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Educational Background Occupation Distribution In Viral Skin Infection Patients At Dermatology And Venereology Outpatient Clinic Dr. Soetomo General A Cademic Hospital Surabaya From January 2019-December 2021

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ABSTRACT

The total cases of viral skin infections in Indonesia, coupled with a lack of awareness regarding the associated risk factors and preventive measures, poses a significant issue. There is a scarcity of research addressing the profile of viral skin infections in Indonesia. This study aims to assess the distribution of educational background and occupation of patients with viral infections treated at the Dermatology and Venereology Outpatient Unit of Dr. Soetomo General Hospital in Surabaya from 2016 to 2018. Using a descriptive approach, this retrospective study relies on medical records spanning from January 2019 to December 2021. The majority of patient's last educational background was senior high school. (43%), with the diagnosis of herpes simplex dominated by senior high school (57%), molluscum contagiosum by patients that never went to school (29%), varicella by both senior high school and patients that never went to school (29%), and herpes zoster by senior high school (30%). The majority of patients work as private employees (28%), with the diagnosis of herpes simplex patients work as college student (29%), Molluscum contagiosum as college student (25%), varicella as college student (30%), and herpes zoster as private employees (35%). In conclusion, the distribution of educational background and occupation of viral skin infection patients at Dermatology and Venereology Outpatient Clinic Dr. Soetomo General Academic Hospital Surabaya from January 2019 - December 2021 still varies every year and requires more comprehensive management.

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INTRODUCTION

Skin infections caused by viruses can manifest at any age, but they are more prevalent among children, particularly those in school. This heightened susceptibility in children can be attributed to their increased activity levels, making them more prone to exposure to infectious agents (Tanamal, Lasut, and Herry, 2012). According to a study conducted by Tanamal, Lasut, and Herry (2012), at the Dermatology and Venereology Polyclinic, Dr.

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Mohammad Hoesin Palembang, between 2005-2008, 13.56% (440 cases) of 3246 pediatric patients had viral skin infections, ranking it as the second most common skin ailment in children. Similarly, at the Dermatology and Venereology Polyclinic, Dr. M. Djamil Padang, during the 2003-2007 period, viral skin infections constituted the fifth most prevalent skin disease among children, with 9.28% (187 cases) of 2016 pediatric patients affected.

Viral skin infections can manifest at any age, but they are more prevalent in children, particularly those in school. This higher occurrence in children may be attributed to their increased activity, making them more susceptible to exposure to infectious agents (Tanamal, Lasut, and Herry, 2012). In the study by Tanamal, Lasut, and Herry (2012), it was reported that at the Dermatology and Venereology Polyclinic, Dr. Mohammad Hoesin Palembang, during the period of 2005-2008, viral skin infections affected 440 (13.56%) out of 3246 pediatric patients, ranking as the second most common skin disease in children. Meanwhile, at the Dermatology and Venereology Polyclinic, Dr. M. Djamil Padang, from 2003-2007, this type of skin infection stood as the fifth most common skin ailment in children, affecting 187 (9.28%) out of 2016 pediatric patients. According to Tanamal, Lasut, and Herry (2012), the predominant viral skin infections encompass herpes simplex, verruca vulgaris, molluscum contagiosum, morbilli, varicella, and herpes zoster. These six diagnoses will be the focal points of observation in the upcoming study.

The significance of promptly and accurately diagnosing viral skin infections lies not only in minimizing their severity but also in decreasing the likelihood of transmission to others (Cyr and Dexter, 2004). Failure to treat the infection in a timely manner can lead to its progression into more severe clinical conditions, such as varicella pneumonia, which is considered a medical emergency (Sauerbrei and Wutzler, 2006).

Hence, in order to enhance the knowledge on viral skin infections, the researcher intends to conduct additional research into the patient Age and Occupation Distribution of Viral Skin Infection Patients in Dermatology and Venereology Outpatient Clinic Dr. Soetomo General Academic Hospital Surabaya from January 2019 - December 2021. This effort aims to contribute to the existing literature on viral skin infections and provide valuable insights for future research on this topic.(Andriani, 2013).

