

CURRENT APPROACHES TO SOCIAL SCIENCES

EDITED BY
Dr. Hasan ÇİFTÇİ

AUTHORS

Assoc. Prof. Ali EKŞİ
Assist. Prof. Dr. Abdul HADI
Assist. Prof. İsmail CEM KANTARLI
Assist. Prof. Dr. Nisa Gökden KAYA
Assist. Prof. Dr. Oğuz Kaan ESENTÜRK
Lect. Ebru KALYONCU
Lect. Fulya ATALAY YALÇIN
Lect. Gülce KİRAZLI
Res. Assist. Nuri Berk GÜNGÖR



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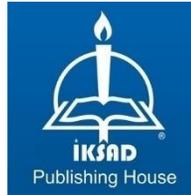
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USA: +1 631 685 0 853
E mail: iksadyayinevi@gmail.com
www.iksadyayinevi.com

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PREFACE

Organizations operating at the international and national level in the new century are shaped by a number of factors. In the new century, many traditional methods have been digitized by differing with the rapid change and transformation of technology. This change and transformation is happening faster than ever before. Accordingly, social sciences are more affected by every process. The change of social sciences will become more evident in the process. Looking at the past studies on social sciences, it is possible to detect differences with current social sciences studies. Along with the changing technology, the perspective on social sciences changes as a whole. Based on this discourse, social sciences are based on evaluations on facts by individuals. Change is inevitable, and it is clear that change will be continuous.

It is not possible to link the changing perspectives of people and updating their traditional behaviors to studies in only one discipline. However, when the disciplines in all social sciences are considered and evaluated as a whole, the correct result and up-to-dateness can be achieved. Change in social sciences will maintain continuity.

I would like to thank all my professors who have universalized, shared and reproduced the information by writing a chapter for the book on behalf of researchers who will benefit from this book. In addition, endless thanks to all those who contributed to the realization of this book and similar books and to İKSAD Publishing, which brings writers on a platform and turns these valuable works into a book.

EDITOR: Dr. Hasan ÇİFTÇİ

CHAPTER 1

EVALUATION OF SOCIAL CAPITAL AND SOCIAL EXCLUSION RELATIONSHIP AMONG VOCATIONAL SCHOOL STUDENTS

Assoc. Prof. Ali EKSI¹,
Lect. Gulce KIRAZLI²,
Lect. Fulya ATALAY YALCIN³,
Asst. Prof. Ismail CEM KANTARLI⁴,
Lect. Ebru KALYONCU⁵

¹ Ege University, Ataturk Health Services Vocational High School, Ege University, First and Emergency Aid Program, Izmir, Turkey, a_eksi@yahoo.com

² Ege University, Ataturk Health Services Vocational High School, Audiometry Program, Izmir, Turkey, gulcekirazli@gmail.com

³ Ege University, Ataturk Health Services Vocational High School, Child Development Program, Izmir, Turkey, fatalay6@gmail.com

⁴ Ege University, Ataturk Health Services Vocational High School, Medical Imaging Techniques Program, Izmir, Turkey, ckantarli@gmail.com

⁵ Ege University, Ataturk Health Services Vocational High School, Child Development Program, Izmir, Turkey, ebrum.80@gmail.com

INTRODUCTION

Today's societies are in the network of multidimensional complex relationships and transformed into a network community. Within social networks, there are actors, their relations with each other, and the compositions consisting of all relationships (Orhan & Yalçın, 2015). The definition of "social capital", commonly used as a popular concept, is an important concept for understanding social life and improving social capacity. Social capital is defined as "emerging as a result of social relations, networks and civil society involvement, and social resources that facilitate access to power and resources with a relationship based on social interaction, cooperation and trust." Social capital consists of a bundle of inter-actor relations and sources strengthened by relationships built on networks, when assessed in this respect, the width and intensity of social networks are factors that enhance social capital (Kangal, 2013; Okçu, 2012; Öztas, 2015).

Although there is not a clear consensus on the definition of social exclusion, a general definition of this concept is as follows: "inability to reach adequate participation mechanisms in the social change, mainly individuals' futures, among the poor, low educated, the disabled, those with lack of health or the disadvantaged compared to other members of society due to any other reasons who are torn to the shore by cutting ties with social networks and activities" (UNV, 2011). In society segments with social exclusion, there are serious problems in access to social capital, also resistance decreases in the face of serious problems, and mechanisms of exit from distress are destroyed. The high

social exclusion in the young population is a matter that should be considered. As a result of the absence of education and opportunity equality, there is a lack of skill in some of the youth, and unemployment increases (Tartanoğlu, 2010; Akatay & Harman, 2014).

People in social exclusion struggle to reach public facilities, the trust bond between the excluded segments of society and the administration is negatively affected, this process may lead to marginalization of excluded people (Silver, 1994). At the beginning of the most discussed issues in Turkey in recent years, there are university education and especially vocational training. The height of the young and unemployed university graduate in turkey causes frequent discussion of university students' career planning and the factors affecting these plans. Access to social capital and social networks is decisive in social exclusion, especially among young people. When assessed from these perspectives, the correlation between social capital and social exclusion is a subject that needs to be evaluated in a multidimensional way. In this study, it was aimed to assess the social capital transportation and its impact on social exclusion, depending on the social network intensities among university students. With the number of university students approaching 8 million in Turkey, discussions focusing on vocational schools in recent years make this study important.

MATERIAL AND METHOD

In the study, students of Ege University were identified as study universe. The sample was composed of 240 students, determined by a simple random sampling method, within the total 2407 students enrolled among the first and second grades from the 2017-2018 academic year in Atatürk Health Services Vocational School. As a data collection tool, a questionnaire consisting of socio-demographic characteristics and student-related features was created; the validity and reliability study prepared by Akin et al. (2014) was applied; finally, “Social Exclusion Scale” was used. In the social exclusion scale, there are 11 items, 5 of which are related to being neglected, and 6 of them are related to exclusion. In the scale, the questions are rated with the 5-Likert Scale, the highest score that can be taken from the scale is 55, the lowest score is determined at 11, and high scores show a high level of social exclusion perception (Akin et al., 2014).

Data collection were analyzed using the IBM SPSS (v22) statistical software. In the data resolution, frequency distribution and percentages were utilized, and the Ki-squared test was used to determine the difference between variables. $P < 0.05$ was accepted as statistically significant. Cronbach-Alpha reliability test was performed to determine reliability of the study. The reliability of the study according to Cronbach test was at an acceptable level ($\alpha = 0.48$). The study was supported as a scientific research project by Ege University Coordination Office of Scientific Research Projects (17-ASHMYO-

001), and Ethics Committee permission was not required during project acceptance.

RESULTS

Identifying Findings of Participants

A total of 240 students participated in the study. The youngest of the students attending the study was 17 years old, the oldest one was 36 years old, and the average age was 20.16 (Standard Deviation; 2.08). 13.8% of the participants were male (n=33); 86.2% of them were female (n=207). 34.2% of the students (n=82) were graduated from secondary education in basic high schools, and 65.8% of them completed their secondary education in vocational high schools. 52.1% of respondents (n=125) were in the first class; 47.9% of them (n=115) were in the second class. 15% of respondents (n=36) stated that they lived in a village and town during large proportion of their pre-university life; 43.8% of them (n=105) indicated that they lived in district centers; and 41.3% of them (n=99) indicated that they lived in provincial centers. 54.6% of the respondents (n=131) reported that they lived with their families; 10.4% of them (n=25) reported living with their friends at home; 5% of them (n=12) reported living alone at home; 28.4% of them (n=68) reported living in dormitories; 1.7% of them (n=4) reported living in other areas such as hostel and relatives. Data related to participants' family income levels are presented in Table 1.

10.8% of participants (n=26) reported that they actively participated in works of student communities within the university; 43.3% of them (n=104) reported that they participated in this type of works at odd times; 40.4% of them (n=97) reported that they did not participate in such works; and 5.4% of them (n=13) reported that they considered this type of works exhausting and waste of time.

Table 1: Participants' Family Income Status*.

Income Level	N	%
Below Minimum Wage	29	12.1
Between Minimum Wage-TRY 2000	88	36.7
Between TRY 2000-2500	43	17.9
Between TRY 2500-3000	32	13.3
Between TRY 3000-4000	24	10.0
TRY 4000 and above	24	10.0
Total	240	100.0

*At the time of the study, the minimum wage in Turkey was TRY 1603.

Findings on Variables related to Social Capital

Participants' answers to questions related to solidarity and social capital are given in Table 2 and 3.

Table 2: Respondents' Responses to Variables related to Solidarist Social Capital.

Variable	Never		Sometimes		Always	
	N	%	N	%	N	%
I have a good relationship with my family, and I can talk to them about everything.	12	5.0	93	38.8	135	56.3
I can get support from my family (mother-father-sister).	6	2.5	68	28.3	166	69.2
I can get support from my close relatives.	58	24.2	123	51.3	59	24.6
I have a very strict friendship and friendship relationship with my friends, and I can collaborate with them on everything.	15	6.3	61	25.4	164	68.3
I can get support from my close friends.	26	10.8	86	35.8	128	53.3
I have relationships with non-relatives, and I can cooperate with them on anything.	99	41.3	87	36.3	54	22.5

Table 3: Respondents' Responses to Variables related to Intermediary Social Capital.

Variable	Never		Sometimes		Always	
	N	%	N	%	N	%
I can get support from my teachers at school.	48	20.0	131	54.6	61	25.4
I can cooperate with students from different departments in my university.	42	17.5	138	57.5	60	25.0
I serve in different non-governmental organizations, and I can get support.	62	25.8	125	52.1	53	22.1
I can cooperate with local organizations of any political parties; I can get support.	188	78.3	38	15.8	14	5.8
My communication with the professional non-governmental organizations (Vocational Association, Professional Chamber, etc.) is intensive, and I can get support.	113	47.1	98	40.8	29	12.1
I have close communication with public and private sector organizations about the profession I will have, and I can get support when necessary.	62	25.8	125	52.1	53	22.1

There is a statistically significant correlation between the learning class and “I can get support from close friends” variable ($p < 0.05$). The proportion of those reporting ability to receive support from their close friends is higher among second grade students (64.3%) compared to first grade students (43.2%). Statistically significant correlation was not found between students’ grade level and the variable “I have close communication with public and private sector organizations about the profession I will have, and I can get support when necessary” ($p < 0.05$). A significant correlation was found between the variable “I can get support from close friends” and the variable “What is your family’s economic situation?” ($p < 0.05$). The ratio of “always” receiving support from close friends among participants with a family income below minimum wage (24.15%) was found lower than the ratio of “always” receiving support among participants with a family income of TRY 4000 and above (24.1%) (Table 4).

A statistically significant correlation was found between family’s economic situation and some intermediary social capital variables ($p<0.05$). Among participants with a family income status below the minimum wage, while none of the students gave the “always” answer to the variable “My communication with the professional non-governmental organizations (Vocational Association, Professional Chamber, etc.) is intensive, and I can get support” (0.0%); it was found that students with a family income of “TRY4000 and above” had higher possibility of receiving support “sometimes” (45.8%) and “always” (8.3%).

