pISSN 0216-2482
eISSN 2356-4067

MKMI

MEDIA KESEHATAN MASYARAKAT INDONESIA

The Indonesian Journal of Public Health

Terakreditasi Nomor : 12/M/Kp/II/2015
Bekerjasama dengan IAKMI

Volume 17 Nomor 3, September 2021

JOURNAL ISSUE

Published by Public Health Faculty, Hasanuddin University
Quarterly Publication
View Current Issue

SOCIAL SHARE

Published Volumes

2013-2025

2025
2024
2023
2022
2021
2020
2019
2018
2017
2016
2015
2014
2013

CITATION

Citedness in Scopus

STAT COUNTER

Visitors See more

271,790	322	139
15,969	287	134
10,937	267	122
976	219	120
787	211	117
429	171	113
370	159	100
335	148	87

FLAG Counter

0424080

View My Stats

TOOLS

turnitin
grammarly
MENDELEY

Keywords

Editorial Team

Editor in Chief

Ida Leida Maria, (SCOPUS ID : 57062982100), Department of Epidemiology, Faculty of Public Health, Hasanuddin University, Indonesia

Managing Editor

Indra Dwinata, (SCOPUS ID : 57194555111), Department of Epidemiology, Faculty of Public Health, Hasanuddin University, Indonesia

Editorial Board

Cordia Ming Yeuk Chu, (SCOPUS ID : 56435044600) Centre for Environment and Population Health, Griffith University, Australia

Mahdi Hasan Suhail, (SCOPUS ID : 55399070800) Department of Physics, University of Baghdad, Iraq

Isam Mohammed Ibrahim, (SCOPUS ID : 56200248100) Department of Physics, University of Baghdad, Iraq

Kristen Marie Hurley, (SCOPUS ID : 8502630200) Center for Human Nutrition, International Health, The Johns Hopkins Bloomberg School of Public Health, Baltimore, Maryland, USA

Peter Davey, (SCOPUS ID : 57192956383) School of Environment and Science, Griffith University, Australia

Wesam Al Madhoun, (SCOPUS ID : 26430526800) Global Ambassadors of Sustainability, Engineering, Gaza University, Palestine

Aini Ahmad, (SCOPUS ID : 57203645325) School of Nursing, KPJ Healthcare University College, Malaysia

Veni Hadju, (SCOPUS ID : 8684558700), Department of Nutrition, Faculty of Public Health, Hasanuddin University, Indonesia

Oktia Woro Kasmini Handayani, (SCOPUS ID : 57196057104), Nutrition, Department of Public Health, Faculty of Sport Science, Universitas Negeri Semarang, Indonesia

Ede Surya Darmawan, (SCOPUS ID : 57215313462), Department of Health Policy and Administration, Faculty of Public Health, Universitas Indonesia, Indonesia

INTERNATIONAL INDEXING

ELSEVIER Scopus

Media Kesehatan Masyarakat Indonesia
Q4 Epidemiology best quartile
SJR 2024
0.12
powered by scimagojr.com

NATIONAL ACCREDITATION

sinta

View Sertificate

MENU

EDITORIAL BOARD

Editor in Chief

Ida Leida Maria
Department of Epidemiology, Faculty of Public Health, Universitas Hasanuddin, Indonesia (SCOPUS ID : 57062982100)

Managing Editor

Indra Dwinata
Department of Epidemiology, Faculty of Public Health, Universitas Hasanuddin, Indonesia (SCOPUS ID : 57194555111)

Editorial Board

Cordia Ming Yeuk Chu, (SCOPUS ID : 56435044600) Centre for Environment and Population Health, Griffith University, Australia

Mahdi Hasan Suhail, (SCOPUS ID : 55399070800) Department of Physics, University of Baghdad, Iraq

Isam Mohammed Ibrahim, (SCOPUS ID : 56200248100) Department of Physics, University of Baghdad, Iraq

Kristen Marie Hurley, (SCOPUS ID : 8502630200) Center for Human Nutrition, International Health, The Johns Hopkins Bloomberg School of Public Health, Baltimore, Maryland, USA

Peter Davey, (SCOPUS ID : 57192956383) School of Environment and Science, Griffith University, Australia

Wesam Al Madhoun, (SCOPUS ID : 26430526800) Global Ambassadors of Sustainability, Engineering, Gaza University, Palestine

Aini Ahmad, (SCOPUS ID : 57203645325) School of Nursing, KPJ Healthcare University College, Malaysia

Veni Hadju, (SCOPUS ID : 8684558700), Department of Nutrition, Faculty of Public Health, Universitas Hasanuddin, Indonesia

Oktia Woro Kasmini Handayani, (SCOPUS ID : 57196057104), Nutrition, Department of Public Health, Faculty of Sport Science, Universitas Negeri Semarang, Indonesia

Ede Surya Darmawan, (SCOPUS ID : 57215313462), Department of Health Policy and Administration, Faculty of Public Health, Universitas Indonesia, Indonesia

IN COLLABORATION WITH

IAKMI
IKATAN AHLI KESEHATAN MASYARAKAT INDONESIA

VIEW MoU

Address
Jl. Perintis Kemerdekaan Km.10,
Faculty of Public Health, Hasanuddin University,
Tamalanrea, Makassar, South Sulawesi,
90245, Indonesia
View on Google Map

Contact Info
Principal Contact : Ida Leida M.Thaha
HP : +628114440454
Email : journal.mkmi@unhas.ac.id
: jurnal.mkmi@gmail.com

JOURNAL ISSUE

Published by Public Health Faculty, Hasanuddin University
Quarterly Publication
View Current Issue

SOCIAL SHARE

Published Volumes

2013-2025

- 2025
- 2024
- 2023
- 2022
- 2021
- 2020
- 2019
- 2018
- 2017
- 2016
- 2015
- 2014
- 2013

CITATION

Citedness in Scopus

STAT COUNTER

Visitors See more

0424079

View My Stats

TOOLS

turnitin
grammarly
MENDELEY

Keywords

Home / Archives / Vol. 21 No. 3: SEPTEMBER 2025

Media Kesehatan Masyarakat Indonesia accepts scientific papers in the form of research reports (original research papers), systematic literature reviews, meta-analyses with a focus on the development of public health issues problems in Indonesia, including the developments and main problems in the field of epidemiology; Health Promotion; Environmental Health, Occupational Health, and Safety, Health Administration and Policy, Biostatistics, Reproductive Health, Hospital Management, Nutrition Science, Health Information Systems in Regional of Indonesia. Media Kesehatan Masyarakat Indonesia collaborates with the Professional Organization of the Ikatan Ahli Kesehatan Masyarakat Indonesia (IAKMI) in terms of assisting the advancement of public health science and the dissemination of research results. Although focused on the Indonesia region, MKMI does not preclude manuscript beyond the region which has correlative and/or comparable issues within that geographical scope. Articles published in Media Kesehatan Masyarakat Indonesia go through a double-blind peer-review process. Therefore, the decision to accept scientific articles is in the right of the Editorial Board based on peer reviewers' recommendations.

