

# ACADEMIC CORRELATES OF TAIWANESE SENIOR HIGH SCHOOL STUDENTS' HAPPINESS

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## ABSTRACT

This study examined the relation between academic factors and senior high school students' general happiness using a nationally representative sample of 11,061 11th graders in Taiwan. Pearson correlation analyses indicated that English teacher-perceived academic performance, mathematics teacher-perceived academic performance, teacher academic support, classmate academic support, organizational processes, and school satisfaction were positively related to students' general happiness, while disturbance in class was negatively related. Regression analysis found that objective academic achievement, mathematics teacher-perceived academic achievement, classmate academic support, disturbance in class, organizational processes, and most importantly, students' overall appraisals of their own happiness with school helped predict students' general happiness, account for 18.4% of the total variance. Among these variables, objective academic achievement and disturbance in class were negatively associated with general happiness. Some of the study's findings are consistent with those in the literature and some extend established accounts, while others point to future research directions.

Throughout the past century, psychologists have focused mainly on depression, anxiety, and conduct disorders of adolescents while neglecting positive mental health. Only relatively recently has there been increasing interest in positive psychology, and more researchers are starting to examine adolescents' life satisfaction and its correlates and predictors (Gilman & Huebner, 2003). Similar to findings in studies of adults, most adolescents report positive levels of life satisfaction (Casas, Alsinet, Rossich, Huebner, & Laughlin, 2001; Greenspoon & Saklofske, 1997; Huebner, Frane, & Valois, 2000; Leung & Zhang, 2000; Neto, 1993). In a review study, Suldo, Riley, and Shaffer (2006)

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indicated that most research on adolescents' life satisfaction has examined the roles of family functioning and intrapersonal variables, but few studies have researched life satisfaction in relation to schooling. Moreover, the existing literature regarding school-related variables and life satisfaction has investigated only one or a few academic factors in isolation. Therefore, the present study extends the previous literature and examines the relation between academic factors and high school students' general happiness more comprehensively using a nationally representative sample in Taiwan.

#### LITERATURE REVIEW

Since the linkage between academic factors and youngsters' happiness is relatively unexplored in the literature of Taiwan, the ensuing Western literature and studies on Chinese adolescent students contributed to our initial understanding of the relations among academic achievement, class-level and school-level academic-related factors, students' overall school satisfaction, and adolescents' general happiness.

##### *Academic Achievement and Happiness*

Many studies have included objective academic achievement (e.g., test scores, school grades) and/or students' self-perceived academic achievement (e.g., self-concept of academic performance, self-evaluated academic competence, academic self-efficacy) as a variable when investigating correlates or predictors of adolescents' life satisfaction. While self-perceived academic achievement consistently has been found to play an important role in students' general happiness, findings on objective academic achievement and global life satisfaction have been inconclusive.

Kirkcaldy, Furnham, and Siefen (2004) investigated the relation between educational performance in reading, mathematical, and scientific literacy as assessed in the Programme for International Student Assessment (PISA) survey and the health performance indicators of the World Health report with data from 30 nations. They found a positive relation between happiness, as measured by Veenhooven's happiness scale, and the three literacy scores, with the magnitude of the association being greatest for reading. However, Huebner (1991) found that grades from the most recent report card were not associated significantly with global life satisfaction of 79 students in grades 5-7 of a rural school district in the Midwest region of the United States.

Two studies have taken both objective and self-perceived academic achievement into consideration when examining adolescents' general happiness. Cheng and Furnham (2002) investigated the extent to which peer relations, self-confidence, and school performance correlated with happiness among 90 students aged 16 to 18 in the United Kingdom. A correlation analysis showed that both actual school grades and self-confidence in terms of academic performance were significantly related to general happiness, but the relation with the latter was stronger. In addition, a series of hierarchical regression analyses revealed that self-confidence in terms of academic performance was a significant predictor of happiness, but school grades were not. Chang, McBride-Chang, Stewart, and Au (2003) explored both developmentally invariant and variable predictors of life satisfaction among 115 second-graders and 74 eighth-graders from Hong Kong. Academic self-concept was found to predict life satisfaction equally strongly in adolescents and children, but test scores were more predictive of children's than adolescents' life satisfaction. In other words, both studies suggested self-perceived academic achievement to be more predictive of adolescents' happiness than objective academic achievement.