Table 4: Relationship between Variable “I can get support from my close friends” and Family Economic Status Variable

I can get support from my close friends		Never		Sometimes		Always		P
		N	%	N	%	N	%	
Variables								
What is Your Family’s Economic Status?	Below Minimum Wage	9	31	13	44.8	7	24.1	0.003
	Between Minimum Wage-TRY 2000	11	12.5	34	38.6	43	48.9	
	Between TRY 2000-2500	2	4.7	15	34.9	26	60.5	
	Between TRY 2500-3000	2	6.3	12	37.5	18	56.3	
	Between TRY 3000-4000	1	4.2	5	20.8	18	75.0	
	TRY 4000 and above	1	4.2	7	29.2	16	66.7	

There is a statistically significant correlation between the learning class and “I can get support from close friends” variable ($p<0.05$, $p=0.000$). The proportion of those reporting ability to receive support from their close friends is higher among second grade students (64.3%) compared

to first grade students (43.2%). Statistically significant correlation was not found between students' grade level and the variable "I have close communication with public and private sector organizations about the profession I will have, and I can get support when necessary" ($p < 0.05$).

Statistically significant correlation was found between the variable "I can get support from my teachers at school" included among social capital variables in the study, and the variable of participation status related to "student communities within the university" ($p < 0.05$). The proportion of students reporting that they "always" get support from their teachers at school to those reporting that they "actively participate" in student communities at university (26.9%) was higher compared to those reporting that "I consider this type of works exhausting and waste of time" (15.4%) and those giving the answer "I disagree" (18.6%), while ratio of "always" receiving support from their teachers at school was found as the highest (32.7%) among students reporting that "I try to participate at odd moments".

There is also a significant correlation between variable of participation status related to "student communities within the university" and variable "I can cooperate with students from different departments in my university" ($p < 0.05$). Students' participation to student communities in the university "actively" among students who are "always" able to communicate with students from different departments (53.8%) are very high compared to those reporting that "I don't agree" (16.5%). In the same way, it is quite a high rate that "active participants" of the student communities can "always" serve in various non-

governmental organizations and receive support (46.2%). This ratio is again very low among students reporting “I don’t participate” in works of student communities (15.5%).

Findings on Variables related to Social Exclusion

Participants’ answers to the questions in the social exclusion scale are given in Table 5.

Table 5: Participants’ Answers to the Questions in the Social Exclusion Scale

Variable	Never		Rarely		Sometimes		Mostly		Always		Average Score
	N	%	N	%	N	%	N	%	N	%	
They treat me like an invisible person.	178	74.2	39	16.3	12	5.0	8	3.3	3	1.3	1.41
They ignore my presence.	205	35.4	19	7.9	10	4.2	4	1.7	2	0.8	1.24
I salute when I walk, and they don’t respond.	206	35.8	17	7.1	7	2.9	5	2.1	5	2.1	1.27
They ignore me when I talk to them.	209	37.1	20	8.3	6	2.5	1	0.4	4	1.7	1.21
They don’t care about me.	191	79.6	27	11.3	11	4.6	3	1.3	8	3.3	1.37
They spend time with me in my house.	34	14.2	11	4.6	48	20.0	59	24.6	88	36.7	3.65
They invite me to their party, organization and meetings.	14	5.8	12	5.0	43	17.9	70	29.2	101	42.1	3.96
They involve me in their vacation and travel plans.	7	2.9	11	4.6	51	21.3	69	28.8	102	42.5	4.03
They are trying to make me take care of them.	17	7.1	24	10.0	55	22.9	60	25.0	84	35.0	3.70
They invite me to dinner.	7	2.9	12	5.0	35	14.6	66	27.5	120	50.0	4.16
They invite me to their weekend events and entertainment.	6	2.5	9	3.8	28	11.7	71	29.6	126	52.5	4.25

According to the Social Exclusion Scale, the average score was found as 30.30 (standard deviation: 5.55), the lowest value for the participants was found as 11, and the maximum value was found as 55. While the lowest average value among variables related to social exclusion was in variable “they ignore me when I talk to them” with an average value of 1.21, the highest value was in the variable “they invite me to their weekend events and entertainment” with an average value of 4.25.

Statistically significant correlation was found between Social Exclusion Scale scores and solidarist social variables such as “gender”, “place where a large part of your life passed before vocational school,” “family income status,” and “ability to receive support from their close friends,” and “ability to receive support from their teachers” ($p < 0.05$). Social exclusion rate was found to be higher in female gender compared to male gender, among those who passed their lives in rural areas such as villages and towns prior to their university life compared to those having lived in cities before university, among those who graduated from a regular high school compared to those graduated from a vocational high school, among those with a family income of minimum wage and lower compared to those with a family income of TRY 3000 and higher.

There was a statistically significant correlation between the Social Exclusion Scale score and some variables related to access to solidarist and intermediary social capital ($p < 0.05$). Social exclusion rate was found lower among those reporting that “I have good relationship with my family and receive better support,” that “I receive support from my

teachers at school,” and “my communication with the professional non-governmental organizations (Vocational Association, Professional Chamber, etc.) is intensive, and I can get support”.

DISCUSSION

Evaluation of Factors Affecting Social Capital

The intensity of social networks defines the intensity of factors such as interaction, cooperation, consultation and solidarity. The family and close relatives are extremely important in terms of solidarist social capital in the intensity of social network. In terms of solidarist social capital, citizenship is another concept that is prominent in societies such as Turkish society in which migration mobility is at a high level. The concept of citizenship is very important in terms of social inclusion, it is important in terms of solidarist social capital especially in the migration from countryside to city. Another concept emerging while assessing solidarist social capital in terms of university students is peer relations. During adolescence or at the age of college years, sometimes friend relations can even preclude family relations (Ağcasulu, 2017; Tunca, 2010). In this study, in answers given to variables related to solidarist social capital, the strong bond in family and friendship relations was a remarkable rate with about 70%, but it was also remarkable that relations with close relatives and countryman were at 20% level, which was very low compared to other variables.

In the literature in general, there are many studies related to the fact that individuals with intense social network are more successful in their social and professional lives (Baykal & Gürbüz, 2016). Social networks provide the individual with easy access to resources such as information and financing, while providing reputation, reliability and social legitimacy (Klyver et al., 2008). Social network density and especially ability to reach intermediary social capital affect the professional development and entrepreneurship positively. When this situation is evaluated in reverse, the vocational training and development processes can also be assessed as a positive influence on the development of social capital (Klyver et al., 2008). In this study, it is noteworthy that the high level of access to social capital was significantly higher among students who were vocational high school graduates. In addition to the opportunities provided by vocational education, the academic education that the student receives, as well as the opportunities offered by vocational education are considered effective. In many studies, education is assessed as a factor contributing to social capital accumulation by developing social skills in itself. Professional relations and vocational education facilitate interaction with many different actors, as a factor that increases social capital. In particular, the importance of a colleague in social security is considered to be a factor that increases social capital (Günkör & Özemir, 2017).

According to Lin, the positive effects of solidarity and social capital on human life, such as the protection of physical assets and the satisfaction of life, contribute positively to the development of intermediary social capital (Lin, 2008). From the results of this study, the direct relationship

between solidarist social capital variables and intermediary social capital variables is remarkable. In general, students with a high social capital of solidarity achieve higher in social capital. For example, students' high level of support from their family and close friends also positively contributes to variables such as ability to receive support from teachers at school and increase in interaction with professional organizations which are significant from point of intermediary social capital. According to the results of this study, intermediary social capital cannot be considered independent of solidarist social capital, and it is also useful to support solidarist social capital factors for the development of intermediary social capital especially among university students.

As quoted by Uçar from Aderman, having an awareness of social responsibility and developing positive attitude towards school are shown as important factors that improve social capital (Uçar, 2010). From the results of this study, it is seen that students' grade level has an effect on some solidarist and intermediary social capital variables. Especially among second grade students, some intense solidarist social capital such as development of close friend relationship show that social networks, and accordingly, intermediary social capital can be improved in university education. High level of intensity in second graders' relations with close friends can be a result that is expected to be higher than first graders. However, the fact that some intermediary social capital values, such as the development of interaction with professional NGOs and sector are high among second graders clearly shows the

positive effect of university education on the development of solidarist and intermediary social capital.

In this study, another remarkable finding related to university students' social capital developments was the positive effect of students' clubs on intermediary social capital. While student clubs increase interaction and co-operation with students from different academic departments and receiving support from teachers among university students, they also increase participation and participation desire for non-governmental organizations among students in student clubs. In a study conducted in 2017 by Turan et al., low level of students club participation was noted among university students, and it was emphasized that active participant students had high level of development of social responsibility, and congruently, this contributed to volunteering and participation to civil society (Turan et al., 2017).

Again, in a study conducted by Tekin and Söylemez in 2015, it was emphasized that participation to student clubs increased responsibility awareness and provided a social and cultural accumulation (Tekin & Söylemez, 2015). When the results of this study are evaluated together with the literature, it can be interpreted that, while student clubs contribute to the development of social capital among students, they have a positive effect on the development of civil society understanding in a modern sense.

In studies conducted on social network intensities, it was attempted to explain limitations and opportunities of an individual ranging from the identification of individual's location within the network (Ağcasulu,

2017). In this study, it is seen that poverty is effective on social capital. The family income situation influences the intensity of some solidarity and intermediary social capital. Poverty also affects access to social capital as in many subjects, and students with low income status have lower levels of support from peers. The low income status not only adversely affects the social capital density but also the confrontational social capital intensity. The population failing in reaching minimum subsistence level is unable to reach adequate social networks, especially they experience problems in reaching intermediary social capital. Congruently, insufficient income emerges as an important factor of social exclusion (Tunca, 2010).

Evaluation of Factors Affecting Social Exclusion

The risk of Social Exclusion is higher in female gender in societies where poverty, immigration and especially gender-based discrimination are higher (Tunca, 2010). In this study, the social exclusion rate for women in vocational school students was found higher. In a study conducted in 3 major provinces in Turkey in 2013 by Özpınar et al., it was found that social exclusion was found to be higher among women than men in many areas. In a study conducted by Özpınar et al., while income status and educational background was found as determining factors in social exclusion among women, income status emerged as a factor increasing social exclusion in both genders in this study (Özpınar et al., 2013). The fact that poverty is more felt among women in many respects and that in many studies it is seen that about 70% of the poorest parts of communities consists of women, and

that this situation is considered as “the phenomenon of poverty feminization” all indicated that disadvantaged status in terms of income status emerges as an important factor of social exclusion among women (Bora, 2007).

In a study conducted by Adaman and Keyder in 2007, it was emphasized that women were more disadvantageous in many fields in terms of social exclusion, the young and young women were separately emphasized as included within the disadvantageous section of society in terms of income status. It was emphasized that social exclusion was more serious especially among the young people who were in the low-income sectors of the society because of the lack of adequate access to the educational facilities (Adaman & Keyder, 2007). When assessed from these perspectives, social exclusion in young people who are educated in vocational schools emerges as a subject that should be evaluated in different perspectives.

According to Çakır, poverty is one of the important factors in social exclusion in income status together with injustice and increasing inequality (Çakır, 2002). In a study conducted by Adaman and Keyder in 2007, poverty and low-income status are considered factors increasing social exclusion in many respects (Adaman & Keyder, 2007). Again, in a study conducted by Karataşoğlu and İslamoğlu in 2016, income status was considered as one of the main determinants in social exclusion, and it was found in this study that, as the income level decreases, social exclusion increases (Karataşoğlu & İslamoğlu, 2016). The income situation emerged as an important factor in social exclusion

in this study as well, and as the family income decreased, social exclusion increased among vocational school students.

