

## CAN A PHYSICAL ACTIVITY PROGRAMME IMPROVE THE QUALITY OF LIFE IN YOUTH WHO LIVE IN AN ORPHANAGE? A MIXED METHODS STUDY

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**Abstract.** *Physical activity (PA) is thought to positively contribute to the improvement of the (poor) Quality of Life (QoL) of youth living in institutions. However, youth's participation in PA can be affected by the "significant others" in their life. The aim of this study was to (a) investigate the impact of a PA programme on the QoL of youth hosted in an orphanage and (b) understand the role of the relationships formed in this institution in the outcome of the programme objectives. For that purpose, a mixed methods approach was adopted. The study was conducted in an orphanage in Attica, Greece. Twelve of the 13 male orphans (Mage= 13.08 ± 2.43 years) participated in a 10-week PA programme implemented in the institution. The KINDL<sup>®</sup> questionnaire was completed by the orphans and one caregiver before and after the PA intervention. The qualitative data were collected through observation and semi-structured interviews with 12 orphans and 6 members of the orphanage staff. The results showed that orphans' QoL levels were poor; whereas a statistically significant decline in their total KINDL<sup>®</sup> scores ( $p = .033$ ) and the Emotional Well-Being subscale ( $p = .013$ ) was identified. Quality data revealed that orphans' participation in the PA programme was inconsistent, although they estimated that it was valuable. Intra- and inter-personal factors emerged as barriers for PA participation. It seems that living in an institution results in deep deteriorations in youth's QoL that cannot be surmounted by their participation in a PA programme.*

**Key words:** *sports, orphans, well-being, health*

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## INTRODUCTION

Quality of Life (QoL) is defined as an “individuals’ perception of their position in life in the context of the culture and value systems in which they live ... [that is] affected in a complex way by the person’s physical health, psychological state, level of independence, social relationships, personal beliefs and their relationship to salient features of their environment” (WHO, 1995). QoL is very important to human life, as it determines the prosperity and well-being of people, having a direct impact on individual- and public health (WHO, 2015).

One of the most disadvantaged groups in terms of QoL is youth, who live in child protection settings (Purohit, Pradhan, & Nagendra, 2016a; Quarmby, 2014). There are several reasons for their poor QoL, including the fact that they are deprived of a parent figure and a specific reference person (Konijn et al., 2019), they do not receive personalized care (Sebsibe, Fekadu, & Molalign, 2014) and they have often been exposed to traumatic events (D’Andrea, Bergholz, Fortunato, & Spinazzola, 2013). Many times, all the above result in deviant or even delinquent behaviors (Leslie et al., 2010; Tarullo, Bruce, & Gunnar, 2007), as well as physical and mental health problems (Heinrich & Gullone, 2006; Kearns, Whitley, Tannahill, & Ellaway, 2015; Kolayış, Sarı, Soyer, & Gürhan, 2011; Tarullo et al., 2007).

Physical Activity (PA), either free (Hyndman, Benson, Lester & Telford, 2017) or organized (Farmer et al., 2020; Georgiev & Gontarev, 2019), is thought to positively affect youth’s QoL, offering a holistic framework for social-psychological-physical development (Hyndman et al., 2017; Moati, 2014). That is also the case for youth living in institutions. Indeed, several studies (Akhmetshin et al., 2019; Çelebi, Alkurt, Mirzeoğlu, & Şemşek, 2005; Culver, Whetten, Boyd, & O’Donnell, 2015; D’Andrea et al., 2013; Hanrahan, 2005; Kolayış et al., 2011; Moati, 2014; Purohit & Pradhan, 2017; Purohit et al., 2016a, b; Ramadan, 2014) have demonstrated that PA can positively contribute to the improvement of various aspects of QoL in youth who live in institutions.

Nevertheless, it is well known that the participation of youth in PA can be affected by the environment in which they are growing up (Macdonald et al., 2004). The relationships of children and adolescents with “significant others” in their life, such as parents (Dagkas & Stathi, 2007), and/or friends (Smith, 2003) can either support or impede their engagement with PA. Based on the above, it seems that if PA is to be used as an effective means for the enhancement of the (poor) QoL of youth living in institutions both in the short and in the long term, light should be shed into the relationships that are formed in the institution, in which the PA program is applied. However, until now, all the published studies focusing on PA in youth living in institutions are quantitative in nature; to our knowledge, there is no published study providing such qualitative evidence so far. Thus, the aim of this study was to investigate the impact of a PA program on the QoL of youth hosted in an orphanage, as well as to understand the role of the relationships formed in this institution in the outcome of the program objectives.

## METHOD

### Design

A mixed methods approach was utilized as it strengthens research evidence (Creswell & Creswell, 2019) and provides insight into the topic to be explored that may be missed

when only a single method (quantitative or qualitative) is used (Johnson & Onwuegbuzie, 2004). Both types of data (i.e. qualitative and quantitative) were collected during the same phase of the research and merged during analysis and interpretation (Creswell & Creswell, 2019).

### **Setting/participants**

The study was conducted in an orphanage in Attica, Greece, between December, 2020 and February, 2021. The orphanage provides free accommodation, food, clothing, footwear, education, sports participation fees, and medical care to orphan and needy males aged 7-16 years. During this study, the orphanage hosted in total 13 males, aged 9-17 years ( $13.08 \pm 2.43$  years). Among them, one adolescent refused to participate and was excluded from the study.

The institution staff consisted of the director, a social worker, a psychologist, an accountant, seven caregivers (4 women, 3 men), kitchen staff, and cleaning staff. Caregivers were responsible for the everyday care (school homework, behavior, hygiene, etc.) of the orphans. Most of them have a university degree in Humanities and had been working in child protection centers for more than 10 years.

### **Quantitative data collection**

The KINDL<sup>®</sup> questionnaire (Ravens-Sieberer & Bullinger, 2000), adapted for the Greek population (Vidali, Vidalis, Ravens-Sieberer, & Bullinger, 2001), was used to assess the orphans' QoL. Specifically, the KINDL<sup>®</sup> versions for ages 8-12 years (Kid-KINDL<sup>®</sup>) and 13-17 years (Kiddo-KINDL<sup>®</sup>) were administered. Moreover, the parent version of the KINDL<sup>®</sup> for children aged 8-16 was completed by a female caregiver, who had been working at the orphanage for 14 years.