METHODS

This type of research is a descriptive research with a retrospective study design by using secondary data from medical records of patients with viral skin infection at the at Dermatology and Venereology Outpatient Clinic Dr. Soetomo General Academic Hospital Surabaya from January 2019- December 2021. This type of research design will provide a better understanding in the educational background and occupation distribution in viral skin infection patients at Dermatology and Venereology Outpatient Clinic Dr. Soetomo General Academic Hospital Surabaya from January 2019 - December 2021.

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RESULT AND DISCUSSIONS

Distribution of viral infection patients by educational background

Table 1. Distribution of viral infection patients by educational background

Diagnosis	Educational background									Total (%)
	Never went to school (%)	Primary school (%)	Junior high school (%)	Senior high school (%)	Diploma 3 (%)	Undergra-duate (%)	In college (%)	Graduate (%)	Others (%)	
Herpes simplex	0	1 (14)	2 (29)	4 (57)	0	0	0	0	0	7 (100)
Verruca vulgaris	0	0	0	0	0	0	0	0	0	0
Molluscum Contagiosum	8 (29)	1 (4)	2 (7)	10 (10)	0	1 (4)	1 (4)	1 (4)	4 (14)	28 (100)
Morbilli	0	0	0	0	0	0	0	0	0	0
Varicella	10 (25)	3 (8)	7 (18)	10 (25)	1 (3)	4 (10)	1 (3)	0	4 (10)	40 (100)
Herpes zoster	5 (4)	18 (13)	13 (14)	58 (30)	9 (9)	8 (7)	1 (1)	0	4 (5)	116 (100)
Total (%)	23 (12)	23 (12)	24 (13)	82 (43)	10 (5)	13 (7)	3 (2)	1 (1)	12 (6)	191 (100)

Of all patient data in this study, the final educational background that dominated was senior high school, namely 82 patients (43%). Followed by Junior high school with 24 patients (13%), patients with primary school education and patients who never went to school with 23 patients each (12%), then undergraduate with 13 (7%), Diploma 3 with 10 (10). 5%), in college there were 3 patients (2%), 1 patient was a graduate (1%), while for other educational backgrounds there were 12 patients (6%)

The results of this study stated that the majority of patients with viral skin infections had a history of recent education as senior high school graduates, and patients who had graduate degrees had the lowest number of patients with viral skin infections. In research conducted by Angelici et al. (2022) stated that the relationship between education and the incidence of infection changed over time. This study shows that in 2020, people with low and middle educational backgrounds have a lower risk of being infected with the virus. However, at the end of the year the data changed to show that highly educated people had a lower risk of being infected with the virus. Different result can also be seen from the research of Sitepu et al. (2019) which shows that the majority of viral infection patients' last education was junior high school. From the differences in these results, it can be assumed that there is no significant influence of educational background on the incidence of viral skin infections. The occurrence of viral skin infections is influenced by many factors, and despite the common belief that education plays a big role, it actually has a limited direct impact. These infections are mainly linked to biological aspects like a person's immune system and genetics, which aren't necessarily affected by education.

Additionally, everyone, regardless of their educational background, tends to follow similar hygiene practices, which are crucial in preventing these infections. Socioeconomic status, closely related to education but distinct, turns out to be more important. People with lower socioeconomic status, not necessarily lower education, are more likely to be vulnerable due to limited access to healthcare. Also, cultural practices, which can be

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unrelated to education, influence how these infections spread. In summary, while education is part of the picture, it's not as crucial as other factors in determining the incidence of viral skin infections.

