

# Determinants of sexual and reproductive health concerns among youngsters in Albania during COVID-19 pandemic

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## Article Info

### Article history:

Received Aug 4, 2023

Revised Dec 1, 2023

Accepted Dec 10, 2023

### Keywords:

Albania

COVID-19

Dermatology

Outpatient visits

SARS-CoV-2

## ABSTRACT

The COVID-19 pandemic has affected all communities, including youngsters. Our aim was to assess the key sexual and reproductive health (SRH) concerns of young people in Albania during the pandemic as well as the factors associated with the main health concern. A cross-sectional study was carried out in Albania in 2021. Multivariable logistic regression analysis was used to assess the association of being concerned about mental health & psychological well-being, urgency for mental health information, and difficulty in getting mental health information with independent variables. In total 340 youngsters aged 14-30 years participated (66% female, 89% Albanian ethnicity, about 20% belonging to the LGBT community). Mental health & psychological well-being were the main SRH topics youngsters were concerned about, reported by 48% of them. About 37% of youngsters had an urgent need for mental health information during the pandemic and 18% experienced difficulty in getting this information. Being part of the LGBT community was associated with a significantly higher likelihood of being concerned about mental health (OR=3.15;95%CI:1.36-7.33), being in urgent need of mental health information (OR=3.68;95% CI:1.63-8.32) and experiencing difficulties in getting mental health information (OR=3.48;95% CI:1.49-8.13). Higher household income levels also increased the likelihood of being concerned about mental health (OR=4.28;95%CI:1.55-11.77) and being in urgent need of mental health information (OR=4.15;95%CI:1.43-12.01). In conclusion, young people in Albania have been concerned about various SRH topics during the COVID-19 pandemic, but the major concern was mental health & psychological well-being, especially for the LGBT community. The findings should guide future interventions for addressing youth mental health concerns in emergency situation.

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## 1. INTRODUCTION

The COVID-19 pandemic has had major implications and consequences in virtually all fields of human activity and affecting communities across the world [1]. Besides the negative impact on the global economy [2], [3], the COVID-19 pandemic has affected health systems as well. Such impacts include the unfavorable impact on health care utilization [4], reduction in the use of preventive care services [5], [6], disruption of supply chains, workforce, information and communication systems, and changes and shaping of health policy [7].

The COVID-19 pandemic negatively affected the access and utilization of various sexual and reproductive health (SRH) services as well [8], including adolescents and young people. The concept of young people is defined in various ways, but the United Nations considers that young people comprise adolescents (people aged 10-19 years) and youth (people aged 15-24 years) [9], sometimes considering youth those people aged 15-32 years [10]. Young people, especially young girls, comprise a vulnerable group of society with regard to sexual and reproductive health services (SRHR) as they face many barriers to SRHR information and care [11]. Millions of young girls aged 12 to 19 years old give birth each year, undergo unsafe abortions, disproportionately bear the burden of new HIV infections and other diseases, hundreds of millions have been raped or subject to female genital mutilation, and also more than 200 million young women and girls do not have access to modern contraceptive methods [12]. Both young men and women are also at higher risk of forced non-consensual sex, contracting HIV/AIDS, low awareness about sexually transmitted infections (STIs), low awareness about the association between STIs and HIV infection, low awareness about SRHR in general, high risk of being involved in commercial unprotected sex, and high risk of engaging in risky behaviors due to poor information about sexuality and consequences of various risky behaviors [13].

Various factors are responsible for the higher vulnerability of young people to SRHR aspects, including prevailing social norms and expectations, cultural taboos, gendered power dynamics, not being taken seriously (information discrimination due to young age), stigma and discrimination, poor economic situation, lack of skills to say “no” to unwanted sex, and curiosity in experimenting drug use [12], [13]. Because adolescents are more vulnerable than any other age group with regard to these issues, then improving their access to comprehensive sexual and reproductive health services and information is of critical importance in building adolescent resilience [14].

