The Institute of Smart Big Data Analytics • New York

Journal of Research in Gender Studies

VOLUME 15(2) • 2025

ADDLETON ACADEMIC PUBLISHERS • NEW YORK

Journal of Research in Gender Studies
An international peer-reviewed academic journal
Volume 15 / Number 2 / 2025
© 2025 by the Institute of Smart Big Data Analytics • New York

The ***Journal of Research in Gender Studies*** publishes mainly original empirical research and review articles focusing on hot emerging topics, e.g., same-sex parenting, civil partnership, LGBTQ+ rights, beauty apps and filters, mobile dating applications, femtech, digital feminist activism, sexting behavior, robot sex, commercial sex online, etc. This journal considers only manuscripts having a high integrative value in the current Scopus- and Web of Science-indexed literature (i.e., citing preponderantly Q1 and Q2 sources published in the past two years).

14 days avg. from submission to first decision
60 days avg. from submission to first post-review decision
7 days avg. from acceptance to online publication

Journal of Research in Gender Studies is published twice a year (July and December) by Addleton Academic Publishers, 30-18 50th Street, Woodside, New York, 11377. All papers in this journal have undergone editorial screening and anonymous double-blind peer-review. ISSN 2164-0262, eISSN 2378-3524.

Editor: Najib Redouane (California State University, Long Beach, USA)
Editor-in-Chief: Ramona Mihăilă (Dimitrie Cantemir Christian University, Romania)
Assistant Editor: Shamsun Nahar (University of Texas at Arlington, USA)
Online submissions to: ramona.mihaila@addletonacademicpublishers.com

Addleton Academic Publishers is an imprint of RIOTS, New York.

Please direct subscription, contributions, back-issue requests, and address changes to editors@addletonacademicpublishers.com

Produced in the United States of America

INDEXING AND ABSTRACTING

Journal of Research in Gender Studies is indexed and/or abstracted in CEEOL, Cengage Learning/Gale, CNKI Scholar, Crossref, DeepDyve, Dimensions/Digital Science, EBSCO, ERIH PLUS, HeinOnline, Hinari, IBSS, Index Islamicus, ProQuest, SHERPA/RoMEO, and Ulrich's Periodicals Directory.

EDITORIAL ADVISORY BOARD

Bárbara Álvarez Rodríguez Stanford University, USA
Anna Babka University of Vienna, Austria
Marianne Baudin Sorbonne University, Paris, France
Rena Bivens Carleton University, Canada
Mónica Bolufer University of Valencia, Spain
Olga A. Burukina Moscow State Linguistic University, Russia
Frédéric Canovas Arizona State University, USA
Cyra Akila Choudhury Florida International University, USA
Heather Clarke University of Wisconsin-Green Bay, USA
Sophie Coavoux The Jean Moulin University Lyon 3, France
Claire M Crabtree University of Detroit, USA
Cristiana Cristureanu Dimitrie Cantemir Christian University, Romania
Terry Cronan San Diego State University, USA
Zoe Dirse Sheridan College, Ontario, Canada
Corina Adriana Dumitrescu Dimitrie Cantemir Christian University, Romania
Mychel L. Estevez Portland State University/The University of Portland, USA
Isabelle Favre University of Nevada, Reno, USA
Corrine Fournier-Kiss The University of Fribourg, Switzerland
Arianne M. Gaetano Auburn University, USA
Rubén García-Sánchez Autonomous University of Madrid, Spain
Melissa Graham La Trobe University, Melbourne, Australia
Shelley Grant University of Washington, USA
John Heath University of Vienna, Austria
Matilda Hellman University of Helsinki, Finland
Cristina Herrera El Colegio de México, Mexico
Susanne Hochreiter University of Vienna, Austria
Daniel Holcombe Clemson University, USA
Nancy Honicker The University of Paris VIII, France
Nancy Isenberg University of Rome III, Italy
Greg Kucich University of Notre Dame, USA
Justine Legrand Sorbonne University, Paris, France
Hélene Lenz Université de Strasbourg, France
Isabel Lousada NOVA University, Lisbon, Portugal
Pamela McCauley Bush University of Central Florida, USA
Montserrat Serrano Mänes The University of Granada, Spain
Viviana Meschitti The University of Bergamo, Italy
Anne Marie Miraglia University of Waterloo, Canada
Mechthild E. Nagel State University of New York, Cortland, USA
Efstratia Oktapoda Sorbonne University, Paris, France
Elizabeth S. Parks Colorado State University, USA
Arnaud Paturet CNRS/ENS, Paris, France
Najib Redouane California State University, Long Beach, USA
Meritxell Roca-Sales Columbia University, USA
Klas Roth Stockholm University, Sweden
Esther Ruiz Ben The Technical University of Berlin, Germany

Rui Shen United States Naval Academy, USA
Marie Nedregotten Sørbø Volda University College, Norway
Marek Tesar The University of Auckland, New Zealand
Clement Tisdell The University of Queensland, Australia
Brigitte Urbani Aix-Marseille University, France
Susanne Maria Weber Philipps-Universität Marburg, Germany
Carolyn Wells Kraus University of Michigan, Dearborn, USA
Gregory White University of Maryland, College Park, USA

Scholars whose papers have been published in
Journal of Research in Gender Studies include:
Shabbir Ahmad The University of Queensland
Bárbara Álvarez Rodríguez Stanford University
Cristina Arrigoni University of Pavia
Davide Ausili University of Milano-Bicocca
Francesco Auxilia University of Milan
Anna Babka University of Vienna
M. V. Lee Badgett The University of Massachusetts Amherst
Maria Amor Barros-Del Rio University of Burgos
Kristen Barta University of Washington
Viviane de Beaufort ESSEC Business School
Laura Bernardi University of Lausanne
Gabriella Berloffa University of Trento
Yolanda Beteta Complutense University of Madrid
Mary C. Breunig California State University, Sacramento
Isabella Buber-Ennser Vienna Institute of Demography/Austrian Academy of Sciences
Josefina Bueno Alonso Université d'Alicante
Melissa L. Breger Albany Law School, Union University
Jacques Brunet-Georget Université Bordeaux III
Penny Jane Burke University of Roehampton, London
Jim Campbell Glasgow Caledonian University
Lorena Cano-Orón The University of Valencia
Frédéric Canovas Arizona State University
Karishma Chatterjee The University of Texas at Arlington
Laura Ceia California State University, Long Beach
Peter Clar University of Vienna
Heather M. Clarke University of Wisconsin, Green Bay
Sophie Coavoux The Jean Moulin University Lyon 3
Javier Corrales Amherst College
Anna Cotter University of Michigan, Ann Arbor
Claire Crabtree University of Detroit
Terry Cronan San Diego State University, San Diego
Gill Crozier University of Roehampton, London
Carmen Cusack University of Alaska Southeast
Sonia De Gregorio Hurtado Technical University of Madrid
Zoe Dirse Sheridan College, Toronto
Dian Dong University of Maryland, College Park
Daniel Drache York University
Kim Anh Duong University of Waikato

Athena Enderstein University of Hull
Elena Falletti Carlo Cattaneo University, Castellanza
Hershey H. Friedman The City University of New York
Arianne Gaetano Auburn University
Margaret Gillespie The University of Franche-Comté
Rachel Gordon Tufts University
Melissa Graham La Trobe University
Shelley Grant University of Washington
Sigurdur Gudjonsson University of Akureyri
Erika V. Hall Emory University
Doris Hanappi University of California, Berkeley
Sharon Hayes Queensland University of Technology
John Heath University of Vienna
Matilda Hellman University of Helsinki/University of Tampere
Darryl B. Hill The City University of New York
Susanne Hochreiter University of Vienna
Nancy Honicker Université de Paris VIII
Bobbi Hopkins University of New England, Armidale
Samantha Howe Ohio Northern University
Katherine Hunt University of Nebraska, Lincoln
Ronald C. Inglehart University of Michigan, Ann Arbor
Ronald F. Inglehart University of Michigan, Ann Arbor
Magali Jaoul-Grammare The University of Strasbourg
Samantha Jeffries Griffith University
Ted G. Jelen University of Nevada, Las Vegas
Josiane Jouët University Paris 2
Joan R. Kahn University of Maryland, College Park
Samantha Keefer The Ohio State University
Carolyn Kraus University of Michigan, Dearborn
Mae Kuykendall Michigan State University
Karen Larwin Youngstown State University
Nicole LaViolette University of Ottawa
Helen Lawton Smith Birkbeck, University of London
Justine Legrand Université Paris-Sorbonne
Timothy C. Lim California State University, Los Angeles
Guillermo Lopez-Garcia The University of Valencia
Inés Sánchez de Madariaga Technical University of Madrid
James M. Magrini College of Dupage, Glen Ellyn
Maija Majamäki University of Helsinki
Montserrat Serrano Mänes Universidad de Granada
Nicole Marr San Diego State University, San Diego
Montserrat Serrano Mänes Universidad de Granada
Eleonora Matteazzi University of Trento
Hayley McKenzie Deakin University
Lauren McKinley San Diego State University, San Diego
Stefano Mengoli University of Bologna
Anne Marie Miraglia University of Waterloo
Viviana Meschitti Birkbeck, University of London
Ramey Moore University of Arkansas, Fayetteville

Mechthild Nagel State University of New York, Cortland
Barbara Nelson Michigan State University
Dzung Kieu Nguyen State University of New York, Albany
Vincenza Odorici University of Bologna
Efstratia Oktapoda Université Paris-Sorbonne, Paris IV
Elizabeth S. Parks University of Minnesota Duluth
Arnaud Paturet CNRS, Paris
Julieta Paulesc Arizona State University
Michael A. Peters University of Waikato/University of Illinois at Urbana-Champaign
Katherine W. Phillips Columbia University
Vijayan K. Pillai The University of Texas at Arlington
Najib Redouane California State University, Long Beach
Rabia Redouane Montclair State University
Alison Rice University of Notre Dame
Reginald Leamon Robinson Howard University School of Law
Meritxell Roca-Sales Columbia University
Susanne Ross Queen Margaret University, Edinburgh
Esther Ruiz Ben The Technical University of Berlin
Matt Ruther University of Louisville
Valérie-Anne Ryser University of Lausanne
Andrew Selth Griffith University
Anne Soronen University of Helsinki
John Steen University of British Columbia, Vancouver
Lorne M. Sulsky Memorial University of Newfoundland, St. John's
Lucy Summers University of Queensland
Ann Taket Deakin University
April Terry Fort Hays State University
Emily Thomson Glasgow Caledonian University
Clement Tisdell The University of Queensland
Beth Turnbull Deakin University
SC Noah Uhrig University of Essex
Charles Van Liew Arizona State University, Tempe
Irene Liberia Vayá The University of Seville
Jennifer Velagic York University & Ryerson University
Martie-Louise Verreynne The University of Queensland
Paola Villa University of Trento
Christian Welzel University of Leuphana
Huike Wen Willamette University
Gregory White University of Maryland, College Park
Joan C. Williams University of California, San Francisco
Kristen P. Williams Clark University
Anna J. Willow The Ohio State University
Belén Zurbano-Berenguer The University of Seville

SUBMISSION INSTRUCTIONS FOR AUTHORS

Addleton journals consider all manuscripts on the condition that (i) the manuscript is your own original work, and does not duplicate any other previously published work, including your own previously published work, and (ii) the manuscript has been submitted only to our journal; it is not under consideration or peer review or accepted for publication or in press or published elsewhere. Please note that we use an anti-plagiarism software to screen manuscripts for unoriginal material. There are no submission or publication fees. Copyright will be retained by authors. As an author, you will receive free access to your article and to the journal's archive.

• All submissions should be sent to editors@addletonacademicpublishers.com and to the editor-in-chief's email address. • Manuscripts may be submitted in any standard editable format. These files will be automatically converted into a PDF file for the review process.

Peer review policy
https://www.addletonacademicpublishers.com/images/Peer_Review_Policy.pdf

Publication ethics and publication malpractice statement
https://www.addletonacademicpublishers.com/images/Publications_Ethics_and_Malpractice_Statement.pdf

Manuscript preparation

• Manuscripts are accepted in English. Any consistent spelling and punctuation styles may be used. Please use double quotation marks, except where "a quotation is 'within' a quotation." Long quotations of 40 words or more should be indented with quotation marks. • A typical manuscript will not exceed 8000 words including tables, references, captions, footnotes and endnotes. Manuscripts that greatly exceed this will be critically reviewed with respect to length. • Manuscripts should be compiled in the following order: title page; abstract; keywords; main text; acknowledgements; references; appendices (as appropriate). • Abstracts of 200 words are required for all manuscripts submitted. • Each manuscript should have 6 keywords. • Section headings should be concise. • All authors of a manuscript should include their full names, affiliations, postal addresses, telephone numbers and email addresses on the cover page of the manuscript. One author should be identified as the corresponding author. Please give the affiliation where the research was conducted. Please supply a short biographical note for each author, and all details required by any funding and grant-awarding bodies as an Acknowledgement on the title page of the manuscript, in a separate paragraph. • Authors must also incorporate a Disclosure Statement which will acknowledge any financial interest or benefit they have arising from the direct applications of their research. • For all manuscripts non-discriminatory language is mandatory. Sexist or racist terms must not be used.

Style guidelines: See the sample paper on the journal's webpage.

CONTENTS

Discrimination, Gender, and Disability:
Violence Suffered by Disabled Women in France [9]
Efstratia Oktapoda

Gender Equality, Feminist Foreign Policy,
and the War in Ukraine [25]
Kristen P. Williams

Is the Fashion Industry Inclusive for All? [40]
Zoi Arvanitidou

3D Augmented Reality Try-on and Context-aware Emotion Recognition Technologies, Big Data-driven Facial Retouching and Artificial Intelligence-based Beauty Tools, and Deep Learning Sensor Fusion and Visual Perception Algorithms for Social Media-related Body Dissatisfaction, Self-Presentation Perceptions and Behaviors, and Unrealistic Physical Appearance [53]
Elvira Nica, Asser Khamis, Silviea Creţu, Nurul Lizzan Kamarudin,
Muzaffer Aydemir, Emilia Pascu, Cătălina-Oana Dumitrescu

Visual Sentiment and Affective Computing Algorithms, Deep Learning-based Multimodal Emotion Recognition and Automated Digital Beauty Technologies, and 3D Machine Learning-based Facial Avatar Makeup Simulation and Generative Artificial Intelligence Virtual Try-on Tools for Perceived Social Validation, Unfavorable Appearance Comparisons, and Negative Body Image, Mood, and Self-Esteem [65]
Gheorghe H. Popescu, Ahmed Diaa Khamis, Vasilii Erokhin,
Silvia Elena Iacob, Rudy Ujang, Dan Mihai Boajă

Human-like Tactile Sensing and Perception Technologies,
Beauty Filter-based Appealing Self-Presentation and Realistic
Makeup Simulation Tools, and Deep Learning-based Facial Expression
Recognition and Artificial Intelligence-enabled Emotion Communication
Systems for Mediated Virtual Self-Expression and Representation [76]
Ioana Alexandra Pârvu, Zoran Simonović, Vloreen Nity Anak Mathew,
Alexandra Teodora Ababii, Firdaus Abdullah, Cristian Florin Ciurlău

Addleton Academic Publishers

Journal of Research in Gender Studies 15(2), 2025
pp. 9–24, ISSN 2164-0262, eISSN 2378-3524

Discrimination, Gender, and Disability: Violence Suffered by Disabled Women in France

Efstratia Oktapoda*

ABSTRACT. So far, the law recognizes more than twenty-five criteria of discrimination. Disadvantaging a person because of their origin, sex, age, disability, or opinions is prohibited by law and the international conventions to which France adheres. In France, the "Defender of Rights," an independent administrative authority, supports victims or witnesses of discrimination, regardless of the reason (origin, disability, gender, etc.) or area (employment, housing, access to a service, etc.). Lawyers provide free support and guidance to all people who have suffered violence and discrimination in order to restore their rights. Furthermore, disability is an aggravating factor in the exposure to violence against women. In addition to the "Defender of Rights," the association "Act Against Exclusion" combats all forms of violence suffered by women with disabilities. The workplace is a living space that is not immune to gender inequalities, gender-based violence, and sexual violence. Additionally, women with disabilities are often victims within the family setting, by their husbands or family members. "Women for Saying, Women for Acting" defends all disabled women, regardless of their disability, and helps them fight against double discrimination: being a woman and being disabled. Beyond simple listening, the association supports women with disabilities towards independence and autonomy. In addition to associations, the French government is launching a national awareness campaign to change the way people view disability by supporting short and long films, as well as ten portraits featuring everyday situations of disabled women. These films and portraits are created in close collaboration with people with disabilities who have volunteered to be models. The awareness campaign is broadcast on TV, in cinemas, in the press, with posters, and through online platforms to involve all citizens in the mobilization.

Keywords: gender; disability; violence; sexual violence; sexual harassment; disabled women; suffering

How to cite: Oktapoda, E. (2025). "Discrimination, Gender, and Disability: Violence Suffered by Disabled Women in France," *Journal of Research in Gender Studies* 15(2): 9–24. doi: 10.22381/JRGS15220251.

Received 7 April 2025 • Received in revised form 22 December 2025
Accepted 24 December 2025 • Available online 30 December 2025

*Sorbonne University, Paris, France, efstratia.oktapoda@sorbonne-universite.fr.

1. Discrimination, Specificities, and Criteria

Discrimination can be direct if the contested decision is based on one of the criteria defined by law. It can also be indirect if a seemingly neutral rule results in unfavorable treatment of people based on one of the same criteria.

Moreover, discrimination can take the form of harassment if based on one of the criteria defined by law. For instance, colleagues or superiors may treat an employee badly or constantly denigrate them because of their origin, disability, sexual orientation, etc.

The list of criteria defined by the law prohibiting discrimination has several sources. On the one hand, international conventions and European texts define a basic set of criteria based on the characteristics of the individual. On the other hand, the French legislator has added specific criteria, some of which refer to classic reasons (such as nationality, surname, or physical appearance), while others relate to specific situations (place of residence, loss of autonomy, etc.).

To refer to the criteria set by European and international texts, I will mention fourteen criteria, as follows: 1. Age, 2. Gender, 3. Origin, 4. Belonging or not belonging, real or presumed, to an ethnic group, nation, or alleged race, 5. Pregnancy, 6. State of health, **7. Disability**, 8. Genetic characteristics, 9. Sexual orientation, 10. Gender identity, 11. Political opinions, 12. Union activities, 13. Philosophical beliefs, and 14. Religious beliefs or belonging, or non-belonging, real or presumed, to a specific religion.[1]

If we refer only to the criteria governed by French legislation, I will consider the following nine specific criteria outlined by French law: 1. Marital status, 2. Physical appearance, 3. Surname, 4. Mannerisms, 5. Place of residence, **6. Loss of autonomy,** 7. Particular vulnerability resulting from the economic situation, 8. Ability to express oneself in a language other than French, and 9. Bank domiciliation[2].



Photo credit@mairie10.paris.fr[3]

2. The Institutions in France that Struggle Against Discrimination

2.1. The Defender of Rights

The Defender of Rights is an independent administrative authority. It recently launched *antidiscriminations.fr*, a new service for reporting and supporting victims. A free 4-digit telephone number (39 28) has been established for people who are victims or witnesses of discrimination, regardless of the reason (origin, disability, gender, etc.) or the area (employment, housing, access to a service, etc.). Lawyers from the Defender of Rights listen, support, and guide people free of charge to restore their rights.

The President of the Republic in France, along with Elisabeth Moreno, the Minister for Equality between Women and Men, Diversity, and Equal Opportunities, entrusted an independent institution with the creation and management of a platform to combat discrimination, as announced in December 2020. The Defender of Rights, which is responsible for combating discrimination and promoting equality, benefits from recognized legal expertise and support networks in the territory, necessary for the proper implementation of this service.

Anyone who believes they have been a victim of discrimination can call the free number 39 28 or visit the dedicated website: www.antidiscriminations.fr. Lawyers from the Defender of Rights, specially trained in discrimination issues, provide a first level of support: listening, answering questions, providing an initial legal assessment of the situation, explaining possible steps, and offering guidance. If the situation falls within one of its areas of competence, the Defender of Rights may intervene according to its usual methods of action to restore the person's rights. If the situation is outside its scope, the Defender will direct the person to the appropriate institutional or associative contacts.

The line between discrimination, violence, and hate speech can be difficult to draw for victims. In addition, many do not initiate a complaint, either because they feel the process is not worth it, or because they have no proof, or because they do not know where to turn. The Defender of Rights also works with all relevant actors, including public authorities and associations, to ensure the greatest continuity in the service provided to victims. This system will need to be strengthened over the coming months.

According to Claire Hedon, the President of the Defender of Rights since July 2020: "The repeated experience of discrimination has harmful and lasting consequences on individual careers and undermines the cohesion of French society. As I stated when I took office, this is one of the major areas of my mandate. This new platform is a crucial element in a broader dynamic if we are to meet the challenge.[4]"

Sexual harassment, which constitutes a form of discrimination based on sex, is recognized by French law. Moreover, the Defender of Rights has been addressing this issue for many years. The workplace is an environment that

is not immune to gender inequalities, gender-based violence, and sexual violence.

A survey on sexual harassment at work, published by the Defender of Rights in March 2014, reveals that one in five women report having encountered a situation of sexual harassment during their professional life.

The Defender of Rights developed a booklet to guide and equip employers who seek to fulfill their legal obligations, as well as all individuals (employers, employees, training professionals, associations, consultants, etc.) who wish to participate in the fight by organizing information, awareness, or training sessions on the topic. This booklet also serves as a useful resource for drafting training specifications, seeking external speakers, and evaluating the quality and relevance of the offers received.

The booklet is structured around three main themes and corresponding sections that provide the necessary theoretical, legal, and practical knowledge on sexual harassment, as well as an educational section offering ideas for activities and simple, adaptable materials:

• **"Understand and recognize"**: better understand sexual harassment by grasping its mechanisms as well as ythe legal freamework;
• **"Alert"**: take action to end a harassment situation (legal framework and penalties, available ressources, and potential actions);
• **"Prevent and react"**: implement the obligation to ensure the safety of employees (sanctioning reported harassment situations and taking actions to prevent and combat sexual harassment).

2.2. The Women's Foundation

Another significant association fighting against all types of discrimination and violence against women is the Women's Foundation[5]. The association, in the process of becoming a foundation hosted by the *Act Against Exclusion Foundation* (FACE), shares the objective of combating all forms of discrimination.

The simultaneous development of studies on gender and research on discrimination raises questions about the definitions of these terms and their interconnections. If gender is a category of analysis aimed at deconstructing sex differences and the power dynamics that enforce them, the notion of discrimination refers to any prejudicial treatment based on an illegitimate criterion – such as sex, age, class, or ethnicity.

3. Gender, Disabilities, and Employment

In the European Union, the employment rate for women with disabilities is 2%, compared to 36% for men with disabilities and 55% for women without disabilities[6]. Globally, only 20% of women with disabilities are employed, compared to 53% of men with disabilities[7].

In France, an event has been held annually for the past 25 years: the European Week for the Employment of People with Disabilities (SEEPH). Last year, it took place during a week in November 2021. For its 25th edition, two main themes were highlighted: "Youth with Disabilities Facing Employment: How to Develop Learning and Access to Higher Education?" and "Ryrality, Disability, and Employment."

Every year, many events are organized alongside the European Week for the Employment of People with Disabilities throughout the country and online, including conferences, recruitment actions, webinars, and other activities.

However, last year, the European Week for the Employment of People with Disabilities launched the first oratory competition dedicated to disability: *Le Grand Pitch.*

Le Grand Pitch is inspired by the "Nuggets Jobs Professional Upgrading Program!" which helps candidates with disabilities better present their stories to be more convincing during job interviews.

There were twenty pitches and five themes aimed at raising awareness of disability in employment, both in business and in society. The competition is led by twenty participants from the "Nuggets" program (*Les Pépites*), who took part in the *Nuggets Jobs Program*. The objective is to pitch, in video format, a theme related to employment and disability, in order to raise awareness about disability among the general public and particularly within businesses and their teams.

After two weeks of voting on a dedicated platform, the winners' results were announced on the same platform. There was also a relay on social media to maximize awareness. The five videos with the most likes were selected for the Grand Final Pitch, which took place a month later.

4. Violence Suffered by Disabled Women

Worldwide, one billion individuals have a disability. Many people with disabilities live in conflict zones or in developing countries, where they face a range of barriers to education, healthcare, and other basic services. In many countries, they are subjected to violence and discrimination. Women with disabilities are also often deprived of their right to live independently, as many are confined to institutions, shackled, or cycled through the criminal justice system. Many human rights abuses result from entrenched stigma and a lack of community-based services, which are essential to ensuring their rights, including those under the UN Convention on the Rights of Persons with Disabilities. The goal is to help change this, working closely with disabled persons, organizations, and other partners[8].

Disability is an aggravating factor in the exposure to violence against women. As a result, higher prevalence rates are recorded for women with

disabilities: 3.9% of women with disabilities experience violence, compared to 1.87% of women on average[9].

Girls and women with disabilities are 1.5 to 10 times more likely to be mistreated than able-bodied women[10].

5. Discrimination and Disability in France

Violence against disabled women is not an isolated phenomenon, but a widespread situation[11]: 90% of women with disabilities experience violence during their lifetime. Moreover, women with disabilities are often considered in terms of their disability rather than their gender issues.

It is important to highlight the double discrimination faced by women with disabilities, which is part of a dual societal approach.

