

# How to Face the Depressed Self: From the Perspective of the Reference Group

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## Abstract:

Today's high school students often face tremendous challenges, causing some to experience psychological depression. Big data show that the problem of psychological depression among high school students grows by 9.7% annually, affecting about 10 million students. Based on the theory that pressure in the mind leads to depression, this paper constructs a model of the influence of reference groups (parents, friends, and teachers) on the psychological depression of high school students, and analyzes the role of positive and negative feedback on adolescent mental health. This study measures the influence of specific advice given by parents, teachers and friends on the degree of psychological depression, and also examines whether reference groups are moderators of the influence of high school students' degree of psychological depression through 150 questionnaires, 10 interviews, and case studies, thus concluding that the advice of reference groups is an important factor contributing to adolescents' psychological depression. The results of the study showed that (1) a large number of high school students experiencing psychological repression mostly received positive feedback for help; (2) the feedback style of the reference group was closely related to adolescents' psychological repression; and (3) negative feedback increased repression when stress was low, and both negative and no feedback increased repression when stress was high. Therefore, the reference group's advice style is related to the level of adolescent mental health, and should provide practical solutions rather than simple comfort to reduce the phenomenon of psychological repression.

## Keywords:

Adolescents, Stress, Psychological Depression, Reference Group, Positive Influence, Negative Influence

## 1. How to Face the Depressed Self: From the Perspective of the Reference Group

### 1.1. Formulation of the research question

This article observes in schools that around exam week, students around the world will have to face a lot of pressure, and there are great ups and downs in their minds.

High school students may experience varying degrees of irritability and anxiety, and even severe cases of uncommunicative behavior, headaches, and insomnia. Many high school students choose to seek help from their teachers, parents and classmates at this stage. However, through interviews with classmates and teachers (see Appendix for interview details), this paper found that the process of seeking help for high school students does not always help to relieve stress, and in some cases can even bring negative consequences and more stress. During the interviews, many of the high school students reported that the problems they were presenting sometimes did not result in practical, hands-on solutions. In this paper, we decided to investigate this issue in depth in order to better assist high school students in their quest for help from parents and teachers.

### ***1.2. Solvability of the problem***

Through in-depth case interviews and questionnaires, data analysis and statistics, this paper hopes to provide parents and teachers with a better understanding of the impact of reference groups on the physical and mental health of high school students. Through the data of this study, we can conclude that the positive effects of reference groups can effectively relieve the stress and depression of high school students.

Through this study, the public will have a better understanding of the impact of reference groups. More people will pay attention to the mental health of high school students. In this paper, we hope to establish a link with school organizations to conduct some activities like psychological presentations every month. This paper hopes to analyze and suggest ways to help some of the cases in need of help, so as to alleviate the degree of their psychological depression or to let their stress and depression receive timely attention from parents or teachers. It is also hoped that psychological professionals will be contacted to publicize solutions to such stress in schools and elsewhere [1].

### ***1.3. Significance and Implications of the Study***

High school students are in a special stage, facing greater pressure to advance to higher education, is a critical period of character formation, but still do not have a fully mature mind, not well able to solve their own pressure, which may lead to the gradual formation of repressed emotions, or even develop into mental illness. The most common environment that high school students come into contact with on a daily basis is their school and family. Therefore, schools and families have a greater influence on them. Teachers and parents, as reference groups, have a certain degree of influence on students' psychological stress through language, behavior, and information transfer. Incorrect guidance may have a great impact on the body and mind of high school students, and over time the pressure will slowly develop into repression, and even in some extreme cases, it will evolve into mental illness. The target population of this study is the high school students of Chengdu Shude International Department. The purpose of this study is to understand the positive, negative, and no effects of reference groups on high school students. This study aims to help schools, families, and other reference groups to create a better atmosphere for high school students to grow up in, and to help high school students to relieve stress and avoid depression and mental illness.

## **2. Literature Review**

### **2.1. Concept of reference groups**

#### **2.1.1. Definition of reference groups**

Groups are defined in sociology as two or more people who interact and influence each other. There is some kind of implicit or explicit relationship between the two and behaviors are interdependent. A reference group, on the other hand, is an individual or group of individuals who exist in reality or virtually, respectively, that are significantly related to the group and to the individual evaluations, pursuits, or behaviors of secondary school students. Thus, reference groups can be used as groups with guiding properties in a particular situation. The group referred to here has many clusters; a student's best friend can be used as a reference group, a student's teachers, parents, etc. also qualify as a reference group, and even an avatar constructed on the basis of conjecture can be used as a reference group as well [2].