DOI: https://doi.org/10.30597/mkmi.v21i3

Articles

Adaptation of Moringa Leaf Extract on Hemoglobin and Arm Circumference in Adolescent Girls Semarang

Sri Achadi Nugraheni [1], Ari Yuniastuti [2], Suryani As'ad [3], Pingkan Fristiwi [4], Fatimah Asri Fadhilah Aulia [5], Shafa Alya Kamila [6]
(1) Faculty of Public Health, Universitas Diponegoro, Semarang, Indonesia,
(2) Faculty of Mathematics and Natural Sciences, Universitas Negeri Semarang, Indonesia,
(3) Hasanudin University Postgraduate Program, Makassar, Indonesia,
(4) Faculty of Public Health, Universitas Diponegoro, Semarang, Indonesia,
(5) Faculty of Public Health, Universitas Diponegoro, Semarang, Indonesia,
(6) Faculty of Public Health, Universitas Diponegoro, Semarang, Indonesia

Citations ? 192-199

Abstract Views : 31 Download :18 10.30597/mkmi.v21i3.43890

PDF

Understanding the Impact of Pictorial Health Warnings on Smoking Behavior Among Adolescents

Pandji Winata Nurikhwan [1], Hadrianti Haji Darise Lasari [2], Dessy Maulina [3], Mustafa Mustafa [4], Abdillah Ahsan [5], Anis Kamila Saleha [6], Indra Haryanto Ali [7]
(1) Undergraduate Medicine Study Program, Faculty of Medicine and Health Sciences, Lambung Mangkurat University, South Kalimantan, Indonesia,
(2) Department of Public Health, Faculty of Medicine and Health Sciences, Lambung Mangkurat University, South Kalimantan, Indonesia,
(3) Department of Development Economics, Faculty of Economics and Business, Lambung Mangkurat University, South Kalimantan, Indonesia,
(4) LBH Pers, Jakarta, Indonesia,
(5) Department of Economics, Faculty of Economics and Business, University of Indonesia, West Java, Indonesia,
(6) Department of Public Health, Faculty of Medicine and Health Sciences, Lambung Mangkurat University, South Kalimantan, Indonesia,
(7) Department of Public Health, Faculty of Medicine and Health Sciences, Lambung Mangkurat University, South Kalimantan, Indonesia

Citations ? 200-208

Abstract Views : 51 Download :11 10.30597/mkmi.v21i3.44773

PDF

Indoor Air Quality and Sick Building Syndrome in Selected Public Buildings in Shah Alam, Selangor

Ismaniza Ismail [1], Mohamad Solehin Zulkarnain [2], Ilyas Syafiq Darul Ridzuan [3], Yahya Thamrin [4], Nasrul Hamidin [5]
(1) Faculty of Applied Sciences, Universiti Teknologi MARA, 40450 Shah Alam, Selangor, Malaysia,
(2) Faculty of Applied Sciences, Universiti Teknologi MARA, 40450 Shah Alam, Selangor, Malaysia,
(3) Institute of Medical Science Technology, Universiti Kuala Lumpur, 43000 Kajang, Selangor, Malaysia,
(4) Department of Occupational Health and Safety, Universitas Hasanuddin, Makassar, Indonesia,
(5) Faculty of Civil Engineering & Technology, Universiti Malaysia Perlis, 02600 Arau, Perlis, Malaysia

Citations ? 209-217

Abstract Views : 64 Download :12 10.30597/mkmi.v21i3.45527

PDF

Relationship Between Cadres Knowledge and Ability to Document Arumdalu Integrated Service Posts (Posyandu) Information System Reports

Devi Pramita Sari [1], Andi Zulkifli [2]
(1) Bachelor of Hospital Administration Department, Faculty of Health Sciences, Duta Bangsa University, Surakarta, Indonesia,
(2) Department of Epidemiology, Faculty of Public Health, Hasanuddin University, Makassar, Indonesia

Citations ? 218-224

Abstract Views : 4 Download :2 10.30597/mkmi.v21i3.44382

PDF

Clustering Community Risk Behaviors for Non-Communicable Diseases in Indonesia: Based on Indonesian Health Survey Data

Hanif Pandu Suhito [1], Mahalul Azam [2], Dina Nur Anggraini Ningrum [3], Sholikun Sholikun [4]
(1) Doctoral of Public Health, Faculty of Medicine, Semarang State University, Semarang, Indonesia,
(2) Department of Public Health, Faculty of Medicine, Semarang State University, Semarang, Indonesia,
(3) Department of Public Health, Faculty of Medicine, Semarang State University, Semarang, Indonesia,
(4) Department of Health Resource, Semarang City Health Office, Semarang, Indonesia

Citations ? 225-235

Abstract Views : 0 Download :0 10.30597/mkmi.v21i3.45641

PDF

Cost-Effectiveness and Feasibility of Anemia Management in Pregnant Women: A Systematic Review

Della Winanti [1], Isra Yanti [2], Nurul Fitriyah [3], Sirajul Munira [4], Mufdlillah Mufdlillah [5], Firdaus Hafidz [6]
(1) Master of Midwifery Program, Faculty of Health Sciences, Universitas 'Aisyiyah Yogyakarta, Indonesia,
(2) Master of Midwifery Program, Faculty of Health Sciences, Universitas 'Aisyiyah Yogyakarta, Indonesia,
(3) Master of Midwifery Program, Faculty of Health Sciences, Universitas 'Aisyiyah Yogyakarta, Indonesia,
(4) Master of Midwifery Program, Faculty of Health Sciences, Universitas 'Aisyiyah Yogyakarta, Indonesia,
(5) Master of Midwifery Program, Faculty of Health Sciences, Universitas 'Aisyiyah Yogyakarta, Indonesia,
(6) Department of Health Policy and Management, Faculty of Medicine, Public Health, and Nursing, Universitas Gadjah Mada, Indonesia