Public policies for women in France have historically not taken the same approach for all women. The 1905 law did not include women, and data on people with disabilities was rarely gendered. In 2021, we finally have data on disabled women in France for the first time.

Disabled women experience additional violence compared to non-disabled women. This double violence faced by disabled women can take the form of: financial dependence, economic dependence, societal dependence, domestic assault, and incest.

Every ten minutes, a woman is killed by a family member somewhere in the world, either through feminicide or so-called honor crimes. This violence is unthinkable in our society.

Furthermore, women with disabilities face threats, insults, humiliation, and physical or sexual assault. More than half of women with disabilities testify that they have been victims of incestuous violence.

In fact, disabled women are easy prey. Not only at work but most often within their own homes, they are victims of sexual violence. Men sexually abuse disabled women, and as most of them have limited mobility, they are unable to leave their homes to file a complaint. Additionally, disabled women are extremely vulnerable and find it unthinkable to denounce their abusers, most often their husbands, because they are dependent on them. Disabled women know they cannot live or feed themselves without their abuser's help. Very often, the abuser is a close family member—such as a brother or an uncle—who forces them into repeated sexual assault. Moreover, women with mental disabilities may view sexual assault as a normal occurrence and may not react. Most of the time, disabled women are unaware of their rights, as they do not have a typical social life and live in isolation.

The five items mentioned above represent a serious social phenomenon, and we must fight to eradicate it. In France, this constitutes a profound cultural shift, accompanied by collective awareness, thanks to numerous

associations and governmental actions, as well as social and political struggles.



Credit Photo@FDFA[12]

6. Actions Against Violence Suffered by Women with Disabilities in France

6.1. Government Actions

6.1.1. The National Assembly's Women's Rights Delegation in France organizes a conference every year on the occasion of the International Day for Combating Violence Against Women.

In 2021, the theme focused on "The Fight Against Violence Suffered by Women with Disabilities." The conference took place under the high patronage of Mr. Richard Ferrand[13], the President of the National Assembly, on November 24, 2021.

6.1.2. The Grenelle on Domestic Violence Against Women, which was launched on September 3, 2019, established 11 inter-ministerial working groups on domestic violence against women.

This initiative demonstrates that the fight against domestic violence, which affects more than 220,000 women each year, remains a major concern for the government.

Meetings are organized with the working groups to assess the implementation of the measures announced at the Grenelle and to propose new actions.

It is also important to note that cooperation has been carried out with associations and the National Gendarmerie.

The French government is firmly committed to the fight against violence suffered by women, including women with disabilities.

6.2. Actions Against Violence Suffered by Women with Disabilities in France

6.2.1. Government Actions

6.2.1. The Secretary of State for Disability

The government is launching a national awareness campaign aimed at changing the way people view disability. This campaign targets all generations, especially young people, who have an undeniable role to play. The campaign is called "Let's See People Before Disability."[14]

To change perceptions of disability, the government's campaign is based on three short films featuring everyday situations: *The Dress*, *The Date*, and *The Cafeteria*, all directed by Yvan Attal. These films illustrate a society in which the relationship with the person focuses on their personality, which is what really matters.

The films are complemented by a series of 10 portraits of women with disabilities, produced by the renowned photographer Sylvie Lancrenon.

Conceived in close collaboration with people with disabilities who participated as models, these portraits highlight their interests and shared tastes in everyday situations.

This awareness campaign will be broadcast over four months across TV, cinemas, press, posters, and online platforms, aiming to involve all citizens in this mobilization.

6.3. Associations

6.3.1. Women for Saying, Women for Acting (FDFA)

Women for Saying, Women for Acting is a feminist organization that takes both a gender and a disability approach. Founded in 2003, it welcomes women with disabilities, regardless of their condition, to fight against double discrimination: being a woman and being disabled. "Women with disabilities are full citizens, and disability is not our identity."

Beyond offering support through listening, *Women for Saying, Women for Acting*[15] helps women with disabilities achieve independence and autonomy.

For its fourth edition of events, on the occasion of the International Day for Combating Violence Against Women, the FDFA association organized a large open-stage event called "Get Out of the Silence" in 2021.



Out of Silence - Act IV - Listening to Violence Women with Disabilities
Photo credit@FDFA[16]

Under the artistic direction of Blandine Metayer, actress, author, and sponsor of the association, the event was dedicated to the fight against gender-based violence. The event took place at the House of Associations, located in the 13th arrondissement of Paris. It was a significant activist event aimed at combating gender and sexual violence experienced by women with disabilities.

During the event, the actors emphasized that in a sexist world, violence against women is prevalent. In a sexist and ableist world, violence affects four out of five women with disabilities.

The performance was launched as an open stage. Invitations were extended to artists to come on stage to perform, slam, read texts, or improvise on the themes of sexism and violence (with simultaneous transcription available via velotype).

This performance was associated with the film *"Violences of Silence"*, a film by Catherine Cabrol released in 2019 by the association *Women for Saying, Women for Acting*. The film highlights eight testimonies from women with various disabilities who are victims of violence and is labeled *"Sexism is Not Our Gender."*[17]

6.3.2. Listening to Violence Women with Disabilities Association

Founded in March 2015, *Listening to Violence Women with Disabilities* operates a free helpline at 01 40 47 06 06. It is the first service in France dedicated to providing legal, social, and psychological support to women with disabilities who are victims of violence or mistreatment.

The helpline is run by volunteers trained in the specific needs of women with disabilities who face violence. The service offers a compassionate listening approach. Its objectives are to help women with disabilities who are victims of violence and/or mistreatment to recognize the reality of the abuse they face and to empower them to break free from the control of their abusers, reassuring them that they are not alone.

The support provided includes legal, social, and psychological services, focusing on processing the experience of violence and rebuilding life after violence. Additionally, the service offers workshops for rebuilding self-esteem, such as beauty and wellness sessions, as well as support toward autonomy through workshops designed to assist with returning to employment.

6.3.3. France Victims Association

Founded in 1986, *France Victims* is a French federation of one hundred and thirty professional associations specializing in supporting victims. The association leads, coordinates, and promotes the network of these associations, while also fostering partnerships to improve victims' access to these services.

In addition, *France Victims* initiates partnerships and agreements to facilitate victims' access to local associations.

The organization manages a national victim assistance platform with the helpline number 08 VICTIMS (Tel: 01 41 83 42 08). This line operates 7 days a week from 9 a.m. to 9 p.m. and is dedicated to listening, informing, and referring victims to the appropriate services.

Since June 2017, *Women for Saying, Women for Acting* has been a partner of *France Victims* and the 08 VICTIMS helpline[18].

6.4. Associations Supported by Governmental and Political Actors

6.4.1. Regional and Territorial Authorities: The Ile-de-France Region, the City of Paris, and Other Funds for Women

The regional and territorial authorities in France, including the Ile-de-France region and the City of Paris, have played a key role in supporting associations dedicated to combating violence against women, particularly those with disabilities. These authorities provide funding and resources to empower local organizations, ensuring that services are accessible and tailored to the needs of women in their communities.

In addition to these regional authorities, other funds are available to support women's associations and initiatives focused on combating gender-based violence. These funds help strengthen the capacity of organizations working to protect women, promote gender equality, and provide essential support services to victims of violence.

6.5. Associations supported by governmental and political actors

6.5.1. Regional and territorial authorities: The Ile de France region, the City of Paris, and other Funds for Women

The Ile-de-France region, the City of Paris, the Interministerial Fund for the Prevention of Delinquency, the Fund for Women in the Mediterranean, and the RAJA-Danièle Marcovici Foundation all support *France Victims*.

Furthermore, numerous prizes and awards have supported *Women for Saying, Women for Acting* for its initiatives as a facilitator of access for victims. These include:

• "Fight Against Violence" Prize from the Ministry of Families, Children, and Women's Rights (2017);
• Citizenship Award from the OCIRP Handicap Award (2016);
• Label "Sexism is Not Our Gender" from the Ministry of Families, Children, and Women's Rights (2016);
• Special Mention of the Human Rights Prize of the French Republic, "Liberty, Equality, Fraternity" (2016).

6.5.2. The French Coordination for the European Women's Lobby (La CLEF)

Founded in 1991, the French Coordination for the European Women's Lobby is an NGO and co-founder of the European Women's Lobby (EWL). Its objective is to coordinate French feminist associations and maintain the link with the Lobby. Accredited at the UN, it regularly holds States accountable within the framework of the Commission on the Status of Women.

The Political Parity and Leadership Commission of the French Coordination for the European Women's Lobby organized a conference on October 2021 called "Parity, 20 Years Later! Genesis, Achievements, and Perspectives," which took place at the Luxembourg Palace. The conference was held under the patronage of Senator Laurence Rossignol (former Minister for Families, Children, and Women's Rights)[19], who was also present at the event.

The conference included two thematic round tables:

1. "Genesis, Change of the Constitution, and the First Law": A look back at the mobilizations that led to the promulgation of the Parity laws.
2. "Where Are We in 2021? State of Play and Future Prospects": The political, legal, and societal consequences of the promulgation of this law, as well as the changes needed to achieve a balanced sharing of power between women and men.

Additionally, a month later, in December 2021, to celebrate its 30th anniversary (1991-2021), the French Coordination for the European Women's Lobby organized a celebration day as part of its "Monthly Tuesdays" at its headquarters, the Cité Audacieuse, in Paris.



Photo credit@La CLEF[20]

During the Celebrating Day, priority themes of their feminist militant activity will be addressed: the fight against violence, access to health and sexual and reproductive rights, access to education and keeping girls in school, and economic and financial empowerment.

Several mini-round tables, each lasting no more than twenty minutes, were planned, with one to three speakers on these subjects. Additionally, there was an exhibition on the Convention for the Elimination of All Forms of Discrimination Against Women (CEDAW), illustrated by middle school and high school students during a competition. The event also featured a chronological fresco outlining the steps taken toward equality and the rights of women and girls, video excerpts, and cultural and fun interludes. The event day was held in the presence of Elisabeth Moreno, the Minister for Equality

between Women and Men, Diversity and Equal Opportunities, as well as members from its sixty national associations and partners of the French Coordination for the European Women's Lobby (La CLEF).

Conclusion

In the early 21st century, disabled women are still victims of gender-based and sexual violence, but they are now more aware of these acts, no longer feel alone, and have the ability to testify about their suffering.

The French government, the Ministry for Equality between Women and Men, Diversity and Equal Opportunities, the Secretary of State for Disability, and numerous inter-ministerial associations—such as the Grenelle on domestic violence, the National Assembly's Women's Rights Delegation, the France Victims Association, and the French Coordination for the European Women's Lobby (La CLEF)—along with regional and territorial authorities like the Ile-de-France region and the City of Paris, are all rising to the challenge. They provide awareness and support to women victims of gender-based and sexual violence.

In particular, the Defender of Rights and the Women for Saying, Women for Acting (FDFA) association are combatting violence suffered by women with disabilities. They advocate for all disabled women, regardless of their disability, offering advice and legal assistance.

Moreover, several actions have been taken at the government level in partnership with these associations to address this societal scourge, which exploits disabled women who often find it inconceivable to leave their family environment and denounce their tormentors, who are often their husbands.

Every year, these actions increase in France, ensuring that everyone is aware that such violence is punishable by law. But more importantly, associations, with the help of the state, have established a free helpline that welcomes disabled women victims of violence, listens to them, and guides them through the procedures stipulated by the law.

Furthermore, French society is not only offering advice, but also actively helping disabled women victims of violence to file complaints and empowering them to feel as women with rights, just like anyone else.

Equality is a right for everyone.

Efstratia Oktapoda, https://orcid.org/0000-0002-0969-6783

Compliance with ethical standards
This article does not contain any studies with human participants or animals performed by the author.

Data availability statement
All data generated or analyzed are included in the published article.

Funding information
None.

Author contributions
The author confirms being the sole contributor of this work and approved it for publication. The author takes full responsibility for the accuracy and the integrity of the data analysis.

Conflict of interest statement
The author declares that the research was conducted in the absence of any commercial or financial relationships that could be construed as a potential conflict of interest.

Transparency statement
The author affirms that the manuscript represents an honest, accurate, and transparent account of the research being reported, that no relevant aspects of the study have been left out, and that any inconsistencies from the research as planned (and, if significant, registered) have been clarified.

Disclosure by the editors of record
The editors declare no conflict of interest in the review and publication decision regarding this article.

BIBLIOGRAPHY

Women with disabilities – Approximately 250 million women worldwide suffer from a disability [Les femmes handicapées – Environ 250 millions de femmes dans le monde souffrent d'un handicap"]. Professional Documentary File. No. 11. February 2002. Paris. CTNERHI.

World Health Organization and World Bank. World Disability Report. 2012, 360 p. file:///C:/Users/33698/Downloads/9789240688193_fre%20(2).pdf

SITOGRAPHY

Bacigalupo. Martina. Human Rights Watch. 2010. https://www.hrw.org/topic/disability-rights

Domestic violence in France. ONDRP. March 2016.
https://www.ihemi.fr/recherche/ondrp

High Council for Gender Equality (HCE f/h). Human Rights for Women and Children with Disabilities, 2012, p. 5. https://www.haut-conseil-egalite.gouv.fr/violences-de-genre/reperes-statistiques/#a814

France Victims. https://www.france-victimes.fr/

Hedon, Claire. *The 14th barometer on the perception of discrimination in employment*. Human Rights Defender. December 7, 2021. https://www.defenseurdesdroits.fr/fr/dossier-de-presse/2021/12/14e-barometre-sur-la-perception-des-discriminations-dans-lemploi
Listening to Violence against women with disabilities (EVFH). https://ecoute-violences-femmes-handicapees.fr/sortir-du-silence-acte-iv/
National Technical Center for Studies and Research on Handicaps and Disadjustments (CTNERHI). https://www.monparcourshandicap.gouv.fr/glossaire/ctnerhi
Paris City Hall. https://mairie10.paris.fr/pages/du-7-au-14-decembre-2019-semaine-parisienne-de-lutte-contre-les-discriminations-15139
The Defender of Rights. https://www.defenseurdesdroits.fr/
Women's Foundation. https://fondationdesfemmes.org/
Women for Saying, Women for Acting. https://fdfa.fr/ & https://fdfa.fr/ecoute-violences-femmes-handicapees/
Youtube videos: *The canteen* in version LSF.
https://www.youtube.com/watch?v=7ZwxnZJgiwU
https://www.clef-femmes.fr/2021/11/04/la-clef-fete-ses-30-ans-prochain-mardi-de-la-clef-decembre-2021/

REFERENCES

1. For all these references, see: The Defender of Rights. https://www.defenseurdesdroits.fr/

2. *Ibid.*

3. See the site: https://mairie10.paris.fr/pages/du-7-au-14-decembre-2019-semaine-parisienne-de-lutte-contre-les-discriminations-15139

4. See: The 14th barometer on the perception of discrimination in employment. Presentation of the barometer by Claire Hedon, Human Rights Defender, on December 7, 2021. https://www.defenseurdesdroits.fr/fr/dossier-de-presse/2021/12/14e-barometre-sur-la-perception-des-discriminations-dans-lemploi

5. The Women's Foundation slogan is: "It's not women who are fragile, it's their rights." See also the video: https://fondationdesfemmes.org/

6. See the file in french: "Women with disabilities – Approximately 250 million women worldwide suffer from a disability" [Les femmes handicapées – Environ 250 millions de femmes dans le monde souffrent d'un handicap"]. Professional Documentary File. No. 11. February 2002. Paris. CTNERHI.
CTNERHI is the National Technical Center for Studies and Research on Handicaps and Disabilities. https://www.monparcourshandicap.gouv.fr/glossaire/ctnerhi

7. See the file in French: World Health Organization and World Bank, World Disability Report, 2012, 360 p. file:///C:/Users/33698/Downloads/9789240688193_fre%20(2).pdf

8. Martina Bacigalupo for Human Rights Watch, 2010. https://www.hrw.org/topic/disability-rights

9. See: domestic violence in France. ONDRP. March 2016. ONDRP is the National Observatory of delinquency and penal responses in France. https://www.ihemi.fr/recherche/ondrp

10. High Council for Gender Equality (HCE). Human Rights for Women and Children with Disabilities, 2012, p. 5. https://www.haut-conseil-egalite.gouv.fr/violences-de-genre/reperes-statistiques/#a814

11. This is the slogan of the association Women for Saying, Women for Acting.

12. Women for Saying, Women for Acting (FDFA). https://fdfa.fr/ecoute-violences-femmes-handicapees/

13. Richard Ferrand is member of the National Assembly of France since 2017, and President of the National Assembly since September 12, 2018. See: https://www.richardferrand.fr/

14. See the Youtube vidéos in french: *The canteen* in version LSF. https://www.youtube.com/watch?v=7ZwxnZJgiwU

15. Women for Saying, Women for Acting. https://fdfa.fr/

16. Listening to Violence against women with disabilities (EVFH). https://ecoute-violences-femmes-handicapees.fr/sortir-du-silence-acte-iv/

17. "Sexism is not our gender" is a Collective made up of 22 structures gathered around the fight against sexism, created in 2017. For the story, from September 2016 to March 2017, several hundred associative, public and private structures mobilized around the national campaign "Sexism, not our gender" to denounce and fight against all forms of sexism of which women are victims: professional inequalities, violence, discrimination. 10 of them had the mission of awarding the label "Sexism is not our gender. Then, they decided to continue the common adventure by creating the Collective "Sexism is not our gender". See the site of Ministry in charge of Equality between women and men, Diversity and Equal opportunities: https://www.egalite-femmes-hommes.gouv.fr/collectif-sexisme-pas-notre-genre-22-structures-rassemblees-autour-de-la-lutte-contre-le-sexisme/

18. See France Victims. https://www.france-victimes.fr/

19. Fervent feminist of the left, Laurence Rossignol was appointed in 2014 as Minister of Families, Children and Women's Rights under the Manuel Valls I government. In 2016, she was appointed as Minister of Families, Children and Women's Rights (11 février 2016-10 mai 2017), under the Manuel Valls II government, succeeding Pascale Boistard (Women's Rights).

20. https://www.clef-femmes.fr/2021/11/04/la-clef-fete-ses-30-ans-prochain-mardi-de-la-clef-decembre-2021/

Addleton Academic Publishers

Journal of Research in Gender Studies 15(2), 2025
pp. 25–39, ISSN 2164-0262, eISSN 2378-3524

Gender Equality, Feminist Foreign Policy, and the War in Ukraine

Kristen P. Williams*

ABSTRACT. The case study of Russia's invasion of Ukraine in 2022 offers scholars and policy makers alike the opportunity to consider the connections between gender equality, foreign policy, and feminist foreign policy in three ways. First, using a feminist (not just a gender) analysis to explore gender equality at the global level, but also at the state and local levels, is important and necessary. Second, the case study allows for an analysis of how the foreign policies of states supporting Ukraine are gendered. Finally, how a feminist foreign (and domestic) policy is needed around the globe in order to achieve global gender equality. This article explores the ways in which gender equality, gendered and gendering of foreign policy, and a feminist foreign policy are linked in the context of the Russia-Ukraine war.

Keywords: feminist foreign policy; gender equality; Russia; Ukraine; women

How to cite: Williams, K. P. (2025). "Gender Equality, Feminist Foreign Policy, and the War in Ukraine," *Journal of Research in Gender Studies* 15(2): 25–39. doi: 10.22381/JRGS15220252.

Received 25 October 2025 • Received in revised form 24 December 2025
Accepted 27 December 2025 • Available online 30 December 2025

*Clark University, Worcester, Massachusetts, United States, kwilliams@clarku.edu.

The Russian invasion of Ukraine in February 2022 offers scholars and policy makers alike the opportunity to consider the connections between gender equality, foreign policy, and feminist foreign policy in three ways. First, using a feminist (not just a gender) analysis to explore gender equality at the global level, but also at the state and local levels, is vitally important and necessary. Second, the case study allows for an analysis of how the foreign policies of states supporting Ukraine are gendered. Finally, how a feminist foreign (and domestic) policy is needed around the globe in order to achieve global gender equality. A feminist foreign policy is, in effect, a transformative foreign policy.[1] This article explores the ways in which gender equality, gendered and gendering of foreign policy, and feminist foreign policy are intertwined in the context of the Russia-Ukraine war that began in 2022.

On March 9, 2022, *The Washington Post* published an article by columnist Monica Hesse titled, "What mothers know about war." Accompanying the article was a photo taken by an Associated Press photographer, Francesco Malavolta, with the caption: "Strollers for refugees and their babies fleeing the conflict from neighboring Ukraine were left at the train station in Przemysl, Poland."[2] As I looked closely at the picture and read Hesse's column, I kept thinking of Cynthia Enloe's central question, "Where are the women?"[3] This question, of course, underlies so much of feminist scholarship in general, and feminist international relations specifically.[4]

- Where are the women (and men) when we consider war?
- Where are the women (and men) when we consider peace?
- Which women? Which men?
- What of other identities?
- What of other marginalized groups?
- How can we understand war and peace if we don't use a *feminist analysis*? In other words, what are we missing?

And Hesse's column gets to these questions when she writes, "The strollers on the train platforms in Poland are a symbol of what women know about war and their place in it. These Ukrainian mothers have arrived without husbands or partners because the men of Ukraine, ages 18 to 60, are prohibited from leaving….The strollers on the train platforms in Poland are the artifacts of war that we do not talk about. They are not the sorts of supplies mentioned when the Ukrainian president goes on a Zoom call with American members of Congress to beg them for military aid; they are not negotiated in the language of sanctions and artillery."[5]

There are these "artifacts of war that we do not talk about" while the war continues. And as the war continues, so too does talk about how to end the war. In considering the peace negotiations, five days after Russia's invasion, on February 29, representatives from the two sides met, with negotiations

running along two tracks, according to Mykhailo Minakov and Iliya Kusa. One track involved consulting teams focused on the "enforcement of humanitarian corridors" and exchanges of prisoners of war. The other track involved negotiators at the foreign affairs ministerial level, with the Ukrainian minister of foreign affairs, Dmytro Kuleba, and Sergei Lavrov, the Russian Foreign Minister. At the time, these talks involved decisions on "the withdrawal of Russian troops from three northern Ukrainian oblasts" as well as planning for a meeting sometime in the future between President Zelensky and President Putin.[6]

Importantly, a feminist analysis of these talks reveals how gendered they were and are. These have been *all-male negotiations* at the proverbial peace table. Talks had been held remotely since face-to-face talks ended on March 29, 2022.[7] Direct peace talks resumed only in May 2025, when delegations from both countries met in Turkey, with no agreement concluded.[8] Whether it is the aides to the respective presidents, Zelensky and Putin, or Defense and Foreign Ministers and ambassadors, all the negotiators are men.[9]

So, how does having all-male negotiators matter for gender equality? Or asked another way, how does having a lack of female negotiators in the Ukraine-Russia peace talks matter for gender equality? Consider UN Security Council Resolution 1325, adopted in late 2000, which "Affirms the importance of the participation of women and the inclusion of gender perspectives in peace negotiations, humanitarian planning, peacekeeping operations, and post-conflict peacebuilding and governance."[10] Resolution 1325 established the *Women, Peace, and Security (WPS)* agenda, which has been continually advanced by the international community, as evidenced by nine subsequent UNSC resolutions. As of 2025, more than 100 states have adopted National Action Plans (NAP), focused on implementing 1325 and the subsequent resolutions. In addition, several regional organizations, such as the African Union and ASEAN have adopted regional action plans.[11]

Russia does not have a National Action Plan, but Ukraine does. In 2016, Ukraine adopted its first NAP (2016-2020), followed by a second plan for 2020-2025.[12] (Discussions for a third NAP (2026-2030) began in 2025.[13]) Notably, Ukraine is a signatory of NATO's Policy on Women, Peace and Security.[14] This matters because we know from the data about the importance of including women as participants in peace negotiations that lead to peace agreements, and, more importantly, their durability. The Council on Foreign Relations has compiled such data, citing one study of "all peace agreements in the post-Cold War period" that showed that when civil society organizations (CSO) participate in these negotiations, including women's CSOs, "peace agreements are 64 percent less likely to fail." Another study examined 130 peace agreements concluded since the end of the Cold War. They found there is "a statistically significant relationship between peace agreements signed by women and the durability of peace." Moreover, research

shows "that parties were significantly more likely to agree to talks and subsequently reach an agreement when women's groups exercised strong influence on the negotiation process."[15]

And yet, women remain woefully underrepresented in peace processes. As UN Women indicates, in 2024, "women made up only 7 per cent of negotiators and 14 per cent of mediators in formal peace processes worldwide—and many peace talks still include no women at all." Further, when examining whether peace agreements and ceasefires reference women, girls, or gender, the data shows that "between 1990 and 2000, only 12 per cent of peace agreements included references to women. In 2024, 31 per cent of peace and ceasefire agreements mentioned women, girls or gender. However, the agreements with gender provisions were limited to only four processes in three countries: Colombia, South Sudan, and the Sudan."[16]

So, when we look at the situation in Ukraine, what do we see? We see women (and children) comprising the majority of refugees. This makes sense that there was a disproportionate percentage of women fleeing after the invasion, as men aged 18-60 were not allowed to leave because of military conscription (this law changed in September 2025).[17] As of February 2025, the UN has estimated that "approximately 3.7 million people [are] internally displaced within Ukraine." Another 6.9 million are refugees, of which 63% are women and children, according to the International Organization for Migration.[18]

We know, too, that women are combatants. Women comprise approximately 15%-17% of the Ukrainian army. Women have also volunteered in support of the Ukrainian war effort, including as medical personnel, grandmothers sewing military uniforms, or women volunteering to help people who are disabled and/or elderly.[19] While there is no conscription for women, they have joined the war effort, including "more than 20,000…in combat roles, and 5,500 … fighting in the trenches." Women in the military include drone operators, fighter pilots, and snipers.[20]

