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Mental Health Promotion and Prevention Among Gifted Adolescents

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Abstract

Problem statement: Mentoring gifted adolescents usually focuses on skill development. Individual psychological counselling and skills training may also improve socio-emotional functioning. **Research question:** What psychological difficulties/ mental health problems occur most frequently among gifted adolescents? Are there any characteristic subgroups/clusters Do mental health-related interventions improve adjustment? **Purpose of study:** A half-year long programme was offered to 100 gifted adolescents, including 30 hours of individual counselling with a clinical psychologist and 30 hours of group workshops (psychodrama, training). Baseline and follow-up psychological testing was performed. **Research methods:** Both quantitative and qualitative methods were used, providing questionnaire data as well as case descriptions by clinical psychologists for each of the gifted adolescents. The test battery included Parent and Peer Attachment Inventory, Olson FACES-IV, State-Trait Anxiety Inventory, Child Depression Inventory, personality items from the IPIP, as well as coping, motivation, and flow-related questions. **Findings:** We have identified eight problem areas (Environmental, Social, Emotional, Motivational, Cognitive, Self-esteem, Coping, Organizational problems) which clustered in five typical psychological profiles (introverted-anxious, perfectionist, seeker, problematic, resilient). Psychological counselling had most impact on stress management. **Conclusion:** Changes of emotional adjustment and some coping variables were found, with only a slight perceived development in social skills. Differences between individual and group sessions were analysed in terms of effectiveness; participants noted better self-awareness and stress management mainly to be a result of individual sessions.

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Keywords: Gifted adolescents, Emotional-social-motivational problems, Coping, Individual Counselling, Social Skills Training

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1. Introduction

Research with talented students has revealed a number of personality factors, personal priorities, and social emotional issues that have consistently emerged as contributing reasons why many either cannot or do not realize their potential. While the cognitive development and academic performance of gifted students have been examined extensively, the study of social-emotional functioning of academically advanced adolescent/high school-age learners has received far less attention in educational research, especially with regard to perceived stress, coping, and mental health

Gifted children are more advanced than other children of their chronological age. Along with their asynchrony, they are sensitive, perfectionistic, have a need for reflective thinking, moral issues affect them more deeply and at an earlier age than their peers. They learn at a faster pace, think or process more deeply, and require less repetition or practice to master assigned material, thus, warranting greater educational challenge (Coleman & Cross, 2001; VanTassel-Baska, 1998). Kazimierz Dabrowski's Theory of Emotional Development (Dabrowski & Piechowski, 1977) is an attempt to clarify the intensities of the gifted students, and to build an understanding of the five "overexcitabilities" (psychomotor, sensual, intellectual, imaginal and emotional) as positive energy which can enable the gifted to become their best selves (Silverman, 1993).

If left academically unchallenged, these students can become bored and exhibit disruptive behaviors. Lack of goals, motivation, or direction, and failure to develop self-regulatory strategies can impact their academic performance for a variety of reasons (Siegle & McCoach, 2002). Talented adolescents may also feel pressure to live up to the expectations of parents, teachers, and other significant adults in their lives. Many fear of failure, experience frustration, and underachieve in school (Schuler, 2002; Silverman, 1993).

Colangelo (2002) supposed that gifted students are emotionally stable, but they are vulnerable in many situations. Adolescence produces a number of such situations, where giftedness means disadvantage among school-mates, resulting in depression, anxiety or isolation. However, no difference has been found between gifted and non-gifted in levels of depression (Bartell & Reynolds, 1986; Brody & Benbow, 1986), with significant differences between girls and boys (Brugha, Bebbington, MacCarthy, Sturt, Wykes, & Potter, 1990; Slavin & Rainer, 1990). Neither suicide had a higher prevalence (Neihart et al., 2002), nor deviant behaviors were not higher than average (Neihart et al., 2002; Seeley, 1984). In contrast, Lange-Eichbaum has studied 800 individuals with extremely high intelligence and has found that alcohol and drug problems had high prevalence. Longitudinal research also showed that social problems of gifted students may result in psychopathology (Beveridge & Yorston, 1999), and prevalence indices of schizophrenia and bipolar disorder were higher (Kyaga et al, 2011).

During weekdays, gifted students experience higher stress, stronger anxiety and more social problems (Chan, 2003; Neihart, 1999) than their peers. For many, achievement anxiety with high stress and negative feelings mean problems that are hard to cope with (Jerusalem, 1984; Lazarus and Folkman, 1984). They do not feel themselves competent enough, especially if teachers or parents demand high standards (Schwarzer & Lange, 1983; Wigfield & Eccles, 1990). Gifted girls have usually more emotional problems than gifted boys (Hankin, Abramson, Moffitt, Silva, McGee & Angell, 1998; Landman-Peeters, Hartman, Pompe, Boer, Minderaa & Ormel, 2005; Hale, Raaijmakers, Muris, Van Hoof, Mleeus, 2008), with some contradictory results (Desantis, 2006; Karatzias, Power, Flemming, Lennan & Swanson, 2002; Huebner, Drane, & Valois, 2000). Contemporary research has explored the

gifted individual's social-emotional development in the classroom, schools, and communities (Peterson, 2003) for a host of affective issues, including, perfectionism (Speirs Neumeister, Williams, & Cross, 2007), depression (Mueller, 2009), overexcitabilities (Mendaglio & Tiller, 2006; Tieso, 2007), interpersonal relationships (Matthews & Kitchen, 2007), self-actualization (Pufal-Struzik, 1999), underachievement (Reis & McCoach, 2000), and psychological well-being (Jin & Moon, 2006).

