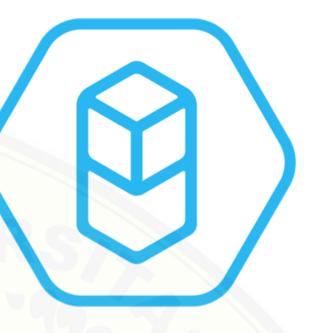


Pharmacy Education an international peer review journal



Volume 22 No. 2 March, 2022





ISSNI- 1/177-2701

About the Journal

Dear Contributors.

The *Pharmacy Education* journal, published by FIP, remains an open access, free to publish, peer reviewed journal. We welcome your submissions on all aspects of pharmacy and pharmaceutical related education, training and workforce development.

During the pandemic year of 2020, and continuing into 2021, we have received unprecedented levels of manuscript submissions. We thank you for these. We have, in response, upgraded our publication platform.

We would like to iterate that all of our Editors, Associate Editors, Reviewers and office staff work as expert volunteers for the Journal, and this ensures there are <u>no publication charges or subscription fees</u> for your accepted manuscripts – all of which are immediate open access. Due to continued high demand, we are undergoing a re-structuring of our editorial office and personnel. Please be patient if there are some delays in your manuscript processing times. We thank all of our Editors, Associate Editors and Peer Reviewers for their continued work and dedication to this highly regarded international research journal.

Dr Marwan El Akel, Editor. Professor Ian Bates, Editor-in-Chief

Pharmacy Education journal provides a research, development and evaluation forum for communication between academic teachers, researchers and practitioners in professional and pharmacy education, with an emphasis on new and established teaching and learning methods, new curriculum and syllabus directions, educational outcomes, guidance on structuring courses and assessing achievement, and workforce development. It is a peer-reviewed online open access platform for the dissemination of new ideas in professional pharmacy education and workforce development. Pharmacy Education supports Open Access (OA): free, unrestricted online access to research outputs. Readers are able to access the Journal and individual published articles for **free** - there are no subscription fees or 'pay per view' charges. Authors wishing to publish their work in Pharmacy Education do so without incurring any financial costs.

In addition we are listed in EBSCO, and indexed in the <u>Emerging Sources Citation Index</u> (ESCI - Web of Science), EMBASE and <u>SCOPUS</u>.

The Journal also recognises the importance of policy issues and current trends in the context of education, professional development and workforce.

The Journal publishes reports of research and innovation in all aspects of professional pharmacy education and training, case studies, country studies, innovations in laboratory and professional educational practice, workforce issues and development, reviews and reports on information technology in education and reviews of current literature.

The Journal has a clear international perspective, and has a longstanding policy of facilitating publication, in particular for younger Faculty, and those authors whose first language may not be English, and manuscripts from all regions seeking low cost engagement with the wider global community.

The Journal is published by the <u>International Pharmaceutical Federation (FIP)</u> and is aligned to the global mission of advancing education, advancing practice and advancing science.

Editorial Team

Editor in Chief

Prof Ian Bates, FIP Education, United Kingdom

Editors

Prof Timothy Rennie, University of Namibia Faculty of Health Sciences, Namibia

Senior Associate Editors

Dr Andreia Bruno-Tomé, Monash University, Australia

Assoc Prof Jennifer Marriott, Monash University, Australia

Managing Editor

Dr Marwan El Akel, Pharmacy Education

Associate Editors

Prof Joyce Addo-Atuah, Touro College of Pharamcy, USA

Prof Patricia Acuna-Johnson, University of Valparaiso, Chile

Dr Syed Imran Ahmed, University of Lincoln, United Kingdom

Prof Alba Mahmoud Albsoul-Younes, The University of Jordon, Jordan

Dr Ammar Almaaytah, Middle East University, Jordan

Dr Filipa Alves Da Costa, University of Lisbon, Portugal

Mr Chima Amadi, Pharmacists Council of Nigeria, Nigeria

Dr Mudassar Iqbal Arain, , University of Sindh, Pakistan.

Prof Lilian M. Azzopardi, University of Malta, Malta

Prof Rula Darwish, The University of Jordon, Jordan

Dr Ruth Edwards, Aston University, UK

Dr Divakar Goli, Acharya Institutes, India

Prof Yahdiana Harahap, Universitity of Indonesia, Indonesia,

Prof Martin Henman, Trinity College Dublin, Ireland

Dr Shazia Jamshed, International Islamic University Malaysia, Malaysia

Dr Abby Kahaleh, Roosevelt University, USA

Prof Silvana Nair Leite, Federal University of Santa Catarina, Brazil

Dr Subhash Chandra Mandal, Directorate of Drugs Control, India

Mr Khalid Garba Mohmmed, University of Milan, Italy

Dr Hana Morrissey, University of Wolverhampton, UK

Dr Christos Petrou, University of Nicosia, Cyprus

Dr Ukamaka Okafor, Pharmacists Council of Nigeria, Nigeria

Dr Carl Schneider, The University of Sydney, Austraila

Prof Bruno Sepodes, University of Lisbon, Portugal

Dr James Scott, Western University of Health Sciences, USA

Prof M Chandra Sekar, University of Findlay, USA

Dr Rajani Shakya, Kathmandu University, Nepal

Dr Lixin Shu, Naval Medical University, China

Dr Judilynn Solidum, University of the Philippines, Philippines

Dr Kyle Wilby, University of Otago, New Zealand

Dr Sarah Willis, The University of Manchester, UK

Prof Shigeo Yamamura, Josai International University, Japan

Published: 2022-03-31

Special Edition

• IAI SPECIAL EDITION: Effectiveness of telemedicine use to improve patient outcome in cancer patients: A narrative review