But, again, we do not see women represented at the peace talks. This links to the second point about the ways in which the foreign policies of other states and the framing of the conflict remain gendered. States and international governmental organizations, as well as the Western media, have noted the humanitarian crisis that has resulted from Russia's invasion, and often frame the humanitarian crisis in gendered ways: women, children, and the elderly as civilians—as victims of Russia's invasion, which of course they are. Calls for humanitarian assistance reinforce traditional gender roles. For example, on Mother's Day in the United States in 2022, the US First Lady, Jill Biden, made a surprise visit to Kyiv--"an active war zone"--and met with Olena Zelenska, Ukraine's first lady. She emphasized the issues that she prioritized: "education, military families and mental health." As reported in *The Washington Post*, "A longtime educator, she visited schools

in each of the three countries she traveled to, met with troops at a military base and emphasized the need for mental health services for refugees during her humanitarian visits and briefings."[21] The gendered framing is also about men as soldiers/protectors. Again, forced conscription means that it is the men who must remain to fight and defend the country. At the same time, the gendering of the conflict is somewhat blurred, as we see women combatants but also men who have fled Ukraine in order to avoid conscription.[22]

In many ways, responses to allegations of Russian war crimes by the international community and individual states reflect gendered priorities. In early March of 2022, the United Nations Human Rights Council adopted Resolution 49/1 to establish an international commission of inquiry "to investigate all alleged violations and abuses of human rights"—essentially an investigation into whether war crimes have been committed by Russia.[23] The EU said it would assist the International Criminal Court in investigating war crimes,[24] and the US has been explicit in stating that Russia has committed such crimes.[25] The U.S.-UK-EU Atrocity Crimes Advisory Group (ACA), established in May 2022, provides advice and assistance to Ukraine's Office of the Prosecutor General (OPG) "on the documentation, investigation, and prosecution of war crimes and other atrocities."[26] NATO revised its WPS policy in 2024, noting "Russia's war of aggression against Ukraine and the threats it poses specifically to women on the frontlines of the conflict."[27]

While there has been attention to the humanitarian crisis and allegations of war crimes, the focus of much of the response to Russia's invasion has been the use of sanctions against Russia and the provision of military assistance to Ukraine. Sanctions on foreign reserves, key technologies, and so forth have been placed on the Russian government as well as certain Russian individuals. In the immediate aftermath of the placement of sanctions, prices for consumer goods rose in Russia, and many Western countries closed their stores and pulled out of the country.[28] The sanctions included exemptions such as trade in agricultural products as these exemptions are intended "to minimize humanitarian costs" amid the "increasing concerns about global food insecurity."[29] At present, "more than 30 countries around the globe who represent more than 50% of the global economy" have placed sanctions and export controls on Russia, making it "now the most sanctioned country in the world."[30] Yet, more than three years since the invasion, the sanctions have not had the desired effect of changing Russia's behavior. Russia has been able to circumvent the sanctions through bilateral trade with countries that do not support sanctioning Russia, such as China, India, Israel, and Saudi Arabia, including its trade in oil and gas.[31]

Ukraine has received significant military aid. In the first few months following Russia's invasion, nearly $4 billion in military aid had been given by the US, and that did not include the "additional $165 million worth of weapons" that the US had sold to Ukraine.[32] On April 28, 2022, President

Biden requested from Congress an additional "$33 billion in security, economic, and humanitarian aid." Of that $33 billion, $24 billion would go towards "additional security and military assistance…and for US efforts to strengthen European security in cooperation with our NATO allies and other partners in the region." An additional $8.5 billion was marked for economic assistance, including basic services such as "food, energy, and healthcare." In the case of humanitarian aid, $3 billion would be allocated for "resources to address food security needs around the globe…"[33] On May 9, Biden signed the "Ukraine Democracy Defense Lend-Lease Act of 2022," which authorized the US "to lend or lease military equipment to Ukraine and other countries in Eastern Europe."[34] In addition to the United States, 30 states have provided military assistance to Ukraine. The types of weapons include missiles (anti-tank Javelins, for example), guns and ammunition, artillery, and attack drones.[35] Overall, as of mid-August 2025, more than 40 states have provided economic, humanitarian, and military assistance, with military aid the largest ($174 billion), followed by financial aid ($163 billion), and then humanitarian aid ($24 billion).[36] It is clear that the response from the international community has prioritized traditional responses: economic sanctions and military assistance.

This is related to the final take away point: the importance of a feminist foreign policy. Why aren't the countries with an explicitly feminist foreign policy centering gender in their responses to the war? What might a feminist foreign policy look like in response to Russia's invasion of Ukraine and the subsequent war?

In 2014, Sweden became the first country to have an explicitly feminist foreign policy in which four Rs mattered in the conduct of their foreign policy: rights, representation, resources, and reality in terms of success. Since Sweden's feminist foreign policy declaration, eight other countries have followed suit (in alphabetical order): Canada, Chile, France, Germany, Libya, Luxembourg, Mexico, and Spain. Yasmine Ergas calls these the FFP9.[37]

And yet, as Azadeh Moaveni, director of the Gender and Conflict Project, International Crisis Group, and Chitra Nagarajan, an activist and researcher focused on conflict, gender, and peacekeeping, write, "Countries like Canada, France, Spain, Finland and Sweden say they have a feminist foreign policy. Yet, mentions of the deeply gendered harms inflicted by this war and how to better protect people of all genders, have been few and far between in the responses of nations who say they are committed to gender equality and women's rights thus far, eclipsed by a focus on boosting arms deliveries and economic sanctions."[38]

Notably, in May 2022, Sweden's Minister of Foreign Affairs, Ann Linde, met with her Canadian counterpart, Melanie Joly, in which they planned "to reiterate their commitment to strong cooperation on global issues, including

the world's stability and the importance of feminist foreign policies."[39] They issued a joint statement noting their bilateral cooperation. The statement began by focusing on the "close relationship based on shared values and priorities," then a reaffirmation of "support for Ukraine's independence and territorial integrity," "need to ensure accountability for the international crimes committed," and "cooperation to safeguard and advance democracy," and as Arctic countries they would continue to cooperate in the region. Six paragraphs into the joint statement addressed specifically a feminist foreign policy: "As close partner countries in championing feminist foreign policy, Canada and Sweden reaffirm our commitment to advancing feminist approaches, eliminating structural and indirect barriers for all women, girls and marginalized people, and to integrate gender perspectives in all our shared priorities. …. In addressing the ongoing crisis in Ukraine, both our countries are leading in highlighting the importance of a gender perspective in all our efforts, including the adoption of gender-responsive budgeting, and are committed to supporting the inclusion of women in decision making and mediation processes and the full implementation of the Women, Peace and Security Agenda…."[40]

Three days later, on May 8, Canada's Prime Minister Justin Trudeau visited Ukraine. In this surprise visit with Ukrainian President Zelensky, Prime Minister Trudeau announced that Canada would send "new weapons and equipment," as well as "imposing new sanctions on Russian individuals," but there was no mention of the components of a feminist foreign policy.[41]

As feminist scholars, such as Katherine A. M. Wright, also ask, where are the gender advisors in the countries and organizations, such as NATO, that are actively involved in assisting Ukraine: "Is the NATO Special Representative on Women, Peace, and Security being included in all high-level discussions? Are Gender Advisors being deployed with the NATO Response Force? Has gender been incorporated into NATO's strategic communications? Is a gender perspective being included in all decision-making processes?"[42] It was only in June 2024 that NATO's "Secretary General's Special Representative for Women, Peace and Security commissioned an assessment report on the needs of the Armed Forces of Ukraine through a gender lens."[43] Additionally, in 2024, NATO provided "more than $7 million to purchase equipment for women in Ukraine's armed forces."[44]

So, what might a Feminist Foreign Policy for responding to the war in Ukraine look like? From Ukraine's position, this is an *inward-focused* feminist foreign policy. Ukraine's 2020-2025 National Action Plan focuses on 5 strategic goals: "participation of women in decision making; resilience to security challenges; post-conflict recovery and transitional justice; counteraction to gender-based and conflict-related sexual violence; strengthening the institutional capacity of the executors of the National Plan."[45] (Note that the NAP focuses on women. As Simon Carpentier remarks, the Ukrainian

NAP "[overlooks] the roles and experiences of men in the conflict, even in the context of CRSV [conflict-related sexual violence].")[46]

The points in Ukraine's NAP are directly relevant to a feminist foreign policy for the states that support Ukraine—an *outward-facing policy*. First, demand the inclusion of women (and other marginalized groups) in the peace talks—at the table, in the actual decision-making process. In so doing, this ensures women's representation and participation both for women in formal political positions but also women at the grassroots level. Essentially, these women have knowledge of what is happening on the ground. This participation needs to be substantive, and not primarily symbolic or window-dressing.

Second, this demand for women's participation in the peace talks relates to the kinds of issues that a peace agreement will need to address explicitly. What is needed are specific gender provisions.[47] The Alliance for Gender-Responsive and Inclusive Recovery, launched in June 2024, "aims to ensure that gender equality and women's empowerment are central to Ukraine's recovery and reconstruction efforts." Further, the Alliance calls for initiatives that "prioritize the needs of displaced women, returnees, disabled women, veterans, rural women, and LGBTIQ+ persons, ensuring their participation in recovery decision-making."[48] In addition to gender provisions on women's participation and gender equality, provisions can include references to addressing sexual and gender-based violence, men and boys, transitional justice, land and property, and security sector reform.[49]

This is, of course, by no means an exhaustive list, but it enables a way to frame a peace agreement and post-conflict situation differently beyond calls for demobilization or delineating borders. Without a peace process and peace agreement that include women and other marginalized groups, and thus an intersectional approach that addresses issues beyond security issues traditionally defined, peace and security will remain elusive as will gender equality, not just in Ukraine but around the globe.

As of this writing, the current status of the peace talks is one of a stalemate. On May 6, 2022, President Zelensky stated the conditions for peace talks, including "a restoration of pre-invasion borders, the return of more than 5 million refugees, membership in the European Union and accountability from Russian military leaders."[50] After more than three years of war, recognizing that Ukraine regaining lost territory is not likely, Zelensky recently signaled his support for a compromise position that would "freeze the war at the current frontlines" so as to start peace agreement negotiations.[51] Russia's consistent demands include recognition of its 2014 annexation of Crimea, that Ukraine not become a member of NATO and be disarmed, as well as "no Western troops…deployed on the ground in Ukraine as part of a peacekeeping force."[52] Russia remains committed to keeping its territorial gains, particularly in the two eastern Ukrainian provinces, Donetsk

and Luhansk. Moreover, Russia favors a permanent peace agreement rather than a ceasefire, "arguing that they [ceasefires] would give Ukraine time to rearm and regroup at a time when Russian forces are making battlefield advances."[53]

In both cases, neither party has centered gender equality, and women's empowerment and participation in the negotiation process and post-conflict situation. As the Council of Europe Commissioner for Human Rights, Michael O'Flaherty, wrote, following his visit to Ukraine in March 2025, women's "roles as active agents in formal and informal peacebuilding and recovery processes are paramount to ensure a gender-sensitive approach in all efforts towards peace, including by addressing their specific needs, and to equally harness women's power in fostering peace, stability and security for all." His memorandum continued: "Not to include women in the peace process would ignore their critical contribution and reduce the likelihood of achieving a lasting outcome. Therefore, there should be full, equal and effective participation of women right from the outset and through all stages of the peace process including, crucially, directly at the negotiating table. Moreover, women and gender experts should be involved in the technical work around every component of a peace deal, including ceasefire-monitoring agreements, provisions on justice and reparations, and socio-economic recovery."[54]

By way of conclusion, considered "the largest and deadliest war in Europe since World War II" and one in which "tens of thousands of people on both sides"[55] have been killed, the war continues without a cease-fire or permanent peace agreement concluded. While Ukrainian women have been disproportionately impacted in terms of access to healthcare and food, and as victims of sexual and gender-based violence, and are in the armed forces, and are "documenting atrocities and potential war crimes," they remain outside of the formal peace process. Women's participation and inclusion (and this means "including women from a range of backgrounds"), and thus the consideration of a "full range of issues involved in peace talks," are necessary for a stable and durable peace agreement.[56]

Compliance with ethical standards
This article does not contain any studies with human participants or animals performed by the author.

Data availability statement
All data generated or analyzed are included in the published article.

Funding information
None.

Author contributions
The author confirms being the sole contributor of this work and approved it for publication. The author takes full responsibility for the accuracy and the integrity of the data analysis.

Conflict of interest statement
The author declares that the research was conducted in the absence of any commercial or financial relationships that could be construed as a potential conflict of interest.

Transparency statement
The author affirms that the manuscript represents an honest, accurate, and transparent account of the research being reported, that no relevant aspects of the study have been left out, and that any inconsistencies from the research as planned (and, if significant, registered) have been clarified.

Disclosure by the editors of record
The editors declare no conflict of interest in the review and publication decision regarding this article.

NOTES AND REFERENCES

1. Mia-Lie Nylund, Sandra Hakansson, and Elin Bjarnegard, "The Transformative Potential of Feminist Foreign Policy: The Case of Sweden," *Journal of Women, Politics & Policy* 44, 3 (2023): 257-73.

2. Monica Hesse, "What mothers know about war," *The Washington Post* (March 9, 2022), https://www.washingtonpost.com/lifestyle/2022/03/09/ukraine-refugee-mother-strollers/.

3. Cynthia Enloe, *Bananas, Beaches and Bases: Making Feminist Sense of International Politics* (Berkeley: University of California Press, 1990).

4. For classic works on feminist international relations, see, for example, Eric M. Blanchard, "Gender, International Relations, and Feminist Security Theory," *Signs* 28, 4 (Summer 2003): 1289-1312; Cynthia Enloe, *Maneuvers: The International Politics of Militarizing Women's Lives* (Berkeley: University of California Press, 2000); J. Ann Tickner, *Gendering World Politics* (New York: Columbia University Press, 2001); Anne Sisson Runyan and V. Spike Peterson, *Global Gender Issues* (1993, 1999) and *Global Gender Issues in the New Millennium* (2010).

5. Hesse, "What mothers know about war."

6. Mykhailo Minakov and Iliya Kusa, "Ukraine-Russia Negotiations: What's Possible?" Wilson Center (April 11, 2022), https://www.wilsoncenter.org/blog-post/ukraine-russia-negotiations-whats-possible.

7. "Russia: Talks With Ukraine Continue but Not Ready for In-Person Meeting," Reuters (May 9, 2022), https://www.usnews.com/news/world/articles/2022-05-09/russian-negotiator-says-peace-talks-with-ukraine-are-ongoing-ifax.

8. CFR Editors, "Three Years of War in Ukraine: Are Sanctions Against Russia Making a Difference?" Council on Foreign Relations (August 12, 2025), https://www.cfr.org/in-brief/three-years-war-ukraine-are-sanctions-against-russia-making-difference.

9. “Women’s Participation in Peace Processes: Ukraine Case Study,” Council on Foreign Relations, https://www.cfr.org/womens-participation-in-peace-processes/ukraine-4 (accessed October 14, 2025).

10. “Global norms and standards: Peace and security,” UN Women.org, https://www.unwomen.org/en/what-we-do/peace-and-security/global-norms-and-standards#:~:text=Other%20key%20documents-,Women%2C%20peace%20and%20security%20resolutions,post%2Dconflict%20peacebuilding%20and%20governance.

11. UN Women: Asia and the Pacific, “National Action Plans: Women, Peace and Security,” https://asiapacific.unwomen.org/en/focus-areas/peace-and-security/national-action-plans#:~:text=Globally%2C%20as%20of%20July%202023,and%20territories%20had%20adopted%20NAPs.&text=As%20of%20September%202025%2C%20the,region%20are%20currently%20developing%20NAPs; Alexandra Dumitrescu, “Opinion: Women, Peace and Security: Words Endure, but Government Action Lags,” Common Space (October 8, 2025), https://www.commonspace.eu/news/opinion-women-peace-and-security-words-endure-government-action-lags#:~:text=Over%20the%20years%2C%20the%20Women%2C%20Peace%20and,the%20Women%2C%20Peace%20and%20Security%20(WPS)%20agenda (accessed October 14, 2025); Our Secure Future, “National Action Plan Database,” https://oursecurefuture.org/our-secure-future/project/all-national-action-plans (accessed October 14, 2025); Women’s International League for Peace and Freedom, “National Action Plans,” https://1325naps.peacewomen.org/ (accessed May 9, 2022).

12. Women’s International League for Peace and Freedom, “Ukraine,” http://1325naps.peacewomen.org/index.php/ukraine/ (accessed May 9, 2022); Security Women, “Ukraine,” https://www.securitywomen.org/unscr-1325-and-national-action-plans-nap/ukraine (accessed October 14, 2025).

13. UN Women Ukraine, “The process of developing a new National Action Plan for the implementation of UN Security Council Resolution 1325 ‘Women, Peace and Security’ for the period 2026-2030 is ongoing,” UN Women (May 6, 2025), https://ukraine.unwomen.org/en/stories/novyny/2025/05/tryvaye-protses-rozrobky-novoho-natsionalnoho-planu-diy-na-vykonannya-rezolyutsiyi-rady-bezpeky-oon-1325-zhinky-myr-bezpeka-na-period-2026-2030-roky.

14. Katherine Wright, “Comment: Women are key to the resolution of the Russia-Ukraine War” (March 21, 2022), https://www.ncl.ac.uk/press/articles/latest/2022/03/commentwomenarekeytoresolutionofthewar/

15. Council on Foreign Relations, “Why It Matters,” https://www.cfr.org/womens-participation-in-peace-processes/why-it-matters.

16. UN Women, “Facts and figures: Women, peace, and security” (October 20, 2025), https://www.unwomen.org/en/articles/facts-and-figures/facts-and-figures-women-peace-and-security.

17. Katy Watson, “A new law lets some Ukrainian men leave the country. But will it hurt the war effort?” BBC (September 9, 2025), https://www.bbc.com/news/articles/czx05gp51qlo.

18. “Women’s Participation in Peace Processes: Ukraine Case Study,” Council on Foreign Relations, https://www.cfr.org/womens-participation-in-peace-processes/ukraine-4; “How many Ukrainians have fled their homes and where have they gone?” BBC (May 7, 2022), https://www.bbc.com/news/world-60555472; Amanda Taub, “The Ukraine Refugee Crisis is a Woman’s Crisis,” *New York Times* (April

13, 2022), https://www.nytimes.com/2022/04/13/world/europe/ukraine-refugees-women.html.

19. Mia Bloom and Sophia Moskalenko, "Ukraine's women fighters reflect a cultural tradition of feminist independence," *The Conversation* (March 21, 2022), https://theconversation.com/ukraines-women-fighters-reflect-a-cultural-tradition-of-feminist-independence-179529.

20. John T. Psaropoulos, "Ukraine's women wage war on Russia as mothers, breadwinners and soldiers," Al-Jazeera (March 31, 2025), https://www.aljazeera.com/news/2025/3/31/ukraines-women-wage-war-on-russia-as-mothers-breadwinners-and-soldiers.

21. Tyler Pager and Matt Viser, "First lady Jill Biden visits Ukraine in rare trip to war zone," *The Washington Post* (May 8, 2022), https://www.washingtonpost.com/politics/2022/05/08/jill-biden-ukraine/.

22. Pjotr Sauer, "'I am not made for war': the men fleeing Ukraine to evade conscription," *The Guardian* (June 29, 2024), https://www.theguardian.com/world/article/2024/jun/29/i-am-not-made-for-war-the-men-fleeing-ukraine-to-evade-conscription.

23. "Independent International Commission of Inquiry on Ukraine," United Nations Human Rights Council (March 4, 2022), https://www.ohchr.org/en/hr-bodies/hrc/iicihr-ukraine/index.

24. "EU to help ICC investigate war crimes in Ukraine—as it happened" (April 11, 2022), https://www.dw.com/en/eu-to-help-icc-investigate-war-crimes-in-ukraine-as-it-happened/a-61427944

25. Anthony J. Blinken, "War Crimes by Russia's Forces in Ukraine," U.S. Department of State (March 23, 2022), https://2021-2025.state.gov/war-crimes-by-russias-forces-in-ukraine/.

26. Atrocity Crimes Advisory Group for Ukraine, "What We do," https://www.aca-ukraine.org/what-we-do/.

27. "Fact Sheet: Advancing Women, Peace and Security at the NATO 75th Anniversary Summit," The White House (July 10, 2024), https://bidenwhitehouse.archives.gov/briefing-room/statements-releases/2024/07/10/fact-sheet-advancing-women-peace-and-security-at-the-nato-75th-anniversary-summit/#:~:text=Revised%20NATO%20WPS%20Policy.,%2C%20Peace%2C%20and%20Security%20objectives..

28. "How sanctions are affecting the Russian economy," PBS Newshour (April 23, 2022), https://www.pbs.org/newshour/world/how-sanctions-are-affecting-the-russian-economy.

29. Congressional Research Service, "The Economic Impact of Russia Sanctions" (updated December 13, 2022), https://www.congress.gov/crs_external_products/IF/PDF/IF12092/IF12092.3.pdf.

30. Claire Mills, "Sanctions against Russia: Targeting third countries," Research Briefing, House of Commons Library (October 3, 2025), 4, https://researchbriefings.files.parliament.uk/documents/CBP-10048/CBP-10048.pdf.

31. Mills, "Sanctions against Russia: Targeting third countries," 4.

32. Jordan Cohen, "Ukraine receives weapons support from around the world," *The Conversation* (May 6, 2022), https://theconversation.com/ukraine-receives-weapons-support-from-around-the-world-182266.

33. The White House, "Fact Sheet: White House calls on Congress to Provide Additional Support for Ukraine" (April 28, 2022), https://bidenwhitehouse.archives.gov/briefing-room/statements-releases/2022/04/28/fact-sheet-white-house-calls-on-congress-to-provide-additional-support-for-ukraine/.

34. Department of Defense, "Biden Signs Lend-Lease Act to Supply More Security Assistance to Ukraine" (May 9, 2022), https://www.defense.gov/News/News-Stories/Article/Article/3025302/biden-signs-lend-lease-act-to-supply-more-security-assistance-to-ukraine/.

35. Jordan Cohen, "Ukraine receives weapons support from around the world," *The Conversation* (May 6, 2022), https://theconversation.com/ukraine-receives-weapons-support-from-around-the-world-182266; Hanna Duggal, "Tracking US and NATO support for Ukraine: A full breakdown," Al-Jazeera (August 21, 2025), https://www.aljazeera.com/news/2025/8/21/tracking-us-and-nato-support-for-ukraine-a-full-breakdown.

36. Duggal, "Tracking US and NATO support for Ukraine: A full breakdown."

37. Yasmine Ergas, "Will Ukraine Bury Feminist Foreign Policies or Will It Reveal Their Power?" PassBlue (March 9, 2022). See also Mikaela Conley, "Feminist Foreign Policies Increase in Number. Do They Matter?" PassBlue (February 14, 2022), https://www.passblue.com/2022/02/14/while-feminist-foreign-policies-expand-in-number-germany-jumps-in/. Note that by October 2022, Sweden abandoned its formal feminist foreign policy when a new government came into power, "backed by a far-right party." See Merlyn Thomas, "Sweden ditches 'feminist foreign policy,'" BBC (October 19, 2022), https://www.bbc.com/news/world-europe-63311743.

38. Azadeh Moaveni and Chitra Nagarajan, "Another deeply gendered war is being waged in Ukraine," Al-Jazeera (March 15, 2022), https://www.aljazeera.com/opinions/2022/3/15/another-deeply-gendered-war-is-being-waged-in-ukraine.

39. Government of Canada, "Minister Joly to welcome Swedish counterpart to Canada" (May 3, 2022), https://www.canada.ca/en/global-affairs/news/2022/05/minister-joly-to-welcome-swedish-counterpart-to-canada.html.

40. Government of Canada, "Canada-Sweden joint statement on bilateral cooperation" (May 5, 2022), https://www.canada.ca/en/global-affairs/news/2022/05/canada-sweden-joint-statement-on-bilateral-cooperation.html

41. "Canada's Trudeau announces new weapons for Ukraine in visit to Kyiv," Reuters (May 9, 2022), https://www.reuters.com/world/europe/canadas-trudeau-announces-new-weapons-ukraine-visit-kyiv-2022-05-08/

42. Katherine A.M. Wright, "A feminist perspective on the Russian-Ukraine War: Implications for NATO," LSE (March 8, 2022), https://blogs.lse.ac.uk/wps/2022/03/08/a-feminist-perspective-on-the-russian-ukraine-war-implications-for-nato/.

43. "Women Defenders of Ukraine," NATO WPS and HS Bulletin, edition #6 (June 2024), 5, https://www.nato.int/nato_static_fl2014/assets/pdf/2024/6/pdf/2406-WPS-HS-Bulletin-6-en.pdf.

44. "Secretary Antony J. Blinken at the NATO Women, Peace, and Security Reception," July 9, 2024, https://2021-2025.state.gov/secretary-antony-j-blinken-at-the-nato-women-peace-and-security-reception/#:~:text=And%20we%20continue%20to%20partner,to%20help%20in%20this%20initiative.