Although poverty and social exclusion intersect in many subjects, policies have been developed in many countries related to the elimination of social exclusion in poorest parts of communities. In this context, for example, one of the main objectives of the “European Anti-Poverty Network (EAPN)”, established in 1990, is to move to the struggle against poverty to policy area as a social exclusion factor. The social inclusion process and national action plans developed by EAPN note the importance of people having a minimum income regardless of their employment status in the name of elimination of social exclusion (Ekim, 2007). EAPN also draws attention to the importance of non-governmental organizations (NGOs) in the fight against poverty and social exclusion, and the networks that will be created through these institutions. In addition to the role and responsibilities of NGOs in the fight against poverty, social inclusion can be accessed via social capital that can be easily obtained by the disadvantaged parts of society through NGOS and volunteering organizations.

Evaluation of Social Capital and Social Exclusion

Relationship

Individuals in high-confidence social networks have more common opportunities in terms of social capital. Social capital is not likely to occur in societies that do not trust each other and interact with each other. There is also a direct relationship between social networks and social exclusion. To create a sense of trust in a society, it is necessary

to ensure that individuals are not abused and excluded by other individuals, even in a certain part of society (Başak & Öztaş, 2010). Considering from all of these perspectives, there is a significant correlation between social capital and social exclusion as the results of this study suggest.

In this study, the social exclusion rate was found to be higher in those who spent their pre-university life in rural areas such as villages and towns in vocational school students. Coming from country to city to reach educational facilities has been considered as one of the most important reasons for migration since the 19th century to this date. Although the actors of this migration from rural to city with the aim of education are relatively educated segments of the community, such segments of the community may experience social exclusion at a higher rate due to effects such as participation to urban life at unexpected speed, inability to reach social capital adequately and lack of income status. In a study conducted by Karataşoğlu and İslamoğlu in 2016, immigration was considered as one of the factors affecting social exclusion, and it was found that rate of social exclusion was higher among those migrating from rural areas (Karataşoğlu & İslamoğlu , 2016).

It can be seen that there is a negative interaction between access to social capital and social exclusion. As the results of this study suggest, social exclusion is high in society segments, especially among individuals who cannot access to social networks adequately; social segments with high level of social exclusion cannot use political,

economic and social rights adequately, they move away from intermediary social networks gradually, and this also increases social exclusion (Ekim, 2007). University education, hence, vocational school education as the subject of this study, may help to resolve this paradox. Socio-cultural activities to be provided to students within university campuses during university education or interaction to be provided with organized structures related to the profession may contribute to the development of intermediary social capital, thus the increase of social inclusion. According to Tekin and Söylemez, “participation in civil society and volunteering” should be seen as a social capital that strengthens social inclusion and allows disadvantaged people to participate in their communities. Volunteering can contribute to the creation of a social capital that supports more egalitarian and social participation, especially for community segments faced with social exclusion issues (Tekin & Söylemez, 2015).

Vocational training in Turkey is carried out at two different levels of education. The first is the secondary level education that is given in vocational high schools at secondary schools, and the other is given in vocational colleges affiliated to universities at the level of associate degree. Many students who have vocational training at the secondary level continue to programs related to their professions in vocational schools with a high level of education (Korkmaz, 2015). In this study, social exclusion was found to be lower in the students who continued their education at vocational school and who had done secondary education in vocational high school. Having different interaction sizes of education, especially in the sector where vocational high school

education and the acquired profession can be thought to be effective (Ergün, 2018). This can create new opportunities to provide social inclusion to vocational school students. Social inclusion can be achieved more easily thanks to interaction areas which will be created within the university campuses and interaction with the sector and professional organizations thanks to opportunities provided by the vocational education for vocational school students coming from the disadvantaged segments of community.

CONCLUSION

The intensity of interaction with close relatives and citizens, which are important factors in solidarity social capital in Turkey where domestic migration is high, is extremely low in university students. The low social capital in those who have emigrated due to education makes the relations of countrymen important in terms of social capital. Another factor that has a negative impact on social capital is poverty. In general, access to social networks and accordingly to social capital are considered insufficient among those who cannot reach the minimum income. However, intermediary social capital is generally low among college students. The significant impact of social capital development on personal development and in reaching career objectives requires a multidimensional evaluation of this situation.

Duration of college education also has a positive effect on solidarist and intermediary social capital. This effect is an important contribution to the development of social capital, positive contribution of this participation mechanisms is seen on the development of social

responsibility awareness and civil society awareness in modern sense. One of the main factors that positively affect social capital is seen as the fact that student has already received vocational training in high school education before university education. Feature of professional education as develop of intermediary social capital is remarkable. Another remarkable feature is that solidarist and intermediary social capital has an interaction in its sophistication. In general, students with high solidarist social capital have also high level of social capital.

Among vocational school students, gender, lack of income status, having migrated from country to city for education and difficulties in reaching intermediary social capital are all prominent factors that increase social exclusion. In fact, these factors come into prominence as problems both triggering each other and having a negative impact on one another. In the vocational school students, usually attending academic departments where more disadvantaged students generally study, poverty in female gender stands out as a factor that further increases social exclusion. A higher feeling of social exclusion especially in young people makes it important to evaluate social exclusion in different dimensions of university students. One of the most important effects on social exclusion is the inability to reach social capital. There is a negative interaction between social capital accumulation and social exclusion. In general, lower social capital also brings social exclusion. When benefits of university education, especially of vocational education, in terms of access to social capital are used correctly, it can be said that these benefits can be turned into a factor contributing to overcoming social exclusion.

The development of social capital and the provision of social inclusion, especially for those who emigrate to the city due to education, adaptation to city together with adaptation to University, creation of a minimum income situation with the facilities such as scholarships and student loans in university students, and facilitating students' access to social capital are all considered effective. As the results of this research suggest, interaction opportunities with the sector and vocational institutions that are provided by vocational education can be converted to an opportunity for vocational school students coming from disadvantaged segments of society. To achieve this, planning of educational system and supporting this planning by university administrations should be ensured in a way to facilitate students' access to social capital.

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CHAPTER 2

**ENVIRONMENTALISM: THE RELATION OF
ENVIRONMENTAL ATTITUDES AND UNJUST
DEVELOPMENT POLICIES, SINDH**

Assist. Prof. Dr. Abdul HADI¹

¹ Department of Sociology, Faculty of Arts and Sciences, Harran University.
hadjarwar@gmail.com

1. INTRODUCTION

The environment has a long-standing and essential place in the history of human who have always looked upon nature to meet their needs. It provides multifold goods and services to human that can be simplified into three main categories in accordance with the functions it performs. It offers resources indispensable for the continuity and maintenance of human life including clean air, water, food, and shelter and so on and so forth. It performs not only a ‘supply depot’ function but also serves as a sink for the waste produced by human consumption. However, the overuse of goods and services provided by environment causes environmental problems (Dunlap and Jorgenson, 2012). Prior to industrialization, the impacts of human activities were not too significant to harm the environment due to less advanced technologies, which could not alter the environment at greater scale. With the onset of industrialization in parallel with advanced technologies and colonization of other regions-from Latin America to Africa and Asia-the process of environmental destruction expedited unprecedentedly. As human’s intervention on nature increases, the environmental problems that were at local level reach to global scale and received attention of people all around the world. The increasing environmental problems are not primarily caused by industrialization or advancement in technology per se, but resulted from the world economy inherently based on the unbridled pursuit of economic growth in the last four centuries. As Allan Schnaiberg and others pointed out that this global economy is built around a kind of “treadmill” logic in which individuals and corporations run in place faster and faster in an effort to keep “toss”

older products (Gould, and Lewis, 2015 p 18). This economy exercises additional pressure on the environment through processes of interchange involving withdrawals and additions. These cycles of withdrawal and addition have resulted in the alteration and exploitation of nature beyond the limits of its resilience and have destabilized biospherical systems. Gould and Lewis, 2015: 37-38).

The global economy is currently exceeding ecological limits, and is producing a variety of destructive impacts that include, but not limited to, climate change, deforestation, extinction of species, the pollution of air, land, and water. The current epoch that has features of the domination of human and disruption of Earth systems essential to the earth's self-regulating capacity has been called by many scientists as the Anthropocene (see Crutzen, 2002). The anthropocentric tradition that developed in western culture and disseminated to the rest of the world, has spawned the Dominant Social Paradigm" (DSP). Dominant Social Paradigm entails a belief in abundance and continuous progress, the necessity of growth, faith in science and technology, and strong commitment to a laissez-faire economy and to the sanctity of private property rights (Albrecht, Bultena, Hoiberg, & Nowak, 1982).

Beyond the doubt, environmental problems have posed a serious challenge for humanity in the 21st century. According to the United Nations Millennium Ecosystem Assessment report (2005), humans have produced more rapid and unprecedented damage to the ecosystems of planet in the last half-century, which in turn not only intensify poverty and increase inequality, but also pose substantial obstacle in the

path of the attainment of the Millennium Development Goals (cited in Gonzalez, 2012).

Like other countries of the world, Pakistan is currently facing various environmental problems including air pollution, contamination of water, deforestation, biodiversity loss, and climate change (Pakistan, EPA, 2005). The dearth of adequate sanitation and waste management systems lead the regular discharge of unprocessed effluents of domestic and industrial into water bodies that provide most people the essential source of drinking water. Consequently, every year 40% of people die because of the consumption of the unhealthy water (Pakistan today, 2012). Likewise, air in several cities of Pakistan is too contaminate to take breathe causing substantial threat to health of populous (Parekh et al., 2001). In addition, the effects of climate change have been prominently noticeable since there is an increase on the number of heat wave days per year and annual rainfall for last few decades (Asian Development Bank, 2017).

On top of all that, there are the disasters effects of increasing extreme weather events, such as catastrophic floods, droughts, and cyclones that have been on rise, have killed, and displaced thousands of people. For example, the flood events of 2010 caused huge irreparable damage people and economy of country. National disaster management of Pakistan (2011) revealed in its annual report that 2010 floods was the worst in the last 80 years that was substantially high in intensity and destruction caused massive human and economic losses. Among the worst hit from 2010 floods were people of Sindh province. According

to the humanitarian policy group, the impact of flooding was particularly severe in Sindh, where more than 400 people were killed and 2.8 million people were in immediate need of assistance (Humanitarian Policy Group). Memon (2011) asserts that historical data of floods in Sindh reveals that the Indus witnessed floods on a similar scale in 1973, 1975, 1976, 1978, 1988, and 1992, the effects of the last year's floods were very disastrous due to altered regime of the river. Just over one year after the devastating 2010 floods, people of Sindh faced another massive flooding, which affected severely on their social, economic, and psychological well-being. The Sindh remain in crippled state throughout the end of the year, nearly 5 million people were badly affected; there are estimations that more than 70,000 people take refuge in relief camps (IRFC, 2011). The focus of the study was people of Sindh who have remained the hardest hit on floods, droughts, and storms. Though these disasters have often been attributed to climate change, but the main cause of the disasters effects are imprudent, exploitative, and unjust development policies of the government that have made Sindh province more vulnerable to climate change. This research was carried out in university of Sindh, located in Sindh province, in which students from all the parts of the province get higher education. The aim of this study was to measure the environmental attitudes of students of university of Sindh by employing the new ecological paradigm (NEP) scale.

