



Higher Education of Social Science
Vol. 9, No. 6, 2015, pp. 1-7
DOI:10.3968/8006

ISSN 1927-0232 [Print]
ISSN 1927-0240 [Online]
www.cscanada.net
www.cscanada.org

Study on the Relationship Between Emotion Tropism and Expressivity of College Students and Their Mental Health

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Supported by Key Project of Chongqing University of Arts and Sciences Teaching Reform Project “the Reform and Practice of the Training Mode of University-Kindergarden in the Preschool Education” (140201); Chongqing Education Commission Social Science Project “the Development Pattern of Rural Pre-School Education in the Poor Areas of the Southeast of Chongqing” (13KN05).

Received 14 September 2015; accepted 19 November 2015
Published online 26 December 2015

Abstract

The method of scaling is adopted to study the relation between emotional tropism (consisting of positive and negative affective variables), emotional expressivity and mental health by doing questionnaires from 263 college students in Chongqing City. The differences test shows that: (a) Males express more negative affect than females and are not as good as women in expressing their feelings, but no significant gender differences in positive affect and feeling of happiness is observed; and freshmen share more feeling of happiness than seniors, but no significant differences between grades in their expression of positive or negative affect and emotions are observed; (b) Correlation analysis shows that feeling of happiness and other positive affect have significant negative correlation with most of the psychological symptom factors, while negative affect have significant positive correlation with all the psychological symptom factors; and emotional expressivity shows significant negative correlation with interpersonal sensitivity, hostility, depression, anxiety and other factors; (c) Regression analysis further shows that negative affect exerts significant regression effect on obsession, interpersonal relationship, depression, anxiety, hostility, bigotry and other factors, and emotional expression exerts regression effect on interpersonal

sensitivity, hostility, depression, anxiety and other factors.

Key words: College students; Positive and negative affect; Feeling of happiness; Emotional expression; Mental health

Deng, X. Y., & Lü, X. (2015). Study on the Relationship Between Emotion Tropism and Expressivity of College Students and Their Mental Health. *Higher Education of Social Science*, 9(6), 1-7. Available from: URL: <http://www.cscanada.net/index.php/hess/article/view/8006>
DOI: <http://dx.doi.org/10.3968/8006>

INTRODUCTION

Emotion and affect have always been considered as an important aspect that impacts on human behavior by psychologists and emotional psychology consists of mainly three factors including emotional experience, emotional expression and emotional physiology (Strongman, 1986; Shi, 2000). However, looking into the previous studies on emotions, it can be seen that the focus of the majority of them is on emotional physiology (Groves & Rebec, 1988; Shi, 2000), although this remains as blameless, it is understood that “if no studies are made on emotional experience and behavior, the understanding of emotion will be incomplete” (Strongman, 1986). Among previous studies on emotion, there is no lack of studies on emotional experience, but it is obvious that in those studies (Shi, 2000; Guo, 2000), particularly in the field of health psychology the partiality exists that concerns and emphases tend to be given to negative affect related to mental illness, such as depression and anxiety, etc., and the studies on positive affect are extremely rare, which undoubtedly hinders not only our overall understanding of emotions but also the study of the influence of emotions on a normal individual rather than only for patients suffering psychological illness. Thus, it is one purpose of the study in this paper

to compare the different influences of two affective variables, namely positive affect and negative affect on the mental health of individuals on the ground of concerning of mental health matters from the point of both problem solving and development, so as to provide data for the study of the influence of affect to normal individual.

Emotion expressing behavior, as a prominent outward manifestation of emotions, is one of the important evaluation criteria for the emotional and social development of individuals, meanwhile, it also has many important functions including adaptation and signalization, and emotion expressing has an important role to play in promoting interpersonal harmony, reducing stress and improving mental health. A series of studies abroad have shown that very few people who are good at expressing themselves have depressive tendencies; good emotion expressers are happier and less anxious and guilt than poor emotion expressers; and stable individual differences exist in emotional expressivity etc. (Kring, Smith, & Neale, 1994; Lamke & Bell, 1982; Zammichiel, Gilroy, & Sherman, 1998). However, domestic researches on emotional expressivity remain very scarce and the correlational studies on emotion expression and psychological health are almost a blank. Therefore, the second purpose of this paper is to study the individual differences in emotional expression and explore the relations between emotional expression and psychological health.

