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Socio-Demographic Correlates of Barriers to Access Healthcare Services Among Children in Post-Communist Albania

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Abstract: Access to healthcare services is an essential component of promoting public health and sustainable development. Our aim was to assess socio-demographic correlates of barriers to access healthcare services among children in Albania, a post-communist country in Europe. An online survey was conducted in September 2022, including a nationwide representative sample of 7831 schoolchildren (≈54% girls) pertinent to grades 6-9 from all regions of Albania. A structured and anonymous questionnaire was administered to all children inquiring about a range of potential barriers to access healthcare services. Overall, about 42% of the children reported that they had barriers to access healthcare services. There were no gender differences, but significant: ethnic differences (51% among Roma/Egyptian children vs. 42% among the general sample of the children); urban/rural differences (46% rural vs. 39% urban); and socioeconomic differences (52% among children with a lower maternal education vs. 31% among children with a higher maternal education; 66% among children from poor families vs. 35% among children with a higher family income). In transitional Albania, children residing in rural areas, children from Roma and/or Egyptian communities and especially those pertinent to low socioeconomic families report considerably more barriers to access healthcare services, which is a cause of concern.

Keywords: access to healthcare; Albania; barriers; children; schoolchildren; sociodemographic factors

1. Introduction

Basic healthcare services are defined as the least healthcare needed to maintain sufficient health and ensure effective disease protection [1]. Hence, access to healthcare services is an essential component of promoting public health and is a critical factor for health and economic sustainability [2,3]. Furthermore, access to healthcare is one of the most important challenges guiding the development of the healthcare systems in the Sustainable Development Goals era [3]. Uneven distribution of healthcare services stands as the primary barrier to achieving both health equity [4,5], sustainable development objectives [3,5] and developing sustainable healthcare systems [3,5,6].

Access to healthcare services exists when services are available in sufficient supply and when there is an opportunity to receive healthcare when needed and in a timely manner [7]. Barriers to healthcare access constitute factors that prevent an individual or a group of individuals from obtaining essential medical care [8]. Barriers to health services may arise in the presence of financial, organizational, social, or cultural issues pertinent to different communities [7,9]. However, barriers and obstacles to healthcare are multifactorial and have been categorized as systemic, sociocultural, or individual barriers [8,10].

Individual barriers denote characteristics unique to individuals which hinder their access to healthcare services [8,10,11]. Such individual factors may include lack of time due to overwork or overburden with various responsibilities, negative previous experiences with the healthcare services including discrimination, or presence of diseases that jeopardize access to healthcare services [11]. In

particular, disabled individuals face additional obstacles and difficulties to access health services due to their medical conditions and also due to their dependency on family assistance and specialized transportation [11,12]. In addition, ensuring equal access to healthcare is crucial for building healthy cities.

Nevertheless, individual factors, also referred to as intrapersonal factors [13], are also associated with such individual characteristics as knowledge, attitudes, behaviour, and skills [13,14]. As a matter of fact, a fairly recent review reported that the most frequent individual level barriers to access healthcare services consist of scarce knowledge of healthcare services and negative beliefs and experiences with previous care encounters [13].

Children may face some additional and/or specific barriers to access healthcare services when needed as, among other things, they are dependent on their parents/caregivers. Regardless of the enormous progress towards achieving universal health coverage, children in low-and middle-income countries may lack access to some essential healthcare services [15,16]. Lack of access to health services can lead to poorer health in children which hinders school attendance and school achievements, social relationships, quality of life and employment opportunities in adulthood [16].

In 1991, following the breakdown of the communist regime, Albania embarked in a market-oriented economy characterized by tremendous changes in political and socioeconomic system, but also in the health care sector [17]. Albania has experienced an unparalleled level of emigration, which currently persists [18]. The net migration rate in Albania is estimated from -5% to -10%, which has led to a loss of >300,000 people only due to emigration in the past two decades [18]. Notwithstanding an enormous progress that Albania has made regarding improvement of its healthcare system especially in the past decade, access to healthcare remains limited, particularly in rural and remote areas of the country [19]. This limitation can hinder efforts to improve public health and promote sustainable development [3].

The available information indicates that a substantial proportion of Albanian children has poor knowledge about healthy behaviours and healthy lifestyle practices [20,21]. Poverty and lack of access to sufficient food may still play an important role in the Albanian context [20,21]. Furthermore, the price of healthy foods is an important factor that prevents families from healthy eating [20,21].

However, to date, there are no scientific reports about access to healthcare services among children in Albania. In this framework, we aimed at assessing the association of barriers to access healthcare services with socio-demographic characteristics of schoolchildren in post-communist Albania. We hypothesised a higher degree of barriers to access healthcare services among schoolchildren pertinent to disadvantaged socioeconomic categories and marginalized groupings, based on a previous study from Albania conducted among adult primary health care users [22].

2. Materials and Methods

An online survey (cross-sectional study) was conducted in September 2022 including a nationwide sample of children pertinent to 9-year schools in Albania.

