

## Emotional reactions of hospitalized children due to COVID-19

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### Abstract

**Aim:** The aim of this study is to explore the manifestation of anxiety symptoms in children who have experienced COVID-19. It examines psychological effects, their emotional responses to distress, and the coping mechanisms they employ to manage their illness.

**Methodology:** Participants included 50 children aged 6-14, hospitalized in the "General Pediatrics" and "Infectious Pediatrics" departments at the University Hospital Center Tirana (QSUT). The "State-Trait Anxiety Inventory for Children (STAIC)" was used to assess self-reported anxiety.

The children's way of life changed significantly due to social isolation and fears of losing their own lives or those of family members. These fears affected their daily functioning. While anxiety is a natural adaptive response, it becomes a disorder when uncontrollable, frequent, and occurs without external stimuli, manifesting in physical and emotional symptoms, and leading to behavioral and cognitive changes.

**Conclusions:** Children aged 10-14 reported higher levels of anxiety. Variables such as illness severity and age influenced results. Common symptoms included:

- Need for reassurance
- Irritability
- Physical complaints (functional)
- Difficulty concentrating
- Feelings of tension and fear
- Negative thoughts about the future

Children aged 6-10 expressed their anxiety through symptoms such as fear of being alone, fatigue, sleep disturbances, and changes in eating habits.

**Keywords:** COVID-19; Anxiety; Emotional symptoms; Children

### 1. Introduction

The global COVID-19 pandemic had profound economic, social, and emotional impacts worldwide. Feelings of uncertainty and fear affected everyone, fundamentally altering daily life. Social isolation, restrictions, closure of daily activities such as schools, workplaces or places of entertainment increased the level of experience of the pandemic itself. And the most sensitive category to this situation are children, since children have less emotional management skills

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than adults. Anxiety problems are extremely prevalent throughout the human lifespan and have a particularly early onset [1].

The United Nations International Children's Emergency Fund (UNICEF) conducted a study of 1,700 children and adolescents from 104 different countries around the world and found that children's brain development can be affected by experiencing high levels of stress [2]. It was reported that there was an increase in irritability, sleep disorders, anxiety and depression in children.

The pandemic significantly affected the relationships and interactions of children with their peers. The World Health Organization (WHO) defines mental health as "a state of well-being in which the individual recognizes his or her potential, and sees the predisposition to cope with the ordinary demands of life, as well as the ability to work successfully and be fruitful and contribute to his or her community [3].

According to the diagnostic criteria for mental health disorders, about one in seven young people has a mental health problem. Untreated mental health difficulties in children and adolescents are associated with poor health, academic and social outcomes, as well as higher rates of drug use, self-harm and suicide, and they often persist into adulthood. Indeed, half of all lifetime mental health difficulties begin before the age of 15 and three-quarters before the age of 18, resulting in a significant global socio-economic cost [4] [5].

The mental health of parents was closely related to the emotional experience of children during the pandemic [6].

Liu et al. found that children with anxious parents were associated with higher levels of emotional symptoms (OR 5.64, 95% CI 2.18–14.58) and total difficulties (i.e., emotional symptoms, conduct problems, hyperactivity/inattention, and attention problems peer relations) (OR 3.78, 95% CI 1.56-9.15) than children without anxious parents [7].

Freud (1936), considered anxiety as "feeling something", an unpleasant emotional state accompanied by physiological conditions such as heart palpitations, vomiting, muscle tension, dizziness and breathing difficulties. According to him, the anxiety experienced by normal people was qualitatively different from the anxiety experienced by neuroses [8]. The anxiety of everyday life, which he called "realistic" or "objective" anxiety, refers to certain, external objects in the real world, and is synonymous with what is commonly known as fear. Sarason (1986), defines anxiety as a disturbing preoccupation, worry about upcoming events, defining the characteristics of anxiety responses and the situations in which it is experienced;[9].

- The situation is seen as difficult, challenging and threatening.
- The individual sees himself as ineffective in treatment, or as unsuitable.
- The individual focuses on undesired consequences or personal incompetence.
- The individual competes in activity and important cognitive tasks.

Barlow (2000), identified three vulnerable groups that interact and influence the development of human anxiety:[10].

- A general biological weakness;
- A general psychological weakness which results particularly from early life experiences;
- A specific psychological weakness, focused on particular events or circumstances.

The individual expects and anticipates failure or loss in relationships with others. These symptoms may include: "rapid or rapid heart rate, sweating, shaking, tightness or shortness of breath, feeling of suffocation, chest pain, discomfort, stomach discomfort or nausea, dizziness, feeling unsure, fainting, numbness, or tingling, chills, or heat [11]. Moderate to severe anxiety affects how the patient manages the disease, how they treat symptoms, how well they adhere to treatment, how experiences the release of medical results, as well as the most important element, how it affects the ability of the child/adolescent to cope with the disease[12]. Consequently, anxiety is seen as one of the most important health-related aspects. The unstable state of an illness can cause adjustment difficulties, anxiety and social problems. Despite their frequency, these problems can be some of the most difficult for physicians to manage [12].