The COVID-19 pandemic's effects on young people range from disruption of everyday routine to serious mental health problems [15]–[17]. Such changes were seen in the altered information needs of the young people, reflecting the new evolving dynamics young people were facing during the pandemic. For example, in the face of the insecurities accompanying the novel COVID-19 disease, searching for information about the symptoms of COVID-19 disease was one of the main researched topics by youngsters during the pandemic [18], [19].

COVID-19 also affected Albania, a small country in Southeast Europe, causing disruptions in the health system and other areas [20], [21] similar to other countries. As regards young people in Albania, there is some information regarding the awareness and behaviors related to COVID-19 among undergraduate students [22], [23], or about the impact of COVID-19 on the mental health of people aged 21 years old or more [24]. However, the information about SRHR-related health concerns of youngsters during the COVID-19 pandemic in Albania is scarce. In this context, this study aimed to assess the main SRHR-related topics Albanian youngsters were concerned most and searched for during the COVID-19 pandemic, the main topics for which there was an urgency to get information and barriers to getting the needed information as well as the factors associated with such behavior.

## 2. METHOD

This was a cross-sectional study carried out in Albania in 2021. The actual study is part of a larger multicenter study carried out by the International Planned Parenthood Federation (IPPF) European Network in the framework of the project Youth Voices, Youth Choices, carried out in five Balkan countries: Albania, Bosnia & Herzegovina, Bulgaria, Kosovo and North Macedonia [25]. The study population consisted of young people aged 14-30 years, including men/boys and women/girls alike. These young people were recruited for participation on the basis of their potential vulnerability. The study population and sampling techniques have been described in detail elsewhere [25]. The study was carried out in Albania, in four main regions: Tirana, Elbasan, Vlora, and Shkodra. The rationale behind this choice was to cover young people from the center, north, and south of Albania, in an attempt to increase its representativeness.

A total of 340 youngsters were included. A structured questionnaire was completed either by young people themselves online or administered face-to-face by a skilled interviewer. The questionnaire included the general background section (age, gender, ethnicity, place of residence, marital status, head of household level of education and income, sexual orientation, and so on); a section about searching for information on different SRHR topics, for which topics there was an urgent need for information and barriers to get this information during the COVID-19 pandemic, questions about the source of information about SRHR topics; a section about the access to SRHR services before and during the pandemic and barriers experienced in these two time moments; and a section comprising various questions for new mothers or pregnant women.

Absolute numbers and respective percentages were used to describe categorical variables. The Chi-square test was used to compare categorical variables. Multiple logistic regression analysis was used to identify the main factors associated with dependent variables.

Multivariable logistic regression analysis was used to assess the association of being concerned about mental health & psychological well-being, urgency for mental health information, and difficulty in getting mental health information with independent variables (age, gender, ethnicity, marital status, household monthly income, household head education level, living in remote areas and sexual orientation). All independent variables were entered in a backward stepwise elimination procedure with a p-value to exit set at  $p > 0.10$ . The Hosmer Lemeshow test for the overall goodness-of-fit of the final model was used to assess the appropriateness of the procedure. Multivariable-adjusted odds ratios ORs, their respective 95% CIs, and p-value were calculated. All analyses met the goodness-of-fit criterion. In all cases, a p-value of  $\leq 0.05$  was considered statistically significant. Statistical package for social sciences (SPSS, version 21.0) was used for all the statistical analyses.

### 3. RESULTS AND DISCUSSION

In total 340 young persons participated in the survey. More than 8 out of 10 participants were 18-30 years old, 65.6% were female and about 11% were Roma. With regard to household monthly income, 14% of participants reported to be in the lowest income level whereas regarding the education level of the head of household 10.5% of participants reported primary school or less. Among the participants, about 13% of them were living in remote areas far away from big cities. With regard to sexual orientation, 80.3% were declared straight or heterosexual and the remaining 19.7% of participants were declared to belong to the LGBT community as shown in Table 1.