Angela Judhia Arkandhi, Woro Harjaningsih (Author) p. 248-253

- IAI SPECIAL EDITION: White Turmeric (Kaempferia rotunda L.) extract liquid soap preparation for feminine hygiene and effectiveness against Candida albicans
 Sofi Nurmay Stiani, Lila Ardiani Putri, Yusransyah, Dimas Danang Indriatmoko (Author)
 p. 74-84
- IAI SPECIAL EDITION: Signal detection of adverse drug reaction to first line anti tuberculosis drugs using the Indonesian pharmacovigilance database
 Setyo Utami, Umi Athiyah, Yunita Nita (Author)
 p. 270-274
- IAI SPECIAL EDITION: Formulation and effectivity testing of pining fruit extract gel (Hornstedtia alliacea) for healing burns
 Firman Gustaman, Fajar Setiawan, Nida Nur Fadhilah, Keni Idacahyati, Winda Trisna Wulandari, Indra Indra (Author)

p. 109-112

- IAI SPECIAL EDITION: The potential role of pharmacists in counteracting health misinformation in social media
 - Anila Impian Sukorini, Titik Puji Rahayu, Kandi Aryani Suwito, Andi Hermansyah (Author) p. 292-296
- IAI SPECIAL EDITION: Development and validation of dissolution testing of Flunarizine dihydrochloride in tablet dosage form

Fitra Yelli , Harrizul Rivai , Henny Lucida (Author) p. 132-137

- IAI SPECIAL EDITION: Solubility improvement of gallic acid in water through cocrystal formation with the solvent-drop grinding method and tartaric acid as co-former Ledianasari, Sohadi Warya, Sri Nurjayanti (Author) p. 156-159
- IAI SPECIAL EDITION: Green synthesis of silver nanoparticles from Alpinia galanga extract
 with microwave irradiation and antibacterial activity against Escherichia coli
 Yuli Haryani, Yonatha Melanie, Maria Novita, Yuharmen, Rudi Hendra, Ganis Fia Kartika (Author)
 p. 20-23
- IAI SPECIAL EDITION: Drug therapy for COVID-19 inpatients in West Nusa Tenggara hospital Mahacita Andanalusia, Shah Iqbal Ikraman Akbar, Anna Pradiningsih (Author) p. 180-183
- IAI SPECIAL EDITION: Determinant factors of narcotics, psychotropic, and addictive substances abuse relapse in a drug rehabilitation centre in Indonesia
 Raharni Raharni, Siti Isfandari, Telly Purnamasari, Andi Leny Susianti, Mujiati Mujiati (Author) p. 207-212
- IAI SPECIAL EDITION: Validity and reliability of the Indonesian version of the Self-Efficacy for Appropriate Medication use Scale (SEAMS-I)

Antonius Nugraha Widhi Pratama, Fardina Aulia, Fransiska Maria Christianty (Author) p. 45-49

• IAI SPECIAL EDITION: Comparison and validation of EuroQol-5 Dimension level and Short Form-6 Dimension in cataract patients

Tri Murti Andayani, Susi Ari Kristina, Rizky Hidayaturahmah (Author)