Gifted learners may possess coping strategies different from their peers (Preuss & Dubow, 2004). Investigations of high- and low-achieving college students indicate self-regulating learning patterns, including task management, time management, problem solving, and self-efficacy which may play a role in academic success and emotional adjustment of learners, including gifted students (Reis & McCoach, 2000; Ruban & Reis, 2006). Scholars have proposed that intelligence serves as a buffer for stress, suggesting that cognitive facility functions as a mechanism for evaluating and adapting to stressors through selection of effective coping responses (Lazarus & Folkman, 1984; Sternberg, 1985). The primary focus of literature about coping practices of gifted youth has been on coping with social demands (Chan, 2003, 2004, 2005; Foust, Rudasill, & Callahan, 2006; Rudasill, Foust, & Callahan, 2007; Swiatek, 1995, 2001, 2002; Swiatek & Dorr, 1998). Findings from these studies indicate gifted learners in elementary and secondary schools use a variety of responses to social distress, including denying and hiding giftedness, minimizing popularity, assisting others with coursework, and conforming to mask giftedness.

Personality patterns of the gifted has also been studied: high openness (curiosity), low agreeableness (high autonomy and achievement-focused), high extraversion (high energy), but in case of natural sciences rather high introversion (Feist, 1999), high neuroticism (sensitivity, restlessness), usually lower, but in case of natural sciences, high conscientiousness (Feist, 1999). This personality pattern is occasionally similar to an antisocial Big Five pattern (King, McKee, Walker és Broyles, 1996; Prabhu et al, 2008). Gifted students are more risk-taking, more impulsive, more sensation seeking and emotionally more sensitive (Feist, 1999, James & Asmus, 2001, Lee, 2005).

2. Problem Statement

Exceptional talent or high ability does not necessarily translate into insightful college and career planning, gifted students may also require special assistance in these areas (Colangelo, 2002; Silverman, 2002). Mentoring gifted adolescents usually focuses on skill development, but, according to Csíkszentmihályi (2010), gifted young individuals won't develop unless psychological support and inspiration is given to them from parents, teachers or from other experts. Ways in which counselors can have individual impact on gifted students include building social self-esteem; helping them overcome perceived barriers and have better adjustment and coping in dual relationships and group settings.

3. Purpose of the Study. Research Questions

Our research was focused on determining the main areas of strengths and weaknesses in gifted adolescents, as well as changes in problem areas as an effect of a psychological intervention. We wanted to determine whether a half-year psychological intervention focusing on individual problems and social skills may produce changes in various areas of adjustment.

100 gifted adolescents were involved in a half-year long psychological intervention programme including 30 hours individual counselling with a clinical psychologist, and 30 hours of social skills development. Group sessions were held by 15 clinical psychologists familiar with one or more psychological methods of group intervention; they used psychodrama role plays and structured training exercises for the purpose of interpersonal skill development. During individual sessions primarily nondirective (Rogers, 1951), supportive counselling was used with additional relaxation and imagination-meditation (e.g. KIP, Leuner, 1951) techniques.

4. Research Methods

4.1 Sample

Our programme and research took place in Hungary. The sample consisted of 100 high-achieving students (mean age 15,3 sd 1,015), 48 girls and 52 boys with various talents (maths, physics, natural sciences: 34 students, languages, history, drama skills: 36 students, music: 10 students, visual art: 9 students, sports: 11 students). Subjects were selected from a larger pool of applicants. Inclusion criteria were: academic success in terms of awards at academic competitions and recommendation of secondary school teachers.

4.2 Research methods

We used both quantitative and qualitative methods; primarily. children, and their mentoring psychologists were used as data sources; additional data were collected from the teachers and parents.

1. Adolescents filled out Inventory of Parent and Peer Attachment (Armsden & Greenberg, 1987), Olson Family test FACES-IV (Olson & Gorell, 2003), State-Trait Anxiety Inventory (Spielberger et al, 1970), Child Depression (Kovács, 1992), IPIP personality items (Goldberg, 1999), Coping Skills Inventory (Oláh, 2000), Aspiration Index of Extrinsic and intrinsic motivation (Kasser & Ryan, 1996), Flow Questionnaire (Oláh, 2002), Self Esteem Inventory (Coopersmith, 1967). They also wrote a written feedback expressing their opinion and experiences of the programme.

2. Clinical psychologists provided a thorough case-description of the adolescents' problems and they filled out a follow-up questionnaire about perceived changes of the participant in various areas of adjustment.