Citations ? 236-247

Abstract Views : 0 Download :0 10.30597/mkmi.v21i3.46022

PDF

Multivariate Analysis of Risk Factors for Destructive Behavior in Children in Indonesia

Nany Hairunisa [1], Husnun Amalia [2], Agnes Tineke Waney Rorong [3], Yasmine Mashabi [4], Muhammad Amru Hammam El Putra [5], Asrenee Ab. Razak [6]
(1) Occupational Medicine Department, Faculty of Medicine, Universitas Trisakti, Jakarta, Indonesia,
(2) Ophthalmology Department, Faculty of Medicine, Universitas Trisakti, Jakarta, Indonesia,
(3) Psychiatric Department, Faculty of Medicine, Universitas Trisakti, Jakarta, Indonesia,
(4) Clinical Pathology Department, Faculty of Medicine, Universitas Trisakti, Jakarta, Indonesia,
(5) Undergraduate Medical Study Program, Faculty of Medicine, Universitas Trisakti, Jakarta, Indonesia,
(6) Department of Psychiatry, School of Medical Sciences, Health Campus, Universiti Sains Malaysia, Penang, Malaysia

Citations ? 248-258

Abstract Views : 0 Download :0 10.30597/mkmi.v21i3.46018

PDF

INTERNATIONAL INDEXING

ELSEVIER Scopus

Media Kesehatan Masyarakat Indonesia
Q4 Epidemiology best quartile
SJR 2024 0.12
powered by scimagojr.com

NATIONAL ACCREDITATION

sinta

View Sertificate

MENU

Editorial Team
Peer Reviewers
Peer Review Process
Focus and Scope
Publication Ethics
Online Submission Guidelines
Plagiarism Check
Article Processing Charge
Policies
License Term
Statistics
Template
Journal History
Indexing

EDITORIAL BOARD

IN COLLABORATION WITH

IAKMI
IKATAN AHLI KESEHATAN MASYARAKAT INDONESIA

VIEW MoU

Address
Jl. Perintis Kemerdekaan Km.10,
Faculty of Public Health, Hasanuddin University,
Tamalanrea, Makassar, South Sulawesi, 90245, Indonesia
View on Google Map

Contact Info
Principal Contact : Ida Leida M.Thaha
HP : +628114440454
Email : journal.mkmi@unhas.ac.id
: jurnal.mkmi@gmail.com

[MKMI] Submission Acknowledgement

External Inbox ×

Ida Leida Maria via Unhas-Journals <uhjournal@unhas.ac.id> 8:38 PM (0 minutes ago)

to me

Nany Hairunisa:

Thank you for submitting the manuscript, "Multivariate Analysis of Risk Factors for Destructive Behavior in Children in Indonesia: A study on risk factors of destructive behaviour" to Media Kesehatan Masyarakat Indonesia. With the online journal management system that we are using, you will be able to track its progress through the editorial process by logging in to the journal web site:

Submission URL: https://journal.unhas.ac.id/index.php/mkmi/authorDashboard/submission/46018
Username: nhairunisa

If you have any questions, please contact me. Thank you for considering this journal as a venue for your work.

Ida Leida Maria

_____ Media Kesehatan Masyarakat Indonesia Email : jurnal.mkmi@gmail.com / journal.mkmi@unhas.ac.id Web OJS : http://journal.unhas.ac.id/index.php/mkmi Phone Number : +628114440454

Submissions

My Queue 1 | Archives

Help

My Assigned

Search | Filters | New Submission

46018 **Hairunisa et al.**
Multivariate Analysis of Risk Factors for Destructive Behavior in Children in Indonesia: A stu...
1 | Submission | View

Online ISSN : 2356-4067 Print ISSN : 0216-2482

JOURNAL ISSUE

Published by Public Health Faculty, Hasanuddin University
Quarterly Publication
View Current Issue

SOCIAL SHARE

Media Kesehatan Masyarakat Indonesia (MKMI) is a scientific journal published by the Faculty of Public Health, Hasanuddin University since 2004. Media Kesehatan Masyarakat Indonesia obtained the identity serial number with pISSN 0216-2482 in 2007 and eISSN 2356-4067 in 2014. Media Kesehatan Masyarakat Indonesia accepts scientific papers in the form of research reports (original research papers), systematic literature reviews, meta-analyses with a **focus on the development of public health issues problems in Indonesia**, including the developments and main problems in the field of epidemiology; Health Promotion; Environmental Health, Occupational Health, and Safety, Health Administration and Policy, Biostatistics, Reproductive Health, Hospital Management, Nutrition Science, Health Information Systems in **Regional of Indonesia**. Media Kesehatan Masyarakat Indonesia collaborates with the Professional Organization of the Ikatan Ahli Kesehatan Masyarakat Indonesia (IAKMI) in terms of assisting the advancement of public health science and the dissemination of research results. Although focused on the Indonesia region, MKMI does not preclude manuscript beyond the region which has correlative and/or comparable issues within that geographical scope.

Articles published in Media Kesehatan Masyarakat Indonesia go through a double-blind peer-review process. Therefore, the decision to accept scientific articles is in the right of the Editorial Board based on peer reviewers' recommendations.

Scopus INDEX COPERNICUS INTERNATIONAL Google Scholar Member of Crossref

INTERNATIONAL INDEXING

ELSEVIER Scopus

Media Kesehatan Masyarakat Indonesia
Q4 Epidemiology
best quartile
SJR 2024
0.12
powered by scimagojr.com

NATIONAL ACCREDITATION

sinta S2 Science and Technology Index

View Sertificate

MEDIA KESEHATAN MASYARAKAT INDONESIA

FAKULTAS KESEHATAN MASYARAKAT UNIVERSITAS HASANUDDIN

P-ISSN : <> E-ISSN : 23564067 Subject Area : Health

1.38235
Impact

5453
Google Citations

Sinta 1
Current Acreditation

Scopus Indexed. Impact Factor

Rapid Publication. Reliable Peer-review. Low APCs. Scopus Indexed. Impact Factor 2.4.