2.1. Study Population

The study population consisted of a nationwide sample of schoolchildren pertinent to grades 6-9 (age-group: 12-15 years) from all regions of Albania. The sampling frame (registered schoolchildren pertinent to grades 6-9) was available from the General Directorate of Preuniversity Education, an institution which is under the auspices of the Albanian Ministry of Education and Sport.

WIN-PEPI (<http://www.brixtonhealth.com/pepi4windows.html>) was employed for calculation of the sample size based on different hypotheses related to the prevalence of selected barriers related to children's access to healthcare services. Based on fairly conservative assumptions, the minimum required sample size was estimated at around 1400 participants. However, we decided to invite all registered schoolchildren pertinent to grades 6-9 in Albania (N=123,998), as this was an online survey. Actually, as the survey was available online for the whole duration of September 2022, the number of respondents exceeded considerably the minimum required sample size.

At the end of September 2022, when the online survey was closed, there were 7928 participants (6.4% of all registered schoolchildren pertinent to grades 6-9) who had completed the questionnaire. Of these, 97 questionnaires were either partially completed (n=59), or invalid (n=38). The final sample included in the analysis consisted of 7831 schoolchildren (about 54% girls) aged 12-15 years (grades 6-9). Of note, survey participants (n=7928) resembled the socio-demographic characteristics (gender, age, place of residence) of the overall number of registered schoolchildren pertinent to grades 6-9 (N=123,998).

2.2. Data Collection

Data collection consisted of a structured, anonymous and self-administered questionnaire which was completed online by all those children who initially agreed to participate in the survey. Schoolchildren used the computer labs available at their respective schools and/or their personal/family devices (PCs, tablets, or smartphones) for completing the online survey.

Assessment of barriers to access healthcare services was based on a series of questions asking children about the perceived (self-reported) obstacles/difficulties to access healthcare including the following factors: i) distance to healthcare facility; ii) nonavailability of the parents/caregivers to accompany their children to healthcare facilities; iii) lack of confidentiality when raising/disclosing a medical problem; iv) lack of school psychologist and/or health personnel to provide counselling and advise; v) other obstacles, as reported by the children. Potential responses to each of the questions of the instrument were as follows: "yes" vs. "no".

In addition, regardless of the specific type of difficulty/obstacle/barrier perceived (or not perceived), all children were asked a general question whether they perceived "any barriers to access healthcare services" (potential responses: "yes" vs. "no"). This was the main dependent (outcome) variable used for in-depth statistical analyses.

Socio-demographic factors included gender (boys vs. girls), age (12, 13, 14 and 15 years, which in the analysis was also dichotomized into: 12-13 years vs. 14-15 years), place of residence (urban vs. rural areas), ethnicity (ethnic Albanians vs. Roma/Egyptian communities), maternal education (high, middle, low, don't know, which in the analysis was also dichotomized into: high education vs. other groups), and family economic situation (very good, good, average, poor and very poor, which in the analysis was also trichotomized into: very good/good, average and poor/very poor).

2.3. Statistical Analysis

Chi-square test was used to compare the distribution of socio-demographic characteristics (age, place of residence, ethnicity, maternal education and family economic situation) between boys and girls included in this study. In addition, Fisher's exact test was used to compare the distribution of barriers to access healthcare services between boys and girls.

Conversely, binary logistic regression was employed to assess the association of socio-demographic characteristics (gender, age, place of residence, ethnicity, maternal education and family economic situation) with barriers of schoolchildren to access healthcare services (outcome variable). Initially, crude (unadjusted) odds ratios (OR: barriers vs. no barriers to access healthcare services), their respective 95% confidence intervals (95%CIs) and p-values were calculated. Subsequently, multivariable-adjusted ORs, their respective 95%CIs and p-values were calculated in binary logistic regression models adjusted simultaneously for all sociodemographic factors [gender, age-group (12-13 years vs. 14-15 years), place of residence, ethnicity, maternal education (high education vs. other groups), and family economic situation (very good/good, average, poor/very poor)]. Hosmer-Lemeshow test was used to assess the overall goodness-of-fit of the multivariable-adjusted regression models; all analyses fitted the criterion [23].

In all cases, a p-value ≤ 0.05 was considered as statistically significant. Statistical Package for Social Sciences (SPSS, version 19.0) was used for all the statistical analyses.

2.4. Ethical Considerations

The study was approved by the Albanian Ministry of Education and Sport in June 2022. In addition, the Commissioner for Information in Albania was informed about the survey. All schoolchildren were informed by their respective teachers about the aim and procedures of the study and were explained in sufficient detail particularly the aspects related to anonymousness of the survey and the successive aggregated data analysis. Passive consent was sought from the parents through teachers from each respective school. Apparently, the content of the questionnaire was not deemed sensitive, as there were no parents/caregivers who explicitly objected to participation of their children after being informed about the study.

