



Keep Togetherness Be Health: The Effect of Social Interest Development Psycho-Education Program *

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Abstract

Adolescence is a critical developmental period where many biological, psychological, and social changes occur simultaneously. These changes can significantly influence adolescents' behavior in later developmental stages, either positively or negatively. Individual Psychology-based group programs and psycho-education practices are well-suited to youth because of their development-oriented and positive approach to human nature. This study investigates the effect of the Social Interest Development Psycho-Education Program on social interest in adolescents. The study adopts a 2x3 mixed experiment model and employs pre-test, post-test, and follow-up measurements via the Social Interest Scale for Adolescents. The researcher conducted the psycho-education program for the experimental group in ten 60-minute sessions and did not intervene in the control group. "Wilcoxon Signed Ranks Test" and "Mann-Whitney U" were used for data analysis. According to the results, a psycho-education program applied to the experimental group increased total social interest. We determined a significant difference between the experimental and the control groups regarding the whole social interest and belonging according to the post-test scores of the students. Social Interest Development Psycho-educational program resulted in improvements in belonging, sensitivity, and help thanks to program implementation. The findings indicate that the Social Interest Development Psycho-educational program is an effective program for developing the total social interest levels of adolescents. In the follow-up test, it was observed that this change continued for the belonging sub-dimension, while the change in the level of social interest was not permanent.

Keywords

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Introduction

Adolescence, a turning point in human development, is a period in which there are many physical, emotional, and social changes and developments in the transition from childhood to adulthood (Reininger et al., 2003). According to the World Health Organization (WHO), adolescence spans the developmental period between the ages of 10-19 (WHO, 2024). It is also a critical developmental period where many biological, psychological, and social changes occur. These changes can affect adolescents' behavior in later developmental periods either positively or negatively (Reininger et al., 2003). The negativities that arise with this change in adolescence are the increase in risky behaviors such as antisocial behavior, violence, aggression, criminal behavior, school dropout, tobacco, alcohol, and substance use, and suicide (Bonino, Cattelino, Ciairano, Mc Donald, & Jessor, 2005; Burak, Söyler, & Pehlivan, 2020; Connell, Gilreath, Aklin, & Brex, 2010; Twenge, 2018). The pandemic, particularly quarantine and social restrictions, has increased adolescents' mental health problems (Hussong, Midgette, Thomas, Coffman, & Cho, 2021; Orgilés et al., 2021; Xie et al., 2020). The studies have shown that engaging in prosocial behavior during this period is a healthy and appropriate strategy for confronting threatening emotions (Alonso-Ferres, Navarro-Carrillo, Garrido-Macias, Moreno-Bella, & Valor-Segura, 2020; Serrano-Montilla, Alonso-Ferres, Navarro-Carrillo, Lozano, & Valor-Segura, 2021). In this context, the development and encouragement of other-oriented tendencies, namely, social interest, is also protective in extraordinary situations.

Individual Psychology and Social Interest

Adler determines social interest as a criterion for an individual's mental health (Ansbacher, 1991). He emphasizes that the way to reach the ideal society is to contribute to the whole, striving for the whole of humanity, not a race, group, or community, and determines the cooperation-based harmony between the individual and the society as a criterion for the ideal culture and mental health (Adler, 2011).

Social interest manifests cognitive, behavioral, affective, and motivational processes, such as friendship, empathy, caring, belonging, cooperation, courage, helping, sharing, contributing, and tolerance (Ansbacher, 1991; Leak & Leak, 2006; Yang, Milliren, & Blagen, 2010). Individuals with high social interest do something useful and contribute to society and have higher self-esteem and motivation because they are more productive, energetic, cooperative, and have developed coping skills (Adler, 2011; Rareshide & Kern, 1991). Individuals with developed social interests are motivated to improve themselves despite facing difficult situations (Weiten, 2008). Ansbacher (1991) states that individuals with high social interest are more self-sacrificing, egalitarian, cooperative, supportive, and have an increased sense of belonging. Studies have shown that social interest reduces feelings of alienation and loneliness (Ostrovsky, Parr, & Gradel, 1992) and facilitates adaptation (Bass, Curlette, Kern, & McWilliams Jr, 2002); it also supports constructive efforts and courage to cope with life tasks (Adler, 2015). It is a protective factor against violence, mental health problems, non-compliance (Mosak & Maniaci, 2012), crime, and involvement in crime (Daugherty, Murphy, & Paugh, 2001).

Developing social interest is also essential for preventing excessive adolescent egocentrism, which may be a risk in adolescence. When adolescent egocentrism, a developmental feature (Santrock, 2014; Steinberg, 2007), is experienced excessively, it causes a lack of self-confidence and increased anxiety in adolescents. Helping adolescents create other interests outside themselves, including them in activities that require cooperation, which will enable them to take care of other people, and showing that their experiences are not unique can reduce their egocentric anxieties. It is expected that the activities mentioned earlier will be carried out with the social interest program implemented in this context, and it is likely that adolescents will reduce their self-centered self-centeredness concerns and increase their self-confidence (Lerner, 2017, p. 135).

Adler emphasizes the importance of social interest in mental health and states that it reflects being healthy (Adler, 2011, p. 28). The results indicate that social interest and mental health (Ansbacher, 1991; Bass et al., 2002), well-being (Rennebohm, Seebeck, & Thoburn, 2017), and psychological adjustment (Ergüner-Tekinalp & Terzi, 2016; Leak & Leak, 2006) are positively correlated.

Social interest refers to the ideal world and society, people striving to show more for the better, a never-ending journey rather than a completed or finished phenomenon or a point reached (Ansbacher & Ansbacher, 1956). For this reason, Adler (2008) argues that the individual is born with the potential for social interest and that social interest is a natural force that needs to be developed by encouraging interactions in the family and school environment (Ansbacher & Ansbacher, 1956, p. 138). Social interest is an innate potential created by nature, expressed through empathy, holistic, and others-oriented.

Nicoll (1996) claims that social interest can be learned and developed by showing the necessary behavior. Swayne (2008) emphasizes the importance of social skills training in promoting the development of social interest. Because social interest is an innate potential, the next step is to turn it into a skill through education and training. As individuals develop their musical or artistic production potential, they should receive training on social interests (Yang et al., 2010, p. 18). Social interest requires nutrition and processing to develop; therefore, social interest is taught, learned, and used (Corey, 2016, p. 112).

In mental health, preventive and skill-building psycho-education groups, especially for children and adolescents, have come to the forefront of developing social skills (Brown, 2013; Güçray, Çekici, & Çolakkadıoğlu, 2009). Many experimental studies have examined the effectiveness of psycho-education groups in adolescents. The meta-analysis and review studies have demonstrated their effectiveness (Gaffney, Ttofi, & Farrington, 2021; Gerrity & DeLucia-Waack, 2007; Jones et al., 2018). Individual Psychology is a well-suited theory for group counseling and psycho-education practices because of its development-oriented approach and positive approach to human nature (Corey, 2016). Individual Psychology has a long and successful history that has contributed to the development of children and young people through the practices performed in primary, secondary, and secondary schools (Lemberger & Nash, 2008).

Adler (2015) states that the development levels of individuals and their societies are related to their social interest levels and argues that people with socially beneficial lifestyles represent the highest form of humanity in the evolutionary process and will probably form the world of the future (Adler, 1956). As Adler (2015) states, failure to develop a social interest in children and adolescents will decrease social interest and increase psychological disorders in adulthood.