5. Findings

First, psychological variables were grouped in eight problem areas which affected the participants. Problem areas were defined on basis of parental ratings. At programme onset, parents were informed about the project at a workshop, where a focus group discussion was held. They had opportunity to express their opinions of developmental challenges in their adolescent's life and their own difficulties with education and support of their children. The team (two clinical psychologists and

a research psychologist) summarized parental ratings and opinions, forming the following problem factors:

- Social (being unsociable, lack of supportive relationships, communication deficits, verbal or physical aggression, parent-child, teacher-child conflicts)
- Emotional (anxiety, anger, impulsiveness, sadness)
- Motivational (lack of intrinsic motivation, undeveloped area of interest, following parents' and not own efforts, diverse, too diffused or narrow area of interest)
- Cognitive problems (specific learning problems)
- Self esteem (low self esteem, boastfulness, perfectionism, identity-related issues)
- Coping (lack of persistence, coping with failures)
- Organizational problems (time management problems, practical problems with adjustment)
- Environmental problems (socio-economic status, lack of financial support).

5.1 Psychologists' ratings of children's problems

Next, clinical psychologists participating in the intervention rated frequency and intensity for the first seven of the above mentioned problem areas (Table 1.). Environmental problems were regarded as out of focus, therefore these were not included. From data it was apparent that more than half of participants have significant problems in the area of social development. High incidence of self-esteem-related and emotional problems was also found. Participants were less, but still significantly affected by motivational issues. Coping level was quite adequate for about 74 percents of the adolescents, with some possibility for improvement. They also were rather unaffected by organizational and cognitive problems.

Table 1. Problem areas affecting participants of the programme at baseline (%)

	No problems	Mild problem	Significant problem
Social	13	31	56
Self-esteem	21	28	51
Coping	47	27	26
Emotional	11	46	43
Motivational	23	43	34
Organizational	55	21	24
Cognitive	81	13	6

To determine whether there are characteristic subgroups of talented students in the sample, we have applied hierarchical clustering (Ward's method, squared euclidean distances. As a result, five clusters of the children emerged. The profiles differed primarily for ratings of perfectionism, introversion and unclarified area of interest. The five typical profiles were named: introverted-anxious (12%), perfectionist (16%), seeker (28%), problematic (14%) and resilient (30%) (Figures 1 and 2.). 'Perfectionists' have coping and self-esteem problems, Anxious-introverted are affected primarily by social and self-esteem issues, Seekers can be characterized by an unclarified area of interest, producing lower motivation as well as organizational problems. Problematic individuals have all kinds of problems simultaneously, whereas resilient students score low on all problem areas.

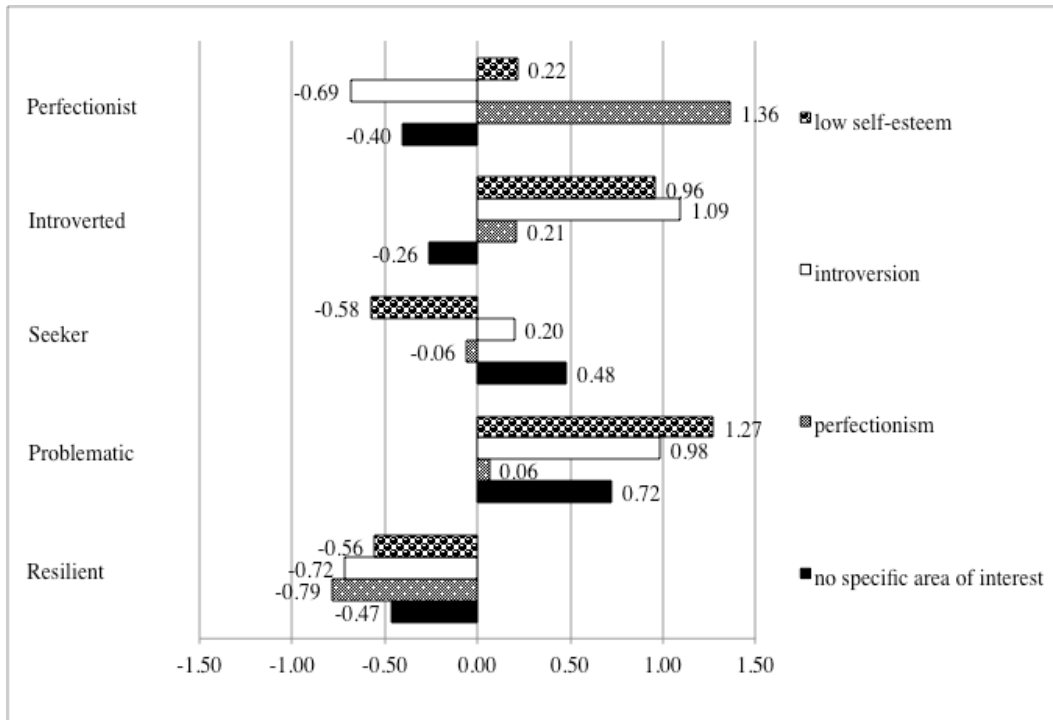


Figure 1. Psychological profiles of gifted adolescents by most common specific problems (values indicate z-scores of ratings)