All the KINDL<sup>®</sup> versions include 24 items that are classified into six subscales/QoL dimensions: Physical well-being; Emotional well-being; Self-esteem; Family; Friends (social contacts); Everyday Functioning (school). Children and adolescents are asked to check the answer that they consider closest to their personal experience; whereas the caregivers are asked to assess their QoL. Each question is answered in a five-point Likert scale (never = 1, rarely = 2, sometimes = 3, often = 4, constantly = 5); whereas some of them have a reverse score. As far as the psychometrics of the KINDL<sup>®</sup> are concerned, both its reliability and validity are sufficiently supported (Ravens-Sieberer & Bullinger, 2000). Also in this study, the internal consistency was supported (Cronbach's alpha values ranged from .64 to .86).

The KINDL<sup>®</sup> was completed by the orphans and the caregiver before and after the implementation of the PA intervention program.

### **Qualitative data collection**

Qualitative data were gathered through observations and individual interviews conducted by the first author. Observations took place during the period of PA programme implementation (both during PA sessions and before/after them) and aimed at observing orphans' and orphanage staff's behaviours and their interaction. For that purpose, an observational protocol was designed, in which descriptive and reflective notes about the PA programme along with notes regarding interactions and events were included. In order to obtain a rich narrative description of the context, notes were written as soon as possible after the observation (Creswell & Creswell, 2019).

Individual semi-structured interviews with 12 orphans and six members of the orphanage staff [director; psychologist; social worker; three caregivers (two females; one male)] were conducted by the first author at the end of the intervention in order to obtain a deeper understanding of their perceptions regarding the programme, as well as the barriers that may have shaped its delivery and acceptance. For that purpose, two flexible interview guides (one for the orphans and one for the staff), consisting of five questions each (Creswell & Creswell, 2019) were consistently applied in all the interviews. The interview questions for the youth asked of them to evaluate the programme and provide their response to the programme. The interview questions for the staff asked of them to evaluate the programme and the youth's response to it, as well as to identify reasons for the youth's inconsistent participation, and to make suggestions for the programme's improvement.

All interviews were conducted in the Greek language (all the participants were native speakers of Greek), in a quiet room, were digitally recorded, and lasted approximately 25 minutes. Written and verbal informed consent was obtained by the adults and youth participants, respectively, before all the interviews.

### **Procedure**

The research was approved by the administrative council of the institution in November 2020 as well as by the University Ethics committee. Then, an informative meeting was held in the orphanage, in which the staff and the orphans were informed about the purpose and the procedures of the study and were assured that their participation would be anonymous and voluntary. All the participants (orphans and staff) provided their informed consent verbally. PA intervention was intended for all the orphans (they were not divided into an experimental and a control group), as it was considered important to give everyone the opportunity to benefit from the PA.

### **Physical activity programme**

The PA programme was informed by the pedagogical principles of Physical Education and was based on the specific needs of youth that are hosted in child protection institutes (Heinrich & Gullone, 2006; Kearns et al., 2015). It was designed through the cooperation of the authors with the psychologist and the social worker of the institution; whereas, orphans' opinions about the activities included were taken into account and a variety of student-centered games and activities (Akhmetshin et al., 2019) took place, so as to encourage them to be physically active with autonomy, after the end of the program intervention (Çalik et al., 2018).

The programme was implemented by the first author, who has a physical education bachelor degree, and lasted 10 weeks (7/12/2020 - 27/2/2021) during the period of the second quarantine in Greece. In the first three weeks, it included team games, as well as basketball and soccer technical exercises and took place in the institution. After the Christmas holidays, activities outside the institution (hiking, football in the fields and on the beach, etc.) were added. The last three weeks, it consisted mainly of walks and activities in the natural environment, due to the preference of the participants for outdoor activities compared to those at the institution. The participants were divided into two groups (group a: n= 6 orphans, aged 9-12 years; group b: n= 6 orphans, aged 13-17 years). In total, 20 30-60 minutes PA sessions took place for each group.

## Analyses

For quantitative data, the average scores regarding the orphans' QoL reported by the participants and the caregiver were first calculated, and intraclass correlation coefficients (ICCs), type 2.1, were computed to examine the agreement between their scores. Then, paired t-tests were implemented on orphans' scores to detect potential differences between the pre- and post- intervention regarding their total and KINDL<sup>®</sup> subscales scores. All statistical analyses were computed with the SPSS v25.0 software (IBM SPSS, Inc., Chicago, IL, USA), and the level of significance was set at 0.05.

For qualitative data, thematic analysis was conducted using all available data (i.e., interview transcriptions, field notes from observations) in order to identify, analyze, and report patterns. Common answers and observations were firstly coded and then organized into themes. Moreover, significant quotations reflecting the core of the themes were extracted and translated from Greek to English.

## RESULTS

### Quantitative data

Descriptive statistics regarding the orphans' QoL as it was assessed by them and the caregiver before and after the PA intervention implementation are presented in Table 1.

**Table 1** Descriptive statistics (M, SD) of the inmates' QoL assessed by themselves and the caregiver at the pre- and post-test

KINDL <sup>®</sup> Sub - Scale	Pre-test		Post-test	
	Inmates	Caregiver	Inmates	Caregiver
Physical Well - Being	76.87 ± 19.78	58.17 ± 16.41	73.13 ± 12.52	64.42 ± 16.41
Emotional Well - Being	46.87 ± 14.80	47.59 ± 13.87	32.5 ± 17.38*	56.25 ± 14.43
Self - Esteem	54.37 ± 20.84	37.5 ± 14.88	50 ± 18.63	47.6 ± 8.28
Family	33.33 ± 20.8	36.1 ± 10.87	35.41 ± 20.25	39.2 ± 11.21
Friends	60.62 ± 21.26	61.54 ± 17.28	63.13 ± 12.31	67.71 ± 7.92
School	51.88 ± 14.45	34.61 ± 17.42	48.13 ± 17.93	36.46 ± 14.56
Total KINDL <sup>®</sup> score	57.18 ± 7.79	45.91 ± 10.10	49.30 ± 7.51*	50.76 ± 8.09

\*Statistically significant differences between pre- and post-test were detected.