Group counseling and psycho-education groups are essential in Individual Psychology and are used frequently (Akdoğan & Ceyhan, 2014; Ergüner-Tekinalp, 2017; Wick, Wick, & Peterson, 1997), but psychoeducational programs with adolescents within the scope of social interest are pretty limited. Few studies on social interest in Türkiye are descriptive or relational studies aimed at university students and adults to reveal the current situation (Erginsoy, 2010; Kayacı & Özbay, 2016; Özaydınlık, 2014; Soyer, 2004). Although there are a few practical studies with social interest (Karcher & Lindwall, 2003; Ostrovsky et al., 1992; Swayne, 2008), it has been seen that there is no structured psycho-education program offered in these studies. No practical study has been conducted with adolescents in Türkiye on this subject.

Various studies have shown that Turkish adolescents are not satisfied with their academic achievements and their lives, and their sense of belonging is low. (Helliwell et al., 2023; PISA 2015, 2018; TIMSS, 2015, 2019; TUIK, 2020). We propose that one valuable way for adolescents to make these essential transitions is to participate in psychoeducational intervention programs, where they can have an opportunity to get to know themselves, interact with others within a social context, and develop social interests (Soyer, 2004; West, Miller, Cox, & Moate, 2018).

Pink (2016) states that there is a third source of motivation in addition to internal and external motivation. This motivation is our innate needs within the scope of learning and creating something new, improving ourselves and the world, and developing it. The concept of social interest overlaps with the third source of motivation mentioned in Pink's (2016) study. This study is also considered necessary to activate adolescents with a different source of motivation.

This study develops and determines the effectiveness of a social interest psychoeducational intervention based on Individual Psychology. The main research goal of the study is to evaluate the effectiveness of the Social Interest Development Psycho-Education Program (SID-PEP). For this purpose, the hypotheses of the research are as follows:

1. Significant differences will exist between pre-test and post-test scores, the total social interest, and all sub-dimensions of social interest among individuals in the experimental group participating in the Individual Psychology-Based Social Interest Development Psychoeducation Programme.
2. No significant differences will be observed between post-test and follow-up test scores, the total social interest, and all sub-dimensions of social interest among individuals in the experimental group participating in the Individual Psychology-Based Social Interest Development Psychoeducation Programme.
3. No significant differences will be found between pre-test and post-test scores, the total social interest, and all sub-dimensions of social interest among individuals in the control group.
4. A significant difference, favoring the experimental group, will be evident in post-test scores, the total social interest, and all sub-dimensions of social interest among the students in the experimental group participating in the Individual Psychology-Based Social Interest Development Psychoeducation Programme compared to those in the control group.

Method

Research Model

This study examines the effect of the Social Interest Development Psycho-Education Program (SID-PEP) on the social interest levels of adolescents. To that end, the study was quasi-experimental, and a 2x3 mixed experiment model (pre-test, post-test, and follow-up measurements) was applied (Fraenkel, Wallen, & Hyun, 2011). The design of the research is presented in Table 1.

Table 1. Experimental design of the study

Groups	Pre-Test	Experimental Process	Post-Test	Follow-Up	After Follow-up
Experimental Group	Measurement I Social Interest Scale for Turkish Adolescents	10 Sessions Social Interest Development Psycho- Education Program	Measurement II Social Interest Scale for Turkish Adolescents	Measurement III Social Interest Scale for Turkish Adolescents	-
Control Group	Measurement I Social Interest Scale for Turkish Adolescents	-	Measurement II Social Interest Scale for Turkish Adolescents	Measurement III Social Interest Scale for Turkish Adolescents	5 Session Social Interest Development Psycho- Education Program

As seen in Table 1, the students in the experimental group participate in the 10-session SID-PEP. After the follow-up test, the students in the control group participate in the 5-week program.

Participants

The study group consisted of 32 high school students in two different groups, an experiment (16 students) and control (16 students), in the fall semester of the 2018-2019 academic year. The inclusion criteria of the study are (a) volunteering to participate in the research and (b) having no clinical illness. The students participating in the study were assigned to the groups randomly, and the experimental and control groups were also determined randomly. However, one female student left the group before the psycho-education process started. Another female quit the group's first session. For this reason, we randomly removed two students from the control group (one male and one female) and excluded them from the data, resulting in a final 28 participants. Each group consisted of 14 members. Information on the participants is given in Table 2.

Table 2. Demographic characteristics of the participants

Demographics	Experimental Group		Control Group		
	n	%	n	%	
Gender	Female	8	57.14	10	71.43
	Male	6	42.86	4	28.57
	Total	14	100	14	100
Class	10-A	1	7.14	1	7.14
	10-B	2	14.28	0	-
	10-C	5	35.71	3	21.42
	10-D	2	14.28	1	7.14
	10-E	3	21.42	3	21.42
	10-F	1	7.14	6	42.86
	Total	14	100	14	100
Age	15	13	92.86	13	92.86
	16	1	7.14	1	7.14
	Total	14	100	14	100

In psychoeducational studies with adolescents, there should be an age difference between group members which is no more than two (Brown, 2013, p. 243), and heterogeneous groups in terms of gender should be formed (DeLucia-Waack, 2006, p. 19). Table 2 shows that the experimental group comprise eight females (57.14%), and six males (42.86%), and the control group consisted of 10 females (71.43%) and four males (28.57%). Most students in both groups were 15 years old (experiment and control= 92.86%).

Measures

Demographics: Demographics for young people consisted of the date of birth, biological gender, and class.

Social Interest Scale for Adolescents (SISA): Social Interest Scale for Adolescents (Kaynak & Işık, 2022) consists of 21 items and four sub-factors: belonging, sensitivity, coping, and helping and assessing participant's social interest. The scale is a five-point Likert Scale and a self-report. The Cronbach's α was .83 for total scores of SISA and belonging, .71 for sensitivity, .81 for coping, and .77 for helping. The test-retest reliability coefficient was .84 for belonging, .74 for sensitivity, .73 for coping, .70 for helping, and .87 for the total scale. We applied SISA to all 10th-grade students before the intervention process as a pre-test. Data were collected via SISA for both groups at pre-treatment, post-treatment, and a 12-week follow-up.

Procedures

We have discussed this section in three phases: The Pre-experimental Process, the Experimental Process, and the Post-experimental Process. The flowchart (Figure 1) below represents the phases from the preparatory stage to the post-test of the psycho-education program.

