

THE EFFECT OF LEARNING STRESS ON LEISURE BENEFITS:
LEISURE COPING STRATEGIES VARIABLES AS MODERATORS

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Abstract

The purpose of this study is to verify the effect of learning stress on leisure benefits and analysis the leisure coping strategies have a moderator effect on the between relationship learning stress and leisure benefits. The students of senior high and higher vocational schools in Taiwan were treated as the subjects, and 720 students from eight senior high and higher vocational schools were drawn by cluster sampling. A total of 622 valid samples were retrieved, with a valid return rate of 86.4%. According to the analysis results, when students' academic stress, parental stress, teacher stress and peer stress are higher, their leisure benefits are lower. Leisure coping strategies show significant moderating effect on relationship between learning stress, parental stress and peer stress and leisure benefits. The findings can serve as reference for future studies.

Keywords: Management, Senior High School, Learning Stress, Leisure Benefits, Leisure Coping Strategies, Moderators

Introduction

One of important objectives of educational reform is to avoid academic stress caused by competition for school admission, change examination-oriented instructional process and result in lively curriculum and diverse development of instructional content. However, it seems that reform of new system did not lower students' load of examinations (Liu, Chang, & Hsu, 2014). Cheng (2010) stated that in Taiwan, senior high school students are at the important phase of physical and mental development. Due to elite education with fewer children, cultivation of globalization vision and life style with enormous academic stress and competition of examinations, nowadays, senior high school students are anxious everyday and they struggle and attempt to have excellent performance. Thus, they do not experience diverse development and healthy learning.

According to investigation of Lin, Wu, Kuo, and Chiu (2009), as to teenagers' leisure constraints, academic study is the most critical factor. Leisure constraints influence teenagers' physical and mental development. Enhancement of positive emotion by leisure activities is an important stress coping strategy. It regulates people's emotion, enhances their positive and lowers their negative emotion under the stress. It strengthens individuals' self-determination and social support and effectively copes with life stress. Social support from social recreation allows people to effectively cope with stress and maintain health (Coleman & Iso-Ahola, 1993). Iwasaki and Mannell (2000) argued that after encountering immediate stressful situation, by leisure activities, people develop coping behavior or cognition. Sometimes people intentionally practice

leisure activities and by change of behavior or cognition, they regulate stress. Sometimes, people realize that they can manage pressure by participating in leisure activities (Qian, Yarnal, & Almeida, 2014).

With rapid social and economic development, leisure activities have become the essential needs of life. Modern people, in particular, encounter different kinds of stress such as work or academic study and they should properly release the pressure. Leisure activities are effective measures (Denovan & Macaskill, 2017). Stress caused by life or work should be coped with or released by appropriate measure or method; otherwise, long-term depression might cause emotional problem and lead to physical health issue. Sports are positive methods to release stress and improve emotion (Huang, 2008). Non-competition sports lower human beings' pressure and enhance cardiovascular function and immunity to fight against illness. Sports are the channels to release stress (Kuo, & Kao, 2008). In addition, leisure activities are resources and measures to cope with short-term stress and experience long-term negative events in life. They release stress and allow people to escape from the problems (Kleiber, Hutchinson, & Williams, 2002). Leisure experience enhances self-recognition, balance between physical and mental states and accomplish the communication with society and environment. Situation of experience influences related cognitive development (Wang & Hu, 2013).

Thus, based on above, this study aims to explore correlation between senior high school students' learning stress, leisure coping and leisure benefits in order to find if leisure coping can influence senior high school students' lei-

sure benefits when they encounter enormous learning stress.

Literature Review and Conceptual Framework Development

The Relationship between Academic Stress and Leisure Benefits

In Taiwan, although there are diverse channels of admission to universities, regarding some popular departments, the competition is still severe. There are always senior high school students who intend to attend good universities. In reality, learning stress is not reduced. Due to academic stress, senior high school students have less time to participate in sports and leisure activities. Their health and physical functions are significantly not satisfying (Lo, Lee, & Tsai, 2011). According to research of Greening and Dollinger (1993), teenagers' low grades and increasing academic stress are considerably associated with tendency of depression. Therefore, most of senior high school students have leisure constraints due to academic issues. After formal courses of school, students must join in cram school. They spend most of time in academic learning and have less time for leisure activities. Thus, effect of leisure benefits is considerably lowered (Chen & Tzeng, 2009; Liu, Chang, & Hsu, 2014). Therefore, the hypothesis 1 of this study was proposed as follows:

H1: Students' academic stress has a negative impact on the leisure benefits.