Table 1. General characteristics of participants

	Variable	Absolute number	Percentage
Age	14-17 years	53	15.6
	18-30 years	287	84.4
Gender	Male	115	33.8
	Female	223	65.6
	Other	2	0.6
Ethnicity	Albanian or other	303	89.1
	Roma	37	10.9
Marital status	Married/cohabiting	152	44.7
	Other	188	55.3
Household monthly income*	Lowest income level	37	14.0
	Higher income level	227	86.0
Household head education level*	Primary school or less	34	10.5
	Secondary school or higher	289	89.5
Living in remote areas	No	295	86.8
	Yes	45	13.2
Sexual orientation*	Straight/heterosexual	224	80.3
	LGBT	55	19.7
Total		340	100.0

\*Any discrepancy with the total number is due to missing information

Participants were asked about the SRHR issues they were concerned about most during the pandemic. This was explored through the information on what topics youngsters had been searching information during the COVID-19 pandemic, about which of SRHR issues there was an urgent need to get information, and whether they faced any difficulty to get information about these issues. This information is displayed in Table 2.

It can be noted that mental health/psychological well-being was absolutely the principal issue of concern for about half of youngsters (47.9%), followed by general health (39.7%). Other SRHR issues with  $>10\%$  of youngsters engaged in searching information about during the pandemic were: gynecological health (19.4%), sexual and intimate relations (15.9%), sexually transmitted infections (14.1%), practicing safe sex (13.5%), gender-based violence (12.1%), pregnancy/birth/postnatal care (11.2%), and domestic violence (10.9%), the details is shown in Table 2. Meanwhile, other SRHR issues shown in Table 2 were mentioned by less than 10% of participants.

This means that mental health and general health issues have been largely dominating the everyday existence of young people in Albania during the COVID-19 pandemic. This trend is reflected in the proportions of youngsters declaring that the need for information became more urgent exactly for these two topics during the pandemic, again with a considerable difference compared to other topics. Lastly, even though higher proportions of youngsters were concerned about mental health and general health during the pandemic and higher proportions reported that these needs became more urgent during the pandemic, as compared to other SRHR topics, still higher proportions of youngsters faced difficulties in getting

information about mental health (17.9%) and general health (13.5%) during the pandemic, compared to relatively very low proportions facing difficulties to get information about other SRHR topics (obviously, this is related with the much lower proportions of youngsters being interested in these other SRHR topics as well). In other words, more youngsters were concerned about their mental health psychological well-being, and general health during the pandemic, more youngsters experienced an urgent need to find information about these topics and yet more youngsters faced difficulties getting such information during the pandemic.

Table 2. The proportion of youngsters searching for information, in urgent need of information, and facing difficulties in getting information about SRHR issues during COVID-19 pandemic

No.	SRHR topic	Searched info during pandemic	Need for info became more urgent during the pandemic	Difficulty to get information during the pandemic
1	Mental health and psychological well-being	47.9%	36.5%	17.9%
2	General health-related concerns	39.7%	30.6%	13.5%
3	Gynecological health (hormonal, menstruation, infections)	19.4%	7.6%	5.9%
4	Sexual or intimate relations	15.9%	5.3%	3.8%
5	Sexually transmitted infections such as HIV, syphilis, and hepatitis.	14.1%	4.1%	5.0%
6	Practicing safe sex	13.5%	4.7%	3.5%
7	Gender-based violence and/or sexual violence	12.1%	3.2%	2.6%
8	Pregnancy, childbirth and postnatal care	11.2%	5.9%	3.8%
9	Domestic violence or partner violence	10.9%	4.1%	2.6%
10	Contraception (way to prevent childbirth) including emergency contraception	8.8%	1.8%	1.5%
11	Fertility/sterility	8.5%	3.5%	3.5%
12	Issues related to sexual orientation, gender identity and gender expression	8.2%	2.9%	1.2%
13	Planning or deciding to have children	7.4%	2.4%	1.8%
14	Sexting or sexual experiences on the internet	6.8%	2.1%	1.2%
15	Termination of pregnancy/abortion	5.6%	1.2%	1.8%
16	Gender-affirming hormone therapy or other treatment that confirms gender identity	1.8%	0.3%	0.0%
17	Others	9.4%	2.6%	2.6%