2. THE NEW ECOLOGICAL PARADIGM

In the midst of heightened environmentalism in the late 1960s and 70s, Dunlap and his colleague asserted that steadily growing environmental concern indicated a paradigm shift in society from dominant social paradigm to the emergence of new environmental paradigm, which posed challenge to predominant paradigm. New ecological paradigm views humans as inextricably linked to nature and inseparable part of it (Dunlap & Van Liere, 1978). (Catton and Dunlop (1980) elucidate new ecological paradigm by asserting that:

(1) While humans have exceptional characteristics (culture, technology, et.), they remain one among many species that are interdependently involved in the global ecosystem; (2) human affairs are influenced not only by social and cultural factors, but also by intricate linkages of cause, effect, and feedback in the web of nature; thus purposive human actions have many unintended consequences; (3) humans live in are dependent upon a finite biophysical environment which imposes potent physical and biological restraints on human affairs; (4) although the inventiveness of human and the powers derived to extend carrying capacity limits, ecological laws cannot be repealed (p.34).

For measuring the new environmental paradigm, Dunlap and Liere (1978) devised the New Environmental Paradigm (NEP) scale, which was revised in 2000 as a New Ecological Paradigm (NEP) scale. The original scale was composed of three facets namely, “The reality of

limits to growth”, “Anti-anthropocentrism”, and “The fragility of nature’s balance”. However, the revised NEP scaling added two other facets in original scale namely, “Rejection of exemptionalism”, and “The possibility of an eco-crisis.” The revision of scale aimed at offering a better balance of both pro-and anti-environmental items along with the modification of the terminology of the some items (Dunlap et al., 2000). The new ecological paradigm scale has been widely used across the world to measure environmentalism of people belonging to different categories such as farmers, ethnic minorities, students to name a few (e.g., Schultz and Zelezny 1999; Schultz et al. 2000; Johnson et al. 2004; Pahl et al. 2005).

3. ENVIRONMENTAL INJUSTICE AND VULNERABILITY OF SINDH

Pakistan is a federation that came into existence by putting together different nations that had never before been united in the same polity before British rule. As its long strategic policy, the British colonialists instead of leaving the countries in their original states as autonomous and sovereign at the time of their invasion, they divided Colonial India in two countries based on ‘two-nation’ theory of Hindu and Muslim nations and created Pakistan and India. However, the legacy of colonialism persists even after the creation of Pakistan. As Gurr (1993), revealed that post-colonial and post-revolutionary states abuse their absolute power in directing policies to the communities’ assimilation, and repression as well as the exploitation of their resources. In these societies, dominant group or ethnicity view indigenous population and

minorities and their rights over natural resources including their rights to land and water along with right to safe environment expendable in the interest of ‘national security’, ‘national unity’, and ‘economic development. In Pakistan, The dominant province Punjab in collusion with federal government appropriate and transfer resources from Sindh to its own development, while creating immiserization and increased inequality among people of Sindh. The exceeding exploitation and usurpation of Sindh’s natural resources has degraded the environment to the extent that its resiliency has weakened increasing the vulnerability of the people to extreme weather events.

Until the 19th century, Indus Delta, located in Sindh, would receive annually approximately 150 Million Acre Feet (MAF) water from the Indus river Basin (Hadi, 2019; 2015). That water carried along with it nutrient-rich silt that enriched the soil and fertility of areas along the riverbanks. The discharge of Indus water to Indian Ocean would prevent the intrusion of sea to inlands. However, Indus flow to delta was massively curtailed due to the construction of number of upstream dams and barrages mainly benefiting the Punjab province. Consequently, Indus River dries up before reaching to the delta, leaving it defenseless before the onslaught of oceanic encroachment. This situation has led to destruction of Indus delta as Narayanan (2014) reveals that Indus delta is on the verge of disaster and being shrunk faster. The gravity of the situation can be noticed from the survey of Government of Sindh, which reported that more than 486,000 hectares land within two districts of Sindh was eroded or lost to the sea forcing

a quarter million people to out-migrate. The seawater has destroyed at least one-third of the land (SAP-Pakistan, 2001). News report (2002) estimates put the figure at 567,000 hectares of the land lost to the sea. Mangroves, essential component of the coastal system, that work as a natural bulwark against storms hugely reduced from 263,000 hectares in 1977, to 158,500 hectares in 1990. The remaining area is being rapidly degraded.

Riverine forests along the River Indus has been severely destroyed in the wake of virtual stoppage of Indus flow, as the river water is the only source of regeneration and growth of these forests (see Altaf memon, 2004). At the time of inception of Pakistan, Sindh was enriched with forests covered an area of 500 square miles mainly on both sides of the River Indus right from Kashmore to Karachi. The soil fertility of these forests not only provided livelihood to millions of people but also were the sanctuaries to various wildlife, flora, and fauna. They were also the source of rainfall and acted as safety valve against annual floods. The reduction in Indus flow has resulted in the destruction of the forests. Now, these forests have been virtually vanished (Dawn, 2008), and have been reduced to hardly 5-10pc from its peak (Khan, 2017). As a result, there is a considerable decline in rainfall pattern in Sindh and no safety valve against annual floods. According to Memon (2011) historical data of floods in Sindh reveals that the magnitude of 2010 year's floods was not unprecedented but the scale of disaster was. The root cause of the catastrophe was the altered regime of Indus River.

Furthermore, the obstruction of Indus flow to Sindh has caused cultural deprivation. People of Sindh give greater value to Indus water, as their many beliefs are associated with it. The religion, literature, and various sociocultural aspects of their lives entwined with water. For example, Sadha Bello shrine, Zindah Pir, and Uderolal are intimately related to Indus (Altaf Memon, 2002). The obstruction of Indus flow to Sindh has severely damaged its people's cultural and spiritual well-being.

Sindh is also enriched with natural resources including coal, oil, and gas. The benefits accruing from these natural resources have been given to the dominant province, whereas environmental pollution generating from extraction activities befall on people of Sindh (Hadi, 2015). A local reputed English Newspaper, 'Dawn' (2009) stated in its editorial that although Sindh has the largest share in the production of oil and gas in Pakistan, people surrounding these resources fields have no other option than cutting down the trees for their survival. According to PDI (2010), the socioeconomic condition of people, surrounding the oil and gas fields are dismal with most of the people living below the poverty line, and are deprived of basic amenities of life. The injustice has reached to the level that people of Sindh has begun to view these resources as bane rather than boon.

4. METHOD

4.1. Measures

A self-administered questionnaire consists of the sociodemographic items and the new ecological paradigm scale item was used to measure the environmental attitudes of university students.

Background information. The questionnaire was comprised of several items regarding the participants' sociodemographic background including age, gender, place of residence, year of study at the university, name of faculty, and family's socioeconomic status as perceived by the participant.

New Ecological Paradigm Scale. The revised version of NEP scale consists of 15 items including five environmental facets was employed to measure the attitudes of participants. The scale entails both positively and negatively words items asking respondents to rate their level of agreement or disagreement on a 5-point Likert scale (1 = strongly disagree, 5 = strongly agree). A reliability test was carried out to measure the internal consistency of full NEP scale and found Cronbach's alpha value equal to 0.71, which shows an acceptable level of reliability. In addition, this study analyzes the NEP scale as both unidimensional by summing the NEP item scores and multidimensional by treating the different facets as sub-scales to find the environmental attitude of respondents.

4.2. Participants and Procedure

The study was conducted among 400 Pakistani undergraduate students of university of Sindh, Jamshoro. Out of the 400, 384 of the respondents completed a self-administered questionnaire. Data for sixteen participants were excluded because various questions were left unanswered in the questionnaire. The consent of all participants was acquired before the collecting data during regular classes at their university.

Table 1: reveals that the participants of the study were 56.3% male and 43.8% female. The students' distribution by years of study was as follows: 24% were in their first year of university, 22.1% were second-year students, 27.6 % were third-year students, and 26.3 % were fourth-year students. The majority of the participants of the study lived long time in cities as the study reveals that 70.8% respondents lived long time in cities, and remaining others lived long time in villages. With regard to the socioeconomic status of the participants' families, 10.7% defined their families as high-income, 73.2% as middle-income, and 16.1% as low-income. The average age of the respondents was 21.52 years, which did not show much variation so was not shown in below table.

Table: 1 Sociodemographic of Respondents

Demographics		Frequency	% Percent
Gender	Male	216	56.3
	Female	168	43.8
Longest Place of Residence	Village	112	29.2
	City	272	70.8
Income Status	Low Income	62	16.1
	Middle Income	281	73.2
	High Income	41	10.7
Year of the Study in University	Freshmen	92	24.0
	Sophomore	85	22.1
	Juniors	106	27.6
	Seniors	101	26.3

5. ATTITUDES OF STUDENTS ABOUT NEW ECOLOGICAL PARADIGM

The findings of Table 2 reveal that the overall percentage of students indicates the rejection of dominant social paradigm and the endorsement of new ecological paradigm. For example, more than 80% of students expressed their approval of new ecological paradigm by indicating, “Humans are seriously abusing the environment” (mean=4.10, SD= 1.0), and “When humans interfere with nature, it often produces disastrous consequences” (mean=4.16, SD= 0.92). The similar ratio of students expressed their disapproval to the anthropocentric statements, “The so-called ecological crisis facing humankind has been greatly exaggerated” (mean=3.86, SD= 0.90), and “Human ingenuity will insure that we do not make the Earth unlivable” (mean= 3.75, SD=0.74). Likewise, nearly three-fourths of respondents did not agree with the statement, which imply the inexhaustibility of natural resources (mean= 3.44, SD= 1.11) and agreed with the statements alluding that the planet has not unlimited space and resources (mean= 3.74, SD= 1.14) and the probability of ecological catastrophe (mean= 4.13, SD= 0.96). However, the result of only one anthropocentric statements “human have the right to modify the natural environment to suit their needs” (mean=2.40, SD=1.17) indicate that two-thirds of students expressed approval of dominant social paradigm. In general, score in support of social dominant paradigm remains very low between 10% and 30%. After correcting the directionality of the items, the mean score of full NEP scale was found 3.70 that show the endorsement of respondents to new ecological paradigm. Hence,

examination of the overall frequency and mean distributions reveals that majority of students highly endorse the new ecological paradigm.

The data was further analyzed through Independent-Samples T-Test and One-way ANOVA. The findings reveal that there was no significant difference between the means of the NEP score and respondents' gender male ($M=3.68$) and female ($M=3.75$), ($t= -1.747$, $df = 382$, $p=0.81$), and income status $F(2, 381) = 1.577$, $p >.05$. This study also found no significant difference between the means of the NEP scale score and respondents' locality, village ($M= 3.69$) and city ($M= 3.72$) ($t = -.608$, $df = 382$, $p=0.544$). In order to find whether there is a significant difference between the mean of the NEP scale score and respondent's income status, A one-way analysis of variance was carried out and found no significant difference in NEP scale score based on respondents' social status, $F(2, 381)= 1.577$, $P=.208$. However, A one-way analysis of variance revealed that there was a statistically significant difference between the means of the NEP scale score and respondent's year of the study in University, $F(3, 380) = 5.770$, $p < 0.01$. The post-hoc tests showed a statistically significant difference between juniors and sophomores ($p\text{-value} = .002$) and juniors and seniors ($p\text{-value} =.004$).

