



## The Role of a Disability in Children in Manifesting a Dermatological Disease

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### Abstract

**Background:** Sometimes there are differences in the appearance of skin diseases among patients who belong in different age or work groups. It is well known that some dermatological diseases are more common in children in comparison to other age groups.

At least one out of 50 children have a kind of disability. The degree of their disability is crucial for their social life. We have researched if there are differences in the manifestation of dermatological diseases between children with disabilities and children without disabilities and the role of a disability in creating a dermatological disease.

**Methods:** We have examined seventy-eight children with a dermatological disease. Half of them have a serious disability and the other half was the control group.

**Results:** The most common dermatological diseases in the control group were the transmissible infections such as warts, impetigo, etc. The transmissible dermatological diseases were almost the 50% in the control group and only 10% in the group with the children with disability. The children with disability appeared more often with dermatitis and especially seborrhea dermatitis and less common with transmissible dermatological diseases.

**Conclusions:** The social distance between the children with disability and the other children of the same age is well known. A proof of that fact is the limited percentage of the transmissible dermatological diseases in the group of disabled children. We have noticed that seborrhea dermatitis is more often in children with mental disability who take medical treatment. Seborrhea dermatitis in children with disability without medication is as common as in the control group.

**Keywords:** Dermatology, Children, Disability, Family Doctor, Psychiatry, Autism, Bullying, Pediatric Dermatology

### INTRODUCTION

The dermatological diseases are more than 2500. Sometimes there are differences in the appearance of skin diseases among patients who belong in different age or work group. Pruritus and skin cancer are more often in people over 65 years old [1]. Some skin conditions are relevant with personal habits. For example, some transmissible skin diseases are more common to swimmers than the rest of the population [2]. The work conditions are sometimes crucial for the appearance of some dermatological diseases. The outdoor workers may develop in a few years' photo aging and different types of skin cancer because of the ultraviolet radiation [3]. Environmental factors may be responsible for the development of dermatological diseases [4].

Pediatric dermatology deals with skin conditions that might be a result of a dysfunction of an internal organ or a dermatological disease without internal organ participation [5]. The spectrum of the dermatological diseases in this age group is quite different than the other age groups [6]. The most frequent dermatological diseases in this group of age are skin infections from viruses or bacteria and several types of eczema [7].

Disability is a common situation and appears in almost 20% of the general population according to the Census Bureau

Reports. The percentage of the people with disability is expected to increase [8]. One in nine children has a kind of disability and receives special education services [9]. There are different kinds of disabilities regarding the time of their appearance. Some of them manifest at the date of birth, some of them appear later and others are the result of an external injury [10]. They are many types of disability such as cerebral palsy, autism, attention deficit hyperactivity disorder, mobility disabilities, other mental disabilities, etc. [11].

The situation of each disability is different [12]. The common finding of all disabilities is the difficulty of these persons to have a normal life without social exclusions and special needs [13].

Because of the large number of children with disability we have decided to investigate if there is a difference in the manifestation of the dermatological diseases in them

*Received: August 27, 2021; Revised: October 10, 2021; Accepted: October 13, 2021*

**Citation:** Iordanis P. (2021) The Role of a Disability in Children in Manifesting a Dermatological Disease. *J Derm Allerg Res*, 1(1): 1-5.

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compared to other children [14].

**MATERIALS AND METHODS**

Seventy-eight children were examined to our private dermatological medical office between January 1<sup>st</sup>, 2021 and June 30<sup>th</sup>, 2021. All of the examined children were between 0-16 years old. The children were divided in two separate groups. One group was with the children with a kind of disability and the other one was the control group. Each group has thirty-nine children. The group of the children with a kind of disability was separated in two subgroups. One included child receiving medication for their disability and the other one included child without medication for their disability. We recorded the presence of dermatological diseases and the type of their disability, the sex and their age. Some of the children with disability have been examined at their home.