Since mental health and psychological well-being were the major concerns of youngsters during the pandemic, we analyzed this information by independent variables included in the study as shown in Table 3. It seems that significantly higher proportions of 18-30 years old participants, females, participants living in higher household income and education level, and LGBT community members were concerned about mental health/psychological well-being during the pandemic compared to their respective counterparts. Finally, backward multiple logistic regression identified two factors that were significantly associated with the likelihood of being concerned about mental health during the pandemic: household income (higher household income level was associated with a 4.28 higher likelihood of being concerned about mental health compared to participants living in lowest income level households) and belonging to the LGBT community which increased the likelihood of being concerned about mental health during the pandemic by 3.15 fold, as compared to straight/heterosexual community. Age was also retained in the final model (older youngsters aged 18-30 years were 2.32 times more likely to be concerned about mental health during the pandemic compared to the youngest), but this association had only borderline significance, see Table 3. Even though the associations with other factors were not significant, some general trends could be spotted. For example, it seems that higher proportions of dominating ethnicities (Albanians) and youngsters living in urban areas were concerned about mental health and psychological well-being during the pandemic compared to their respective counterparts.

Table 4 shows the factors associated with the urgent need to find information about mental health and psychological well-being during the pandemic. Similarly to the factors associated with concerns about mental health, significantly higher proportions of older youngsters, females, higher household income and education level participants, and LGBT members were in urgent need of information about mental health during the pandemic. However, multiple binary regression analysis suggested that only higher household income level (OR=4.15; 95%CI:1.43-12.01) and being a member of LGBT community (OR=3.68; 95%CI:1.63-8.32) was associated with significantly higher likelihood of being in urgent need for information about mental health during the pandemic.

Table 3. Multiple logistic regression analysis of factors associated with the need to search for mental health and psychological well-being during the COVID-19 pandemic

Variable		Concerned about mental health		X2	P-value	Multivariable logistic regression analysis	
		No	Yes			OR (95% CI)	P-value
Age	14-17 years	36 (67.9)	17 (32.1)	6.333	0.012	1.0	-
	18-30 years	141 (49.1)	146 (50.9)			2.32 (0.92-5.85)	0.076
Gender	Male	70 (60.9)	45 (39.1)	5.052	0.025		
	Female	107 (48.0)	116 (52.0)				
Ethnicity	Albanian or other	155 (51.2)	148 (48.8)	0.911	0.340		
	Roma	22 (59.5)	15 (40.5)				
Marital status	Married/cohabiting	84 (55.3)	68 (44.7)	1.131	0.288		
	Other	93 (49.5)	95 (50.5)				
Household monthly income*	Lowest income level	27 (73.0)	10 (27.0)	5.662	0.017	1.0	-
	Higher income level	118 (52.0)	109 (48.0)			4.28 (1.55-11.77)	0.005
Household head education level*	Primary school or less	24 (70.6)	10 (29.4)	4.915	0.027		
	Secondary school or higher	146 (50.5)	143 (49.5)				
Living in remote areas	No	152 (51.5)	143 (48.5)	0.254	0.614		
	Yes	25 (55.6)	20 (44.4)				
Sexual orientation*	Straight/heterosexual	128 (57.1)	96 (42.9)	10.552	0.001	1.0	-
	LGBT	18 (32.7)	37 (67.3)			3.15 (1.36-7.33)	0.008

\*Odds ratios (OR: “mental health concerned” vs. “not mental health concerned”, 95% confidence intervals (95% CIs), and p-values from multivariable-adjusted binary logistic regression models. All variables in the table were entered in a backward stepwise elimination procedure with a P-value to exit set at P>0.10. The table shows only the variables that were retained in the final model (Hosmer Lemeshow test for the overall goodness-of-fit of the final model: Chi-square statistic=0.998, d.f.=3, P=0.802)

