



The Effectiveness of Positive Thinking Training on Mental Toughness and Social Well-being in Derelict Adolescents

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Abstract: Mental toughness and social well-being are supportive characteristics that help adolescents, especially derelict adolescents, to cope effectively with environmental challenges. Accordingly, the present study was conducted to investigate the effectiveness of positive thinking training on mental toughness and social well-being in derelict adolescents. The research method was quasi-experimental pre-test-post-test with a control group. The statistical population of the study consisted of all derelict adolescents aged 13 to 18 years under the auspices of the Welfare Center of Karaj, Iran in the second six months of 2020. By accessible sampling method, 30 people were selected and randomly assigned to the control and experimental groups (15 people in each group). The experimental group received a Rashid (2009) Positive Intervention Package in 14 sessions for seven weeks, two 60-minutes sessions per week. The control group did not receive any intervention during this period. Research data were collected using Clough et al. Mental Toughness Questionnaire and Keyes's Social Well-being questionnaire (KSWBQ). Multivariate analysis of covariance was used to test the research hypotheses. The results indicated that positivity education increased the mental toughness and social well-being in derelict adolescents. Accordingly, the findings suggest that supportive institutions use positivity thinking training as an effective intervention to increase the positive virtues such as mental toughness and social well-being in derelict adolescents.

Keywords: Positive thinking training, Mental toughness, Social well-being, Derelict adolescents

Introduction

The disintegration of the family and various other factors in the Iranian society has made many families face the neglect of children (([Aghai & Mirmohammadi, 2018](#)). Derelict children refers to children who are deprived of support, care and effective maintenance by their families for various reasons and do not have the possibility to live in the family environment. Due to the unknown parents, divorce and separation from each other, abandonment of the family by the father, addiction of the parents, the lack of moral and social competence, the absence of parental influence, the existence of disorder, chaos and incompatibility, running away from home due to having a violent, authoritarian and unstable family, being rejected and abandoned and are kept in public centers such as orphanages and charity centers ([Ahangari, Eshaghi, Rasouli, & Tahan, 2019](#)).

The social well-being of derelict teenagers as groups at risk is one of the main priorities of Iran ([Alizadeh, Raheb, Mirzaee, & Hosseinzadeh, 2020](#)). Social well-being is one of the dimensions of health that affects or is affected by both physical and mental dimensions and it is the quantity and

quality of the interaction of a person with the surrounding environment for the welfare of the society ([Damari, Emami Razavi, Hajebi, & Elahi, 2021](#)). Social well-being is influenced by several factors; one of the structures that have been taken into consideration in this regard is the ability of a person to face the adversities of life or actually mental toughness. The meaning of mental toughness is to consider a human being as an independent, valuable, efficient and capable being who can use logical and reasonable coping methods to solve problems and face problems even in the most critical and stressful situations ([Crust & Clough, 2011](#)). In fact, mental toughness is a personality trait that is a factor for improving health and is a combination of beliefs about oneself and the world that makes a person resistant to internal and external pressures and makes a person successfully overcome difficult and threatening situations ([Rahmati & Naaimikia, 2015](#)). People with high mental toughness can understand and control the environment in order to have a meaningful and appropriate behavior or action ([Lindblad, Sandelin, Petersson, Rohani, & Langius-Eklöf, 2016](#)). Mental toughness can protect a person against stressful life conditions and has strong associations with health and health-related behavior and has been shown to predict psychological well-being ([Grevenstein & Bluemke, 2015](#)). One of the effective ways to improve people's living and working conditions is to use positive thinking training ([Shoshtarirezvani, Jaladati, Hojatansari, & Bahrami, 2021](#)). Positive thinking training is one of the methods derived from the third wave of psychotherapy and is effective in improving psychological characteristics, which emphasizes identifying and cultivating strengths and weaknesses with the aim of improving health ([Morley, 2015](#)). This intervention, with emphasis on the creation and expansion of positive emotions, seeks to create a shield against mental disorders and create and increase positive psychological characteristics ([Bekhet, 2017](#)). Instead of deep concentration on human inabilities and weaknesses, positive psychology is focused on human abilities such as living happily, enjoying, problem solving and optimism ([Seligman & Csikszentmihalyi, 2014](#)). The aim of this approach is to discover the methods by which people can express their altruistic feeling of pleasure and happiness and play a more prominent role in creating happy in family, professional situation and social environments ([Foroozanfar, 2020](#); [Sharifikia, Ahangri, Askari, & Tahan, 2019](#)). This approach emphasizes the positive processes and abilities of people and advises therapists to pay attention to the positive processes of their clients and incorporates symptoms with strengths, resources with risks, weaknesses with values, and hopes with regrets ([Rashid, 2015](#)). Earlier studies indicated the effectiveness of positive thinking training on the mental toughness of students ([Melhe, Salah, & Hayajneh, 2021](#)), on the psychological toughness of first secondary school students ([Kazemi, Mousavi, Rasoulzadeh, Mohammadi, & Mohammadi, 2020](#)), on the psychological toughness of female students ([Mortazavi Emami, Ahghar, Pirani, Heidari, & HamidiPour, 2019](#)), on mental health of students ([Shoshtarirezvani et al., 2021](#)), on psychological health of mothers with children Autism ([Rashidzadea, Beyrami, Touraghashemi, & Mirnasab, 2019](#)), on psychological well-being of elderly women ([Sayadi Sarini, Hojatkhah, & Rashidi, 2016](#)), and on psychological well-being of students ([Ghiasi, Tabatabaee, & Nasri, 2016](#)).