As early as in late 1940s, national surveys were made abroad on positive affect such as feeling of happiness and euphoria (Mroczek & Kolarz, 1998; Larsen & Ketelaar, 1991), but most of these studies were concerned of the relationship between the overall feeling of happiness and euphoria and demographic variables (such as age, gender, income and race) and their relationship with social stress, social support and role achievements etc. (Abbey & Andrews, 1985). In the past decade, domestic studies began to pay attention to positive affect including feeling of happiness and euphoria, etc., but on one hand, these studies have been primarily targeted at the elderly, rarely involving other age groups (Liu & Gong, 2001), and on the other hand, the subjects of most of those studies are the euphoria status and the influence of individual factors on it without relating those affective variables to psychological health and emotional variables, which is even more obvious when it turns to the study of emotion expression, that there have already been studies on the emotion expression of infants and discussions on the relation between the emotion and feelings of infants and their psychological health, nevertheless rarely involving other age groups (Li, Tao, & Dong, 2001). Many psychologists have pointed out that, emotions can not only reflect the individual's psychological health status, but also create a significant impact on psychological health. It is especially true for young college students, who are at a critical stage for the development of their life, therefore,

exploring the features of their emotions and feelings and their relationship with psychological health is of great significance to the emotional education, and psychological health education today.

Based on the above statement, this paper will take the young college students as the research objects and discuss the following two questions: a) relationships between statistical variables and feeling of happiness, positive affect, negative affect and emotional expressivity; and b) relationships between affective variables and emotional expressivity and psychological health.

1. RESEARCH DESIGN

1.1 Subjects

The study adopts stratified random sampling and students from three colleges in Wuhan are sampled. To make it easier to make comparison of grade differences, the sample is chosen randomly from the two grades of freshmen and seniors, and the number of effective subjects is 263, among whom there are 124 freshmen and 139 seniors; 106 boys and 157 girls; and 114 majoring in liberal arts, and 149 in science and engineering.

1.2 Tools

1.2.1 Affect Scale

The Affect Scale prepared by the Kammmn and Flett (in 1983) and modified by Xin Ziqiang etc. is adopted. 20 fully stated items are used in the scale to detect positive affect and negative affect, and the feeling of happiness is reflected by the difference between the positive and negative affect, using the 5-Grade Scoring System (1=never, 5=always, where of negative affect items get minus points). It has been shown in some studies that the scale has fairly high liability and construct validity (Xin & Chi, 2001). In this study, the coefficient of internal consistency among the items of positive emotional dimension in the scale is 0.84 and that of negative emotional dimension is 0.73.

1.2.2 Emotional Expressivity Scale

Emotional Expressivity Scale prepared by Kring and Smith and translated by Chen Huichang is adopted, and 5-Grade Scoring System is used (1=never, 5=always, and the higher the score is, the more likely the subject is willing to express emotions). It has been shown in some studies that the scale has fairly high liability and validity (Xin & Chi, 2001). In this study, the consistency coefficient of the scale is 0.72.

1.2.3 Clinic Self-Rating Scale for Psychological Health Symptoms (SCL-90)

SCL-90 is adopted to test students' psychological health status.

General demographic data of the subjects, such as grade, gender, an urban or rural resident and so on, are obtained when the survey is implemented.

1.3 Procedure

Group test is carried out by the prime experimenters in the sampled universities, with all subjects being anonymous and finishing the test independently as required by the unified guidance. Data therefrom are statistically processed with SPSS17.0 Software Pack.

2. STATISTICAL ANALYSIS

2.1 Gender Differences in Affective Variables and Emotional Expressivity

T test is conducted for scores of subjects of different genders in Affect Scale and Emotional Expressivity Scale, and the results are shown in Table 1:

Table 1
Gender Differences in Affective Variables and Emotional Expressivity

Affective Variables and Emotional Expressivity	Male (n=106)		Female (n=157)		t
	M	SD	M	SD	
Positive affect	3.23	0.63	3.16	0.60	0.647
Negative affect	2.87	0.65	2.28	0.59	2.934*
Feeling of happiness	7.32	1.14	8.80	1.03	-1.463
Emotional expressivity	50.02	9.69	57.32	10.82	-2.769*

Note. * $P < .05$; ** $P < .01$; *** $P < .001$; and the same below.

Statistical results show that the scores of the subjects in the emotional variables and emotional expressivity show insignificant differences in respect of their status as an urban or rural resident (whether the subjects' families are located in towns or villages). There are no significant gender differences in positive affect and feeling of happiness, but significant gender differences exist in negative affect and emotional expressivity. As shown in Table 1, males score higher in negative affect than females in average, which indicates that males have more negative affect. Besides, females score significantly higher than males in emotional expressivity, which suggests that females are more adept at expressing their emotions.