45. "National Action Plan for the Implementation of UN Security Council Resolution 1325 on Women, Peace, Security until 2025," https://wpsfocalpoints

network.org/wp-content/uploads/2022/08/Ukraine-NAP2.pdf#:~:text=APPROVED%20by%20the%20Regulation%20of%20the%20Cabinet%20of,which%20collectively%20form%20the%20Women%2C%20Peace%2C%20Security%20agenda. For the 10 objectives of the first NAP (2016-2020), see: Women's International League for Peace and Freedom, "Ukraine," http://1325naps.peacewomen.org/index.php/ukraine/.

46. Simon Carpentier, "The Missing Piece: Lessons from Ukraine for Integrating Masculinities in Women, Peace and Security," IPI Global Observatory (November 3, 2023), https://theglobalobservatory.org/2023/11/the-missing-piece-lessons-from-ukraine-for-integrating-masculinities-in-women-peace-and-security/.

47. Almut Rochowanski, "Ukraine: Europe should walk its talk on women, peace, and security," European Leadership Network (April 22, 2022), https://www.europeanleadershipnetwork.org/commentary/ukraine-europe-should-walk-its-talk-on-women-peace-and-security/.

48. Anna Serdyuk, "Alliance for Gender-Responsive and Inclusive Recovery in Ukraine Launched with strong support of governments, UN agencies, private sector and civil society," United Nations: Ukraine (June 12, 2024), https://ukraine.un.org/en/271438-alliance-gender-responsive-and-inclusive-recovery-ukraine-launched-strong-support.

49. "PA-X Analytics: Peace and Transition Process Data," PeaceRep, https://www.peaceagreements.org; https://www.peaceagreements.org/agreements/search/?search_type=basic-search&show_timeline=0&match_any_issues=True.

50. Liz Sly, Karoun Demirjian, Timothy Bella, and Ellen Francis, "Ukraine lays out peace-talk demands as the West braces for escalation," *The Washington Post* (May 6, 2022), https://www.washingtonpost.com/national-security/2022/05/06/zelensky-demands-ukraine-biden-funding/

51. Pjotr Sauer, "Zelensky calls Trump's proposal to freeze war at current frontlines 'good compromise,'" *The Guardian* (October 22, 2025), https://www.theguardian.com/world/2025/oct/22/zelenskyy-calls-trumps-proposal-to-freeze-war-at-current-frontlines-good-compromise.

52. Guy Faulconbridge, "Exclusive: Putin's demand to Ukraine: give up Donbas, no NATO and no Western troops, sources say," Reuters (August 22, 2025), https://www.reuters.com/world/china/putins-demand-ukraine-give-up-donbas-no-nato-no-western-troops-sources-say-2025-08-21/.

53. Pjotr Sauer, "Zelensky calls Trump's proposal to freeze war at current frontlines 'good compromise,'" *The Guardian* (October 22, 2025), https://www.theguardian.com/world/2025/oct/22/zelenskyy-calls-trumps-proposal-to-freeze-war-at-current-frontlines-good-compromise.

54. Michael O'Flaherty, *Memorandum on human rights elements for peace in Ukraine* (Council of Europe, 2025), 25, https://rm.coe.int/memorandum-on-human-rights-elements-for-peace-in-ukraine-by-michael-o-/1680b678ec.

55. Yashraj Sharma, "Why planned Trump-Putin talks collapsed, and what it means for Ukraine," Al-Jazeera (October 22, 2025), https://www.aljazeera.com/news/2025/10/22/why-planned-trump-putin-talks-collapsed-and-what-it-means-for-ukraine.

56. Briana Mawby, "When Russia and Ukraine eventually restart peace talks, involving women—or not—could be a key factor in an agreement actually sticking," The Conversation (August 31, 2022), https://theconversation.com/when-russia-and-

ukraine-eventually-restart-peace-talks-involving-women-or-not-could-be-a-key-factor-in-an-agreement-actually-sticking-189207.



"Strollers for refugees and their babies fleeing the conflict from neighboring Ukraine were left at the train station in Przemysl, Poland. (Francesco Malavolta/AP)", *The Washington Post* (March 9, 2022), https://www.washingtonpost.com/lifestyle/2022/03/09/ukrainie-refugee-mother-strollers/.

Journal of Research in Gender Studies 15(2), 2025
pp. 40–52, ISSN 2164-0262, eISSN 2378-3524

Is the Fashion Industry Inclusive for All?

Zoi Arvanitidou*

ABSTRACT. The population with disabilities represents a quarter of adults and is an estimated $490 billion market in the United States alone. They seek equal rights, possibilities, and opportunities and have great purchasing power. Designers must develop products that fit this population's body, needs, and skills, promoting autonomy, independence, and quality of life. Thus, they help disabled users and their carers when dressing and undressing (Brogin & Okimoto, 2019). New ideas are needed for a co-design platform dedicated to this population to create inclusive fashion. This platform can positively affect the well-being of millions of citizens with mobility/physical disabilities (Soares et al., 2016). The progress for inclusion in fashion is limited, as one's abilities are rarely included. Has a designer ever wondered how their clothes would be used by someone with limited use of their hands or how a new pair of pants would work for someone with prosthetics?

Keywords: fashion; inclusion; people with disabilities

How to cite: Arvanitidou, Z. (2025). "Is the Fashion Industry Inclusive for All?," *Journal of Research in Gender Studies* 15(2): 40–52. doi: 10.22381/JRGS15220253.

Received 4 October 2025 • Received in revised form 27 December 2025
Accepted 29 December 2025 • Available online 30 December 2025

*University of Malta, Valletta, Malta, zoi.arvanitidou@um.edu.mt.

1. Introduction

Diversity and including as many people and groups in fashion as possible is a consumer demand and demand. Fashion companies also see the need to meet the needs of people with disabilities, realising that they can be an important future source of income (Matano, 2021). However, people with disabilities are ignored by the fashion industry, even though they are around 1.2 billion worldwide, 1 in 8 on earth, and there is much gross under-representation of them. Therefore, 15% of people with physical or mental disabilities are the largest minority group on the planet and the only one where no one can enter at some unfortunate moment. However, we either cling to harmful stereotypes or refuse to discuss their representational potential (Lawson, 2021). The purchasing power of people with disabilities totals US$2.1 trillion and rises to US$6.9 trillion if parents and caregivers are included (Ahmed, 2017). However, people with disabilities are the least served and underrepresented in the fashion industry. Shopping for clothes is a big adventure for anyone whose body size and proportions fall outside fashion's preferred "ideal" size. Moreover, this leads to lost profits for fashion companies (Haines, 2021). In 2020, 61 million adults with disabilities live in the USA, meaning 26% (about one in four) have a disability. Of these, 1 in 4 are women, while 3.7% find it difficult to dress or wash (3DLOOK, 2019). The value of the adaptive clothing market in the USA alone is estimated at US$249 billion in 2017 and will reach US$400 billion in 2026 (Alexiou, 2022).

Historically, for centuries, disability has brought to mind only hospitals and special rehabilitation centres. Some discussion of disability inclusion and promotion of equal opportunities for them began in 1981 when the UN declared it the International Year of Persons with Disabilities. Still, many years before any faint representation of the body with disabilities appeared in fashion and fashion media. As recently as 1999, British fashion designer Alexander MacQueen presented a catwalk model with disabilities, Aimee Mullins, who walked with a wooden prosthetic limb that resembled a high boot at a fashion show in London. Although an important moment, it failed to move society at the time to initiate a structural change. Much later, actions for more diversity and inclusion appeared again in the fashion media, such as Tommy Hilfiger's adaptive clothing collection and the Barbie Fashionistas line that featured the famous doll with medical accessories and patches. Thus, the 1.2 billion people with disabilities saw their representation in fashion for the first time. Of course, even today, there is no complete representation of people with disabilities in the whole of fashion. For this inclusion, the physical barriers, the digital, and, above all, behavioural barriers must be removed, and they must be fully welcomed. Recently, with the Runway of Dreams events in New York and London, the efforts of disability-inclusive

fashion raised awareness in society, promoting a true revolution in space (Bullock, 2022).

All widely consume fashion, as clothing is a basic need of people, but it lacks the inclusion of many groups because it only caters to certain body types. People want to be noticed and heard, but more so to be represented. True representation of everyone will probably make fashion more inclusive, and the right way to do that is to include marginalised and oppressed groups of people in its system. Due to consumer demands, the fashion industry is slowly changing its mindset. The entrenched prejudice against bodies with disabilities, such as those who are too large or too small (dwarfs), deprives the fashion industry of revenue (3DLOOK, 2019). There are some adaptive clothing companies like "So Yes" in Belgium, "I am Denim" in Britain and "Social Syrge" in Chicago, but the big names are reluctant to get involved. Some sporadic entries like Tommy Hilfiger and Nike are important, but this exception proves the rule (Alexiou, 2022). Despite claims by fashion players that they are making efforts to include everyone, progress is very little. It does apply quite a bit to gender, race, and religion, but less so to body size and rarely to disability. Never has a designer questioned whether their collection can be worn by someone with limited use of their arms or whether their trousers are useful for people with artificial limbs. The venues where the fashion shows are either standing-room-only or have bleachers, so wheelchairs are practically excluded. No catwalk show lighting manager has ever considered the sensitivity of the visually impaired, especially the person with epilepsy, when adjusting the lighting fixtures (Farra, 2021).

2. Terminology

As a term, fashion identifies clothing that expresses current social trends, so all is clothing, but not all is in style. Suppose the fashion world understands how inclusion and diversity work; fashion companies could make customer-centric clothing. Then, customers will feel visible and valued regardless of their special characteristics. Diversity means attracting people with different factors, such as age, skin colour, race, body size, and physical ability. Participation or inclusion means not excluding anyone at any stage of the fashion production process, bringing together a wide range of collaborating people, and ensuring everyone is equally visible (3DLOOK, 2019). The term *adaptive fashion* appeared around 2000 and described clothing that not only caters to people with physical or mental disabilities, who may have difficulty or even severe discomfort in dressing but at the same time is fashionable, stylish and desirable (Alexiou, 2022; Indiano, 2019).

3. Fashion Design for People with Disabilities

For the design of the clothes of people with missing limbs, the special characteristics of their bodies must be taken into account. Functional clothing is needed, which gives greater independence in dressing, self-sufficiency in daily activities and concealment-beautification of physical deformity. There used to be disability-specific clothing, but most were unsightly as they focused solely on immediate functionality. If the findings of ergonomics, knowledge of fabric characteristics and garment manufacturing technology are combined, clothing can be made that hides disability, is functional and supports physical activity. In addition, they must be elegant and tasteful to overcome the "uncomfortable and concealing clothing" status and reach "convenient, beautiful and functional". The main reason for the difficulty of people with disabilities to participate in social activities is that there are no clothes on the market with the above characteristics. The physical differences of people with disabilities lead to a differentiation of their psychology from the non-disabled. To restore normal psychology and social identification with the non-disabled, they use prosthetic limbs and clothes are required to hide them to form an ordinary appearance accepted by society (Chang et al., 2009). However, such specialised garments for people with disabilities are hard to find, mainly deal with functionality, and lack the function of body adornment. This issue can deeply undermine self-esteem, hinder social life and ultimately reduce the quality of life. Even people with different disabilities need different clothes. In this case, designers should use fabrics from other fibres, such as windproof, waterproof, antibacterial, retention or elimination of body heat and, above all, resistance to use. Nevertheless, such special materials always cost more than the usual ones. Their too-extensive use increases costs that could become prohibitive for people with disabilities. Research is needed to develop speciality fabrics at affordable prices. The design of the clothes must cover the asymmetries that are usually present in the body with disabilities so that it appears symmetrical and stable. The position of the openings is important for their functionality. These should be in places that allow for comfortable use of disability aids, such as artificial limbs and walkers, and for clothing to be put on and removed easily. Hence, they are comfortable to use and last longer. They must also open and close easily to regulate body temperature (Chang et al., 2009).

Technically, clothing closures are the most immediate and reported issue, as buttons and fewer zips make it difficult for people with hand dysfunction and need ergonomic closures, such as magnetics, that retain the garment's shape. There still needs to be an ability to adapt to different body types, and this is helped by various belts and hidden hems that allow for quick changes. Finally, for each person with disabilities, the best solution must be found in how the clothes will be put on and removed, such as passed over the head or closed in front or back or on the side (Ahmed, 2017). In 2022, the barriers to

the inclusion of people with disabilities in the fashion industry are still too many, starting from the simplest, the lack of easy access in retail stores, let alone fashion shows or dressing rooms, to the absence of adaptive clothing design classes in fashion schools and the absence of unusual body types on the runways. An unsolved issue is the significant lack of options in clothing for people with disabilities. Since the construction of individual identity through individual style is as important for people with disabilities as for the non-disabled, the reduced range of clothing severely limits this possibility (Alexiou, 2022). Adaptive clothing is not only intended for people with disabilities but also for older people with similar problems (Ahmed, 2017).

3.1 Fashion Industry's Accessibility Issues for People with Disabilities

Fashion companies are not as progressive as they claim to be regarding the performative inclusion of the body with disabilities. Fashion is exclusively for fit bodies. At New York Fashion Week Fall 2022, there was a sense of increased accessibility as Collina Strada, Studio189, Foo and Foo, Guvanch, and Hester Sunshine took to the runway with models in wheelchairs. Such significant steps of representation in a fashion industry known for excluding people with disabilities should be noted. However, at the same time, they emphasise that the fashion industry has always been oriented towards able-bodied bodies. Considering that 1 in 4 Americans are people with disabilities, there seems to be a huge underrepresentation. Even now, spectator areas are usually inaccessible to people with disabilities. Some physical requirements exist to enter the demonstration area, such as walking through the crowd, climbing stairs or passing through narrow corridors (Michie, 2022). The space around the catwalk is sometimes formed into bleachers, and the spectators are squeezed standing up. With the resources available today, lack of access is unacceptable for the integral vast segment of humanity, people with disabilities. The term catwalk alone suggests that models must be physically fit individuals. Of course, fashion companies should include performance aspects of disability in their shows, but this should be commonplace, which is not the case now. The lack of representation perpetuates the stereotype that the clothes on display are only for the non-disabled. These may discourage designers from using models with special needs. Such a lack of accessibility in high fashion spaces raises the question of who owns fashion: the companies and designers or the public? However, fashion and disability are coming together more and more. The non-profit organisation's website, Open Style Lab, has collections of adaptive fashion with user-friendly closures, lines for all sizes, and clothes for people with disabilities with prosthetic limbs. The refined, classy approach is reminiscent of fashion's mission to appeal to all and that clothes should fit the wearer, not vice versa (Michie, 2022).

3.2 Experiences in the Field of Fashion by People with Disabilities

Fashion reporter Madison Lawson (2021), born with muscular dystrophy leading to progressive muscle wasting, has described her harrowing experiences. Although she serves the fashion industry, she often feels excluded when it comes to representation, and going to the New York Fashion Week shows in 2017, she experienced plenty of barriers to accessibility. In any case, the people checking the entrance did not know how she would enter the building in her wheelchair. Usually, her assistant had to carry her on his back and drag the wheelchair behind him up the stairs, which made her feel humiliated and wonder why these things happened in a place that verbally promised inclusion. He attributes the exclusion from the field of fashion to the misconception that people with disabilities cannot have a full life, as others do not consider them equal members of the community in schools, temples, or meeting places. People with disabilities do not become actors; few have become models recently. In fairy tales, there is no princess with disabilities. Children are shaped by their environment into an image of beauty by accepted social standards. However, if this image of desired beauty never resembles the self-image, it devastates their self-esteem and creates body aversion. Even people with disabilities are often praised for their bravery. However, Lawson sees this as a disturbing compliment, as people with disabilities do not feel brave but people trying to get what they want, like everyone else. This experience makes her question whether she benefits from seeing models with disabilities when the particular brand organising the show does not meet her clothing needs and desires and why they hire models with disabilities in fashion shows without comfortable access to the runway or backstage (Lawson, 2021).

4. The Impact of Westernized Beauty Standards on People with Disabilities

Westernised Beauty Standards (WBS) are guidelines that affect almost everyone's lives. The ideal of beauty is the white, blond body with a small nose, substantial breasts and long legs, but this is opposed to the great diversity of human bodies. The body with disabilities, in particular, is unattractive and characterised as an inversion of perfection, leading to social stigmatisation of people with disabilities. The offensive designation «disabled» becomes a political, ontological and epistemological designation because it identifies the person as powerless and incapable, so reading his identity results from external appearance, not character. After 1970, the term «ability» was introduced, with a negative connotation (analogous to «racism» and «sexism») and meant the irrational and unfair admission that people with disabilities are inferior people. Competence manifests itself socially, in addition to highly visible discrimination, and as cultural appropriation. For example, Kylie Jenner was accused of complacency because she was photographed on the

cover of *Interview Magazine*, sitting in a gold wheelchair, dressed in black vinyl and sadomasochistic accessories. Similarly, Lady Gaga received the same accusation when she used a wheelchair in the video clip *Paparazzi* (2009), fetishising disability. People with disabilities are empowered when they resist such practices and reductive stereotypes and demand modern, stylish clothing and environments (Ellington & Lim, 2017).

5. Lack of Fashion Creations for People with Disabilities and the Causes of this Lack

There is a severe shortage of adaptive clothing for people with disabilities. According to research by Cara Indiano (2019), there are about 20 such clothing companies, but only two of them are fashion brands, Tommy Hilfiger and Target. The adaptive clothing collections of both are just a complement to their other collections. There are such companies in Canada and Great Britain, while in the USA, there were none in 2019. The lack of access to adaptive fashion for people with disabilities is attributed to the following reasons: 1) invisibility of people with disabilities due to a historical and current absence of government care. 2) Lack of academic research on adaptive fashion, and due to the abolition of Home Economics programs (departments), the fashion industry is unwilling to undertake it. Home economics in the early 2nd century, emphasising the development of individual and domestic practices such as sewing, became the natural site for developing clothing for people with disabilities. However, this should have been given more importance. After 1960, there were proposals for clothing for people with disabilities, such as the book by well-known fashion designer Helen Cookman: *Functional Fashions for the Physically Handicapped* (Cookman & Zimmerman, 1961). Notable home economist Adeline M. Hoffman presented the book *Clothing for the Handicapped, the Aged, and Other People with Special Needs* (Hoffman, 1979). Handicap clothing topics are found in old, saved home economics magazines. 3) There is a serious lack of will from the fashion industry to produce adaptive fashion because they do not want to research the issue since people with disabilities are "invisible" in society. The fashion industry merely reflects the cultural ideologies of its time and does not direct them. People (and people with disabilities, too) do not dress or undress in public. Unless someone deals with dressing a person with disabilities, they do not know that there is a problem, much less that it needs a solution. Still, fashion defines itself as art, while the relief of people with disabilities is considered medicine or science, fields that fashion carefully avoids because it believes them to damage its image (Indiano, 2019).

The absence of academic research into the methodology of manufacturing clothing for people with disabilities means that it has to be undertaken by

companies, which, if done individually, would be time-consuming and expensive. Existing fashion design methodologies and tools strongly emphasise aesthetics and do not lend themselves to such garments. Virtual design software, even the new programs Optitex and CLO3D, can only achieve the most of making the avatars sit. None can render the unique movement of people with disabilities, nor how they dress. This is another aspect of the invisibility of people with disabilities (Indiano, 2019).

6. Promoting Inclusion in Fashion for People with Disabilities

At the 2018 BOF Voices gathering, fashion industry power players, designers, industry investors and retail chain owners participated and discussed ways to include people with disabilities in fashion. The conclusions reached are: 1) Only when companies become aware of their various disabilities and problems will substantial change occur. Working with people with disabilities at the design stage, who will express the construction errors that create difficulties for them, will give a big boost. By bringing them to fashion design schools, future designers will get to know their problems and needs firsthand. Sinead Burke, a Dublin teacher and fashion blogger, who is short at 3ft 5in or 105cm, also attended the gathering. She loves fashion because it helps her express herself, but her clothing options are limited. In addition to countless physical obstacles to shopping for clothes, she has to buy children's clothes and work with sewists to fit them to her body since children's bodies do not have curves in the hips and bust, which means additional expenses. Burke called out the fashion industry for its disregard for people with disabilities. She said: "My money and existence are as valid as yours…… You are off to a very wrong start. You think you know what disabled people need or want, just making assumptions instead of asking them. Bring us to the table and ask for our valid opinions because we live this experience daily". The opinions of the consumers who will buy and wear these clothes must be heard (Ahmed, 2017; O'Connor, 2019). 2) It is not enough to display the disability in a company's marketing; it must serve the consumer with disabilities and include him in every possible way. 3) Special training of retail sales staff is needed. People with disabilities have great difficulties in most physical stores, and 75% are forced to leave them. Retail clerks are the only physical "brand" contact with shoppers with disabilities, and if they are ignorant of the shopper's needs, the shopping experience is ruined. However, more importantly, shoppers' relationship with the brand is broken. The result is £420 million lost to UK businesses every week. 4) For most brands, developing and creating lines of adaptive clothing is an unaffordable expense, but some big and powerful ones can cope, and cooperation is needed, not competition (O'Connor, 2019).

7. The Fight for Inclusion and Participation in a Fashion Education that Prevents it

Diversity and inclusion efforts by the fashion industry will only bring systemic change if fashion education changes. Design schools are where new practices and worldviews are born, and the thinking of young designers who will ultimately shape the industry is developed. However, the curricula reinforce an entrenched, narrow set of worldviews that champion white supremacy, able-bodied, and lipophobic bodies, and that affects the future designers who will be making policy decisions tomorrow. Oversized, very small, and bodies with disabilities are absent from the design, but students are not taught why certain body categories are preferred. Design classes teach the "9 heads" method, assuming the body is nine times the height of the head, although the average height is five (5) heads. This results in unrealistically thin, elongated bodies and clothes being designed on them. Students work to standardise ideal sizes, so they never design for different body types, let alone bodies with disabilities. However, the teachers were also trained to the same standard and cannot accept that they do not know a different design. Nevertheless, in some fashion schools, a change has begun. At Parsons, Grace Jun calls in people with disabilities to advise students. At Columbia College, Chicago, Lauren Downing Peters received a grant from the Council of Fashion Designers of the USA to train faculty to include plus-size design in their courses (Barry, 2020). Ben Barry, Associate Professor of Equity, Diversity, and Inclusion at the Ryerson School of Fashion in Toronto, Canada, wants to change fashion education and the global fashion industry. He believes that new design rules will be formed by showing students the marginalisation and exclusion many people experience in fashion. Of course, teachers need to be retrained as well. Designer Izzy Camilleri, the owner of IZ Adaptive, believes that creating adaptive clothing is not a simple design but requires knowledge of the problems of people with disabilities, which will be gained by entering the fashion schools of the excluded groups, who will join the education of fashion design (Scriver, 2020).

8. Disability in Fashion Press, Publications, Online Fashion Campaigns and Consumers' Feedback

Fashion does not accidentally disregard disability presents and reinforces cultural ideals of body shape and qualities that should be valued and emulated. In a content analysis of fashion publications, online fashion advertising campaigns and online consumer reviews between 2014 and 2019, Jordan Foster and David Pettinicchio (2022) explored how disability is presented and how images reinforce or combat negative stereotypes. They concluded that spatial logic underplays models with disabilities and

embellishes their image, and disability is often presented in visibly softened, naïve images. Consumers, with their comments, respond favourably to the effort, but feedback through comments shows that they question the practices of the space, urging for greater representation of people with disabilities. In September 2018, *Teen Vogue*'s cover (a purely online edition) featured three models with disabilities. In 2021, Nike, Tommy Hilfiger and Aerie also featured models with disabilities in their ads, and consumers responded positively with real-time praise (Foster & Pettinicchio, 2022).

Any innovation for inclusion and differentiation comes from a conscious effort by some industry powerhouses for a kind of "cultural entrepreneurship" that defies the risk-reward relationship. The portrayal of disability in editorials and advertisements are naive, one-dimensional, sanitised, softened images that reinforce societal beliefs about disability (Pettinicchio, 2019). In all, the reality is distorted with a naive sanitisation of the model with disabilities by editing its features to project a conventional image closer to the dominant fashion standards to make consumers comfortable. In editorials, disability is used to embellish the image of the non-disabled, projecting their philanthropic disposition and inspiring pity in readers. While the professional achievements of the people featured and the advocacy of people with disabilities are highlighted, people with disabilities are left completely in the background, fading away without any pictures of them. Even when people with disabilities are central figures in the editorials, they are not the subjects of research and are not depicted as elegant presences dressed in designer clothes (Foster & Pettinicchio, 2022).

Some positive cases of using models with disabilities in fashion advertising include a) American retailer Aerie, who paired models with disabilities in wheelchairs or walkers with non-disabled models. The images were shown by TV stations and online and received much praise. Paralympic champion Chelsea Werner starred. The promotion brought a big increase in sales for Aerie (38% in 2018). This business success shows that the benefits of including diverse bodies outweigh the risks. Consumer comments, however, show the entrenched position that disability must be overcome and not accepted. b) the sportswear company Nike and c) the fashion house Tommy Hilfiger, who introduced a full range of adaptive clothing alongside their other fashion clothing lines (Foster & Pettinicchio, 2022).

In online research by Robyn Brown, Michelle Maroto & David Pettinicchio (2021), 50 editorials of the online *Teen Vogue* were examined between 2018 and 2020 to determine how disability is marketed to consumers within the cultural logic and fashion conventions that shape the content of such publications. Their findings show that on online fashion sites, there is more diversity and inclusion as disability is presented in new, less limiting ways. Three different models were detected: 1) The editorials that deal with the representation of disability in films, fashion, and television

examine the obstacles to including people with disabilities and the issues of appropriating disability. 2) Editorials addressing disability rights, American policy and law and 3) Editorials profiling individuals with disabilities. In general, the editorials, besides their large number, about any other medium, were more global; people with disabilities wrote 20%, and 50% included a disability-related photo. In comparison, in the previously mentioned five-year survey, only 29 disability editorials and 5 featured a photograph of a person with disabilities. They were silent on how visible and non-disabled disabilities affect the lives of those who live with them (Foster, 2021).