Also, studies have shown the effectiveness of positive thinking training on social well-being and its components ([Dargahi, Mohsenzade, & Zaharakar, 2015](#); [Dehghannezhad, Hajhosseini, & Ejei, 2017](#); [Otis-Green & Juarez, 2012](#)). For instance, on theoretical constructs from the field of positive psychology to interpret the impact of music festival attendance on participants' psychological and social well-being, a study presented a conceptual model in order to guide further research in this area, and enable both festival organizers and attendees to take optimal advantage of the potential of music festivals to impact positively on young adults' psychological and social well-being ([Packer & Ballantyne, 2011](#)).

Social well-being is one of the basic indicators of the development of any society, which leads to the efficiency of the individual in the society. Also, social well-being is an important factor in accepting social norms, which enables a person to maintain a positive balance and avoid undesirable responses such as high-risk behaviors ([Ghoreishi Rad & Pour JabbarAkhouni, 2019](#)). On the other hand, the decrease in life expectancy and lack of mental strength can cause problems in derelict adolescents. Also, considering that most of the researches in the field of social well-being and mental toughness have been done on normal adolescents and less studies have been done on derelict adolescents and considering the effectiveness of positive thinking training on the personality and social characteristics of adolescents, conducting researches in this field is necessary and using the results of these researches in the field of identification and prevention and solving the problems of derelict adolescents is one of the important research requirements. Therefore, the aim of the present study was to investigate the effectiveness of positive thinking training on the mental toughness and social well-being in derelict teenagers.

Material and Methods

The research method was quasi-experimental pre-test-post-test with a control group. The statistical population is all derelict adolescents aged 13 to 18 years under the auspices of the Welfare Center of Karaj, Iran in the second six months of 2020. By accessible sampling method, 30 people were selected and randomly assigned to the control and experimental groups (15 people in each group). Inclusion criteria were age range of 12-18 years, stay in Welfare Center for more than 1 year, willingness to cooperate, ability to respond to self-report tools, not having severe psychological disorder according to the report of Welfare Center consultants. Exclusion criteria included absence of more than two sessions, refusal to participate in the study, and incomplete response to the research tools.

Instruments

Mental Toughness Scale (MTS): This 48-question scale was designed by [Levy, Polman, Clough, Marchant, and Earle \(2006\)](#) and has 6 subscales of challenge (8 questions), commitment (11 questions), emotional control (7 questions), and life control (7 questions).), self-confidence in abilities (9 questions) and interpersonal self-confidence (6 questions) on a 5-point Likert scale from 1 (completely disagree) to 5 (completely agree). The range of scores is between 48 and 240, and the higher the score indicates higher mental toughness. [Levy et al. \(2006\)](#) reported a reliability coefficient

of 0.90 using the test-retest method and its content validity was reported as favorable. [Sohrabi, Abedanzade, Shetab Boushehri, Parsaei, and Jahanbakhsh \(2017\)](#) confirmed its content validity and reported the reliability of the questionnaire using Cronbach's alpha for the subscales in the range of 0.74 to 0.78, and the total reliability of the questionnaire 0.86. The reliability of this questionnaire in the present study was obtained with Cronbach's alpha method of 0.77.