As it was revealed by the ICCs that were computed, the agreement between the youth's assessment of their QoL and its assessment by the caregiver was poor. Specifically, at the pre-test the ICC ranged from .07 (School) to .59 (Emotional Well - Being); whereas, at the post-test it ranged between .01 (Friends) and .74 (Physical Well - Being) at the post-test. Due to this discrepancy, only the orphans' scores were used for the analyses regarding the impact of PA program on the orphans' QoL.

According to the paired t-tests, a statistically significant decline was revealed at the post-test in the orphans' total KINDL<sup>®</sup> scores [ $t(12)=2.5$ ,  $p=.033$ ] and in the Emotional Well - Being subscale [ $t(12)=3.08$ ,  $p=.013$ ]. No other significant differences were detected.

### Qualitative data

As far as the qualitative data are concerned, the codes were sorted into three main categories of themes, including the PA programme evaluation; the orphans' response to the programme; and barriers for the orphans' participation.

#### *PA programme evaluation*

Most of the orphans (n=10) stated the PA programme was valuable and they would like to have it on a regular basis; whereas, seven said that it improved their QoL because it offered them opportunities for physical exercise. The staff agreed that the PA programme was very helpful, especially at that specific period, when – due to the country lockdown – the orphans did not have any other activities outside the institution, and positively contributed to the orphans' QoL.

*“...the programme helped also the relations among the orphans, through its team activities. For some of them that impact was not obvious; they had never played together. You offered us the prospect to move ahead”.* (Psychologist)

#### *Orphans' response to the programme*

Field notes revealed that orphans' participation was not consistent. In each session, on average two boys per group (not always the same ones) did not participate. However, nine of them estimated that their participation was sufficient; three admitted that they did not consistently participate due to different reasons, each [“T” (14 years old) said he could not regularly participate due to allergies; “W” (15-year-old) due to shortage of time; “A” (15-year-old) said “*I was bored. I would have participated more if everybody had taken part*”].

Indeed, adolescents' participation heavily depended on whether their peers took part or not. Moreover, it was observed that during the first sessions the orphans found it difficult to cooperate; however, after some weeks they shared their ideas for team games.

#### *Barriers for orphans' participation*

Regarding the barriers for the orphans' participation in the programme, both intra- and inter-personal factors emerged.

##### ▪ Intra-personal factors:

The staff recognized that one of the barriers to the orphans' participation in the programme was their (bad) psychological status.

*“There are several reasons for an orphan's non-participation that are relative to their psychological status. Some of them are in a constant bad mood and that has nothing to do with the instructor or the content of the programme.”* (Caregiver, male).

*“These children are hurt and they offer what they can afford to [...]. They do not have anything stable in their life and that is reflected in their every step. The worst home is better than the best institution. We are an institution, institution, institution; the worst that could have happened to them! The child must be very well organized within themselves, to show stability in sports, at school, in everything. [...] This starts from within them. They have difficulties following a program. Children in institutions are a special category and when I say “special” I mean that they have different needs than*

*children living in their own homes. Their psychological strength is limited. If only someone could consider how many reference persons a child living in an institution encounters in twenty-four hours... ”* (Caregiver, female).

*“These children are psychologically traumatized. They are not emotionally strong. [...]”* (Caregiver, female).

Strongly attached to the orphans’ psychological status was their engagement with computers. Some boys very often, if they had access to computers, chose not to participate in the PA program so as not lose time from the online computer game they played. Furthermore, the staff emphasized that the boys spent many hours in front of computers, which they believed stems from past traumas and bad experiences at the institution.

*“The only thing that concerns P is the internet and the Fortnite game. He does not even attend his classes, while the same time – of course – he is not interested in sports. He is another child in chaos...He does not know what will happen in the future... The internet is a way to forget. He is very sensitive and he knows very well how to hide; he has a lot of pain inside him.”* (Caregiver, female)

*“T told me once: “I do not want to study; I do not want to do anything”. It is exactly what happens with many of the orphans... he has no courage for anything; he gets lost in a computer and he has many reasons for doing so...and he is right! He does not have anyone waiting for him. [...] Since his mom and dad have not been able to stand in front of him to tell him “We love you. You are precious to us”, the child is trying to find the meaning of his life and it will take him many years to find it.”* (Caregiver, female)

Finally, feeling embarrassed was identified as a barrier for the orphans’ participation in PA. Younger orphans were keen on walks outside the orphanage. However, four of the adolescents hesitated to take part, so as not to be recognized as “the children of the institution”. Furthermore, when they participated they seemed anxious not to meet a classmate and walked in distance from each other. Many times they preferred to take a different route and pretended not to know each other.

*“Will we all go out as a group? It will seem that we are from the institution...”* (“P”, 14-year-old).

However, it should be noticed that on the way back to the institution, they did not seem to care about this issue and followed the group in a great mood for conversation.

The biggest concern for one of the adolescent orphans was that he felt embarrassed because his clothes were not the right fit anymore. Nevertheless, when the first author offered him her jacket, he was very happy and participated in the walk.

- Inter-personal factors:

The way the institution operated was an obstacle for PA programme implementation. To begin with, the inability of the staff to implement the rules was revealed. For example, the director, the psychologist and the social worker co-decided that while the programme was taking place, the orphans would not have access to the computer room. This rule was not followed by all the caregivers.

*“...We did not have a common attitude towards the programme. Some of the caregivers followed what we had agreed; whereas some others did not. That inconvenienced us...”* (Social worker)

*“The success of a programme requires preparation and good coordination on our part first. [...] That does not happen... it never happens. That's why there was a problem with the orphans' response to the PA programme. [...]”* (Caregiver, female)

A lack of common practices and rules was noticed across all the aspects of the daily life in the orphanage. For example, several times, when the orphans should be doing their schoolwork, they were allowed to play electronic games, resulting in them not finishing their studies. Inconsistency was also observed at meal times, as, for several days, there were children who missed one of the meals (e.g., breakfast), because they may not have been woken up or were busy, mainly at the computers.