2.2 Grade Differences in Affective Variables and Emotional Expressivity

T test is conducted for scores of subjects of different

grades in Affect Scale and Emotional Expressivity Scale, and the results are shown in Table 2:

Table 2
Grade Differences in Affective Variables and Emotional Expressivity

Affective variables and emotional expressivity	Freshmen (n=124)		Seniors (n=139)		t
	M	SD	M	SD	
Positive affect	3.27	0.63	3.12	0.59	1.592
Negative affect	2.97	0.59	2.48	0.68	-1.85
Feeling of happiness	9.61	10.58	6.35	10.63	2.004*
Emotional expressivity	50.3	11.33	53.5	9.16	-1.396

The results in Table 2 show that students from different grades has no significant differences in their scores respectively in positive affect, negative affect and emotional expressivity, but in respect of the dimension of happiness, the difference of grades is significant, that the average scores of freshmen is significantly higher than that of the seniors, that is, the freshmen share more happiness than seniors.

Moreover, the statistical results also show that the scores of the subjects in the emotional variables and emotional expressivity show insignificant differences with respect to whether they are urban or rural residents.

2.3 Correlation Analysis of Affective Variables, Emotional Expressivity and Psychological Health Factors

The results in Table 3 show that positive affect has negative correlation in various degrees with the scores of factors of SCL-90, among which the negative correlation with obsession, hostility, bigotry, depression, anxiety, interpersonal sensitivity and terror reaches the significant level; positive correlation between the negative affect and factors of SCL-90 reaches the significant level, wherein the positive correlation with factors including depression and anxiety is quite high, the positive correlation with factors including obsession, bigotry, hostility and interpersonal sensitivity is moderate and relatively low negative correlation with factors including somatization, fear and Psychoticism; the negative correlation between the feeling of happiness and obsession, interpersonal sensitivity, depression, anxiety, hostility, bigotry and terror is of the significant level, wherein the negative correlation

Table 3
Correlation Analysis of Affective Variables, Emotional Expressivity and Psychological Health Factors

	Somatization	Obsession	Interpersonal relationship	Depression	Anxiety	Hostility	Terror	Bigotry	Psychoticism
Positive affect	-0.154	-0.203**	-0.216**	-0.395**	-0.343**	-0.288**	-0.270**	-0.178*	-0.123
Negative affect	0.386**	0.421**	0.471**	0.584**	0.584**	0.506**	0.323**	0.511**	0.291*
Feeling of happiness	-0.121	-0.364**	-0.401**	-0.540**	-0.540**	-0.463**	-0.297**	0.404**	-0.153**
Emotional Expressivity	-0.160*	-0.148	-0.285**	-0.203**	-0.203**	-0.272**	0.135	0.145**	-0.137

with depression and anxiety is quite high; the negative correlation between emotional expressivity and factors including interpersonal sensitivity, hostility, depression, anxiety and somatization is significant, while that between emotional expressivity and other factors is insignificant.

2.4 Regression Analysis of Affective Variables, Emotional Expressivity and Psychological Health Factors

Table 4
Regression Analysis of Affective Variables, Emotional Expressivity and Psychological Health Factors

	Selected factors	β	<i>P</i>	<i>R</i> ²
Obsession	Negative affect	0.421***	0.000	0.177
Interpersonal sensitivity	Negative affect	0.457***	0.000	0.222
	Emotional expressivity	-0.260***	0.000	0.319
Depression	Negative affect	0.614***	0.000	0.377
	Emotional expressivity	-0.180***	0.008	0.399
Anxiety	Negative affect	0.584***	0.000	0.341
	Emotional expressivity	-0.169**	0.009	0.352
Hostility	Negative affect	-0.524***	0.000	0.256
	Emotional expressivity	-0.232***	0.000	0.337
Bigotry	Negative affect	0.511***	0.000	0.261

The multiple regression results in Table 4 show that Negative affect exerts significant regression effect on six factors consisting of obsession, interpersonal sensitivity, depression, anxiety, hostility and bigotry and is able to make an effective forecast of them, with the interpretation rate being 17.7%-37.7%; the emotional expressivity exerts significant regression effect on hostility and interpersonal sensitivity with the interpretation rate being 9.8% and 8.2% respectively, and as for depression and anxiety, although the regression coefficient is significant, the interpretation rate is only 2.3% and 1.2%, which nevertheless reminds us that the emotional expressivity has to certain extent influences on depression and anxiety.

