positive school climate is associated with an affective connection with school, contributing to fewer student behavioral problems, fewer conflicts and violence, and better school adjustment (Brown et al., 2010; Hatzichristou et al., 2017). Hence, school climate can function as a protective factor, reducing the negative effects of certain risk factors (Hatzichristou et al, 2018; Thapa et al., 2013).

Furthermore, positive peer relations moderated the levels of covitality interacting with performance. Several studies support this finding, highlighting the significant role of peers in students’ adjustment, especially in secondary education (Kingery et al., 2011). The focus is no longer solely on the educational aspects...
of school life (e.g. teaching methods) but mainly on the social context of the school and more specifically on the role that human relations can play in students’ adjustment. In that context, school aims, not only at the transmission of knowledge but also at students’ social adjustment providing a caring and supportive environment.

Students who had unemployed fathers experienced high levels of covitality, even as their grades increased and reported high levels of discipline/order in their school. Studies have shown that everyday stressors, such as father’s unemployment, can alleviate the positive adjustment and sense of well-being and has a negative impact on teenagers’ adjustment (Sleskova et al., 2006). However, in this study, this was not verified. A possible explanation of this finding may be that students who have experienced such a stressful event in their family, such as a parent’s unemployment may find stability and a sense of security in the school context. The daily routine of school activities may provide a sense of "control," and predictability in contrast with the feeling of destabilization that they probably experience in the family. Therefore, students may be more committed to school.

Finally, physical environment proved to be significant in the relationship between performance and covitality by providing financially deprived students with a context, in which they can improve their performance and consequently feel better adjusted. Research findings have indicated that the quality of school’s physical environment has an impact on students’ perception of the school climate, thus affecting the behavior of students at school, such as violence, vandalism, smoking, and school performance (Uline & Tschannen-Moran, 2008). Adolescents who assess negatively the school physical environment usually report less supportive relationships with teachers and peers, a reduced sense of security, and increased adjustment difficulties (e.g. bullying, use of drugs) (Maxwell, 2016; Plank et al., 2009). Teachers, students, or parents have taken action in many school contexts aiming to improve the physical environment (infrastructure, building, playground, gardens) in order to make the learning process a more pleasant experience (Zullig et al., 2010).

The results of this study are useful for developing prevention and intervention programs to promote psychosocial adjustment and positive school climate in the school community. The role of school climate emerged as a significant protective factor for students' well-being, especially for the ones experiencing fathers’ unemployment. Academic achievement increases also when students experiencing economic recession feel supported and safe in their school. Dimensions that incorporate social, emotional, and learning support, either by teachers or peers, surfaced as an important source of emotional support for students that experience economic recession due to their fathers’ unemployment. Moreover, it seems that contextual factors, such as discipline/order and physical environment function compensatorily for those students who may feel that the school is a place that can provide a safe and caring environment.

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Αντιλήψεις εφήβων για την κοινωνική και συναισθηματική τους υγεία και σχολική επίδοση: Ο διαμεσολαβητικός ρόλος του σχολικού κλίματος

Βασιλική ΣΤΑΣΙΝΟΥ1, Χρυσή ΧΑΤΖΗΧΡΗΣΤΟΥ1, Αικατερίνη ΛΑΜΠΡΟΠΟΥΛΟ2, Παναγιώτης ΛΙΑΝΟΣ1

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Η ψυχοκοινωνική προσαρμογή των παιδιών και των εφήβων έχει μελετηθεί διεθνώς σε σχέση με πολλά παράγοντες σε ατομικό και συστημικό επίπεδο. Αυτό εξακολούθησε με πολλά έργα, όπως το Ερωτηματολόγιο Ψυχοκοινωνικής και Συναισθηματικής Υγείας [Social Emotional Health Survey–Secondary (SEHS-S) (Furlong, You, Renshaw, Smith, & O’Malley, 2013)], το Ερωτηματολόγιο Σχολικού Κλίματος (California Department of Education, 2011), τη δημογραφική στοιχείωση των μαθητών και άλλες πηγές στην ψυχοκοινωνική και συναισθηματική υγεία. Στην παρακάτω απεριόριστη λίστα συνδέονται τα βασικά παράμετρα και παραμέτρους για τον εκπαιδευτικό και την παιδαγωγική προσαρμογή στην παραμορφώσιμη εργασία των παιδιών και των εφήβων. Στην παρούσα έρευνα συμμετείχαν 745 εφήβοι μαθητές (ΣΜ.Ο 14.4 €) από Γυμνάσια της Αθήνας και συμπεράνθηκε ότι η ανεργία των πατέρων και ορισμένες διαστάσεις του σχολικού κλίματος (μαθησιακή υποστήριξη, πειθαρχία, σχέσεις με ομηλίκους, κοινωνική και συναισθηματική υποστήριξη) προβλέπουν την επίδοση των μαθητών. Τα αποτελέσματα παρέχουν βαθύτερη κατανόηση θέματος που έπρεπε να αντιμετωπίσει το θετικό ρόλο του θετικού σχολικού κλίματος στην ψυχοκοινωνική προσαρμογή των εφήβων παρέχοντας τη βάση για την ανάπτυξη και εφαρμογή αποτελεσματικών παρεμβάσεων στην παιδαγωγική κοινότητα.