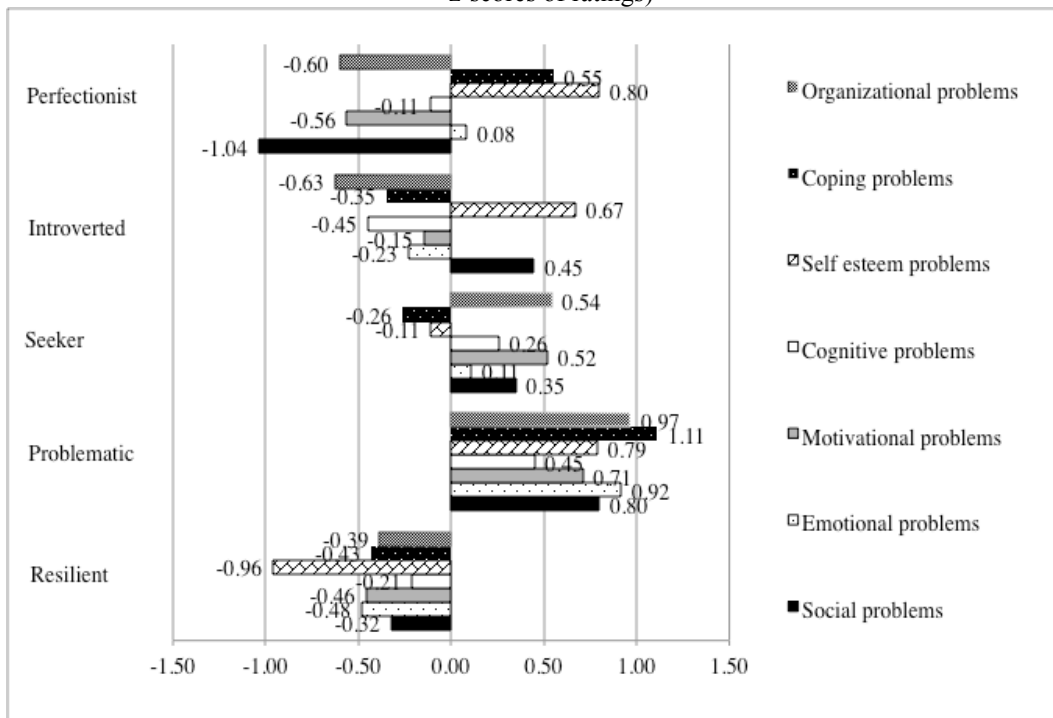


Figure 2. Psychological profiles of gifted adolescents by problem areas (values indicate z-scores of ratings)

5.2 Results on children's self-report questionnaires

In Table 2 mean and SD scores of self-report questionnaires for baseline and follow-up are presented along with results of paired sample t-tests. There were differences between subjects at baseline and follow-up ratings for various aspects. There was a reduction in perceived stress, also an improvement in some aspects of coping skills, such as positive thinking and emotion control. Also an increase in self-esteem could be observed; though no further differences for self-respect and self-growth.

Table 2. Longitudinal results of self-report questionnaires before and after psychological programme.

	Mean (Time 1.)	SD (Time 1.)	Mean (Time 2.)	SD (Time 2.)	t	df	Sig. (2- tailed)
Peer and Parent Attachment	3.985	0.393	3.943	0.497	1.276	77	0.206
Olson Family Attachment	3.771	0.673	3.697	0.857	1.351	77	0.181
State trait anxiety	2.117	0.459	2.001	0.491	2.937	77	0.004
Big Five variables							
Depression	0.401	0.272	0.359	0.297	1.899	77	0.061
Extraversion	3.494	0.693	3.589	0.780	-1.980	77	0.051
Agreeableness	3.912	0.521	3.845	0.649	1.472	77	0.145
Consciousness	3.382	0.736	3.338	0.793	1.138	77	0.258
Neuroticism	2.744	0.777	2.622	0.787	2.757	77	0.007
Coping variables							
Positive thinking	2.880	0.763	3.009	0.738	-2.097	77	0.039
Sense of coherence	2.902	0.694	2.923	0.754	-0.276	77	0.784
Sense of control	3.154	0.614	3.152	0.574	0.029	77	0.977
Self-respect	2.727	0.762	2.675	0.771	0.816	77	0.417
Self Regulating System monitoring capacity	3.160	0.553	3.173	0.661	-0.261	77	0.795
Self Regulating System mobilizing capacity	3.171	0.633	3.209	0.643	-0.546	77	0.586
Self Regulating System creations capacity	2.910	0.657	3.000	0.631	-1.390	77	0.169
Synchronicity	2.474	0.670	2.385	0.705	1.338	77	0.185
Persistence	2.970	0.741	3.019	0.731	-0.769	77	0.444
Impulse control	2.891	0.691	2.970	0.756	-1.095	77	0.277
Irritability control	2.944	0.693	2.996	0.796	-0.843	77	0.402
Emotion control	2.575	0.836	2.795	0.775	-2.988	77	0.004
Social monitoring capacity	3.092	0.608	3.090	0.644	0.037	77	0.97
Social mobilizing capacity	3.045	0.622	3.043	0.648	0.040	77	0.968
Social creations capacity	2.412	0.542	2.509	0.655	-1.672	77	0.099
Sense of self-growth	3.207	0.742	3.299	0.648	-1.362	77	0.177