The Relationship between Parental Stress and Leisure Benefits

Parents considerably influence their children's learning. In society of Taiwan,

in particular, there is the belief in "learning is the noblest of human pursuits". Many parents make their children to join in cram school or talent classes, mostly the academic ones, such as mathematics, language and mental calculation, since their childhood to allow their children to be more advanced than others. Few of them have the intention to propose leisure activities to their children. Due to parents' excessive intervention in academic study and expectation, teenagers are extremely stressful and it even results in their serious depression (Chen & Tzeng, 2009). Parents' educational measure also influences children's personality development. Excessive care results in children's low tolerance of frustration, strong dependency, irresponsibility, high academic stress, etc. (Farrell, 2007). Parents actively participate in and intervene in children's academic study. They prevent children's learning frustration and prepare for their future education. Hence, parents tend to have the cognition and attitude to concern about children's learning frustration (Lo, Lee, & Tsai, 2011). According to Wu (2006), the most important factor of students' stress is that they cannot accomplish the grades expected by parents. They tend to have low grades in examinations, their results of examinations do not meet the parents' standard and they are not interested in subjects of cram school or talent classes. It reveals that parents cause high pressure for children's learning. With parents' excessive expectation, they do not agree with children's participation in leisure activities which are not related to academic learning. Therefore, senior high school students in Taiwan must follow cram school courses arranged by parents and they have fewer opportunities to enjoy benefits of leisure activities. Thus, this study hypothesis 2 was for-

mulated as follows:

H2: Students' parental stress has a negative impact on the leisure benefits.

The Relationship between Teacher Stress and Leisure Benefits

Teachers play the roles as instructors. However, regarding senior high school students' stress caused by competition for school admission, teachers usually undertake parents' expectation for children in terms of their academic performance. When teachers have excessive demands, it results in students' invisible learning stress (Chen, 2010). Teachers play significant roles in students' school life. They are extremely influential on academic learning or affairs of life. For instance, in Taiwan, in order to reinforce students' grades, teachers tend to borrow physical education or talent classes to strength subject practice (such as Chinese, mathematics and chemistry), particularly in the phase of senior high school when students encounter the pressure of entrance examination to universities (Liu, Wu, & Wu, 2009). When students do not comprehend the content of courses, teachers are excessively strict, their interaction is negative and communication between parents and teachers is not satisfying, students perceive the pressure from teachers (Kaplan, Liu, & Kaplan, 2005). Due to teachers' excessive expectation, many students experience obstacles and failure in learning (Knighten, 1984). Therefore, teachers' demand for students' academic learning lowers students' participation in normal leisure activities. Some teachers even forbid students to waste time on leisure activities. Therefore, the hypothesis 3 was proposed as follows:

H3: Students' teacher stress has a negative impact on the leisure benefits.

The Relationship between Peer Stress and Leisure Benefits

The most significant characteristic in adolescence is the increased effect of peers. For instance, Chen and Tzeng (2009) argued that in adolescence, teenagers attempt to escape from parents' control and engage their affection to peers. When peers do not support or identify with them, their self-confidence is reduced. In addition, in severe academic competition, they and peers exclude each other. When their academic achievement is inferior, they are mocked by peers. When their interpersonal relationship with peers is negative, they tend to be hostile. Thus, how to maintain positive competition and interaction with peers is the worry and concern of modern teenagers (Kaplan, Liu, & Kaplan, 2005). Huang and Lee (2002) studied teenagers' peer conflict and realized that in peer relationship, due to difference of concept, self-centered and cognition, inferior academic performance and low IQ, teenagers are stressful and not satisfied. Trenberth (2005) stated that in all leisure time and all types of leisure activities, teenagers' companions are mostly the classmates or friends. Peer interaction influences quality and frequency of their leisure participation. Thus, this study hypothesis 4 was formulated as follows:

H4: Students' peer stress has a negative impact on the leisure benefits.