Distribution of viral infection patients by occupation

Table 2. Distribution of viral infection patients by occupation

Diagnosis	Occupation											Total (%)
	Underage (%)	Housewife (%)	Student (%)	Trader (%)	Government employees (%)	Private employees (%)	College student (%)	Retired (%)	Unemployed (%)	Self -employed (%)	Others (%)	
Herpes simplex	0	1 (14)	1 (14)	0	0	1 (14)	2 (29)	1 (14)	0	1 (14)	0	7 (100)
Verruca vulgaris	0	0	0	0	0	0	0	0	0	0	0	0
Molluscum Contagiosum	4 (14)	1 (4)	1 (4)	0	0	6 (21)	7 (25)	2(7)	0	0	7 (22)	28 (100)
Morbilli	0	0	0	0	0	0	0	0	0	0	0	0
Varicella	6 (15)	5 (11)	2 (5)	0	1 (3)	5 (13)	12 (30)	0	0	1 (3)	8 (20)	40 (100)
Herpes zoster	0	35 (30)	4 (3)	1 (1)	6 (5)	41 (35)	8 (7)	0	4 (3)	5 (4)	12 (10)	116 (100)
Total (%)	10 (5)	42 (22)	8 (8)	1 (1)	7 (4)	53 (28)	29 (15)	3 (2)	4 (2)	7 (4)	27 (15)	191(100)

The patient data in this study is dominated by patients who work as private employees, namely 53 patients (28%), followed by housewives with 42 patients (22%), college students with 29 patients (15%), students with 8 patients. (8%), underage patients were 10 (5%), self-employed patients were 7 patients (4%), retirees were 3 patients (2%), Traders were 1 patient (1), and patients with other jobs such as teachers, lecturers, TNI (Indonesian State Army) or POLRI (State Police of the Republic of Indonesia) were 27 patients (15%). The patients diagnosed with herpes simplex, molluscum contagiosum, and varicella were dominated by college students, namely 2 patients (29%), 7 patients (25%), and 12 patients (30%), respectively. Meanwhile, patients diagnosed with hepres zoster were dominated by private employees, namely 41 patients (35%).

The results of this study show that the majority of jobs for patients with skin viral infections are private employees, namely 53 patients (28%), followed by housewives with 42 patients (22%), college students with 29 patients (15%), students with 8 patients. (8%), underage patients were 10 (5%), self-employed patients were 7 patients (4%), retirees were 3 patients (2%), Traders were 1 patient (1), and patients with other jobs such as teachers, lecturers, TNI (Indonesian State Army) or POLRI (State Police of the Republic of Indonesia) were 27 patients (15%).

The occupation of private employees can influence the incidence of viral skin infections through various workplace dynamics. In office settings, the close proximity and shared spaces may elevate the risk of transmission, with factors like shared equipment and limited personal space contributing to the potential for skin infections (Wang et al., 2020). Similarly, employees in service industries, characterized by frequent customer interactions and handling of shared items, may face an increased likelihood of exposure to infectious agents, amplifying the risk of viral skin infections (Larson et al., 2021). Stress associated with many private sector jobs can also compromise the immune system, making individuals more susceptible to infections (Glaser et al., 2019). However, proactive workplace

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measures, such as hygiene protocols and stress management initiatives, can play a pivotal role in mitigating the impact of viral skin infections among private employees.

For the diagnosis of herpes simplex, molluscum contagiosum, and herpes zoster in this study, the majority of infected patients' occupations were college students. This is in accordance with research from Roberts, Pfister, and Spear (2003) which shows an increasing trend in the proportion of HSV-1 infecting college students. However, research by Fatmuji (2015) shows different data, that the majority of patients diagnosed with herpes simplex are unemployed. Until now there is no specific literature that provides information on the most common occupations of individuals diagnosed with viral skin infections. In the absence of specific studies providing evidence for the relationship between occupation and viral skin infections, it's important to acknowledge the multifactorial nature of skin infections. Factors such as personal hygiene practices, overall health, and individual susceptibility play significant roles in determining the likelihood of skin infections(Ramadani, 2011).

CONCLUSION

In conclusion, the educational background of patients in this study reveals a prevalence of senior high school graduates, constituting 43% of the sample. Following this, junior high school, primary school, and those with no formal education were also represented, showcasing diverse educational backgrounds. The occupational distribution indicates that private employees comprise the majority, accounting for 28% of the patients, with housewives and college students being the next most prevalent groups at 22% and 15%, respectively. The study further highlights variations in the distribution of specific viral skin infections based on occupation, with college students predominantly diagnosed with herpes simplex, molluscum contagiosum, and varicella, while private employees are more commonly diagnosed with herpes zoster. These findings shed light on the interplay between educational and occupational factors in the occurrence and diagnosis of viral skin infections among the studied population.

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