As can be seen from the data, anxiety is a psychological problem which can increase during the course of the disease. For this reason, early identification of anxiety symptoms and its treatment is very important. In order to apply the most effective treatment for anxiety, its type and severity must be taken into account. According to Cuijpers [13] cognitive-behavioral therapy is the most studied and most effective psychotherapeutic form in the treatment of anxiety.

## 2. Methodology

Participants in this study are 50 subjects from age (6-14 years old), subjects are patients in the pediatric department of the Tirana University Hospital Center (QSUT), respectively admitted to the "General Pediatrics" ward and Infectious Pediatrics. The State-Trait Anxiety Inventory for Children (STAIC) was administered for self-reporting of anxiety experienced by children. The sample was selected based on several criteria:

- Pediatric patients must have passed or been hospitalized for the diagnosis of Covid 19.
- Pediatric patients had to be between the ages of 6-14 years.
- Pediatric patients had to have normal cognitive-motor development, able to complete the questionnaire.

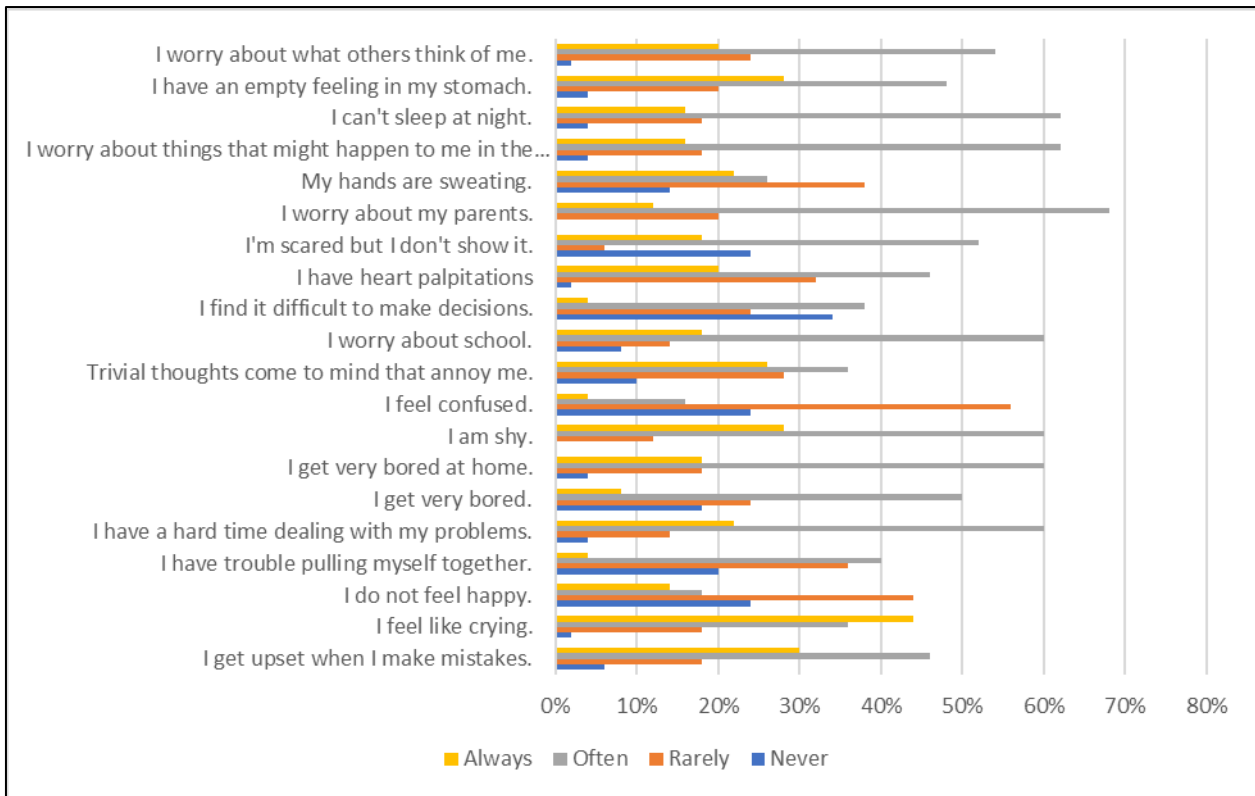
The study was conducted at the "Mother Teresa" University Hospital Center in Tirana, which is considered to be representative for pediatric patients from all districts of Albania. Based on the fact that the "Mother Teresa" University Hospital Center collects specialties from all districts of Albania, the sample studied at (QSUT) is considered representative for the population. Data collection was carried out by reviewing the register of admissions to the ward of Infectious Pediatrics and General Pediatrics. Considering the statistics, it was judged that a number of (n=50) patients to be part of the study. The participants and parents of the children were first asked for approval to participate in the study, as well as they were informed in advance about the importance of completing the anxiety questionnaire.