Curr. Cardiology Reviews

Media Kesehatan Masyarakat Indonesia

COUNTRY	SUBJECT AREA AND CATEGORY	PUBLISHER	SJR 2024
Indonesia Universities and research institutions in Indonesia Media Ranking in Indonesia	Medicine - Epidemiology - Health Informatics - Health Policy - Public Health, Environmental and Occupational Health	Fakultas Kesehatan Masyarakat Universitas Hasanuddin	0.124 Q4 H-INDEX 5

PUBLICATION TYPE	ISSN	COVERAGE	INFORMATION
Journals	02162482, 23564067	2019-2024	Homepage How to publish in this journal journal.mkmi@unhas.ac.id

[redacted]
oid Publication. Reliable Peer-revie
Cs. Indexed in Scopus. Start today.
lanosci Asia Close

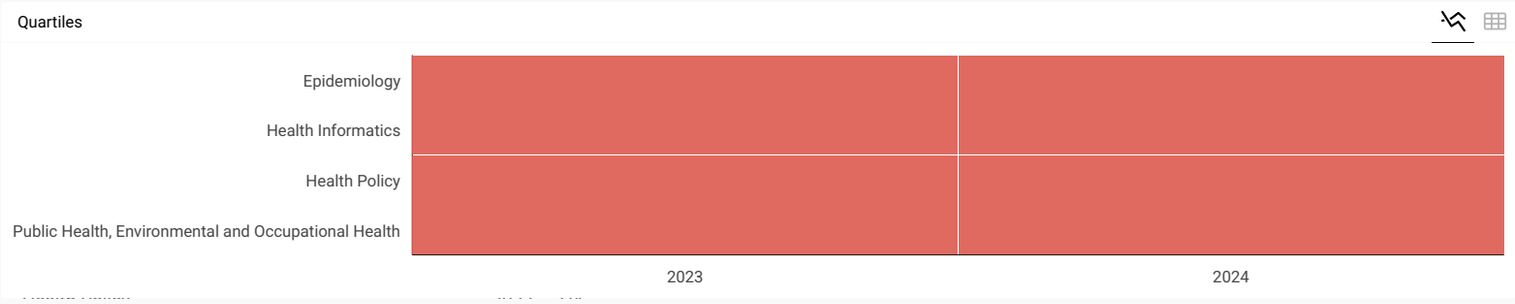
Canva Canva Pro dari Rp14.000

Choose Your Favorite
SHOP NOW
VIVAIA
Animal Fun with Adorable Walking Loafers

SCOPE

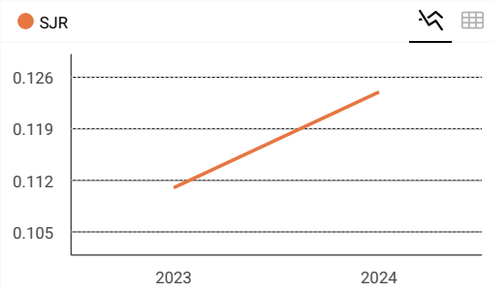
Media Kesehatan Masyarakat Indonesia (MKMI) is a scientific journal published by the Faculty of Public Health, Hasanuddin University since 2004. Media Kesehatan Masyarakat Indonesia obtained the identity serial number with pISSN 0216-2482 in 2007 and eISSN 2356-4067 in 2014. Media Kesehatan Masyarakat Indonesia accepts scientific papers in the form of research reports (original research papers), systematic literature reviews, meta-analyses with a focus on the development of public health issues problems in Indonesia, including the developments and main problems in the field of epidemiology; Health Promotion; Environmental Health, Occupational Health, and Safety, Health Administration and Policy, Biostatistics, Reproductive Health, Hospital Management, Nutrition Science, Health Information Systems in Regional of Indonesia. Media Kesehatan Masyarakat Indonesia collaborates with the Professional Organization of the Ikatan Ahli Kesehatan Masyarakat Indonesia (IAKMI) in terms of assisting the advancement of public health science and the dissemination of research results. Although focused on the Indonesia region, MKMI does not preclude manuscript beyond the region which has correlative and/or comparable issues within that geographical scope. Articles published in Media Kesehatan Masyarakat Indonesia go through a double-blind peer-review process. Therefore, the decision to accept scientific articles is in the right of the Editorial Board based on peer reviewers' recommendations.

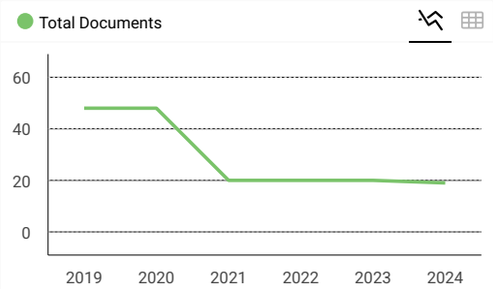
Join the conversation about this journal

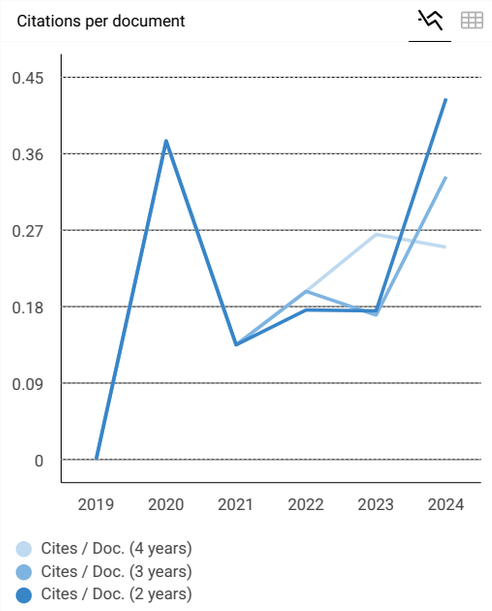


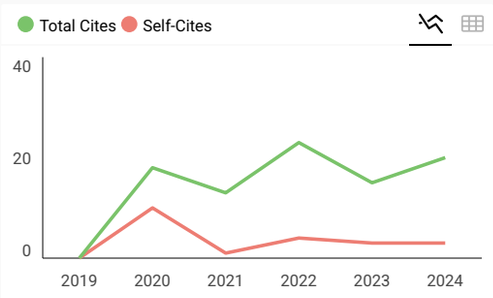
Chat with an expert Online Now
JustAnswer
Open

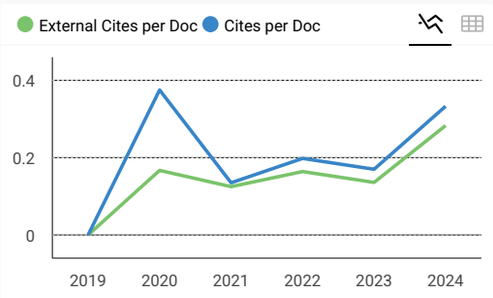
Chat with an expert Online Now
JustAnswer
Open