Table 4. Multiple logistic regression analysis of factors associated with the urgency to search for mental health and psychological well-being during the COVID-19 pandemic

Variable		Urgency for information about mental health		X2	P-value	Multivariable logistic regression analysis	
		No	Yes			OR (95% CI)	P-value
Age	14-17 years	36 (67.9)	17 (32.1)	6.333	0.012		
	18-30 years	141 (49.1)	146 (50.9)				
Gender	Male	70 (60.9)	45 (39.1)	5.052	0.025		
	Female	107 (48.0)	116 (52.0)				
Ethnicity	Albanian or other	155 (51.2)	148 (48.8)	0.911	0.340		
	Roma	22 (59.5)	15 (40.5)				
Marital status	Married/cohabiting	84 (55.3)	68 (44.7)	1.131	0.288		
	Other	93 (49.5)	95 (50.5)				
Household monthly income*	Lowest income level	27 (73.0)	10 (27.0)	5.662	0.017	1.0	-
	Higher income level	118 (52.0)	109 (48.0)			4.15 (1.43-12.01)	0.009
Household head education level*	Primary school or less	24 (70.6)	10 (29.4)	4.915	0.027		
	Secondary school or higher	146 (50.5)	143 (49.5)				
Living in remote areas	No	152 (51.5)	143 (48.5)	0.254	0.614		
	Yes	25 (55.6)	20 (44.4)				
Sexual orientation*	Straight/heterosexual	128 (57.1)	96 (42.9)	10.552	0.001	1.0	-
	LGBT	18 (32.7)	37 (67.3)			3.68 (1.63-8.32)	0.002

\*Odds ratios (OR: “urgency for mental health information” vs. “no urgency for mental health information”, 95% confidence intervals (95% CIs), and p-values from multivariable-adjusted binary logistic regression models. All variables in the table were entered in a backward stepwise elimination procedure with a P-value to exit set at P>0.10. The table shows only the variables that were retained in the final model (Hosmer Lemeshow test for the overall goodness-of-fit of the final model: chi-square statistic=2.933, d.f.=2, P=0.231)

Table 5 shows the factors associated with facing difficulties in getting information about mental health and psychological well-being during the pandemic. With except to sexual orientation, all other associations were not significant. Multiple binary regression analysis suggested that only being a member of the LGBT community was associated with a significantly higher likelihood of facing difficulties in getting information about mental health during the pandemic (OR=3.48; 95%CI:1.49-8.13). Age was also retained in the final model but the association had only borderline significance.

To the best of our knowledge, this is the first study exploring in a new light the main SRHR concerns of young people during the COVID-19 pandemic in Albania, their urgency and barriers to getting information on these topics as well as providing an in-depth analysis of the factors associated with these behaviors. Even though almost every SRHR topic was of concern for various proportions of Albanian youngsters, mental health and psychological well-being were undoubtedly the most frequent concerns, reported by almost half of the participants, closely followed by general health concerns reported by about 40% of youngsters.

Table 5. Multiple logistic regression analysis of factors associated with facing difficulties in getting information for mental health and psychological well-being during the COVID-19 pandemic

Variable		Difficulty to get information about mental health		X <sup>2</sup>	P-value	Multivariable logistic regression analysis	
		No	Yes			OR (95% CI)	P-value
Age	14-17 years	46 (86.8)	7 (13.2)	0.956	0.328	1.0	-
	18-30 years	233 (81.2)	54 (18.8)			5.92 (1.77-45.61)	0.088
Gender	Male	94 (81.7)	21 (18.3)	0.031	0.860		
	Female	184 (82.5)	39 (17.5)				
Ethnicity	Albanian or other	247 (81.5)	156 (18.5)	0.553	0.457		
	Roma	32 (86.5)	5 (13.5)				
Marital status	Married/cohabiting	131 (86.2)	21 (13.8)	3.178	0.075		
	Other	147 (78.7)	40 (21.3)				
Household monthly income*	Lowest income level	33 (89.2)	4 (10.8)	0.836	0.361		
	Higher income level	189 (83.3)	38 (16.7)				
Household head education level*	Primary school or less	30 (88.2)	4 (11.8)	0.989	0.320		
	Secondary school or higher	235 (81.3)	54 (18.7)				
Living in remote areas	No	243 (82.4)	52 (17.6)	0.149	0.699		
	Yes	36 (80.0)	9 (20.0)				
Sexual orientation*	Straight/heterosexual	191 (85.3)	33 (14.7)	15.557	<0.001	1.0	-
	LGBT	34 (61.8)	21 (38.2)			3.48 (1.49-8.13)	0.001