Demographic characteristics of the participants in this study; Most of the children and teenagers who are included in the study are from Tirana, about 35% of them and the rest are scattered in all areas of Albania.

## 3. Discussion

**Table 1** Emotional reactions of children

	Never	Rarely	Often	Always
I get upset when I make mistakes.	6%	18%	46%	30%
I feel like crying.	2%	18%	36%	44%
I do not feel happy.	24%	44%	18%	14%
I have trouble pulling myself together.	20%	36%	40%	4%
I have a hard time dealing with my problems.	4%	14%	60%	22%
I get very bored.	18%	24%	50%	8%
I get very bored at home.	4%	18%	60%	18%
I am shy.	0%	12%	60%	28%
I feel confused.	24%	56%	16%	4%
Trivial thoughts come to mind that annoy me.	10%	28%	36%	26%
I worry about school.	8%	14%	60%	18%
I find it difficult to make decisions.	34%	24%	38%	4%
I have heart palpitations	2%	32%	46%	20%
I'm scared but I don't show it.	24%	6%	52%	18%
I worry about my parents.	0%	20%	68%	12%
My hands are sweating.	14%	38%	26%	22%
I worry about things that might happen to me in the future.	4%	18%	62%	16%
I can't sleep at night.	4%	18%	62%	16%
I have an empty feeling in my stomach.	4%	20%	48%	28%
I worry about what others think of me.	2%	24%	54%	20%



**Figure 1** Emotional reactions of children

Social isolation, lack of support and experiencing illness when separated from loved ones or symptoms that persist and persist over a long period can increase feelings of fear and anxiety. Emotional discomfort and anxiety are a natural response to the situation that children have been through.

Social isolation, without the possibility to be close to the close family can influence the increase in feelings of fear and anxiety.

The symptoms that have been evident in the study are these:

- Feeling bored and wanting to cry even without reason.
- Feeling irritated (from unusual causes).
- Blaming yourself for the situation.
- Feeling tired.
- He dreams continuously as if he is sick.
- He does not fully remember the time when he was hospitalized.
- Loss of confidence.
- Constant problems with sleep.
- Problems with feeding.
- Remembers small details during hospitalization.
- Fear of death.
- Constant fear of being seriously contaminated.
- Difficulty to keep yourself after a difficult situation
- negative thoughts that become intrusive

For younger children (usually under seven), research shows an increase in:

- Dependency ratios (cannot stay long without the presence of mother or father)
- Fear
- Uncooperative behaviors and anxiety
- Boredom at home

- Seeking attention
- Concern for parents' health

Anxiety is characterized by the fear that something bad will happen, and the individual is unable to avoid it, which could be a disaster or misfortune [11].

All limitations in school and social life, cognitive limits, illness, and feelings of vulnerability for personal health can cause discouragement and avoidance of risk taking which is seen as "normal" in adolescence. Koolhaas et al. point out that in a certain situation, some individuals can react actively, while other individuals can react in a more passive way [14]. These coping styles are characterized by behavioral patterns and explain individual differences in sensitivity to stress caused by illnesses, this also explains some of the differences in self-reports of children and adolescents who have experienced covid 19.

Competent parents also influence their children's coping efforts by modeling coping strategies, facilitating engaging strategies and avoiding non-engaging strategies, thus parents help children find coping resources within and outside their family [15].

Having a disease that has a series of physical symptoms that are unknown regarding their progress it's associated with uncertainty and the inability to have control over these symptoms is directly related to the emotional problems that children and adolescents exhibit. About 68% of children say that they often worry about their family and parents who care, especially after passing covid 19.

The children and teenagers included in the study express that they are worried about the future, about 62% answered "often". After the passing of Covid 19, about 62% of them state that they sleep uncomfortably. About 48% of them admit that they have a state of emptiness in their stomach that they often demonstrate, this is also explained by the sting of fear for their health progress. Regarding the manifestation of physiological symptoms, 26% of them say that their hands often sweat, and 46% of them have strong heartbeats. 54% of the children included in the study, also worry about the opinion of others.

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#### **4. Conclusions**

Illnesses and hospitalization are stressful experiences for children and their families. Hospitalization, constant contact with doctors, doing tests has turned into an anxious and unpleasant experience. Lack of physical strength, loss of physical control or autonomy causes in the child an increase in the level of anxiety, stress, the appearance of inappropriate behaviors, damage to the self-image and self-esteem of the child, as well as loss of their sense of identity and continuity. Addressing patient preferences and needs is recognized as an important component of providing the best possible health care, especially for hospitalized patients. The evaluation should not only depend on the evidence of physical symptoms but also on a careful assessment of the psychological behavioral features that characterize these patients during the course of their complaints. Identification and treatment of the main situations that pose a risk for the evolution of the manifestation of anxiety symptoms.

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#### **Compliance with ethical standards**

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##### *Disclosure of conflict of interest*

No conflict of interest to be disclosed.

##### *Statement of informed consent*

Informed Consent was taken from the parents of the hospitalized child, reported in the study, for using the data of the medical records, providing anonymity.

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