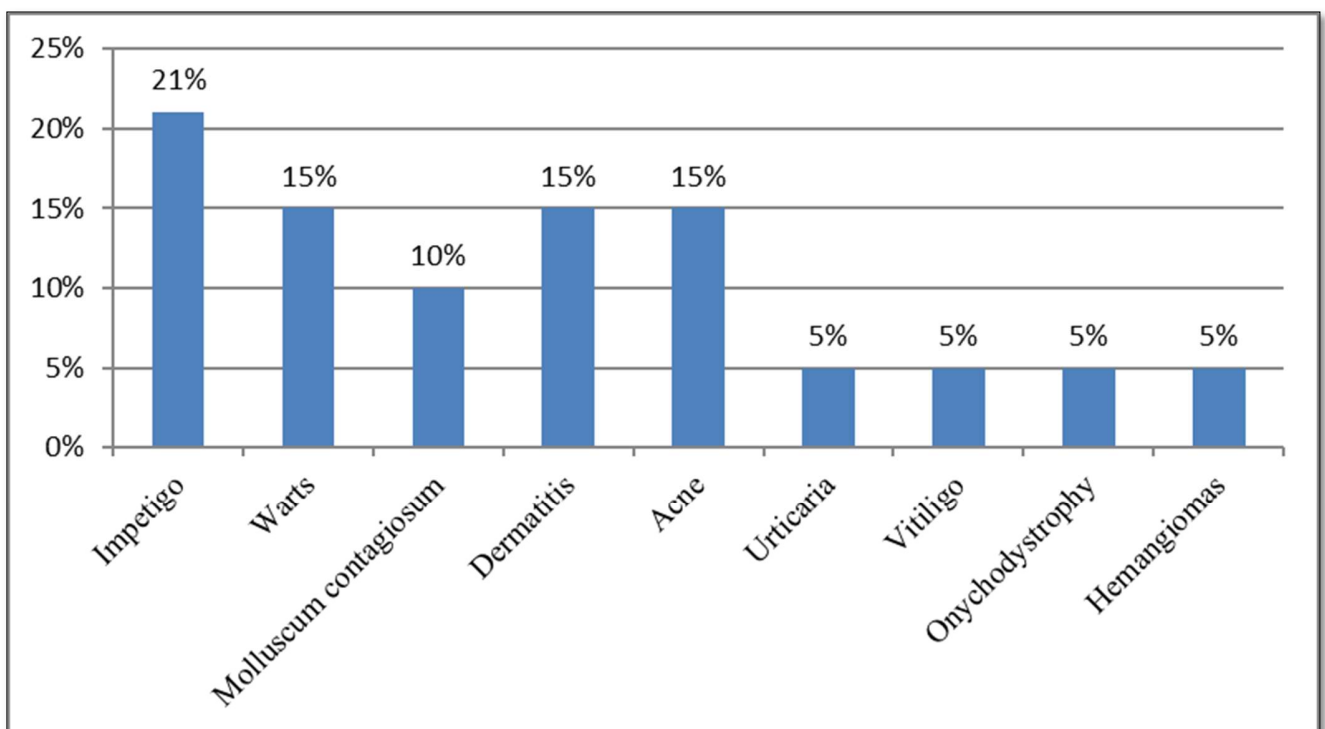
The data are presented by numbers and are expressed as numbers and percentages. This study was conducted in compliance with the ethical standards of the responsible institution on human subjects as well as with the Helsinki Declaration. The patients' parents were informed about the data collection and gave their written consent.

**RESULTS**

In the control group were twenty male and nineteen female patients. The mean age was 8.1 years. The most common dermatological diseases in this group were different types of infected transmissible diseases (45%), dermatitis (15%), and acne (15%). Other dermatological diseases that they have manifested were urticaria, hemangiomas, vitiligo and onychodystrophy. The transmissible dermatological diseases included impetigo (20%), warts (15%) and Molluscum contagiosum (10%) (**Graph 1**) (**Table 1**).

**Table 1.** Dermatological diseases in the control group.

Disease	n	Percent
Impetigo	8	21.05%
Warts	6	15.78%
Molluscum contagiosum	4	10.52%
Dermatitis	6	15.78%
Acne	6	15.78%
Urticaria	2	5.26%
Vitiligo	2	5.26%
Onychodystrophy	2	5.26%
Hemangiomas	2	5.26%
Total	38	99.95%



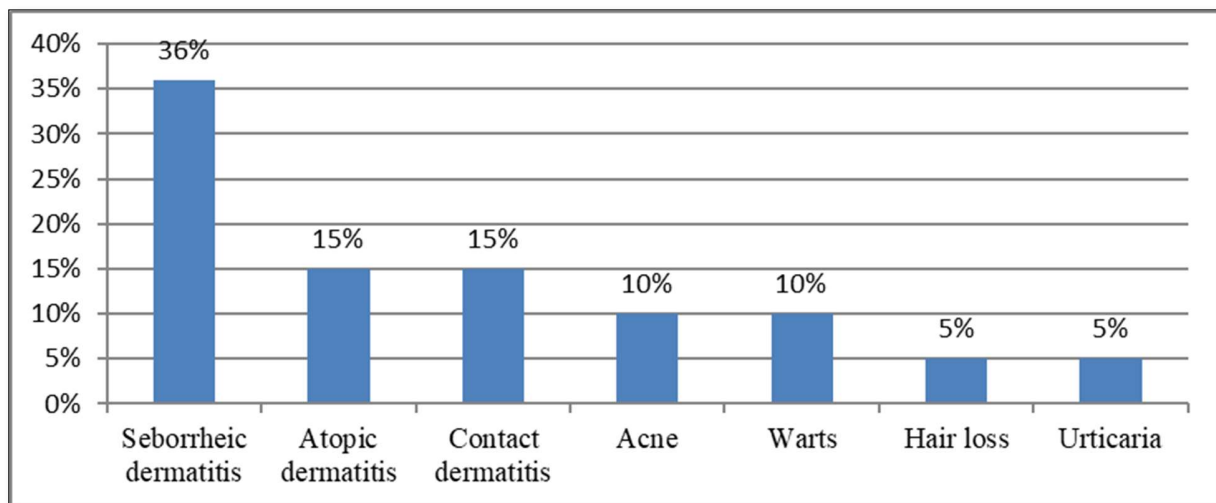
**Graph 1.** Dermatological diseases in control group.