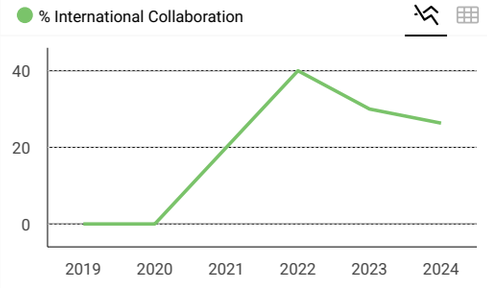


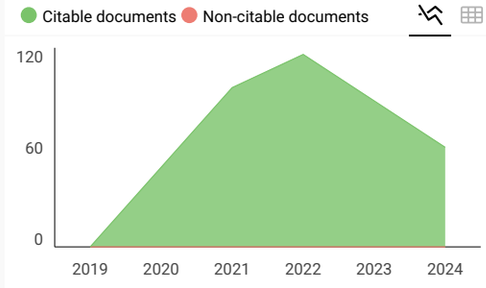


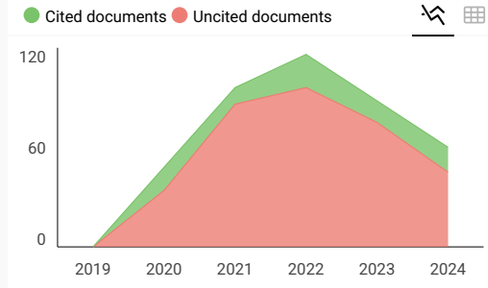


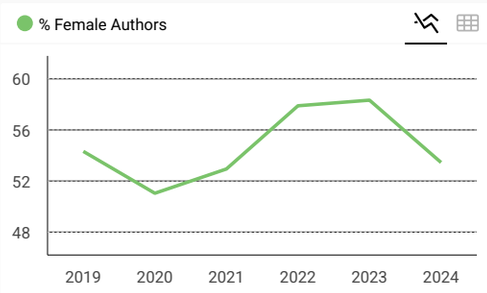


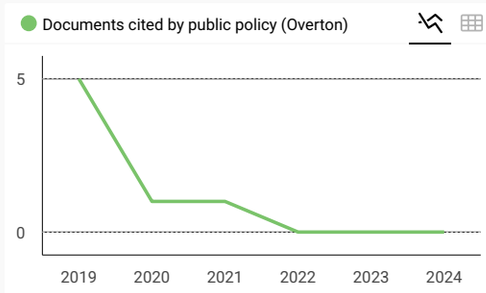


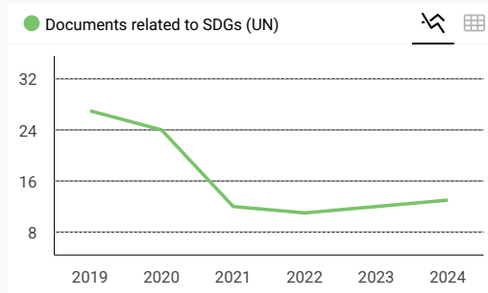


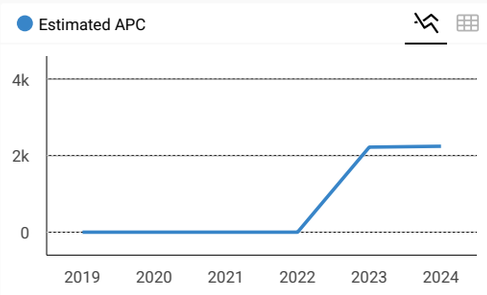


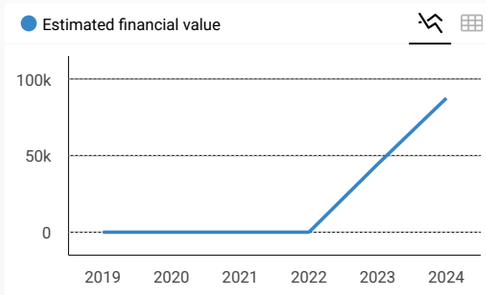












← Show this widget in your own website

Just copy the code below and paste within your html code:

<a href="https://www.scimagojr

SCImago Graphica

Explore, visually communicate and make sense of data with our **new data visualization tool**.

Metrics based on Scopus® data as of March 2025

A **ahmad landong** 10 months ago

want to look for a Q4 public health journal template

reply

SCImago Team

Melanie Ortiz 10 months ago

Dear Ahmad,
Thank you for contacting us.
We suggest you use the Journal Rankings search tool shown on our website, as the journals can be filtered by Subject Area/ Category, among others:
https://www.scimagojr.com/journalrank.php
Best Regards, SCImago Team

R **reza** 1 year ago

Hi, I want to know more about whether this journal is still indexed by scopus.after I check on the scopus portal, the coverage status is only until 2023.

reply

SCImago Team

Melanie Ortiz 1 year ago

Dear Reza, thank you very much for your comment. We suggest you consult the Scopus database directly. Keep in mind that the SJR is a static image (the update is made one time per year) of a database (Scopus) which is changing every day.
The Scopus' update list can also be consulted here:
https://www.elsevier.com/solutions/scopus/how-scopus-works/content
Best Regards, SCImago Team

Leave a comment

Name

Email
(will not be published)

I'm not a robot

reCAPTCHA
Privacy - Terms

Submit

The users of Scimago Journal & Country Rank have the possibility to dialogue through comments linked to a specific journal. The purpose is to have a forum in which general doubts about the processes of publication in the journal, experiences and other issues derived from the publication of papers are resolved. For topics on particular articles, maintain the dialogue through the usual channels with your editor.

Developed by: SCImago Powered by: Scopus

Follow us on @ScimagoJR

Scimago Lab, Copyright 2007-2025. Data Source: Scopus®

EST MODUS IN REBUS
Horatio (Satire 1,1,106)

Legal Notice

Privacy Policy

UNIVERSITAS TRISAKTI

Nany Hairunisa <nanyhairunisa@trisakti.ac.id>

[MKMI] Editor Decision

6 messages

Indra Dwinata <uhjornal2@unhas.ac.id> Fri, Oct 3, 2025 at 10:05 AM
To: Nany Hairunisa <nanyhairunisa@trisakti.ac.id>, Husnun Amalia <husnun_a@trisakti.ac.id>, Agnes Tineke Waney Rorong <agnestwr@trisakti.ac.id>, Yasmine Mashabi <yasmine.mashabi@trisakti.ac.id>, Muhammad Amru Hammam EL Putra <moh.hammam21@yahoo.com>, "Asrenee Ab. Razak" <asrenee@usm.my>

Nany Hairunisa, Husnun Amalia, Agnes Tineke Waney Rorong, Yasmine Mashabi, Muhammad Amru Hammam EL Putra, Asrenee Ab. Razak:

We have reached a decision regarding your submission to Media Kesehatan Masyarakat Indonesia, "Multivariate Analysis of Risk Factors for Destructive Behavior in Children in Indonesia: A study on risk factors of destructive behaviour".