In the investigation of this study, the concept of reference group is used specifically as a group of reference values in life that cause some degree of influence on students' psychological stress through language, behavior, and information transfer. These individuals or groups are defined as individuals or groups that offer event-related opinions or suggestions to their subjects, i.e., referential discourse and referential thinking can have a certain degree of directional influence on the original thoughts of high school students. In this paper, high school students are defined as influenced objects, and the corresponding influencing relationships are individual referents and group referents (friends, family, teachers). This definition applies to the basic model of this study: high school students' psychological stress is aggravated, mitigated, or unaffected to some degree by the depressing results of the reference group's influence.

#### **2.1.2. Definition of psychological stress**

The present study with reference to the definition of Folkman views psychological stress as a specific relationship between an individual and his environment, which the individual assesses as burdensome, exceeding his resources, and hazardous to his health.

In this paper, environment refers to the interrelationships formed by the reference groups to which high school students are exposed in their study life. Individual assessment refers to the results of acceptance or rejection adopted by the study group in response to the reliability or orientation suggestions of the reference group. Individual stress in high school students arises from whether they view dealing with events as too demanding beyond their coping abilities, a view centered on evaluations, i.e., evaluations for others, i.e., positive feedback, negative feedback, and no feedback from the reference group.

#### **2.1.3. Definition of psychological depression**

Hammen defines depression as the submerging of socially unacceptable impulses and desires in one's unconscious. Depressive psychology is a more generalized pathological psychosocial phenomenon. It is associated with individual frustration and disappointment, leading to the development of inferiority complex, frustration, self-absorption, anxiety, isolation, and other undesirable psychological and behavior.

In this study, psychological depression is defined as the end result and manifestation produced by psychological stress.

#### ***2.1.4. Relationship between psychological stress and psychological depression***

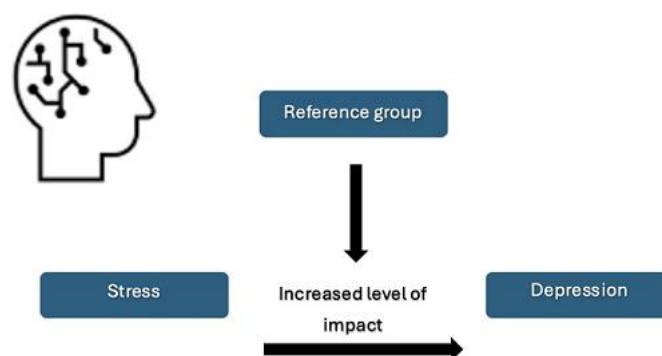
In people's daily lives, Stress is often found as a source of personal psychological depression, because of the long-term accumulation of psychological stress or unprocessed, resulting in mental health problems, also known as psychological depression. Correlation coefficient: a statistical index of the relationship between two things (from -1 to +1), which is determined by an intermediate factor that is calculated by a data model. This correlation is determined by the intermediate factor, which is determined by the data model, which calculates the size of the correlation, where the larger the correlation, the stronger the intermediate factor's determinism, and conversely, the smaller the correlation, the weaker the intermediate factor's determinism. In this study, reference groups were used as intermediate determinants to investigate whether their moderation would lead to an increase or decrease in the level of psychological depression [3].

#### ***2.1.5. Reference Group Impact Types and Measurement***

Based on the basic definition of reference groups, this paper argues that the role of reference groups is broadly categorized into three guiding influences: positive, negative, and no influence. Among them, the main study is informational influence, which means that individuals adapt their behavior by viewing others as sources of information that guide their behavior. Informational influence stems from the fact that when an individual refers to the behaviors and perceptions of a reference group member as potentially useful information, the degree of influence is dependent on the similarity of the person influenced to the group member and the expertise of the group member exerting the influence, and is most likely to be internalized by high school students' groups when the Information sources are most likely to be internalized by groups of high school students when they are perceived by individuals as credible: negative information of equal strength influences high school students more strongly than positive information .

### ***2.2. Modeling of psychological stress in secondary school students and reference group assumptions***

#### ***2.2.1. Research model***



***Figure 1. Explore the degree of influence played by reference groups in the process.***

According to the literature of psychological pressure, psychological depression and reference group, this paper constructs a research model as in Figure 1 to explore the degree of influence played by reference groups in the process of psychological pressure to psychological depression of high school students. The degree of influence of reference groups is categorized as positive, negative and non-directional.