The most common dermatological diseases in this group were seborrhea dermatitis (35%), atopic dermatitis (20%), contact

dermatitis (15%), acne (10%), warts (10%), hair loss (5%) and Urticaria (5%) (**Graph 2**) (**Table 2**).

**Table 2.** Dermatological diseases in children with disability.

Disease	N	Percent
Seborrheic Dermatitis	14	36.84%
Atopic Dermatitis	6	15.78%
Contact Dermatitis	6	15.78%
Acne	4	10.52%
Warts	4	10.52%
Hair Loss	2	5.26%
Urticaria	2	5.26%
Total	38	99.96%



**Graph 2.** Dermatological diseases in children with disability.

In the group with the children with a disability were twenty-one male and eighteen female patients. The mean age was 12.05 years. The spectrum of the disabilities included cerebral palsy, mental disabilities (autism and attention deficit hyperactivity disorder), Down syndrome and movement disabilities. One of the most common mental disabilities was autism (21%) (**Table 3**).

**Table 3.** Children with disability.

Disability	N	Percent
Autism	8	21.05%
Mental disability	18	47.36%
Kinetic disability	10	26.31%
Blindness	1	2.63%
Down Syndrome	1	2.63%
Total	38	99.98%

Five out of twenty-six children with mental disability were under medication for their condition and they were about 19%. Seborrheic dermatitis was the most common dermatological side effect in the children with mental disability who receive medication.

## DISCUSSION

Childhood skin characteristics are different from the other age groups [15]. Only 30% of the pediatric patients with a skin disorder visit a dermatologist or a pediatrician [16]. Probably some dermatological diseases as acne present in a larger number in the community of the children than the children who finally visit a doctor. We have observed that the average age was different at the two groups. This is probably due to a delay in visiting a primary care service of the children with disability because of their condition [17]. Generally infectious diseases and different types of eczema are the most common dermatological diseases in children [18]. In our study we have found that the most common dermatological disease in children was the transmissible infection diseases (45%) and different types of eczema (15%). At the other group the most common dermatological diseases in children with several disabilities were seborrhea and atopic dermatitis (55%). The transmissible dermatological diseases in the second group were only 10%.

The infectious dermatological disease and different kinds of eczema were the majority in both groups but their percentage

was not the same. The percentage difference regarding the infectious dermatological disease was very high.

The children with any kind of disability are usually lonely because of the social distance. Playing with other children is not usual [19]. It is well known that social exclusion and bullying are common situations in children with disabilities [20]. Physical contact during playing is the most common reason for the transmissible dermatological diseases in children. The fact that children with special needs lack physical contact is one of the reasons that they don't often manifest transmissible dermatological diseases. Another reason is that the parents or the caregivers of these children take a great attention of their hygiene.

In contrast to the control group the children with disability develop seborrhea dermatitis as the most common dermatological disease. Seborrhea dermatitis is a very common inflammatory chronic disease [21]. The disease appears usually in the face, the scalp, the chest with scaling, erythematic and itches [22]. The disease is affected by psychological factors [23]. Seborrhea dermatitis is more common in patients who receive psychotropic drugs like haloperidol, lithium, buspirone and chlorpromazine [24].

We have noticed that 19% of the children with disability have taken a kind of medication for their condition. Chronic treatment with narcoleptic induced in the most cases seborrhea dermatitis [25].

The decreased social participation creates psychological disorders in people with disabilities and their families [26]. Although children with disabilities are supported by special education programs, their integration into society continues to present difficulties.

In cases of chronic narcoleptic treatment, there should be the cooperation of a psychiatrist and a dermatologist or a general practitioner in order to reduce as much as possible the side effects on the skin [27]. Since dermatological diseases are usually visible in those cases, they might aggravate the social distance. The family and the special trainers play an active role in the reduced presence of dermatological infections by following the rules of hygiene [28].

#### FINANCIAL DISCLOSURE

There was no specific funding source to be mentioned.

#### CONFLICT OF INTEREST

The author declares that have no conflict of interest

#### INFORMED CONSENT

All subjects provided written informed consent.

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