- p. 236-241
- IAI SPECIAL EDITION: The development of a medication safety module for healthcare professionals: Results of a Delphi technique
 - Desak Ketut Ernawati , Ika Widi Astuti, Luh Kadek Pande Ary Susilawati, I Wayan Sumardika (Author) p. 70-73
- IAI SPECIAL EDITION: Pharmaceutical care model for antituberculosis drug therapy in tuberculosis patients at a primary healthcare centre in Surabaya, East Java, Indonesia Yuni Priyandani, Abdul Rahem, Umi Athiyah, M. B. Qomaruddin, Kuntoro (Author) p. 263-266
- <u>IAI SPECIAL EDITION: Development of novel curcumin nanoemulgel: Optimisation, characterisation,</u> and ex vivo permeation
 - Ferdy Firmansyah, Wildan Khairi Muhtadi, Sepfira Indriani, Maulana Dziya Ulhaq, Suci Rizki Auliya, Benni Iskandar, Nesa Agistia, Lutfi Chabib (Author) p. 98-103
- IAI SPECIAL EDITION: Molecular docking study of vemurafenib derivatives on melanoma inhibitory activity (MIA) as anti-melanoma
 - Fauzan Zein Muttaqin , Anita Pramudya Ratna Sari, Fransiska Kurniawan (Author) p. 284-288
- IAI SPECIAL EDITION: Medication adherence and quality of life among asthmatic patients in primary care in Indonesia
 - Gesnita Nugraheni, Ayu N. A. Santoso, Dian Puspitasari, Catur D. Setiawan, Yunita Nita (Author) p. 123-128
- IAI SPECIAL EDITION: Cytotoxic activity of Cantigi leaf extract (Vaccinium varingiaefolium Blume Miq.) on HeLa cervical cancer cells and A549 lung cancer cells Kosasih Kosasih, Hasna Nurfitriyati, Reza Hafidz (Author) p. 147-150
- IAI SPECIAL EDITION: Effects of a combination of Sauropus androgynus L. leaf and Zingiber Ottensii rhizome on fatty acid profile and liver damage in rats
 - Agus Sulaeman, Annisa Mardianni , Ary Yuniarto , Masteria Yunovilsa Putra, Bustanussalam, Asep Bayu (Author)
 - p. 9-15
- IAI SPECIAL EDITION: The effect of astaxanthin gel and zeaxanthin combination on wound healing in diabetic rats
 - Lusi Nurdianti, Renaldi Eka Mufti Rosyidi, Keni Idacahyati, Fajar Setiawan (Author) p. 169-173
- IAI SPECIAL EDITION: The impact of mobile application: "Friends of Heart" in knowledge and compliance of patients with coronary heart disease
 - Riyan Pratama Putra, Ike Dhiah Rochmawati, Delta Ardy Prima (Author) p. 36-40
- IAI SPECIAL EDITION: Evaluation of pharmacist-led structured counselling on glycemic control and clinical outcomes of Type 2 diabetes mellitus patients at a health centre in East Jakarta, Indonesia
 - Muhammad Rahmat Masdin, Ratu Ayu Dewi Sartika, Rani Sauriasari (Author) p. 194-199
- IAI SPECIAL EDITION: An exploratory study of pharmacists' views on the development of a professional recognition system in Indonesia
 - Sherly Meilianti, Felicity Smith, Roy Himawan, Franciscus Kristianto, Rasta Naya, Ian Bates (Author) p. 225-229
- <u>IAI SPECIAL EDITION: Mapping of pharmaceutical service facilities (pharmacy) based on</u> geographic information in Surabaya
 - Catur Dian Setiawan, Arief Wibowo, Umi Athiyah (Author)

p. 60-65

• IAI SPECIAL EDITION: Cost of illness analysis of diabetes mellitus with complications in one hospital in Surabaya

Yohana Febriani Putri Peu Patty, Yunita Nita, Libriansyah (Author) p. 254-258

• IAI SPECIAL EDITION: Optimal scenario of antihypertension's cost-effectiveness in Prolanis hypertension patients: A case study of Pandeglang District, Indonesia

Yusransyah, Eli Halimah, Auliya A. Suwantika (Author) p. 85-91

• IAI SPECIAL EDITION: Brotowali (Tinospora crispa L.) stem extract activity as an α -Amylase enzyme inhibitor

Yustina Sri Hartini, Dewi Setyaningsih, Fetiana Chrismaurin, Fila Delpia (Author) p. 275-277

• IAI SPECIAL EDITION: Meta-analysis of the effectiveness of histamine-2 receptor antagonists as prophylaxis for gastrointestinal bleeding in intensive care unit patients

Fonny Cokro, Juliana Sumartono (Author) p. 113-117

• IAI SPECIAL EDITION: Effect of Rosmarinus officinalis L inhalation on reducing primary dysmenorrhoea in female students of the Bali International University

Ida Ayu Manik Partha Sutema, I Gede Argham Mahardika (Author) p. 138-141

• IAI SPECIAL EDITION: The potential of Mimosa pudica L as an α - glucosidase inhibitor and antioxidant agent

Muhamad Afham, Hilwan Yuda Teruna, Rudi Hendra (Author) p. 1-4

• <u>IAI SPECIAL EDITION: Infrared spectroscopy chemometric model for determination of phenolic</u> content of plant leaf powder

Lestyo Wulandari, Tyas Putri Rahmadania, Nia Kristiningrum (Author) p. 160-164

• IAI SPECIAL EDITION: Antioxidant activity assay of Agarwood leaf extract cream (Aquilaria malaccensis L.) using free radical scavenging method

Abdul Rahman Wahid, Yuli Fitriana, Alvi Kusuma Wardani, Lisa Apriana Heru Listari (Author) p. 24-29

• <u>IAI SPECIAL EDITION: Prescription of medicine for outpatients of gynaecology obstetric poly</u> at a private hospital in Semarang, Indonesia

Didik Apriyanto, Maria Caecilia Nanny Setiawati (Author) p. 184-187

• IAI SPECIAL EDITION: Pancreatic histological studies in mice induced by alloxan and steeping okra coffee (Abelmoschus esculentus [L.] Moench)