Self esteem	0.656	0.260	0.704	0.257	-2.144	77	0.035
Motivation variables							
Extrinsic motivation	3.426	0.791	3.516	0.829	-1.381	77	0.171
Intrinsic motivation	4.308	0.507	4.309	0.641	-0.024	77	0.981
Flow at school	2.922	0.513	2.872	0.501	0.806	77	0.423
Flow at home	3.283	0.573	3.313	0.485	-0.538	77	0.592
Flow during talent activity	3.569	0.346	3.542	0.440	0.522	77	0.603

We have also performed a qualitative analysis on written feedback from the subjects. Reports indicated that individual psychological counselling was perceived as most efficient. All participants found the program as fruitful in multiple areas of their lives. While describing attitudes toward the psychological intervention, as well as their experiences about the same, participants primarily pointed out perceived stress reduction (primarily in the academic area), less anxiety and uncertainty feelings, and more relaxed mood. They were enthusiastic about learning relaxation techniques and their experience was that they could well apply their newly learnt skills in their everyday lives. Self-knowledge regarding their strengths and weaknesses improved; also, they claimed that they saw themselves more objectively. Participants also noticed better interpersonal adjustment, coping, conflict management and assertiveness. (Which is surprising, as psychological tests did not indicate any change for interpersonal functioning). In summary, subjects profited a lot from the counselling relationship, they noted feelings of trust, as well as positive feedback and encouragement they received from their mentor. This suggested that the Rogersian non-specific therapy factors (Rogers, 1951) had beneficial influences.

6. Conclusions

Gifted students are often discussed as an undifferentiated group, yet they are affected by the environment, personality, community, previous educational experiences, and relationships in different ways, resulting in different problem patterns. In our research, specific subgroups of gifted adolescents emerged: students with no psychological problems (resilients), those having primarily socio-emotional problems (anxious-introverted), ones with perfectionistic attitudes and achievement anxiety, as well as ones with motivational problems; also, there was a multi-problem group. Being aware of common characteristics assists us in identifying areas of strengths and weaknesses, and focus intervention programmes on different subgroup needs.

Our results are in partial fit with the Betts and Neihart (1988) model; we have found a 'resilient' (unproblematic) cluster, fitting their 'successful' subgroup. However, the authors have classified 90% of talented students as 'successful', in contrast to our data (with only 30 percents). Lower incidence of the resilient profile can be a cultural difference (Hungarian students being more challenged in the school system), also, we have used a more detailed (perhaps broader) problem definition in comparison to former authors. Betts and Neihart (1988) have also found a 'Challenging' group, similar to our 'Seekers', with its distinctive characteristic being lack of focus on their interest area; in our viewpoint, this group may need primarily educational guidance and mentoring. Their third cluster, 'Dropouts' are similar to our 'Problematic' subjects. This group definitely has to be a focus of

interventions, as a number of problem areas appear: poor social and emotional adjustment, everyday life practical issues and motivational problems. In our opinion, if left without support, this group may be at risk for underachievement, and even for developing various psychopathological symptoms. We have not found fitting clusters for Betts and Neihart's 'Double-labeled' and 'Challenging' groups; it is understandable, as an identified learning disability is the primary marker of the former and underachievement for the latter. We suppose this results of sample selection: students with learning problems and underachievement were not recommended to participate our program (teachers in Hungary do not even classify learning disabled students as gifted). Last, Betts and Neihart's 'Underground' group is similar to both our 'Introverts' and 'Perfectionists' ones; students having problems primarily in the socio-emotional area.

From our research it seems that social problems occur very frequently, affecting lots of students; and there is also a high prevalence for emotional problems. These issues appear even in those who do relatively well in terms of coping the practical issues of their lives. In adolescence, gifted students may perceive their giftedness as disadvantageous, even an obstacle to adjustment in the peer group; and social adjustment to the community is a more-less general issue for almost all talented youngsters. Social skill development may need much attention at this age.

Before the intervention, we have not differentiated between needs of particular subgroups; they emerged as results of our study data. However, the whole sample profited from social skill development and nondirective, supportive counselling. It seems that our programme had most effect on emotional and self-esteem problems, decreasing neuroticism, improving emotional control and some other aspects of coping capacity, meanwhile having only some perceived impact on social adjustment. In our viewpoint, a half-year period (30 hours of skills training) may not be sufficient to indicate and/or produce permanent changes in the social adjustment area for children who live under rather stressful conditions (e.g. having lots of obligations); some of them even being isolated since a longer period of time.