The impact of self-perceived academic performance on adolescents' life satisfaction was supported by two other studies. Leung, McBride-Chang, and Lai (2004) investigated the relations among maternal concern and restrictiveness, self-evaluated academic competence, and life satisfaction in a short-term, longitudinal study of 346 seventh-grade students from Hong Kong. Using structural equation modeling, the researchers found that adolescents' perceived maternal concerns and perceived academic competence significantly predicted life satisfaction over time. Suldo and Huebner (2005) examined whether extremely high life satisfaction was associated with adaptive or maladaptive functioning among 698 students from three middle schools and two high schools in a rural public school district in a Southeastern state of the United States. They found that adolescents with very high life satisfaction reported significantly higher levels of academic self-efficacy than their peers with life satisfaction in the average range.

### *School Climate, School Satisfaction, and Happiness*

Samdal, Nutbeam, Wold, and Kannas (1998) examined the relation between school climate and school satisfaction with data from 11-, 13-, and 15-year-old students in Finland, Latvia, Norway, and Slovakia. Among school climate factors (e.g., teacher support, student support, disturbances in class, unreasonable job demands, justice in school, safety in the school environment, bullying, and loneliness during

breaks), they found the strongest predictors of students' satisfaction with school to be organized process factors (e.g., justice in school and safety in the school environment) and teacher support, followed by student support and disturbances in class. However, the linkage between adolescents' school satisfaction and their general happiness was not explored in this study.

Other studies have identified certain school climate factors as being associated with adolescents' general happiness. Suldo and Huebner (2005) found that, in addition to the factor of academic self-efficacy mentioned earlier, very high life satisfaction also co-occurred with high social support from both classmates and teachers. Moreover, the effect size associated with support from classmates was twice as large as that for support from a close friend. Nativig, Albrektsen, and Qvarnstrom (2003) explored the association between happiness and experience of stress at school, as well as personal and social factors among 887 Norwegian school adolescents aged 10-15. Similarly, they found teacher social support and peer social support to be positively related to happiness; moreover, support from teachers seemed to be more important than support from other students. In an earlier study, Wentzel (1998) also found academic support from teachers and peers to be related to adolescents' interest in school among 167 sixth-graders in a suburban community of the United States.

In sum, researchers have found academic achievement and school climate to be associated with adolescents' happiness, or life satisfaction, which has served as a proxy for happiness. As a secondary analysis on national data in Taiwan, the present study investigated how objective academic achievement, teacher-perceived academic achievement, teacher academic support, classmate academic support, disturbances in class, and organizational processes, as well as students' overall school satisfaction, predict Taiwanese 11th graders' general happiness.

## METHOD

### *Sample and Data Collection*

The Taiwan Educational Panel Survey (TEPS) is a multistage, stratified sample survey of Taiwanese high school students, jointly supported by Academia Sinica, the Ministry of Education, the National Academy for Educational Research, and the National Science Council in Taiwan (Chang, 2003). By using clustered, multistage, stratified probability sampling, high schools in Taiwan were classified according

to geographical location, metropolitan/rural area, and public/private school. Then, within each school, four classes were selected, and within each class, 15 students were selected. The national data set used in this study was collected in 2005 and released in 2007 as the third wave—the new panel. The sample included 11,061 11th graders from 260 senior high schools classified according to geographical location, metropolitan/rural area, and school types. The sample consisted of 50% males.

For the purpose of this study, data from students' and their teachers' questionnaires were used. In the TEPS student questionnaire, they were asked to answer questions regarding their background: daily engagement, family life, school life, and extracurricular activities. In this study, information regarding teacher academic support, classmate academic support, disturbance in class, organizational processes, school satisfaction, and general information on students' happiness were all drawn from the students' questionnaires. In addition, students completed a series of ability tests, with the composite test score serving as their objective academic achievement. In the TEPS teacher questionnaire, Chinese, English, and mathematics teachers were asked to report on their teaching methods and materials, teaching environment, grading, and perceived academic performance of individual students in the subject they taught. The last section on perceptions of individual students' academic performance was utilized in this study to provide information on teacher-perceived academic achievement.

### *Measures*

*General happiness.* This was measured by a single item: "Taking all things together, would you say you have a happy life these days?" Participants were asked to respond to a 4-point Likert scale (ranging from 4 = very happy through 1 = not happy at all).