3. Results

Of the overall 7831 schoolchildren included in the analysis, 4204 (~54%) were girls and 3627 (~46%) were boys. Boys were somehow younger than girls ($P<0.001$) [Table 1].

Table 1. Distribution of socio-demographic characteristics in a nationwide sample of Albanian schoolchildren included in the online survey conducted in September 2022

Socio-demographic factors	Total (N=7831)	Girls (N=4204)	Boys (N=3627)	P ²
Age:				
12 years	2037 (26.0) ¹	988 (23.5)	1049 (28.9)	
13 years	1792 (22.9)	951 (22.6)	841 (23.2)	<0.001
14 years	2128 (27.2)	1193 (28.4)	935 (25.8)	
15 years	1874 (23.9)	1072 (25.5)	802 (22.1)	
Place of residence:				
Urban areas	4838 (62.0)	2517 (60.1)	2321 (64.2)	<0.001
Rural areas	2962 (38.0)	1669 (39.9)	1293 (35.8)	
Ethnicity:				
Roma/Egyptian community	174 (2.3)	77 (1.9)	97 (2.8)	
Ethnic Albanian	7299 (97.7)	3967 (98.1)	3332 (97.2)	0.009
Mother's education:				
High	2517 (32.5)	1309 (31.4)	1208 (33.8)	
Middle	3728 (48.2)	2060 (49.5)	1668 (46.7)	0.003
Low	1235 (16.0)	677 (16.3)	558 (15.6)	
Don't know	260 (3.4)	119 (2.9)	141 (3.9)	
Economic situation:				
Very good	3068 (39.6)	1708 (41.1)	1360 (38.0)	
Good	1439 (18.6)	774 (18.6)	665 (18.6)	
Average	2760 (35.7)	1457 (35.0)	1303 (36.4)	0.005
Poor	397 (5.1)	185 (4.4)	212 (5.9)	
Very poor	76 (1.0)	36 (0.9)	40 (1.1)	

¹ Absolute numbers and their respective column percentages (in parentheses). Discrepancies in the totals are due to the following missing covariate values: n=31 for residence, n=358 for ethnicity, n=110 for mother's education, and n=91 for economic situation.

² P-values from the chi-square test for comparison of independent proportions.

Overall, 38% of schoolchildren were from rural areas (40% in girls vs. 36% in boys, $P<0.01$). Only 2.3% of participants belonged to Roma and Egyptian minorities (1.9% in girls vs. 2.8% in boys,

P=0.01). Almost one-third of schoolchildren (33%) reported a higher maternal education (31% in girls vs. 34% in boys, P<0.01) and further 48% an average maternal education. On the whole, 40% of schoolchildren reported a very good economic situation (41% in girls vs. 38% in boys, P=0.01), further 19% had a good economic situation, whereas 6% reported a poor and/or a very poor economic situation (5% in girls vs. 7% in boys) [Table 1].

Overall, 29% of schoolchildren responded positively that “distance to healthcare facility” is an obstacle/difficulty/barrier to access healthcare services (Table 2).

Table 2. Barriers to access healthcare services by gender of schoolchildren included in the study

Barriers to access healthcare services	Total (N=7831)	Girls (N=4204)	Boys (N=3627)	P ²
Distance to healthcare facility:				
Yes	2244 (29.1) ¹	1200 (29.0)	1044 (29.4)	0.706
No	5456 (70.9)	2945 (71.0)	2511 (70.6)	
Nonavailability of the parents/caregivers to accompany children to healthcare facilities:				0.327
Yes	1393 (18.1)	732 (17.7)	661 (18.6)	
No	6293 (81.9)	3400 (82.3)	2893 (81.4)	
Lack of confidentiality when raising/disclosing a medical problem:				0.916
Yes	1917 (25.3)	1032 (25.3)	885 (25.2)	
No	5668 (74.7)	3042 (74.7)	2626 (74.8)	
Lack of school psychologist and/or health personnel to provide counselling and advise:				0.516
Yes	1596 (20.9)	847 (20.6)	749 (21.2)	
No	6055 (79.1)	3269 (79.4)	2786 (78.8)	
Other barriers:				
Yes	225 (2.9)	120 (2.9)	105 (3.0)	0.946
No	7408 (97.1)	3977 (97.1)	3431 (97.0)	
Any barriers:				
No obstacles at all	4424 (58.1)	2374 (58.0)	2050 (58.3)	0.798
At least one obstacle	3189 (41.9)	1721 (42.0)	1468 (41.7)	

¹ Absolute numbers and their respective row percentages (in parentheses). Discrepancies in the totals are due to the following missing covariate values: n=131 for “distance”, n=145 for “nonavailability of the parents”, n=246 for “lack of confidentiality”, n=180 for “lack of school psychologist/health personnel”, n=198 for “other obstacles”, and n=218 for “no obstacles/difficulties at all”.

² P-values from Fisher’s exact test.