Social Well-Being Scale: This 20-question questionnaire was developed by [Keyes and Shapiro \(2004\)](#). It has 5 subscales of social actualization (questions 1-4); social integration (questions 5-7), social coherence (questions 8-10), social acceptance (questions 11-15) and social contribution (questions 16-20) on a 5-point Likert scale (very high, 5 and very low, 1). The range of scores is between 20 and 100, and higher scores indicate higher social well-being. [Babapour Kheiroddin, Toosi, and Hekmati \(2010\)](#) confirmed the validity of this tool with the internal consistency method. They also reported the reliability of the mentioned questionnaire using Cronbach's alpha method for the total scale of 0.78. The reliability of this questionnaire in the present study was obtained with Cronbach's alpha method of 0.75.

In this research, the participants in both groups were asked to answer the research questionnaires in pre-test. The experimental group received a [Rashid \(2009\)](#) Positive Intervention Package in 14 sessions for seven weeks, two 60-minute sessions per week. The control group did not receive any intervention during this period. Then a post-test was taken from both groups. The summary of the intervention sessions is presented in Table 1.

Table 1. Summary of Positive Intervention Package sessions

| Session | Title | Content |
|---------|------------------------|---|
| 1 | Orientation | Lack of positive resources perpetuates depression. 1. The role of absence or lack of positive emotions, capabilities, character and meaning in the persistence of depression is discussed. 2. The framework of positive psychotherapy, the role of the therapist and the responsibilities of clients are discussed. A pre-test is taken |
| 2 | Commitment | Determine specific capabilities. 1. The clients determine their special abilities from the positive introduction and discuss the situations that this ability helped them. 2. Three paths leading to happiness, joyfulness and meaning are discussed. |
| 3 | Commitment/Joyfulness | Developing special abilities and positive emotions 1. The developing of special abilities is discussed; clients are prepared to form specific, objective and accessible behaviors. 2. The role of positive emotions in well-being is discussed. |
| 4 | Joyfulness | Good memories versus bad memories 1. The role of good and bad memories in well-being is discussed. 2. Encouraging clients to express their feelings with anger and bitterness |
| 5 | Joyfulness /Commitment | Forgiveness Introducing forgiveness as a tool that turns anger and bitterness into neutral emotions and even positive emotions for some people. |
| 6 | Joyfulness /Commitment | Gratitude: Gratitude is discussed as thanks and past good memories and bad memories are highlighted with emphasis on gratitude. |
| 7 | | Middle treatment session: review of treatment Reviewing the assignments and exercises of the previous sessions Feedback and goal review |
| 8 | Meaning/commitment | Contentment versus maximization: Contentment versus maximization is discussed. |
| 9 | Joyfulness | Optimism and hope Clients fail to think over a period of time in an important task and are membered when they are not accepted by a person. Clients are then asked what other doors open when one door closes. |

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|----|--------------------|--|
| 10 | commitment/meaning | Love and attachment Clients are invited to discuss the identification of specific abilities of people according meaning. |
| 11 | Meaning | Genealogy of capabilities: The importance of capabilities is discussed. |
| 12 | Joyfulness | Reflective joyfulness: Reflective joyfulness is defined as the awareness of joyfulness and its intentional creation in the past. |
| 13 | Meaning | The Gift of Time: Ways to use special abilities to offer the gift of time to serve someone much more than yourself |
| 14 | Coherence | The concept of a fulfillment that integrates joyfulness, commitment and meaning is discussed. A post-test is taken |

Ethical considerations in this research included voluntary participation of members in group counseling sessions, completion of questionnaires willingly by members, and confidentiality of information and names of individuals in the research. In the current research, SPSS-22 software was used for data analysis and multivariate covariance analysis was used to examine hypotheses.

Results

According to the results, in the control group there were 4 people aged 12 to 14 years (26.7%), 6 people aged 15 to 16 years (40%) and 5 people aged 17 to 18 years (33.3%) and in the experimental group there were 5 people aged 12 to 14 years old (33.3 percent), 7 people were 15 to 16 years old (46.7 percent), and 3 people were 17 to 18 years old (20 percent). Descriptive results of research variables are reported in Table 2.