### **2.2.2. Research hypotheses**

Hypothesis 1: The extent to which high school students' psychological stress affects psychological repression is influenced by the reference group.

Hypothesis 1a: When positive feedback from the reference group is given, it relieves students' stress, which leads to a gradual decrease in their level of repression;

Hypothesis 1b: When negative feedback from the reference group (negative words or behaviors) makes high school students more stressed and leads to a gradual increase in the level of repression;

Hypothesis 1c: when there is no feedback from the reference group, it prevents high school students from venting the pressure in their hearts and allows the level of repression to peak.

This paper takes high school students as the research object: high school students at a certain stage of the psychological state will be from stress to repression, assuming that high school students around the reference group such as friends, family, teachers and so on bring external words or behaviors to the student's own self-judgment and decision-making to produce 70%-80% of the negative impact on the student will lead to the increase of high school students' psychological repression [4].

## **3. Data Analysis**

### **3.1. Research Methodology**

This study adopts a combination of survey method, literature research method, case study method and quantitative research method. A more comprehensive analysis of whether the degree of influence of psychological stress on psychological repression among high school students is influenced by reference groups.

#### **3.1.1. Research Objects: High school students in Chengdu City**

#### **3.1.3. Data Measurement**

According to the basic model of Figure 1, the psychological stress scale in this paper refers to Cohen and Williamson's Perceived Stress Scale (PSS); the psychological depression scale adopts Gross and John's Emotion Regulation Questionnaire (ERQ); and the reference group is the Cultural Experts' Evaluation of the Items Scale, as shown in Figure 2. Cultural Experts' Evaluation of the Items scale, as shown in Figure 2.

| Item                                                                                                       | No. who chose more characteristic of Japan | No. who chose more characteristic of North America | No. who chose no difference | % consensus |
|------------------------------------------------------------------------------------------------------------|--------------------------------------------|----------------------------------------------------|-----------------------------|-------------|
| <b>Interdependent</b>                                                                                      |                                            |                                                    |                             |             |
| I have respect for the authority figures with whom I interact.                                             | 13                                         | 0                                                  | 1                           | 96          |
| It is important for me to maintain harmony within my group.                                                | 14                                         | 0                                                  | 0                           | 100         |
| My happiness depends on the happiness of those around me.                                                  | 11                                         | 2                                                  | 1                           | 82          |
| I would offer my seat in a bus to my professor.                                                            | 12                                         | 1                                                  | 1                           | 89          |
| I respect people who are modest about themselves.                                                          | 14                                         | 0                                                  | 0                           | 100         |
| I will sacrifice my self-interest for the benefit of the group I am in.                                    | 13                                         | 0                                                  | 1                           | 96          |
| I often have the feeling that my relationships with others are more important than my own accomplishments. | 13                                         | 0                                                  | 1                           | 96          |
| I should take into consideration my parents' advice when making education/career plans.                    | 11                                         | 1                                                  | 2                           | 86          |
| It is important to me to respect decisions made by the group.                                              | 13                                         | 0                                                  | 1                           | 96          |
| I will stay in a group if they need me, even when I'm not happy with the group.                            | 14                                         | 0                                                  | 0                           | 100         |
| If my brother or sister fails, I feel responsible.                                                         | 14                                         | 0                                                  | 0                           | 100         |
| Even when I strongly disagree with group members, I avoid an argument.                                     | 14                                         | 0                                                  | 0                           | 100         |
| <b>Independent</b>                                                                                         |                                            |                                                    |                             |             |
| I'd rather say "no" directly, than risk being misunderstood.                                               | 2                                          | 12                                                 | 0                           | 86          |
| Speaking up during a class is not a problem for me.                                                        | 0                                          | 14                                                 | 0                           | 100         |
| Having a lively imagination is important to me.                                                            | 0                                          | 12                                                 | 2                           | 93          |
| I am comfortable with being singled out for praise or rewards.                                             | 0                                          | 13                                                 | 1                           | 96          |
| I am the same person at home that I am at school.                                                          | 0                                          | 13                                                 | 1                           | 96          |
| Being able to take care of myself is a primary concern for me.                                             | 1                                          | 12                                                 | 1                           | 89          |
| I act the same way no matter who I am with.                                                                | 0                                          | 13                                                 | 1                           | 96          |
| I prefer to be direct and forthright when dealing with people I've just met.                               | 0                                          | 14                                                 | 0                           | 100         |
| I enjoy being unique and different from others in many respects.                                           | 0                                          | 13                                                 | 1                           | 96          |
| My personal identity, independent of others, is very important to me.                                      | 0                                          | 14                                                 | 0                           | 100         |
| I value being in good health above everything.                                                             | 2                                          | 8                                                  | 4                           | 71          |