A part of our programme provided support in a one-on-one setting. It is suggested by various authors (e.g. Bailey, 2007) to use an individualized approach; and our research confirms this may be fruitful. As a means, psychological counselling may be an effective method. Participants' qualitative data suggest that personal growth was primarily a result of individual counseling gains. From feedback reports, it seems that students had most positive experiences about individual sessions including relaxation techniques. As Bailey (2007) suggests, gifted students should develop self-awareness for their difference from their peers and the impact of perfectionism on their academic and personal lives which, in turn, enables them cope their challenges better. Our subjects reported that these revelations and insights definitely emerged during individual counselling. In our interpretation, increase in coping capacity and decrease in emotional problems can be attributed to improved self-understanding. Relaxation and imagination techniques proved to be very useful; subjects remained using them permanently, even after the programme. Imagination and relaxation techniques may lead to better self-reflection, improve body awareness and produce permanent decrease in stress level (in our study, improvement in terms of Emotional Control scores, and decreases of the Neuroticism index).

Several studies suggest that social skills development during adolescence may contribute significantly to better adjustment (Moon & Ray, 2006, VanTassel-Baska, 2006). We have used extracurricular activities for this purpose (roleplay and cognitive-behavioral exercises offered to homogenous groups of gifted children). Various other approaches may be taken for social skills development, some of them may be even more effective than our methods. Intracurricular, classroom activities, occurring within the class setting, may lead to more significant skill improvement within the natural environment of the students. Our study confirms that group experience can shore up a student's feeling of belonging, may support better emotional stability and coping (Robinson, 2008), still, within a six-month period little skill gain was achieved. Experience from homogenous groups of gifted students may not easily generalize to the natural environment of the adolescent.

In summary, lot of work remains to be done regarding specification of needs in different subgroups of gifted children; testing different psychological intervention effects may be a good approach. Apparently, a combination of individual counselling and group work seems adequate, yet it is a question if a group approach produces additional gains beyond individual settings; and if yes, what these would be. It would be especially important to investigate this issue, as individual counselling may not be available to all students for economic reasons and effective group settings might be easier to organize. Therefore, it is important to keep in mind that regardless of which type of gifted student we encounter, a number of issues and concerns will be common; meanwhile within-subgroup differentiation might offer guidelines to elaborate evidence-based and need-based group techniques.

References

- Armsden, G. C., & Greenberg, M. T. (1987). The Inventory of Parent and Peer Attachment: Relationships to well-being in adolescence. *Journal of Youth and Adolescence*, 16 (5), 427-454.
- Bailey, C. L. (2007). Social and emotional needs of gifted students: What school counselors need to know to most effectively serve this diverse student population. Paper based on a program presented at the Association for Counselor Education and Supervision Conference, Columbus, OH, October 2007).
- Bartell, N. P., & Reynolds, W. M. (1986). Depression and self-esteem in academically gifted and nongifted children: A comparison study. *The Journal of School Psychology*, 24: 55-61.
- Betts, G. T., & Neihart, M. (1988). Profiles of the gifted and talented. *Gifted Child Quarterly*, 32(2), 248-253.
- Beveridge A, & Yorston G. (1999). I drink, therefore I am: alcohol and creativity. *Journal of the Royal Society of Medicine*, 92:646.
- Brody, L. E., & Benbow, C. P. (1986). Social and emotional adjustment of adolescents extremely talented in verbal or mathematical reasoning. *Journal of Youth and Adolescence*, 15: 1-19.
- Brugha T.S., Bebbington P.E., MacCarthy B., Sturt E., Wykes T., Potter J. (1990). Gender, social support and recovery from depressive disorders: a prospective clinical study. *Psychological Medicine* 20:147-156.
- Chan, D. W. (2003a). Dimensions of emotional intelligence and their relationship with social coping among gifted adolescents in Hong Kong. *Journal of Youth and Adolescence* 32: 409-418.