\*Odds ratios (OR: "difficulty to get mental health information" vs. "no difficulty to get mental health information", 95% confidence intervals (95% CIs), and p-values from multivariable-adjusted binary logistic regression models. All variables in the table were entered in a backward stepwise elimination procedure with a P-value to exit set at P>0.10. The table shows only the variables that were retained in the final model (Hosmer Lemeshow test for the overall goodness-of-fit of the final model: chi-square statistic=0.260, d.f.=2, P=0.878)

Other SRHR concerns were important for much lower proportions of youngsters. These concerns about mental health and psychological well-being were supported by higher proportions of youngsters declaring an urgent need to get information on this topic during the pandemic and reflected in the higher proportion of them experiencing difficulties in getting information about mental health and well-being during the pandemic. We investigated further and discovered that the likelihood of being concerned about mental health and psychological well-being increased significantly with age, household income level, and being part of the LGBT community; furthermore, higher household income level and being part of LGBT community also significantly increased the likelihood of the urgent need for information about mental health and psychological well-being, whereas older age and LGBT community increased the likelihood of experiencing difficulties to get information on mental health and psychological well-being among Albanian youngsters.

It is interesting to notice that about 48% of Albanian youngsters were concerned about mental health and well-being during the pandemic compared to only about 12% in Bulgaria, about 32% in Kosovo, 38% in North Macedonia, and about 43% of youngsters in Bosnia and Hercegovina [25]. With except to Bulgaria, these figures support the fact that mental health and psychological well-being has been a central concern for young people during the COVID-19 pandemic. The same trends were noticed for the proportions of youngsters for whom mental health & psychological well-being became more urgent during COVID-19 as well; in general, the need for information on mental health & psychological well-being became more urgent among youngsters who already had some level of knowledge and involvement in SRHR issues [25]. The low level of mental health concerns among Bulgarian youngsters needs to be investigated further.

On the other hand, about 18% of youngsters in Albania declared that they have encountered difficulties in getting information about mental health & psychological well-being during the pandemic. According to the published report on which this paper is based, some reasons for this could include the low priority assigned to SRHR issues during the pandemic by the primary healthcare system thus demotivating them to go and ask for information about mental health at primary healthcare centers, fear and reluctance to ask and search for information, fear to go to a health center during COVID-19 pandemic due to restrictions in place, insecurity and fear of getting infected, and stigma surrounding mental health issues [26].

With regards to the factors associated with being concerned about mental health & well-being, related urgent need to get information, and difficulties to get such information our findings are largely in accordance with international literature reports. For example, a study of 593 young people aged 16-25 years in Australia, sampled in the general population (n=364) and primary youth mental health services (n=229), found that the prevalence of self-reported depression and anxiety in the general population was 44.1% and 48.5%, respectively, during COVID-19; among youth in mental health services, the corresponding figures were 62.7% and 59.1% [27]. Also, 86% of youngsters reported that the COVID-19 pandemic has had a negative impact on their mental health, and about 82-84% perceived a negative impact on their work and study and non-work life [27].

