

Croatian Version of the TOPICOP Questionnaire

Linguistic Validation and Reliability

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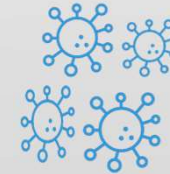
Atopic dermatitis



200 million children and adults worldwide



Genetic factors



Immune dysregulation



Defects in the skin barrier

Slide 1: Atopic dermatitis is a chronic, recurrent inflammatory skin disease that affects approximately 200 million children and adults worldwide. It is caused by genetic factors, immune dysregulation, and defects in the skin barrier.

Atopic dermatitis



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Slide 2: Disease is characterized by continuous itching, dry skin, and pruritic lesions, which can significantly disrupt patients' quality of life by causing sleep disturbances, mental health issues, poor academic, work and social functioning.

Allergic contact dermatitis



Affecting 20% of population



Exposure to environmental allergens



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Slide 3: Another common skin condition, allergic contact dermatitis, arises from exposure to environmental allergens and can manifest as acute or chronic dermatitis, affecting up to 20% of the population.

Corticophobia

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Clinical and Experimental Dermatology
Concise Report

#corticophobia: a review on online misinformation related to topical steroids

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Abstract

Misinformation in healthcare is at crisis level worldwide, with the internet as primary source of prevarication. Topical corticosteroids (TCS) are a safe and effective treatment used in multiple dermatological conditions. Nonadherence to prescribed TCS can be due to phobia secondary to misinformation. TCS phobia is a complex multifaceted phenomenon that exploits patients with skin disease, creates cognitive dissonance and can obstruct successful treatment. This study aimed to examine the content of TCS-related misinformation available online. A formal review of PubMed was performed using the terms 'topical corticosteroids' AND 'misinformation' OR 'disinformation' OR 'conspiracy theory', along with an informal Google search using combinations of these terms and further targeted searches on social media applications including Facebook™, Twitter™, Instagram™ and TikTok™. 'Topical steroid withdrawal', 'red skin syndrome' or 'TCS addiction' is a particularly prevalent myth currently being propagated on social media, with most content suggesting that eczema is due to a 'leaky gut' or food intolerance and not to skin inflammation. The risks of potential adverse effects such as skin thinning and stunted growth/development are often exaggerated. Multiple websites promoting misinformation were frequently endorsed by companies advertising consultations or testing to identify 'underlying causes', or 'natural' products as alternative treatments, including 'herbal' remedies, which can contain significant quantities of corticosteroids or other potent ingredients. The dermatology community should be vigilant of the type of TCS-related misinformation online and be active in attempts to counteract it with evidence-based advice.

Finnegan, P.; Murphy, M.; O'Connor, C. #corticophobia: A Review on Online Misinformation Related to Topical Steroids. *Clin Exp Dermatol* 2023, 48 (2), 112–115. <https://doi.org/10.1093/ced/llac019>.

Slide 4: Both atopic dermatitis and allergic contact dermatitis are often treated with topical corticosteroids (TCS) to manage inflammation, but adherence to this treatment is frequently compromised due to topical corticophobia, a fear of corticosteroids fueled by misconceptions about their side effects. The Internet and social media are the main sources of misinformation.

TOPICOP©: A New Scale Evaluating Topical Corticosteroid Phobia among Atopic Dermatitis Outpatients and Their Parents

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Abstract

Background: The fear of using topical corticosteroids, usually called topical corticophobia, is a frequent concern for atopic dermatitis patients and/or their parents. *Desaccion patients' atopic dermatitis and their parents' topical corticosteroid*