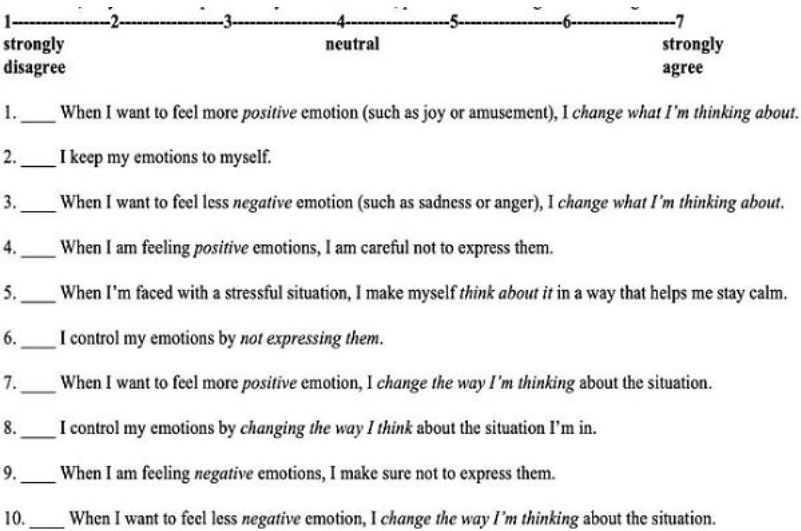
**Figure 2.** The Emotion Regulation Questionnaire (ERQ) developed by Gross.

The Perceived Stress Scale (PSS) consists of 10 questions, each with a score of 0-4, indicating the frequency of different situations, from never to very often, with higher scores indicating greater frequency. The details are shown in Figure 3.

|                                                                                                                      | 0 = Never | 1 = Almost Never | 2 = Sometimes | 3 = Fairly Often | 4 = Very Often |
|----------------------------------------------------------------------------------------------------------------------|-----------|------------------|---------------|------------------|----------------|
| 1. In the last month, how often have you been upset because of something that happened unexpectedly?                 | 0         | 1                | 2             | 3                | 4              |
| 2. In the last month, how often have you felt that you were unable to control the important things in your life?     | 0         | 1                | 2             | 3                | 4              |
| 3. In the last month, how often have you felt nervous and "stressed"?                                                | 0         | 1                | 2             | 3                | 4              |
| 4. In the last month, how often have you felt confident about your ability to handle your personal problems?         | 0         | 1                | 2             | 3                | 4              |
| 5. In the last month, how often have you felt that things were going your way?                                       | 0         | 1                | 2             | 3                | 4              |
| 6. In the last month, how often have you found that you could not cope with all the things that you had to do?       | 0         | 1                | 2             | 3                | 4              |
| 7. In the last month, how often have you been able to control irritations in your life?                              | 0         | 1                | 2             | 3                | 4              |
| 8. In the last month, how often have you felt that you were on top of things?                                        | 0         | 1                | 2             | 3                | 4              |
| 9. In the last month, how often have you been angered because of things that were outside of your control?           | 0         | 1                | 2             | 3                | 4              |
| 10. In the last month, how often have you felt difficulties were piling up so high that you could not overcome them? | 0         | 1                | 2             | 3                | 4              |

**Figure 3.** Perceived Stress Scale (PSS) consists of 10 questions.

The Emotion Regulation Questionnaire (ERQ) developed by Gross et al. Gross & John was used for the Emotion Suppression Sub-Questionnaire. The questionnaire was rated on a 7-point scale (from "1" to "7" for "completely disagree" to "completely agree"). Higher scores indicate a greater tendency to utilize the emotion regulation strategy. The internal consistency coefficient of the Emotional Depression Scale was 0.73 in this survey, as shown in Figure 4.