- Chan, D. W. (2003b). Assessing adjustment problems of gifted students in Hong Kong: The development of the student adjustment problems inventory. *Gifted Child Quarterly* 47: 107-118.
- Chan, D. W. (2004). Social coping and psychological distress among Chinese gifted students. *Gifted Child Quarterly*, 48: 30-41.
- Chan, D. W. (2005). The structure of social coping among Chinese gifted children and youths in Hong Kong. *Journal of for the Education of the Gifted*, 29: 8-29.
- Coleman, L. J. & Cross, T. L. (2001). *Being gifted in school: An introduction to development, guidance, and teaching*. Waco, TX: Prufrock Press, Inc.
- Coopersmith, S. (1967). *The antecedents of self-esteem*. San Francisco: W. H. Freeman & Co.
- Colangelo N. (2002). *Counseling Gifted and Talented Students*. The University of Iowa.
- Csikszentmihályi M (2010). *Gifted children. Flow at school*. (in Hungarian). Budapest: Nyitott Könyvműhely.
- Dabrowski, K & Piechowski, M.M. (1977). *Theory of levels of emotional development (Vols.1 & 2)*. Oceanside, NY: Dabor Science.
- Desantis, A. L. (2006). *An ecological view of school satisfaction in adolescence: Linkages between social support and behavior problems*. Doctoral Dissertation, University of South Carolina.
- Feist, G. J. (1999): The influence of personality on artistic and scientific creativity. In R. J. Sternberg (Ed.): *Handbook of human creativity*. New York: Cambridge University Press, 273–296.
- Foust, R. C., Rudasill, K. M., & Callahan, C. (2006). An investigation into the gender and age differences in the social coping of academically advanced students. *Journal of Advanced Academics*, 18: 60-80.
- Goldberg, L. R. (1999). A broad-bandwidth, public domain, personality inventory measuring the lower-level facets of several Five-factor models. In I Mervielde, I. Deary, F. De Fruyt, & F. Ostendorf (Eds.): *Personality psychology in Europe*, Tilburg, The Netherlands: Tilburg University Press, pp. 7–28.
- Hale, W.W. Raaijmakers, Q.A, Muris, P., van Hoof A., & Meeus W.H. (2009). One factor or two parallel processes? Comorbidity and development of adolescent anxiety and depressive disorder symptoms. *Journal of Child Psychology and Psychiatry* 50:1218-1226.
- Hankin, B.L., Abramson, L.Y., Moffitt, T.E. Silva, P.A. McGee, R. & Angell, K.E. (1998). Development of depression from preadolescence to young adulthood: emerging gender differences in a 10-year longitudinal study. *Journal of Abnormal Psychology* 107: 128–140.
- Huebner, E. S., Drane, J. W., &Valois, R. F. (2000). Levels and demographic correlates of adolescent life satisfaction reports. *Psychology International* 21: 281-292.
- James, K., & Asmus, C. (2001). Personality, cognitive skills, and creativity in different life domains. *Creativity Research Journal* 13: 149–159.
- Jerusalem, M. (1984): Reference group, learning environment and self-evaluations: A dynamic multi-level analysis with latent variables. In R. Schwarzer (Ed.): *The self in anxiety, stress and depression*. Amsterdam: Elsevier Science, pp. 61-73.
- Jin, S., & Moon, S. M. (2006). A study of well being and school satisfaction among academically talented students attending a science high school in Korea. *Gifted Child Quarterly*, 50: 168-184.
- Karatzias, A. K., Power, J., Flemming, F., Lennan, G., & Swanson, V. (2002). The role of demographics, personality variable and school stress on predicting school satisfaction dissatisfaction: Review of the literature and research findings. *Educational Psychology* 22: 33-50.

- Kasser, T. & R. M. Ryan (1996). 'Further examining the American dream: Differential correlates of intrinsic and extrinsic goals', *Personality and Social Psychology Bulletin* 22: 280–287.
- King, L. A., McKee-Walker, L., Broyles, S. J. (1996). Creativity and five-factor model. *Journal of Research in Personality* 30:189–203.
- Kovacs M. (1992). *The Children's Depression Inventory (CDI) manual*. New York, NY: Multi-Health Systems.
- Kyaga, S., Lichtenstein, P, Boman, M., Hultman, C., Langstrom, N., & Landen, M. (2011). Creativity and mental disorder: family study of 300,000 people with severe mental disorder. *British Journal of Psychiatry* 199:373-379.
- Landman-Peters, K., Hartman, C.A., Pompe, G., Boer, J.A., Minderaa, R.B. & Ormel J. (2005). Gender differences in the relation between social support, problems in parent-offspring communication, depression and anxiety *Social Science and Medicine*, 60:2549–2559
- Lazarus, R.S., & Folkman, S. (1984). *Stress, appraisal and coping*. New York: Springer.
- Lee, K. -H. (2005). The relationship between creative thinking ability and creative personality of 4 to 5 year-old preschoolers. *International Education Journal*, 6:194–199.
- Leuner H. (Hrsg., 1951/2005). *Katathym-imaginative Psychotherapie (KiP)*, Stuttgart: Georg Thieme.
- Matthews, D., & Kitchen, J. (2007). School-within-a-school gifted programs: Perceptions of students and teachers in public secondary schools. *Gifted Child Quarterly*, 51: 256-271.
- Mendaglio, S., & Tiller, W. (2006). Dabrowski's theory of positive disintegration and giftedness: Overexcitability research findings. *Journal for the Education of the Gifted*, 30: 68-87.
- Moon, S. M., & Ray, K. (2006). Personal and social talent development. In F. A. Dixon & S. M. Moon (Eds.): *The handbook of secondary gifted education*. Waco, TX: Prufrock Press, pp. 251–280.
- Mueller, C. E. (2009). Protective factors as barriers to depression in gifted and non-gifted adolescents. *Gifted Child Quarterly*, 53: 3-14.
- Neihardt, M. (1999a). The impact of giftedness on psychological well being: What does the empirical literature say? *Roeper Review* 22: 10-17.
- Neihardt, M. (1999b). The Impact of Giftedness on Psychological Well-Being. *Roeper Review* 22: 10-17.
- Neihardt, M., Reis, S. M., Robinson, N. M., & Moon, S. M. (Eds., 2002). *The social and emotional development of gifted children: What do we know?* Waco, Prufrock Press.
- Oláh, A. (2002). Health protective and health promoting resources in personality: A framework for the measurement of the psychological immune system. Paper presented at the Positive Psychology Meeting, Quality of Life Research Center, Claremont Graduate University, April 2000.
- Oláh, A. (2002). Positive Traits: Flow and Psychological Immunity. Paper presented at the First International Positive Psychology Summit, Washington DC, October 2002.
- Olson, D.H., & Gorall, D.M. (2003). Circumplex Model of marital and family systems In: Walsh, F. (Ed.): *Normal family processes*. Guilford, New York, pp. 514-547.
- Peterson, J. S. (2003). An argument for proactive attention to affective concerns of gifted adolescents. *Journal of Secondary Gifted Education*, 14, 62-70.
- Prabhu, V., Sutton, C., Sauser, W. (2008): Creativity and certain personality traits: Understanding the mediating effect of intrinsic motivation. *Creativity Research Journal*, 20: 53–66.
- Preuss, L. J., & Dubow, E. F. (2004). A comparison between intellectually gifted and typical children in their coping responses to a school and a peer stressor. *Roeper Review*, 26: 105-111.
- Pufal-Struzik, I. (1999). Self-actualization and other personality dimensions as predictors of mental health of intellectually gifted students. *Roeper Review*, 22: 44-47.