Beliefs

Worries

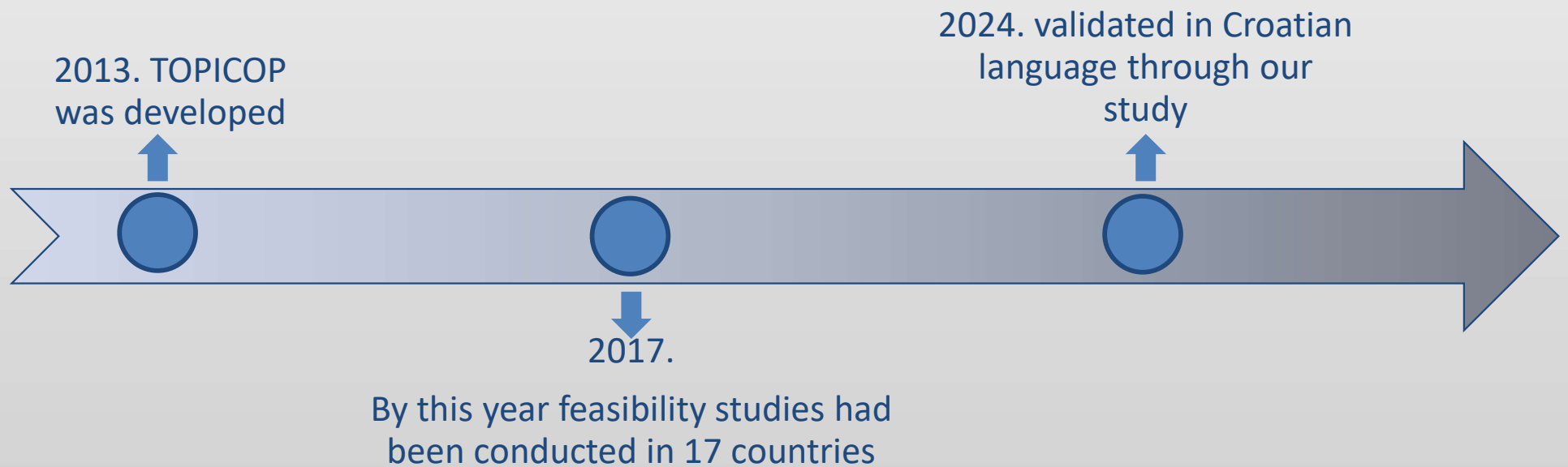
Behaviors

Table 3. Items of the TOPICOP©.

TCs pass into the bloodstream				
	Totally disagree	Not really agree	Almost agree	Totally agree
TCs can lead to infections				
	Totally disagree	Not really agree	Almost agree	Totally agree
TCs make you fat				
	Totally disagree	Not really agree	Almost agree	Totally agree
TCs damage your skin				
	Totally disagree	Not really agree	Almost agree	Totally agree
TCs will affect my future health				
	Totally disagree	Not really agree	Almost agree	Totally agree
TCs can lead to asthma				
I don't know of any side effects but I'm still afraid of TCs				
	Totally disagree	Not really agree	Almost agree	Totally agree
I'm afraid of applying too much cream				
	Never	Sometimes	Often	Always
I'm afraid of putting cream on certain zones like eyelids, where the skin is thinner				
	Never	Sometimes	Often	Always
I wait as long as I can before treating myself				
	Never	Sometimes	Often	Always
I stop the treatment as soon as I can				
	Never	Sometimes	Often	Always
I need reassurance about TCS				
	Never	Sometimes	Often	Always

Moret, L.; Anthoine, E.; Aubert-Wastiaux, H.; Le Rhun, A.; Leux, C.; Mazereeuw-Hautier, J.; Stalder, J.-F.; Barbarot, S. TOPICOP©: A New Scale Evaluating Topical Corticosteroid Phobia among Atopic Dermatitis Outpatients and Their Parents. *PLoS One* 2013, 8 (10), e76493. <https://doi.org/10.1371/journal.pone.0076493>.

Slide 5: To evaluate the issue of topical corticophobia, the TOPICOP (Topical Corticosteroid Phobia) questionnaire was developed in 2013. The questionnaire, consisting of 12 items, assesses patients' worries, beliefs, and behaviors related to the use of TCSs, allowing for a standardized measurement of corticophobia. It has been used in dermatology to help identify patients who may struggle with adhering to TCS treatment due to irrational fears.



Slide 6: The TOPICOP questionnaire was developed in 2013. TOPICOP is, at this point, the only score validated to evaluate topical corticophobia. An international feasibility study was conducted in 17 countries around the world by 2017. In 2024. the TOPICOP questionnaire was validated in Croatian language through our study.

Article

Linguistic Validation and Reliability of the Croatian Version of the TOPICOP Questionnaire

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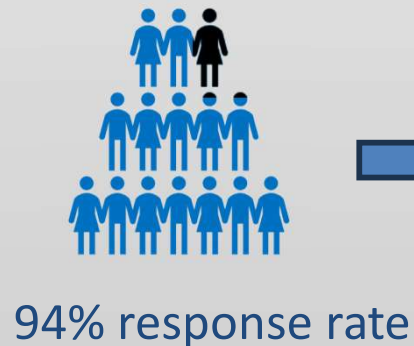
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Abstract: *Background and Objectives:* This study demonstrates the factor structure and reliability of the Croatian version of the TOPICOP (Topical Corticosteroid Phobia) questionnaire, thereby contributing to further validation and standardization of the measurement of topical corticophobia with dermatological patients or their parents, which directly affects patient or parent compliance, as well as the final therapeutic effect. *Materials and Methods:* The cross-sectional, observational study was conducted at the University Hospital Centre Split, Department of Dermatovenerology. The research involved inviting 120 participants (age 12–68) who attended the University Hospital Centre Split's Atopy School, patients examined in the Dermatology Outpatient Clinic of the University Hospital Centre Split and diagnosed with atopic dermatitis (AD) or allergic contact dermatitis (ACD), and



Slide 7: Our study aimed to validate the Croatian version of the TOPICOP questionnaire with the purpose of measuring topical corticophobia and improving treatment adherence. 120 participants, aged 12 to 68 and diagnosed with atopic dermatitis or allergic contact dermatitis, participated in a cross-sectional, observational study at the University Hospital Centre Split, Croatia. Parents or legal representatives of children under 12 years were also included. We collected data using the Croatian translation of the questionnaire



Questions in the questionnaire	Factor saturations
I am afraid of applying too much TCS cream/ointment.	0.67
I need reassurance about TCSs.	0.67
TCSs will affect my future health.	0.62
I don't know of any side effects, but I'm still afraid of TCSs.	0.61
TCSs can lead to asthma.	0.61
I wait as long as I can before treating myself with TCSs.	0.59
I'm afraid of putting TCS cream/ointment on certain zones, like the eyelids, where the skin is thinner.	0.59
TCSs can lead to infections.	0.55
TCSs pass into the bloodstream.	0.53
TCSs make you fat.	0.51
I stop TCS treatment as soon as I can.	0.47
TCSs damage your skin.	0.47

Factor analysis showed high reliability: with Cronbach's alpha coefficient 0.85.