Leisure Coping Strategies as Moderator between Learn Stress and Leisure Benefits

Leisure coping is based on individuals' needs to release negative emotion. By participating in leisure activities, they lower negative emotion and obtain leisure benefits (Kleiber, Hutchinson, & Williams, 2002). Iwasaki and Mannell (2010) argued that leisure coping strategies mean that by engagement of leisure activities, individuals release stress and maintain physical and mental health. There are various leisure coping strategies and it depends on individuals' needs of leisure activities. The purposes all refer to pursuit of psychological health (Liu, Chang, & Hsu, 2014). Previous research demonstrated that students' leisure coping strategies can enhance leisure participation and increase leisure benefits (Chen & Tzeng, 2009; Wu, Hsu, & Huang, 2008). Learning stress has been the problem encountered by senior high school students. It is the reality that educational reform intends to change. Due to learning stress, senior high school students should maintain psychological comfort by leisure coping and experience the benefits resulted from leisure activities (Chen, 2010). Driver (1989) stated that leisure activities help recover energy and they serve to respond to or lower stress. Besides, there is significant correlation between stress and leisure demand. According to empirical research of Liu, Chang, and Hsu (2014), students' leisure coping strategies can lower academic stress and increase leisure benefits. Based on above, this study will explore effects of learning stress and leisure benefits and treat leisure coping strategies as moderators. In the following, four hypotheses are proposed:

H5: Leisure coping strategies have a negative moderating effect on the relationship between academic stress and leisure benefits.

H6: Leisure coping strategies have a negative moderating effect on the relationship between parental stress and leisure benefits.

H7: Leisure coping strategies have a negative moderating effect on the relationship between teacher stress and leisure benefits.

H8: Leisure coping strategies have a negative moderating effect on the relationship between peer stress and leisure benefits.

Method

Data Collection

This study treated 4 public senior high schools, 4 private senior high schools, 4 public vocational schools and 4 private vocational schools in Taiwan as population. By cluster sampling, it respectively selected one class from Grade 10 to Grade 12 in each school. In each class, it distributed 30 questionnaires, with a total of 720 questionnaires. Before distributing questionnaires, the researcher contacted the directors of the schools by telephone and explained the research purpose. Upon their agreement, questionnaires were distributed. Students filled in questionnaires with the assistance and explanation of their homeroom teachers. Finally, this study obtained 622 valid questionnaires. Valid return rate is 86.4%.

Measurements

Basic information includes public and private schools, gender, grade, participation in sports clubs and ranking of grades in class in order to recognize participants' backgrounds.

Learning stress scale is the revision of items of life stress scale of Wang and Lee (2010). There are four dimensions in this scale: academic stress, parental stress, teacher stress and peer stress. It includes 14 items. Scoring is based on Likert 5-point scale. From Strongly agree, Agree, Neutral, Disagree to Strongly disagree, it refers to 5-1.

Scale of leisure coping strategies is based on scale of leisure coping strategies developed by Huang (2008). After modification, there are 3 dimensions: “enhance positive emotions”, “pressure release” and “leisure palliative coping”, including 12 items. It adopts Likert 5-point scale. From Strongly agree, Agree, Neutral, Disagree to Strongly disagree, it refers to 5-1.

This study revises research of Lu (2008) as scale of leisure benefits. There are 2 dimensions: external pleasure and Inner growth, including 9 items. Scoring is based on Likert 5-point scale, ranging from 1 (strongly disagree) to 5 (strongly agree).

Measurement Model

This study adopted a partial least squares model and the Warp PLS version 5.0 statistical software developed by Kock (2015) to verify all scales' validity and reliability. According to the suggestion by Hulland (1999), an analysis of the validity and reliability of all relevant scales in a model shall examine reliability, convergent validity, and discriminant validity.

Reliability

According to Fornell and Larcker (1981), the composite reliability and the Cronbach's α were acceptable if they

were equal to or greater than .70. In this present study, the composite reliability and the Cronbach's α all exceeded .70, showing the reliability of each scale was acceptable.

Table 1. Reliability analysis

Latent variables	Composite reliability	Cronbach's α
Academic stress	.922	.886
Parental stress	.907	.863
Teacher stress	.901	.834
Peer stress	.869	.773
Enhance positive emotions	.928	.896
Pressure release	.929	.898
Leisure palliative coping	.883	.823
External pleasure	.918	.881
Inner growth	.906	.869

Convergent Validity

In learning stress scale, factor loading of variables of academic stress dimension is .840~.887 and they are higher than .50. Factor loading of variables of parental stress dimension is .807~.884 and they are higher than .50. Factor loading of variables of teacher stress dimension is .860~.875 and they are higher than .50. Factor loading of variables of peer stress dimension is .754~.873 and they are higher than .50. In leisure coping strategies scale, factor loading of variables of enhance positive emotions dimension is .815 ~.904 and they are higher than .50. Factor loading of variables of pressure release dimension is .845 ~.895 and they are higher than .50. Factor loading of variables of leisure palliative coping dimension is .768~.843 and they are higher than .50. In leisure benefits scale, factor loading of variables of external pleasure dimension is .843~.891 and they are higher than .50. Factor loading of variables of inner growth dimension is .715~.860

and they are higher than .50. The previous latent variables match the standard proposed by Hair, Black, Babin, and Anderson (2009). Thus, it has good convergent validity.

