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**Nowoczesne strategie oceny typów skóry i edukacji zdrowotnej  
w dermatologii i kosmetologii**

Modern strategies for skin type assessment and health education  
in dermatology and cosmetology

Rozprawa doktorska na stopień doktora  
w dziedzinie nauk medycznych i nauk o zdrowiu  
w dyscyplinie nauki o zdrowiu  
przedkładana Radzie Dyscypliny Nauk o Zdrowiu  
Warszawskiego Uniwersytetu Medycznego

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## Streszczenie w języku angielskim (English summary)

The doctoral dissertation entitled "*Modern strategies for skin type assessment and health education in dermatology and cosmetology*" is a single-topic series of publications devoted to the topic of remote cosmetic consultations, the key element of which is cosmetic diagnostics. Remote cosmetic diagnostics allows for the identification of skin type, which allows for a precise assessment of its needs and the selection of appropriate care. In addition, it plays an important educational role in the promotion of skin health and cancer prevention.

Remote cosmetic diagnostics is based on information technology, mainly the Internet, which reduces the need for stationary visits. During the COVID-19 (coronavirus disease 2019) pandemic, remote consultations have made it possible to maintain social distance. They are currently used for people who have difficult access to a specialist, while at the same time they are support for clinicians.

As part of a single-topic series of publications constituting a doctoral dissertation, a review of literature on the importance of remote consultations in cosmetology and cosmetic dermatology was conducted. The works discussed in the review focus on teledermatology (dermatological consultations), diagnostics and treatment of dermatological conditions. In addition, on educating patients in the field of consolidating proper care behaviors, photoprotection and anti-cancer prevention. The analysis of the studies discussed in the review showed that creating forms in remote counseling facilitates the provision of personalized advice.

The next publication reviewed the literature on the potential and impact of social media on changing behaviors and activities in promoting skin health. The availability of social media worldwide provides unlimited opportunities for sharing and managing information. The literature search revealed 1558 papers, of which 23 were eligible for the review. Three publications concerned acne, 20 publications concerned skin cancer, sun protection and tanning. Social media interventions were discussed in 15 studies. The review allowed for the identification of cognitive and cognitive-behavioral interventions. In observational and interventional studies, the most frequently discussed topics were: skin exposure to the sun, protection from UV radiation and skin cancer. Analysis of observational studies showed that social media, according to users, is a reliable place to obtain information about skin health. A trend was observed in the influence of social media

on user behavior. The studies analyzed in the review showed that more frequent use of social media is significantly associated with more frequent exposure to UV radiation. It was identified that social media focuses on visualization. Photos and images are important tools for influencing users. In intervention studies, there is a noticeable tendency to encourage recipients to respond to posted posts and create their own posts. The engagement of social media users is measured by the amount of content shared and contributes to changing attitudes and behaviors in the field of skin prevention. It can be concluded that interventions involving social media users in generating content increase motivation to care for the skin.

In subsequent publications, included in the single-topic publication cycle, a Polish version of the Baumann Skin Type Questionnaire (BSTQ) was developed, used to assess skin type (oily or dry; sensitive or resistant; with or without discoloration; wrinkled or tight/wrinkle-free). The questionnaire is a useful tool in remote counseling.

In the publication concerning the development and validation of the Polish version of the Baumann Skin Type Questionnaire (BSTQ), in the dimensions: oily or dry and sensitive or resistant, it was shown that the Polish adaptation of the Baumann Skin Type Questionnaire (BSTQ) is a reliable tool for assessing skin type in the above dimensions, among a young cohort. The internal consistency test (Cronbach's alpha coefficient value) was used to assess the reliability of the questionnaire. In the dimension of oily or dry skin, the values:  $\alpha_{\text{raw}}=0.75$ ,  $\alpha_{\text{std}}=0.74$  in the test and  $\alpha_{\text{raw}}=0.77$ ,  $\alpha_{\text{std}}=0.77$  in the retest, confirmed by the values of the Lambda 6 Guttman reliability coefficient in the G6 test=0.79 and in the G6 retest=0.81. In the case of the assessment of the dimension sensitive or resistant skin, the values:  $\alpha_{\text{raw}}=0.72$ ,  $\alpha_{\text{std}}=0.74$  in the test and  $\alpha_{\text{raw}}=0.78$ ,  $\alpha_{\text{std}}=0.79$  in the retest, confirmed by the values of the Lambda 6 Guttman reliability coefficient in the G6 test=0.81 and in the G6 retest=0.85. In both dimensions, the obtained values indicate good internal consistency of the test, i.e. satisfactory reliability of the questionnaire.

The next publication concerned the development and validation of the Polish version of the Baumann Skin Type Questionnaire (BSTQ) in the assessment of discoloration and wrinkles. The publication assessed the reliability of the questionnaire using an internal consistency test (Cronbach's alpha coefficient value). Low internal consistency was demonstrated (in the dimension of skin with or without discoloration, values:  $\alpha_{\text{raw}}=0.55$ ,  $\alpha_{\text{std}}=0.54$  in the test and  $\alpha_{\text{raw}}=0.58$ ,  $\alpha_{\text{std}}=0.54$  in the retest, confirmed by the values of the Lambda 6 Guttman reliability coefficient in the test G6=0.63 and in the

retest  $G6=0.63$ ; in the dimension of wrinkled or tense skin:  $\alpha_{\text{raw}}=0.33$ ,  $\alpha_{\text{std}}=0.25$  in the test and  $\alpha_{\text{raw}}=0.36$ ,  $\alpha_{\text{std}}=0.33$  in the retest, which was reflected in low values of the Lambda 6 Guttman coefficient:  $G6=0.47$  in the test and  $G6=0.54$  in the retest).

The Baumann Skin Type Questionnaire (BSTQ) has been shown to be a useful tool for assessing skin type, including oily or dry skin and sensitive or resistant skin. Its use in assessing skin for pigmentation and age-related changes should be carefully considered and potentially supplemented with additional diagnostic approaches.