9. Conclusions

Disabilities require special functionality in clothing. Disabled people have the same right to pursue individuality through fashion as any non-disabled person. They also seek inclusion, acceptance and social identity like every-one else, so their need is stronger for aesthetic, stylish clothing. In general, clothing for people with disabilities in terms of structure and style must meet the following conditions: 1) Be worn comfortably and, if possible, without assistance. 2) Be adapted to the specific characteristics of their body. 3) To provide a sense of physical and psychological comfort. Of course, physical comfort is a primary goal, but also important is the psychological warmth they feel seeing their preferred style and individual needs met on the shelves, in online stores and displayed on fashion websites. 4) Be available at reasonable prices due to the possible reduced purchasing power of each person with disabilities, and be easy to wash and maintain.

The timid start of disability inclusion by the fashion industry is important, but there is still a long way to go. There are some people with disabilities in front of the cameras. However, they are also needed behind them, as in positions of power in fashion magazines, organising fashion weeks and elsewhere where they have historically been invisible. The purpose of fashion schools is not to serve the fashion industry but to guide it by producing industry leaders. The new generation of designers needs to be taught why fashion favours certain body types, ignoring entire groups and working with them to include them. Images of people with disabilities are rare in fashion media, except for *Teen Vogue* editorials. The gross underrepresentation and neglect of people with disabilities perpetuate and reproduce inequality and stigmatise them. To deconstruct the idea of fashion-disability incompatibility, there needs to be more adaptive clothing for people with disabilities. Committing to more inclusion and diversity is a difficult goal. Nevertheless, in the long run, it will bring positive social change and multiple benefits: to the fashion companies who will gain, and to consumers who will see positive representation and increased clothing choice.

Zoi Arvanitidou, https://orcid.org/0009-0002-1402-6992

Compliance with ethical standards
This article does not contain any studies with human participants or animals performed by the author.

Data availability statement
All data generated or analyzed are included in the published article.

Funding information
None.

Author contributions
The author confirms being the sole contributor of this work and approved it for publication. The author takes full responsibility for the accuracy and the integrity of the data analysis.

Conflict of interest statement
The author declares that the research was conducted in the absence of any commercial or financial relationships that could be construed as a potential conflict of interest.

Transparency statement
The author affirms that the manuscript represents an honest, accurate, and transparent account of the research being reported, that no relevant aspects of the study have been left out, and that any inconsistencies from the research as planned (and, if significant, registered) have been clarified.

Disclosure by the editors of record
The editors declare no conflict of interest in the review and publication decision regarding this article.

REFERENCES

3DLOOK. (2019). "What Can Fashion Businesses Do to Be More Inclusive and Diverse?" Retrieved from 3DLOOK: https://3dlook.ai/content-hub/inclusivity-in-fashion/

Ahmed, O. (2017, November 30). "It's Time for Adaptive Fashion." Retrieved from *The Business of Fashion*, https://www.businessoffashion.com/videos/news-analysis/its-time-for-adaptive-fashion/

Alexiou, G. (2022, November 18). "Why Top Brands Should Rethink Adaptive Fashion and Take It Seriously." Retrieved from *Forbes*, https://www.forbes.com/sites/gusalexiou/2022/11/18/why-top-brands-should-rethink-adaptive-fashion-and-take-it-seriously/

Barry, B. (2020, January 6). "How Fashion Education Prevents Inclusivity." Retrieved from *Business of Fashion*, https://www.businessoffashion.com/opinions/workplace-talent/op-ed-how-fashion-education-prevents-inclusivity/

Bullock, S. (2022, November 1). "Building an Inclusive Fashion Movement for People with Disabilities." Retrieved from *Fashion Revolution*, https://www.fashionrevolution.org/building-an-inclusive-fashion-movement-for-people-with-disabilities/

Chang, W.-M., Zhao, Y.-X., Guo, R.-P., Wang, Q., & Gu, X.-D. (2009). "Design and Study of Clothing Structure for People with Limb Disabilities," *Journal of Fiber Bioengineering and Informatics* 2(1): 62–67.

Cookman, H., & Zimmerman, M. (1961). *Functional Fashions for the Physically Handicapped.* New York: Institute of Physical Medicine & Rehabilitation, New York University Medical Center.

Ellington, T., & Lim, S. (2017). "Rendered Powerless: Disability versus Westernized Beauty Standards," *QED: A Journal in GLBTQ Worldmaking* 4(3): 170–176.

Farra, E. (2021, August 27). "This Is What's Missing in Fashion's Inclusivity Movement." Retrieved from *Vogue*, https://www.vogue.com/article/whats-missing-in-inclusivity-movement-adaptive-fashion-disabled-community

Foster, J. (2021). "Framing Disability in Fashion," in *The Oxford Handbook of the Sociology of Disability*, edited by Brown, R. L., Maroto, M., & Pettinicchio, D. New York: Oxford University Press, 213–229.

Foster, J., & Pettinicchio, D. (2022). "A Model who Looks Like Me: Communicating and Consuming Representations of Disability," *Journal of Consumer Culture* 22(3): 579–597.

Haines, A. (2021, June 24). "The Fight for Adaptive Fashion: How People with Disabilities Struggle to Be Seen." Retrieved from *Forbes*, https://www.forbes.com/sites/annahaines/2021/06/24/the-fight-for-adaptive-fashion-how-people-with-disabilities-struggle-to-be-seen/

Hoffman, A. (1979). *Clothing for the Handicapped, the Aged, and Other People With Special Needs.* Springfield: Charles C Thomas Pub Ltd.

Indiano, C. (2019). *Adaptive Fashion: A New Design Methodology for People with Disabilities.* Cincinnati: University of Cincinnati.

Lawson, M. (2021, March 10). "Why Disability Representation Is Crucial to Building a Better, More Inclusive Fashion Industry." Retrieved from *Vogue*, https://www.vogue.com/article/why-disability-representation-is-crucial-to-building-a-better-more-inclusive-fashion-industry

Matano, A. (2021, April 28). "Inclusive Fashion Is More than Just Size." Retrieved from *The Ticker*, https://theticker.org/3684/opinions/inclusive-fashion-includes-more-than-just-size-inclusivity/

Michie, N. (2022, September 16). "Fashion Week Still Has an Ableism Problem." Retrieved from *Fashion*, https://fashionmagazine.com/flare/identity-politics/fashion-week-2022-ableism/

O'Connor, T. (2019, March 16). "How Can Fashion Better Address the Needs of Disabled People?" Retrieved from *Business of Fashion*, https://www.businessoffashion.com/articles/news-analysis/how-can-fashion-better-address-the-needs-of-disabled-people/

Pettinicchio, D. (2019). *Politics of Empowerment: Disability Rights and the Cycle of American Policy Reform.* Stanford, CA: Stanford University Press.

Scriver, A. (2020, September 16). "Why the Fight for Inclusivity in Fashion Education Is More Important than Ever." Retrieved from *This*, https://this.org/2020/09/16/why-the-fight-for-inclusivity-in-fashion-education-is-more-important-than-ever/

Journal of Research in Gender Studies 15(2), 2025
pp. 53–64, ISSN 2164-0262, eISSN 2378-3524

3D Augmented Reality Try-on and Context-aware Emotion Recognition Technologies, Big Data-driven Facial Retouching and Artificial Intelligence-based Beauty Tools, and Deep Learning Sensor Fusion and Visual Perception Algorithms for Social Media-related Body Dissatisfaction, Self-Presentation Perceptions and Behaviors, and Unrealistic Physical Appearance

Elvira Nica[1], Asser Khamis[2], Silviea Crețu[3], Nurul Lizzan Kamarudin[4], Muzaffer Aydemir[5], Emilia Pascu[6], Cătălina-Oana Dumitrescu[1]

ABSTRACT. This article advances existing literature concerning 3D augmented reality try-on and context-aware emotion recognition technologies, big data-driven facial retouching and artificial intelligence-based beauty tools, and deep learning sensor fusion and visual perception algorithms for social media-related body dissatisfaction, self-presentation perceptions and behaviors, and unrealistic physical appearance. The screening software tools and evidence synthesis technologies deployed include Abstrackr, CADIMA, DistillerSR, Eppi-Reviewer, JBI SUMARI, Litstream, METAGEAR package for R, Nested Knowledge, PICO Portal, Rayyan, and SRDR+. The case studies cover AirBrush, B612, BeautyPlus, Evoto, Facetune, Filmora, Fotogenic, GlamAR, Meitu, Perfect365, Vivid Glam, and YouCam.

Keywords: 3D augmented reality try-on; big data-driven facial retouching; beauty; visual perception; self-presentation; unrealistic physical appearance

How to cite: Nica, E., Khamis, A., Crețu, S., Kamarudin, N. L., Aydemir, M., Pascu, E., and Dumitrescu, C.-O. (2025). "3D Augmented Reality Try-on and Context-aware Emotion Recognition Technologies, Big Data-driven Facial Retouching and Artificial Intelligence-based Beauty Tools, and Deep Learning Sensor Fusion and Visual Perception Algorithms for Social Media-related Body Dissatisfaction, Self-Presentation Perceptions and Behaviors, and Unrealistic Physical Appearance," *Journal of Research in Gender Studies* 15(2): 53–64. doi: 10.22381/JRGS15220254.

Received 12 July 2025 • Received in revised form 21 December 2025
Accepted 26 December 2025 • Available online 30 December 2025

[1]Bucharest University of Economic Studies, Bucharest, Romania, elvira.nica@ase.ro, (corresponding author); catalina.dumitrescu@amp.ase.ro.
[2]The Egyptian Academy, Tanta, Egypt, info@thic.edu.eg.
[3]Gheorghe Asachi Technical University of Iași, Romania, silviea.cretu@gmail.com.
[4]Universiti Teknologi MARA, Sarawak, Kota Samarahan, Malaysia, nurullizzan@uitm.edu.my.
[5]The Altınbaş University School of Applied Sciences, Istanbul, Turkey, muzaffer.aydemir@altinbas.edu.tr.
[6]"Dimitrie Cantemir" Christian University, Bucharest, Romania, pascuemilia@gmail.com.

1. Introduction

Artificial intelligence face filters and beauty tools can slim jaws, smooth skin, inflate lips, and whiten teeth. Beauty filters and machine learning algorithms define and sculpt facial features, blur out imperfections, and remove blemishes for skin tone optimization and a polished flawless complexion. Beauty filters and facial recognition technologies can transform appearance for a digital hyper-realistic stunning self-expression and self-esteem by smoothing skin, darkening or adjusting pupils, elongating legs and tightening waists, and refining facial features. Augmented reality beauty face filters and virtual try-on tools can be leveraged for skin smoothing, wrinkle reduction, blemish removal, teeth whitening, and facial feature reshaping.

Beauty and makeup filters can affect body image perception by photo-realistic transformations. Multi-dimensional face beautification tools and artificial intelligence beauty and makeup filter apps can smooth out skin imperfections and shape face and body. Artificial intelligence-based facial feature and skin condition analysis is pivotal in skin smoothing and tone changing. Augmented reality beauty apps and filters can be deployed for hair color changing, acne removal, skin smoothing, eye brightening, facial feature, and makeup enhancement. Virtual try-on and beauty filter apps can be leveraged in facial feature reshaping, real-time skin smoothing, and virtual hair coloring.

2. Screening Software Tools and Evidence Synthesis Technologies

The screening software tools and evidence synthesis technologies deployed were Abstrackr (for collaborative citation screening semi-automation), AMSTAR (for reproducible evidence assessment), ASReview Lab (for screening and ranking-based publication inclusion/exclusion), CADIMA (for primary research identification and collection), CASP (for qualitative evidence identification), Catchii (for duplicate record detection and removal), Citationchaser (for relevant bibliographic record assessment), R package and Shiny app citationchaser (for complex search string-based bibliographic database searching), DistillerSR (for artificial intelligence workflow-based data screening), Eppi-Reviewer (for machine learning-based data clustering), JBI SUMARI (for bias identification associated with published result evaluation), Litstream (for keyword-based streamlined literature characterization), METAGEAR package for R (for study data location and extraction), MMAT (for question criteria and screening), Nested Knowledge (for data screening and extraction), PICO Portal (for collaborative knowledge quality assessment), Rayyan (for title, abstract, and full-text screening and selection), ROBIS (for study eligibility criteria inspection), SluRp (for data extraction and processing), SRDR+ (for research question data extraction), SWIFT-

Active Screener (for document classification and prioritization), and Systematic Review Accelerator (for common word and phrase identification).

3. Literature Review

3D augmented reality try-on technologies, neuromorphic vision sensor and synthetic geospatial data, cognitive and affective algorithms, and big data-driven facial retouching tools (Afzal et al., 2025; Csorba et al., 2025; Hu et al., 2025; Oláh et al., 2023) configure social media-related body dissatisfaction, visual and haptic imagery, self-presentation perceptions and behaviors, and unrealistic physical appearance. Augmented reality beautification and face retouching filters, artificial neural network-based neuromorphic computing systems, virtual clothing try-on simulations, and semantic ontology technologies (Aquino et al., 2025; Dabija et al., 2024; Levin et al., 2025; Rowland, 2022) articulate digitally manipulated visual narratives, photo editing behavior, 3D spatial data analytics and infrastructures, and marginalized body representations. 3D virtual try-on technologies, augmented reality body scans, artificial intelligence-powered mood detectors, and deep learning-based gesture recognition systems (Barker, 2020; Harriger et al., 2026; Mavritsakis et al., 2022; Morley, 2022) assist spatial imagery and harmful self-objectification processes for idealized beauty representations and images, facial appearance dissatisfaction, body shape perceptions, and expressive gestures and movements.

Deep fusion convolutional neural networks, visual sentiment and activity-tracking algorithms, face retouching filters, and synthetic motion and perception data (Bensussan, 2025; Kwon et al., 2026; Pârvu et al., 2025) enable 3D human skeleton motion prediction and recognition, lifestyle behavior and body shape modeling, image scene classification and processing, and media body ideal internalization. Augmented reality technology-powered virtual try-ons, beauty apps and filters, realistic makeup simulation tools, and visual perception and emotion analytics algorithms (Bratu, 2024; Maes et al., 2025; Ramirez et al., 2025) further 3D human body and visual object appearance modeling, clothing texture simulation, 3D facial expression and motion tracking, and digital twin-based detailed body size representation for visual and haptic imagery, perceived facial attractiveness, beauty standard realistic depiction, and body image worry recognition. Immersive makeup and augmented reality-based virtual try-on experiences can be attained by use of neuromorphic and bio-inspired computing systems, cognitive and affective algorithms, and context-aware emotion recognition and reality capture technologies (Ciurlău et al., 2025; Kandathil et al., 2020; Spada, 2025) for artificial intelligence-generated hyper-realistic body-inclusive avatars.

Immersive makeup and hyper-personalized beauty experiences (Coffey et al., 2025; Mihăilă, 2023; Popescu, 2022; Xu and Deng, 2025) can be achieved through hyper-realistic augmented reality-powered makeup filters, 3D cloth modeling and simulation, artificial intelligence-powered mood detectors, space mapping and visual sentiment algorithms, expression recognition and artificial tactile sensory systems, and deep learning-based virtual try-on and neuromorphic synthetic intelligence technologies. Augmented reality beauty apps and filters, deep learning-based facial expression recognition systems, beauty artificial intelligence and 3D body sensory technologies, and virtual reality-based visual perception and 3D object recognition tools (Cug et al., 2023; Herring et al., 2025; Öztunç et al., 2025) shape body image dissatisfaction, visual and haptic object recognition, perceived facial attractiveness, and beauty standard virtual activation. Augmented reality beautification filters, wearable artificial intelligence devices, neuromorphic vision sensor data, and structure-preserving 3D virtual garment modeling (Digennaro and Iannaccone, 2025; Mirabet-Herranz et al., 2025; Töre et al., 2026) optimize marginalized body representations, visually appealing self-presentations, negative emotional states, and virtual bodily self-consciousness.

4. Case Studies

YouCam Video harnesses face retouching and reshaping tools for overall face and jawline slimming, producing natural looking results while clearing away blemishes. Vivid Glam's beauty apps and facial retouching tools reshape face and sculpt body for longer and slender legs, skin smoothening and tone adjustment, lip pouting, blemish and dark circle concealment, eye brightening, hair color changing, cheekbone sharpening, and teeth whitening, while preserving natural features and self-expressive authenticity for a flattering visual impression. Perfect365's beauty filter apps assist in virtually trying out various makeup looks, adjust skin tone and eye color, and refine contours, enhancing appearance by skin smoothing and face slimming, touching up facial features, and optimizing lipstick, eyeliner, and blush features for stunning visuals.

Vivid Glam's facial editing and body reshaping tools can slim face, adjust nose size, eliminate redness, adjust color hue and saturation, even out skin tone and texture, and lengthen lower body. Meitu's beauty filter and virtual makeup apps can enhance lipstick, eyeliner, and blush features, edit hair, modify nose and lips, and remove wrinkles, while leveraging skin smoothing technologies for a flawless complexion. Evoto AI Photo Editor's makeup filter tools, deep learning algorithms, and facial mapping technologies configure natural skin texture, tackle hair color grading, adjust blush opacity, and clear up blemishes. BeautyPlus' artificial intelligence photo and image editor app integrates virtual makeup try-ons and hairstyle

makeovers for face and body slimming, teeth whitening, and skin bronzing and reshaping.

B612's beauty and virtual makeup filters can change lip and eye color, add a blush to and contour the face, and enhance lipstick, eyeliner, and blush features for a polished and refined look. Evoto AI Photo Editor refines skin tone flawlessly and optimizes facial structures and expressions naturally by eyelash, eyebrow, blush, contour, face freckle, and lipstick filters. Vivid Glam's face reshape, retouch, and body editing tools can erase blemishes and acne, smoothing skin for a flawless authentic look, and thus elevating mood. AirBrush's beauty filter apps and photo editing tools can apply virtual makeup, erase dark circles, and smooth skin. Meitu's beauty filters add virtual makeup and removes blemishes, dark spots, and pores, while smoothening skin. YouCam Perfect AI Makeup Photo Editor's beauty filters ensure flawless body images and preserve natural skin texture.

Facetune's 3D facial and virtual makeup features integrate face slimmer and blemish remover effects, BeautyPlus smooths skin, brightens eyes, and apply virtual makeup, and Facetune's glow and brightening tools reshape and smooth face. AirBrush AI Photo Editor's beauty filter tools simulate realistic makeup, enhancing facial features for digital beauty. B612 AI Photo and Video Editor's beauty filter apps and facial reshaping tools integrate virtual makeup effects, in addition to skin tone optimization, eye enlargement, and nose narrowing for a perfect personalized look.

Fotogenic's face and body tune retouch app can fix imperfections, optimizing facial features and skin textures for realistic beauty standards. Vivid Glam's face and body reshaping tools integrate skin-smoothening features, removing blemishes. Filmora's artificial intelligence and augmented reality tools can reshape face and resize eyes and lips, restoring confidence. GlamAR's virtual makeup try-ons can be harnessed for stunning skin tone and texture enhancement. YouCam Perfect's 3D virtual makeup apps and filters can shape artificial intelligence hairstyle, contour pattern, skin texture, and lip color changing. Facetune's photo editing tools and makeup filters can be harnessed in skin smoothing, jawline and nose sharpening and cheekbone lifting, and teeth whitening.

5. Results

Artificial intelligence and augmented reality technologies can reconfigure facial and body features, adding makeup, changing face shape, whitening teeth, blurring pores, and smoothing skin. Beauty filter apps and artificial intelligence photo editing tools can whiten teeth and smooth skin, change hair color, and reshape face and body. Unattainable beauty standards and negative self-esteem issues due to virtual try-on and makeup filter apps (Elias and Gill, 2017; Michalkova et al., 2023; Popescu et al., 2025) can

affect body image, altering self-perception and lowering confidence. Artificial intelligence beauty tools can sculpt jawline and smooth skin. Artificial intelligence-powered hair try-on and beauty filter apps, virtual makeup filter apps and facial recognition technologies, and hair color change and customizable beauty retouching tools (Frieiro et al., 2022; Miller, 2025; Vochozka et al., 2022) can be deployed for eye enhancement, skin smoothing, nose slimming, and blemish removal. Realistic augmented reality beauty filters, realistic facial feature and makeup visualization tools, and makeup try-ons can be harnessed for face and body reshaping, skin smoothness and brightness, hair color change, and eye enlargement.

Virtual try-on and beauty filter apps can remove wrinkles and acne, reshape eyes and eyebrows, slim waist, legs, and arms, and ajust skin tone. Facial contouring and color adjustment tools define facial features for skin smoothing, removing imperfections. Augmented reality makeup filter and virtual try-on apps set unrealistic beauty standards while correcting smooth skin imperfections, leading to negative social comparisons, mismatched expectations, and personal dissatisfaction, affecting self-image. Artificial intelligence and augmented reality makeup filter apps and virtual try-on tools (Gu et al., 2025; Luo and Zhang, 2024; Watson, 2022) identify facial features and skin tone for a harmonious stunning look, boosting self-confidence and maintaining a natural appearance. Photo and video editing tools can enable virtual makeup try-on experiences by skin smoothing for a flawless complexion, while possibly resulting in lower self-worth and mental health issues. Unrealistic beauty standards may lead to body image issues.

6. Discussion

Facial expression recognition and virtual reality-based visual perception technologies, 3D human skeleton motion capture and generation, augmented reality body scans, and human digital twin body and behavior modeling enhance facial appearance dissatisfaction, negative mood and self-esteem, face-specific visual self-representation, and physically-inspired clothing appearance for photorealistic animatable clothed avatars. This study aligns with Afzal et al. (2025), Bensussan (2025), Digennaro and Iannaccone (2025), Gu et al. (2025), Harriger et al. (2026), Kandathil et al. (2020), Maes et al. (2025), Öztunç et al. (2025), Pârvu et al. (2025), and Vochozka et al. (2022).

Photorealistic clothing texture and context-aware virtual garment modeling, biometric emotional artificial intelligence and tactile sensory neuromorphic computing technologies, deep learning sensor fusion and emotion analytics algorithms, and and bioinspired artificial perceptual devices can be harnessed for photorealistic texture and clothing appearance generation, neural 3D clothed-human body reconstruction, 3D human skeleton motion segmentation and representation, and beauty filter-based appealing self-

presentation. This result is consistent with previous studies, such as Coffey et al. (2025), Elias and Gill (2017), Hu et al. (2025), Kwon et al. (2026), Luo and Zhang (2024), Morley (2022), Spada (2025), Töre et al. (2026), and Xu and Deng (2025).

Generative artificial intelligence synthetic and kinematic body pose data, multi-modal emotion recognition and visual sentiment algorithms, 3D body scanning and hyper-realistic augmented reality beauty technologies, and real-time location tracking and neuromorphic tactile recognition systems can be deployed for deep neural network-based photorealistic 3D human reconstruction, digital self-monitoring and self-tracking, photorealistic clothing and body motion animation, and physical condition detection and monitoring. Augmented reality technology-powered virtual try-ons, 3D realistic skin and hair modeling, deep learning-based facial expression recognition and artificial sensory neural network systems, and cognitive mapping and skeleton-based action recognition algorithms can be leveraged for visual and haptic object recognition, immersive augmented reality visualization, scene representation and classification, and photorealistic texture-based clothed body shape estimation. Our findings are also supported by Barker (2020), Cug et al. (2023), Herring et al. (2025), Levin et al. (2025), Mihăilă (2023), Miller (2025), Popescu et al. (2025), Ramirez et al. (2025), and Watson (2022).

3D human skeleton motion analysis and tracking, face-specific visual self-representation, image visual coherence, and physically-simulated 3D contextual detail-aware multi-view clothing capture develop on neurobiological computation and biometric emotional artificial intelligence technologies, augmented reality face filters, artificial intelligence-enabled emotion communication and intelligent 3D garment systems, and 3D motion and multisensory object representation tools. Virtual bodily self-consciousness, social appearance comparisons, negative body image, and beauty ideal gendered representations integrate aesthetic and affective technologies, photo retouching and virtual makeover apps, artificial neural network-based neuromorphic computing and in-sensor motion perception systems, and virtual beauty try-ons. Our findings are consistent with Aquino et al. (2025), Bratu (2024), Ciurlău et al. (2025), Frieiro et al. (2022), Michalkova et al. (2023), Mirabet-Herranz et al. (2025), Oláh et al. (2023), Popescu (2022), and Rowland (2022).

7. Conclusions

Artificial intelligence beauty and makeup technologies, together with augmented reality-based facial and body feature analysis, can be deployed for skin smoothing and tone enhancement, realistic lipstick color, eye bag removal, teeth and eye whitening, undertone and foundation shade adjustment, and subtle blemish elimination and skin retouching, articulating

advanced beauty enhancements for visually appealing images while maintaining personal branding and polished appearance consistency.

Artificial intelligence beauty filters and machine learning algorithms brighten and lighten skin tone, remove wrinkles, reduce dullness and discoloration, sculpt and contour the face, and even out complexion for a defined appearance and balanced facial contour. Beauty filters smooth skin with regard to uneven texture and pores, optimize cheekbones, jawlines, and chin, and plump lips, enhancing facial structure, impacting body image, and affecting self-perception in terms of unrealistic beauty standards.