Discriminant Validity

The test is based on square root of Average Variances Extracted (AVE) of individual latent variables proposed by Chin (1998). It should be higher than covariance relationship between the said latent variable and latent variables of other dimensions in the model. In addition, Venkatesh, Thong, and Xu (2012) argued that standard of AVE square root must be at least higher than or equal to .50. In this study, AVE square root of all latent variables in research model is .81 ~.88 and they are all higher than .50. Besides, AVE of all latent variables are higher than all correlation coefficients in the same column and row. It matches the standard. Therefore, measurement model of this study has good discriminant validity.

Results

Demographic Analysis Results

As to participants of this study, there are 336 males (54.0%) and 286 females (46.0%); 138 public senior high school students (22.2%), 159 private senior high school students (25.6%), 173 public vocational school students (27.8%), 152 private vocational school students (24.4%); 213 Grade 10 students (34.2%), 217 Grade 11 students (34.9%), 192 Grade 12 students (30.9%); 269 students who participate in sports clubs (43.2%), 353 students who do not participate in sports clubs (56.8%); 218 students who are Top 10 in the ranking of grades in class (35.0%), 201 students

who are Top 11-20 (32.3%), 128 students who are Number 21-30 (20.6%), 64 students who are Number 31-40 (10.3%) and 11 students who are after Number 41 in the ranking (1.8%).

Models Hypotheses Test

Analytical results of all hypotheses in this study is shown below:

- H1: Students' academic stress negatively influences leisure benefits. Analytical result is significant ($\beta_1 = -.15, p < .05$). Thus, when students' academic stress is higher, their leisure benefits are lower.
- H2: Students' parental stress negatively influences leisure benefits. Analytical result is significant ($\beta_2 = -.13, p < .05$). Thus, when students' parental stress is higher, their leisure benefits are lower.
- H3: Students' teacher stress negatively influences leisure benefits. Analytical result is significant ($\beta_3 = -.10, p < .05$). Thus, when students' teacher stress is higher, their leisure benefits are lower.
- H4: Students' peer stress negatively influences leisure benefits. Analytical result is significant ($\beta_4 = -.11, p < .05$). Thus, when students' peer stress is higher, their leisure benefits are lower.
- H5: Leisure coping shows significant moderating effect on relationship between academic stress and leisure benefits. Analytical result is significant ($\beta_5 = -.07, p < .05$). Thus, when students' leisure coping is higher, effect of academic stress on leisure benefits is lower.

H6: Leisure coping shows significant moderating effect on relationship between parental stress and leisure benefits. Analytical result is significant ($\beta_6 = -.08, p < .05$). Thus, when students' leisure coping is higher, effect of parental stress on leisure benefits is lower.

H7: Leisure coping shows significant moderating effect on relationship between teacher stress and leisure benefits. Analytical result is significant ($\beta_7 = .05, p > .05$). Thus, students' leisure coping does not moderate relationship between teacher stress and leisure benefits.

H8: Leisure coping shows significant moderating effect on relationship between peer stress and leisure benefits. Analytical result is significant ($\beta_8 = -.10, p < .05$). Thus, when students' leisure coping is higher, effect of peer stress on leisure benefits becomes lower.

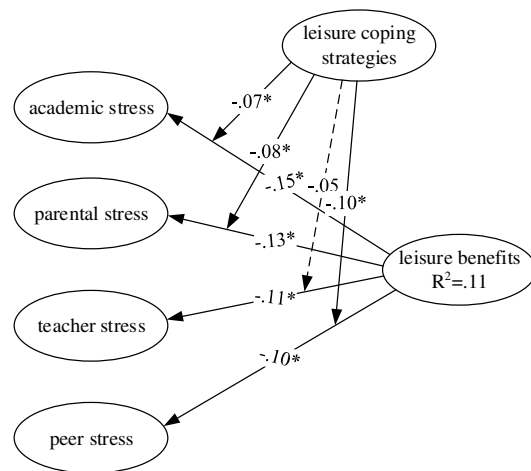


Figure 2. SEM Results Of The Leisure Coping Strategies Moderator Effect

* $p < .05$

Explanatory Power

R^2 denotes predictive power of research model. It is percentage of explained variance of exogenous variables on endogenous variables. It refers to predictive power of research model. When the value is higher, predictive power is higher. Research finding in Figure 1 shows that academic stress, parental stress, teacher stress and peer stress can explain 11% variance of leisure benefits. Figure 2 shows that academic stress, parental stress, teacher stress, peer stress and leisure coping can explain 13% variance of leisure benefits.