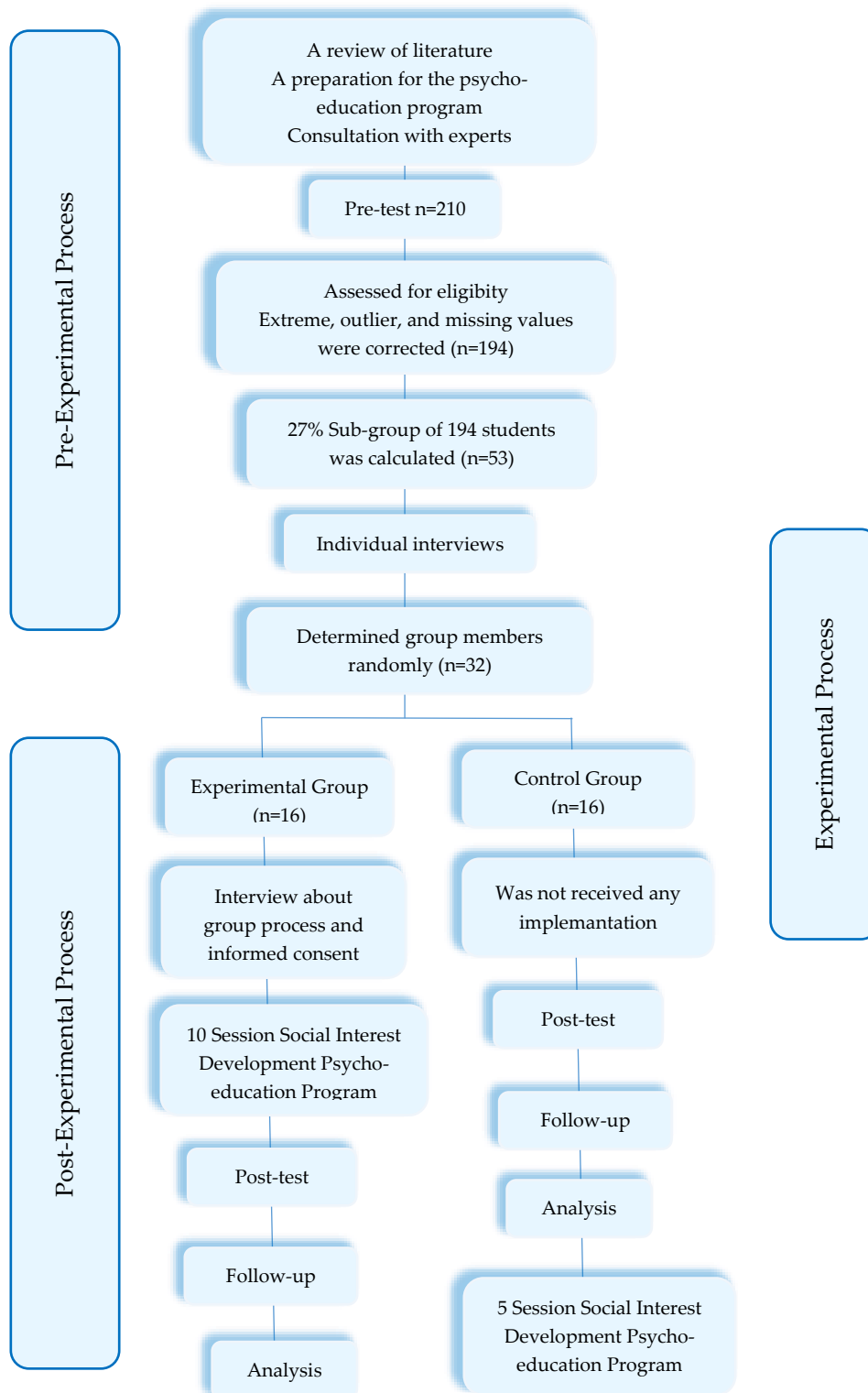


Figure 1. Phases of the psycho-education program

Pre-experimental Process: This process involves the preparation of the program, the determination of the subjects, and the creation of the experimental and control groups. We conducted a literature review on social interests and individual psychology. We consulted experts on social interest and curriculum/program development topics for content validity and edited the program according to their suggestions. SID-PEP is a psychoeducational program for girls and boys consisting of ten interactive sessions of 60 minutes each. Each session of SID-PEP has a unique focus. The structure of the SID-PEP is summarized in Table 3.

Table 3. Content of SID-PEP

Session	Issues/Themes	Goals of Session
1	Meeting Introduction of SID-PEP	To know the group leader and each other, know about group rules and processes, express their expectations and personal goals regarding the group process, and know the concept of social interest.
2	Empathy	To understand different perspectives by putting oneself in the shoes of the other person, understanding the feelings of another person/ other people, and giving appropriate empathic reactions at a simple level in interpersonal communication.
3	Collaboration	To understand the importance of collaboration, realize how it can increase/improve its collaborative aspects.
4	Belonging	To be a part of a whole: Developing a sense of belonging to the school, family and friends, and the society in which they live.
5	Contributing	To support to be a contributor to society.
6	Life Tasks	To know work, social, and love within life tasks.
7	Courage	To recognize the relationship between the concepts of courage, risk-taking, making mistakes, and the power to recover.
8	Coping/ Encouragement	To encourage others to deal with problems they encounter in life and to enable them to find solutions to the problems they encounter for the benefit of society.
9	Sensitive	To have a sensitive approach to other living things and nature.
10	Evaluation of group process and termination	To recognize the changes occurring within the scope of social interest and to encourage group members to maintain the life they lead to continue improving their social interest after the group sessions have ended.

We applied the Mann-Whitney U Test due to the difference between the pre-test scores of the social interest total and the experimental and control groups' sub-dimensions. As a result, compared to the pre-test, there was no significant difference in all factorial dimensions of the social interest of the participants (social interest total $U=89.50$, $p>.05$; belonging $U=87.00$, $p>.05$; sensitivity $U=84.50$, $p>.05$; helping $U=61.50$, $p>.05$, and coping $z=93.00$, $p>.05$).

Experimental Process: The first author of this study applied the 10-session SID-PEP to an experimental group of fourteen participants. The researcher conducted the psycho-education program for ten sessions and 60-minute sessions. The first author, who is a psychological counsellor, facilitated both groups. The author also received peer supervision from an experienced Adlerian therapist while reducing the intervention. Based on the Adlerian counseling, each session consisted of didactic teaching, group discussions, and experiential exercises. Participants were provided with workbooks to apply and practice the program material and between-session practice assignments.

Post-Experimental process: We used SISA for the post-test of both groups. For follow-up measurements, we used SISA again at the 12-week follow-up for all groups. After completing the measures, the first author applied the five-session SID- PEP to the control group.

Internal Validity and External Validity

Internal validity means that the relationship observed between two or more variables in a study should be clear due to the independent variable rather than "another variable" (Fraenkel et al., 2011). Fraenkel et al. (2011, pp. 167-176) and Shavelson (1988) explained what should be done to increase internal validity. Accordingly, to increase internal validity, a random selection of experimental and control groups and the members of these groups was made. Other internal validity-affecting factors and actions taken to reduce or control the influence are presented below.

- *Selection of subjects:* In order to increase internal validity, the selection of the experimental and control groups members' was randomised.
- *The maturation of the subjects:* A pre-test/post-test applied research model with the experimental-control group was chosen. The student clubs and non-governmental organizations that the participants are members of were asked, and they were asked not to make changes in them without informing the leader in the process.
- *The loss of the subject:* Volunteering was taken as a basis. The number of members relative to possible separations was determined as 16. Various gifts were given to the members in the group process to increase internal and external motivation by associating them with group contact.
- *The pre-test effect:* Eleven weeks were set between the pre-test and post-test application.
- *The statistical regression effect:* The members assigned to the groups were randomly selected. The lower 27% group was taken, and outliers were removed. During the data collection process, a valid and reliable measurement tool was used.
- *The effect of the environment:* All questionnaires were completed at approximately the same time across conditions.
- *The effect of members' expectations:* A control group and a follow-up test were formed. General information was given about the process and program themes to members who were not told that the main purpose of the experiment was to develop their social interests.