Table 2. Frequency and mean distribution of the NEP scale items

NEP ITEMS %DISTRIBUTION	Mean	SD			
			A	D	U
1: "We are approaching the limit of the number of people the Earth can support."	65.6	17.7	16.7	3.65	1.14
2: "Humans have the right to modify the natural environment to suit their needs."	66.1	26.6	7.3	2.40	1.17
3: "When humans interfere with nature, it often produces disastrous consequences."	82.5	8.1	9.4	4.16	0.92
4: "Human ingenuity will insure that we do not make the Earth unlivable."	10.7	80.7	8.6	3.75	0.74
5: "Humans are seriously abusing the environment."	82.8	10.4	6.8	4.10	1.0
6: "The Earth has plenty of natural resources if we just learn how to develop them."	22.4	74.0	3.6	3.44	1.11
7: "Plants and animals have as much right as humans to exist."	88.0	5.7	6.3	4.39	0.91
8: "The balance of nature is strong enough to cope with the impacts of modern industrial nations."	26.6	64.8	8.6	3.46	1.13
9: "Despite our special abilities, humans are still subject to the laws of nature."	77.1	9.4	13.5	3.91	0.96
10: "The so-called ecological crisis facing humankind has been greatly exaggerated."	11.2	81.5	7.3	3.86	0.90
11: "The Earth is like a spaceship with very limited room and resources."	76.3	18.8	4.9	3.74	1.14
12: "Humans were meant to rule over the rest of nature."	33.6	51.8	14.6	3.34	1.28
13: "The balance of nature is very delicate and easily upset."	68.8	22.3	8.9	3.61	1.09
14: "Humans will eventually learn enough about how nature works to be able to control it."	13.0	80.5	6.5	3.69	0.83
15: "If things continue on their present course, we will soon experience a major ecological catastrophe."	79.2	5.4	15.4	4.13	0.96

6. THE FIVE FACETS OF NEP SCALE

Principle component analysis (PCA) was conducted to confirm the presence of new ecological paradigm scale's dimensions and the relationship among them. Table 3 and 4 verifies the existence of new ecological paradigm (NEP) scale's five facets validates the presence of the five facets of NEP Scale with eigenvalues greater than 1.

Table 3: Initial Eigenvalues

Component	Initial Eigenvalues		
	Total	% of Variance	Cumulative %
1	3.105	20.703	20.703
2	2.484	16.563	37.266
3	1.820	12.130	49.396
4	1.225	8.165	57.561
5	1.160	7.735	65.296
6	.897	5.980	71.275
7	.844	5.625	76.900
8	.729	4.857	81.758
9	.603	4.018	85.775
10	.553	3.688	89.463
11	.468	3.122	92.586
12	.379	2.528	95.114
13	.274	1.828	96.942
14	.244	1.626	98.568
15	.215	1.432	100.000

Table 4: Components

NEP SCALE ITEMS	Components				
	1	2	3	4	5
1: "We are approaching the limit of the number of people the Earth can support."	0.765				
2: "Humans have the right to modify the natural environment to suit their needs."		0.707			
3: "When humans interfere with nature, it often produces disastrous consequences."			0.860		
4: "Human ingenuity will insure that we do not make the Earth unlivable."				0.866	
5: "Humans are seriously abusing the environment."					0.731
6: "The Earth has plenty of natural resources if we just learn how to develop them."	0.888				
7: "Plants and animals have as much right as humans to exist."		0.513			
8: "The balance of nature is strong enough to cope with the impacts of modern industrial nations."			0.898		
9: "Despite our special abilities, humans are still subject to the laws of nature."				0.455	
10: "The so-called ecological crisis facing humankind has been greatly exaggerated."					0.614
11: "The Earth is like a spaceship with very limited room and resources."	0.909				
12: "Humans were meant to rule over the rest of nature."		0.782			
13: "The balance of nature is very delicate and easily upset."			0.907		
14: "Humans will eventually learn enough about how nature works to be able to control it."				0.819	
15: "If things continue on their present course, we will soon experience a major ecological catastrophe."					0.779

The Reality of Limits to growth: The findings in following Table: 5 reveal that 76.3%, and 65.6% of students agreed with pro-ecological statements "The Earth is like a spaceship with very limited room and resources" (mean= 3.74, SD= 1.14), and "We are approaching the limit of the number of people the Earth can support" (mean= 3.65, SD= 1.14), respectively. Conversely, on the pro-dominant social paradigm statement "The Earth has plenty of natural resources if we just learn how to develop them" (mean= 3.44, SD= 1.11) was disapproved by nearly three-fourths of students. The overall mean score of above three

items of this facet is 3.61, which, indicates that pro-environmental attitudes among the respondents was very high.

Anti-anthropocentrism: Table: 5 reveals that nearly 90% of students have beliefs that like humans, both plants and animals have the rights of existence (mean=4.39, SD= 0.91). However, two-thirds of students showed approval to the anthropocentric statement by indicating, “Humans have the right to modify the natural environment to suit their needs” (mean= 2.39, SD= 1.17). The remaining statement of this facet got approval from 52% of students by agreeing, “Humans were meant to rule over the rest of nature” (mean=3.34, SD= 1.28). The overall mean score of above three items of this facet is 3.37, which, indicates that pro-environmental attitudes among the respondents was very high.

The Fragility of Nature’s Balance: The NEP is premised on the idea of balance and harmony in nature and the extreme intervention of humans have endangered that harmony and balance. On the pro-ecological statement that implies that human intervention often causes disastrous impacts over nature, more than 80% respondents agreed with the statement (mean= 4.16, SD= 0.92). Furthermore, two-thirds of students expressed their approval to another pro-ecological view by indicating, “The balance of nature is very delicate and easily upset” (mean= 3.61, SD= 1.09); the similar ratio of students expressed disapproval to the anthropocentric statement by disagreeing, “The balance of nature is strong enough to cope with the impacts of modern industrial nations” (mean= 3.46, SD= 1.13). The overall mean score of

above three items of this facet is 3.74 that show that pro-ecological attitudes among the samples were high.

Rejection of Exemptionalism: Table.5 shows that 77% of students endorse the statement “human are still subject to the laws of nature despite their special abilities” (mean= 3.91, SD= 0.96). On the anthropocentric statements that “Human ingenuity will insure that we do not make the Earth unlivable” (mean= 3.75, SD= 0.74), and “Humans will eventually learn enough about how nature works to be able to control it” (mean= 3.69, SD= 0.83), more than 80 percent of students disagreed with both statements. It implies that overwhelming majority of students have no trust in human ingenuity to overpower the ecological constraints. Furthermore, the mean scores of all the items of this facet 3.78 also exhibit the rejection of social dominant paradigm and endorsement of pro-ecological view.

The Possibility of an Eco-crisis: The overwhelming majority of the students nearly 80 percent agreed with the statement about the serious abuse of environment by human (mean= 4.10, SD= 1.0) and the probable ecological catastrophe (mean= 4.13, SD= 0.96). Likewise, more than four-fifths of students disagreed with the statement that there is exaggeration of ecological crisis (mean= 3.86, SD= 0.90). The mean score of all these statements is 4.03, which reveals the high endorsement of new ecological paradigm. Human are severely damaging the environment, which may lead to probable ecological catastrophe.

Table. 5: NEP Scale Score on Five Facets

NEP FACETS	Scale items	%DISTRIBUTION			Mean	SD
		A	D	U		
The Reality of limits to growth	“We are approaching the limit of the number of people the Earth can support.”	65.6	17.7	16.7	3.65	1.14
	“The Earth has plenty of natural resources if we just learn how to develop them.”	22.4	74.0	3.6	3.44	1.11
	“The Earth is like a spaceship with very limited room and resources.”	76.3	18.8	4.9	3.74	1.14
Anti-anthropocentrism	“Humans have the right to modify the natural environment to suit their needs.”	66.1	26.6	7.3	2.40	1.17
	“Humans were meant to rule over the rest of nature.”	33.6	51.8	14.6	3.34	1.28
	“Plants and animals have as much right as humans to exist.”	88.0	5.7	6.3	4.39	0.91
The fragility of nature’s balance	“When humans interfere with nature, it often produces disastrous consequences.”	82.5	8.1	9.4	4.16	0.92
	“The balance of nature is strong enough to cope with the impacts of modern industrial nations.”	26.6	64.8	8.6	3.46	1.13
	“The balance of nature is very delicate and easily upset.”	68.8	22.3	8.9	3.61	1.09
Rejection of exceptionalism	“Human ingenuity will insure that we do not make the Earth unlivable.”	10.7	80.7	8.6	3.75	0.74
	“Despite our special abilities, humans are still subject to the laws of nature.”	77.1	9.4	13.5	3.91	0.96
	“Humans will eventually learn enough about how nature works to be able to control it.”	13.0	80.5	6.5	3.69	0.83
The Possibility of an eco-crisis	“The so-called ecological crisis facing humankind has been greatly exaggerated.”	11.2	81.5	7.3	3.86	0.90
	“Humans are seriously abusing the environment.”	82.8	10.4	6.8	4.10	1.0
	“If things continue on their present course, we will soon experience a major ecological catastrophe.”	79.2	5.4	15.4	4.13	0.96

7. DISCUSSION AND CONCLUSION

The aim of the study was to measure the environmental concerns among the students of university of Sindh who belong to all districts of Sindh province. This study found that overall percentage and mean scores of respondents NEP scale showed their disapproval to dominant social paradigm and endorsement to new ecological paradigm (3.70). Compared with similar samples from other countries such as Nigeria (2.95-Ogunbode 2013), the sample of this study showed pro-ecological attitudes consistent with previous studies such as in the United States (3.57-Kortenkamp and Moore 2006), Australia (3.96-Blaikie 1992).

Inconsistent with Hosseinnezhad (2017), this study found no significant difference between male and female attitudes on NEP scale. In Hosseinnezhad's study finding showed significant difference between genders towards environment; women exhibited more pro-ecological attitudes than men exhibit. Likewise, no difference on the NEP scale score among the sample based on their place of residence found in the study in contrast with the findings of Ntanos et al., (2018) that found significant difference in the NEP scale score based on respondents' residence. Similar was the results in NEP scale score based on their income status. Thus, the finding of this research did not find any significant difference among the respondents' NEP score based on their gender, area of residence, and income status. However, significant difference was found among the students based on their year of study in the university, especially junior students' overall NEP score was higher than others score.