Our decision is: Revisions Required

_____ Media Kesehatan Masyarakat Indonesia Email : jurnal.mkmi@gmail.com / journal.mkmi@unhas.ac.id Web OJS : http://journal.unhas.ac.id/index.php/mkmi Phone Number : +628114440454

J-Revisions Required - 46018.docx
9482K

Indra Dwinata <uhjornal2@unhas.ac.id> Fri, Oct 3, 2025 at 10:07 AM
To: Nany Hairunisa <nanyhairunisa@trisakti.ac.id>, Husnun Amalia <husnun_a@trisakti.ac.id>, Agnes Tineke Waney Rorong <agnestwr@trisakti.ac.id>, Yasmine Mashabi <yasmine.mashabi@trisakti.ac.id>, Muhammad Amru Hammam EL Putra <moh.hammam21@yahoo.com>, "Asrenee Ab. Razak" <asrenee@usm.my>

[Quoted text hidden]

J-Revisions Required - 46018.docx
9482K

Indra Dwinata <uhjornal2@unhas.ac.id> Fri, Oct 3, 2025 at 10:08 AM
To: Nany Hairunisa <nanyhairunisa@trisakti.ac.id>, Husnun Amalia <husnun_a@trisakti.ac.id>, Agnes Tineke Waney Rorong <agnestwr@trisakti.ac.id>, Yasmine Mashabi <yasmine.mashabi@trisakti.ac.id>, Muhammad Amru Hammam EL Putra <moh.hammam21@yahoo.com>, "Asrenee Ab. Razak" <asrenee@usm.my>

[Quoted text hidden]

J-Revisions Required - 46018.docx
9482K

Indra Dwinata <uhjornal2@unhas.ac.id> Fri, Oct 3, 2025 at 10:12 AM
To: Nany Hairunisa <nanyhairunisa@trisakti.ac.id>, Husnun Amalia <husnun_a@trisakti.ac.id>, Agnes Tineke Waney Rorong <agnestwr@trisakti.ac.id>, Yasmine Mashabi <yasmine.mashabi@trisakti.ac.id>, Muhammad Amru Hammam EL Putra <moh.hammam21@yahoo.com>, "Asrenee Ab. Razak" <asrenee@usm.my>

[Quoted text hidden]

J-Revisions Required - 46018.docx
9482K

Indra Dwinata <uhjornal2@unhas.ac.id> Fri, Oct 3, 2025 at 10:14 AM
To: Nany Hairunisa <nanyhairunisa@trisakti.ac.id>, Husnun Amalia <husnun_a@trisakti.ac.id>, Agnes Tineke Waney Rorong <agnestwr@trisakti.ac.id>, Yasmine Mashabi <yasmine.mashabi@trisakti.ac.id>, Muhammad Amru Hammam EL Putra <moh.hammam21@yahoo.com>, "Asrenee Ab. Razak" <asrenee@usm.my>

[Quoted text hidden]

J-Revisions Required - 46018.docx
9482K

Indra Dwinata <uhjornal2@unhas.ac.id> Fri, Oct 3, 2025 at 10:31 AM
To: Nany Hairunisa <nanyhairunisa@trisakti.ac.id>, Husnun Amalia <husnun_a@trisakti.ac.id>, Agnes Tineke Waney Rorong <agnestwr@trisakti.ac.id>, Yasmine Mashabi <yasmine.mashabi@trisakti.ac.id>, Muhammad Amru Hammam EL Putra <moh.hammam21@yahoo.com>, "Asrenee Ab. Razak" <asrenee@usm.my>

[Quoted text hidden]

J-Revisions Required - 46018.docx
9482K

UNIVERSITAS TRISAKTI

Nany Hairunisa <nanyhairunisa@trisakti.ac.id>

[MKMI] Editor Decision

1 message

Indra Dwinata <uhjornal2@unhas.ac.id> Wed, Oct 8, 2025 at 7:53 PM
To: Nany Hairunisa <nanyhairunisa@trisakti.ac.id>, Husnun Amalia <husnun_a@trisakti.ac.id>, Agnes Tineke Waney Rorong <agnestwr@trisakti.ac.id>, Yasmine Mashabi <yasmine.mashabi@trisakti.ac.id>, Muhammad Amru Hammam EL Putra <moh.hammam21@yahoo.com>, "Asrenee Ab. Razak" <asrenee@usm.my>

Nany Hairunisa, Husnun Amalia, Agnes Tineke Waney Rorong, Yasmine Mashabi, Muhammad Amru Hammam EL Putra, Asrenee Ab. Razak:

We have reached a decision regarding your submission to Media Kesehatan Masyarakat Indonesia, "Multivariate Analysis of Risk Factors for Destructive Behavior in Children in Indonesia: A study on risk factors of destructive behaviour".

Our decision is to: Accept Submission

_____ Media Kesehatan Masyarakat Indonesia Email : jurnal.mkmi@gmail.com / journal.mkmi@unhas.ac.id Web OJS : http://journal.unhas.ac.id/index.php/mkmi Phone Number : +628114440454

K-REVISI - 46018.docx
6187K

UNIVERSITAS TRISAKTI

Nany Hairunisa <nanyhairunisa@trisakti.ac.id>

[MKMI] New notification from Media Kesehatan Masyarakat Indonesia

2 messages

Ghea <uhjornal2@unhas.ac.id> Thu, Oct 9, 2025 at 8:44 PM
Reply-To: Ida Leida Maria <journal.mkmi@unhas.ac.id>
To: Nany Hairunisa <nanyhairunisa@trisakti.ac.id>

You have a new notification from Media Kesehatan Masyarakat Indonesia:

You have been added to a discussion titled "Copy Edit" regarding the submission "Multivariate Analysis of Risk Factors for Destructive Behavior in Children in Indonesia".