Furthermore, 18% of participants reported that “nonavailability of the caregivers” was an obstacle/difficulty/barrier to access healthcare services. In addition, “lack of confidentiality” was reported by one out four children as another obstacle for accessing services. Also, “lack of psychologist/health personnel at school” was reported by one in five schoolchildren. Only 3% of schoolchildren reported other obstacles/difficulties/barriers (without specifying the type) for

accessing healthcare services. There were no gender differences for any type of obstacles/difficulties/barriers to access healthcare services.

When asked about the overall barriers to access healthcare services regardless of their type, on the whole, 42% of schoolchildren responded positively, whereas the remaining 58% did not perceive any obstacles/difficulties/barriers at all (Table 2). This last variable ("any obstacles/difficulties/barriers") was used as dependent (outcome) variable in further analyses.

Table 3 presents the crude (unadjusted) association of "any obstacles/difficulties/barriers to access healthcare services" (response categories: "no" vs. "yes") with socio-demographic characteristics of schoolchildren included in the study.

Table 3. Distribution of "any barriers to access healthcare services" by socio-demographic characteristics of schoolchildren included in the study (N=7831)

Socio-demographic characteristic	No barriers (N=4424)	Barriers (N=3189)	OR (95%CI) ²	P ²
Gender:				
Boys	2374 (58.0) ¹	1721 (42.0)	1.00 (reference)	0.792
Girls	2050 (58.3)	1468 (41.7)	1.02 (0.92-1.11)	
Age:			0.109 (3) ³	
12 years	1130 (57.1)	850 (42.9)	1.10 (0.97-1.25)	0.155
13 years	985 (56.3)	764 (43.7)	1.13 (0.99-1.29)	0.067
14 years	1233 (59.5)	838 (40.5)	0.99 (0.87-1.13)	0.906
15 years	1076 (59.3)	737 (40.7)	1.00 (reference)	-
Age-group:				
12-13 years	2115 (56.7)	1614 (43.3)	1.12 (1.02-1.23)	0.016
14-15 years	2309 (59.4)	1575 (40.6)	1.00 (reference)	
Place of residence:				
Urban areas	2856 (60.7)	1852 (39.3)	1.00 (reference)	<0.001
Rural areas	1550 (53.9)	1326 (46.1)	1.32 (1.20-1.45)	
Ethnicity:				
Roma/Egyptian	83 (49.1)	86 (50.9)	1.46 (1.07-1.97)	0.016
Ethnic Albanian	4151 (58.4)	2956 (41.6)	1.00 (reference)	
Mother's education:			<0.001 (3)	
High	2049 (69.3)	909 (30.7)	1.00 (reference)	-
Middle	1611 (52.1)	1484 (47.9)	2.08 (1.87-2.31)	<0.001
Low	633 (48.3)	677 (51.7)	2.41 (2.11-2.76)	<0.001
Don't know	109 (51.2)	104 (48.8)	2.15 (1.63-2.85)	<0.001
Mother's education:				
High	2049 (69.3)	909 (30.7)	1.00 (reference)	<0.001
Middle/Low/Don't know	2353 (51.0)	2265 (49.0)	2.17 (1.97-2.39)	
Economic situation:			<0.001 (4)	
Very good	1967 (65.0)	1057 (35.0)	1.00 (reference)	-
Good	737 (52.9)	656 (47.1)	1.66 (1.46-1.89)	<0.001
Average	1483 (54.8)	1221 (45.2)	1.53 (1.38-1.70)	<0.001
Poor	191 (49.1)	198 (50.9)	1.93 (1.56-2.39)	<0.001
Very poor	26 (34.2)	50 (65.8)	3.58 (2.22-5.78)	<0.001

Economic situation:					<0.001 (2)
Very good/good	2704 (61.2)	1713 (38.8)	1.00 (reference)	-	
Average	1483 (54.8)	1221 (45.2)	1.30 (1.18-1.43)	<0.001	
Poor/very poor	217 (46.7)	248 (53.3)	1.80 (1.49-2.19)	<0.001	

¹ Absolute numbers and their respective row percentages (in parentheses). Discrepancies in the totals are due to the following missing covariate values: n=31 for residence, n=358 for ethnicity, n=110 for mother's education, and n=91 for economic situation.

² Odds ratios (OR: obstacles/difficulties/barriers vs. no obstacles/difficulties/barriers to access healthcare services), 95% confidence intervals (95%CIs) and p-values from crude (unadjusted) binary logistic regression models.

³ Overall p-value and degrees of freedom (in parentheses).