There has been extensive debate among the social scientists about the factors that lead to cross-cultural differences in environmental attitudes. According to Inglehart (1995) pro-environmental attitudes among wealthy nations emerged due to a shift in their social values from a materialist values to post-materialist values that include higher quality of life and maintenance of a healthy environment. As a part of his post-materialist thesis, Inglehart (1995) assumed that environmental consciousness in non-wealthy societies is the result of their direct exposure to environmental degradation and its effects. Other researchers suggest that the determining factors behind the environmental attitudes of people are economic and technological advancement as well as culture and direct experience to environmental problems (Pierce, 1997; Vikan, 2007). This study asserts that pro-ecological attitudes among the students of university of Sindh are primarily caused by material and nonmaterial dimension of environmental concerns faced by people of Sindh as Guha and Martinez-Alier (1997) argued that environmental concerns have both materialist and non-materialist dimension across the world. The people of developing countries often protest against the health threatening pollution and for the protection of their natural resources vital for their livelihood. They sometimes protest environmental degradation for nonmaterialist cultural, traditional, and religious reasons (cited in Dunlap and York, 2008). Among the material factors, people of Sindh has faced the exploitation of their natural resources including water, oil, and gas which has inflicted irreparable damage to the economic, social, cultural and environmental well-being of people of Sindh. Due to the

obstruction of Indus flow to Sindh the fertile lands of Sindh, deltaic ecosystem and riverine forests have been severely harmed. With the destruction of deltaic ecosystem, mangroves, and forest, people of Sindh has become extremely vulnerable to ecological catastrophe caused by climate changes since mangroves acted as windbreakers and prevented storms from reaching inland and the forests were the source of rainfall and acted as safety valve against annual floods. Among the non-material factors are many beliefs of people of Sindh linked with Indus River. The religion, literature, and various sociocultural aspects of their lives entwined with water. For example, Sadha Bello shrine, Zindah Pir, and Uderolal are intimately related to Indus (Altaf Memon, 2002). The obstruction of Indus flow to Sindh has caused cultural deprivation as many spiritual and cultural activities cannot be performed without Indus water. Thus, the pro-ecological attitudes among the students of university of Sindh are primarily caused by material and nonmaterial dimensions. This study recommends that the government of Pakistan should cease its imprudent development policies that have made people of Sindh more vulnerable to climate disasters.

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CHAPTER 3

GIFTED CHILDREN AND PLAY

Assist. Prof. Dr. Nisa Gökden KAYA¹

¹ Hitit University, Faculty of Health Sciences, Department of Child Development, Çorum, Turkey. nisakay@gmail.com

INTRODUCTION

Play, which is an old and universal phenomenon, keeps an important place in children's life. Play is a significant and functional tool in terms of supporting the development of gifted children as well as normal developing children. Although it is often assumed that gifted children are superior from their peers in all fields and thus have no childish needs such as play; gifted children, also need play.

Giftedness has been a significant research area for over centuries and it gained importance with the development of science and technology due to the need of gifted individuals more than ever. Gifted children who develop rapidly from their peers in terms of cognitive characteristics have above-average ability, creativity and task commitment and apply these three into one or more fields by combining them (Renzulli, 1986). As expressed in this definition, the gifted people are mostly mentioned with the cognitive traits and this causes some psychological and social traits of them to be ignored. This is especially true in the childhood period. The sentence “To have the intelligence of an adult and the emotions of a child...in a childish body is to encounter certain difficulties.” (Hollingworth, 1942: 282) summaries the asynchronous development of gifted children. Social and psychological development of gifted children are not fast as cognitive development, which is called asynchronous development. According to Peterson (2009) parents and educators who are unaware of asynchronous development of gifted children have high academic achievement expectations. Roedell (1984) stated that the reason of

unrealistic expectations is the gap between a child's advanced intellectual capability and more age-appropriate social and physical skills. In other words, parents of gifted children may assume that their child does not need childish demands such as play. However, play is an essential need for gifted children as well as normal developing children. According to Özbay (2013) gifted children should be encouraged to learn new games, make new friends and thus relax.

STAGES OF PLAY

Research in child development area reveal that play has stages that children pass in a linear developmental pattern. In other words, as children develop, the types of games they play differ according to the characteristics of the development period. Parten (1932), who is one of the earliest researchers to study about play, focused on the social interactions between children during play and explained the characteristics of play. Parten defined six sequential stages of play according to development periods of children. Parten's six stages of

play and their characteristics are presented in Figure 1.

Unoccupied Play	<ul style="list-style-type: none">• This stage emerges from birth to 3 months.• It is defined as sensory activities that lack focus or narrative.
Solitary Play	<ul style="list-style-type: none">• This stage emerges between 3 months and 2 ½ years.• This stage involves playing alone and with little interest in toys outside of their immediate vicinity.
Onlooker Play	<ul style="list-style-type: none">• This stage emerges between 2 ½ and 3 ½ years.• During this stage, children will observe other children's play without getting involved themselves.
Parallel Play	<ul style="list-style-type: none">• This stage emerges between 3 ½ and 4 years.• It involves children playing in proximity to one another but not together.
Associative Play	<ul style="list-style-type: none">• This stage emerges between 4 and 4 ½ years.• During this stage, children begin to share, acknowledge, copy and work with one another.
Cooperative Play	<ul style="list-style-type: none">• This stage emerges in 4 ½ years and up.• In this stage, children play together, sharing the same game, and collaborate to achieve their game goals.

Figure 1: Parten’s 6 Stages of Play

Also Piaget (1962), who is the most well-known researcher in child development area, divided play process into stages parallel to children’s cognitive development. In 1968 Smilansky reviewed Piaget’s stages of play and their characteristics (cited in Rubin, Maioni and Hornung, 1976). Figure 2 presents four stages of play and their characteristics according to Piaget and Smilansky.

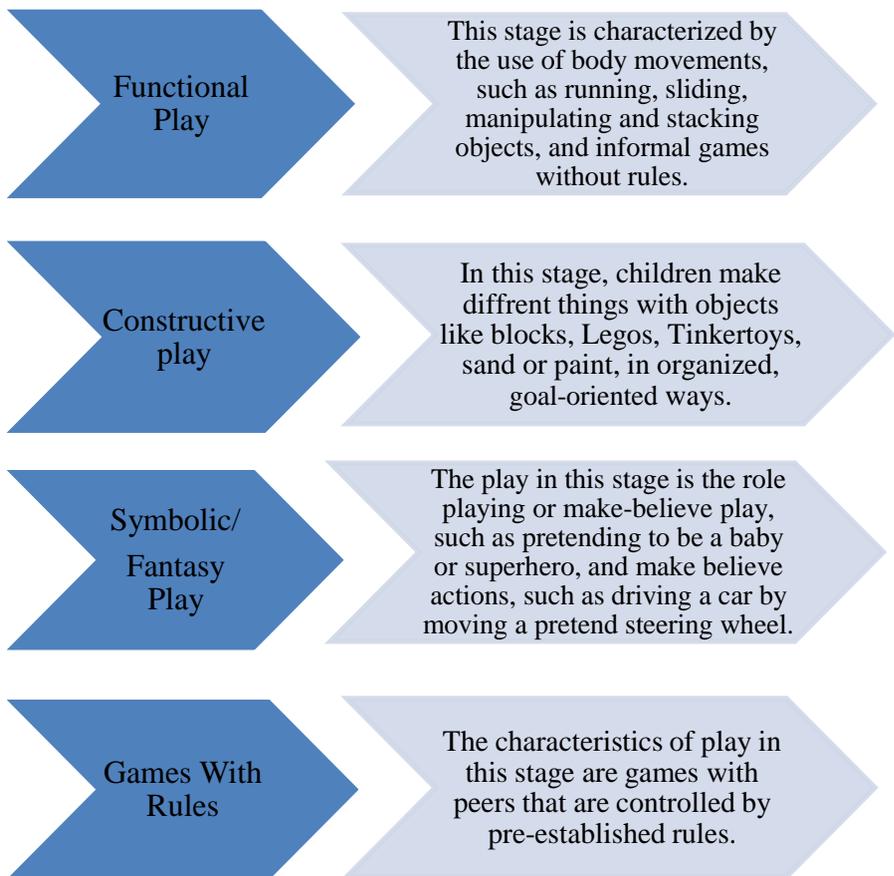


Figure 2: Stages of Play according to Piaget and Smilansky

BENEFITS OF PLAY

Play supports children's cognitive, social, physical and emotional development. Many researchers drew attention to the benefits that children acquire through play; such as physical well-being and strength (Ginsburg, 2007), certain communication skills (Genç and Dağlıoğlu, 2018), shaping personality of the child (Seyrek and Sun, 1991), problem-solving abilities (Anderson-McNamee and Bailey, 2010) and developing creativity and imaginativeness (Bergen, 1998). Moreover, playing with peers improves creativity, ability, flexibility, understanding, cooperation and sharing that are important for all children. Shortly, ensuring children participate in playgrounds, meets the need to interact with peers in social contexts.

Gifted children have high energy both physically and mentally. Thus, like every child, gifted children need to deal with physical activities (Özbay, 2013). Similarly, Freeman (2001) describes play as a cathartic activity for gifted children. Gifted students who have exceptional learning curiosity and motivation, participate in play activities as much as their normal peers (Morelock and Morrison, 1999). However, young gifted children usually learn to play games earlier than the other children do. Since they have developed game interest and behavior, they may try to structure the game group of their peers in a more complex way (Webb, 1993). Similarly Robinson (2008) mentions that gifted children are more mature socially than their age peers in spheres such as friendship patterns, play interests, social knowledge and behavior, and personality. According to the results of a

study conducted with 15 preschoolers in order to compare the playfulness of gifted and nongifted children, the degree of sense of humor and manifest joy was found equivalent in both groups whereas gifted children demonstrated higher degrees of physical, social and cognitive play styles (Barnett & Fiscella, 1985). In addition, Wright-Scott (2018) mentions that because of the difference in interests, gifted children may face difficulties in finding like-minded playmates. Furthermore, gifted children are sensitive to moral concerns more than their peers. Webb, Meckstroth and Tolan (1982) discussed the differences between gifted children and age peers based on advanced moral development. Such advancement may cause stress because the child is likely to question and even challenge traditions and practices peers follow without question. Because of these differences, gifted children usually prefer older friends (Gross, 2001). Rogers and Silverman (1998) stated that none of the average students chose friends much older than themselves, whereas one-third of the gifted students chose older playmates and 15% chose much older companions due to long attention span. Because of the long attention span of gifted children, they play games longer than playmates and get upset when their peers stop playing. Parents of the gifted group often remarked that their children tended to spend time with adults, where this was not mentioned by parents of the average group. More than one-third of the gifted children were comfortable playing by themselves and spending time alone reading. When the data in literature put together, it has emerged that play is an important need

for gifted children in not only supporting cognitive development and also socializing, enjoying, thus well-being.

GAME PREFERENCES OF GIFTED CHILDREN

As mentioned in literature, gifted children need an enriched environment in order to develop their characteristics such as skills, talent and creativity. Özbay (2013) emphasized the importance of play in the enrichment of environment for gifted children. In order to offer an enrichment environment to gifted children, parents should give the opportunity to produce original designs with different toys and materials. Supporting with enriched activities, maze games, music, etc. materials, toys, making contact with nature, organizing family events, group games and creating hobbies are beneficial.

In a recent study, Kaya (2020) determined the activities preferred by gifted students in their leisure. According to results, the leisure activities include playing chess, lego and puzzle. These games develop creativity and thinking skills that are significant skills for gifted children. Moreover, leadership skills are improved by playing chess (Hunt and Cangemi, 2014) and beginning sports in early ages (Tapşın, 2019). In addition, due to curiosity and high motivation to learn, some gifted children see play as an opportunity to develop themselves intellectually. Similarly Roeper (2015) mentions that play is a way of learning for gifted children.

Genç and Dağlıoğlu (2018) mentions that giftedness is an emotional state as well as a cognitive state. In other words, gifted children feel different from their peers. They usually prefer playing alone rather than playing with friends and family members. Since gifted children cognitive development is superior to their peers, they may have difficulties during play activities with their friends. Researchers stated that, despite the capability of interactive play, some gifted children choose to spend their time alone in solitary play (Webb, Gore, Amend, 2007). Perfectionism, which is one of the key elements of gifted children, may cause some problems during interactive play since gifted perfectionist children always want to win.