A study among 371 youngsters aged 16-25 found that the COVID-19 pandemic had a negative impact on their mental health but those who self-identified as gender-diverse individuals had the highest rate of anxiety or depression compared to those identifying themselves as male or female [28]. Indeed, scientific research has shown that gender-diverse youngsters are more vulnerable to mental health impacts and they experience more psychological distress compared to heterosexuals or youngsters whose gender corresponds to their sex registered at birth [29]. Another study evaluating the mental health challenges that a sample of 622 youngsters aged 14-28 years (4.7% transgender or gender-diverse identity and 593 self-identified as male/female) faced during the pandemic reported that gender-diverse youngsters faced significantly greater mental health challenges, less family support, higher rate of mental health services disruptions due to pandemic, higher rates of unmet need for mental health services during the pandemic compared to cisgender individuals [30]. Other studies have reported that the mental health status of the LGBT community is more negatively impacted by the COVID-19 pandemic compared to their non-LGBT peers. For example, a study reported that 60% of LGBT people and 37% of non-LGBT people had their mental health negatively impacted by COVID-19, higher proportions of LGBT people reported discrimination or unfair treatment compared to non-LGBT peers (19% vs 9%, respectively), 25% of LGBT people sought mental health care during the pandemic compared to 12% of non-LGBT peers, 25% of LGBT people used telehealth services for mental healthcare during the past 12 months compared to 14% of non-LGBT peers, 19% of LGBT but only 5% of non-LGBT peer faced affordability barriers to mental healthcare or counseling during the pandemic, and higher proportions of LGBT report negative provider experiences than non-LGBT peers [31]. Other reports confirm that the LGBT community bears a disproportionate burden of mental health problems and that the COVID-19 pandemic has also disproportionately affected this community [32]. These results are in full accordance with our findings suggesting that LGBT community youngsters were more concerned about mental health and psychological well-being during the pandemic compared to their cisgender colleagues, higher proportions of them had an urgent need for information about mental health and higher proportions of them faced difficulties or barriers to get such information.

It has been reported that older youngsters experience more mental health challenges during the COVID-19 pandemic compared to younger individuals [30]. Also, a study reported that the global prevalence of depressive and anxiety symptoms during COVID-19 was higher among older adolescents [33]. This positive association between mental health concerns/problems and age was also reported by the actual study where older youngsters were more likely to be concerned about mental health and also more likely to experience difficulties in getting information about mental health. These findings could be explained by the fact that almost all LGBT participants in our study (96.4%) were older (18-30 years old) compared to only 79% of cisgender at this age group, and the fact that LGBT community youngsters experience more mental health challenges compared to cisgender youngsters [29], [30], as discussed earlier. Also, it is possible that older youngsters might understand better (be more aware) the whole situation and elements of the COVID-19 pandemic and, as a result, they could be more concerned about mental health and other possible related consequences, reflected in higher proportions of older youngsters in urgent need of information with regard to mental health. These results are supported by other studies in the general population reporting that younger age is a risk factor for mental health disorders related to the COVID-19 pandemic [34]–[37]; younger age in general population samples usually refers to youth and youngsters. However, Chew and colleagues reported an inverse association between mental health symptoms and age among healthcare workers [38].

Lower income is reported to be a risk factor for mental health disorders related to the COVID-19 pandemic [34], [36]. In our study, we found an inverse association: better well-off youngsters were more likely to be concerned about mental health, and in urgent need of information about mental health compared to less well-off participants. This finding seems counterintuitive and more research is needed to replicate it and to check whether it is due to chance. This is even more important in the context where studies based on strong methodological design have reported an inverse association between income level and the likelihood of depressive symptoms among 16-24 years old youngsters [39]. Interestingly in our study gender was not retained in the final model of multiple logistic regression analysis among the main factors explaining the behavior of youngsters related to mental health during the pandemic. However, our results demonstrated that significantly higher proportions of females (52%) were concerned about mental health and psychological well-being during the pandemic compared to males (39.1%), being thus in line with previous research suggesting a more negative mental health impact of the pandemic on females [33], [35]–[37], [40].