There were no gender differences, but an inverse association with age-group, with younger children (12-13 years) reporting a slightly higher degree of barriers to access healthcare services compared with their older counterparts (14-15 years): 43% vs. 41%, respectively (P=0.02). Furthermore, schoolchildren from rural areas reported a higher degree of barriers to access healthcare services compared with children from urban areas (46% vs. 39%, respectively; P<0.01). In addition, children pertinent to Roma/Egyptian communities reported a significantly higher level of barriers to access healthcare services compared with the ethnic Albanians (51% vs. 42%, respectively; P=0.02). Also, there was a strong and graded relationship with maternal education: 31% of schoolchildren with a high maternal education reported barriers to access healthcare services compared with 48% of those with middle maternal education and 52% of children with a low maternal education (overall P<0.01). Likewise, there was evidence of a strong association with the family economic situation: 39% of schoolchildren with a good and/or very good economic situation reported barriers to access healthcare services compared with 45% of those with an average economic situation and 53% of children with a poor and/or very poor economic situation (overall P<0.01) [Table 3].

In multivariable-adjusted binary logistic regression models [Table 4] with "any obstacles/difficulties/barriers" introduced as dependent (outcome) variable (OR: "yes" vs. "no") and all socio-demographic characteristics introduced simultaneously into the models, there was evidence of a mild positive relationship with age-group (OR=1.2, 95%CI=1.1-1.3) and rural residence (OR=1.1, 95%CI=1.0-1.3).

Table 4. Association of barriers to access healthcare services with socio-demographic characteristics of schoolchildren; multivariable-adjusted results from binary logistic regression

Variable	OR ¹	95%CI ¹	P ¹
Gender:			
Boys	1.00	reference	0.827
Girls	1.01	0.92-1.11	
Age-group:			
14-15 years	1.00	reference	0.001
12-13 years	1.18	1.07-1.29	
Place of residence:			
Urban areas	1.00	reference	0.019
Rural areas	1.13	1.02-1.25	
Ethnicity:			
Ethnic Albanian Roma/Egyptian	1.29	0.94-1.78	0.113
Mother's education:			
High	1.00	reference	<0.001
Middle/Low/Don't know	2.06	1.86-2.28	
Economic situation:			0.002 (2) ²
Very good/good	1.00	reference	-
Average	1.12	1.01-1.24	0.034
Poor/very poor	1.39	1.13-1.70	0.002

¹ Odds ratios (OR: obstacles/difficulties/barriers vs. no obstacles/difficulties/barriers to access healthcare services), 95% confidence intervals (95%CIs) and p-values from multivariable-adjusted binary logistic regression models. All covariates presented in the table were entered simultaneously into the binary logistic regression models.

² Overall p-value and degrees of freedom (in parentheses).

The association with ethnicity was attenuated and lost its statistical significance (OR=1.3, 95%CI=0.9-1.8). On the other hand, upon simultaneous adjustment for all covariates, the positive relationship of barriers to access healthcare services with a non-high maternal education persisted strongly (OR=2.1, 95%CI=1.9-2.3). Furthermore, in multivariable-adjusted models, the positive association of barriers to access healthcare services with poor/very poor economic situation was attenuated but remained statistically significant (OR=1.4, 95%CI=1.1-1.7) [Table 4].

4. Discussion

The evidence from our study conducted in transitional Albania indicates a relatively high degree of self-perceived barriers ($\approx 42\%$) to access healthcare services by schoolchildren. Furthermore, our findings indicate that Albanian children residing in rural areas, children from Roma and/or Egyptian communities and especially those pertinent to low socioeconomic families perceive substantially more barriers to access healthcare services.

Of note, most of the studies on this topic have employed a qualitative research methodology and do not provide nationally representative data on the prevalence of barriers to access healthcare services [24]. This is especially the case for studies including children's populations in low-and middle-income countries [25]. Indeed, while there is a significant body of literature across many low-and middle-income which indicate the presence of barriers to healthcare among children and young people [26,27], quantitative data on the prevalence of healthcare access among these population

categories are scant, an issue which has been also acknowledged by the Lancet commission on adolescents [28].

Therefore, it is difficult to compare our quantitative findings related to the prevalence of self-perceived barriers to access healthcare with literature reports. Nevertheless, our findings related to socio-demographic correlates of self-reported barriers to access healthcare services are generally compatible with previous reports from the international literature [7,8,10-13,16,24-26,28].

It has been reported that young individuals are less likely to access healthcare compared to other age-groups, and present later when they seek care which results in poor prognosis [25,29]. In addition, there have been several reports from many countries indicating that young people typically report poorer experiences when they access healthcare compared to other groups [30,31]. We did not inquire about children's previous experiences with medical encounters, but obtained evidence that one-fourth of them perceived the lack of confidentiality as a barrier to access healthcare services. Seemingly, this is a proxy measure for prior experiences with healthcare services.

A recent scoping review reported on the barriers to accessing healthcare among young people in 30 low-middle income countries [25]. Overall, significantly greater barriers to accessing healthcare were reported in the younger populations compared to older adults [25]. Therefore, the available evidence suggests that young people often face additional barriers to accessing healthcare in many low-middle income countries, which resembles findings across many high-income countries [25]. Albania cannot be exempted from this "pattern", according to which, children and young people face additional barriers, irrespective of socioeconomic development [32].