Creativity and thinking skills are also important features that gifted children look for in game preferences. Since outstanding characteristics of gifted children are creativity and superior thinking skills, they prefer games, which require creativity and thinking skills. The results of the study on leisure activities of gifted students showed that gifted children prefer playing chess, lego and puzzle (Kaya, 2000). In meta-analysis studies related to relation between playing chess and cognitive ability, the results revealed that there is a positive correlation between chess playing and processing speed, short and long-term memory, understanding skills (Burgoyne et al., 2016) and chess players perform better than other players in a large number of cognitive skills such as planning, numerical ability and logic (Sala et al., 2017). Thus chess is a popular game for gifted children. Lego and puzzle are games that reveal creativity of gifted children.

Sport games are also beneficial for gifted children. Sports support not only physical development but also social and cognitive development. Team sports are important for practicing collaborative work. Moreover, according to a study result, beginning sports in early ages develops leadership skills (Tapşın, 2019). In that sense, encouraging gifted children to participate in sport games support leadership skills that are important for throughout life.

CONCLUSION

It is important to note that gifted children should not be accepted as a homogenous group. Although in literature some common characteristics of gifted children are listed, there are individual differences among them. Due to different interests of gifted children, their game preferences vary. Gender, age and personality also play role in game preferences of gifted children.

Asynchronous development is another significant point. Although gifted children are superior in cognitive development, they are children socially and emotionally. It is often assumed that gifted children are superior in all developmental areas from their peers, so that parents may have unrealistic expectations from their children. Unfortunately, many parents of gifted children expect high academic achievement from their children. In that sense, Freeman (2001) mentions that play may be assumed as a waste of time for gifted children. Especially parents and teachers should keep in the mind that gifted are also children. This means they have essential childish needs such as play. Gifted children learn, create, socialize and enjoy through

play. In other words, gifted children create opportunities for both learning and enjoying through play, which is a natural need.

Finally, parents and teachers should be aware of gifted children's psychosocial needs. Like every child, supporting their psychological and social development by various play, games and sports is important. Parents and teachers can combine play and educational curriculum and create opportunities for instructive play settings.

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CHAPTER 4

THE EFFECT OF PEER MEDIATED ADAPTIVE PHYSICAL ACTIVITY PROGRAM ON SOCIAL SKILL LEVELS OF INTELLECTUAL DISABILITY CHILDREN

Assist. Prof. Dr. Oğuz Kaan ESENTÜRK¹

Research Assistant Nuri Berk GÜNGÖR²

¹Erzincan Binali Yıldırım Üniversitesi, Faculty of Education, Physical Education and Sport. esenturk954@gmail.com

² Karamanoğlu Mehmetbey Üniversitesi, Physical Education and Sport. nuriberkgungor@gmail.com

INTRODUCTION

Individuals are different from each other in terms of their physical, mental, psychological, and social characteristics. The existence of a variety of individual differences among individuals who make up the society can affect all developmental dimensions positively or negatively, and it determines the qualifications and deficiencies. As the level of being affected by the inadequacies in the developmental dimension increases, it can be difficult for the individual to meet the expectations of the society and sometimes they cannot even meet these expectations. In other words, "not being like everyone" is the cut-off point of difference. According to this evaluation, individuals are defined with different classifications and different attributes in terms of educational or medical aspects in the context of their incompetence. One of these classifications is mental disability (İlhan & Esentürk, 2014). However, intellectual disability among different disability groups also brings dependence on other people due to the effect of a will failure (İlhan et al., 2016).

Social skills are learned behaviors that are purposeful, determined by rules and vary according to the social environment of the individual (Margalit, 1993). Individuals with such social skills can interact with other people, transmit information, and leave a positive impression on other individuals after interaction (Chadsey-Rush, 1992). However, intellectual disability individuals experience limitations due to various reasons in the process of acquiring social skills that facilitate social cohesion (Sazak-Pınar and Çiftçi-Tekinarslan, 2003).

While children with normal development gain the knowledge and skills necessary to live independently in society by using all their development areas and observing their social environment, the situation differs for intellectual disability children. The learning of self-care skills, language and communication skills, daily life skills and social skills depends on some instructional arrangements for these children (İlhan et al., 2015, Snell, 1993; Özyürek, 1983). According to (Güngör et al. 2019), that social functions, which are another parameter of healthy lifestyle behaviors, can also be important gains in individuals with mental disabilities through sports. Intellectual disability children are supported by many methods and educational programs prepared in line with their developmental characteristics (Rustin and Kuhr, 1989). Peer-mediated practices are thought to be important among these teaching methods, because it is known that these children do not succeed in acquiring the social skills necessary to establish positive relationships without peer interaction (Meese, 1996).

Intellectual disability individuals need support to participate in social activities and games. Unfortunately, children with special needs have been the least preferred by their normally developing peers, occasionally exposed to peer bullying, not involved in any activity or accused (Bolich, 2001). In order to avoid such situations, it is considered an obligation to prepare social support programs that allow interaction with peers to be more frequent and support and sustain friendship (Özaydın, 2008). Particularly, it is thought that peer

mediated practices are more functional in providing social skills to intellectual disability children (Sazak, 2003).

There are studies reporting the positive results of peer-mediated teaching methods for the acquisition of different skills for intellectual disability individuals (Abdelkarim and Abuiyada, 2016; Benè and Bergus, 2014; Carter and Hughes, 2005; El-Sayed, Metwally and Abdeen, 2013; Silverman, 2009; Zingaro and Porter, 2014). Another area of discipline that is considered to have positive effects on peer-mediated practices is adaptive physical education, which includes exercise-based practices and games and enables physical activities appropriate to the developmental characteristics of individuals affected by disability (Bouffard & Reid, 2012; Hutzler, 2011).

Physical education and sports play an important role in the socialization of the individual, as it is a social activity that enables the individual to participate in dynamic social environments. Considering that sport is mostly a collective activity in modern societies, individuals engaged in sport enter into social relations with different groups of people through sportive activities. Sports enables individual to communicate with other people with different beliefs and thoughts in other environments and allows them to be affected and affect them by getting rid of his/her own narrow world (Ilhan, 2008).

However, only one study on providing social skills to intellectual disability children has been found in the national literature (Yarimkaya, 2018). Therefore, it is foreseen that the results obtained from this study will make important contributions to the literature.

Purpose

In this study, it was aimed to investigate the effect of peer-mediated adaptive physical activity program on social skill levels of intellectual disability children. For this general purpose, answers for the following sub-questions were sought.

- 1- Do the social skill levels of intellectual disability children differ significantly before and after the peer-mediated APA program?
- 2- Is there a significant difference between intellectual disability children's social skill levels after peer-mediated APA program and follow-up measurement obtained after three weeks?
- 3- What are the teachers' opinions on the socialization levels of intellectual disability children after the peer-mediated APA program?

METHOD

Model of Research

Sequential descriptive design, one of the mixed research methods, was used in the study. Within the scope of this model, it was aimed to develop social skills levels of the intellectual disability children by applying the peer mediated APA program to them and then to support the situation with qualitative data. Sequential Descriptive Design is a mixed method design in which quantitative data is collected and analyzed first, and then qualitative data is collected and analyzed in order to place the obtained data on solid foundations (Creswell and Clark, 2008). In the quantitative aspect of the study, pre-test and post-

test measurements were obtained by applying APA program to intellectual disability children. In the qualitative dimension, interviews were conducted to support the findings of quantitative analysis.

Study Groups

The quantitative aspect of the study was carried out with twelve children, six intellectual disability children and six normally developing children. In the qualitative part of the study, interviews were conducted with four teachers. In the following section, intellectual disability children are defined as "special children" and normal developing children are defined as "partner children".

Special Children and Selection Process

Six children diagnosed with mental disability participated in the study. In the research, some prerequisites were sought in the process of determining the participating children. In addition, these prerequisites were met separately for each of the participating children. Participating children;

- 1- Must have been diagnosed with mental disability from official institutions,
- 2- Should show an inadequacy specific to the dependent variable (social skill) to be developed in the research,
- 3- Should not have any health problems in participating in practical training,
- 4- Should be open to sensual contact and interaction before, during and after the practice.

In the process of determining the children in accordance with the prerequisites listed above, necessary permissions were obtained from the administration of A Kindergarten, and interviews were conducted with the school counselors and classroom teachers. During the interviews, the teachers were informed about the purpose of the research, the ethical suitability and the practices to be performed. Then, it was asked to determine the children who were suitable for the prerequisites listed in the study. As a result of the evaluations of the school counselors and classroom teachers, six children were determined in accordance with these prerequisites. The final selection was made by discussing the prerequisite features by meeting the families, class teachers and school counselors of the six selected children at the A Kindergarten.

Partner Children and Selection Process

Six children with normal development who are the peers of special children participated in the study. In the research, some prerequisites were sought in the process of determining the partner children. In addition, these prerequisites are met separately for each partner child.

Partner Children;

- 1- Should be open to communication and interaction with special children,
- 2- Should have high levels of social skills according to teacher opinions,
- 3- Should not have any health problems in participating in practical training,

- 4- Should be open to sensual contact and interaction before, during and after the practice.

Peer Education Process

Before the implementation of the peer-mediated APA program, peer education was conducted to teach the partner children the behavior that should be done during the practice. The related literature (Özaydin, Tekin-Iftar and Kaner, 2008; Sazak and Tekinarslan-Cifci, 2003; Stanish and Temple, 2012; Temple and Stanish, 2011; Yarimkaya, 2017; Yarimkaya, 2018; Filazoğlu et al., 2015) was used in the preparation of the peer education program. Peer education program consists of two parts. In the first part, information about the general development characteristics of special children was presented to partner children; in addition, theoretical information is given about how to interact with special children. In the second part, the partner children were given information about how to present the instructions and how to manage the moments of starting and finishing the games during the practices. Peer trainings consisted of 3 45-minute sessions.

Environment and Tools

The research was conducted in the multi-purpose playground of A Kindergarten. Necessary safety measures were provided for special and partner children in the playground which is approximately 25m². The floor of the playground is rubber and the area is covered with soft cushions. Temperature and light arrangements were within normal acceptable values. Materials such as balls, miniature goal posts and

basketball hoops, funnels, pet bottles, slalom sticks, trampoline, training ladder, etc. were used in the practice process.

Peer Mediated APA Program

In the study, the practices were carried out with special and partner children for twelve weeks and two days a week for 1 hour. In the process of determining the activities within the scope of the peer-mediated APA program, the definition of the targeted dependent variable as well as the relevant literature (Menear & Neumeier, 2015; Garcia-Villamizar & Dattilo, 2010; Todd & Reid, 2006; Staples et al., 2011; Srinivasan et al., 2014; Fragala-Pinkham, Haley, Rabin & Kharasch, 2005; Kunzi, 2015; Gutman, Raphael-Greenfield & Rao, 2012; Gutman et al., 2010; İlhan, 2007; İlhan, 2008; Özen et al., 2012; Ministry of National Education, 2009; Ministry of Youth and Sports (MYS), 2014; Yarimkaya, 2016; Emmons & Anderson, 2005; Winnick, 2000) was taken into consideration. Factors such as interaction, communication, competition, winning-losing, taking responsibility, and helping are included in the activity content to increase the level of social skills. All practices were conducted by the researchers.

Data Collection Tools

Data collection tools related to two different paradigms were used in the study.