Indiana Gita Anggraeni, Rahmat A Hi Wahid, Nurul Marfu'ah (Author) p. 213-217

• IAI SPECIAL EDITION: Development of Sumbawa honey as tonic to stimulate stamina during the COVID-19 pandemic in West Nusa Tenggara

Baiq Leny Nopitasari, Shah Iqbal Ikraman Akbar, Alvi Kusuma Wardani (Author) p. 50-54

• <u>IAI SPECIAL EDITION: Adverse drug reaction of antiepileptic monotherapy on epileptic paediatric patients in Dr Sardjito Hospital, Yogyakarta, Indonesia</u>

Woro Harjaningsih, Emma Rahmania, Sheila Nabila Firdha (Author) p. 242-247

• IAI SPECIAL EDITION: Influence of dispersing solvent on curcumin dissolution from solid dispersions prepared using hydroxypropyl methylcellulose-polyvinylpyrrolidone K30

Dewi Setyaningsih, Dyah Roro Palupi, Yustina Sri Hartini (Author) p. 74-78

• IAI SPECIAL EDITION: Relationship between family support and compliance in diabetes mellitus patients

Devi Nur Zafirah, Liza Pristianty, Abdul Rahem, Yuni Priyandani (Author) p. 267-269

• IAI SPECIAL EDITION: Theobroma cacao L. (Cocoa) pod husk as a new therapy for transient receptor protein vanilloid-1 (TRPV1)-targeted diabetic neuropathy: An in silico study Pungky Azarotul Nisa, Alviyani Mahdalina Adzani, Sinta Noor Amalia, Risa Maulidiana, Eka Yuniar, Fania Mufti Mufidah, Fifteen Aprila Fajrin (Author) p. 104-108

• IAI SPECIAL EDITION: Relationship between knowledge and attitude towards COVID-19 prevention behaviour among west jakarta residents

Đ...tеfаnսѕ LÕ½kаÑ•, Diana Laila Ramatillah, Nina Jusnita, Đ...аlÑ•Đ° FаdhÑ−lla, Yufri Aldi, Fatma Sri Wahyuni (Author) p. 289-291

• IAI SPECIAL EDITION: Validation of stress assessment instruments related to the COVID-19 pandemic in pregnant women

Mazhar Ardhina Silmi, Gusti Noorrizka Veronika Achmad, Hanni Prihhastuti Puspitasari (Author) p. 129-131

- IAI SPECIAL EDITION: In vitro anti-ageing activity of ethanol extract of Cantigi (Vaccinium varingiaefolium Blume Miq.) leaf and the extract loaded gelatin nanoparticles
 Kosasih Kosasih, I Wayan Redja, Yunahara Farida (Author)
 p. 151-155
- IAI SPECIAL EDITION: Antioxidant and α-Glucosidase inhibition of Pyrrosia longifolia extracts
 Rohimatul Khodijah, Hilwan Yuda Teruna, Rudi Hendra (Author)
 p. 16-19
- IAI SPECIAL EDITION: Stevia rebaudiana as a nutraceutical for COVID-19 patients with no sugar diet during recovery and its nanoparticle application

Lutfi Chabib, Arman Suryani, Sherina Nabila Putri Hakim, Muhammad Ikhwan Rizki, Ferdy Firmansyah, Yulianto, Fitra Romadhonsyah (Author) p. 174-179

• IAI SPECIAL EDITION: The effect of advertising on the decision to purchase facial wash during the COVID-19 pandemic

Anna Pradiningsih, Baiq Leny Nopitasari, Ida Ayu Melian, Resi Sukmaningsih, Mahacita Andanalusia (Author)

p. 41-44

• IAI SPECIAL EDITION: Study of potential interactions of oral antidiabetic drugs in patients with type 2 diabetes mellitus with comorbidities: A retrospective study

Primanitha Ria Utami, Devi Ristian Octavia (Author) p. 200-206

• IAI SPECIAL EDITION: Regulatory compliance of skincare product advertisements on Instagram

Sinta Rachmawati, Afriza Amalia, Ema Rachmawati (Author) p. 230-235

• IAI SPECIAL EDITION: Cost of illness for COVID-19 inpatients in West Nusa Tenggara, Indonesia

Cyntiya Rahmawati, Baiq Nurbaety, Nurul Qiyaam, Sulton Dini, Laelatul Maftuhah (Author) p. 66-69

• <u>IAI SPECIAL EDITION: Tocilizumab therapy in COVID-19 patients</u> Yulistiani, Humaira Izka A, Mareta Rindang A, Prastuti A W (Author)

p. 259-262

• IAI SPECIAL EDITION: Plant tissue culture of cat whiskers (Orthosiphon aristatus Blume Miq): A review of secondary metabolite production and micropropagation

Fahrauk Faramayuda, Totik Sri Mariani, Elfahmi, Sukrasno (Author) p. 92-97

• IAI SPECIAL EDITION: Evaluation of clinical pharmacy services in community health centres to support Indonesian health programme in West Java Indonesia