Table 2. Descriptive results of mental toughness in pre-test and post-test scores of control and experimental groups

| Group | Variable | Pretest | | Posttest | |
|--------------|-------------------------------|---------|-------|----------|-------|
| | | Mean | SD | Mean | SD |
| Control | challenge | 22.40 | 3.098 | 22.87 | 3.173 |
| | Commitment | 25.47 | 2.900 | 25.93 | 2.527 |
| | Emotional control | 20.43 | 3.461 | 20.93 | 2.881 |
| | Life control | 21.47 | 2.615 | 21.93 | 2.160 |
| | self-confidence in abilities | 22.60 | 6.631 | 23.20 | 6.109 |
| | interpersonal self-confidence | 15.87 | 3.623 | 16.53 | 3.357 |
| | mental toughness | 128.23 | 8.999 | 131.40 | 8.244 |
| Experimental | challenge | 23.93 | 3.039 | 26.16 | 2.989 |
| | Commitment | 25.67 | 3.716 | 28.41 | 4.348 |
| | Emotional control | 19.97 | 4.417 | 22.13 | 4.124 |
| | Life control | 21.87 | 2.549 | 23.90 | 3.127 |
| | self-confidence in abilities | 24.80 | 4.902 | 26.33 | 4.390 |
| | interpersonal self-confidence | 16.33 | 3.177 | 19.47 | 2.979 |
| | mental toughness | 132.57 | 7.475 | 146.39 | 9.308 |
| Control | social actualization | 12.27 | 3.900 | 13.33 | 3.579 |
| | social integration | 9.11 | 2.596 | 10.03 | 2.881 |
| | social coherence | 8.17 | 3.519 | 8.62 | 3.387 |
| | social acceptance | 14.11 | 4.319 | 14.57 | 3.811 |
| | social contribution | 16.31 | 2.689 | 16.46 | 2.682 |
| | Social well-being | 59.97 | 6.959 | 63.02 | 6.682 |
| Experimental | social actualization | 12.67 | 4.776 | 16.07 | 3.990 |
| | social integration | 8.53 | 2.560 | 11.33 | 2.582 |
| | social coherence | 8.90 | 3.334 | 10.74 | 3.465 |
| | social acceptance | 13.72 | 4.974 | 16.52 | 3.940 |
| | social contribution | 15.52 | 3.327 | 17.58 | 2.815 |
| | Social well-being | 59.34 | 7.340 | 72.24 | 6.098 |

In order to investigate the effectiveness of positive thinking training on mental toughness in derelict adolescents, multivariate covariance analysis was used. Shapiro-Wilk test was used to check the normality of the distribution of scores, which confirmed the assumption of normality of the distribution of scores due to the non-significance of the obtained values. The results of the homogeneity test of the regression slope of the pre-test and post-test scores in the experimental and control groups showed that the regression slope was the same in both groups ($F=1.672, P>0.05$). The results of Levin's test to check the homogeneity of the variance of the dependent variables in the groups showed that the variance of the component of challenge ($F=3.25, P>0.05$), commitment ($F=1.24, P>0.05$), emotional control ($F=0.69, P>0.05$), life control ($F=2.78, P>0.05$), self-confidence in abilities ($F=0.23, P>0.05$) and interpersonal self-confidence ($F=0.52, P>0.05$) in groups. The results of the Box-M test to check the equality of the covariance matrix of the dependent variables between the experimental and control groups also showed that the covariance matrix of the dependent variables in the two groups is equal ($F=1.447, p > 0.05, \text{Box-M} = 39.698$). The results of Bartlett's sphericity test or the significance of the relationship between the variables showed that the relationship between these components is significant ($\chi^2 = 43.90, DF=20, p<0.01$). After examining the assumptions of multivariate covariance analysis, the results showed that there is a significant difference between two groups in the mental toughness ($F_{6,17}=4.030, p<0.01, \text{Wilks Lambda}=0.413$). To investigate the difference more precisely, ANCOVA embedded in MANCOVA was performed. The results are presented in Table 3.