Discussion

When senior high school students' academic stress, parental stress, teacher stress and peer stress are higher, their leisure benefits are lower. The result supports that most of senior high school students are unhappy. The main cause is their academic stress (Liu, Chang, & Hsu, 2014). In addition, in Taiwan, cram school education is popular and it deprives students' leisure time. In this

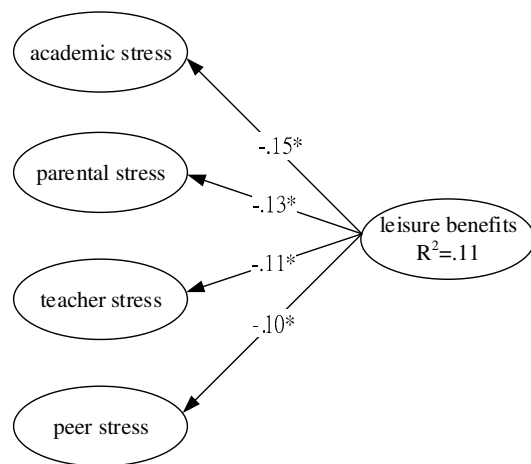


Figure 1. Standardized Parameter Estimation Of Overall Model
 Note: * $p < .05$

situation, students' pressure is significantly increased (Chen & Tzeng, 2009). Li (2010) argued that in Taiwan, 26.4% students had had the idea to commit suicide. The first cause was academic stress. Therefore, it is important to learn to effectively cope with stress and transform the pressure into learning drive. Kuo and Kao (2008) argued that due to students' stress resulted from perception of academic performance and achievement, students might cope with pressure by passive measures and it influences their academic performance. Therefore, we should encourage students to participate in sports to enhance physical and mental health and help students cope with life. Hence, from sports leisure situations, students can be relaxed, release stress and have sufficient energy for study. It cultivates their competence to adapt to environment and avoids them to deal with stress by passive suicide.

Leisure coping strategies have significant moderating effect on relationship between learning stress, parental stress and peer stress and leisure benefits. Except for teacher stress which is not moderated by leisure coping, the result generally matches leisure coping strategies proposed by Iwasaki and Mannell (2000) who stated that participation in leisure activities can moderately cope with negative stress, results in positive moderating outcome and maintains physical and mental health. Liu, Chang, and Hsu (2014) argued that leisure coping strategies mean individuals decide to have leisure activities when they are stressful. By behavioral or cognitive change, it is the best measure to moderate and manage pressure. Lin (2014) suggested that students who participate in different types of leisure activities obtain different experiences and leisure benefits. Therefore, it can attempt to

find the leisure activities which cope with students' various stress the most effectively to serve as reference for schools and teachers to establish leisure activities and sports projects.

Suggestions

According to findings of this study, leisure coping can lower effect of peer stress on leisure benefits. Thus, it is suggested that senior high school students can follow the activity content of leisure coping. For instance, leisure companion is a kind of social support. It is sharing experience without conditions. By leisure activities such as bridge, singing and Wei Chi, they can serve for leisure time and enhance peer relationship. Participation in leisure sports can reinforce interpersonal relationship and physical and mental health (Kuo & Kao, 2008). Coleman and Iso-Ahola (1993) suggested adopting social leisure activities and avoiding competition orientation. Thus, leisure activities can enhance affection, expand interpersonal relationship, increase social interaction and result in social support benefits. Liu, Chang, and Hsu (2014) argued that when students cope with academic stress in schools, parents should encourage them to regularly participate in leisure sports. In the activity process, they can be liberal and release muscle and spirit and obtain positive force such as interpersonal support in order to lower academic stress. It is suggested that schools can establish reward system regarding students' participation in leisure sports to encourage teachers' and students' exercises and enhance leisure sports culture on campus. By joining in leisure sports, students not only obtain physical, psychological and social functions, but also enhance knowledge and skills of sports. Teachers can adopt leisure activi-

ties of sports as tools. It can lower students stress and fulfill the efficacy of guidance. Finally, it is suggested that future research can include the variable of depression. Many studies argued that stress is one of the key factors of depression. Future researchers can attempt to find if there is moderating effect of leisure coping strategies on relationship between stress and depression. As to data collection, they can adopt journals to collect effect of stress on depression and moderating effect of leisure coping strategies

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