Zaenal Komar, Keri Lestari, Anna Meiliana, Ali Gufron Mukti (Author) p. 278-283

• IAI SPECIAL EDITION: Comparison of antipyretic activities of ethanol and ethyl acetate extracts of Bandotan herb (Ageratum conyzoides L.) in hyperpyrexia mice

Fransiska Maria Christianty, Diana Holidah, Junita Haulani, Lady Refrina Fitriasaria, Fifteen Aprila Fajrin (Author)

p. 118-122

• IAI SPECIAL EDITION: Lung histopathological profile of male albino Wistar rats exposed to tobacco smoke administered ethanolic extract of red spinach

Keni Idacahyati, Rani Agustiani, Vera Nurviana, Winda Trisna Wulandari, Firman Gustaman (Author) p. 142-146

• <u>IAI SPECIAL EDITION: α-Glucosidase inhibitory activities of Loranthus ferrugineus and</u> Peperomia pellucida extracts

Hilwan Yuda Teruna, Rudi Hendra, Muhammad Almurdani (Author) p. 5-8

 IAI SPECIAL EDITION: Phytochemical screening and antidiabetic activities test of ethanol extract from Syzygium cumini L. seeds in male Wistar rats induced by alloxan Lia Puspitasari, Made Asmarani Dira (Author) p. 165-168

• <u>IAI SPECIAL EDITION: Effects of health supplement self-medication learning media on health</u> student behaviours during the COVID-19 pandemic

Adin Hakim Kurniawan, Yusmaniar, Safitri, Alvi Nur (Author) p. 30-35

 <u>IAI SPECIAL EDITION: Medication adherence of diabetes mellitus patients in Indonesia: A</u> systematic review

Maria Vini Pertiwi, Riza Alfian, Yunita Nita, Umi Athiyah (Author) p. 188-193

• IAI SPECIAL EDITION: The potential of citronella grass to inhibit growth of Escherichia coli and Staphylococcus aureus bacteria

Reynelda Juliani Sagala, Pretty Falena Atmanda Kambira, Untung Gunawan, Grafty Pollin (Author) p. 218-224

• IAI SPECIAL EDITION: Effect of gelling agent and penetration enhancer on the release rate of ibuprofen-PEG 6000 solid dispersion from gel preparations

Budipratiwi Wisudyaningsih, Lidya Ameliana (Author) p. 55-59

Pharmacy Education (2022) 22(2) 230-235 Universitas Jember

https://doi.org/10.46542/pe.2022.222.230235



IAI SPECIAL EDITION

RESEARCH ARTICLE

Regulatory compliance of skincare product advertisements on Instagram

Sinta Rachmawati, Afriza Amalia, Ema Rachmawati Faculty of Pharmacy, University of Jember, Indonesia

Keywords

Advertisement
Compliance regulation
Cosmetic
Instagram
Skincare

Correspondence

Sinta Rachmawati.
Faculty of Pharmacy
University of Jember
Indonesia
sinta.rachmawati@unej.ac.id

Abstract

Introduction: Significant progress has been shown in the selling of cosmetic products. The number of companies working in this industry increased from 153 in 2017 to 760 in 2018. The National Agency of Drug and Food Control (NA-DFC) of Indonesia (BPOM) is authorised to supervise circulating cosmetic products, including cosmetic advertisements. BPOM issues regulations on Technical Guidelines for Supervision of Cosmetic Ads which are updated regularly. Skincare products are the type of cosmetics that are advertised on social media. Instagram is one of the most widely used social media platforms for the advertisement of skincare products in Indonesia Objectives: To determine the regulatory compliance of skincare product advertisements on Instagram. Method: The study was conducted by collecting data online via Instagram from 30 November to 6 December 2020. All advertisements of skincare products that were found in the most popular search menus and that were uploaded in 2020 were used. A checklist of regulatory compliance based on recent regulation was made as an instrument of study. Result: There were 135 samples of skincare product advertisements. They consisted of cleansing (58 products), moisturiser (66 products), sun protector (five products), and peeling (five products). The average regulatory compliance was 91.44%. Conclusion: The regulatory compliance of skincare product advertisements is close to 100%. However, some points of assessment need improvement.

Introduction

Significant progress has been shown in the selling of cosmetic products. The number of companies working in this industry increased from 153 in 2017 to 760 in 2018 (Ministry of Industry, 2018). As of August 2021, there were 201,123 cosmetic products obtaining distribution permits (NA-DFC, 2021). The National Agency of Drug and Food Control (NA-DFC/BPOM) is authorised to supervise cosmetic products. There are two types of supervision: pre-market and post-market evaluation. At the post-market evaluation, BPOM issues some regulations on cosmetics advertisement, which are updated regularly. The recent issue is the Regulation of the Head of the NA-DFC no 18/2016 on Technical Guidelines for Supervision of Cosmetic Advertising (NA-DFC, 2016).