In our study, we did not ask children to report directly on financial barriers to access healthcare services, as this question is not deemed age-appropriate in the Albanian context. However, the available evidence suggests that financial constraints constitute an important barrier to access healthcare services in Albania [33]. On the whole, in 2018, out-of-pocket payments comprised about 45% of the overall health expenditure in Albania [34]. This share is very high and constitutes a significant financial barrier to access healthcare services, especially for the economically disadvantaged population categories including children and young individuals pertinent to these marginalized groupings.

Our study may have several limitations pertinent to selection bias (due to sample representativeness), possibility of information bias (self-reported instrument), as well as the issue of study design. Our study included a nationwide sample of schoolchildren aged 12-15 years (grades 6-9). All registered schoolchildren of this age-group were invited to participate over a 1-month period (September 2022). During this time period, 6.4% of schoolchildren completed the online survey which, in absolute terms, constitute a fairly large sample size. More importantly, there were no significant differences regarding the distribution of socio-demographic factors between survey participants and the overall number of registered schoolchildren attending grades 6-9, which is comforting. The instrument of data collection consisted of a previously validated (in a sample of schoolchildren in Tirana, the Albanian capital), simple (straightforward) and anonymous questionnaire which was completed online by the children at their convenience (either by using the computer labs available at their respective schools, or their personal/family devices at home premises). Nevertheless, computer labs are not available and/or accessible in all 9-year schools in Albania, and access to PCs, tablets or smartphones should not be taken for granted for all children in Albania. Also, despite the lack of plausible reasons for differential reporting between children pertinent to different socio-demographic categories, the possibility of information bias cannot be excluded completely. In addition, importantly, the reported barriers of access to healthcare are self-perceptions by the children, which means that the extent of (perceived) barriers may not necessarily reflect the real magnitude (level) of barriers to access healthcare services. Finally, as this was a cross-sectional study, findings should be interpreted with extreme caution.

Regardless of the aforementioned potential limitations, our study provides useful evidence about self-perceived barriers to access healthcare services by schoolchildren in Albania, a post-communist country still struggling to reform its health care sector. Our findings concerning rural areas are compatible with previous reports which indicate that, in Albania, access to healthcare

services remains limited in rural areas, especially in remote parts of the country [19]. There are several challenges that need to be addressed to improve access to healthcare services in Albania, including geographic barriers, limited healthcare infrastructure, and financial barriers [19]. Regardless of the significant progress in improving healthcare infrastructure, there is still a shortage of adequate facilities in rural areas in Albania and especially a shortage of health professionals [19]. Also, the cost of healthcare services can be prohibitive, particularly for low-income households, posing significant financial barriers to accessing healthcare services [19,33].

Therefore, in order to improve access to healthcare services in Albania, several strategies should be simultaneously employed, including improvement of healthcare infrastructure, as well as implementation of adequate policies for retention and remuneration of healthcare professionals. In addition, strengthening of primary healthcare can help to improve the overall access to services and promote especially preventive and public health services [19]. Also, provision of financial support to low-income households to access healthcare services can help to reduce financial barriers and improve access to healthcare services. On an innovative aspect, utilization of technology, such as telemedicine, can help to improve access to healthcare services, particularly in remote areas of Albania where healthcare infrastructure and human resources are scarce.

5. Conclusions

Our findings from transitional Albania indicate that children residing in rural areas, children from selected minorities, and especially those pertinent to low socioeconomic categories report considerably more barriers to access healthcare services. Hence, more than three decades after the breakdown of the communist regime, on the face of it, Albania still faces several challenges regarding access to healthcare services, which should be a serious cause of concern for policymakers and decision-makers, because lack of access to healthcare services jeopardizes health equity [4,5], sustainable development objectives [3,5] and development of sustainable healthcare systems [3,5,6].

In conclusion, improving access to healthcare services in Albania and in other similar countries in transition requires a multifaceted approach that addresses geographic barriers, strengthens healthcare infrastructure and human resources, reduces financial barriers, and utilizes technology to improve healthcare delivery. Policymakers in all countries should be aware of the fact that access to healthcare services is an essential component of promoting public health and sustainable development.

Author Contributions: Conceptualization, I.M., S.V. and G.B.; methodology, I.M., S.V. and G.B.; formal analysis, I.M., S.V. and G.B.; investigation, A.A., S.X. and K.M.; writing—original draft preparation, I.M., S.V. and G.B.; writing—review and editing, A.A., S.X. and K.M.; funding acquisition, all authors. All authors have read and agreed to the published version of the manuscript.

Funding: This study was conducted in the framework of the “Schools for Health”, which is a project of the Swiss Development and Cooperation (SDC) Agency implemented in Albania (<http://shkollatpershendetin.al/en/>).

Institutional Review Board Statement: The study was approved by the Albanian Ministry of Education and Sport in June 2022.

Informed Consent Statement: All schoolchildren were informed about the aim and procedures of the study and were explained in sufficient detail particularly the aspects related to anonymousness of the survey and the successive aggregated data analysis. Passive consent was sought from the parents through teachers from each respective school.