*“The attitudes of the caregivers are very important. The child often does not understand what is good for them; we have to teach them. Unfortunately, this is not the case here. Caregivers do not have a common attitude towards orphans. These deficits are obvious in their studying, meals, sleep. Some caregivers do not care or cannot bear to set limits; however, when we do not obey the rules how could we teach them to children? [...]”* (Caregiver, female)

*“Two and a half years now, we have not managed to eat all together even once.”* (Director)

It was obvious that the daily routines at the orphanage were not in line with a programme.

*“... The problem is that we do not have a program implementation culture [...]. When I came here, I did not find any sort of program. I designed one; however, the orphans have found it very difficult to follow it... One of them told me "before you arrived, I went to school whenever I wanted" [...]. That boy threatened to stab me [...].”* (Director)

*“Before this director, the situation here was somewhat out of control. The orphans did whatever they wanted. You cannot imagine what happened here. I even found the bolts of my car unscrewed.”* (Caregiver, female)

Furthermore, several members of the staff emphasized the bad relationships of the orphans with the Director.

*“Their inaction is due to opposition”* (Social worker)

Some boys expressed their disagreement with the Director's decision to lock the computer room at the hours of PA programme implementation; whereas, some others attributed those behaviours to the bad relationships of the youth with the Director.

*“Since the PA programme was presented by the Director some of the orphans did not want to participate due to their bad relationship with him”* (Psychologist)

*“The changes I brought were not easy for them. They are not used to these changes and they cannot accept them. [...]”* (Director)

Finally, the relationships among the orphans were bad too. It seemed that the orphans had not developed a sense of being a team. Although they went to the same school, they often reported that during school hours, they did not talk to each other and preferred not to hang out. Moreover, as it was earlier reported, they faced difficulties in participating in group PA. The observation of their free play revealed that it included notable violence (hitting each other; use of abusive words). Sometimes their play took the form of a fight, with the older boys ordering the younger ones to simultaneously hit a slightly older child all over his body. This “game” ended, when the orphan, who “ordered” the fight decided so, or when one of the “fighters” was seriously hurt, or when a staff member noticed what happened. Furthermore, several boys mistreated the animals of the institution (e.g., they stuck chewing gum on and threw things at the dog).

Violent behaviours were the main way the boys expressed themselves, especially when they felt that they could not handle a situation. One day, when the young children



were finishing their school work, just before a PA session, “K” (9-year-old), obviously annoyed by a disagreement with the caregiver about his exercises and a comment by “G” (11-year-old), started shouting. The caregiver left the study room to let him calm down, and “K” took a chair and threw it towards “G”.

*“In previous years the older boys were in control. Hierarchical relationships, fear, and obedience prevailed among the orphans; a situation usually found in reformatories.”[...] (Director)*

## DISCUSSION

Research evidence reveals that PA can positively contribute to the improvement of the (poor) QoL of youth living in institutions (Akhmetshin et al., 2019). However, as youth’s participation in PA can be affected by the “significant others” in their life (Dagkas & Stathi, 2007; Smith, 2003), the relationships that are formed in an institution should be investigated if effective PA interventions aiming at the improvement of the QoL of young orphans are to be implemented. To our knowledge, this was the first study attempting to both examine the impact of a PA program on the QoL of youth hosted in an orphanage and understand the role of the relationships formed in this institution in the outcome of the program objectives, using a mixed methods approach.

Our key findings were that the PA programme that was implemented for 10 weeks did not significantly improve the orphans’ QoL, as youth did not consistently take part, despite the fact that they estimated the programme as valuable. Both intra- and inter-personal factors acted as barriers for the youth’s participation in the programme and negatively affected their QoL.

Starting with the quantitative data, the initial levels of the orphans’ QoL expressed by the total KINDL<sup>®</sup> scores, though slightly higher than those of Turkish adolescents living in orphanages ( $46.47 \pm 15.60$ ) (Çaman & Özcebe, 2011), were low. However, the scores of our participants were much poorer than those of typical Greek youth living in families (Ginieri - Coccossis et al., 2013; Rotsika et al., 2016; Rotsika et al., 2011). For example, the scores of the orphans on the Emotional Health and the Family subscales were  $46.87 \pm 14.80$  and  $33.33 \pm 20.8$ , respectively; whereas, the scores of their peers living in families on those subscales exceeded 76 points (Ginieri-Coccossis et al., 2013; Rotsika et al., 2016, 2011). Moreover, higher scores on the KINDL<sup>®</sup> subscales than those presented in this study have been found in youth with learning disabilities (Ginieri - Coccossis et al., 2013; Rotsika et al., 2011) and migrants (Rotsika et al., 2016), with the exception of the Self-Esteem subscale, where KINDL<sup>®</sup> scores were similar to the present ones.

An explanation for the above finding can be the fact that the general psychological and physical development of youth growing up in families (Bettmann, Mortensen, & Akuoko, 2015) differs from the development of their peers left without parental care, who lack personalized care (Sebsibe et al., 2014), a stable living environment, and specific reference persons (Konijn et al., 2019). Several researchers argue that the conditions these youth encounter result in feelings of loneliness (Moati, 2014), anxiety (Heinrich & Gullone, 2006; Kearns et al., 2015), depression (Heinrich & Gullone, 2006), and aggressive behaviours (Leslie et al., 2010). The aforementioned are negatively associated with QoL (Çaman & Özcebe, 2011; Kolayış et al., 2011). According to Tümkaya (2005), the main reason why orphans face difficulties in their lives is that they

lack the emotional satisfaction they could have from their family and relatives. During the interviews, the caregivers said that these youth were hurt, with nothing stable in their lives, and attributed the heavy engagement of orphans with computers to their lack of emotional satisfaction and their effort to "forget their problems".