Advertising is one strategy to expand the market for cosmetic products. The dynamic development of advertising requires the existence of rules that can be used as a reference in a healthy, objective, honest, correct, and responsible manner. Thus, it should be evaluated in its compliance to a better and safer use of products. Social media is often used for advertising products, including cosmetics. Skincare products are a type of cosmetic that is widely advertised. Some of the social media platforms used by companies to serve their advertisements are Facebook, Twitter, or Instagram. Social media marketing analyst, NapoleonCat revealed that up to January 2021, there were 82,320,000 Instagram users in Indonesia (29.8% of the whole population). Indonesia contains the fourth-highest number of Instagram users in the world (Statista, 2021). This study aims to determine the regulatory compliance of skincare product advertisements on Instagram.

Methods

This study used a checklist based on the Regulation of the Head of the NA-DFC no 18/2016 on Technical Guidelines for Supervision of Cosmetic Ads (Supplementary material). The checklist is required to determine regulatory compliance of skincare product advertisements. There are six components of evaluation compliances: (1) Language; (2) Norms; (3) Advertising actor; (4) Research data and statistics; (5) Testimonials and recommendations; and (6) Statements related to cosmetic claims.

Data collection

The study was conducted by collecting data online via Instagram from 30 November to 6 December 2020. A checklist of regulatory compliance based on recent regulation was made as an instrument of study. Skincare products consist of cleansing products, moisturisers, sun protectors and peels. The inclusion criteria were advertisements found in the most popular search menus, uploaded in 2020, and that contained textual information. The advertisements that contained only product images were excluded. Five hashtags were used to gain data. They were: #sellcosmetics (#jualkosmetik), #sellskincare (#jualskincare), #sellmask

(#jualmasker), #sellfaceserum (#jualserummuka), and #sellcreamface (#jualcreamface). This research has received approval from the Research Ethics Committee of the Faculty of Dentistry, University of Jember No.1081/UN25.8/KEPK/DL/2020.

Data analysis

Data were obtained from the checklist evaluation, consisting of six components with yes and no statements. The six components were language, norms, advertising actors, research and statistical data, testimonials and recommendations, and statements related to cosmetic claims. Each component consisted of several statements. The data were analysed descriptively. The percentage of regulatory compliance was counted based on the instrument. A narrative description would complete the analysis.

Results

There were 135 advertising products (Table I). Skincare products were divided into four types, cleansing (58 products), moisturiser (66 products), sun protector (5 products), and peels (six products). There were 38 products (28.15%) of unregistered products by the NA-DFC. Masks were the most commonly found as unregistered products. Serum was the most advertised skincare product (42 of 135).

Table I: Overview of skincare products

ype of preparation N		Category	N	Unregistered product (%)†
Cleansing		Freshener	21	5 (3.70%)
	50	Facial wash	12	4 (2.96%)
	58	Milk cleanser	1	0 (0%)
		Mask	24	15 (11.11%)
Moisturiser		Day cream	6	0 (0%)
		Night cream	10	2 (1.48%)
	66	Moisturiser cream	7	0 (0%)
		Serum	42	8 (5.93%
		Acne cream	1	1 (0.74%)
Sun protector	5	Sunscreen cream	5	1 (0.74%)
Peels		Peeling gel	1	0 (0%)
	C	Scrub cream	2	1 (0.74%)
	6	Exfoliating toner	1	(0%)
		Peeling spray	2	1 (0.74%)
Total	135		135	38 (28.15%)

[†]number of unregistered products: total products (N) x 100%

The Regulatory Compliance evaluation was based on the checklist (Table II). It referred to the Head of the NA-DFC no 18/2016 on Technical Guidelines for Supervision of Cosmetic Ads regulation. There were six components of the evaluation: language, norms, advertising actor, research data and statistics, testimonials and recommendations, and statements related to cosmetic claims (NA-DFC, 2016). The average

compliance of all components was 91.44%. Three components had a value below the average. These were language (88.51%), testimonials and recommendations (88.31%), and statements related to cosmetic claims (76.88%).

The advertisement did not fit with the language components because they used the word 'cure', 'medicate' or 'potent'. In testimonials and

recommendations, some advertisements did not fulfil the checklist because they used before-after testimonials or used the agency logo. For statements related to the cosmetic claims component, advertisements would be non-compliant if they claimed the product to be a medical treatment. None of the advertisements broke the norm, advertising actor, and research data and statistics rule.

Table II: Regulatory compliance of skincare products

Туре		Compliance (%)					Tatal (0/)
	1	2	3	4	5	6	Total (%)
Cleansing	89.25%	100%	100%	100%	94.99%	87.3%	93.79%
Moisturiser	84.81%	100%	100%	100%	82.70%	69.38%	89.55%
Sun protector	96.66%	100%	100%	100%	86.67%	80%	91.94%
Peels	83.31%	100%	100%	100%	88.89%	70.83%	90.50%
Average	88.51%	100%	100%	100%	88.31%	76.88%	91.44%

1-Language; 2-Norms; 3-Advertising actor; 4- Research data and statistics; 5-Testimonials and recommendations; and 6- Statements related to cosmetic claims

Discussion

Natural cosmetics are on-trend, one of them being the organic homemade mask. Unfortunately, this product is not registered. Every cosmetic can only be circulated after obtaining marketing authorisation from the NA-DFC. Customers need to be careful in buying cosmetics online. Registered cosmetics guarantee the quality, safety, and usability of products (Ministry of Health, 2010). On the other hand, unregistered cosmetics can have safety risks or could cause serious undesirable effects. A study in Europe stated that skincare products rank first regarding serious undesirable effects (34% of all cases) (Butschke, 2016).