Data Availability Statement: The data presented in this study is available on request from the corresponding author.

Acknowledgments: This study was conducted in the framework of the “Schools for Health”, which is a project of the Swiss Development and Cooperation (SDC) Agency implemented in Albania (<http://shkollatpershendetin.al/en/>).

Conflicts of Interest: The authors declare no conflict of interest.

References

1. *Mosby's pocket dictionary of medicine, nursing & health professions*; 6th ed. St. Louis, Elsevier, 2010.
2. Habib, S.; Khan, M.A.; Hamadneh, N.N. Gender Sensitivity in Accessing Healthcare Services: Evidence from Saudi Arabia. *Sustainability*. **2022**, *14*, 14690. <https://doi.org/10.3390/su142214690>.
3. Kruk, M.E.; Gage, A.D.; Arsenault, C.; et al. High-quality health systems in the Sustainable Development Goals era: Time for a revolution. *Lancet. Glob. Health*. **2018**, *6*, e1196-e1252.
4. Ashford, N.A.; Hall, R.P.; Arango-Quiroga, J.; Metaxas, K.A.; Showalter, A.L. Addressing Inequality: The First Step Beyond COVID-19 and Towards Sustainability. *Sustainability*. **2020**, *12*, 5404. <https://doi.org/10.3390/su12135404>.
5. Khosravi Kazazi, A.; Amiri, F.; Rahmani, Y.; Samouei, R.; Rabiei-Dastjerdi, H. A New Hybrid Model for Mapping Spatial Accessibility to Healthcare Services Using Machine Learning Methods. *Sustainability*. **2022**, *14*, 14106. <https://doi.org/10.3390/su142114106>.
6. Brătucu, G.; Tudor, A.I.M.; Dovleac, L.; Sumedrea, S.; Chițu, I.B.; Trifan, A. The Impact of New Technologies on Individuals' Health Perceptions in the European Union. *Sustainability*. **2020**, *12*, 10349. <https://doi.org/10.3390/su122410349>.
7. Adugna, M.B.; Nabbouh, F.; Shehata, S.; Ghahari, S. Barriers and facilitators to healthcare access for children with disabilities in low and middle income sub-Saharan African countries: a scoping review. *BMC. Health. Serv. Res.* **2020**, *20*, 15. doi: 10.1186/s12913-019-4822-6.
8. Riley, W.J. Health disparities: gaps in access, quality and affordability of medical care. *Trans. Am. Clin. Climatol. Assoc.* **2012**, *123*, 167-174.
9. Gulliford, M.; Figueiroa-Munoz, J.; Morgan, M.; Hughes, D.; Gibson, B.; Beech, R.; Hudson, M. What does 'access to health care' mean? *J. Health. Serv. Res. Policy*. **2002**, *7*, 186-188.
10. National Academies of Sciences, Engineering, and Medicine; Health and Medicine Division; Board on Population Health and Public Health Practice. Baciu A, Negussie Y, Geller A, et al., eds. *Communities in Action: Pathways to Health Equity*; National Academies Press (US), 2017.
11. Toy, J.; Gregory, A.; Rehmus, W. Barriers to healthcare access in pediatric dermatology: A systematic review. *Pediatr. Dermatol.* **2021**, *38*(Suppl 2), 13-19. doi: 10.1111/pde.14748.
12. Scheer, J.; Kroll, T.; Neri, M.T.; Beatty, P. Access barriers for persons with disabilities: the consumer's perspective. *J. Disabil. Policy. Stud.* **2003**, *13*, 221-230. doi.org/10.1177/104420730301300404.
13. Garney, W.; Wilson, K.; Ajayi, K.V.; Panjwani, S.; Love, S.M.; Flores, S.; Garcia, K.; Esquiv, C. Social-Ecological Barriers to Access to Healthcare for Adolescents: A Scoping Review. *Int. J. Environ. Res. Public. Health*. **2021**, *18*, 4138. doi: 10.3390/ijerph18084138.
14. McLeroy, K.R.; Bibeau, D.; Steckler, A.; Glanz, K. An Ecological Perspective on Health Promotion Programs. *Heal. Educ. Behav.* **1988**, *15*, 351-377.
15. World Health Organisation. Millennium Development Goals (MDGs) 2015. Available online: <http://www.who.int/mediacentre/factsheets/fs290/en/> (accessed on 21 March 2023).
16. Bright, T.; Felix, L.; Kuper, H.; Polack, S. Systematic review of strategies to increase access to health services among children over five in low- and middle-income countries. *Trop. Med. Int. Health*. **2018**, *23*, :476-507. doi: 10.1111/tmi.13044.
17. Nuri, B.; Tragakes, E. *Health care systems in transition: Albania*; Copenhagen: European Observatory on Health Care Systems; 2002. Available online: https://www.euro.who.int/__data/assets/pdf_file/0009/96426/E80089.pdf (accessed on 21 March 2023).
18. Institute of Statistics, Albania. *Migration and integration of migrants*; Available online: <http://www.instat.gov.al/al/temat/treguesit-demografik%C3%AB-dhe-social%C3%AB/migracioni-dhe-integrimi-i-migrant%C3%ABve/#tab2> (accessed on 21 March 2023).
19. World Health Organization, Regional Office for Europe. *Primary health care in Albania: rapid assessment*. Copenhagen: WHO Regional Office for Europe; 2018. Available online: <https://www.euro.who.int/en/health-topics/Health-systems/primary-health-care/publications/2018/primary-health-care-in-albania-rapid-assessment-2018> (accessed on 21 March 2023).
20. Hyska, J.; Burazeri, G.; Menza, V.; Dupouy, E. Assessing nutritional status and nutrition-related knowledge, attitudes and practices of Albanian schoolchildren to support school food and nutrition policies and programmes. *Food. Policy*. **2020**, *96*. doi.org/10.1016/j.foodpol.2020.101888.
21. Institute of Statistics, Institute of Public Health, and ICF. *Albania Demographic and Health Survey 2017-18*; Tirana, Albania; 2018. Available online: <https://www.unicef.org/albania/media/1761/file/adhs.pdf> (accessed on 21 March 2023).
22. Roshi, D.; Burazeri, G.; Schröder-Bäck, P.; Toçi, E.; Italia, S.; Ylli, A.; Brand, H. Understanding of Medication Information in Primary Health Care: A Cross-Sectional Study in a South Eastern European Population. *Front. Public. Health*. **2020**, *8*, 388. doi: 10.3389/fpubh.2020.00388.
23. Hosmer, D.; Lemeshow, S. *Applied logistic regression*; New York: Wiley & Sons; 1989.