Youth living in childcare settings present low scores on the School and Friends KINDL® subscales, as they often have severe learning disabilities and inability to meet their academic obligations (Quarmby, 2014); thus, they tend to drop out of school (Smyke et al., 2002). This was also demonstrated in the present study, with the Director pointing out the great difficulty the orphans faced in school, with numerous school absences and very poor grades. Several researchers suggest that orphans' poor academic achievement leads to low levels of self-esteem, as they are possessed by a sense of inferiority compared to their peers, resulting in their inability to create interpersonal relationships (Kalyva, 2016; Kiambi & Mugambi, 2017). Frequent failures to be integrated into a peer group and engage in group activities appears to be a combination of emotional, interpersonal, and behavioural weaknesses (Lyons, Uziel-Miller, Reyes, & Sokol, 2000) that cause difficulties in social interaction and relationships with peers (Tarullo et al., 2007). In the present study, it was revealed that the orphans had not managed to develop healthy relationships, mistreating the younger children and the pets of the institution; whereas, violence (vocal and physical) prevailed in their interaction. Institutionalization is thought to promote social stigma (Link & Phelan, 2001). In the present study four out of twelve participants, feeling the stigma of "institution child", were quite anxious not to meet a friend or schoolmate, whenever the PA program included a walk outside the institution.

A finding worth discussion is the low orphan-caregiver concordance about the QoL of the orphans. This could be attributed to the fact that, in contrast to youth growing up with their parents (Ginieri - Coccossis et al., 2013; Kiss et al., 2009; Rotsika et al., 2011), those living in institutions do not have a specific reference person corresponding to a parent figure, who has substantial knowledge of their daily needs (Konijn et al., 2019). Nevertheless, low agreement on the evaluation of QoL between the scores of children and their parents is often reported (Ginieri - Coccossis et al., 2013; Rotsika et al., 2011). It should be noted that divergences of parent-child perceptions are found mainly in the areas of QoL, where the child seems to be experiencing difficulties, since children underestimate the problem they are experiencing, rating themselves higher than their real status (Kiss et al., 2009). In the same way, parents of children with learning disabilities seem to overestimate some areas of their offspring's QoL in order to balance the deficit the child may face (Ginieri - Coccossis et al., 2013; Rotsika et al., 2011). It seems that in the present study, the Caregiver, being aware of the low levels of QoL of orphans in some areas (e.g. Family, School), presented higher scores in some other categories (e.g. Emotional health, Friends).

As far as the impact of the PA programme on orphans QoL is concerned, according to the KINDL® scores, statistically significant decreases in the total KINDL® scores and the Emotional Well-Being subscale scores were revealed; whereas, slight improvements, though of not statistical significance, were noticed for the Physical Well-Being and Friends subscales. This lack of QoL improvements is in disagreement with previous experimental studies examining the effects of PA programmes on youth living in institutions (Akhmetshin et al., 2019; Çelebi et al., 2005; Culver et al., 2015; D'Andrea et al., 2013; Kolayış et al., 2011; Moati, 2014; Purohit & Pradhan, 2017; Purohit et al., 2016a, b; Ramadan, 2014). A potential factor that may have negatively affected the results of the present PA programme was the small number (n=12) and the wide age range (9 -17 years)

of the participants that did not allow for real team games. In the above studies that report positive outcomes of the PA, the participants were of approximately the same age, forming more homogenous groups.

Nevertheless, it should be noted that those studies focused on specific QoL variables, such as physical fitness (Purohit et al., 2016; Ramadan, 2014), attitudes towards regular participation in sports (Çelebi et al., 2005), cognitive abilities (Purohit & Pradhan, 2017; Ramadan, 2014), self-esteem and anxiety (Kolayış et al., 2011), loneliness (Moati, 2014; Purohit et al., 2016b), mental health and behaviour (Akhmetshin et al., 2019; Culver et al., 2015; D'Andrea et al., 2013; Ramadan, 2014); thus, they do not provide a comprehensive picture of the QoL. Furthermore, the distinct differences among the programmes implemented in those studies should be emphasized, as they impede the comparison of their results and conclusions being drawn about which programme can be effective. For example, the shortest intervention lasted one month (Ramadan, 2014) and the longest seven months (Akhmetshin et al., 2019)]; whereas, the PA content included yoga sessions (Culver et al., 2015; Purohit & Pradhan, 2017; Purohit et al., 2016a,b), football (Akhmetshin et al., 2019), basketball (D'Andrea et al., 2013) or various sport activities (Çelebi et al., 2005).

Moreover, the period during which the PA programme in this study was implemented (i.e. during a country lock-down due to the second wave of the COVID-19 pandemic) may have played a vital role, since the orphans were confined exclusively to the orphanage. According to the literature, the changes in the youth's daily life caused by the pandemic are associated with large effects on their QoL; especially in their physical and mental health (Fore, 2020; Orben, Tomova, & Blakemore, 2020). It seems that the PA programme, although leading to improvements on some KINDL<sup>®</sup> subscales (Physical Well-Being; Friends), could not overcome the deterioration of the QoL caused by the quarantine.

In contrast to the statistical results, the majority of orphans reported that the PA programme was beneficial for their QoL and that they would like to receive it regularly. The staff of the orphanage were on the same page. Nevertheless, the field notes revealed that the orphans' participation was not consistent, even though they thought so. They may have not been able to accurately assess their participation or they were not aware of what consistent participation means. Qualitative data offered valuable information about the barriers for the orphans' participation and revealed deeper problems in the relationships within the institution. As mentioned earlier, intra-personal factors were reported and observed. As it was earlier discussed, the orphans' poor psychological status was pointed out by the staff. Moreover, the orphans spent a lot of time in front of computers. However, it is known that excessive screen time is associated with the multiple negative effects on youth's physical, mental, and social development (Gentile & Anderson, 2006). This is a global phenomenon with youth presenting screen time of approximately eight hours per day (Reid, Radesky, Christakis, Moreno, & Cross, 2016; Rideout, Foehr, & Roberts, 2010).

