

Promoting Self-disclosure Using Associative Cards in High School Adolescents

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Abstract: The Self-disclosure for adolescents is important for their interpersonal relationships as well as future social development. Adolescents tend to increase their self-disclosure when they communicate with their peers. Associative cards serve as a tool that closes the distance between people and builds an emotional connection with others during communication. Previous research has showed that associative cards could facilitate the self-disclosure of patients with psychological problems. This study aims to test the effectiveness of associative cards on adolescents' self-disclosure in school settings. This study adopted a quasi-experimental design with non-randomized samples, 14 volunteer students were invited to join in the associative cards activity. The Self-Disclosure Inventory was used to measure participants' self-disclosure. Participants finished the same inventory before and after the activity. The results showed that score differences between the pretest and posttest indicated a significant difference, which suggested that using associative cards can promote adolescents' self-disclosure in the school environment. The conclusion provided a novel way to facilitate peer relationships in school. Educators can use associative cards more in the future to promote adolescent's self-disclosure to peers. The associative cards activity in this research can be improved and extended to study whether the promotion of adolescents' self-disclosure can last long term.

Keywords: self-disclosure, associative cards, adolescents, interpersonal relationship, school environment

1. Introduction

Adolescence is a critical period to develop peer relationships, which is essential to their long-term social competence in the future [1]. Self-disclosure, a fundamental factor to improve interpersonal relationships, refers to the readiness of individuals to express information about themselves to others [2]. Researchers assert that this information should be of a private or intimate essence which usually is not readily accessible to others [3]. In this study, self-disclosure of adolescents refers to the willingness to talk about their personal information related to their self-assessments, emotions, and daily school lives with their peers. Meanwhile, associative cards are intended to boost users' creativity and communication, which allow people to reclaim their sense of self [4]. The associative cards also serve as the bridge that help people communicate their feelings [5]. Therefore, this study intends to design a student activity using Personita decks of oh cards, sets of associative

cards created by Ely Raman and Marina Lukyanova, to promote the self-disclosure of adolescents and strengthen their peer relationships.

1.1. Adolescents' Self-Disclosure

During adolescence, self-disclosure significantly increases [6]. Mitchell pointed out that self-disclosure works as a catharsis for adolescents' positive and negative emotions [7]. As Bubrmester and Prager said, adolescents rely more heavily on self-disclosure to cope with their stress than young children [6]. Because girls experience more stress in puberty, they disclose to others more than boys [6]. The nature of puberty-related concerns also leads to girls' tendency to disclose to their same-sex friends [8]. According to Bubrmester and Prager, adolescents may choose peers to parents as recipients of self-clarifying and self-disclosure owing to the various authority structures of parent-child and peer relationships [6].

Besides these characteristics of adolescents' self-disclosure, self-disclosure is an important process that helps people grow and support their interpersonal relationships, especially for adolescents. Bubrmester and Prager mentioned that the regulation of self-disclosure affects self-determination and control in relationships [6]. Adolescents can develop close relationships through reciprocity or getting feedback from others during self-disclosure [9]. The study conducted by Bauminger, Finzi-Dottan and Chason showed that three dimensions of self-disclosure including friends, family, and physical appearance have direct effects on young adolescents' intimacy [10]. Therefore, self-disclosure is critical to adolescents, which helps them build solid peer relationships and foster their future social development. Also, demographic variables such as gender and nationality may play a role in self-disclosure. Kito found that Americans are more willing to disclose themselves than Japanese people do [11].

1.2. Measurements of Self-Disclosure

Plenty of research measures self-disclosure through interviews or discussions. Haynes and Avery [12] conducted an audiotaped interview that allows participants to discuss "things I dislike and like about members of my same/opposite sex". Bubrmester and Prager pointed out that in-depth interviews with kids, parents, and instructors could be a good place to start when examining kids' conscious interests [6]. Barak and Gluck-ofei measured self-disclosure based on online forum messages in three categories, including information, thoughts, and feelings [13].