The serum is the most advertised skincare product (42 of 135). It is popularly used as an anti-ageing product. A study showed that serum might repair the visible signs of photodamaged skin. It can also improve the appearance of fine lines and wrinkles, skin tone, and firmness (McCall-Perez, 2011; Sonti, 2013). Skin lightener has become a popular skincare product around the world, including in countries in Southeast Asia. Around 50% of Filipino women use skin lightener products (Mendoza, 2014). The pursuit of lighter skin is linked with modernity, economic opportunities, and social mobility (Glenn, 2008).

Cosmetics should differ from medicine. The use of the words 'cure', 'medicate', or 'potent' give bias to the consumer. BPOM has issued a five-step process for identifying if a product is cosmetic: 1) Composition of the cosmetic (must not contain prohibited ingredients or exceed the limit level); 2)Area that the cosmetic is used on (only for the external part of the human body);

3) The cosmetic's main function (to cleanse, perfume, change appearance, improve body odour and or protect or maintain a good condition of the body); 4) Product presentation (not used to treat or prevent disease); 5) Physiological effect of the product (has non-permanent physiological effects) (NA-DFC, 2015).

Research on compliance with pharmaceutical product regulations has been carried out in various countries. A survey on labelling information of ayurvedic drugs marketed in India showed that they did not comply with almost all the requirements in the regulations (Bhalerao et al., 2010). Another study about the compliance of regulatory requirements of drug labelling in India stated that nine of 16 criteria did not fulfil the act (Shah & Singh, 2020). A study about directto-consumer (DTC) broadcast advertisements for pharmaceuticals in the USA concluded poor compliance with FDA guidelines. Furthermore, the quality of the information provided in advertisements was generally low (Klara et al., 2018). Knowing the compliance rate of the guideline is useful for follow-up monitoring. In this study, three criteria (language, testimonials and recommendations, and statements related to cosmetic claims) should be addressed more strictly by authority. It aims to protect the public from the risk of using unsafe, inappropriate, and irrational cosmetics due to the influence of advertisements.

Conclusion

There are 135 samples of skin care product advertisements. The serum is the most advertised

product. This is probably because of the demand for antiageing and skin-lightening products. 28.15% of products are unregistered. This creates concerns regarding product safety. The compliance with regulations for skincare product advertisements is close to 100%. However, some points of assessment need improvement, including language, testimonials and recommendations, and statements related to cosmetic claims.

References

Bhalerao, S., Munshi, R., Tilve, P., & Kumbhar, D. (2010). A survey of the labeling information provided for ayurvedic drugs marketed in India. *International journal of Ayurveda research*, **1**(4), 220–222. https://doi.org/10.4103/0974-7788.76785

Butschke, A., Droß, A., Dünnebier, K., Laube, I., & Weiler, A. (2016). Experiences and statistical evaluation of serious undesirable effects of cosmetic products in the EU. *Cosmetics*, **3**(3), 25. MDPI AG. https://doi.org/10.3390/cosmetics3030025

Glenn, E.N. (2008). Yearning for lightness. *Gender & Society*, **22**(3), 281–302. https://doi.org/10.1177/0891243208316089

Klara, K., Kim, J., & Ross, J.S. (2018). Direct-to-Consumer Broadcast Advertisements for Pharmaceuticals: Off-Label Promotion and Adherence to FDA Guidelines. *Journal of general internal medicine*, **33**(5), 651–658. https://doi.org/10.1007/s11606-017-4274-9

McCall-Perez, F., Stephens, T.J., & Herndon, J.H., Jr (2011). Efficacy and tolerability of a facial serum for fine lines, wrinkles, and photodamaged skin. *The Journal of clinical and aesthetic dermatology*, **4**(7), 51–54

Mendoza RL. (2014). The skin whitening industry in the Philippines. J *Public Health Policy*. **35**(2):219-38. https://doi.org/10.1057/jphp.2013.50

Ministry of Health. (2010). Regulation of cosmetic notification/Peraturan menteri kesehatan republik

Indonesia Nomor 1176/Menkes/Per/Viii/2010 Tentang Notifikasi Kosmetika.

https://farmalkes.kemkes.go.id/peraturan/permenkes/

Ministry of Industry. (2018). National cosmetic industry grows 20%/Industri kosmetik nasional tumbuh 20%. https://kemenperin.go.id/artikel/18957/Industri-Kosmetik-Nasional-Tumbuh-20

NapoleonCat. (2021). Instagram users in Indonesia. https://napoleoncat.com/stats/instagram-users-in-indonesia/2021/01/