*Objective academic achievement.* This was measured by four curriculum-free ability subtests on analytical thinking, mathematics, language, and science. The four scores were combined into a composite, with higher scores signifying better educational achievement.

*Teacher-perceived academic achievement.* Three teacher-perceived academic achievement ratings were obtained from teachers of Chinese, English, and mathematics, the three subject areas considered to be of utmost importance in Taiwan's secondary schools. Respondents were asked to rate a specific student's performance in the subject they teach compared to other students in the class (rated on a 4-point scale with 4 = much better than other students and 1 = much worse than other students).

*Teacher academic support.* This was measured by a sum score of six variables ("Teachers can recall every student's name"; "Teachers reinforce hard-working students"; "Teachers utilize various methods to help students learn"; "Teachers assign homework frequently"; "Teachers make sure students finish their homework"; and "Teachers discuss and explain after a test"). The internal consistency analyses for this sum score yielded a Cronbach's  $\alpha$  of .68. The response categories were (1) true for most teachers, (2) true for at least half of the teachers, (3) true for some teachers, and (4) true for none of the teachers.

*Classmate academic support.* This was measured by a sum score of six variables ("My classmates study and discuss homework together frequently"; "My classmates are academically competitive with each other"; "My classmates discuss entering a higher institution frequently"; "My classmates go to exhibitions and speeches outside of school together frequently"; "My classmates initiate conversation with teachers outside of the classroom frequently"; and "My classmates come from good socioeconomic backgrounds"). Internal consistency analyses for this sum score yielded a Cronbach's  $\alpha$  at .71. Participants were asked to respond on a 4-point Likert scale (ranging from 4 = strongly agree through 1 = strongly disagree).

*Disturbance in class.* This was measured by the sum of three variables ("Teachers often loudly ask students to be quiet or punish students"; "Teachers frequently ignore whether students are engaging in their teaching"; and Teachers spend most of the time talking about non-academic topics or dealing with class disturbances"). Internal consistency analyses for this sum score yielded a Cronbach's  $\alpha$  of .61. The response categories were (1) true for most teachers, (2) true for at least half of the teachers, (2) true for some teachers, and (4) true for none of the teachers.

*Organizational process.* This was measured by a sum of six variables ("The rules are not fair in school"; "The grading is not fair in school"; "The school does not show interest in the students"; "The rules are strict in school"; "I do not feel safe at school"; and "The learning atmosphere is not good in school"). Internal consistency analyses for this sum score yielded a Cronbach's  $\alpha$  of .73. Participants were asked to respond on a 4-point Likert scale (ranging from strongly agree to strongly disagree).

*School satisfaction.* This was measured by the sum of four variables ("School is a place I can learn things"; "School is a place for making friends"; "Going to school is boring"; and "School is a happy place").

Internal consistency analyses for this sum score yielded a Cronbach's  $\alpha$  of .67. Participants were asked to respond on a 4-point Likert scale (ranging from strongly agree to strongly disagree).

## RESULTS

When Taiwanese 11th graders were asked, "Taking all things together, would you say you have a happy life these days?" their responses were 2.5% very unhappy, 11.6% not quite happy, 66.5% quite happy, and 19.3% very happy ( $M = 3.03$ ,  $SD = 0.64$ ).

Table 1 summarizes the intercorrelations among the academic achievement factors, school factors, school satisfaction, and Taiwanese 11th graders' general happiness. For academic achievement, Pearson correlation analyses indicated that English teacher-perceived and mathematics teacher-perceived academic performance correlated significantly with general happiness, but Chinese teacher-perceived academic performance and objective academic achievement did not. All school climate factors, however, correlated significantly with general happiness. While teacher academic support, classmate academic support, and organizational processes were positively related to general happiness, disturbance in class was negatively related to that variable. In addition, overall school satisfaction was significantly related to general happiness. It is important to note that almost all the independent variables were significantly correlated with each other.