- Reis, S. M., & McCoach, D. B. (2000). The underachievement of gifted students: What do we know and where do we go? *Gifted Child Quarterly*, 44: 152-170.
- Robinson N. M. (2008). The Social World of Gifted Children and Youth In: S. I. Pfeiffer (Ed.): *Handbook of Giftedness in Children*. Springer, Pp. 33-51.
- Rogers, Carl (1951). "Client-Centered Therapy" Cambridge Massachusetts: The Riverside Press.
- Ruban, L., & Reis, S. M. (2006). Patterns of self regulatory strategy use among low-achieving and high-achieving university students. *Roeper Review*, 28: 148-156.
- Rudasill, K. M., Foust, R. C., & Callahan, C. (2007). The Social Coping Questionnaire: An examination of its structure with an American sample of gifted adolescents. *Journal for the Education of the Gifted*, 30: 353-371.
- Schuler, P. (2002). Perfectionism in gifted children and adolescents. In N. M. Neihart, S. M. Reis, N. M. Robinson, & S. M. Moon (Eds.): *The social and emotional development of gifted children: What do we know?* Waco, TX: Prufrock Press, Pp. 71-79
- Schwarzer, R., & Lange, B. (1983). Test anxiety development from grade 5 to grade 10: A structural equation approach. In: Van der Ploeg, H. M., Schwarzer, R., Spielberger C.D. (Eds.): *Advances in test anxiety research*. Lisse, The Netherlands: Swets, Zeitlinger, 147-157.
- Seeley, K. (1984). Giftedness and delinquency in perspective. *Journal for the Education of the Gifted*, 8: 59-72.
- Seigle, D., & McCoach, D. B. (2002). Promoting a positive achievement attitude with gifted and talented students. In M. Neihart, S. M. Reis, N. M. Robinson, & S. M. Moon (Eds.): *The social and emotional development of gifted children: What do we know?* Waco, TX: Prufrock Press, Pp. 237-249
- Silverman, L.K. (Ed.,1993). *Counseling the gifted and talented*. Denver, CO: Love Publishing Company.
- Slavin, L. A., & Rainer, K. L. (1990): Gender differences in emotional support and depressive symptoms among adolescents: A prospective analysis. *American Journal of Community Psychology*, 18: 407-421.
- Speirs Neumeister, K. L., Williams, K. K., & Cross, T. L. (2007). Perfectionism in gifted high school students: Responses to academic challenge. *Roeper Review*, 29: 11-18.
- Spielberger, C. D., Gorsuch, R. L., & Lushene, R. E. (1970). *Manual for the State-Trait Anxiety Inventory*. Palo Alto, CA: Consulting Psychologists Press.
- Sternberg, R. J. (1985). *Beyond IQ: A triarchic theory of human intelligence*. Cambridge, UK: Cambridge University Press.
- Swiatek, M. A. (1995). An empirical investigation of the social coping strategies used by gifted students. *Gifted Child Quarterly*, 39: 154-161.
- Swiatek, M. A. (2001). Social coping among gifted high school students and its relationship to self-concept. *Journal of Youth and Adolescence*, 30: 19-39.
- Swiatek, M. A., & Dorr, R. M., (1998). Revision of the Social Coping Questionnaire: Replication and extension of previous findings. *Journal of Secondary Gifted Education*, 10: 252-259.
- VanTassel-Baska, J. (Ed.,1990). *A practical guide to counseling the gifted in a school setting* (2nd ed.). Reston, VA: The Council for Exceptional Children.
- VanTassel-Baska, J. (2006). Secondary affective curriculum and instruction for gifted learners. In F. A. Dixon & S. M. Moon (Eds.): *The handbook of secondary gifted education*. Waco, TX: Prufrock Press, Pp. 481-503.

- Tieso, C. (2007). Patterns of overexcitabilities in identified gifted students and their parents: A hierarchical model. *Gifted Child Quarterly*, 51: 11-22.
- Wigfield, A., Eccles, J.S. (1990). Test anxiety in the school setting. In M. Lewis, & S.M. Miller (Eds.): *Handbook of developmental psychopathology: Perspectives in developmental psychology*. New York: Plenum, 237-250.