

# Profil Photoaging Berdasarkan Skala Glogau pada Masyarakat di Area Pesisir dan Korelasinya dengan Sun Index = Photoaging Profile Based on Glogau Scale and Its Correlation with Sun Index in the Coastal Population

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## Abstrak

Latar Belakang: Photoaging dapat mengakibatkan terjadinya penuaan kulit dini, kerutan kasar, hilangnya elastisitas dan kelenturan, tekstur kulit menjadi tidak rata, keratosis, serta perubahan pigmentasi kulit.

Individu yang secara geografis tinggal di daerah sering terpajan sinar matahari lebih rentan mengalami photoaging, contohnya di area pesisir. Pengukuran photoaging menggunakan Skala Glogau, sedangkan pengukuran pajanan sinar matahari menggunakan sun index.

Tujuan: Menganalisis profil photoaging berdasarkan skala Glogau dan korelasinya dengan riwayat pajanan matahari menggunakan sun index pada masyarakat pesisir.

Metode: Merupakan studi deskriptif analitik dengan desain potong-lintang. Populasi target penelitian adalah orang berusia 20 tahun dengan kulit tipe Fitzpatrick III, IV, atau V, serta berisiko tinggi photoaging dengan rerata pajanan sinar matahari 3 jam perhari. Subjek penelitian (SP) diambil dengan metode consecutive sampling berdasarkan kriteria penerimaan dan penolakan. Analisis statistik dilakukan untuk membuktikan hipotesis penelitian. Nilai  $p < 0,05$  dianggap signifikan secara statistik.

Hasil: Diantara 55 SP, 3 orang termasuk dalam Skala Glogau II, 42 orang dalam Skala Glogau III, dan 10 orang dalam Skala Glogau IV. Mayoritas memiliki kerutan yang tetap ada saat wajah tidak bergerak, paling banyak pada regio dahi 74,5%, nasolabial 70,9%, dan sudut mata 69,1%. Perubahan pigmentasi paling dominan ditemukan adalah diskromnia (65,5%), serta tidak ditemukan keratosis aktinik pada mayoritas SP (98,2%). Diperoleh nilai median sun index sebesar 10,91, dan median BSA yang terpajan matahari sebesar 20,50%. Rerata total durasi pajanan matahari adalah 53,63 jam/minggu. Didapatkan korelasi lemah namun tidak bermakna secara statistik antara sun index dengan keparahan derajat photoaging berdasarkan Skala Glogau ( $r = 0,205$ ;  $p = 0,134$ ). Dari data tambahan didapatkan korelasi positif lemah yang bermakna antara lamanya pajanan matahari per minggu dan keparahan derajat photoaging berdasarkan Skala Glogau ( $r = 0,281$ ;  $p = 0,038$ ), serta didapatkan korelasi positif sedang yang bermakna antara usia dan derajat keparahan photoaging berdasarkan Skala Glogau ( $r = 0,631$ ;  $p < 0,001$ ). Didapatkan keratosis seboroik pada hampir seluruh SP, terutama pada kelompok Glogau tipe III (77,3%). Lebih banyak ditemukan SP yang tidak merokok pada Glogau II (100%) dan III (57,1%), sedangkan Glogau IV lebih banyak pada pasien merokok (80%). Didapatkan pula Glogau II dan III lebih banyak pada perempuan (100% dan 59,5%), sedangkan Glogau IV lebih banyak pada laki-laki (80%).

Kesimpulan: Berdasarkan klasifikasi photoaging menurut Glogau, 3 orang termasuk dalam Skala Glogau II, 42 dalam Skala Glogau III, dan 10 dalam Skala Glogau IV. Tidak terdapat korelasi yang bermakna antara sun index dengan keparahan derajat photoaging berdasarkan Skala Glogau.

.....Background: Photoaging can cause premature skin aging, coarse wrinkles, loss of elasticity, uneven skin texture, keratosis, and skin pigmentation changes. Individuals who geographically live in areas frequently exposed to sunlight are more susceptible to photoaging, for example in coastal areas. Photoaging was

classified using Glogau scale and sun exposure was measured by sun index.

**Aim:** To analyze the photoaging profile based on Glogau Scale and its correlation with the history of sun exposure using sun index in coastal population.

**Method:** This is an analytic descriptive study with a cross-sectional design. The target population for this study were people aged 20 years with skin types Fitzpatrick III, IV, or V, and at high risk of photoaging with an average sun exposure of 3 hours per day. The research subjects were taken by consecutive sampling method based on acceptance and rejection criteria. Appropriate statistical analysis was performed to prove the research hypothesis. P value of  $<0.05$  is considered statistically significant.

**Results:** Among 55 subjects, 3 people are included in the Glogau II category, 42 people in the Glogau III, and 10 people in the Glogau IV. Majority have wrinkles at rest, the most wrinkles were found in forehead region 74.5%, nasolabial 70.9%, and crow's feet 69.1%. The most dominant pigmentation changes were dyschromia (65.5%), and no actinic keratosis was found in the majority subjects (98.2%). The median sun index value was 10.91, and the BSA median exposed to the sun was 20.50%. The average total duration of sun exposure was 53.63 hours/week. In additional data, there was a weak correlation but not statistically significant between sun index and the severity of photoaging based on the Glogau Scale ( $r = 0.205$ ;  $p = 0.134$ ). A significant weak correlation was obtained between sun exposure per week and the severity of photoaging based on the Glogau Scale ( $r = 0.281$ ;  $p = 0.038$ ), and a significant moderate correlation was obtained between age and the severity of photoaging based on the Glogau Scale ( $r = 0.631$ ;  $p < 0.001$ ). Seborrheic keratosis was found in almost all subjects, especially in the Glogau type III group (77.3%). There were more non-smokers in Glogau type II (100%) and III (57.1%), while type IV was more common in smoking patients (80%). It was also found that type II and III Glogau were more common in women (100% and 59.5%), while type IV Glogau were more common in men (80%).

**Conclusion:** Based on Glogau photoaging scale, 3 people are included in the Glogau II category, 42 people in the Glogau III, and 10 people in the Glogau IV. There was no significant correlation between sun index and the severity of photoaging based on the Glogau Scale.