However, due to the subjective and time-consuming nature of the interview, most study tend to use self-report scales or questionnaires to measure self-disclosure. Kito used the Self-Disclosure Index which consists of ten items of personal formation, and each of these items was placed into the stem of "I am willing to talk about [the item] with [the target person]" [11, 14]. Kito then used a 5-point Likert-type scale for each item [12]. West and Zingle created Self-disclosure Inventory for Adolescents (SDIA) that contains both the "content and the confidant" [15]. Other researchers utilized the Jourard Self-Disclosure Inventory (SD-60) [16], its shortened version (SD-25) [17], and Self-Disclosure Questionnaire (SDQ) [18]. Some of the inventories mentioned above are suitable for adults and some are suitable for adolescents. Considering the objective and easy-to-operate characteristics of the scale, this study adopted and combined Self-Disclosure Index [14], Self-disclosure Inventory for Adolescents (SDIA) [15], and Self-Disclosure Questionnaire (SDQ) [18] to generate an inventory to measure adolescents' self-disclosure specifically in school settings.

1.3. The Use of Associative Cards

As a projective tool, the use of associative cards in psychotherapy and psychological care has become an increasingly prevalent and innovative practice [19]. Raz and Lahad pointed that associative COPE

cards can affect psychophysiological arousal, which can be a part of Fantastic Reality, Somatic Experiencing, and Cognitive Behavioral Therapy for PTSD and anxiety disorders [20]. According to Levy, associative cards facilitate the breakdown of communication barriers between clients and drama therapists by inviting clients to create and tell their own untold stories in a safe way [21]. Incorporating art-making and story-making with the associative cards is a creative way for adolescents and young adults on a variety of issues, such as grief, eating disorders, and trauma to express their feelings [22]. Other article pointed that the associative cards help suicidal adolescent inpatients recognize their emotions [23].

The Persona and Personita decks of associative cards have been quite beneficial in helping adolescents understand their relationships and how to communicate with their relatives [23]. Regarding trauma and resilience, the Cope decks of associative cards have also demonstrated powerful effects in group therapy settings [23]. Stockbridge and Auburn [24] found that using associative cards for substance abuse recovery allows women to make connections and express feelings. Some studies have shown that the therapeutic work of self-awareness and self-disclosure is made easier by the associated cards with the intention of inspiring creative self-transformation [25]. It can be seen that the associative cards, especially Persona and Personita decks promote patients' communication and help them perceive their feeling in the psychotherapy domain, and adolescents are often targeted. However, there are few cases using associative cards in a school setting.

1.4. Research Design

This study adopted a quasi-experimental design with non-randomized samples. In this paper, this study chooses adolescents in the Sino-American program in Beijing Huiwen Middle School as the subjects and aimed to promote their peer relationship. Participants were tested before and after experiencing the designed activity using associative cards. This study chose the Personita decks which consist of 77 Portraits of Children & Youth from around the world plus 44 situation cards about intra- and inter-personal relationships. By comparing participants' pre- and post-test results, this study will reveal the effectiveness of associative card activity on their self-disclosure in school environment. In order to ensure the full experience of all participants, this study used a quasi-experimental design with no control group. The hypotheses of this study are as follows:

Hypothesis 1. Compared to pretest self-disclosure scores, there will be significantly higher posttest self-disclosure scores after students participate in the associative cards activity.

Hypothesis 2. There will be differences in the changes of scores between students of different genders after participating in the associative cards activity.

2. Method

2.1. Participants

The Participants were 14 volunteer high school students (7 males and 7 females) from the Sino-American program of Beijing Huiwen Middle School Grade 10 and Grade 11, aged 16-17 years.

2.2. Measures (Self-Disclosure Inventory)

This study adopted Self-Disclosure Index [15], Self-disclosure Inventory for Adolescents (SDIA) [17], and Self-Disclosure Questionnaire (SDQ) [9] for adolescents mentioned above. The Self-disclosure Inventory used in this study consists of demographic questions and 26 self-disclosure items in school settings (see Appendix A). These items were divided into three subscales including General, School Concern, and Personal Concern because of their greater relevance to adolescents' school lives. The subscale of General was adopted and modified from the Self-Disclosure Questionnaire (SDQ)

[9], which comprises ten items. The subscales of School Concern and Personal Concern were adopted from Self-disclosure Inventory for Adolescents (SDIA) [16], each comprising eight items. All these items have proven to possess validity and reliability in previous research. Each item was modified and inserted into the stems from the Self-Disclosure Index [15], “I’m willing to talk about [the item] with [the target person].” with a 3-point Likert-type scale (0 = totally disagree, 3 = totally agree). This Self-Disclosure Inventory was used for both the pretest and the posttest.