External validity is applied when the results of a study can be generalized to other people or settings beyond the specific individuals or backgrounds used in the research (Fraenkel et al., 2011, p. 268; Shavelson, 1988). Fraenkel et al. (2011, p. 167-176) and Shavelson (1988)'s procedures were followed in this study to increase external validity. The external validity affecting factors and actions taken to reduce or control the influence are presented below (Cook & Campell, 1979; Shavelson, 1988).

- *The effect of time and intervention interaction:* A follow-up test was applied 12 weeks after the group process was completed.
- *The effect of environment and intervention interaction:* The microcosmos feature of the group process was used. The group counseling environment can be seen as a small model of the member's world (Goldberg & Hoyt, 2015). The applications were carried out in a meeting room in a public school, with examples and activities parallel to daily life, and care was taken to ensure that the environment was not artificial and away from daily life.
- *The effect of selection and intervention interaction/sampling:* The pre-test application was provided to cover all 10th grades. Volunteering was taken as a basis. The members to participate in the study were randomly assigned to the groups.
- *The recall probability of the members:* Eleven weeks passed between the pre-test and the post-test. The follow-up test was carried out 12 weeks after the post-test application.

Data Analysis

Since the number of people in the study group is below 30, it is recommended to use nonparametric tests to analyze the data (Erkuş, 2011). Therefore, since the experimental and control groups in the study consisted of 16 students, nonparametric tests were used to analyze the data to be collected. In the data analysis process, we used the Wilcoxon Signed Ranks Test to compare the groups and Mann-Whitney U-Test to determine the difference between the groups, and the data were analyzed using the SPSS 25 program.

Results

This section presents the findings obtained from the analyses, which revealed the effect of SID-PEP on adolescents' social interest levels. First, descriptive statistics are given regarding the pre-test, post-test, and follow-up test data obtained from the experimental and control groups. Then, the groups were compared with the pre-test, post-test, and follow-up-test data obtained from the experimental and control groups.

The pre-test mean scores of the participants in the experimental group of the social interest total was 71.78 (SD: 7.33; SE: 1.83); the post-test mean score was 82.00 (SD: 9.73; SE: 2.60), and the follow-up test mean score was 77.78 (SD: 8.04; SE: 2.15). Again, the pre-test means score of the participants in the experimental group on the belonging was 23.71 (SD: 4.96; SE: 1.24); the post-test mean score was 29.50 (SD: 5.30; SE: 1.41), and the follow-up test mean score was 28.43 (SD: 3.88; SE: 1.04). For sensitivity sub-dimension, the pre-test means a score of the participants was 18.86 (SD: 3.65; SE: .91); post-test score was 20.78(SD: 2.66; SE: .71); and the follow-up test mean score was 19.57(SD: 2.17; SE: .58). Moreover, the pre-test means a score of the participants in the experimental group on the helping was 15.78 (SD: 1.77; SE: .44); the post-test mean score was 16.93(SD: 1.94; SE: .52); and follow-up test mean score was 14.28(SD: 1.32; SE: .35). Finally, the coping subscale pre-test score was 13.43(SD: 3.31; SE: .83); post-test mean score was 14.78(SD: 3.47; SE: .93); and the follow-up test mean score was 14.50(SD: 4.11; SE: 1.1).

The pre-test mean scores of the participants in the control group of the social interest total was 73.17 (SD: 6.14; SE: 1.64); the post-test mean score was 76.00 (SD: 8.81; SE: 2.20), and the follow-up test mean score was 79.79 (SD: 7.52; SE: 2.01). Again, the pre-test means score of the participants in the control group on the belonging was 23.17 (SD: 4.92; SE: 1.23); the post-test mean score was 25.64 (SD: 5.49; SE: 1.37), and the follow-up test mean score was 27.71 (SD: 4.98; SE: 1.33 4). For sensitivity sub-dimension, the pre-test means a score of the participants was 19.86 (SD: 2.63; SE: .66); the post-test score was 20.07(SD: 4.59; SE: 1.15); and the follow-up test mean score was 20.21(SD: 2.61; SE: .70). Moreover, the pre-test means a score of the participants in the control group on the helping was 16.86 (SD: 2.22; SE: .55); the post-test mean score was 16.71(SD: 2.12; SE: .53); and follow-up test mean score was 17.29(SD: 1.68; SE: .45). Finally, the coping sub- dimension pre-test score was 13.29(SD: 1.51; SE: .38); the post-test mean score was 13.57(SD: 1.95; SE: .49); and the follow-up test mean score was 14.57(SD: 2.41; SE: .64).

Experimental Group Results

We examined the difference between the pre-test and post-test scores of the social interest total and sub-dimension of the experimental group using the Wilcoxon Signed-Ranks test. Findings obtained from these comparisons are presented in Table 4.

Table 4. Wilcoxon Signed Ranks Test Results Related to Pre-test and Post-test Measurements of Experimental Group Social Interest Total and Sub-Dimensions

Scale	Group Comparisons (Pre-Test/ Post-Test)	n	Mean Rank	Sum of Rank	Z
Social Interest (Total)	Negative Ranks	0	.00	.00	-3.18**
	Positive Ranks	13	7.00	91.00	
Belonging	Negative Ranks	1	3.50	3.50	-3.08**
	Positive Ranks	13	7.81	101.50	
Sensitivity	Negative Ranks	2	3.75	7.50	-2.48*
	Positive Ranks	10	7.05	70.50	
Helping	Negative Ranks	3	4.33	13.00	-1.80*
	Positive Ranks	8	6.63	53.00	
Coping	Negative Ranks	5	5.40	27.00	-1.30
	Positive Ranks	8	8.00	64.00	

**p<.01, *p<.05, n=14

As seen in Table 4, compared to the pre-test, there is a notable increase in three factorial dimensions of the social interest of the participants in the post-test (social interest total $Z=-3.18$, $p<.01$; belonging $Z=-3.08$, $p<.01$; sensitivity $Z=-2.48$, $p<.05$; helping $Z=-1.80$, $p<.05$). According to the Wilcoxon signed-rank test results, it was found that the social interest, belonging, sensitivity and helping scores obtained by majority of the experimental group students in the post-test were positive compared to their scores in the pre-test (positive ranks= 7.00; 7.81; 7.05; 6.63). This finding reveals that the SID-PEB implemented with the experimental group contributed positively to their social interest and three sub-dimensions. However, there were no significant differences in coping scores between the pre-test and post-test ($Z=-1.30$, $p>.05$). As seen in Table 4, it is determined that the majority of the experimental group students ($n=8$) obtain positive coping scores from the post-test compared to the pre-test (positive rank= 8.00). However, this difference in favor of the positive did not create a significant difference. When the results of the analysis are examined, it is seen that the first hypothesis of the research was supported in terms of social interest, helping, sensitivity, and belonging but not in terms of coping scores.

We examined the difference between post-test and follow-up test scores of the social interest total and sub-dimensions of the experimental group using the Wilcoxon Signed-Ranks test. Findings obtained from these comparisons are presented in Table 5.