Table 3. Results of ANCOVA embedded in MANCOVA on mental toughness components

| Variable | Source | SS | DF | MS | F | p | Eta |
|-------------------------------|---------------|--------|----|--------|--------|-------|-------|
| Challenge | Between group | 24.097 | 1 | 24.097 | 7.192 | 0.014 | 0.246 |
| | Error | 73.713 | 22 | 3.351 | | | |
| Commitment | Between group | 26.067 | 1 | 26.067 | 13.463 | 0.001 | 0.380 |
| | Error | 42.597 | 22 | 1.936 | | | |
| Emotional control | Between group | 9.350 | 1 | 9.350 | 9.278 | 0.006 | 0.297 |
| | Error | 22.171 | 22 | 1.008 | | | |
| Life control | Between group | 21.329 | 1 | 21.329 | 8.469 | 0.008 | 0.278 |
| | Error | 55.407 | 22 | 2.518 | | | |
| confidence in abilities | Between group | 5.814 | 1 | 5.814 | 7.587 | 0.012 | 0.256 |
| | Error | 16.858 | 22 | 0.766 | | | |
| interpersonal self-confidence | Between group | 34.385 | 1 | 34.385 | 8.255 | 0.009 | 0.273 |
| | Error | 91.634 | 22 | 4.165 | | | |

According to Table 3, there is a significant difference between the two groups in the challenge component ($F = 7.192, P < 0.05$), in the commitment component ($F = 13.463, P < 0.01$), in the emotional control component ($F=9.278, P<0.01$), in the component of life control ($F=8.469, P<0.01$), in the component of self-confidence in abilities ($F=7.587, P<0.05$) and in the component of interpersonal self-confidence ($F=8.255, P<0.01$). Based on this, it can be concluded that there is a significant difference between the mental toughness of the control and experimental groups, and the intervention has increased mental toughness in derelict adolescents. Also, the effect size shows that the

intervention accounted for 24.6% variance of challenge, 38% variance of commitment, 29.7% variance of emotional control, 27.8% variance of life control, 25.6% variance of self-confidence in abilities and 27.3% variance of interpersonal self-confidence.

In order to investigate the effectiveness of positive thinking training on social well-being in derelict adolescents, multivariate covariance analysis was used. Shapiro-Wilk test was used to check the normality of the distribution of scores, which confirmed the assumption of normality of the distribution of scores due to the non-significance of the obtained values. The results of the homogeneity test of the regression slope of the pre-test and post-test scores in the experimental and control groups showed that the regression slope was the same in both groups ($F = 0.566$, $P > 0.05$). The results of Levin's test to check the homogeneity of the variance of the dependent variables in the groups showed that the variance of the social actualization component ($F = 0.204$, $P > 0.05$), the social integration component ($F = 0.134$, $P > 0.05$), social coherence component ($F = 1.526$, $P > 0.05$), social acceptance component ($F = 0.010$, $P > 0.05$) and social contribution component ($F = 0.244$, $P > 0.05$) is equal in groups. The results of the Box-M test to check the equality of the covariance matrix of the dependent variables between the experimental and control groups also showed that the covariance matrix of the dependent variables in the two groups is equal ($F=0.487$, $p>0.05$, $\text{Box-M}=9.081$). The results of Bartlett's test of Sphericity or the significance of the relationship between the variables showed that the relationship between these components is significant ($\chi^2=48.325$, $DF=14$, $p<0.01$). After examining the assumptions of multivariate covariance analysis, the test results showed that there is a significant difference between two groups in the social well-being ($F=10.668$, $p<0.01$, Wilks Lambda=0.263). To investigate the difference more precisely, ANCOVA embedded in MANCOVA was performed. The results are presented in Table 4.

Table 4. Results of ANCOVA embedded in MANCOVA on social well-being components

| Variable | Source | SS | DF | MS | F | p | Eta |
|----------------------|---------------|---------|----|--------|--------|-------|-------|
| social actualization | Between group | 32.208 | 1 | 32.208 | 9.139 | 0.006 | 0.284 |
| | Error | 81.060 | 23 | 3.524 | | | |
| social integration | Between group | 21.780 | 1 | 21.780 | 6.524 | 0.018 | 0.221 |
| | Error | 76.789 | 23 | 3.339 | | | |
| social coherence | Between group | 17.350 | 1 | 17.350 | 12.183 | 0.002 | 0.346 |
| | Error | 32.755 | 23 | 1.424 | | | |
| social acceptance | Between group | 35.723 | 1 | 35.723 | 6.561 | 0.017 | 0.222 |
| | Error | 125.220 | 23 | 5.444 | | | |
| social contribution | Between group | 22.234 | 1 | 22.234 | 11.731 | 0.002 | 0.338 |
| | Error | 43.592 | 23 | 1.895 | | | |