Elvira Nica, https://orcid.org/0000-0002-7383-2161
Asser Khamis, https://orcid.org/0009-0008-5703-366X
Silviea Crețu, https://orcid.org/0000-0001-9515-7147
Nurul Lizzan Kamarudin, https://orcid.org/0009-0009-1203-1430
Muzaffer Aydemir, https://orcid.org/0000-0001-8167-3159
Emilia Pascu, https://orcid.org/0009-0007-9289-6404
Cătălina-Oana Dumitrescu, https://orcid.org/0000-0003-0499-7568

Compliance with ethical standards
This article does not contain any studies with human participants or animals performed by the authors. Extracting and inspecting publicly accessible files (scholarly sources) as evidence, before the research began no institutional ethics approval was required.

Data availability statement
All data generated or analyzed are included in the published article.

Funding information
None.

Author contributions
All authors listed have made a substantial, direct and intellectual contribution to the work, and approved it for publication. The authors take full responsibility for the accuracy and the integrity of the data analysis.

Conflict of interest statement
The authors declare that the research was conducted in the absence of any commercial or financial relationships that could be construed as a potential conflict of interest.

Transparency statement
The authors affirm that the manuscript represents an honest, accurate, and transparent account of the research being reported, that no relevant aspects of the study have been left out, and that any inconsistencies from the research as planned (and, if significant, registered) have been clarified.

Disclosure by the editors of record
The editors declare no conflict of interest in the review and publication decision regarding this article. This paper is part of a collective research topic, and thus a somewhat standard structure and a list of reliable data visualization and (reporting and methodological) quality assessment tools have been provided.

REFERENCES

Afzal, H., Deshpande, S., and Carlini, J. (2025). "Glowing Beyond Shades: Unveiling the Psychosocial Correlates of Skin Lightening Product Choice – A Systematic Review," *Social Marketing Quarterly* 31(1), 79–100. doi: 10.1177/15245004241309932.

Aquino, Y. S. J., Rohrbach, T., and Shih, P. (2025). "Ethics of Algorithmic Invasiveness in Beauty Apps: An Online Experimental Survey of Public Perspectives," *Information, Communication & Society*. doi: 10.1080/1369118X.2025.2590550.

Barker, J. (2020). "Making-up on Mobile: The Pretty Filters and Ugly Implications of Snapchat," *Fashion, Style & Popular Culture* 7(2/3): 207–221. doi: 10.1386/fspc_00015_1.

Bensussan, H. (2025). "Consumer Information and the Cybernetic Control of Markets: A Model Explored in the Beauty Market," *Journal of Economic Issues* 59(1): 140–165. doi: 10.1080/00213624.2025.2455653.

Bratu, S. (2024). "Digital Clothing Try-on Apps, Augmented Reality Beautification Filters, and Artificial Intelligence-powered Mood Detectors in Body Image Disturbance," *Journal of Research in Gender Studies* 14(1): 86–100. doi: 10.22381/JRGS14120246.

Ciurlău, C. F., Emek, M. L., Dragomir, M., and Drugău Constantin, A.-L. (2025). "Convolutional Neural Network-based Gesture Recognition and Virtual Try-on Clothing Systems, 3D Digital Garment Photorealistic Simulations, and Wearable Artificial Intelligence and Aesthetic Self-Monitoring Devices for Beauty Filter-based Appealing Self-Presentations and Social Appearance Comparisons," *Journal of Research in Gender Studies* 15(1): 57–64. doi: 10.22381/JRGS15120256.

Coffey, J., Dobson, A., Kanai, A., Gill, R., and White, N. (2025). "Cinch, Filter, Erase: Virtual Bodies and the Editable Self," *New Media & Society*. doi: 10.1177/14614448251336430.

Csorba, L. M., Dabija, D.-C., and Pop, N. H. (2025). "Can Well-Being and Socializing through Fitness Foster the Fitness Center Satisfaction and Loyalty? Empirical Research in a Post-Crisis Context," *Studies in Business and Economics* 20(2): 47–69. doi: 10.2478/sbe-2025-0024.

Cug, J., Petreanu, A.-M.-S., AlAkoum, A., Emek, M. L., and Stamule, S. (2023). "Deep Learning-based Multimodal Emotion Recognition Technologies, 3D Motion and Multisensory Object Representation Tools, and Visual Matching and Image Processing Algorithms for Idealized Beauty Standards and Social Media-related Body Dissatisfaction," *Journal of Research in Gender Studies* 13(2): 24–38. doi: 10.22381/JRGS13220232.

Dabija, D.-C., Csorba, L. M., Pop N. H., and Obadă, D.-R. (2024). "The Impact of Extraversion and Introversion on Millennials Propensity to Recommend Their Preferred Fitness Center," *Behavioral Sciences* 14(1): 22. doi: 10.3390/bs14010022.

Digennaro, S., and Iannaccone, A. (2025). "Imagining Another Self: The Use of Social Media among Preadolescents and Its Body-Related Consequences. An Exploratory Study," *Sage Open* 15(1): 21582440251321364. doi: 10.1177/21582440251321364.

Elias, A. S., and Gill, R. (2017). “Beauty Surveillance: The Digital Self-Monitoring Cultures of Neoliberalism,” *European Journal of Cultural Studies* 21(1): 59–77. doi: 10.1177/1367549417705604.

Frieiro, P., González-Rodríguez, R., and Domínguez-Alonso, J. (2022). “Self-Esteem and Socialisation in Social Networks as Determinants in Adolescents’ Eating Disorders,” *Health & Social Care in the Community* 30(6): e4416–e4424. doi: 10.1111/hsc.13843.

Gu, Y., Xu, Y., and Min, Z. (2025). “Escaping the Spectacle? Young Women’s Ambivalence to Gender Aesthetics on Xiaohongshu,” *Feminist Review* 141(1): 15–33. doi: 10.1177/01417789251371530.

Harriger, J. A., Brown, S. A., Chung, H. G., and Trammell, J. P. (2026). “Effects of Filtered vs. Unfiltered TikTok Videos on Mood, Body and Facial Satisfaction, and Cosmetic Surgery Interest,” *Body Image* 56: 102030. doi: 10.1016/j.bodyim.2026.102030.

Herring, S. C., Dedema, M., Rodríguez, E., and Yang, L. (2025). “Strategic Use of Video Face Filter Types: Influence of Audience, Gender, and Culture,” *New Media & Society* 27(6): 3524–3544. doi: 10.1177/14614448241230461.

Hu, Y., Tian, H., Hou, Y., Zhu, M., and Gao, X. (2025). “Social Networking Sites Use Exacerbates Appearance Anxiety in Young Chinese Women: The Moderating Role of Self-Concept Clarity,” *Psychology of Popular Media*. doi: 10.1037/ppm0000600.

Kandathil, C. K., Patel, P. N., Saltychev, M., and Most, S. P. (2020). “Differences in Social Perceptions Between Digital Single Lens Reflex Camera and Cell Phone Selfie Images,” *Facial Plastic Surgery & Aesthetic Medicine* October: 347–354. doi: 10.1089/fpsam.2020.0077.

Kwon, S., Jang, J., and Park, S.-H. (2026). “Beyond Homophily: AI-driven Analysis of Facial and Personality Similarity Preferences in Online Dating,” *Computers in Human Behavior* 178: 108906. doi: 10.1016/j.chb.2026.108906.

Levin, T., Tiggemann, M., Harriger, J., and Fardouly, J. (2025). “The Influencer Effect: Current Findings and Future Directions for Research on Social Media Influencers and Body Image,” *Body Image* 55: 102000. doi: 10.1016/j.bodyim.2025.102000.

Luo, X., and Zhang, R. (2024). “Decoding the Gendered Design and (Dis)affordances of Face-editing Technologies in China,” *International Journal of Human-Computer Studies* 181: 103149. doi: 10.1016/j.ijhcs.2023.103149.

Maes, C., Vanherle, R., Fardouly, J., and Vandenbosch, L. (2025). “#BoPo, #Ideal, or #Mixed? Exploring Adolescents’ Daily Exposure to Appearance Content on Social Media and Its Relations with Body Image Components,” *Communication Research*. doi: 10.1177/00936502251338901.

Mavritsakis, N., Mîrza, T. V., Mîrza, C. M., Dragoş, O., and Pop, N. H. (2022). “Aging and Life Expectancy during the COVID-19 Pandemic,” *Health, Sports & Rehabilitation Medicine* 23(1): 34–39. doi: 10.26659/pm3.2022.23.1.34.

Michalkova, L., Petreanu, A.-M.-S., Chitcă, C., Geambazi, P., Gura, K., and Petre, G.-A. (2023). “Beauty Artificial Intelligence and Context-aware Emotion Recognition Technologies, Neuromorphic and Bio-inspired Computing Systems, and Big Data-driven Facial Retouching Tools for Visually Appealing Self-presentations and Negative Emotional States,” *Journal of Research in Gender Studies* 13(2): 9–23. doi: 10.22381/JRGS13220231.

Mihăilă, R. (2023). “3D Virtual Garment Simulation and Facial Expression Recognition Technologies, Beauty Filter-based Appealing Self-presentation and Generative Artificial Intelligence Virtual Try-on Tools, and Deep Learning-based Gesture Recognition and Augmented Reality Face Makeup Systems for Body-Image Affective Judgments and Dysfunctional Appearance Beliefs,” *Journal of Research in Gender Studies* 13(2): 54–68. doi: 10.22381/JRGS13220234.

Miller, L. A. (2025). “Preserving the Ephemeral: A Visual Typology of Augmented Reality Filters on Instagram,” *Visual Studies* 40(3): 472–485. doi: 10.1080/1472586X.2024. 2341296.

Mirabet-Herranz, N., Galdi, C., and Dugelay, J. -L. (2025). “Facial Biometrics in the Social Media Era: An in-Depth Analysis of the Challenge Posed by Beautification Filters,” *IEEE Transactions on Biometrics, Behavior, and Identity Science* 7(1): 108–117. doi: 10.1109/TBIOM.2024.3438928.

Morley, N. (2022). “Beauty Apps for Digital Self-Monitoring and Self-Tracking: Expressive Gestures and Movements, Negative Moods and Emotions, and Visual and Haptic Imagery,” *Journal of Research in Gender Studies* 12(2): 63–78. doi: 10.22381/JRGS12220224.

Oláh, J., Popp, J., Harba, J.-N., Adilbekova, K., and Niță, M. I. (2023). “Augmented Reality Face Filters and 3D Digital Garment Photorealistic Simulations for Unrealistic Beauty Images, Body Image Concerns, and Physical Appearance and Attractiveness,” *Journal of Research in Gender Studies* 13(2): 84–98. doi: 10.22381/JRGS13220236.

Öztunç, M., Çötok, N. A., Işıkgöz, M. E., and Biricik, K. (2025). “Digital Culture and Aesthetic Orientation: Associations with Body Perception and Beauty Perception on Social Media,” *BMC Psychology* 13: 1178. doi: 10.1186/s40359-025-03517-y.

Pârvu, I. A., Privitera, D., Bîgu, A.-M., Pîrcălăbescu, R. M., and Paţurcă, R. N. (2025). “Beauty Filter-based Appealing Self-Presentation and 3D Facial Avatar Makeup Simulation Tools, Emotion Recognition and Visual Sentiment Algorithms, and 3D Human Body and Image Appearance Modeling for Augmented Reality-based Virtual Try-on and Hyper-Personalized Beauty Experiences,” *Journal of Research in Gender Studies* 15(1): 49–56. doi: 10.22381/JRGS15120255.

Popescu, L. (2022). “Image Editing Tools for Visually Appealing Self-Presentations: Digitally Mediated Social Presence, Body Dissatisfaction and Shame, and Ideal Beauty Standards,” *Journal of Research in Gender Studies* 12(2): 48–62. doi: 10.22381/JRGS12220223.

Popescu, G. H., Iacob, S. E., Bran, A. C., Stana, C., and Radu, M. (2025). “3D Virtual Modeling and Artificial Intelligence Clothing Try-on Technologies, Hyper-Realistic Augmented Reality-powered Makeup Filters, and Cognitive and Affective Algorithms for Beauty Ideal Cultural Constructions,” *Journal of Research in Gender Studies* 15(1): 33–40. doi: 10.22381/JRGS15120253.

Ramirez, E. J., Clark, L., Campbell, S., Dreiman, J., Clay, D., Gupta, R., et al. (2025). “Embodiment, Relationships, and Sexuality: An Ethical Analysis of Extended Reality Technologies,” *Science and Engineering Ethics* 31: 38. doi: 10.1007/s11948-025-00563-y.

Rowland, M. (2022). “Online Visual Self-Presentation: Augmented Reality Face Filters, Selfie-Editing Behaviors, and Body Image Disorder,” *Journal of Research in Gender Studies* 12(1): 99–113. doi: 10.22381/JRGS12120227.

Spada, M. (2025). “History ‘for the Gram’: AI Beauty and the Vintage, Analogue, and ‘Throwback’ Celebrity,” *Celebrity Studies*. doi: 10.1080/19392397.2025.2518089.

Töre, F. K., Ağralı, C., and Nacar, G. (2026). “Associations between Social Media Use, Body Mass Index, and Body Image among Pregnant Women,” *BMC Women’s Health*. doi: 10.1186/s12905-026-04259-8.

Vochozka, M., Geambazi, R.-Ș., Constantinescu, M., Geambazi, P., and Alexandru, B. (2022). “Photo Retouching Apps and Immersive and Interactive Technologies for Idealized Beauty Representations and Images: Digital Social Practices, Unfavorable Appearance Comparisons, and Self-Presentation Perceptions and Behaviors,” *Journal of Research in Gender Studies* 12(2): 128–143. doi: 10.22381/JRGS12220228.

Watson, R. (2022). “Appearance-focused Social Media Use, Unrealistic Beauty Ideals, and Body Image Dissatisfaction,” *Journal of Research in Gender Studies* 12(1): 114–129. doi: 10.22381/JRGS12120228.

Xu, Y., and Deng, X. (2025). “How Attractiveness and Value Similarity Drive Social Media Live Streaming Purchases: A Hybrid SEM-ANN Approach,” *Asia Pacific Journal of Marketing and Logistics*. doi: 10.1108/APJML-04-2025-0735.

Journal of Research in Gender Studies 15(2), 2025
pp. 65–75, ISSN 2164-0262, eISSN 2378-3524

Visual Sentiment and Affective Computing Algorithms, Deep Learning-based Multimodal Emotion Recognition and Automated Digital Beauty Technologies, and 3D Machine Learning-based Facial Avatar Makeup Simulation and Generative Artificial Intelligence Virtual Try-on Tools for Perceived Social Validation, Unfavorable Appearance Comparisons, and Negative Body Image, Mood, and Self-Esteem

Gheorghe H. Popescu[1], Ahmed Diaa Khamis[2], Vasilii Erokhin[3], Silvia Elena Iacob[4], Rudy Ujang[5], Dan Mihai Boajă[6]

ABSTRACT. This paper draws on a substantial body of theoretical and empirical research on visual sentiment and affective computing algorithms, deep learning-based multimodal emotion recognition and automated digital beauty technologies, and 3D machine learning-based facial avatar makeup simulation and generative artificial intelligence virtual try-on tools for perceived social validation, unfavorable appearance comparisons, and negative body image, mood, and self-esteem. The review software systems leveraged for article screening and quality evaluation include AMSTAR, CADIMA, DistillerSR, Eppi-Reviewer, JBI SUMARI, Litstream, PICO Portal, and SWIFT-Active Screener. The case studies cover Airbrush, B612, BeautyPlus, Evoto, FaceApp, Facetune, Fotor, GlamAR, Perfect365, PortraitPro, PrettyUp, SODA, Ulike, Vivid Glam, Wondershare DemoCreator, and YouCam.

Keywords: visual sentiment; affective computing; emotion recognition; digital beauty; facial avatar makeup simulation; generative artificial intelligence virtual try-on

How to cite: Popescu, G. H., Khamis, A. D., Erokhin, V., Iacob, S. E., Ujang, R., and Boajă, D. M. (2025). "Visual Sentiment and Affective Computing Algorithms, Deep Learning-based Multimodal Emotion Recognition and Automated Digital Beauty Technologies, and 3D Machine Learning-based Facial Avatar Makeup Simulation and Generative Artificial Intelligence Virtual Try-on Tools for Perceived Social Validation, Unfavorable Appearance Comparisons, and Negative Body Image, Mood, and Self-Esteem," *Journal of Research in Gender Studies* 15(2): 65–75. doi: 10.22381/JRGS15220255.

Received 8 July 2025 • Received in revised form 20 December 2025
Accepted 28 December 2025 • Available online 30 December 2025

[1]"Dimitrie Cantemir" Christian University, Bucharest, Romania; Bucharest University of Economic Studies, Bucharest, Romania, gheorghe.popescu@man.ase.ro (corresponding author).
[2]The Egyptian Academy, Tanta, Egypt, dr_ahmedkhamis@yahoo.com..
[3]Harbin Engineering University, China, vasilii_erokhin@hrbeu.edu.cn.
[4]Bucharest University of Economic Studies, Bucharest, Romania, silvia.iacob@economie.ase.ro.
[5]Universiti Teknologi MARA, Sarawak, Kota Samarahan, Malaysia, rudyujang@uitm.edu.my.
[6]"Dimitrie Cantemir" Christian University, Bucharest, Romania, dan.boaja@ucdc.ro.

1. Introduction

Augmented reality virtual makeup try-ons, face and body shaping tools, and blush, eyeliner, eyebrow, and lipstick filters can smooth skin, whiten teeth, improve color tones, and reduce blemishes. Deep learning algorithms, beauty and virtual makeup filters, and artificial intelligence image editing tools can clear up spots, blemishes, and wrinkles, optimize skin texture, lipstick, blush, and eyeshadow, reshape body, and alter hair color, length, and style. Artificial intelligence photo editing apps and virtual makeup filters can adjust hairline and hair volume, improve face proportions and chin and jawline contouring, remove skin problems, and reshape teeth and body. Augmented reality beauty filters and virtual makeup try-ons can smooth skin texture, reshape nose and lips, and enhance bust and hips.

Computer vision and deep learning algorithms, artificial intelligence makeup apps, and augmented reality beauty try-on and facial recognition technologies alter facial features for a glam makeup look and a realistic and natural-looking appearance, negatively impacting self-esteem by narrowing nose bridge, plumping lips, and optimizing skin tones. Augmented reality face filters, computer vision algorithms, and artificial intelligence beauty and makeup apps can be leveraged for face and skin texture retouching, hair color and skin tone change, eyebrow, cheek, and lip enhancement, removing blemishes and shadows, highlighting bone structure, and whitening and cleaning eyes. Facial contouring tools and beauty filters accentuate cheekbones and jawlines.

2. Review Software Systems Leveraged for Article Screening and Quality Evaluation

The review software systems leveraged for article screening and quality evaluation were Abstrackr (for machine-learning-based text mining), AMSTAR (for literature search usability), AXIS (for cross-sectional study quality assessment), CADIMA (for evidence-based decision making support), CASP (for qualitative evidence synthesis), Catchii (for eligible title and abstract screening), Citationchaser (for inconsistent terminology networks), R package and Shiny app citationchaser (for machine learning screening-based reference scanning), DistillerSR (for artificial intelligence-powered literature collection), Eppi-Reviewer (for machine learning-based data classification), JBI SUMARI (for bias identification associated with published result measurement), Litstream (for machine learning-based topic extraction), METAGEAR package for R (for text mining and critical analysis), MMAT (for design type determination), PICO Portal (for citation screening and identification), Rayyan (for transparent and reproducible evidence), ROBIS (for methodological quality deficiency inspection), SluRp (for data cluster-

ing and categorization), SRDR+ (for evidence synthesis and text analysis), SWIFT-Active Screener (for full text, title, and abstract screening), and Systematic Review Accelerator (for search string duplicate exclusion).

3. Literature Review

Body image disturbance and worry recognition, negative behaviors and sentiments, perceived social validation, and idealized online identities (Anani et al., 2024; Hussain et al., 2025; Padín et al., 2021) develop on synthetic image data augmentation, artificial intelligence-powered mood detectors, dynamic gesture recognition and affective computing algorithms, and deep learning-based multimodal emotion recognition and automated digital beauty technologies. Photo-realistic 3D human and synthetic clothing reconstruction, real-time subtle facial expression capture, 3D motion data processing, and visual and haptic object recognition (Ateq et al., 2024; Li and Sun, 2024; Miller, 2025; Qutub, 2021) integrate artificial tactile sensing technologies, visual sentiment and emotion recognition algorithms, augmented reality try-on lenses, and visual sensor data for photo-realistic 3D clothed virtual humans in immersive virtual reality simulation environments. Animatable 3D clothed human reconstruction, 3D human shape representation, 3D intelligent wearable garment modeling, and 3D virtual fabric simulation (Bautista Alcaine et al., 2025; Hawker and Carah, 2020; Swerzenski, 2021) require silhouette image analysis, digital twin mapping and immersive technologies, 3D path planning and tactile sensory neuromorphic computing tools, and sensor-based 3D semantic mapping.

3D human shape and facial expression modeling, 3D skeletal rendering, shared knowledge and action mechanisms, and object detection and categorization (Bevan-Dye, 2025; Dabija et al., 2024; Lăzăroiu et al., 2024; Oregi et al., 2024) necessitate motion detection data, facial expression recognition and image sensor technologies, convolutional neural network-based gesture recognition and augmented reality face makeup systems, and deep learning and machine-based eye-tracking and neuromorphic computing algorithms. Synthetic human and multimodal biosignal data, artificial visual perception and sensor-based gesture recognition systems, tactile sensory neuromorphic computing and multimodal sensing technologies, and image processing and visual matching algorithms (Carey, 2022; Mavritsakis et al., 2022; Mihăilă and Branișteș, 2021; Popescu, 2023) are pivotal in 4D dynamic scene reconstruction, deep learning network-based facial expression recognition, visual language navigation and semiotics, and interconnected quantified selves.

Facial expression and emotional spatial data, 3D machine learning-based facial avatar makeup simulation and generative artificial intelligence virtual try-on tools, artificial visual perception and emotion recognition systems, and hyper-realistic augmented reality beauty and visual imaging technologies

(Çınaroğlu and Yılmazer, 2025; Mulgrew and Courtney, 2022; Tudosă et al., 2025) are instrumental in interactive virtual clothing animation, human pose estimation, deep learning 3D limb movement tracking, and machine learning-based body measurement determinations for artificial intelligence-generated hyper-realistic body-inclusive avatars in 3D immersive visualization environments. 3D skin texture and image appearance modeling, neuromorphic and bio-inspired computing systems, 3D digital twin visualization and augmented reality makeup try-on technologies, and emotion recognition and perceptual image algorithms (Coffey et al., 2025; Csorba et al., 2025; Mișa et al., 2022; Riccio et al., 2024) configure algorithmic social behavior, unrealistic beauty standards, embodied interaction modalities, and negative body image, negative moods, and emotions.

4. Case Studies

YouCam Video deploys beauty and makeup filters for head size and jawline adjustment, smoothing skin and reducing wrinkles. Facetune makes skin look flawless by its auto-smooth function. B612's augmented reality makeup filters can create stunning makeup and realistic looks. Evoto AI Photo Editor's machine learning-based digital beauty tools and artificial intelligence filters can retouch makeup correct skin discoloration by tone changing, enhance natural skin undertones, increase or decrease eyelash thickness, adjust eyebrow shape and color concentration, fine-tune eyeshadow color intensity, and blend blush tones, while removing blemishes, acnes, and freckles, optimizing face shapes and skin tones, and trying on lipstick shade virtually. Ulike's beauty app configures realistic makeup features for blush and contour.

Evoto AI Photo Editor's lipstick and blush filters articulate realistic textures for a natural look by portrait skin retouching in terms of facial feature adjustment. FaceApp's machine learning technologies and makeup filters enhance facial features by removing acne, blemishes, and wrinkles for a photorealistic flawless natural beauty. Wondershare DemoCreator's artificial intelligence beauty filters and realistic virtual try-ons adjust skin tone and facial features, such as forehead and nose size. Fotor's artificial intelligence photo makeup editor and photo retouching tools integrate beauty filter processes for a polished image in terms of skin smoothening and teeth whitening. Airbrush Video's beauty filters can optimize lipstick, eyeliner, and blush features for a flawless appearance, suiting style and preferences, perfecting social appearance, and articulating unrealistic beauty standards.

Vivid Glam's facial detection technology and retouch and reshape tools are pivotal for makeup filter styles in terms of minor color corrections by skin tone adjustment and facial feature enhancement, concealing blemishes and smoothing out imperfections. Perfect365's artificial intelligence beauty

apps and computer vision algorithms can identify facial features for a realistic makeover, while also adjusting skin tone and lip and eye color. YouCam Video's beauty and makeup filters can adjust lipstick, contour, blush, eyeliner, and eyeshadow, while smoothing and brightening skin. GlamAR's virtual makeup filters enable a stunning transformation and a polished appearance for a natural look, adjusting skin tone. B612's photo and video editing app optimizes visual content with regard to lip and eye color, contour, and blush. PrettyUp's video and body editing tools modify body features for slimming and retouch facial features.