Table 5. Wilcoxon Signed Ranks Test Results Related to Post-test and Follow-up Test Measurements of Experimental Group Social Interest Total and Sub-Dimensions

Scale	Group Comparisons (Post-Test/Follow-up Test)	n	Mean Rank	Sum of Rank	Z
Social Interest (Total)	Negative Ranks	11	8.09	89.00	-2.30*
	Positive Ranks	3	5.33	16.00	
Belonging	Negative Ranks	9	8.11	73.00	-1.30
	Positive Ranks	5	6.40	32.00	
Sensitivity	Negative Ranks	8	7.63	61.00	-1.74
	Positive Ranks	4	4.25	17.00	
Helping	Negative Ranks	14	7.50	105.00	-3.31
	Positive Ranks	0	.00	.00	
Coping	Negative Ranks	5	6.40	32.00	-.46
	Positive Ranks	5	4.60	23.00	

* $p<.05$, $n=14$

As shown in Table 5, there is a significant difference between the social interest post-test and follow-up test scores of the experimental group ($Z=-2.30$, $p<.05$). According to the Wilcoxon signed-rank test results, it was determined that the majority of the experimental group students ($n=11$) obtained negative social interest scores from the follow-up test compared to the post-test (negative rank= 8.09). When the mean rank and sums of the rank scores are considered, it is seen that the significant difference is in favor of the negative ranks. In other words, it can be stated that the difference is in favor of the post-test scores of the experimental group. In this context, it is seen that the change observed at the end of the experimental process in the social interest levels of the students participating in the experimental group was not long-term.

In the experimental group, there were no significant differences between post-test and follow-up test scores of belonging ($Z=-1.30$, $p>.05$), sensitivity ($Z=-1.74$, $p>.05$), and helping ($Z=-3.31$, $p>.05$). When the mean rank and sums of the rank scores for these three sub-dimensions are considered, it is seen that the significant difference is in favor of negative ranks (negative rank=8.11; 7.63; 7.50). In other words, it can be noted that the difference is in favor of the post-test scores of the experimental group. In the follow-up test, it is understood that the scores of the participants decreased in all three sub-dimensions ($n=9$, 8, 14). However, for the belonging dimension, this decrease was not a decrease that would cause a significant difference. According to these findings, the increase in the belonging levels of students continued.

There was no significant difference between the post-test and follow-up test scores regarding the coping of the experimental group ($Z=-.46$, $p>.05$). Thus, there was no change in the coping levels of

the students. When the Wilcoxon test results are examined, it is seen that positive and negative are equal ($n=5, 5$), but it is seen that the negative rank is higher (negative rank=6.40); that is, the results are in favor of the post-test. In the coping sub-dimension, no significant difference was found in comparing the pre-test and the post-test. It can be said that the second hypothesis was supported only in the belonging dimension but not in the social interest and other sub-dimensions.

Control Group Results

The difference between the pre-test and post-test scores of the social interest total and sub-dimensions of the control group and the significance of this difference was compared using the Wilcoxon Signed-Ranks test. The findings obtained from these comparisons are presented in Table 6.

Table 6. Wilcoxon Signed Ranks Test Results Related to Pre-test and Post-test Measurements of Control Group Social Interest Total and Sub-Dimensions

Scales	Group Comparisons (Pre-Test/ Post-Test)	n	Mean Rank	Sum of Rank	Z
Social Interest (Total)	Negative Ranks	6	5.83	35.00	-.178
	Positive Ranks	5	6.20	31.00	
Belonging	Negative Ranks	5	9.10	45.50	-.000
	Positive Ranks	8	5.69	45.50	
Sensitivity	Negative Ranks	7	6.07	42.50	-.276
	Positive Ranks	5	7.10	35.50	
Helping	Negative Ranks	6	7.83	47.00	-.643
	Positive Ranks	6	5.17	31.00	
Coping	Negative Ranks	4	6.63	26.50	-.582
	Positive Ranks	7	5.64	39.50	

n=14

Table 6 illustrates that compared to the pre-test; there is no significant difference in all factorial dimensions of the social interest of the participants in the post-test (social interest total $Z=-.178$, $p>.05$; belonging $Z=.000$, $p>.05$; sensitivity $Z=-.276$, $p>.05$; helping $Z=-.643$, $p>.05$, and coping $Z=-.582$, $p>.05$). Based on the findings obtained, it can be said that the third hypothesis of the research was also confirmed.

Results of Comparison of Social Interest Total and Sub-Dimensions Post-Test Scores of Experimental and Control Groups

We tested the difference between the social interest total and sub-dimensions post-test scores of the experimental and control groups with the Mann-Whitney U-Test. The findings obtained from this comparison are presented in Table 7.

Table 7. Mann Whitney U-Test Results on the Comparison of Experimental Group and Control Group Social Interest Total and Sub-Dimensions Post-Test Scores

Scale	Group	n	Mean Rank	Sum of Rank	U	p
Social Interest (Total)	Experimental	14	18.54	259.50	41.50	.01*
	Control	14	10.46	146.50		
Belonging	Experimental	14	18.43	258.00	43.00	.01*
	Control	14	10.57	148.00		
Sensitivity	Experimental	14	15.36	224.50	76.50	.33
	Control	14	13.64	181.50		
Helping	Experimental	14	15.86	215.00	86.00	.60
	Control	14	13.14	191.00		
Coping	Experimental	14	16.18	226.50	74.50	.28
	Control	14	12.82	179.50		

* $p<.05$

As Table 7 presents, the results indicate a significant difference between the experimental and control groups scores of social interest ($U=41.50$, $p<.05$) and belongings ($U=43.00$, $p<.05$). There was a significant increase in the student's social interest and belonging scores in the psycho-education program compared to those who did not attend the psycho-education program.

The obtained results in Table 7 above show that there is no significant difference between the experimental and control groups' scores of sensitivity ($U=76.50$, $p>.05$), helping ($U=86.00$, $p>.05$), and coping ($U=74.50$, $p>.05$). The students participating in the psycho-education program had higher scores for being sensitive, helping, and coping than those who did not participate in the psycho-education program, but these differences were not significant. In sum, after the implementation of the program, the social interest and belonging scores of the adolescents in the experimental group increased, and the fourth hypothesis was accepted only in the social interest and belonging dimension but not in the helping, sensitivity, and coping dimensions.

Discussion, Conclusion, and Suggestions

This section includes discussions and comments regarding the differences between the social interest and sub-dimension scores of SID-PEP. The current research attempted to explore the effect of psychoeducational intervention based on Individual Psychology on enhancing social interest among adolescents. The results show a significant difference between the pre-test and post-test scores, and the psychoeducational intervention effectively enhanced social interest and belonging. However, the psychoeducational intervention did not improve sensitivity, helping, or coping. In the follow-up test applied three months after the completion of the psychoeducation program, no significant difference was found in the belonging dimension. In other words, the change in the belonging dimension for the participants continues. However, a significant difference was found in the social interest dimension, and it was seen that the change in social interest was not long-term.

Social Interest

This study showed a substantial increase in the total social interest scores of the students participating in the psycho-education program compared to the control group. Previous studies have reported positive group experiences and positive social behavior by communicating with others that focus on collaboration, honesty, respect, equality, decision-making, and sharing the process of taking responsibilities as opportunities for developing a social interest (Dreikurs-Ferguson, 2015; Edwards & Gfroerer, 2001). Studies of Social-Emotional Learning (SEL) programs show that participating individuals improve their empathy and social-emotional skills (Durlak, Weissberg, Dymnicki, Taylor, & Schellinger, 2011). We focused on different themes in the ten-week group sessions held in SID-PEP. Even though one session is limited for the themes we discussed, it is seen that the participants contribute to the general social interest of the individual.