**Figure 4.** The Emotion Regulation Questionnaire (ERQ) developed by Gross.

3.2. Findings and Conclusions

3.2.1 Descriptive statistics of variables

The mean, standard deviation, and correlation coefficient values of the variables are described, showing that all three latent variables have high correlation coefficient values for their means. (N=150) (Table 1)

**Table 1.** Descriptive analysis of variables and correlation coefficients.

|                          | Stress   | Depression | Reference group feedback | Gender   | Family background | Age      | History of depression | living costs |
|--------------------------|----------|------------|--------------------------|----------|-------------------|----------|-----------------------|--------------|
| Average value            | 1.46     | 1.393333   | 1.406667                 | 1.566667 | 1.913333          | 2.693333 | 1.313333              | 2.026667     |
| Standard deviation       | 0.500067 | 0.490126   | 0.6765156                | 0.497196 | 0.654737          | 3.305368 | 0.465403              | 0.713689     |
| Minimum value            | 1        | 1          | 1                        | 1        | 1                 | 1        | 1                     | 1            |
| Maximum values           | 2        | 2          | 3                        | 2        | 3                 | 4        | 2                     | 3            |
| Correlation coefficient  |          |            |                          |          |                   |          |                       |              |
| Stress                   | 1        |            |                          |          |                   |          |                       |              |
| Depression               | -0.2229  | 1          |                          |          |                   |          |                       |              |
| Reference group feedback | -0.1996  | 0.2025     | 1                        |          |                   |          |                       |              |
| Gender                   | -0.0567  | 0.1258     | 0.0885                   | 1        |                   |          |                       |              |
| Family background        | 0.1226   | -0.0604    | 0.0498                   | 0.09     | 1                 |          |                       |              |

|                       |         |         |         |         |        |         |         |   |
|-----------------------|---------|---------|---------|---------|--------|---------|---------|---|
| Age                   | -0.0603 | -0.0576 | -0.0429 | -0.0896 | 0.0062 | 1       |         |   |
| History of depression | -0.2197 | 0.2211  | 0.1681  | 0.0396  | 0.0236 | -0.0287 | 1       |   |
| Living cost           | 0.3227  | -0.2796 | -0.1616 | 0.0139  | 0.1773 | 0.0263  | -0.0859 | 1 |

### 3.2.2. Analysis of the reliability of the questionnaire

#### 3.2.2.1. Reliability analysis

The reliability analysis mainly examines the consistency or stability of the results obtained from the tested variables, and is commonly measured by the Cronbach's Alpha reliability coefficient, with a coefficient of 0.7 or above being more desirable, and when the reliability is lower than 0.6, consideration needs to be given to adding or deleting question items. Using the overall data to analyze the reliability of each variable scale, the results are shown in Table 6, the Alpha coefficient of each variable scale is greater than 0.8, with good reliability. Scale reliability analysis was performed on each group of data and the results are shown in Table 6, the Cronbach's Alpha coefficient for both variables on each group of data is greater than 0.8, thus indicating that the scales in the questionnaire of this study have good reliability and can be used for the measurement of this variable (Table 2).

**Table 2.** Variational reliability test.

| Variable   | Measurement Item | Item count | Cronbach's a |
|------------|------------------|------------|--------------|
| Stress     | A1               | 15         | 0.921        |
|            | A2               |            |              |
|            | A3               |            |              |
|            | A4               |            |              |
|            | A5               |            |              |
|            | A6               |            |              |
|            | A7               |            |              |
|            | A8               |            |              |
|            | A9               |            |              |
|            | A10              |            |              |
|            | A11              |            |              |
|            | A12              |            |              |
|            | A13              |            |              |
|            | A14              |            |              |
|            | A15              |            |              |
| Depression | C1               | 8          | 0.859        |
|            | C2               |            |              |
|            | C3               |            |              |
|            | C4               |            |              |
|            | C5               |            |              |
|            | C6               |            |              |
|            | C7               |            |              |
|            | C8               |            |              |

### 3.2.2.2 Validity analysis

Validity is measurement validity. In this paper, we use the method of factor analysis, using principal component analysis, eigenvalues greater than as a criterion to extract common factors, using variance maximization orthogonal rotation method for factor analysis

This paper used SPSS19.0 to conduct exploratory factor analysis on the two scales of stress and depression. Through data analysis, it was found that the KMO values of the three variables were 0.912 and 0.836 respectively, and the p-values of the Bartlett's spherical test were all less than 0.05, which indicated that the sample sizes were sufficient and suitable for further factor analysis. The specific results are shown in Table 7, and the criteria for KMO values are shown in Table 3.