According to table 4, there is a significant difference between the two groups in social actualization ($F= 9.13$, $P<0.01$), social integration ($F=6.524$, $P<0.05$), social coherence ($F=12.183$, $P<0.01$), social acceptance ($F=6.561$, $P<0.05$) and social contribution ($F=11.731$, $P<0.01$). These findings show that there is a significant difference between the social well-being of the control and experimental groups. Based on this, it can be concluded that the intervention increased the social well-being of the

participants in the experimental group. Also, the effect size shows that the intervention has explained 28.4% variance of social actualization, 22.1% variance of social integration, 34.6% variance of social coherence, 22.2% variance of social acceptance and 338.9% variance of social contribution.

Discussion

The purpose of this study is to investigate the effectiveness of positive thinking training on mental toughness and social well-being in derelict adolescents. Our results indicated there is a difference between the experimental and control groups in mental toughness scores. Accordingly, it can be concluded that the intervention has increased mental toughness in derelict adolescents. The obtained result is consistent with the results of previous studies. For instance, ([Kazemi et al., 2020](#)) showed that positive thinking training has increased the indicators of psychological toughness in students by creating positive thoughts and mental structures. Also, the results of another study indicated that positive thinking training was effective on the psychological toughness of female students ([Mortazavi Emami et al., 2019](#)).

In the explanation of the above finding, it can be said that positive psychology as a new approach in psychology studies positive emotions and characteristics in humans and focuses more on the inherent strengths and talents of humans. Another goal of positive psychology is to identify concepts that help ensure health and mental toughness and benefit people from a healthy life. Teaching positive thinking changes the mental and behavioral characteristics of people towards positive thoughts. Positive psychology interventions are effective in increasing mental toughness by promoting positive feelings and thoughts, positive behaviors, positive cognition and perception ([Carr et al., 2021](#)). It can also be said that positive psychology intervention wherein the focus is on eliciting positive feelings, cognitions or behaviors, not only have the capacity to increase well-being, but can also decrease distress in populations with clinical disorders ([Chakhssi, Kraiss, Sommers-Spijkerman, & Bohlmeijer, 2018](#)).

Another finding of the research showed that positive thinking training increased social well-being in derelict adolescents. The obtained result is consistent with the results of previous studies. The study of [Shoshtarirezvani et al. \(2021\)](#) showed that teaching positive thinking significantly improves the mental health of students. In another study, the results indicated that teaching positive thinking based on religious teachings can improve the psychological well-being of mothers with autistic children ([Rashidzadea et al., 2019](#)). Also, the results of [Sayadi Sarini et al. \(2016\)](#) showed that positive thinking training is effective on the psychological well-being of elderly women. [Ghiasi et al. \(2016\)](#) also showed that positive thinking training increases students' emotional regulation and psychological well-being.

In the explanation above, it can be said that positive psychology is mainly concerned with strengthening one's abilities and competencies. In order to prevent mental disorders, people must have abilities such as hope, optimism, skill, perseverance, internal motivation and mental ability. Positive psychology seeks to make people stronger and more productive and to develop their talents. Positive

psychology is the scientific study of optimal and desirable human functions. It seems that in the current complex situation with the negative impact of Covid-19 Epidemic on various aspects of learning and motivation of learners, a positive psychological approach and positive interventions can be considered a worthy strategy for educational interventions ([Samavi, 2022](#)).

One of the limitations of the present study was the self-reporting questionnaire, the lack of a follow-up period and the implementation of the research in derelict adolescents. Therefore, caution should be observed in generalizing the results. Therefore, it is suggested to repeat the present study in other age groups in order to generalize the findings. Also, in future studies, the follow-up period should also be considered in order to study the stability of the effectiveness of the applied intervention. Based on the findings of the present study, it is suggested that the positive thinking training program be included in the educational programs of psychological counseling centers and other institutions related to derelict adolescents, and interventions based on positive psychology would be used to improve the personality and emotional qualities of adolescents.

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