Most recent studies state that the roles of parents and teachers in developing social interests are significant and that cooperation is required (Adler, 2015; Ansbacher & Ansbacher, 1956; Mosak & Maniaci, 2012). In this study, we did not do any activities with school or family. Perhaps, for this reason, the increase in students' social interest post-test scores did not persist in the follow-up test.

Belonging

There was a significant increase in the scores of the students participating in the psycho-education program compared to the control group. Some researchers have reported that the feelings of belonging, group cohesion, and commitment increase, and the sense of loneliness decreased due to the programs (Glass & Benschhoff, 2002; Ostrovsky et al., 1992; Wingett & Milliren, 2008). Similarly, Karcher and Lindwall (2003) claim that adolescent mentors with high social interest are more connected to the school and family and share their positive feelings about attachment with younger students. Studies with different groups have proven that individual psychology-based school practices are effective (Hamm, Carlson, & Ergüner-Tekinalp, 2016; Hunter & Sawyer, 2006; LaFountain, 1996; West et al., 2018). According to the results of these studies, the classroom is the best social environment where the child can meet the need to belong and define school as a place where social interests can be lived and

practiced. McMahon (2009) states that group life emphasizes intimacy and provides a sense of belonging because it enables them to see and share similarities. It seems possible that experiencing a group process and spending everyday life with group members contribute to the sense of belonging. The theme of the fourth session of the group sessions was belonging, and in this session, the students produced solutions together for some problems experienced in their schools, family and friend relationships, and society through small group work. In addition, it is thought that the small group work carried out in the sessions of collaboration (session 3), contribution (session 5), courage (session 7), and coping/encouragement (session 8), especially in the group, and carrying out the process in cooperation with the group members throughout the process contributed to the members' feeling of belonging. The sense of belonging continues unless they have a life that harms this feeling of belonging.

Sensitivity

There was no significant difference between the post-test scores of the experimental group and the control group regarding sensitivity, but the students participating in the psycho-education program had higher scores in sensitivity than the control group. Karcher and Lindwall (2003) state that mentors with high social interest are willing to counsel students on academic and social risks, are more willing to change the world and more sensitive. Ostrovsky et al. (1992) observed that adolescents' moral development improved through social interest. Similarly, West et al. (2018) found that school-based social interest development experiences made children more responsible for citizenship and worldview. Twenge (2018, p. 234) defines the characteristics of this generation, including the study group, and states that helping individuals under challenging situations and being sensitive increases in this generation, but this increase is online based. He explains this situation, which he defines as negligent, as the sensitivity remains as sharing on social media and not moving to the action stage. The lack of a significant difference in sensitivity can be explained by this generation's ability to experience difficulties putting sensitivity into action. When the mean scores of the participants in the sub-dimension of being sensitive in the pre-test and post-test are examined, it is seen that there is a slight increase in the mean score of the post-test. In this context, it can be said that most of the members participating in the experimental group improved in the sub-dimension of being sensitive, but this improvement did not cause a high enough increase to cause a significant difference. The fact that the items in the dimension of being sensitive in the scale items, especially including action, may not be reflected in the scale scores due to the feature of Generation Z mentioned by Twenge (2018). Therefore, more sessions may be needed to be sensitive about acting.

Helping

There was no significant difference between the post-test scores of the experimental group and the control group regarding the helping, but the students participating in the psycho-education program had higher scores in the helping compared to the control group. Ostrovsky et al. (1992) observed that students' sharing of feelings developed in their studies through a social interest. A slight increase in the post-test mean score is observed examining the means of the participants in the assisting sub-dimension for both the pre-test and post-test. In this study, SID-PEP session themes were not direct help-themed sessions. The themes of collaboration, contribution, and sensitivity contributed to helping behavior. Addressing this theme in a single session was insufficient to develop the students. This may be because the scale items, sub-dimensions, and the themes of the group sessions do not overlap one-to-one. The lack of direct sessions with the theme of sharing and helping may have caused the group members not to show significant differences in this dimension.

Coping

There was no significant difference between the post-test scores of the experimental group and the control group regarding managing, but the students participating in the psycho-education program had higher scores in coping than the control group. West et al. (2018) revealed that school-based social interest development experiences led to more empathetic and encouraging experiences, especially in interpersonal relationships, and created a positive self-perception. LaFountain (1996) showed a significant positive relationship between the solution's inclusion of a social interest element and

achieving the goal. Social interests play a vital role in achieving this goal. Twenge (2018) defines this generation's characteristics as the most intensive need for trust; therefore, they mature late, are more emotionally fragile, and more sensitive to criticism, more dependent on their parents for a longer time, and they have low risk-taking behaviors even in a positive sense. He also states that giving less responsibility to these young people causes them to mature late, which is explained by the concept of helicopter parenting (Lee & Kang, 2018), which describes the attitudes of overprotective, programmatic, and perfectionist parents, which have been quite common recently. Considering all these situations, it seems difficult for parents who usually overcome a problem instead of their child, young people who are not allowed to face their responsibilities and whose fragility is supported, to acquire a skill that requires process and encouragement, such as coping with a session. It is seen that coping, which is handled within the scope of social interest, is a characteristic that includes many skills and characteristics. There is a little increase in the post-test mean score when comparing the individuals' means for the coping sub-dimension in the pre-test and post-test. In this study, the post-test was administered during exam week at the school, so the students were anxious. Considering that it was a period when their anxiety increased due to their end-of-term achievement scores, it is thought that it may have resulted from a period when they felt inadequate in coping. In Adventure-based Counselling applications such as LECC, collaborative challenge-based activities are applied to improve students' problem-solving skills. It is stated that such activities are the driving force for problem-solving (Fletcher & Hinkle, 2002). In this study, the activities in the sessions related to coping were planned in a challenging style, and the participants' challenging themselves by taking advantage of the power of group cooperation could have provided more effective results in the coping dimension. Overall, considering the coping skills that require higher skills, the fact that it was an exam period, the lack of activities in the sessions that better develop these skills, parental attitudes, and generation characteristics that inhibit these skills, a session did not provide a significant difference in the coping skills of these participants.

Results show that psychoeducational intervention based on individual psychology is an effective tool for enhancing adolescent social interest. In comparing the pre-test and post-test social interest scores of the participants in the psychoeducational intervention based on Individual Psychology, a statistically significant increase was evident in the post-test for total social interest scores. Although further research is necessary to establish the efficacy of this intervention, preliminary results indicate that the intervention based on Individual Psychology may help promote adolescent social interest. The same intervention could be used as a training module or program to enhance social interest among similar populations.

This study has a few limitations, which need to be mentioned. First, this study was limited to adolescents in a high school in Ankara who had permission from their parents, had no barriers to participate in group work, and participated voluntarily. Second, although it was aimed to provide class diversity, students from the same class were included in the experimental and control groups. The fact that students from the same class were included in the experimental and control groups is a limitation of this study. Third, the selection of group members was random, but the survey topic might have attracted individuals interested in social interests. Lastly, the researcher developed the psycho-education program; the researcher effect is one of the study's limitations.

For future studies, it is recommended that social interest enhancing activities be carried out with groups that are better structured in terms of the number of sessions and the time allocated. Especially, it is thought that coping and sensitivity themes can be planned in more than one session to ensure that the changes that occur are permanent. The program process can be supported with parent and teacher group sessions or student breakout sessions. Additionally, beyond social interest, variables positively or negatively related to social interest (such as depression, anxiety, well-being, and empathy) could be included in the research process to explore the relationship between the program and these variables.