**Table 3.** KMO and Bartlett's test.

| Variable   | KMO   | Bartlett test          |     |     |
|------------|-------|------------------------|-----|-----|
|            |       | approximate chi-square | df  | Sig |
| Stress     | 0.912 | 1165.691               | 105 | 0   |
| Depression | 0.836 | 499.055                | 28  | 0   |
| Total      | 0.904 | 1827.236               | 253 | 0   |

In this paper, the scale was factor analyzed using principal component analysis, and the principal component factors were extracted by rotation through the maximum variance method, and the extraction results are shown in Table 9. Where KMO=0.904, indicating that the adequacy of the sample is sufficient. The questionnaire included a total of 2 latent variables: stress and depression. The factor analysis method successfully extracted these 2 latent variables, in which the ninth statement of repression and the tenth statement had too low loading values, which were removed from the analysis in this paper. The total variance drawn contributed 50% to the total variance drawn; indicating acceptable interpretive power of the scale (Table 4).

**Table 4.** Scale validity test values.

| Measurement Item | Stress | Depression |
|------------------|--------|------------|
| A1               | 0.585  |            |
| A2               | 0.628  |            |
| A3               | 0.757  |            |
| A4               | 0.699  |            |
| A5               | 0.666  |            |
| A6               | 0.667  |            |
| A7               | 0.73   |            |
| A8               | 0.59   |            |
| A9               | 0.626  |            |
| A10              | 0.738  |            |
| A11              | 0.607  |            |
| A12              | 0.531  |            |
| A13              | 0.72   |            |
| A14              | 0.616  |            |
| A15              | 0.704  |            |
| C1               |        | 0.629      |
| C2               |        | 0.718      |
| C3               |        | 0.543      |
| C4               |        | 0.735      |
| C5               |        | 0.765      |
| C6               |        | 0.649      |
| C7               |        | 0.634      |

|                         |        |        |
|-------------------------|--------|--------|
| C8                      |        | 0.739  |
| Variance extraction (%) | 30.268 | 19.732 |

### 3.2.3. Hypothesis testing

#### 3.2.3.1. A test of the effect of stress on repression

This study utilized one-way analysis of variance to test the effect of stress on depression. The results of the data showed that there was a main effect of stress [M high stress=1.49; M low stress=1.28;  $F(1,149)=7.737, p<0.05$ ], stress and repression (Table 5, Table 6).

**Table 5.** Variance chi-square test.

| Levene statistic | df1 | df2 | Significance |
|------------------|-----|-----|--------------|
|------------------|-----|-----|--------------|

**Table 6.** One-way ANOVA test.

|            | Square sum | df  | Mean square | F     | Significance |
|------------|------------|-----|-------------|-------|--------------|
| Intergroup | 1.778      | 1   | 1.778       | 7.737 | .006         |
| Intragroup | 34.015     | 148 | .230        |       |              |
| Total      | 35.793     | 149 |             |       |              |

#### 3.2.3.2 Moderating role of reference group feedback

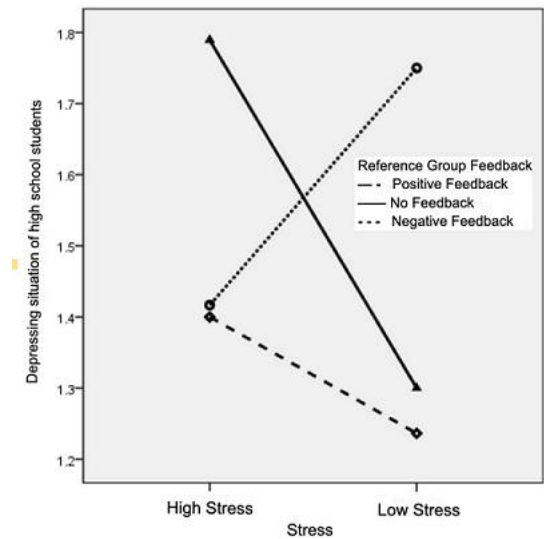
This study utilizes ANOVA to examine the moderating effect of reference group feedback on stress and depression. Since stress and depression are both categorical variables, this paper adopts the function of “general linear model and univariate ANOVA” in SPSS software to test the moderating effect of reference group feedback on stress and depression. The interaction between reference group feedback and stress was found to be significant ( $F=9.818, P=0<0.01$ ), i.e., reference group feedback moderated the relationship between stress and depression, and hypothesis 1 was established. Further analysis showed (Figure 5), that is, when high school students are in low stress, feedback from the reference group (positive feedback/no feedback) is more significant than negative feedback from the reference group in inducing high school students to relieve themselves of repression; and when high school students are in high stress, feedback from the reference group (positive feedback/negative feedback) is more significant than no feedback from the reference group in inducing high school students to relieve themselves of repression. Therefore, Hypothesis 1 is valid, where Hypothesis 1a is fully valid, Hypothesis 1c is partially valid, and Hypothesis 1b is not valid [5].