National Agency of Drug and Food Control (NA-DFC). (2021). Product statistics approved by circulation permit/Statistik produk yang mendapat persetujuan izin edar. https://cekbpom.pom.go.id/

National Agency of Drug and Food Control (NA-DFC). (2016). Regulation of the head of the NA-DFC no 18/2016 on technical guidelines for supervision of cosmetic advertising/Perka BPOM no 18/2016 tentang pedoman teknis pengawasan iklan kosmetika. https://jdih.pom.go.id/download/product/745/18/2016

National Agency of Drug and Food Control (NA-DFC). (2015). Regulation of the head of the NA-DFC no 19/2015 on cosmetic technical requirements/Perka BPOM no 19/2015 tentang persyaratan teknis kosmetika. https://jdih.pom.go.id/view/slide/716/19/2015

Shah, S., & Singh, A. (2020). Drug labeling: The study of compliance of regulatory requirements for prescription drugs in India. *Perspectives in clinical research*, **11**(4), 164–167. https://doi.org/10.4103/picr.PICR_195_18

Sonti, S., Makino, E.T., Garruto, J.A., Gruber, J.V., Rao, S., & Mehta, R.C. (2013). Efficacy of a novel treatment serum in the improvement of photodamaged skin. *International journal of cosmetic science*, **35**(2), 156–162. https://doi.org/10.1111/ics.12018

Statista. (2021). Leading countries based on Instagram audience size as of July 2021. https://www.statista.com/statistics/578364/countries-withmost-instagram-users/

Supplementary material

Checklist: regulatory compliance of skincare products advertisements

1. Language

Question Yes No[†]

Are there the words "cure", "treat", and/or words or sentences that have the same meaning as if to treat a disease?

Is there the word "halal" when cosmetics have not obtained an official certificate from the competent authority?

Does the advertisement use the words "safe", "free", "harmless", "no side effects" and/or words/sentences that have the same meaning?

Does the advertisement use the word "potent" and/or words that have the same meaning?

Does the advertisement use the words "only", "number one", "famous", "top", "most", and/or which have the same meaning when associated with product benefits?

Does the advertisement use the word "much more" and/or words/sentences that have the same meaning, which are associated with the benefits of the product unless it is compared to the product itself and has a clear statement?

2. Norms

Question Yes No[†]

Does the advertisement contain an intention that is contrary to the norms of decency and public order?

Does the advertisement use flags, national symbols and national anthems?

Does the advertisement contain an inappropriate display (with the intention of demeaning) a national hero or a state monument?

Does the advertisement contain discrimination, for example discrimination against ethnicity, nationality, religion, gender, age, disability, profession or occupation, disease, or sexual orientation?

Does the advertisement contain the intent to demean a company, organisation, industry, commercial activity, or other product?

Does the advertisement contain the intent to exploit eroticism or sexuality?

Does the advertisement contain support for acts of violence, justify or condone the violence?

Does the advertisement contain an exploitation of misfortune, suffering or concern stemming from society?

Is there anything in the advertisement that will create or play with fear, or induce a person's belief in superstition?

3. Advertising actor

Question Yes No[†]

Does the advertising actor identify, use attributes or locations that are related to the profession or health authority?

Is the advertising role played by a state official in product commercials or corporate ads?

Are the advertisements played by babies, except for cosmetics which are baby products?

4. Research data and statistics

Question	Yes	No [†]

Does the advertisement perform research data processing that can mislead the public or manipulate data?

Does the ad contain misuse of scientific, statistical and graphic terms?

Does the ad use an asterisk (*) or other sign with the same meaning when used to mislead, or confuse the public?

[†] Answer indicates that the advertisement has the regulatory compliance

[†] Answer indicates that the advertisement has the regulatory compliance

[†] Answer indicates that the advertisement has the regulatory compliance

[†] Answer indicates that the advertisement has the regulatory compliance

5. Testimonials and recommendations

Question	Yes	No⁺
Does the advertisement provide testimonials that represent other people, institutions, groups, groups or the wider community?		
Does the advertisement use recommendations from a laboratory, research institute, government agency, health or beauty professional organisation and health workers?		
Does the advertisement contain the name, logo or symbol and identity of the Ministry/Agency and Laboratory/Agency that conducts analysis and issues certificates for Cosmetics? (except for halal certificates from the Indonesian Ulema Council)?		

[†]Answer indicates that the advertisement has the regulatory compliance

6. Statements related to cosmetic claims

Question Yes No[†]

Does the advertisement include statements regarding functions outside of cosmetics such as prevention and/or treatment of disease or related to pathological conditions?

Does the advertisement include a statement that does not contain the name of the ingredients (ingredients) that are allowed in cosmetics, except for materials related to culture and/or religion?

Does the advertisement include a statement that does not contain ingredients that are prohibited in cosmetics?

Does the advertisement promise absolute instant results if it turns out to be used regularly and continuously?

[†]Answer indicates that the advertisement has the regulatory compliance