Quantitative Data Collection Tool: In the scope of the research, Social Skill Scale (SSS), which is one of the subscales of Social Skills Rating System (SSRS) developed by Gresham and Elliot (1990) and Turkish

adaptation by Sucuoglu and Ozokcu (2005) was used as a quantitative data collection tool. The Social Skill Scale includes three sub-dimensions: cooperation, assertiveness and self-control. *Cooperation sub-dimension* includes behaviors of helping others, sharing their belongings, following rules and guidelines etc.; *assertiveness sub-dimension* includes interaction behaviors such as requesting information, introducing oneself, and reacting to others; *Self-control sub-dimension* The sub-dimension of self-control includes behaviors such as anger control, reconciliation and proper response to be exhibited in case of disagreement. The SSS is filled by each student after deciding how often s/he displays each behavior in the scale considering the behavior of each student exhibited during the last month or two months. Zero (0) is marked if the student never displays a behavior, one (1) if s/he sometimes displays, two (2) if s/he often displays. The total score from the SSS varies between 0 and 60. In addition to assessing the frequency of each behavior through the Social Skill Scale, the teacher also evaluates each social behavior in the scale in terms of the importance of success in the classroom. To determine how important a behavior is in class achievement, it is rated zero (0) if it is not important for class achievement, and one (1) if it is important, and two (2) if it is critical. In the scale form, there are a total of 29 items, 12 in the cooperation sub-dimension, 10 in the assertiveness sub-dimension and 7 in the self-control sub-dimension. Also, the Cronbach alpha coefficient was calculated to be .96 for the total score of Social Skills Scale, .91 for the first factor, .93 for the second factor, and .84 for the

third factor. It was determined that the 3 factors explained 59.75% of the total variance (Sucuoğlu & Özokçu, 2005).

Qualitative Data Collection Tool: In the study, semi-structured interview form was used as a qualitative data collection tool. Interviewing is a tool that enables to reveal what people think, what they think and why, what are their attitudes and feelings, and the factors that direct their behavior (Ekiz, 2009). In the process of creating the questions to be included in the interview form, the related literature was examined. The questions prepared in line with the literature were revised according to the findings obtained from the quantitative part of the research. The interview form in the draft format was submitted to the evaluation of three academicians specialized in physical education, special education and Turkish. As a result of scope validity based on expert opinions, semi-structured interview form took its final form.

Data Analysis

Quantitative and qualitative data were analyzed separately. In the following section, information on the analysis of quantitative and qualitative data is presented.

Analysis of Quantitative Data

Before starting the analysis of the data, it was examined whether the data were suitable for normal distribution by considering Shapiro-Wilk and kurtosis-skewness coefficients. In the analysis, it was seen that the data did not have normal distribution. Therefore, the use of non-parametric tests in the analysis process was decided. Mann Whitney U

test and Wilcoxon test were used in the analysis of the data obtained quantitatively. Significance value was determined as 0.05.

Analysis of Qualitative Data

Descriptive (thematic) analysis method was used in the analysis of qualitative data. First, voice recordings obtained from the interviews with teachers were transcribed. The data transcribed were converted into codes and categories in line with the findings of quantitative analysis.

Validity-Reliability

In order to provide for the quantitative and qualitative findings valid and reliable results, some precautions are presented in the following section.

Validity-Reliability of Quantitative Data

In this study, Cronbach Alpha internal consistency coefficient related to the general and sub-dimensions of the measurement tool was examined in order for quantitative data to give valid and reliable results.

Validity-Reliability of Qualitative Data

In qualitative research, validity and reliability are considered important in terms of the appropriateness of the results reached. For this purpose, the methods, which are used to provide validity and reliability in qualitative studies, of spending a long time in the working environment, presenting the data and analyzes to the control of the researched persons and presenting the data, analyzes and comments to the experts were applied (Ekiz, 2009).

FINDINGS

In this section, qualitative and quantitative findings obtained within the scope of the research are presented in line with the research questions.

Findings Related to the First Sub Question: Do the social skill levels of intellectual disability children differ significantly before and after the peer-mediated APA program?

Table 1 shows the results of the pre-test and post-test for the effect of peer-mediated APA program on the social skills of intellectual disability children.

Table 1: Wilcoxon Signed Ranks Test Results of Pre-test and Post-Test Scores Related to Social Skills Level of the Application Group

Group	Pre-	Rank	Rank			
test Post-test	N	Average	Total	Z	p	
MHC*	Negative	0 ^a	.00	.00	-2.201	0.023
	Rank					
	Positive	6 ^b	3.50	21.00		
	Rank					
	Equal	0 ^c				
	Total	6				

*Intellectual Disability Children

Table 1 shows that there is a significant difference between the pre-test and post-test scores regarding the social skill levels of intellectual disability children in favor of the post-test. (Z:-2.201; p: 0.02<0.05).

Findings Related to the Second Sub Question: Is there a significant difference between intellectual disability children's social skill levels after peer-mediated APA program and follow-up measurement obtained after three weeks?

Table 2 shows the results between the social skill levels of the intellectual disability children after the peer-mediated APA program and the follow-up measurement obtained three weeks later.

Table 2: Wilcoxon Marked Ranks Test Results of Final Test-Follow-up Test Scores Related to Social Skill Level of the Application Group

Group	Final test-	N	Rank Average	Rank Total	Z	p
MHC*	Negative	2 ^a	3.00	6.00	-.378	0.705
	Rank					
	Positive	2 ^b	2.00	4.00		
	Rank					
Equal	2 ^c					
	Total	6				

In Table 2, it was found that there was no significant difference between the posttest- follow-up test measurements regarding the social skill level of intellectual disability children ($Z: -.378; p: 0.705 > 0.05$).

Findings Related to the Third Sub-Question: What are the teachers' opinions on the socialization levels of intellectual disability children after the peer-mediated APA program?

In the study, peer-mediated APA program was applied to intellectual disability children and as a result of this application, significant difference was determined between pre-test and post-test measurements related to social skill levels of special children. At the end of the application, it was found that the special children retain their social skills three weeks after the application. Table 3 shows the opinions of teachers about the changes in social skill levels of special children after the applications.

Table 3: Teachers' Opinions on the Change in Social Skill Levels of Intellectual Disability Children after the Peer Mediated APA Program

Categories	f
From individuality to majority	3
Peer acceptance	4
Improvement in friendship relations	4
Increased participation in in-class and extracurricular activities	2
Peer support	3
Increased awareness	4
Group belonging	4
Sharing	4
Qualitative increase of time spent with peers	2

According to Table 3, after peer-mediated APA program for intellectual disability children, teachers defined the changes in social skill levels in children as “From individuality to majority”, “Peer acceptance”, “Improvement in friendship relations”, “Increased participation in in-class and extracurricular activities”, “Peer support”, “Increased awareness”, “Group belonging”, “Sharing”. In the following section, the teachers' opinions reflecting the raw form of the concepts included in the table above as categories are presented.

“...her confidence in her friends increased after sports. Whereas she was meeting all her needs individually before the sport, she became able to move with her friends both inside and outside the class. With our APA programs, we have already aimed to achieve this and similar achievements, sport is an element that supports both the activities alone and within the curriculum” (Tugba).

“...perhaps the most important comment that can be made before and after sports is the inclusion of special children by the normal children in their play” (Derya).

“...the relationship of special children with the normal children has improved both during the meal times and doing up the shoelace as a self-care, even when climbing up and down stairs” (Merve).

“..I believe that normally developing partner children will no longer take pity on special children in society. It happened with this sport because partners realized that special children could do something” (Asli).

“...all children started to include special children in their in-class and out-of-class conversations. Even the whole school saw what these children could do. I'm sure both my and other teachers' faith in the profession may have increased. And for myself, I will give more space to sports in my classes and ITPs (Individualized Training Programs)” (Tugba)

DISCUSSION and CONCLUSION

The aim of the study was to examine the effect of peer-mediated adaptive physical activity program (APA) on the social skill levels of intellectual disability children. It was also examined whether intellectual disability children could retain these skills after the end of the practice. In order to qualitatively support the quantitatively-obtained effectiveness findings, interviews were conducted with teachers of special children.

In the study, it was concluded that the peer mediated APA program had an effect on the social skill levels of intellectual disability children. In addition, with the follow-up measurements, it was observed that intellectual disability children retained the social skills acquired after the practice.

In the interviews conducted in order to support these quantitative findings, it was observed that special children developed peer relationships, increased interaction levels, improved sharing skills, and experienced improvements in the feeling of belonging to a group.

The findings of effectiveness obtained by using both paradigms (quantitative and qualitative) in the study were consistent with previous studies on intellectual disability children and APA program. In the study of Yarimkaya (2018), it was reported that it has a positive effect on social skill levels of children with moderate mental disability. Similarly, in the studies conducted by Stanish and Temple (2012) and Temple and Stanish (2011), it was found that the peer-mediated APA program contributed positively to the social skill levels of intellectual disability children. According to the results their some search, when emotional adjustment, neurotic and behavioural problems of children with mild intellectual disability are examined it is determined that emotional adaptation, behaviour problem levels of sports children are better than non-sports children it was (Kozak et al., 2019). İlhan, et al., (2013), found that regular physical education and sports activities increase the quality of life of the children with intellectual disabilities. In addition, it can be stated that well-planned physical education and sports activities support the increase of the quality of life of these children and have an important role in minimizing the disadvantages that may occur (İlhan, 2010).

It is seen that APA program has positive effects especially on social skills of individuals with ASD. In the literature, there are studies in which peer-mediated APA program has made positive changes in the social skill levels of individuals with ASD. In the study conducted by Yarımkaaya et al. (2017), it was determined that the peer-mediated APA program provided improvements in the ability to establish eye contact, initiate communication and react to the communication that can be evaluated within the scope of social communication skills of an individual with ASD. Similarly, in the studies conducted by Brookman et al. (2003) and Chu Pan (2012), it was found that peer-mediated physical activities applied on the social skills of individuals with ASD had positive contributions. In the literature, research findings have been reported which are not implemented by peer mediation but have positive effects on social skills of individuals with ASD through the physical activities, games and exercises. Koegel et al. (2005) examined whether the impact of supported and unsupported play activities on social interactions of children with ASD. Two children with ASD participated in the study. The findings of the study showed that social interaction of children with ASD increased positively after play activities. Kasari et al. (2008) investigated the effects of joint attention and symbolic play intervention programs on fifty-eight children with ASD. The findings of the study showed that the expressive language skills of children with ASD increased. Delano and Snell (2006) examined the effectiveness of social story reading, comprehension control, and optional play activities with peers at school on the social skills of three children with ASD such as attention, interpretation, and

response to interpretation. The findings of the study indicated that the social skills of children with ASD increased positively.

The findings of the study showed that the peer-mediated APA program had an impact on the social skill levels of intellectual disability children. In addition, as a result of the peer-mediated APA program, the skills acquired by children became permanent. As a result of the interviews conducted with teachers, it was determined that children can generalize their social skills to people and environments outside of the practices. As a result, it is thought that quantitative effectiveness findings are supported by qualitative interview data.

Based on the above-mentioned findings, the recommendations that may lead to future research are as follows:

1. Having at least one control group in future studies may increase the validity and reliability of the findings.
2. Apart from mental disability, differences can be achieved by working with different disability groups.
3. The literature can be enriched by applying mother, sibling and father mediated APA programs except peer mediated.

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