2.3. Procedure

The whole activity lasted about 80 minutes

- (1) Pretest and introduction of associative cards, which took 14 minutes.
- (2) Warm-up activity: Each participant chose a card from Personita decks to represent their self-assessed social status and interpersonal relationships and briefly described their card, which took 11 minutes.



Figure 1: Personita decks of associative cards.

- (3) Create a story in pairs: Randomly pair participants and instruct each pair to create a story. One representative from each pair drew the situation cards (See Figure 1a) randomly. Each pair determined the main characters of the story with a maximum of two, even if there were more than two characters shown on the situation card. Each pair chose from youth cards (See Figure 1b) which were portraits of children and youth from around the world to visualize their main characters and created demographics, personalities, and background stories of these characters. Then, using the situation card, the selected youth card, and the created information of characters, each pair created a story of this situation and expanded it with their understanding of intra- and inter-personal relationships. At last, each pair took turns to share their story, which took 22 minutes.

- (4) Story Chain with the theme of “Helen’s school life”: The researcher identified a main character (from the youth cards), described the character’s personality characteristics, and difficulties encountered in interpersonal relationships at school. The end of the story was set by the researcher that the character overcame the difficulties. Each participant then took turns to draw situation cards randomly and create a plot of the story based on the situation card and the plot created by the participant before this person. At last, the story was constructed with 14 plots to reach the required ending, which took 23 minutes.

- (5) Posttest and debrief, which took 10 minutes.

3. Result

First, the differences between total pretest scores and posttest scores were calculated. Then, variable distribution normality was verified through the Shapiro- Wilk test. The use of associative cards was regarded as independent variable, and the degree of self-disclosure was regarded as dependent variable. Next, the Paired Samples test was used to test the pre-post differences, and the significance

level was 0.05. The result showed that $t(13) = 4.473, p < 0.001$, which indicate significance between the improvement of self-disclosure and the utilization of associative cards.

To test the change of scores of each subscale of General, Personal Concern, and School Concern, the differences between the pretest and posttest scores of each subscale were calculated. After the Shapiro- Wilk test, the normality was verified and the two outliers of subscales of personal concern and school concern were excluded. The Paired Samples test respectively showed that $t(13) = 1.934, p = 0.038$ (general), $t(12) = 6.383, p < 0.001$ (personal concern), and $t(12) = 1.885, p = 0.042$ (school concern), which all indicated significance. Among them, subscale of Personal Concern showed a very strong significance.

Then, the non-parametric test was selected. The result of Mann-Whitney U showed that there was no significance in the changes in scores between males and females. All statistical analyses were performed using IBM SPSS Statistics 29.0.

4. Discussion

In this study, the hypothesis that using associative cards can promote adolescents' self-disclosure in the school environment was verified, which was consistent with the findings of Thomas [23] that the Personita decks of associative cards can promote communication and narrow the distance between adolescents and studies of Voicu that the associative cards can facilitate self-disclosure [25]. Simultaneously, it becomes evident that during the entire associative cards activity, adolescents getting to know each other served as a fundamental basis for self-disclosure. For example, participants shared their attitudes toward interpersonal relationship, their personalities, and some embarrassing personal experiences. Personita decks are easy to facilitate storytelling about interpersonal relationships, especially relationships between family members and peers. Throughout the activity, participants gradually opened themselves up in terms of their feelings, emotions, and values. While each participant shared the created story, others naturally echoed with this person, asked follow-up questions, brought up discussions of moral reasoning, and were involved in elevating the theme. As the initiator of the event, it was very happy to see the process of students getting to know one another other and sharing their personal information with their peers.