Four sets of regression analyses were employed to determine how academic achievement variables, class-level academic-related variables, school-level variables, and school satisfaction help explain Taiwanese 11th graders' level of general happiness, as shown in Table 2. In the first model, among the academic achievement variables, only mathematics teacher-perceived academic achievement significantly entered the equation to predict general happiness. In the second model, among the academic achievement variables and class-level academic-related variables, objective academic achievement, mathematics teacher-perceived academic achievement, teacher academic support, classmate academic support, and disturbances in class significantly entered the equation. In the third model, the school-level variable of organizational process also significantly entered the equation. Finally, in the last model, in addition to objective academic achievement, mathematics teacher-perceived academic achievement, classmate academic support, disturbances in class, and organizational process, school satisfaction also significantly entered the equation to predict general happi-

**Table 1** Correlations Among Research Variables

	1	2	3	4	5	6	7	8	9	
1.	1									
2.	.008	1								
3.	.010	.210***	1							
4.	.024*	.208***	.342***	1						
5.	.048***	.311***	.284***	.315**	1					
6.	.135***	.061***	.058***	.039***	.033**	1				
7.	.158***	.138***	.044***	.080***	.059***	.322***	1			
8.	-.108*	-.152**	-.131**	-.122**	-.099**	-.239**	-.148**	1		
9.	.188***	.168***	.096***	.104***	.080***	.230***	.206***	-.416**	1	
10.	.415***	.149***	.066***	.077***	.094***	.239***	.295***	-.231**	.370***	1

\*p<.05 \*\* p<.01 \*\*\*p<.001

*Note.* Variable numbers refer to the following: 1. General happiness, 2. Objective academic achievement, 3. Chinese teachers' perceived academic achievement, 4. English teachers' perceived academic achievement, 5. Mathematic teachers' perceived academic achievement, 6. Teacher academic support, 7. Classmate academic support, 8. Disturbance in class, 9. Organizational process, 10. School satisfaction.

ness, accounting for 18.4% of the total variance. It is interesting to note that in the last model, when school satisfaction was added, teacher academic support did not significantly enter the equation as it did in the previous two models, and disturbance in class, classmate academic support, and organizational process all entered the equation with a smaller effect than the same variables in the previous two models. Another interesting finding was that even though objective ac-

**Table 2 Regression Analyses Predicting Taiwanese Senior-High-School Students' General Happiness**

Variable	Model 1	Model 2	Model 3	Model 4
Objective academic achievement	.001	-.020*	-.029***	-.042***
Chinese teachers' perceived academic achievement	-.008	-.020	-.024	-.024
English teachers' perceived academic achievement	.001	-.012	-.013	-.014
Mathematic teachers' perceived academic achievement	.037**	.035**	.036***	.025**
Teacher academic support		.045***	.034***	.009
Classmate academic support		.079***	.069***	.024**
Disturbance in class		-.065***	-.031***	-.016*
Organizational process			.097***	.027***
School satisfaction				.249***
R Square	.002	.044	.061	.184
F(df)	3.548** (4,7791)	50.632*** (7,7788)	63.783*** (8,7787)	195.101*** (9,7786)

\*p < .05    \*\*p < .01    \*\*\*p < .001

ademic achievement did not significantly enter the equation in the first model, it became a significant predictor when other variables were added and taken into consideration together in the second, third, and last models.

DISCUSSION

Consistent with results from earlier studies on adolescents' global life satisfaction, this study's findings revealed positive levels of general happiness for Taiwanese adolescents. For example, while in South Car-

olina, 73% of the 5,545 public junior high school students rated their global life satisfaction in a positive way, ranging from "mostly satisfied" to "delighted" (Huebner, Frane, & Valois, 2000), 85.8% of the Taiwanese 11th graders in the present study rated their general happiness in a positive way, ranging from "quite happy" to "very happy." Compared to the 1,099 Chinese junior high school students in grades seven to nine in Hong Kong who reported an average rating of 4.31 ( $SD = 1.09$ ) on a 7-point Likert scale of global life satisfaction (Leung & Zhang, 2000), the Taiwanese students in this study reported an average rating of 3.03 ( $SD = .640$ ) on a 4-point Likert scale of general happiness.

### *Academic Achievement*

In this study, a Pearson correlation analysis revealed that objective academic achievement, assessed by a composite score of ability subtests for analytical thinking, mathematics, language, and science, was not significantly related with Taiwanese 11th graders' general happiness, a result consistent with Huebner's (1991) findings with American adolescents, but inconsistent with Cheng and Furnham's (2002) findings on English youth. However, further regression analyses revealed that objective achievement was a significant predictor of general happiness when other academic factors were also taken into consideration. Specifically, regression analysis shows that, with relevant teacher-perceived academic factors, school climate factors, and the school satisfaction variable constant, the composite test score helps explain the general happiness of Taiwanese senior high school students. Actually, this study's finding that the composite test score was negatively associated with general happiness is puzzling, because it is generally inconsistent with results from Western studies.