Furthermore, the relationships developed within the institution were problematic. Orphans had not developed the sense of being a team; as the psychologist noted, they had never played together; that is why they faced difficulties in group PA activities. Nevertheless, they showed slight improvements in the Friends KINDL<sup>®</sup> subscale. It seems that the impact of the PA programme was not strong enough to overcome the hierarchical relationships that were both observed and reported or the extreme behaviors and violence of all kinds that were particularly prevalent. These findings are not rare in youth living in institutions (Leslie et al., 2010; Tarullo et al., 2007) and should be taken into account when a PA intervention for this population is designed.

However, one of the most important barriers seemed to be the way the institution operated. Menzies-Lyth (1985) argues that the key-factors for the operation of an institution are its administration and its members' communication/cooperation. In this study, a lack of cooperation within the staff was revealed, resulting in their inability to maintain common caregiving practices, which had negative consequences not only for the PA programme implementation but also for the orphans' daily life. The director's confession that they had not managed to eat all together even once in two and a half years shows that these youth are growing up in the absence of a warm and concrete context. Also, Kalyva (2016) states that the conditions in institutions are negative not only for the orphans, but also for the staff, who feel that they do not have enough training, support, and supervision in order to be effective. She also argues that the time children spend in institutions is an aggravating factor for their lives and that children of foster families, having spent less time in child care facilities, have been found to be less burdened by the symptoms of institutionalization (Kalyva, 2016).

This study has some limitations that should be taken into account when interpreting its results. To begin with, the intervention took place during the quarantine due to the COVID-19 pandemic and not in a "normal" period. This (negatively) affected the results of the PA programme; however, it is unknown to what degree. Moreover, the group of orphans was quite small, resulting in the absence of a control group; thus, our sample consisted only of males of a wide age range; this restricted their interaction within the programme; furthermore, our findings cannot be generalized to female orphans. Nevertheless, this is the first study to investigate the impact of a PA intervention on youth living in an orphanage, using a mixed methods approach. This is the strength of the study, since this approach enhances research evidence (Creswell & Creswell, 2019) and offers a unique insight into the topic that may have been missed in studies using only a single method (Johnson & Onwuegbuzie, 2004).

## CONCLUSIONS

The QoL of youth living in an orphanage is poor and their participation in a 10-week PA programme implemented at the institution cannot significantly improve their QoL. Both intra- and inter-personal factors associated with their living at the orphanage act as barriers for youth's participation in the programme and negatively affect their QoL. In this specific orphanage, the way it operated caused further problems for the orphans' lives. It seems that living in an institution results in deep deteriorations in youth's QoL that cannot be surmounted by their participation in a PA programme.

## REFERENCES

- Akhmetshin, E. M., Miftakhov, A. F., Murtazina, D. A., Sofronov, R. P., Solovieva, N. M., & Blinov, V. A. (2019). Effectiveness of using football basics in physical education and organizing arts and cultural events for promoting harmonious development of orphan children. *International Journal of Instruction*, 12(1), 539-554.
- Bettmann, J. E., Mortensen, J. M., & Akuoko, K. O. (2015). Orphanage caregivers' perceptions of children's emotional needs. *Children and Youth Services Review*, 49, 71-79. doi: 10.1016/j.childyouth.2015.01.003
- Çalik, S. U., Pekel, H. A., & Aydos, L. (2018). A study of effects of kids' athletics exercises on academic achievement and self-esteem. *Universal Journal of Educational Research*, 6(8), 1667-1674. doi: 10.13189/ujer.2018.060806
- Çaman, Ö. K., & Özcebe, H. (2011). Adolescents living in orphanages in Ankara: psychological symptoms, level of physical activity, and associated factors. *Turkish Journal of Psychiatry*, 22(2).