The way this study designed the activity and the nature of the associative cards can explain why the subscale of Personal Concern had higher significance. Since this study used the associative cards in a non-competitive and cooperative way, most participants' defense mechanisms were removed, and they can explore their inner world in a trusting and safe atmosphere. Through the process of asking follow-up questions and responding to previous plots, participants were more willing to support and assist others, which allowed them to get contact with others lovingly. Because the theme and plot of the story are based on the interpersonal troubles and the personalities of the main character, participants got a deeper understanding of the contents related to these aspects. Plus, the whole activity provided a secure space for participants to disclose their private personal information. Although the theme of the created story was school life, the participants mentioned little about academic performance and subjects, which indicated the relatively smaller proportion of academics in adolescents' daily lives compared to intra- and inter-personal relationships. Also, they barely discussed state of health and financial condition during the activity. Thus, the score of the subscale of Personal Concern increased more significantly than the subscale of School Concern and General.

This study did not find a gender difference in the effectiveness of the associative card on self-disclosure. This may be because none of the stories created included any gender-specific topic. Also, this study did not observe any differences between females and males during the process of activity. Surprisingly, when adolescents worked in pairs to create a story together, both the same gender and the opposite gender collaborated well and were very happy.

5. Conclusion

This study intended to test the effectiveness of associative cards on adolescents' self-disclosure in school settings and verify whether the gender plays the role on changes of self-disclosure. The result showed that using associative cards can promote adolescents' self-disclosure in the school environment. In particular, adolescents' self-disclosure about topic of personal concern was promoted greatly through the associative cards activity. This study did not find gender differences in the effectiveness of associative cards on self-disclosure.

Self-disclosure can help adolescents narrow distance between their peers and build solid peer relationships with them through communication of their personal information, the increase of self-disclosure is beneficial for adolescents' future development in society. Self-disclosure increased dramatically in adolescence and most self-disclosure of adolescents took place in the school. Therefore, it is important to research ways that can promote self-disclosure of adolescents in school environment. Simultaneously, as a popular projective tool, the nature of the associative cards to facilitate communication and establish a safe social atmosphere made it necessary to study the effectiveness of associative cards on adolescents' self-disclosure in school settings. This study is of great significance to educators and students themselves. The result of this study can be applied in school to increase students' self-disclosure with their peers.

Due to the design of the associative cards activity and the protection of participants' experience, this study used a relatively small sample size. Further studies can be conducted on a larger population of adolescents. Moreover, most participants mentioned topics of family or parents when creating their stories, which can be used as inspiration for later activity design to measure the effectiveness of associative cards on promoting adolescents' self-disclosure in other settings. Lastly, this paper advises educators to use associative cards and the activities this study designed as tools in school to foster students' interpersonal relationships.

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Appendix A (The self-disclosure inventory)

demographic questions

Name

Gender

Grade

Have you ever used the oh card?

General

I am willing to talk about

“my main interest in life with my classmates.”

“those activities and experiences which I enjoy with my classmates.”

“my personality with my classmates.”

“my strengths and weaknesses with my classmates.”

“my abilities as a student with my classmates.”

“my current motivation with my classmates.”

“my future educational/occupational plan with my classmates.”

“the state of health and physical appearance with my classmates.”

“what do I like and/ dislike about my physical characteristics with my classmates.”

“my current financial condition with my classmates.”

Personal concern

I am willing to talk about

“the things that make me feel sad and unhappy with my classmates.”

“my greatest faults with my classmates.”

“the things that get me worried or make me afraid with my classmates.”

“the mistakes that I have made with my classmates.”

“the troubles I get into with my classmates.”

“things I have done about which I feel guilty with my classmates.”

“the embarrassing situations I have been in with my classmates.”

“my bad habits with my classmates.”

School concern

I am willing to talk about

“which school subjects I like and which I dislike with my classmates.”

“subjects I am poorest in at school with my classmates.”

“how I feel about homework with my classmates.”

“my ability to learn at school with my classmates.”

“my occupational plans for the future with my classmates.”

“how well I get along with my teachers with my classmates.”

“how I feel about my school marks with my classmates.”

“how I feel about tests with my classmates.”