Link: https://journal.unhas.ac.id/index.php/mkmi/authorDashboard/submission/46018

Ida Leida Maria

_____ Media Kesehatan Masyarakat Indonesia Email : jurnal.mkmi@gmail.com / journal.mkmi@unhas.ac.id Web OJS : http://journal.unhas.ac.id/index.php/mkmi Phone Number : +628114440454

Ghea <uhjornal2@unhas.ac.id> Thu, Oct 9, 2025 at 8:45 PM
Reply-To: Ida Leida Maria <journal.mkmi@unhas.ac.id>
To: Nany Hairunisa <nanyhairunisa@trisakti.ac.id>

[Quoted text hidden]

NANY HAIRUNISA

Universitas Trisakti

S1 - Kedokteran

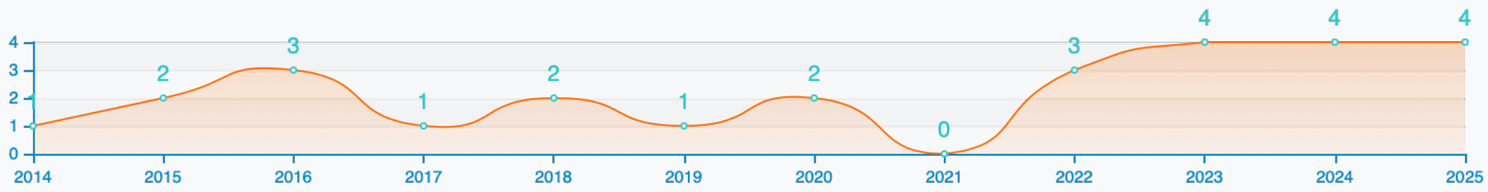
SINTA ID : 6707337

Physician | Clinical Trial | Infectious Disease (HIV/AIDS) | Occupational Health | Epidemiology and

1.138	386	1.138	386
SINTA Score Overall	SINTA Score 3Yr	Affil Score	Affil Score 3Yr

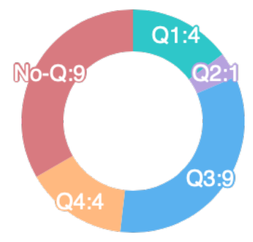
Articles Researches Community Services IPRs Books PAK Expertise Metrics

Latest number of publications

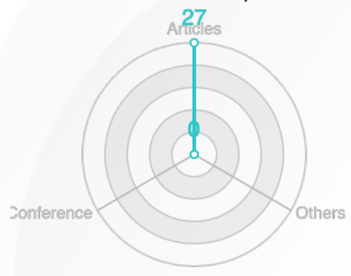


Summary

Article Quartile



Research Output



	Scopus	GScholar
Article	27	91
Citation	199	655
Cited Document	17	52
H-Index	6	12
i10-Index	6	14
G-Index	3	1

Scopus Garuda Google Scholar RAMA

Search...

Scopus Analysis

Evaluating the Effect of the Ketogenic Diet on the Reproductive and Metabolic Parameters in Iraqi Females with Polycystic Ovary Syndrome

Q3 as Journal | Al Nahrain Journal of Science

Author Order : 3 of 3 Creator : Harbi N.S.

2025 0 cited

Multivariate Analysis of Risk Factors for Destructive Behavior in Children in Indonesia

Q4 as Journal | Media Kesehatan Masyarakat Indonesia

Author Order : 1 of 6 Creator : Hairunisa N.

2025 0 cited

Organotin complexes with Schiff’s base ligands: insights into their cytotoxic effects on lung cancer cells

Q1 as Journal | Journal of Umm Al Qura University for Applied Sciences

Author Order : 11 of 11 Creator : Ibadi F.

2025 5 cited

Schiff-Base Thiadiazole-Modified Hydrogels: A Comprehensive Review of Biomedical Applications

no-Q as Journal | Al Nahrain Journal for Engineering Sciences

Author Order : 5 of 7 Creator : Muslah S.

2025 0 cited

Low Doses of Kretek Cigarette Smoke Altered Rat Lung Histometric, and Overexpression of the p53 Gene

Q4 as Journal | Open Respiratory Medicine Journal

Author Order : 0 of 8 Creator : Parwanto E.

2024 1 cited

Overview of diabetes mellitus types and medications

no-Q as Journal | Journal of University of Anbar for Pure Science

Author Order : 7 of 9 Creator : Al-Ani A.

2024 1 cited

Cognitive intervention for Mild Cognitive Impairment (MCI) among the elderly: A bibliographic network analysis of research trends

Q4 as Journal | Npg Neurologie Psychiatrie Geriatrie

Author Order : 3 of 3 Creator : Rorong A.T.W.

2024 0 cited

Relationship between Emotional Distress and Workplace Influence on Depressive Symptoms among Online Motorcycle Taxi Drivers

Q4 as Journal | Althea Medical Journal

Author Order : 2 of 7 Creator : Merijanti L.T.

2024 0 cited

Recent Studies on Cancer Cell's Inhibition by Organotin (IV) Materials: An Overview

no-Q as Journal | Al Nahrain Journal of Science

Author Order : 4 of 5 Creator : Ibadi F.

2023 2 cited

Transparency and Ethics in Chemical Laboratories

no-Q as Journal | Journal of University of Anbar for Pure Science

Author Order : 5 of 6 Creator : Al-Dahhan W.H.

2023 0 cited

HUSNUN AMALIA

Universitas Trisakti

Profesi - Profesi Dokter

SINTA ID : 5989489

Opthalmology

1.153	324	1.153	324
SINTA Score Overall	SINTA Score 3Yr	Affil Score	Affil Score 3Yr

Articles Researches Community Services IPRs Books Metrics

Latest number of publications

Scopus Garuda Google Scholar RAMA

Scopus Analysis

CONTRAST SENSITIVITY AND ASTHENOPIA ANALYSIS IN WORKERS

Q4 as Journal Acta Medica Bulgarica

Author Order : 1 of 7 Creator : Amalia H.

2025 0 cited

Multivariate Analysis of Risk Factors for Destructive Behavior in Children in Indonesia

Q4 as Journal Media Kesehatan Masyarakat Indonesia

Author Order : 2 of 6 Creator : Hairunisa N.

2025 0 cited

Overview of diabetes mellitus types and medications

no-Q as Journal Journal of University of Anbar for Pure Science

Author Order : 8 of 9 Creator : Al-Ani A.