3. DISCUSSION

3.1 Gender Differences in Affective Variables and Emotional Expressivity

This study shows that males and females show quite enormous emotional differences. Male college students experience more negative affect than female college students and in general feel less happy than females. This result is inconsistent with the findings of some scholars in the past taking the middle aged and the elderly as their subjects. For example, the research by Liu Rengang on persons over 55 year old found that there was a significant gender differences in negative affect, that females shared more negative affect (Liu & Gong, 2000); the research by Xin Ziqiang on the middle aged who is 37.3 years old on average also found the same result (Xin & Chi, 2001); and the research conducted by Zheng Xue on college students

To further explore the degree of correlation between the affective variables and emotional expressivity and psychological health, multiple regression analysis is made taking positive affect, negative affect, feeling of happiness and emotional expressivity as independent variables and factors in SCL-90 as the dependent variables, results of stepwise regression are shown in Table 4:

in Guangzhou found that there are no significant gender difference on the scores of the dimensions of positive and negative affect (Zheng & Yan, 2001). According to the author, this may be due to the different traditional social roles of males and females, that male college students have higher pursuit for achievements and career than female students, which exposes them to more pressure when competing for employment, postgraduate entrance exams and others, so it is inevitably that more negative affect will arise in them; by contrast, with the continuous influence of the development of the society and culture, the personality of modern female college students has been gradually transforming from the traditional type to the modern type, that as they become more and more outgoing and open-minded and less emotionally dependent than it used to be before, less negative affect is now generated. This conclusion of this paper thus questions the assumption put forward by the predecessors that the gender differences of emotional development is consistent between different age classes (Xin & Chi, 2001), however, whether the gender differences of emotional development of youngsters and that of the middle-aged and the elder groups is inconsistent remains to be further explored and confirmed.

Researches on gender differences have also found that female college students score significantly higher on emotional expressivity than male students, and this conclusion is in consistency with that of some foreign studies (Kring, Smith, & Neale, 1994), for which there may be reasons of both the indirect influence of biological factors and, even further, of the socialization of gender roles. The study of social expectation of gender roles shows that most people think that personality

traits compatible with males are more connected with achievements and careers and those of females are more relevant with emotions and interpersonal relationship (Hall, 1994). As a matter of fact, the study on the early emotional behavior of infants has showed that the differences in early emotional behavior of individuals are not obvious (Li, Tao, & Dong, 2001), but as the age grows and their interpersonal relationships expand, the influence of social and cultural factors on the individual become more and more significant, when females increasingly exhibit characters such as being delicate and sensitive in affect and better at expressing their emotions than males. This is the result of the socialization of gender roles to a large extent.

3.2 Grade Differences of Affective Variables and Emotional Expressivity

The results of the study on the grade differences in emotional variables and emotion expressivity show that there are no significant grade differences in positive and negative affect as well as emotional expressivity, but in the dimension of the feeling of happiness, the freshmen score significantly higher than the seniors. The conclusion is consistent at large with the previous findings (Li & Zhao, 2000). This shows that compared with the freshmen, the seniors share less happiness. The seniors are faced with tremendous pressure applying for employment, preparing for the postgraduate entrance exam and choosing the working and living places for themselves and their lovers following graduation, etc., and whether a satisfying job may be found or by further study they would be able to continue to realize their ideals of life has direct influence on the students' feeling of happiness. However, faced with a harsh employment situation and enormous pressure of preparing for the postgraduate entrance exam nowadays, the seniors are very easy to expose themselves to negative affect and thus get less happiness. Besides, if two college students have established an intimate relationship prior to their graduation, the risk of deciding the place to settle down their residency thereafter and the choice of whether to continue the relationship or not disturb the graduates, too. These are the particular psychological problems facing graduates to which attention should be paid. In addition, the freshmen who have just been relieved from the enormous pressure of the college entrance exams are still rejoicing their success in passing the exams, and, on the other hand, the learning tasks for the them are relatively easy to cope with, thus for them everything is yet to be finalized and they are endowed with a lot of time and opportunities, filling them with sweet longing and yearning for the campus life, and that's why it is reasonable that they have more confidence and happiness. Furthermore, since this survey is carried out in the second semester of the school year, when following the one-semester-long adaptation period the negative emotions of freshman students caused by maladaptation in such

adaptation period as newcomers have relatively decreased and their happiness increases correspondingly, that is one of the reasons why the freshmen share significantly more happiness than the graduates are concluded in the research.