- Çelebi, M., Alkurt, S. Ö., Mirzeoğlu, D., & Şemşek, S. (2005). Evaluation of the Social Impact of Recreational Sports Activities on Orphan Turkish Girls' Attitudes. *Bolu Abant İzzet Baysal Üniversitesi Sosyal Bilimler Enstitüsü Dergisi*, 2(11), 61-68. doi: 10.11616/AbantSbe.142
- Creswell, J. W., & Creswell, J. D. (2019). *Research design: Qualitative, quantitative, and mixed methods approaches*. Sage publications.
- Culver, K. A., Whetten, K., Boyd, D. L., & O'Donnell, K. (2015). Yoga to reduce trauma-related distress and emotional and behavioral difficulties among children living in orphanages in Haiti: A pilot study. *The Journal of Alternative and Complementary Medicine*, 21(9), 539-545. doi: 10.1089/acm.2015.0017
- D'Andrea, W., Bergholz, L., Fortunato, A., & Spinazzola, J. (2013). Play to the whistle: A pilot investigation of a sports-based intervention for traumatized girls in residential treatment. *Journal of family violence*, 28(7), 739-749. doi: 10.1007/s10896-013-9533-x
- Dagkas, S., & Stathi, A. (2007). Exploring social and environmental factors affecting adolescents' participation in physical activity. *European Physical Education Review*, 13(3), 369-384. doi: 10.1177/1356336X07081800
- Farmer, E., Papadopoulos, N., Emonson, C., Fuelscher, I., Pesce, C., McGillivray, J., ... & Rinehart, N. (2020). A preliminary investigation of the relationship between motivation for physical activity and emotional and behavioural difficulties in children aged 8–12 years: The role of autonomous motivation. *International Journal of Environmental Research and Public Health*, 17(15), 5584. doi:10.3390/ijerph17155584 w
- Fore, H. H. (2020). A wake-up call: COVID-19 and its impact on children's health and wellbeing. *The Lancet Global Health*, 8(7), e861-e862. doi: 10.1016/S2214-109X(20)30238-2
- Gentile, D. A., & Anderson, C. A. (2006). Video games. *Encyclopedia of human development*, 3(8), 1303-1307.
- Georgiev, G., & Gontarev, S. (2019). Impact of physical activity on the aggressiveness, deviant behavior and self-esteem with school children aged 11-15. *Journal of Anthropology of Sport and Physical Education*, 3(4), 21-25. doi: 10.26773/jaspe.191005
- Ginieri-Coccosis, M., Rotsika, V., Skevington, S., Papaevangelou, S., Malliori, M., Tomaras, V., & Kokkevi, A. (2013). Quality of life in newly diagnosed children with specific learning disabilities (SpLD) and differences from typically developing children: a study of child and parent reports. *Child: care, health and development*, 39(4), 581-591. doi: 10.1111/j.1365-2214.2012.01369.x
- Hanrahan, S. J. (2005). Using psychological skills training from sport psychology to enhance the life satisfaction of adolescent Mexican orphans. *Athletic Insight*, 7(3), 7-13.
- Heinrich, L. M., & Gullone, E. (2006). The clinical significance of loneliness: A literature review. *Clinical psychology review*, 26(6), 695-718. doi: 10.1016/j.cpr.2006.04.002
- Hyndman, B., Benson, A. C., Lester, L., & Telford, A. (2017). Is there a relationship between primary school children's enjoyment of recess physical activities and health-related quality of life? A cross-sectional exploratory study. *Health Promotion Journal of Australia*, 28(1), 37-43. doi: 10.1071/HE15128
- Johnson, R. B., & Onwuegbuzie, A. J. (2004). Mixed methods research: A research paradigm whose time has come. *Educational researcher*, 33(7), 14-26. doi: 10.3102/0013189X033007014
- Kalyva, P. (2016). *Psycho-koinoniki symperifora kai diaposopikes dexiotites se paidia pou zoun se idrymata*. [Psycho-social behavior and interpersonal skills in children living in institutions.]. (Doctoral dissertation, National and Kapodistrian University of Athens. School of Philosophy. Department of Psychology). Retrieved from <https://www.didaktorika.gr>
- Kearns, A., Whitley, E., Tannahill, C., & Ellaway, A. (2015). Loneliness, social relations and health and well-being in deprived communities. *Psychology, health & medicine*, 20(3), 332-344. doi: 10.1080/13548506.2014.940354
- Kiambi, E. G., & Mugambi, M. M. (2017). Factors influencing performance of orphans and vulnerable children projects in Imenti North Sub county, Meru country, Kenya. *International Academic Journal of Information Sciences and Project Management*, 2(1), 179-196.
- Kiss, E., Kapornai, K., Baji, I., Mayer, L., & Vetró, Á. (2009). Assessing quality of life: mother-child agreement in depressed and non-depressed Hungarian. *European child & adolescent psychiatry*, 18(5), 265-273. doi: 10.1007/s00787-008-0727-3
- Kolayış, H., Sarı, İ., Soyer, F., & Gürhan, L. (2011). Effect of the physical activities on orphans' anxiety and self esteem. *Anxiety*, 2(0.019).
- Konijn, C., Admiraal, S., Baart, J., van Rooij, F., Stams, G. J., Colonna, C., ... & Assink, M. (2019). Foster care placement instability: A meta-analytic review. *Children and Youth Services Review*, 96, 483-499. doi: 10.1016/j.childyouth.2018.12.002
- Leslie, L. K., James, S., Monn, A., Kauten, M. C., Zhang, J., & Aarons, G. (2010). Health-risk behaviors in young adolescents in the child welfare system. *Journal of Adolescent Health*, 47(1), 26-34. doi:10.1016/j.jadohealth.2009.12.032
- Link, B. G., & Phelan, J. C. (2001). Conceptualizing stigma. *Annual review of Sociology*, 27(1), 363-385.
- Lyons, J. S., Uziel-Miller, N. D., Reyes, F., & Sokol, P. T. (2000). Strengths of children and adolescents in residential settings: Prevalence and associations with psychopathology and discharge placement. *Journal of*