Even though researchers in Taiwan have not directly explored the relation between academic achievement and happiness, Yang (2005), who investigated the value of educational achievement and adolescents' mental health with an earlier data set also collected by the TEPS, found higher objective academic achievement to be associated with worse mental health until the achievement was high, where the downward trend stopped and curved up only very slightly. Similarly, Chen and Lu (in press), who examined the effects of after-school time use on later educational achievement and mental health, respectively, with the TEPS data set, found higher objective academic achievement to be associated with poorer later mental health in a zero-order correlation analysis, while objective academic achievement was not a significant predictor for later mental health when background and after-

school activity variables were taken into consideration. In another independent study with Taiwanese adolescents, researchers found that objective academic achievement (indexed by school test scores) was positively associated with better self-concepts in certain areas, but *not* with overall self-satisfaction, which may be regarded as a proxy for happiness (Lu & Lin, 2003).

Both Yang's (2005) and Chen and Lu's (in press) findings seem to be consistent with the general impression, which has been well acknowledged in Taiwanese society, that academically more proficient students are more likely to feel pressured toward educational competition and therefore are more likely to have depressive symptoms. Lu and Lin's (2003) results, in contrast, reveal more complexity in projecting a relation between achievement and well-being. Does the culturally unique phenomenon explain the lack of relation, or even negative relation, between objective academic achievement and general well-being? Further research in this area is recommended.

Unlike objective academic achievement and general happiness, the relation between self-perceived academic achievement and general happiness has been well established in previous studies (e.g., Chang et al., 2003; Cheng & Furnham, 2002; Leung et al., 2004; Suldo & Huebner, 2005). The present study adds a new dimension to the literature by investigating the relation between teacher-perceived academic achievement and general happiness. The Pearson correlation analysis shows that both mathematic and English teachers' perceived academic achievement were significantly related to students' level of general happiness; but the regression analysis found that only mathematics teachers' perceived mathematics achievement contributed to students' general happiness when other academic factors were taken into consideration. In other words, how mathematics teachers evaluate an individual student was a significant predictor of the student's general happiness, when relevant teacher-perceived academic factors, school climate factors, and the school satisfaction variable were held equivalent. Since performance in mathematics plays an important role in the high-stakes college entrance exams for Taiwanese senior high school students, it is reasonable to speculate whether a mathematics teacher's high regard for a student might affect his or her perceived general happiness. Nevertheless, how objective academic achievement, student self-perceived academic achievement, and teacher-perceived academic achievement interact with adolescents' general happiness and with each other remains an area for further research.

### *School Climate, School Satisfaction, and General Happiness*

Teacher academic support, classmate academic support, disturbance in class, organizational processes, and school satisfaction were all significantly related to the general happiness of Taiwanese 11th graders. In the regression analyses, when school satisfaction was added to the last model, teacher academic support disappeared, and classmate academic support, disturbance in class, and organizational processes became predictors with smaller effects. A probable explanation is that the variance of these four factors was accounted for by school satisfaction for general happiness in the last model, considering that Samdal et al. (1998) have indicated strong correlations among these factors.

Previous literature has provided empirical evidence of the effects of teacher social support and student social support upon students' general happiness (Nativig, Albrektsen, & Qvanstrom, 2003; Samdal et al., 19998; Suldo & Nuebner, 2005). The present study focused on the academic dimension of teacher support and classmate support, and the findings generally concur with results from previous studies. In addition, disturbance in class, a third class-level academic-related factor, also was found to be significantly associated with students' general happiness, but in a negative way. Similarly, school-level organizational process was found to be a predictor of general happiness, and finally, students' overall appraisals of their happiness with school, measured by the four dimensions of the degree to which students perceived school as a happy place, a boring place, a place for making friends, or a place for learning, was the greater predictor of students' general happiness in this study, even though this linkage had not been explored before.