3.3 Relationship Between Affective Variables, Emotional Expressivity and Psychological Health

3.3.1 Affective Variables and Psychological Health

From the results of the correlation analysis, it is observed that, in addition to somatization and mental illness, both positive affect and the feeling of happiness show a significant negative correlation with factors in SCL-90; negative emotion show a significant positive correlation with all the factors in SCL-90 and its positive correlations with depression and anxiety are extremely significant. As further indicated by the results of the correlation analysis, negative affect exert significant regression effect on obsession, interpersonal sensitivity, depression, anxiety, hostility and bigotry and other factors, and is capable of interpreting why these factors vary from 17.7% to 37.7%. It is thus seen that affective variables have great influence on the psychological health of college students. The more the positive affect and feeling of happiness one share, the higher his or her level of psychological health is. Excessive negative affect in daily life, if not eased and adjusted timely, will possibly easily develop into emotional disorders, which may further give rise to anxiety, depression, interpersonal sensitivity and other psychological illness and is adverse to the psychological health. Therefore, the psychological workers in colleges and universities should pay high attention to students' emotional problems, by not only helping them prevent and overcome negative emotion and guiding them to improve their ability to correctly deal with and regulate negative emotions on the ground of prevention and correction of problems, but also taking some positive interventions in view of the development, such as conducting reasonable emotive education as some schools in the United States do (Lazarus, 1994) or adopting empathy education as that conducted in Finland (Yang, 1996), to cultivate students' positive emotions, optimize their emotion-related good mental quality to promote their psychological health from the positive side.

3.3.2 Emotional Expressivity and Psychological Health

In addition, the study also indicates that emotional expressivity shows a significant negative correlation with interpersonal sensitivity, hostility, depression and anxiety, exerts a significant regression effect on interpersonal sensitivity and hostility, is capable of explaining the variation between 9.8% and 8.2 % and can be used to predict depression and anxiety to some extent. All of these show that expressing emotions appropriately will help reduce psychological stress, promote psychological health, and reduce mental illness. Therefore, to cultivate students' capability to express their emotions should

become an indispensable part of the emotional education in colleges and universities. On the one hand, college students should practice how to control their emotions under different circumstances and atmospheres in case of becoming excessively emotional; on the other hand, they should be provided with the opportunities to express their own emotions and feelings freely and in public, especially when they are frustrated or unhappy, under such circumstances, they should try to find an opportunity to express and vent as much as possible, so as to relieve their psychological stress and promote their psychological health.

In summary, the emotional and affective characteristics of college students differ due to their genders and ages, and these characteristics have great influence on their psychological health. These conclusions drawn in this study can not only make up a range of shortages existing at present in the research of psychological health of college and middle-school students including that starting from the point of view of problem solving rather than from development, enrich the contents of psychological research and provide theoretical foundation for the emotional education and psychological health education for the college workers, but also have important practical significance for psychological counseling in universities. College psychological health workers should pay attention to the conclusion of the differences test in the study and provide corresponding emotion adjusting strategies according to characteristics and differences in affective variables and emotional expressivity of college students in different genders and ages to help them express their emotions smoothly and properly. In addition, the close relationship between college students' emotional and sentimental characteristics and their psychological health, as well as university students' understanding and feeling of their own living conditions should be understood in depth. It is necessary to both evaluate and prevent effectively university students' negative emotions from the perspective of troubleshooting, so that they can make reasonable and appropriate expression of their emotions and maintain mental balance in the face of contradictions, conflicts, frustrations and a series of other psychological stress, and even more importantly, to conduct reasonable and targeted emotional education to university students in stage from a development perspective, to cultivate and develop their positive emotions and promote their psychological health in a positive way, which is very significant in respect of their development and their growth into a useful person.

CONCLUSION

From the above analysis, we can conclude that:

(a) Male university students express more negative emotions than females and they are not as good as females

in emotional expressivity, and there are no significant gender differences in positive affect and feeling of happiness; and freshmen share more happiness than seniors, but there are no significant grade differences in positive affect, negative affect and emotional expressivity.

(b) Feeling of happiness and positive emotions have significant negative correlation with most of the psychological symptom factors, while negative emotions have significant positive correlation with all the psychological symptom factors; and emotional expressivity shows significant negative correlation with interpersonal sensitivity, hostility, depression, anxiety and other factors.

(c) Negative affect exerts significant regression effect on obsession, interpersonal relationship, depression, anxiety, hostility, bigotry and other factors, and emotional expression exerts regression effect on interpersonal sensitivity, hostility, depression, anxiety and other factors.

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