24. Miteniece, E.; Pavlova, M.; Rechel, B.; Groot, W. Barriers to accessing adequate maternal care in Central and Eastern European countries: A systematic literature review. *Soc. Sci. Med.* **2017**, *177*, 1-8. doi: 10.1016/j.socscimed.2017.01.049.
25. Nachiappan, N.; Mackinnon, S.; Ndayizeye, J.P.; Greenfield, G.; Hargreaves, D. Barriers to accessing health care among young people in 30 low-middle income countries. *Health. Sci. Rep.* **2022**, *5*, e733. doi: 10.1002/hsr2.733.
26. United Nation Children Fund (UNICEF). *The state of the world's children: adolescence an age of opportunity*; 2011. Available online: https://www.unicef.org/sowc2011/pdfs/SOWC-2011-Main-Report_EN_02092011.pdf (accessed on 21 March 2023).
27. McIntyre, P. *Adolescent friendly health services*; WHO; 2002. Available online: https://apps.who.int/iris/bitstream/handle/10665/67923/WHO_FCH_CAH_02.14.pdf?sequence=1&isAllowed=y (accessed on 21 March 2023).
28. Patton, G.C.; Sawyer, S.M.; Santelli, J.S.; et al. Our future: a Lancet commission on adolescent health and wellbeing. *Lancet.* **2016**, *387*, 2423-2478. doi:10.1016/S0140-6736(16)00579-1.
29. Neinstein, L.S.; Irwin, C.E. Young adults remain worse off than adolescents. *J. Adolesc. Heal.* **2013**, *53*, 559-561. doi:10.1016/J.JADOHEALTH.2013.08.014.
30. Hargreaves, D.S.; Elliott, M.N.; Viner, R.M.; Richmond, T.K.; Schuster, M.A. Unmet health care need in US adolescents and adult health outcomes. *Pediatrics.* **2015**, *136*, 513-520. doi:10.1542/PEDS.2015-0237.
31. Fuentes, L.; Ingerick, M.; Jones, R.; Lindberg, L. Adolescents' and young adults' reports of barriers to confidential health care and receipt of contraceptive services. *J. Adolesc. Health.* **2018**, *62*, 36-43. doi:10.1016/J.JADOHEALTH.2017.10.011.
32. Hargreaves, D.S.; Greaves, F.; Levay, C.; et al. Mitchell, I.; Koch, U.; Esch, T.; Denny, S.; Frich, J.C.; Struijs, J.; Sheikh, A. Comparison of health care experience and access between young and older adults in 11 high-income countries. *J. Adolesc. Heal.* **2015**, *57*, 413-420. doi:10.1016/J.JADOHEALTH.2015.05.015.
33. World Health Organization. *Can people afford to pay for health care? New evidence on financial protection in Albania*; 2020. Available online: <https://apps.who.int/iris/bitstream/handle/10665/336390/9789289055291-eng.pdf> (accessed on 21 March 2023).
34. World Bank. *Out-of-pocket expenditure (% of current health expenditure): Albania*; [website]; Washington (DC); 2021. Available online: <https://data.worldbank.org/indicator/SH.XPD.OOPC.CH.ZS?locations=AL> (accessed on 21 March 2023).