**Table 7.** Analysis of the interaction effect of reference group feedback and stress on perception of repression.

| Origin                           | (Number of) degrees of freedom (physics) | Mean square | F       | sig   |
|----------------------------------|------------------------------------------|-------------|---------|-------|
| Calibration model                | 5                                        | 1.361       | 7.484   | 0     |
| Intercept                        | 1                                        | 125.427     | 689.679 | 0     |
| Stresses                         | 1                                        | 0.253       | 1.391   | 0.24  |
| Reference group feedback         | 2                                        | 1.086       | 5.973   | 0.003 |
| Stress *Reference group feedback | 2                                        | 1.786       | 9.818   | 0     |
| Inaccuracies                     | 144                                      | 182         |         |       |
| Total                            | 150                                      |             |         |       |

|                 |     |  |  |  |
|-----------------|-----|--|--|--|
| Corrected total | 149 |  |  |  |
|-----------------|-----|--|--|--|

$R\text{-squared} = 0.206$   $Adjusted\ R\text{-squared} = 0.179$



**Figure 5.** Plot of the interaction effect of reference group feedback and stress.

## 4. Conclusions and Reflection

### 4.1. Basic Conclusion

This study utilized data analysis method, literature research method, questionnaire survey method, case study method and other research methods to investigate and verify whether the reference group will implicitly increase the degree of adolescents' repressed emotions. The results show that only negative feedback increases adolescents' suppressed emotions when adolescents are not under much pressure; when adolescents are under some pressure, both negative feedback and no feedback increase adolescents' suppressed emotions.

Therefore this research group is committed to address this social problem from three situations.

(i) When adolescents are not stressed

1. As a high school student's reference group (e.g., elders, teachers, or peers), one should always be aware of one's own words and actions, and not give no feedback or negative feedback to those around them when they are experiencing depressing emotions.

2. High school students should ignore the voices of their reference groups that give them no feedback or negative feedback when they themselves are experiencing repressed emotions, and listen to the negative feedback with a benign mindset.

3. Based on the results of this study, the research group will set up a research group to publicize and popularize the issue to the public, and to solve this kind of social problem with a large-scale initiative. For example, we will regularly publish articles on psychological issues, establish contact with school organizations, and conduct monthly lectures and other activities. At the same time, the group will analyze and make suggestions to help some of the cases in need of help, so as to alleviate their degree of psychological depression.

(ii) When adolescents are under high levels of stress, no feedback as well as negative feedback can increase the individual's depressing emotions. Especially when the reference group gives no feedback to adolescents, such as cold violence, both positive and negative feedback are less influential than no feedback. Therefore, this research group will focus on the solution to the increase of psychological depression caused by no feedback.

(1). Parents, friends and teachers of adolescents should treat adolescents under stress with sincerity and honesty, emphasize communication and oppose cold violence.

(2). Teenagers should correctly deal with cold violence from family, friends, teachers and teachers, face themselves truthfully, control their emotions, rationally analyze the causes of cold violence, express their real needs, and seek professional help (e.g., from psychologists).

(3). As a research group, we will set up a corresponding research group in close contact with school organizations to pay attention to the psychological situation of people around us and help them get out of this psychological situation, as well as actively contracting professionals in the society who are concerned about this psychological problem, and publicizing the solutions to this kind of pressure in schools and other places [6].

#### **4.1.1. Potential challenges**

(1) This study did not achieve complete randomization in sampling to take data (random sample), also for each person has the same probability of being selected at any stage of the sampling process. In this study, the questionnaires were distributed in the form of private letters to friends, classmates, and posted in the circle of friends; in addition, when choosing the interviewee, the interviewers invited by the panelists were all the classmates and teachers around them. (2) This study did not take into account the possible stages of data presentation, but also in the different stages of the data presented different findings, such as 100 copies of the data for one outcome, 200 copies for another outcome, with the possibility of interval results.

Future measures taken: (1) Design the sampling method of random sample (random assignment) to avoid the possibility of only inviting people around to participate in the survey, to achieve the data collection of completely random theory. (2) Determine the likelihood interval to reduce the stage of data. After designing the survey, discuss and analyze the possible phases of the data, and conduct research by distributing the data more than once to finally determine the validity of the data.

#### **4.1.2. Program Improvement**

Assuming that there is enough time, this paper reflects and summarizes the four major aspects of questionnaire design, research groups, data collection, and solutions, and discusses how to further optimize the research and exploration.