The main factors explaining these negative consequences of COVID-19 pandemic on mental health and psychological well-being of youngsters are mostly related to social isolation, mainly referring to the inability to see friends and family or mental support persons or to engage in routine social interactions, etc., and interpersonal tension referring to irritability due to spending too much time with family members, losing personal independence, and inability to talk about mental health problems at home [27], with lack of family support having a especially negative impact on the LGBT young people [32]. In addition, youngsters reported a worsening of their mental health, often referring to low motivation, sadness, mood, eating and

sleep disruption, feelings of hopelessness, excessive worry, and depression, driven by social isolation and other pandemic-related stressors including uncertainty about the future, the feeling of losing control over own life direction, and the feeling of having less options or the inability to use other environments as a form of distraction or motivation [27]. Another factor contributing to worsened mental health during the pandemic was related to existential and development crisis, referring to the feeling that the pandemic stopped life altogether, everything (studies, career, perspectives, and relationships) coming to a halt and losing the trust that the individual has the power to shape one's future, thus leading to feeling powerless and unmotivated [27]. An additional factor explaining the negative impact on mental health is the inability to perform self-care, referring to the disruption of the routine life and inability to do things youngsters normally do under normal circumstances, which are essential for maintaining mental health such as socialization and outdoor physical activity, leading to increased feelings of sadness, hopelessness and depression [27].

Another factor in explaining the burden of mental health problems among youngsters could be the time spent on social media and online media in general. For example, a general population survey reported that COVID-19 was related to depressive symptoms and other mental health problems, generally mediated by excessive media consumption (>4 hours daily) [41]. Even though media consumption is a way to cope with potentially disastrous circumstances, such as the COVID-19 pandemic, because it helps be informed about new developments about the disaster and the situation in general, keep in touch with friends and others, and remain entertained in seemingly hopeless situations, it can also lead to misinformation which in turn could lead to increased anxiety, stress and a deterioration of mental health, especially if people consume media for more than three hours daily [41]. The association between excessive media consumption and deterioration of mental health was reported among youngsters as well, with those using social media for more than seven hours daily reporting more severe emotional distress [28].

This study has several limitations. First, its cross-sectional nature does not allow to draw conclusions about the temporality of events and causality. In this context, any association identified should be interpreted with caution. Second, we did not employ a random selection of participants and therefore the selection bias cannot be ruled out thus limiting the generalization of the findings. Third, this study could be prone to information bias given that the participants could have been particularly eager to or reluctant to report about various SRHR topics. However, we took all the precautions in order to minimize this risk by standardization of interviewers and interviewing procedures and establishing a trusting climate between the interviewers and participants.

This study has several strong points as well. To our knowledge, this is the first study reporting on the factors associated with mental health concerns, urgent needs to get information on mental health & psychological well-being, and barriers to getting such information among youngsters during the COVID-19 pandemic in Albania. The inclusion of vulnerable youngsters is another important strong point of this study. Our findings could serve policy-makers, decision-makers, and relevant professionals for better-addressing youth mental health concerns in an emergency situation. In addition, the use of mixed quantitative-qualitative research methods has allowed us to gain insights into the thoughts and perceptions of youngsters with regard to various SRHR topics and this could improve our understanding of these issues as well. Finally, this study could serve as a starting point for further in-depth and more detailed research on youth and sexual and reproductive health and rights in Albania.

#### 4. CONCLUSION

In conclusion, about half of studied youth in Albania reported to have been concerned about mental health during the COVID-19 pandemic, and relatively high proportions of them experienced an urgent need for information and difficulties in getting information about mental health. Being part of the LGBT community increases the likelihood of being concerned about mental health, being in urgent need of mental health information, and experiencing difficulties in getting mental health information. Higher household income levels also increase the likelihood of being concerned about mental health and being in urgent need of mental health information. LGBT young people may be in a particularly disadvantaged position during shock situations in Albania.

#### ACKNOWLEDGEMENTS

International Planned Parenthood Federation, European Network (IPPF EN) coordinated this study in the framework of the "Youth Voices, Youth Choices" project, implemented by Albanian Centre for Population and Development (ACPD) in Albania and other (4) Balkan Countries (Bulgaria, Bosnia and Herzegovina, North Macedonia, and Kosova) and supported by Merck through its Merck for Mothers Program.






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