BeautyPlus harnesses lipstick and eyebrow filters, skin retouching tools, and virtual makeup try-ons. Perfect365's realistic and polished beauty filter apps integrate hyperrealistic makeup and hair try-ons. Fotor's lipstick and blush filters adjust makeup effortlessly, Ulike's Beauty Filter App amplifies facial features, SODA removes blemishes and uneven tones, and PortraitPro changes the iris color and sharpens eyes and eyelashes. PrettyUp's beauty filter apps, virtual makeup tools, and skin smoothing technologies can touch up facial features, add style and mood, remove blemishes, enhance lipstick, eyeliner, blush features, and refine contours, for a polished unrealistic or unnatural appearance, blurring out imperfections for a flawless complexion.

Perfect365 can be deployed for skin smoothing, teeth whitening, hairstyle simulation, blemish removal, and face reshaping. GlamAR beauty filters and virtual try-ons can be leveraged in skin retouching for texture refinement and blemish reduction. YouCam Makeup's augmented reality filters and beautification tools can be harnessed for skin smoothing and whitening, face slimming, and eye enlargement. BeautyPlus's creative artificial intelligence makeup tools enhance facial features for a glossy or glam look.

5. Results

Artificial intelligence beauty filters can enhance visual appeal, creating a refined and attractive look by skin smoothing and teeth whitening, cheekbone highlighting, chin reshaping, face and nose slimming down, brightening or toning down complexion, typifying body image growing concerns and unrealistic beauty standards. Augmented reality virtual makeup try-ons and beauty filters (Goh et al., 2025; Kılıç, 2025; Wei and Georgakopoulou, 2025) can retouch blemishes and blur spots for a smooth skin and reshape facial contours and adjust proportions for a polished makeup skin tone, face and body reshaping, facial expression tracking, and saturation and luminance adjustment, eroding self-perception and self-esteem, and feeding insecurity and dissatisfaction in relation to body image. Augmented reality beauty filters and virtual makeup try-ons (Cug et al., 2022; Maes and de Lenne, 2022; Schroeder and Behm-Morawitz, 2025) can integrate computer vision-based real-time facial movement and expression tracking, assisting in face

reshaping, body tuning, wrinkle removal, hair color changing, skin smoothing and tone adjustment, teeth whitening for a natural polished look.

Artificial intelligence-powered makeup photo editor and digital beauty editing tools (Duncan, 2025; Gulati et al., 2024; Matsuzaka et al., 2025; Peng, 2020) can smooth skin texture, sculpt cheekbones, tweak lip color and hair tones, eliminate pores and acne, refine facial features, and adjust eye size, creating a polished presence and unrealistic beauty standards. Makeup virtual try-on tools and beauty filter apps can include makeup shadows and natural-looking light reflection, reshaping and contouring facial features, blurring blemishes and acne, and smoothing skin for a polished appearance. Augmented reality face and beauty filters and realistic virtual try-on systems (Eugeni, 2024; Hockin-Boyers et al., 2025; Wang et al., 2019) can adjust skin tone, texture, or depth, apply makeup effects, enhance facial features, and reduce blemishes for realistic virtual look and beauty transformations, being pivotal in skin smoothing, lip color adjustment, blemish removal, eyebrow shaping, hair retouching.

6. Discussion

Augmented reality beauty apps and filters, virtual reality-based visual perception and computer-generated imagery technologies, sensor-based motion capture suits, and neuromorphic vision sensor data articulate toxic body image ideals, visual imagery and representations, object grasping and manipulation, and unrealistic societal beauty standards. 3D facial analysis and realistic makeup simulation tools, bio-inspired artificial perceptual and synthetic speech augmentation devices, 3D human motion capture and face recognition technologies, and visual sentiment and affective computing algorithms assist spatial imagery and harmful self-objectification processes, deep neural network-based photorealistic 3D human visualization, augmented reality filter-based self-face perception, and sensor-based human tracking for artificial intelligence-generated hyper-realistic body-inclusive avatars. Our findings are consistent with Anani et al. (2024), Duncan (2025), Gulati et al. (2024), Hawker and Carah (2020), Lăzăroiu et al. (2024), Matsuzaka et al. (2025), Mihăilă and Branişte (2021), Riccio et al. (2024), and Wang et al. (2019).

Wearable artificial intelligence and aesthetic self-monitoring devices, visual matching and emotion recognition algorithms, 3D body sensory and deep learning-based multimodal emotion recognition technologies, and 3D facial analysis and generative artificial intelligence virtual try-on tools enable face and body emotion recognition processes, negative mood and self-esteem, self-presentation perceptions and behaviors, and body image dissatisfaction. This result is consistent with previous studies, such as Ateq et al. (2024), (Carey, 2022), Çınaroğlu and Yılmazer (2025), Li and Sun (2024), Maes and

de Lenne (2022), Qutub (2021), Swerzenski (2021), and Wei and Georgakopoulou (2025).

Augmented reality beautification filters, 3D digital garment photorealistic simulations, deep learning-based virtual try-on and gesture recognition technologies, and artificial sensory neural network and neuromorphic tactile recognition systems further facial and motion data capturing, digitally manipulated visual narratives, affective computing and sentiment analysis, and autonomous simulated virtual agent intentionality. Our findings are also supported by Bevan-Dye (2025), Cug et al. (2022), Goh et al. (2025), Hussain et al. (2025), Mișa et al. (2022), Mulgrew and Courtney (2022), Oregi et al. (2024), Peng (2020), and Schroeder and Behm-Morawitz (2025).

Augmented reality body and face filters, 3D virtual modeling and computer vision technologies, artificial neural network-based neuromorphic computing and sensor-based gesture recognition systems, and eyewear frame digital twins shape idealized facial and bodily appearances, visual digital cultures, beauty ideal internalization, and social media photo manipulation. Augmented reality-based body-enhancing and emotional sensing technologies, artificial sensory neural network and convolutional neural network-based gesture recognition systems, and emotion analytics and image processing algorithms optimize machine learning-based body measurement determinations, scene representation and classification, digital twin-based detailed body size representation, and controllable 3D-aware human avatar generation and image synthesis. This study aligns with Bautista Alcaine et al. (2025), Coffey et al. (2025), Eugeni (2024), Hockin-Boyers et al. (2025), Kılıç (2025), Miller (2025), Padín et al. (2021), Popescu (2023), and Tudosă et al. (2025).

7. Conclusions

Augmented reality face makeup and motion-based gesture recognition systems, 3D virtual modeling and artificial tactile sensing technologies, beauty filter and emotion analytics algorithms, and eyewear frame digital twins enhance social media-related body dissatisfaction, low self-esteem and self-image, body image worry, mood, and emotion recognition, and unfavorable appearance comparisons. Image sensor and bio-inspired artificial perceptual devices, big data augmentation and spatial mapping algorithms, neuromorphic tactile recognition and real-time location tracking systems, and 3D spatial computing and metaverse technologies improve negative body image, cognitive and affective engagement, perceived body shape, and self-rated emotional expressiveness.

Synthetic image data augmentation, digital beauty and computer graphics technologies, visual matching and sensor network clustering algorithms, and 3D motion capture and artificial visual perception systems can be harnessed for realistic 3D avatar facial appearance animation, personalized photo-

realistic avatar generation and representation, facial shape and appearance modeling, and physics-based clothing animation and simulation in engaging extended reality environments. Realistic makeup simulation and generative artificial intelligence virtual try-on tools, 3D avatar motion capture and computer vision technologies, deep learning-based gesture recognition and augmented reality face makeup systems, and visual cognitive and motion segmentation algorithms can be deployed for 3D neural object and scene representation, image-based autonomous virtual 3D object recognition and segmentation, 3D human pose and physics-based appearance estimation, and digital human image construction.

Gheorghe H. Popescu, https://orcid.org/0000-0002-6635-1861
Ahmed Diaa Khamis, https://orcid.org/0009-0008-4669-4083
Vasilii Erokhin, https://orcid.org/0000-0002-3745-5469
Silvia Elena Iacob, https://orcid.org/0000-0002-2629-1403
Rudy Ujang, https://orcid.org/0009-0005-8808-0782
Dan Mihai Boajă, https://orcid.org/0009-0009-6943-9525

Compliance with ethical standards
This article does not contain any studies with human participants or animals performed by the authors. Extracting and inspecting publicly accessible files (scholarly sources) as evidence, before the research began no institutional ethics approval was required.

Data availability statement
All data generated or analyzed are included in the published article.

Funding information
None.

Author contributions
All authors listed have made a substantial, direct and intellectual contribution to the work, and approved it for publication. The authors take full responsibility for the accuracy and the integrity of the data analysis.

Conflict of interest statement
The authors declare that the research was conducted in the absence of any commercial or financial relationships that could be construed as a potential conflict of interest.

Transparency statement
The authors affirm that the manuscript represents an honest, accurate, and transparent account of the research being reported, that no relevant aspects of the study have been left out, and that any inconsistencies from the research as planned (and, if significant, registered) have been clarified.

Disclosure by the editors of record
The editors declare no conflict of interest in the review and publication decision regarding this article. This paper is part of a collective research topic, and thus a somewhat standard structure and a list of reliable data visualization and (reporting and methodological) quality assessment tools have been provided.

REFERENCES

Anani, P. W., Mintah, F. D., Danso, A. A. A., and Churcher, E. W. (2024). "Filtered Reality: Exploring the Motives and Socio-Demographic Factors of Smartphone Beauty Filter Usage among University Students in Ghana," *Cogent Arts & Humanities* 11(1): 2392381. doi: 10.1080/23311983.2024.2392381.

Ateq, K., Alhajji, M., and Alhusseini, N. (2024). "The Association between Use of Social Media and the Development of Body Dysmorphic Disorder and Attitudes toward Cosmetic Surgeries: A National Survey," *Frontiers in Public Health* 12: 1324092. doi: 10.3389/fpubh.2024.1324092.

Bautista Alcaine, P., Cebollero-Salinas, A., Elboj-Saso, C., and Íñiguez-Berrozpe, T. (2025). "Linking Appearance in Social Networks and Acts to Improve It with Depression in Adolescents: A Descriptive Analysis of Their Relationship Based on Gender," *International Journal of Adolescence and Youth* 30(1): 2574466. doi: 10.1080/02673843.2025.2574466.

Bevan-Dye, A. L. (2025). "Factors Influencing Female Generation Y Digital Nomad Consumers' Adoption of YouTube Beauty Vlogs' Informational Content," *Spanish Journal of Marketing - ESIC*. doi: 10.1108/SJME-12-2024-0328.

Carey, B. (2022). "Social Media Photo Manipulation, Beauty Ideal Internalization, and Problematic Body Image," *Journal of Research in Gender Studies* 12(1): 39–53. doi: 10.22381/JRGS12120223.

Çınaroğlu, M., and Yılmazer, E. (2025). "Problematic Social Media Use, Self-Objectification, and Body Image Disturbance: The Moderating Roles of Physical Activity and Diet Intensity," *Psychology Research and Behavior Management* 18: 931–952. doi: 10.2147/PRBM.S517193.

Coffey, J., Kanai, A., Dobson, A. S., Gill, R., and White, N. (2025). "'Hang on, Why Am I Editing My Photos?' Disrupting the Virtual Gaze through Selfie-Editing Workshops," *Qualitative Research*. doi: 10.1177/14687941251341994.

Csorba, L. M., Dabija, D.-C., and Pop, N. H. (2025). "Can Well-Being and Socializing through Fitness Foster the Fitness Center Satisfaction and Loyalty? Empirical Research in a Post-Crisis Context," *Studies in Business and Economics* 20(2): 47–69. doi: 10.2478/sbe-2025-0024.

Cug, J., Tănase, A., Stan, C. I., and Chitcă, T. C. (2022). "Beauty Filters for Physical Attractiveness: Idealized Appearance and Imagery, Visual Content and Representations, and Negative Behaviors and Sentiments," *Journal of Research in Gender Studies* 12(2): 33–47. doi: 10.22381/JRGS12220222.

Dabija, D.-C., Csorba, L. M., Pop N. H., and Obadă, D.-R. (2024). "The Impact of Extraversion and Introversion on Millennials Propensity to Recommend Their Preferred Fitness Center," *Behavioral Sciences* 14(1): 22. doi: 10.3390/bs14010022.

Duncan, P. (2025). "The Glowy: The Aesthetics of Transparency in Postfeminist "Wellness" Culture," *Feminist Media Studies*. doi: 10.1080/14680777.2025.2468914.

Eugeni, R. (2024). "A Scanner Darkly: Augmented Reality Face Filters as Algorithmic Images," *Visual Communication* 23(3): 498–512. doi: 10.1177/14703572241235286.

Goh, A. Y. H., Hartanto, A., Kasturiratna, K. T. A. S., and Majeed, N. M. (2025). "No Consistent Evidence for between- and within-Person Associations between Objective Social Media Screen Time and Body Image Dissatisfaction: Insights

From a Daily Diary Study," *Social Media + Society* 11(1): 20563051251313855. doi: 10.1177/20563051251313855.

Gulati, A., Martínez-Garcia, M., Fernández, D., Lozano, M. A., Lepri, B., and Oliver, N. (2024). "What Is Beautiful Is Still Good: The Attractiveness Halo Effect in the Era of Beauty Filters," *Royal Society Open Science* 11(11): 11240882. doi: 10.1098/rsos.240882.

Hawker, K., and Carah, N. (2020). "Snapchat's Augmented Reality Brand Culture: Sponsored Filters and Lenses as Digital Piecework," *Continuum* 35(1): 12–29. doi: 10.1080/10304312.2020.1827370.

Hockin-Boyers, H., Vertinsky, P., Norman, M., Dean, N. A., and Ramachandran, A. (2025). "Training the Algorithm: Agency and Algorithmic Injustice in Instagram's 'Whitewashed' Health and Fitness Spaces," *New Media & Society*. doi: 10.1177/14614448251366172.

Hussain, B., Aslam, S., and Imran, A. (2025). "Manufacturing Beauty: How AI and Social Media Are Redefining Aesthetic Norms in Emerging Digital Cultures," *Acta Psychologica* 260: 105734. doi: 10.1016/j.actpsy.2025.105734.

Kılıç, S. (2025). "The Algorithmic Colonization of the Human Face: Beauty, Bias, and the Digital Guillotine," *AI & Society*. doi: 10.1007/s00146-025-02512-6.

Lăzăroiu, G., Gedeon, T., Szpilko, D., and Halicka, K. (2024). "Digital Twin-based Alternate Ego Modeling and Simulation: Eva Herzigova as a 3D MetaHuman Avatar," *Engineering Management in Production and Services* 16(3): 1–14. doi: 10.2478/emj-2024-0020.

Li, P., and Sun, Y. (2024). "Impact of Internet Celebrities' Short Videos on Audiences' Visit Intentions: Is Beauty Power?," *Humanities and Social Sciences Communications* 11: 381. doi: 10.1057/s41599-024-02895-9.

Maes, C., and de Lenne, O. (2022). "Filters and Fillers: Belgian Adolescents' Filter Use on Social Media and the Acceptance of Cosmetic Surgery," *Journal of Children and Media* 16(4): 587–605. doi: 10.1080/17482798.2022.2079696.

Matsuzaka, S., Volpe, V. V., Avery, L. R., and Stanton, A. G. (2025). "Shrunken and Recolored: Young Black American Women's Double Consciousness Body Image, Online Victimization, and Photo Editing," *Psychology of Women Quarterly* 49(3): 332–344. doi: 10.1177/03616843251352872.

Mavritsakis, N., Mîrza, T. V., Mîrza, C. M., Dragoș, O., and Pop, N. H. (2022). "Aging and Life Expectancy during the COVID-19 Pandemic," *Health, Sports & Rehabilitation Medicine* 23(1): 34–39. doi: 10.26659/pm3.2022.23.1.34.

Mihăilă, R., and Braniște, L. (2021). "Digital Semantics of Beauty Apps and Filters: Big Data-driven Facial Retouching, Aesthetic Self-Monitoring Devices, and Augmented Reality-based Body-Enhancing Technologies," *Journal of Research in Gender Studies* 11(2): 100–112. doi: 10.22381/JRGS11220217.

Miller, L. A. (2025). "Build-a-face: Homogeneity, Racialisation and Eurocentric Beautification in Instagram AR Face Filters," *Information, Communication & Society*. doi: 10.1080/1369118X.2025.2536157.

Mișa, A., Melenciuc, M., Pădurariu, I., and Văduva, C. (2022). "Augmented Reality Body and Face Filters for Digitally Manipulated Visual Narratives: Physical Appearance Ideals, Perceived Social Validation, and Aesthetic and Affective Technologies," *Journal of Research in Gender Studies* 12(2): 160–175. doi: 10.22381/JRGS122202210.

Mulgrew, K. E., and Courtney, S. (2022). “Women’s Response to, Awareness of, and Interest in Body Functionality Content on Instagram,” *Body Image* 43: 54–62. doi: 10.1016/j.bodyim.2022.08.008.

Oregi, P., Cavale, N., Khatib, M., and Rahman, S. M. (2024). “The Ethics and Responsibilities of Social Media Usage by Plastic Surgeons: A Literature Review,” *Aesthetic Plastic Surgery* 48: 530–542. doi: 10.1007/s00266-023-03553-2.

Padín, P. F., González-Rodríguez, R., Verde-Diego, C., and Vázquez-Pérez, R. (2021). “Social Media and Eating Disorder Psychopathology: A Systematic Review,” *Cyberpsychology: Journal of Psychosocial Research on Cyberspace* 15(3): 6. doi: 10.5817/CP2021-3-6.

Peng, A. Y. (2020). “Alipay Adds ‘Beauty Filters’ to Face-Scan Payments: A Form of Patriarchal Control over Women’s Bodies,” *Feminist Media Studies* 20(4): 582–585. doi: 10.1080/14680777.2020.1750779.

Popescu, L. (2023). “Hyper-realistic Augmented Reality-powered Makeup Filters, Deep Learning-based Multimodal Emotion Recognition and Clothing Simulation Technologies, and Cognitive and Affective Algorithms for Negative Body Image and Objectified Body Consciousness,” *Journal of Research in Gender Studies* 13(2): 69–83. doi: 10.22381/JRGS13220235.

Qutub, A. (2021). “The Selfie Production Model: Rethinking Selfie Taking, Editing, and Posting Practices,” *Cyberpsychology: Journal of Psychosocial Research on Cyberspace* 15(4): 4. doi: 10.5817/CP2021-4-4.

Riccio, P., Colin, J., Ogolla, S., and Oliver, N. (2024). “Mirror, Mirror on the Wall, Who Is the Whitest of All? Racial Biases in Social Media Beauty Filters,” *Social Media + Society* 10(2): 20563051241239295. doi: 10.1177/20563051241239295.

Schroeder, M., and Behm-Morawitz, E. (2025). “Digitally Curated Beauty: The Impact of Slimming Beauty Filters on Body Image, Weight Loss Desire, Self-objectification, and Anti-fat Attitudes,” *Computers in Human Behavior* 165: 108519. doi: 10.1016/j.chb.2024.108519.

Swerzenski, J. D. (2021). “Fact, Fiction or Photoshop: Building Awareness of Visual Manipulation through Image Editing Software,” *Journal of Visual Literacy* 40(2): 104–124. doi: 10.1080/1051144X.2021.1902041.

Tudosă, P., Nica, E., Szpilko, D., Almășan, C. M., Manole, C., & Stamule, S. (2025). “3D Augmented Reality Try-on and Digital Beauty Technologies for Visually Appealing Self-Presentations in Digital Social Practices,” *Journal of Research in Gender Studies* 15(1): 9–24. doi: 10.22381/JRGS15120251.

Wang, Y., Fardouly, J., Vartanian, L. R., and Lei, L. (2019). “Selfie-Viewing and Facial Dissatisfaction among Chinese Adolescents: A Moderated Mediation Model of General Attractiveness Internalization and Body Appreciation,” *Body Image* 30: 35–43. doi: 10.1016/j.bodyim.2019.05.001.

Wei, W., and Georgakopoulou, A. (2025). “Gendered Chronotopes on Social Media Through the Lens of Small Stories and Positioning Analysis: The Case of the “Pretty Girl” on Xiaohongshu (RedNote),” *Signs and Society* 13(4): 460–478. doi: 10.1017/sas.2025.10022

Journal of Research in Gender Studies 15(2), 2025
pp. 76–87, ISSN 2164-0262, eISSN 2378-3524

Human-like Tactile Sensing and Perception Technologies, Beauty Filter-based Appealing Self-Presentation and Realistic Makeup Simulation Tools, and Deep Learning-based Facial Expression Recognition and Artificial Intelligence-enabled Emotion Communication Systems for Mediated Virtual Self-Expression and Representation

Ioana Alexandra Pârvu[1], Zoran Simonović[2], Vloreen Nity Anak Mathew[3], Alexandra Teodora Ababii[4], Firdaus Abdullah[3], Cristian Florin Ciurlău[5]

ABSTRACT. The purpose of the paper is to explore human-like tactile sensing and perception technologies, beauty filter-based appealing self-presentation and realistic makeup simulation tools, and deep learning-based facial expression recognition and artificial intelligence-enabled emotion communication systems for mediated virtual self-expression and representation. Study screening tools, machine learning classifiers, and reference management software employed include AMSTAR, BIBOT, Catchii, DistillerSR, Eppi-Reviewer, JBI SUMARI, Litstream, METAGEAR package for R, Nested Knowledge, PICO Portal, ROBIS, and SluRp. The case studies cover AirBrush, BeautyPlus, Evoto, FaceApp, FaceTune, Fotor, Maybelline, Media.io, Meitu, Picsart, PhotoDirector, PrettyUp, VanceAI, Vivid Glam, Wondershare UniConverter, and YouCam.

Keywords: beauty filter-based appealing self-presentation; realistic makeup simulation; tactile sensing and perception; facial expression recognition; mediated virtual self-expression and representation; artificial intelligence-enabled emotion communication

How to cite: Pârvu, I. A., Simonović, Z., Mathew, V. N. A., Ababii, A. T., Abdullah, F., and Ciurlău, C. F. (2025). "Human-like Tactile Sensing and Perception Technologies, Beauty Filter-based Appealing Self-Presentation and Realistic Makeup Simulation Tools, and Deep Learning-based Facial Expression Recognition and Artificial Intelligence-enabled Emotion Communication Systems for Mediated Virtual Self-Expression and Representation," *Journal of Research in Gender Studies* 15(2): 76–87. doi: 10.22381/JRGS15220256.

Received 14 June 2025 • Received in revised form 18 December 2025
Accepted 21 December 2025 • Available online 30 December 2025

[1]Bucharest University of Economic Studies, Bucharest, Romania, parvuioana19@stud.ase.ro (corresponding author).
[2]Institute of Agricultural Economics, Belgrade, Serbia, z.simonovic@yahoo.com.
[3]Universiti Teknologi MARA, Sarawak, Kota Samarahan, Malaysia, vloreen@uitm.edu.my; fir@uitm.edu.my.
[4]National School of Political Science and Public Administration, Bucharest, Romania, ababii_alexandra-teodora24m@student.comunicare.ro.
[5]"Dimitrie Cantemir" Christian University, Bucharest, Romania, cristianciurlau@yahoo.com.

1. Introduction

Beautification filters and makeup tools integrate reshaping and retouching features for slight complexion smoothing, spot appearance and uneven texture reduction, and gentle under-eye brightening for a refined and polished look. Natural and creative makeup filters, together with glow and brightening tools, are pivotal in face slimming and skin smoothing for subtle enhancements. Beauty filters and makeup features, together with retouch and reshape tools, are harnessed for skin retouching, face slimming, and lip plumping. Flawless face and stunning beauty filter apps can smooth skin, brighten face, and apply makeup for a seamless look, integrating instant complete beautification features. Unrealistic beauty standards and norms can create body image issues and negative self-evaluations.

Makeup filters and face-editing features can cover blemishes and reduce wrinkles, creating a hyper-realistic effect. Makeup and retouch app, together with face slimming functions and retouch and reshape tools, are instrumental for highly natural accurate face-shaping and glam makeup looks. Beauty filters and digital makeup apps can enhance appearance by smoothing out skin and brightening look. Artificial intelligence virtual makeup try-on filters and image processing tools are instrumental in facial appearance optimization. Artificial intelligence and augmented reality technologies can assist in skin tone and condition analysis, shaping perceived body imperfections.

2. Study Screening Tools, Machine Learning Classifiers, and Reference Management Software

Study screening tools, machine learning classifiers, and reference management software employed include Abstrackr (for machine-learning-based abstract organization), AMSTAR (for publication bias quantification), BIBOT (for machine learning-based article retrieval), CADIMA (for literature search structuring and documentation), CASP (for thematic synthesized evidence quality appraisal), Catchii (for duplicate record detection), Colandr (for machine learning-based text-based evidence synthesis), R package and Shiny app citationchaser (for machine learning screening-based reference checking), DistillerSR (for artificial intelligence-powered literature reproducibility), Eppi-Reviewer (for evidence mapping and synthesis), JBI SUMARI (for published content trustworthiness evaluation), Litstream (for machine learning-based data analysis), METAGEAR package for R (for research result identification), MMAT (for content validity evaluation), Nested Knowledge (for result visualization and analysis), PICO Portal (for artificial intelligence-based evidence mapping), Rayyan (for citation organization and tracking), ROBIS (for study selection and appraisal), SluRp (for data tracking and analysis), SRDR+ (for research question data management),

SWIFT-Active Screener (for evidence mapping), and Systematic Review Accelerator (for abstract screening disagreement detection).