(i) Reasonable presentation of reference groups and comprehensiveness of questionnaire design

Based on Prospect Theory, reference groups are used as an objective reference factor in the subjective space, however, there are no specific principles for reasonable reference group reference indicators and reference points. Therefore, when designing the questionnaire, the research team only used the reference group as a single variable to collect preconceived data, so the questionnaire has the problem of non-

comprehensiveness, and the reasonable expression and presentation of the reference group may not be able to achieve the same level of thinking and understanding of the participants. Taking this into consideration, this study will improve the questionnaire's comprehensiveness when there is enough time, and redesign and improve the conceptual presentation of the reference group, the presentation of the figurative understanding of the reference group, the relevance of the questions, the reasonableness, and the collectability of the questionnaire. In addition, the confidentiality and explanatory power of the questionnaire will be strengthened in this paper so that the participants will have enough trust and participation in this study[7].

(ii) Designing the study population and cohort to be more accurate and completely randomized

In this study, all the high school students are used, this group is not familiar with the social environment because they have not been in the world for a long time. Therefore, there are differences in the correct understanding of the reference group, and there is a non-complete randomization of the data collection object, which will cause a certain impact on the experiment and interference. Combined with this viewpoint, this study will choose to study the group image more accurately in the case of sufficient time, and refine the characteristics, habits, and ideological deviations of the research object. At the same time, ensure that the survey respondents are completely randomized[8].

(iii) fully collect data to ensure the validity of the data (excluding the defects of random filling, chaotic filling, rush to fill in time)

There are data validity defects in this study, there are random filling, non-objective filling, rushing to fill in the unreasonable situation, and the number of information is not enough. Combined with this viewpoint, this study will carry out reasonable instructions and emphasize before filling in when there is enough time to improve the number of data collection[9].

(iv) Improvement of the preliminary solution and implementable action plan

The preliminary solution and implementable action plan of this study have no way to consider its implementability and reliability because of time, and there is a bias towards theoretical support, which requires practical data and phenomena to help confirm the correctness of the solution. With this in mind, this study will test the implementability of the solutions when there is enough time to collect at least a small amount of evidence and data to help support the theoretical recommendations [10].

## Conflicts of Interest

The author declares that there is no conflict of interest regarding the publication of this article.

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## References

- [1] Barsade, S.G.; Gibson, D.E. Group Affect: Its Influence on Individual and Group Outcomes. *Current Directions in Psychological Science: A Journal of the American Psychological Society*, 2012, 21(2), 119-123.

- [2] Bearden, W.O.; Etzel, M.J. Reference Group Influence on Product and Brand Purchase Decisions. *The Journal of Consumer Research*, 1982, 9(2), 183-194.
- [3] Cohen, S.; Williamson, G. Perceived Stress in a Probability Sample of the United States. Spacapan, S. and Oskamp, S. (Eds.) *The Social Psychology of Health*. Newbury Park, CA: Sage, 1988.
- [4] Credé, M.; Bashshur, M.; Niehorster, S. Reference Group Effects in the Measurement of Personality and Attitudes. *Journal of Personality Assessment*, 2010, 92(5), 390-399.
- [5] Folkman, S.; Lazarus, R.S.; Dunkel-Schetter, C.; DeLongis, A.; Gruen, R.J. Dynamics of a Stressful Encounter: Cognitive Appraisal, Coping, and Encounter Outcomes. *Journal of Personality and Social Psychology*, 1986, 50(5), 992-1003.
- [6] Gross, J.J.; John, O.P. Individual differences in two emotion regulation processes: Implications for affect, relationships, and well-being. *Journal of Personality and Social Psychology*, 2003, 85, 348-362.
- [7] Hammen, C. Stress and depression. *Annual Review of Clinical Psychology*, 2005, 1(1), 293-319.
- [8] Heine, S. J.; Lehman, D. R.; Peng, K.; Greenholtz, J. What's wrong with cross-cultural comparisons of subjective likert scales?: The reference-group effect. *Journal of Personality and Social Psychology*, 2002, 82(6), 903-918.
- [9] Reich, J.W.; Zautra, A. J. Arousal and the Relationship Between Positive and Negative Affect: An Analysis of the Data of Ito, Cacioppo, and Lang (1998). *Motivation and Emotion*, 2002, 26(3), 209.
- [10] Traynor, M. Focus Group Research. *Nursing Standard*, 2015, 29(37), 44-48.



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