- the American Academy of Child & Adolescent Psychiatry*, 39(2), 176-181. doi: 10.1097/00004583-200002000-00017
- Macdonald, D., Rodger, S., Ziviani, J., Jenkins, D., Batch, J., & Jones, J. (2004). Physical activity as a dimension of family life for lower primary school children. *Sport, Education and Society*, 9(3), 307-325. doi: 10.1080/13573320412331302412
- Menzies-Lyth, I. M. (1985). The development of the self in children in institutions. *Journal of Child Psychotherapy*, 11(2), 49-64. doi: 10.1080/00754178508254774
- Moati, N. A. A. (2014). Effect of a motor physical program on psychologically personal social coordination and the sense of loneliness in children deprived of family care. *Interaction*, 7, 294. doi: 10.21608/jass.2014.84767
- Orben, A., Tomova, L., & Blakemore, S. J. (2020). The effects of social deprivation on adolescent development and mental health. *The Lancet Child & Adolescent Health*, 4(8), 634-640. doi: 10.1016/S2352-4642(20)30186-3
- Purohit, S. P., & Pradhan, B. (2017). Effect of yoga program on executive functions of adolescents dwelling in an orphan home: A randomized controlled study. *Journal of traditional and complementary medicine*, 7(1), 99-105. doi: 10.1016/j.jtcme.2016.03.001
- Purohit, S. P., Pradhan, B., & Nagendra, H. R. (2016a). Effect of yoga on EUROFIT physical fitness parameters on adolescents dwelling in an orphan home: A randomized control study. *Vulnerable Children and Youth Studies*, 11(1), 33-46. doi: 10.1080/17450128.2016.1139764
- Purohit, S. P., Pradhan, B., & Nagendra, H. R. (2016b). Yoga as a preventive therapy for loneliness in orphan adolescents. *Indian Journal of Health & Wellbeing*, 7(1).
- Purohit, S. P., Pradhan, B., Mohanty, S., & Nagendra, H. R. (2015). Effect of yoga program on minimum muscular fitness of orphan adolescents by using kraus-weber test: A randomized wait-list controlled study. *Indian Journal of Positive Psychology*, 6(4), 389.
- Quarmby, T. (2014). Sport and physical activity in the lives of looked-after children: A 'hidden group' in research, policy and practice. *Sport, education and society*, 19(7), 944-958. doi: 10.1080/13573322.2013.860894
- Ramadan Bekhit, A. (2014). The Effect of the Educational Program of Basketball on the Skills Variables and Reducing Behavioral Deviations of Orphans Children. *Journal of Applied Sports Science*, 4(3), 122-126. doi: 10.21608/jass.2014.84762
- Ravens-Sieberer, U., & Bullinger, M. (2000). Questionnaire for measuring health related quality of life in children and adolescents. Revised Version. *Recuperado de: <http://kindl.org/cms/wpcontent/uploads/2009/11/ManEnglish.pdf>*.
- Reid Chasiakos, Y. L., Radesky, J., Christakis, D., Moreno, M. A., Cross, C. (2016). Council on Communications and Media. Children and adolescents and digital media. *Pediatrics*, 138(5), 25-93. doi: 10.1542/peds.2016-2593
- Rideout, V. J., Foehr, U. G., & Roberts, D. F. (2010). *Generation M<sup>2</sup>: Media in the lives of 8 to 18-year-olds*. Henry J. Kaiser Family Foundation.
- Rotsika, V., Coccossis, M., Vlassopoulos, M., Papaeleftheriou, E., Sakellariou, K., Anagnostopoulos, D. C., ... & Skevington, S. (2011). Does the subjective quality of life of children with specific learning disabilities (SpLD) agree with their parents' proxy reports?. *Quality of Life Research*, 20(8), 1271-1278.
- Rotsika, V., Vlassopoulos, M., Kokkevi, A., Fragkaki, I., Anagnostopoulos, D. C., Lazaratou, H., & Ginieri Coccossis, M. (2016). Comparing immigrant children with native Greek in self-reported-Quality of Life. *Psychiatriki*, 27(1), 37-43.
- Tadesse, S., Dereje, F., & Belay, M. (2014). Psychosocial wellbeing of orphan and vulnerable children at orphanages in Gondar Town, North West Ethiopia. *Journal of Public Health and Epidemiology*, 6(10), 293-301. doi: 10.5897/JPHE2014.0648
- Smith, A. L. (2003). Peer relationships in physical activity contexts: A road less traveled in youth sport and exercise psychology research. *Psychology of sport and Exercise*, 4(1), 25-39. doi: 10.1016/S1469-0292(02)00015-8
- Smyke, A. T., Dumitrescu, A., & Zeanah, C. H. (2002). Attachment disturbances in young children. I: The continuum of caretaking casualty. *Journal of the American Academy of Child & Adolescent Psychiatry*, 41(8), 972-982. doi: 10.1097/00004583-200208000-00016
- Soenens, B., & Vansteenkiste, M. (2010). A theoretical upgrade of the concept of parental psychological control: Proposing new insights on the basis of self-determination theory. *Developmental Review*, 30(1), 74-99. doi: 10.1016/j.dr.2009.11.001
- Tarullo, A. R., Bruce, J., & Gunnar, M. R. (2007). False belief and emotion understanding in post-institutionalized children. *Social Development*, 16(1), 57-78. doi: 10.1111/j.1467-9507.2007.00372.x
- Tümekaya, S. (2005). Ailesi yanında ve yetistirme yurdunda kalan ergenlerin umutsuzluk duzeylerinin karsilastirilmesi. *Journal of Turkish Educational Sciences*, 3(4), 445-459.
- Vidali, L. E., Vidalis, A., Ravens-Sieberer, U., & Bullinger, M. (2001). H elliniki ekdosi tou erotimatologiou KINDL®. [The Greek version of the KINDL® questionnaire.]. *Ippokratia*, 5 (3), 124-135.
- Whoqol Group. (1995). The World Health Organization quality of life assessment (Whoqol): position paper from the World Health Organization. *Social Science & Medicine*, 41(10), 1403-1409. doi: 10.1016/0277-9536(95)00112-K
- World Health Organization. (2015). Measuring quality of life. 1997. <https://www.who.int/tools/whoqol>

**UTICAJ PROGRAMA FIZIČKE AKTIVNOSTI  
NA POBOLJŠANJE KVALITETA ŽIVOTA MLADIH KOJI ŽIVE  
U DOMU ZA NEZBRINUTU DECU:  
STUDIJA MEŠOVITIH METODA**

*Smatra se da fizička aktivnost ima pozitivan uticaj na kvalitet života mladih koji žive u institucijama za nezbrinutu decu. Međutim, osobe koje deca smatraju značajnim mogu uticati na njihovu percepciju fizičke aktivnosti. Cilj ovog istraživanja bio je da se (a) istraži uticaj programa fizičke aktivnosti na kvalitet života mladih ljudi koji žive u instituciji za nezbrinutu decu i (b) da se utvrdi uloga koju odnosi formirani u ovoj instituciji igraju u postizanju ciljeva samog programa. Za potrebe analize koristili smo studiju mešovutih metoda. Istraživanje je sprovedeno u domu za nezbrinutu decu u mestu Atika u Grčkoj. Dvanaest od 13 dečaka smeštenih u domu ( $Mage = 13.08 \pm 2.43$  years) učestvovalo je u programu fizičke aktivnosti u trajanju od deset nedelja, koji se sprovodio u samoj instituciji. Dečaci i jedan vaspitač popunili su KINDL® upitnik pre i nakon implementacije programa. Kvalitativni podaci prikupljeni su obzervacijom i tokom polustrukturisanih intervjua sa dečacima kao i sa šestoro njihovih vaspitača. Rezultati pokazuju da je nivo kvaliteta njihovog života nizak; a uočen je i statistički značajan pad u ukupnim KINDL® rezultatima ( $p = .033$ ) i rezultatima Skale emotivnog zadovoljstva ( $p = .013$ ). Rezultati su ukazali na to da su deca iz doma sporadično učestvovala u program fizičke aktivnosti, iako su tvrdili da im je učestvovanje bilo važno. Faktori odnosa između pojedinaca i između grupa pojedinaca u domu identifikovani su kao prepreka za učešće u programu fizičke aktivnosti. Vrlo je verovatno da život u instituciji dovodi do značajnog pada kvaliteta života mladih ljudi koji se ne može prevazići njihovim učešćem u programu fizičke aktivnosti.*

*Ključne reči: sport, deca iz doma za nezbrinutu decu, dobrobit, zdravlje*