In conclusion, academic achievement factors, school climate factors, and most importantly, school satisfaction were found to have a significant impact upon Taiwanese 11th graders' general happiness. This study, as a secondary analysis utilizing a large-scale survey constrained by time, is limited in its measurement. Only a single item was used to measure the dependent variable (i.e., general happiness). In addition, some probable, relevant independent variables, such as student self-perceived academic achievement and unreasonable job demands, were not included in the questionnaire. However, this study deserves attention because it adds to the literature on the relations between academic factors and adolescents' general happiness. Some of the findings of this study are consistent with those in the literature and some extend established accounts, while others point to future research directions.

## REFERENCES

- Casas, F., Alsinet, F., Rossich, M., Huebner, E. S., & Laughlin, J. (2001). Cross-cultural investigation of the multidimensional students' life satisfaction scale with Spanish adolescents (pp. 359-366). In F. Casas & C. Saurina (Eds.), *Proceedings of the III Conference of International Quality of Life Studies*.
- Chang, L. Y. (2003). *Taiwan Education Panel Survey: Base year 2001, student data and parent data*. Taipei: Center for Survey Research, Academia Sinica.
- Chang, L., Chang, C. M., Stewart, S. M., & Au, E. (2003). Life satisfaction, self-concept, and family relations in Chinese adolescents and children. *International Journal of Behavioral Development, 27*(2), 182-189.
- Chen, S. Y., & Lu, L. (in press). After-school time use in Taiwan: Effects on educational achievement and well-being. *Adolescence*.
- Cheng, H., & Furnham, A. (2002). Personality, peer relations, and self-confidence as predictors of happiness and loneliness. *Journal of Adolescence, 25*, 327-339.
- Gilman, R., & Huebner, S. (2003). A review of life satisfaction research with children and adolescents. *School Psychology Quarterly, 18*(2), 192-205.
- Greenspoon, P. J., & Saklofske, D. H. (1997). Validity and reliability of the Multidimensional Students' Life Satisfaction Scale with Canadian children. *Journal of Psychoeducational Assessment, 15*, 138-155.
- Huebner, E. S. (1991). Correlates of life satisfaction in children. *School Psychology Quarterly, 6*(2), 103-111.
- Huebner, E. S., Drane, W., & Valois, R. F. (2000). Levels and demographic correlates of adolescent life satisfaction report. *School Psychology International, 21*, 281-292.
- Kirkcaldy, B., Furnham, A., & Siefen, G. (2004). The relationship between health efficacy, educational attainment, and well-being among 30 nations. *European Psychologist, 9*(2), 107-119.
- Leung, C. Y. W., Chang, C. M., & Lai, B. P. Y. (2004). Relations among maternal parenting style, academic competence, and life satisfaction in Chinese early adolescents. *Journal of Early Adolescence, 24*(2), 112-143.
- Leung, J. P., & Zhang, L. W. (2000). Modelling life satisfaction of Chinese adolescents in Hong Kong. *International Journal of Behavioral Development, 24*(1), 99-104.
- Lu, L., & Lin, Y. C. (2003). Academic achievement and self-concept: Chinese and Japanese adolescents. *Fu Jen Studies: Science and Engineering, 37*, 43-62.
- Natvig, G. K., Albrektsen, G., & Qvarnstrom, U. (2003). Associations between psychosocial factors and happiness among school adolescents. *International Journal of Nursing Practice, 9*, 166-175.
- Neto, F. (1993). The Satisfaction with Life Scale: Psychometrics properties in an adolescent sample. *Journal of Youth and Adolescence, 22*, 125-134.
- Samdal, O., Nutbeam, D., Wold, B., & Kannas, L. (1998). Achieving health and educational goals through schools: A study of the importance of the school climate and the students' satisfaction with school. *Health Education Research, 13*(3), 383-397.
- Suldo, S. M., & Huebner, E. S. (2005). Is extremely high life satisfaction during adolescence advantageous? *Social Indicators Research, 78*, 179-203.

- Suldo, S. M., Riley, K. N., & Shaffer, E. J. (2006). Academic correlates of children and adolescents' life satisfaction. *School Psychology International, 27*(5), 567-582.
- Wentzel, K. R. (1998). Social relationships and motivation in middle school: The role of parents, teachers, and peers. *Journal of Educational Psychology, 90*(2), 202-209.
- Yang, M. L. (2005). The value of educational achievement and adolescents' mental health. *Chinese Journal of Mental Health, 18*(2), 75-99.

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