3. Literature Review

Human-like tactile sensing and perception technologies, 3D image generation and visual perception algorithms, augmented reality body scans, and physio- and neuro-behavioral sensors can be leveraged for 3D-aware virtual clothed human generation and reconstruction, contextual deep convolutional neural network-based facial feature and body (Andrada, 2025; Janak et al., 2026; Rahman et al., 2025) shape virtualization, physiological and behavior data sharing and interoperability, and neural rendering-based physically-simulated garments and photorealistic clothing. 3D human clothed avatar and realistic facial image reconstruction, full-body avatar representation and movement predictions, photorealistic synthetic human representation and clothing animation, and facial movement detection and recognition (Balica, 2025; Csorba et al., 2025; Meng, 2025; Park and Hong, 2021) develop on image-based 3D reconstruction and neuromorphic synthetic intelligence technologies, geospatial mapping and semantic object recognition algorithms, augmented reality technology-powered virtual try-ons, and deep-learning-based facial expression recognition and artificial intelligence-enabled emotion communication systems.

3D pose mapping and estimation, motion capture animation, hyperrealistic anthropomorphic appearance, and physically-realistic clothing simulation (Beckett, 2022; Herman et al., 2025; Ota and Nakano, 2021) integrate remote sensing and affective haptics technologies, multi-modal image-based 3D object detection and scene perception algorithms, neuromorphic and bio-inspired computing systems, and 3D facial avatar makeup simulation and generative artificial intelligence virtual try-on tools. Photorealistic appearance and social simulation emotion modeling, 3D human body texture, shape, and pose estimation, multi-sensory object localization and recognition, and deep learning-based visual reasoning and sentiment analysis (Bratu, 2022; Dabija et al., 2024; Lu and Chia, 2026; Newell, 2022) require hyper-realistic augmented reality beauty and computer-generated imagery technologies, neuromorphic vision sensor and multimodal biosignal data, cognitive and affective algorithms, and sensor-based gesture recognition and artificial sensory neural network systems for emotionally expressive animatable photorealistic full-body avatars.

Animatable neural human avatar generative modeling, image-based temporally coherent visual and spatial semantic representation, photorealistic avatar garments and clothing appearance, and mediated virtual self-expression and representation (Chen et al., 2025; Maes et al., 2025; Wu et al., 2025) necessitate 3D virtual try-on and neuromorphic synthetic intelligence tech-

nologies, 3D visual motion and emotion analytics algorithms, deep learning-based gesture recognition and artificial tactile sensory systems, and real-time high accuracy voice analytics capabilities. Internet of Things-based machine vision and synthetic speech augmentation devices, deep learning-based multimodal emotion recognition and 3D human body reconstruction technologies, beauty filter-based appealing self-presentation and multimodal visual interaction tools, and object detection and categorization algorithms (Cîrstea, 2024; Lăzăroiu, 2024; Perkins, 2022; Zvarikova et al., 2023) are pivotal in virtual body appearance variations, 3D human body shape and animatable full-body appearance modeling, face angle detection and full-body motion capture analysis, and deep learning-based skeletal motion prediction.

4. Case Studies

Wondershare UniConverter can restore natural skin texture, FaceApp can be deployed for aging/de-aging effects, haircut simulation, virtual makeup, and skin tone and expression adjustment, VanceAI Portrait Retoucher can correct skin tone and removes acne, and Picsart's beauty artificial intelligence technologies can fix minor flaws and brighten eyes. YouCam's beauty filters can edit face shape and smooth out skin imperfections for a flawless complexion by optimizing lipstick, eyeliner, and blush features. Maybelline's virtual makeup try-on tools are leveraged for blemish removal, softer face shape, and skin smoothing, leading to realistic beauty transformations. Evoto AI Photo Editor's makeup filter tools can adjust skin tones for flawless self-expression and natural looking effects with regard to virtual beauty enhancements, replicating subtle blush.

Vivid Glam's portrait and makeup tools can reshape face, conceal blemishes, smoothen skin, brighten eyes, and whiten teeth, refining appearance for a natural look. FaceTune's virtual makeup tools and beauty filters can alter hair color and hairstyle, while being instrumental in retouching facial features, enhancing eyes and lips, smoothing skin, and whitening teeth. Fotor's artificial intelligence-driven beauty filters and skin retouch tools can enhance facial features and cover skin defects and imperfections for a flawless transformation by removing blemishes and wrinkles. BeautyPlus is pivotal for teeth whitening, face reshaping and slimming, and blemish removal, blurring imperfections and eliminating acne for a flawless complexion. VanceAI Portrait Retoucher can remove wrinkles and blemishes, Wondershare UniConverter can fix imperfections for natural skin texture and sharpen facial features, and Media.io can smooth skin, fixes blurry faces, and brightens eyes.

Vivid Glam's face and body reshaper tools can smoothen skin, slim face and adjust jawline, narrow/broaden forehead, redimension chin, change eye and mouth size, adjust nose size and brow thickness and height, show off lip

color, and remove skin imperfections. FaceApp's artificial intelligence beauty apps and makeup filters are pivotal in appearance modification by skin tone and subtle retouch analysis, dark circle assessment, hairstyle and color try-ons, redness mapping, and blemish-free touch-ups. Evoto AI Photo Editor's virtual makeup filter try-ons integrate maximum eye impact shadows and liners, optimizing hyper-personalized beauty retouch practices and realistic visual standards. Picsart's augmented reality makeup features and artificial intelligence-powered beauty content creator tools enhance facial features and skin textures and color tones for polished images and an appealing look.

Vivid Glam's artificial intelligence face editing tools and beauty filters add makeup, reshape forehead and jawline, slim forehead, and adjust head size. PrettyUp fine-tunes the body, while also comprising cheek, jaw, and face slimming features. Meitu's smart beautification tools and artistic face editing features can make eyes bigger and brighter, remove blemishes, and smooth skin. Vivid Glam's skin retouching tool can zap away blemishes and cover up uneven tone or redness, YouCam Video leverages body editing tools for face slimming and chin reshaping, BeautyPlus' makeup filters can improve skin quality, FaceApp can remove spots and imperfections and add volume to hair for a real-time glam look, and AirBrush can narrow noses and resize eyes.

Artificial intelligence-based PhotoDirector's makeup filter apps reshape and refine facial features, removing blemishes and optimizing forehead, jaw, and chin. Meitu's human facial and body technologies, artificial intelligence-skin analysis software, image recognition tools, and virtual makeup try-ons can fine-tune mood and behavior, alter facial proportions by reshaping and contouring, and bring out skin texture.

5. Results

Artificial intelligence-driven beauty retouching tools can retain natural skin texture by freckle and acne removal for a perfect complexion, polished realistic look, and radiant skin, maintaining a natural appearance and a vibrant look while possibly increasing body dysmorphia and altered self-image negative effects. Artificial intelligence makeup and beauty filters (Harcourt et al., 2025; Millière, 2022; Wang, 2024) can refine skin tones and textures, remove redness, blemishes, and pores, boost hair volume and recoloring, and hide stray strands, enhancing natural appearance and creating stunning images, thus promoting idealized beauty images and standards. Social comparisons and insecurities related to unattainable and unrealistic beauty ideals and standards (Corpodean et al., 2022; Mavritsakis et al., 2022; Mihăilă, 2022; Popescu, 2024) impact self-image by not reflecting real appearance. Augmented reality beauty face filter technologies and makeup filter and virtual try-on tools (Grieger et al., 2025; Konings et al., 2025;

Sonmez and Esiyok, 2022) can optimize skin texture, pigmentation, tone detection, and whitening.

By facial feature detection, recognition, tracking, and analysis, augmented reality and artificial intelligence beauty technologies (Digennaro and Tescione, 2024; Hu and Ge, 2025; Rice, 2022) can correct uneven skin tones, eliminate spots and blemishes, tweak eyebrow shape and eyelashes length, enhance lip shape, and smooth skin and brighten eyes, maintaining a consistent polished natural or flawless makeup look while furthering digital beauty manipulation effects. Virtual artificial intelligence makeup tools (Foster and Baker, 2022; Morikawa et al., 2021; Vizcaíno-Verdú et al., 2025) can be harnessed for eye makeup and partial skin adjustments, acne, blemish, and complexion correction, accurate shade matching, real-time hair color simulation, realistic personalized facial contouring, and teeth color brightening, removing stains and creating a radiant smile, and thus for a flawless natural and polished authentic look. Virtual makeup filters and try-ons (Eldaly and Mashaly, 2022; Mihăilă, 2024; Szydło et al., 2025) can be leveraged for skin tone and waist size optimization, real-time facial feature tracking and modification, and nose narrowing for aesthetic appeal optimization.

6. Discussion

Motion pose capture and augmented reality try-on technologies, object detection and categorization algorithms, image-based 3D scene representation 3D facial analysis tools, and artificial tactile sensory and motion-based gesture recognition systems are instrumental in animatable 3D-aware clothed human generation and modeling, 3D human body pose and shape reconstruction and estimation, behavioral pattern and sensor data context-aware interpretation, and simulation data reconstructed appearance for artificial intelligence-generated hyper-realistic body-inclusive avatars. This result is consistent with previous studies, such as Andrada (2025), Beckett (2022), Digennaro and Tescione (2024), Herman et al. (2025), Konings et al. (2025), Meng (2025), Mihăilă (2024), Sonmez and Esiyok (2022), and Vizcaíno-Verdú et al. (2025).

Hyper-realistic augmented reality-powered makeup filters, motion tracking and visual perception algorithms, 3D facial avatar makeup simulation and digital twin-based detailed body shape representation tools, and neuromorphic and bio-inspired computing systems configure 3D-aware human facial appearance and expression analysis, 3D human body shape and pose appearance, deep learning-based skeletal motion recognition, and 3D clothed avatar and facial appearance reconstruction. Artificial visual perception and augmented reality face makeup systems, digital self-monitoring and self-tracking tools, image and voice recognition technologies, and beauty filter

and affective computing algorithms articulate generative artificial intelligence digital twin-based socio-spatial and physics-based appearance modeling, sensor-based situational awareness and physiological data, photorealistic deep neural network-based digital human reconstruction, and emotional expression simulation. This study aligns with Bratu (2022), Eldaly and Mashaly (2022), Grieger et al. (2025), Lăzăroiu (2024), Lu and Chia (2026), Mihăilă (2022), Millière (2022), Rahman et al. (2025), Rice (2022), and Wu et al. (2025).

Beauty filter-based appealing self-presentation and realistic makeup simulation tools, object grasping and manipulation algorithms, motion-based gesture recognition and in-sensor motion perception systems, and artificial intelligence beauty and 3D augmented reality try-on technologies assist generative artificial intelligence digital twin-based virtual reality simulation, deep learning-based 3D human representation, silhouette image recognition and analysis, and 3D human body pose detection and estimation for 3D modeling technology-based digital humans. Our findings are also supported by Chen et al. (2025), Corpodean et al. (2022), Foster and Baker (2022), Janak et al. (2026), Morikawa et al. (2021), Ota and Nakano (2021), Perkins (2022), Szydło et al. (2025), and Zvarikova et al. (2023).

Deep-learning-based facial expression recognition and in-sensor motion perception systems, big data-driven facial retouching and realistic makeup simulation tools, beauty filter and multilayer perceptron algorithms, and neurobiological computation and biometric emotional artificial intelligence technologies shape convolutional neural network-based facial expression and body shape, deep learning-based 3D face and photorealistic skin appearance reconstruction, image-based 3D object and physics-based dynamic modeling, and virtual 3D texture rendering. Artificial neural network-based neuromorphic computing and in-sensor motion perception systems, visual recognition and image processing algorithms, 3D facial analysis and beauty ideal internalization tools, and augmented reality makeup try-on and virtual reality-based visual perception technologies optimize multimodal human interaction behavior simulation and modeling, convolutional neural network-based spatial scene recognition, sensor-based unstructured image collection, and 3D human pose estimation and neural cloth simulation. Our findings are consistent with Balica (2025), Cîrstea (2024), Harcourt et al. (2025), Hu and Ge (2025), Maes et al. (2025), Newell (2022), Park and Hong (2021), Popescu (2024), and Wang (2024).

7. Conclusions

Deep learning prediction and 3D location sensing algorithms, digital twin-based detailed body size representation and 3D facial analysis tools, artificial neural network-based neuromorphic computing and sensor-based gesture recognition systems, and realistic avatar and motion pose capture technologies

enable 3D garment animation and computer-based photorealistic image generation, digital human appearance, deep learning-based expressive face and clothing texture recognition, and immersive virtual avatar garment fitting.

Convolutional neural network-based gesture recognition and artificial intelligence-enabled emotion communication systems, big data-driven facial retouching and augmented reality filter-based self-face perception tools, cognitive and affective algorithms, and 3D clothing simulation and context-aware emotion recognition technologies further 3D deep neural network-based facial expression and sensory data-based 3D action recognition modeling, multi-person 3D motion prediction and pose estimation, garment texture image segmentation and design classification, and image-based 3D reconstructed scene segmentation.

Ioana Alexandra Pârvu, https://orcid.org/0009-0008-4952-1890
Zoran Simonović, https://orcid.org/0000-0002-2769-6867
Vloreen Nity Anak Mathew, https://orcid.org/0000-0002-8984-3228
Alexandra Teodora Ababii, https://orcid.org/0009-0002-0676-611
Firdaus Abdullah, https://orcid.org/0000-0002-5572-5573
Cristian Florin Ciurlău, https://orcid.org/0000-0003-4172-8236

Compliance with ethical standards
This article does not contain any studies with human participants or animals performed by the authors. Extracting and inspecting publicly accessible files (scholarly sources) as evidence, before the research began no institutional ethics approval was required.

Data availability statement
All data generated or analyzed are included in the published article.

Funding information
None.

Author contributions
All authors listed have made a substantial, direct and intellectual contribution to the work, and approved it for publication. The authors take full responsibility for the accuracy and the integrity of the data analysis.

Conflict of interest statement
The authors declare that the research was conducted in the absence of any commercial or financial relationships that could be construed as a potential conflict of interest.

Transparency statement
The authors affirm that the manuscript represents an honest, accurate, and transparent account of the research being reported, that no relevant aspects of the study have been left out, and that any inconsistencies from the research as planned (and, if significant, registered) have been clarified.

REFERENCES

Andrada, G. (2025). "Beauty Filters in Self-Perception: The Distorted Mirror Gazing Hypothesis," *Topoi* 44: 367–378. doi: 10.1007/s11245-024-10149-1.

Balica, R.-Ș. (2025). "3D Human Motion Capture and Context-Aware Emotion Recognition Technologies, Augmented Reality Body and Face Filters, and Affective Computing and Image Processing Algorithms for Idealized Appearance and Imagery," *Journal of Research in Gender Studies* 15(1): 25–32. doi: 10.22381/JRGS15120252.

Beckett, S. (2022). "Social Media-related Body Dissatisfaction, Beauty Ideal Internalization, and State Self-Objectification," *Journal of Research in Gender Studies* 12(1): 69–83. doi: 10.22381/JRGS12120225.

Bratu, S. (2022). "Idealized Online Identities, Social Appearance Comparisons, and Negative Body Image," *Journal of Research in Gender Studies* 12(1): 130–145. doi: 10.22381/JRGS12120229.

Chen, R., Xu, T. & Guo, Y. (2025). "Filtering a Beauty Justification: The Effect of Filtered Selfies on Preferences for Hedonic versus Utilitarian Products," *Marketing Letters* 36*:* 79–95. doi: 10.1007/s11002-024-09728-4.

Cîrstea, M. (2024). "Tactile Sensory Neuromorphic Computing and Artificial Intelligence Beauty Technologies, 3D Facial Avatar Makeup Simulation and Big Data-driven Facial Retouching Tools, and Visual Cognitive and Skeleton-based Action Recognition Algorithms for Body Dissatisfaction and Shame," *Journal of Research in Gender Studies* 14(2): 67–82. doi: 10.22381/JRGS14220244.

Corpodean, H., Tudosă, P., Popescu, K. C., and Petreanu, A.-M.-S. (2022). "Augmented Reality Beauty Apps for Idealized Facial and Bodily Appearances: Low Self-Esteem and Self-Image, Cognitive and Affective Engagement, and Negative Emotional States," *Journal of Research in Gender Studies* 12(2): 79–94. doi: 10.22381/JRGS12220225.

Csorba, L. M., Dabija, D.-C., and Pop, N. H. (2025). "Can Well-Being and Socializing through Fitness Foster the Fitness Center Satisfaction and Loyalty? Empirical Research in a Post-Crisis Context," *Studies in Business and Economics* 20(2): 47–69. doi: 10.2478/sbe-2025-0024.

Dabija, D.-C., Csorba, L. M., Pop N. H., and Obadă, D.-R. (2024). "The Impact of Extraversion and Introversion on Millennials Propensity to Recommend Their Preferred Fitness Center," *Behavioral Sciences* 14(1): 22. doi: 10.3390/bs14010022.

Digennaro, S., and Tescione, A. (2024). "Scrolls and Self-perception, Navigating the Link between Social Networks and Body Dissatisfaction in Preadolescents and Adolescents: A Systematic Review," *Frontiers in Education* 9: 1390583. doi: 10.3389/feduc.2024.1390583.

Eldaly, A. S., and Mashaly, S. M. (2022). "The New Dilemma of Plastic Surgery and Social Media: A Systematic Review," *European Journal of Plastic Surgery* 45: 371–382. doi: 10.1007/s00238-021-01891-5.

Foster, J., and Baker, J. (2022). "Muscles, Makeup, and Femboys: Analyzing TikTok's 'Radical' Masculinities," *Social Media + Society* July–September: 1–14. doi: 10.1177/20563051221126040.

Grieger, J. D., Oliveira, L., and Botelho-Francisco, R. E. (2025). "Impacts of Facial Filters on Instagram: Self-Image, Digital Vulnerability, and Aesthetic Standards

in Brazil," *Current Psychology* 44: 19175–19193. doi: 10.1007/s12144-025-08475-7.

Harcourt, D., Krauter, M. A., Guest, E., and Bogart, K. R. (2025). "Moving beyond the Individual: The Impact and Importance of Sociocultural Influences on Visible Difference," *Body Image* 53: 101900. doi: 10.1016/j.bodyim.2025.101900.

Herman, A. A., Brammer, S. E., and Punyanunt-Carter, N. M. (2025). "Face Off: Exploring College Students' Perceptions Regarding Face Filters on TikTok," *Media Watch* 16(1): 93–107. doi: 10.1177/09760911241291950.

Hu, T., and Ge, L. (2025). "Datafication of Digital Intimacy: The Dual Logic of Empowerment and Commodification," *Games and Culture*. doi: 10.1177/15554120251358522.

Janak, R., Bhana, D., and Reddy, V. (2026). "Fun, Flirtation and Fear: Selfies in Teenage Girls Digital Exchange Cultures," *Children & Society* 40(1): 8–24. doi: 10.1111/ chso.12891.

Konings, F., Vandenbosch, L., Fitzgerald, K., Fardouly, J., Beelen, E., Tabruyn, T., et al. (2025). "Adolescents' Sexualized Self-Presentations on Social Media: A Cross-National Data Donation Study," *Media Psychology*. doi: 10.1080/15213269.2025.2509500.

Lăzăroiu, G. (2024). "Emotion Recognition and Visual Matching Algorithms, Augmented Reality Makeup Try-on and 3D Body Scanning Technologies, and Artificial Neural Network-based Neuromorphic Computing and In-Sensor Motion Perception Systems for Physical Appearance and Attractiveness," *Journal of Research in Gender Studies* 14(2): 83–98. doi: 10.22381/JRGS14220245.

Lu, F., and Chia, S. (2026), "'Selfie'-Objectification: Effects of Sexually Objectifying Selfies on Young Women's Self-Objectification and Intention to Have Cosmetic Surgery," *Online Information Review* 50(1): 116–132. doi: 10.1108/OIR-12-2024-0805.

Maes, C., Fardouly, J., and Vandenbosch, L. (2025). "A Qualitative Exploration of Belgian Adolescents' and Young Adults' Views on Idealized and Body Positive Content on Social Media," *Body Image* 54: 101938. https://doi.org/10.1016/j.bodyim.2025.101938.

Mavritsakis, N., Mîrza, T. V., Mîrza, C. M., Dragoş, O., and Pop, N. H. (2022). "Aging and Life Expectancy during the COVID-19 Pandemic," *Health, Sports & Rehabilitation Medicine* 23(1): 34–39. doi: 10.26659/pm3.2022.23.1.34.

Meng, T. (2025). "'Fair-Skinned, Young and Slim' or 'Kardashian-Style': UK-based Female Chinese International Students' Self-Presentation on Mobile Dating Applications," *Feminist Media Studies*. doi: 10.1080/14680777.2025.2514793.

Mihăilă, R. (2022). "Augmented Reality Face Filters for Unrealistic Physical Appearance and Beauty Images: Contextual Visual Meanings, Negative Thoughts and Behaviors, and Social Interactions and Comparisons," *Journal of Research in Gender Studies* 12(2): 112–127. doi: 10.22381/JRGS12220227.

Mihăilă, R. (2024). "Bio-Inspired Artificial Perceptual and Aesthetic Self-Monitoring Devices, Augmented Reality-based Body-Enhancing and 3D Virtual Garment Simulation Technologies, and Emotion Recognition and Image Processing Algorithms for Body Image Self-Consciousness," *Journal of Research in Gender Studies* 14(2): 51–66. doi: 10.22381/JRGS14220243.

Millière, R. (2022). "Deep Learning and Synthetic Media," *Synthese* 200: 231. doi: 10.1007/s11229-022-03739-2.

Morikawa, C., Kobayashi, M., Satoh, M., Kuroda, Y., Inomata, T., Matsuo, H., et al. (2021). “Image and Video Processing on Mobile Devices: A Survey,” *The Visual Computer* 37: 2931–2949. doi: 10.1007/s00371-021-02200-8.

Newell, M. (2022). “Beauty Apps and Filters in Visual Digital Cultures: Perceived Sociocultural Pressures, Self-Rated Emotional Expressiveness, and Image Processing Algorithms,” *Journal of Research in Gender Studies* 12(2): 144–159. doi: 10.22381/JRGS12220229.

Ota, C., and Nakano, T. (2021). “Neural Correlates of Beauty Retouching to Enhance Attractiveness of Self-Depictions in Women,” *Social Neuroscience* 16(2): 121–133. doi: 10.1080/17470919.2021.1873178.

Park, S., and Hong, S.-K. (2021). “Performing Whiteness: Skin Beauty as Somatechnics in South Korean Stardom and Celebrity,” *Celebrity Studies* 12(2): 299–313. doi: 10.1080/19392397.2021.1912258.

Perkins, J. (2022). “Augmented Reality Beauty Apps for Physical Appearance and Attractiveness: Face and Body Emotion Recognition Processes, Negative Mood and Self-Esteem, and Appealing Self-Presentation,” *Journal of Research in Gender Studies* 12(2): 95–111. doi: 10.22381/JRGS12220226.

Popescu, L. (2024). “Deep Learning-based Gesture Recognition and In-Sensor Motion Perception Systems, Wearable Artificial Intelligence and Aesthetic Self-Monitoring Devices, and Beauty Filter and Visual Sentiment Algorithms for Problematic Body Image,” *Journal of Research in Gender Studies* 14(2): 99–114. doi: 10.22381/JRGS14220246.

Rahman, E., Rao, P., Sayed, K., Webb, W. R., Sadeghi-Esfahlani, S., Yu, N., et al. (2025). “Is Asymmetry the New Perfect? Redefining Beauty with Artificial Intelligence,” *Aesthetic Plastic Surgery*. doi: 10.1007/s00266-025-05353-2.

Rice, L. (2022). “Social Media Appearance Pressures, Body Image Concerns, and Harmful Self-Objectification Processes,” *Journal of Research in Gender Studies* 12(1): 24–38. doi: 10.22381/JRGS12120222.

Sonmez, M., and Esiyok, E. (2022). “The Importance of Media on Decision to Undergo Cosmetic Surgery Operation,” *Aesthetic Plastic Surgery* 46: 3101–3107. doi: 10.1007/s00266-022-03139-4.

Szydło, J., Bonciu, C. I., Burcea, Ș. G., and Dumitrescu, C.-O. (2025). “3D Virtual Garment Simulation and Augmented Reality-based Body-enhancing Technologies, Neuromorphic Tactile Recognition and In-Sensor Motion Perception Systems, and 3D Facial Avatar Makeup Simulation and Digital Twin-based Detailed Body Shape Representation Tools for Idealized Beauty Images,” *Journal of Research in Gender Studies* 15(1): 41–48. doi: 10.22381/JRGS15120254.

Vizcaíno-Verdú, A., Feijoo, B., and Sádaba, C. (2025). “Behind the Adolescent Filter: Unveiling the Connection Between Digital Body Image Edition, Satisfaction and Well-Being,” *Atlantic Journal of Communication* 33(4): 597–610. doi: 10.1080/15456870.2025.2470737.

Wang, J. (2024). “Bridging the Self’s Worlds: Young Girls’ Creative TikTok Expressions of Multimodal Literacy during Covid-19,” *Journal of Early Childhood Literacy*. doi: 10.1177/14687984241270820.

Wu, Y., Kemps, E., and Prichard, I. (2025). “Mind Your Figure! Watch, but Don’t Eat”: A Content Analysis of Eating and Appearance-related Messages in Eating Videos on Social Media,” *Body Image* 53: 101883. doi: 10.1016/j.bodyim.2025.101883.

Zvarikova, K., Frajtova Michalikova, K., Harba, J.-N., Stupu, A. D., and Pârvu, I. A. (2023). “Multi-sensory Perception and Deep Learning-based Virtual Try-on Technologies for Body Shape and Attractiveness, Unrealistic Societal Beauty Standards, and Thinness Ideal Internalization,” *Journal of Research in Gender Studies* 13(2): 39–53. doi: 10.22381/JRGS13220233.