References

- Adler, A. (1956). *The origin of the neurotic disposition. The individual psychology of Alfred Adler*. New York: Basic Books.
- Adler, A. (2008). *Problems of neurosis: A book of case-histories (social interest and masculine protest)* (2nd ed., A. Kılıçoğlu, Trans.). Say Yayıncılık.
- Adler, A. (2011). *Superiority and social interest* (9th ed., B. Çorakçı, Trans.). Say Yayıncılık.
- Adler, A. (2015). *Social Interest: A challenge to mankind* (1st ed., A. Tekşen, Trans.). İstanbul: Payel Press.
- Akdoğan, R., & Ceyhan, E. (2014). The effect of adlerian group counseling on inferiority feeling and psychological symptoms. *Turkish Psychological Counseling and Guidance Journal*, 5(42), 280-293.
- Alonso-Ferres, M., Navarro-Carrillo, G., Garrido-Macías, M., Moreno-Bella, E., & Valor-Segura, I. (2020). Connecting perceived economic threat and prosocial tendencies: The explanatory role of empathic concern. *PLoS One*, 15(5), e0232608. doi:10.1371/journal.pone.0232608
- Ansbacher, H. L. (1991). The concept of social interest. *Individual Psychology: Journal of Adlerian Theory, Research & Practice*, 41(1), 28-46.
- Ansbacher, H. L., & Ansbacher, R. (Eds). (1956). *The individual psychology of Alfred Adler*. New York: Basic Books.
- Bass, M. L., Curlette, W. L., Kern, R. M., & McWilliams Jr, A. E. (2002). Social interest: A meta-analysis of a multidimensional construct. *The Journal of Individual Psychology*, 58(1), 4-34.
- Bonino, S., Cattellino, E., Ciairano, S., Mc Donald, L., & Jessor, R. (2005). *Adolescents and risk: Behavior, functions, and protective factors*. New York: Springer.
- Brown, W. N. (2013). *Psychoeducational groups: Process and practice* (V. Yorgun, Trans.). Ankara: Anı Publishing.
- Burak, M., Söyler, V., & Pehlivan, E. (2020). Prevalence of smoking and substance use in adolescents. *Journal of Dependence*, 21(1), 64-71.
- Connell, C. M., Gilreath, T. D., Aklin, W. M., & Brex, R. A. (2010). Social-ecological influences on patterns of substance use among non-metropolitan high school students. *American Journal of Community Psychology*, 45(1-2), 36-48. doi:10.1007/s10464-009-9289-x
- Campell, D. T., & Cook, T. D. (1979). *Quasi Experimentation. Design and Analysis Issues for Field Settings*. USA Hought.
- Corey, G. (2016). *Theory and practice of group counseling* (9th ed.). Boston: Cengage Learning.
- Daugherty, D. A., Murphy, M. J., & Paugh, J. (2001). An examination of the Adlerian construct of social interest with criminal offenders. *Journal of Counseling & Development*, 79(4), 465-471. doi:10.1002/j.1556-6676.2001.tb01994.x
- DeLucia-Waack, J. L. (2006). *Leading psychoeducational groups for children and adolescents*. Thousand Oaks, CA: Sage.
- Dreikurs-Ferguson, E. (2015). *Adlerian theory: An introduction* (2nd ed.). Şikago: Adler School of Professional Psychology.
- Durlak, J. A., Weissberg, R.P., Dymnicki, A. B., Taylor, R. D., & Schellinger, K. B. (2011). The impact of enhancing students' social and emotional learning: A meta-analysis of school-based universal interventions. *Child Development*, 82(1), 405-432. doi:10.1111/j.1467-8624.2010.01564.x
- Edwards, D. L., & Gfroerer, K. P. (2001). Adlerian school-based interventions for children with attention-deficit/hyperactivity disorder. *Journal of Individual Psychology*, 57(3), 210-223.
- Erginsoy, D. (2010). *Üniversite öğrencilerinin toplumsal ilgileri, bilişsel çarpıtmaları ve ilk anıları* (Unpublished doctoral dissertation). Marmara University, İstanbul.

- Ergüner-Tekinalp, B. (2017). The effectiveness of adlerian-based encouragement group counseling with college students in Turkey. *The Journal of Individual Psychology*, 73(1), 54-69. doi:10.1353/jip.2017.0004
- Ergüner-Tekinalp, B., & Terzi, Ş. (2016). Coping, social interest, and psychological birth order as predictors of resilience in Turkey. *Applied Research in Quality of Life*, 11(2), 509-524. doi:10.1007/s11482-014-9378-3
- Erkuş, A. (2011). *Scientific research process* (3rd ed.). Ankara: Seçkin Press.
- Fletcher, T. B., & Hinkle, J. S. (2002). Adventure based counseling: An innovation in counseling. *Journal of Counseling & Development*, 80(3), 277-285. doi:10.1002/j.1556-6678.2002.tb00192.x
- Fraenkel, J. R., Wallen, N. E., & Hyun, H. H. (2011). *How to design and evaluate research in education*. New York: McGraw-Hill.
- Gaffney, H., Ttofi, M. M., & Farrington, D. P. (2021). Effectiveness of school-based programs to reduce bullying perpetration and victimization: An updated systematic review and meta-analysis. *Campbell Systematic Reviews*, 17(2), e1143. doi:10.1002/cl2.1143
- Gerrity, D. A., & DeLucia-Waack, J. L. (2007). Review of research on group work in schools. *The Journal for Specialists in Group Work*, 32(1), 97-106. doi:10.1080/01933920600978604
- Glass, J. S., & Benshoff, J. M. (2002). Facilitating group cohesion among adolescents through challenge course experiences. *Journal of Experiential Education*, 25(2), 268-277. doi:10.1177/105382590202500204
- Goldberg, S. B., & Hoyt, W. T. (2015). Group as social microcosm: Within-group interpersonal style is congruent with outside group relational tendencies. *Psychotherapy*, 52(2), 195-204.
- Güçray, S. S., Çekici, F., & Çolakkadıoğlu, O. (2009). Planning of psychoeducational groups and their principle. *Mersin University Journal of the Faculty of Education*, 5(1),134-153.
- Hamm, J. S., Carlson, J., & Ergüner-Tekinalp, B. (2016). Adlerian-based positive group counseling interventions with emotionally troubled youth. *The Journal of Individual Psychology*, 72(4), 254-272. doi:10.1353/jip.2016.0021
- Helliwell, J. F., Layard, R., Sachs, J. D., Aknin, L. B., De Neve, J.-E., & Wang, S. (Eds.). (2023). *World happiness report 2023* (11th ed.). New York: Sustainable Development Solutions Network.
- Hunter, D. ve Sawyer, C. (2006). Blending Native American spirituality with individual psychology in work with children. *Journal of Individual Psychology*, 62(3), 234-250.
- Hussong, A. M., Midgette, A. J., Thomas, T. E., Coffman, J. L., & Cho, S. (2021). Coping and mental health in early adolescence during COVID-19. *Research on Child and Adolescent Psychopathology*, 49(9), 1113-1123. doi:10.1007/s10802-021-00821-0
- Jones, R. B., Thapar, A., Stone, Z., Thapar, A., Jones, I., Smith, D., & Simpson, S. (2018). Psychoeducational interventions in adolescent depression: A systematic review. *Patient Education and Counseling*, 101(5), 804-816. doi:10.1016/j.pec.2017.10.015
- Karcher, M. J., & Lindwall, J. (2003). Social interest, connectedness, and challenging experiences: What makes high school mentors persist?. *Journal of Individual Psychology*, 59(3), 294-315.
- Kayacı, Ü., & Özbay, Y. (2016). Traumatic experience, psychological birth order, social interest of students, in the prediction of psychological hardiness. *The Journal of Happiness & Well-Being*, 4(1), 128-142.
- Kaynak, Ü., & Işık, Ş. (2022). Development of the social interest scale for Turkish adolescents. *The Journal of Individual Psychology* 78(2), 221-237. doi:10.1353/jip.2022.0026
- LaFountain, R. M. (1996). Social interest: A key to solutions. *The Journal of Individual Psychology*, 52(2), 150-157.
- Leak, G., & Leak, K. (2006). Adlerian social interest and positive psychology: A conceptual and empirical integration. *The Journal of Individual Psychology*, 62(3), 207-223.