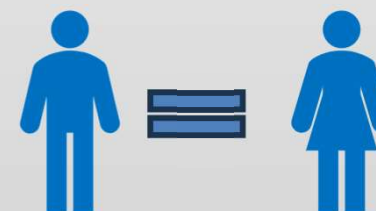
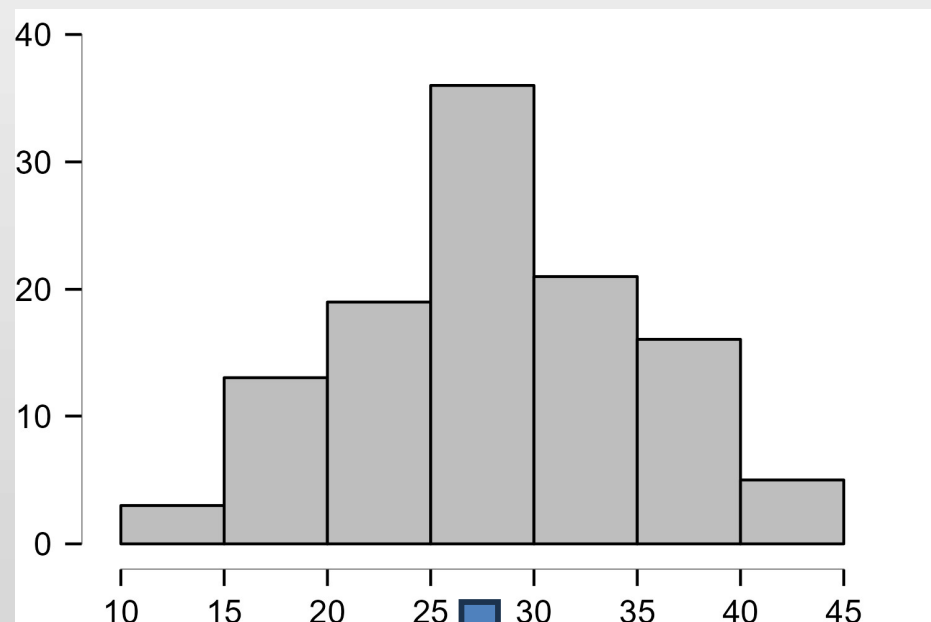
Slide 8: Of the 120 participants, 113 provided valid responses, with a 94% response rate. Factor analysis yielded one common factor of relatively high reliability: Cronbach's alpha coefficient was 0.85 with a 95% confidence interval from 0.81 to 0.89.

Descriptive statistics of questions on the TOPICOP questionnaire

Questions in the questionnaire	M(SD)
TCSs pass into the bloodstream.	2.74 (0.91)
TCSs can lead to infections.	1.85 (0.92)
TCSs make you fat.	1.92 (0.95)
TCSs damage your skin.	2.46 (0.85)
TCSs will affect my future health.	2.53 (0.81)
Topical corticosteroids will affect my health in the future.	2.06 (0.82)
I don't know of any side effects, but I'm still afraid of TCSs.	2.58 (0.99)
I am afraid of applying too much TCS cream/ointment.	2.68 (0.94)
I'm afraid of putting TCS cream/ointment on certain zones, like the eyelids, where the skin is thinner.	2.79 (0.96)
I wait as long as I can before treating myself with TCSs.	2.30 (0.86)
I stop TCS treatment as soon as I can.	2.27 (1.12)
I need reassurance about TCSs.	2.28 (0.98)

Slide 9: The results revealed significant levels of topical corticophobia, especially concerns about applying topical corticosteroids to sensitive areas such as thin skin, despite fewer worries about serious side effects like weight gain or infections.

Figure 1. Distribution of the results



The average score was 28.5, indicating moderate levels of topical corticophobia

Slide 10: The average questionnaire score was 28.5 with a standard deviation of 6.9, indicating moderate levels of topical corticophobia across the sample. No significant differences were found between male and female respondents or between patients and their parents or legal representatives.



Slide 11: The Croatian version of the TOPICOP questionnaire now has been validated as a reliable tool for assessing corticophobia, which is a significant barrier to effective treatment of patients with atopic dermatitis or allergic contact dermatitis.

How can we help?



Slide 12: By identifying and addressing topical corticophobia, healthcare providers can improve treatment adherence and patient outcomes. Future studies should focus on cross-cultural validation and interventions to reduce topical corticophobia through education.