- Lee, J., & Kang, S. (2018). Perceived helicopter parenting and Korean emerging adults' psychological adjustment: The mediational role of parent-child affection and pressure from parental career expectations. *Journal of Child and Family Studies*, 27(11), 3672-3686.
- Lemberger, M. E., & Nash, E. R. (2008). School counselors and the influence of Adler: Individual Psychology since the advent of the ASCA National Model. *Journal of Individual Psychology*, 64(4), 386-402.
- Lerner, M. R. (2017). *The good teen* (O. Şimşek, Trans.). Ankara: Sola Unitas.
- McMahon, S. (2009). *Portable therapist* (N. Kavalalı, Trans.). Barış İlhan Press.
- Mosak, H. H., & Maniaci, M. (2012). Adlerian Psychotherapies. In J. R. Corsini & D. Wedding (Eds.), *Current psychotherapies* (p. 115-178). Kaknüs Publishing.
- Nicoll, W. G. (1996). School lifestyle, social interest, and educational reform. *Individual Psychology*, 52(2), 130-149.
- Orgilés, M., Morales, A., Delvecchio, E., Francisco, R., Mazzeschi, C., Pedro, M., & Espada, J. P. (2021). Coping behaviors and psychological disturbances in youth affected by the COVID-19 health crisis. *Frontiers in Psychology*, 12. doi:10.3389/fpsyg.2021.565657
- Ostrovsky, M., Parr, G., & Gradel, A. (1992). Promoting moral development through social interest in children and adolescents. *Individual Psychology: Journal of Adlerian Theory, Research & Practice*, 48(2), 218-225.
- Özaydınlık, S. (2014). *Evlü çiftlerin evlilik uyumu ile kişilik özellikleri ve romantik ilişkilerindeki sosyal ilginin incelenmesi* (Unpublished master's thesis). Marmara University, İstanbul.
- PISA. (2015). PISA 2015 national report. Retrieved from http://odsgm.meb.gov.tr/test/analizler/docs/PISA/PISA2015_Ulusal_Rapor.pdf
- PISA. (2018). PISA 2018 national report. Retrieved from http://odsgm.meb.gov.tr/test/analizler/docs/PISA/PISA2018_Ulusal_Rapor.pdf
- Pink, H. D. (2016). *Drive: Nasıl motive oluruz? Nasıl motive ederiz?* (L. Göktem, Trans.). Mediacat.
- Rareshide, M., & Kern, R. (1991). Social interest: The haves and have nots. *Individual Psychology: Journal of Adlerian Theory, Research & Practice*, 47(4), 464-476.
- Reininger, B., Evans, A. E., Griffin, S. F., Valois, R. F., Vincent, M. L., Parra-Medina, D., ... Zullig, K. J. (2003). Development of a youth survey to measure risk behaviors, attitudes, and assets: Examining multiple influences. *Health Education Research*, 18(4), 461-476. doi:10.1093/her/cyf046
- Rennebohm, S. B., Seebeck, J., & Thoburn, J. W. (2017). Attachment, dyadic adjustment, and social interest: An indirect effects model. *Journal of Individual Psychology*, 73(3), 208-224. doi:10.1353/jip.2017.0017
- Santrock, J. W. (2014). *Puberty* (14th ed., D. M. Siyez, Trans.). Ankara: Nobel.
- Serrano-Montilla, C., Alonso-Ferres, M., Navarro-Carrillo, G., Lozano, L. M., & Valor-Segura, I. (2021). Assessment of the effects of health and financial threat on prosocial and antisocial responses during the COVID-19 pandemic: The mediating role of empathic concern. *Personality and Individual Differences*, 178, 110855. doi:10.1016/j.paid.2021.110855
- Shavelson, R. J. (1988). *Statistical reasoning for the behavioral sciences*. Londra: Allyn and Bacon.
- Soyer, M. (2004). Adaptation of the social interest scale: Validity and reliability studies. *Turkish Journal of Psychological Counseling and Guidance*, 3(21), 29-34.
- Steinberg, I. (2007). Risk-taking in adolescence; New perspectives from brain and behavioural science. *Current Directions in Psychological Sciences*, 16(2), 55-59. doi:10.1111/j.1467-8721.2007.00475.x
- Swayne, L. L. (2008). *Increasing social interest among adolescent girls through character education* (Doctoral dissertation). Adler School of Professional Psychology, Charleston SC.

- TIMSS. (2015). TIMSS 2015 Üçüncü Uluslararası Matematik ve Fen Çalışması ulusal raporu. Retrieved from http://timss.meb.gov.tr/wp-content/uploads/TIMSS_2015_Ulusal_Rapor.pdf
- TIMSS. (2019). TIMSS 2019 Türkiye ön raporu. Retrieved from https://meb.gov.tr/meb_iys_dosyalar/2020_12/10173505_No15_TIMSS_2019_Turkiye_On_Raporu_Guncel.pdf
- TUIK. (2020). Youth in statistics 2020. Retrieved from <https://data.tuik.gov.tr/Bulten/Index?p=Istatistiklerle-Genclik-2020-37242>
- Twenge, J. (2018). *İGen* (O. Gündüz, Trans.). Kaknüs Publishing.
- Weiten, W. (2008). *Psychology themes and variations briefer version* (7th ed.). Boston: Cengage Learning.
- West, E. M., Miller, L. G., Cox, J. A., & Moate, R. M. (2018). Parents' perceptions of young children's social interest experiences. *The Journal of Individual Psychology, 74*(4), 368-386. doi:10.1353/jip.2018.0028
- WHO. (2024). Adolescent health. Retrieved from <https://www.who.int/southeastasia/health-topics/adolescent-health>
- Wick, D. T., Wick, J. K., & Peterson, N. (1997). Improving self-esteem with Adlerian adventure therapy. *Professional School Counseling, 1*(1), 53-56.
- Wingett, W., & Milliren, A. (2008). Psychoeducational E5 groups for use in schools. *Journal of Individual Psychology, 64*(4), 494-505.
- Xie, X., Xue, Q., Zhou, Y., Zhu, K., Liu, Q., Zhang, J., & Song, R. (2020). Mental health status among children in home confinement during the coronavirus disease 2019 outbreak in Hubei Province. *JAMA Pediatrics, 174*(9), 898-900. doi:10.1001/jamapediatrics.2020.1619
- Yang, J., Milliren, A., & Blagen, M. (2010). *The psychology of courage: An Adlerian handbook for healthy social living*. Birleşik Krallık: Taylor & Francis.