2024 1 cited

Low Doses of Kretek Cigarette Smoke Altered Rat Lung Histometric, and Overexpression of the p53 Gene

Q4 as Journal Open Respiratory Medicine Journal

Author Order : 0 of 8 Creator : Parwanto E.

2024 1 cited

Decreased density of pyramidal cells in the cerebral cortex, and Purkinje cells in the cerebellar cortex of Sprague-Dawley rats after being exposed to filtered kretek cigarette smoke

Q3 as Journal Journal of Biological Research Italy

Author Order : 3 of 6 Creator : Tjahyadi D.

2023 2 cited

Effect of Extreme Temperature Storage on Flavonoids levels and Antibacterial activity of Lantana camara Linn. leaf extract cream

Q2 as Journal Research Journal of Pharmacy and Technology

Author Order : 2 of 7 Creator : Parwanto E.

2023 1 cited

Myocarditis Related-COVID-19 mRNA Vaccination: A Narrative Review

Q3 as Journal Al Anbar Medical Journal

Author Order : 5 of 5 Creator : Gushaendri I.

2023 0 cited

Omicron the New COVID-19 Variant, A Review

no-Q as Journal Al Nahrain Journal of Science

Author Order : 6 of 9 Creator : Abdallh M.

2022 2 cited

Developing COVID-19's Vaccines: Short Review

no-Q as Journal Al Nahrain Journal of Science

Author Order : 6 of 7 Creator : Alsayed R.

2022 0 cited

The impact of the drug methyldopa in both medical and industrial applications

no-Q as Journal Al Nahrain Journal of Science

Author Order : 5 of 7 Creator : Naoom N.E.

2022 0 cited

View more ...

Summary

Article Quartile

Research Output

	Scopus	GScholar
Article	11	68
Citation	8	468
Cited Document	6	39
H-Index	2	9
i10-Index	0	9
G-Index	1	1

AGNES TINEKE WANEY RORONG

Universitas Trisakti

S1 - Kedokteran

SINTA ID : 6729308

Jiwa

80
SINTA Score Overall

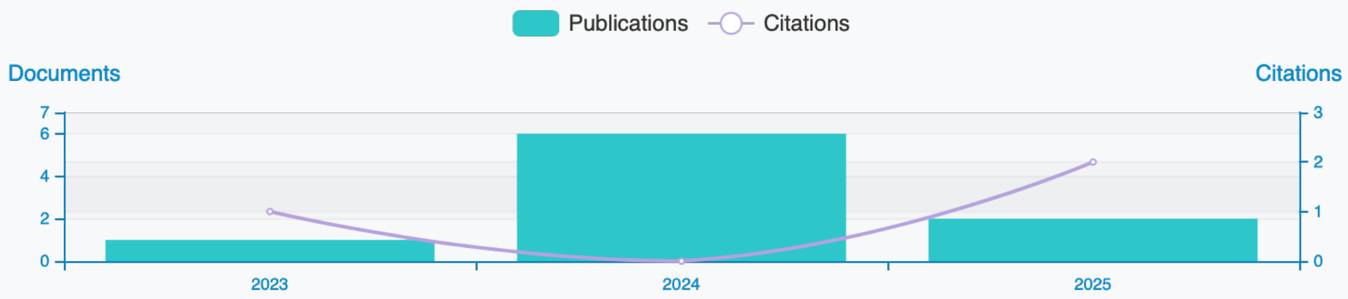
57
SINTA Score 3Yr

80
Affil Score

57
Affil Score 3Yr

Articles Researches Community Services IPRs Books PAK Expertise Metrics

Latest number of Publication and Citations



Scopus Garuda Google Scholar RAMA

Search...

Hubungan Kapasitas Cadangan Kognitif dan Kualitas Hidup Lansia

Authors : ATW Rorong, RMW Lintuuran, DP Velyani, D Satyasari, IN Fitriana Jurnal Locus Penelitian dan Pengabdian 5 (1), 449-460., 2026

2026 0 cited

Understanding The Differences Between Apheresis, Plasmapheresis, and Plasma Exchange: The Urgency of Understanding Terminology in Daily Clinical Practice

Authors : Y Mashabi, ATW Rorong, F Abdillah, H Widowati, FSR Lubis, S Arrazy, ... Jurnal Biomedika dan Kesehatan 8 (2), 111-115, 2025

2025 0 cited

Multivariate Analysis of Risk Factors for Destructive Behavior in Children in Indonesia

Authors : N Hairunisa, H Amalia, ATW Rorong, Y Mashabi, MAHE Putra, AA Razak Media Kesehatan Masyarakat Indonesia 21 (3), 248-258, 2025

2025 0 cited

Cognitive intervention for Mild Cognitive Impairment (MCI) among the elderly: A bibliographic network analysis of research trends

Authors : ATW Rorong, D Satyasari, N Hairunisa NPG Neurologie-Psychiatrie-Gériatrie 24 (140), 96-104, 2024

2024 1 cited

Hubungan Kadar Karbon Monoksida dengan Gambaran Psikopatologi dan Kognitif pada Pengemudi Ojek Online

Authors : ATW Rorong, RMW Lintuuran, DP Velyani, D Satyasari, IN Fitriana Jurnal Sehat Indonesia: Vol 6 (2), 619, 2024

2024 1 cited

Pemeriksaan Nilai Diagnostik Procalcitonin dan Protein C-Reaktif pada Sepsis: Perspektif Komprehensif Terbaru

Authors : Y Mashabi, ATW Rorong, F Abdillah Jurnal Biomedika dan Kesehatan 7 (3), 268-273, 2024

2024 0 cited

PSIKOEDUKASI TENTANG EKSPRESI EMOSI PADA PELAKU RAWAT LANSIA DENGAN DEPRESI PASCA STROKE

Authors : RMW Lintuuran, ATW Rorong, D Satyasari, A Syafita, A Kogoya, ... Jurnal Pengabdian Masyarakat Trimedika 1 (1), 105-114, 2024

2024 0 cited

PENYULUHAN DAN PELATIHAN FUNGSI KOGNITIF PADA LANSIA DI KELURAHAN KRENDANG, JAKARTA BARAT

Authors : XA Dwiputri, M Fadhlan, ZAP Sulaiman, NAN Suyatno, ATW Rorong, ... Jurnal Pengabdian Masyarakat Trimedika 1 (2), 181-188, 2024

2024 0 cited

What's new

Authors : P Pass, P Points

2024 1 cited

Research trends in brain imaging of mild cognitive impairment in 25 years: a bibliometric analysis

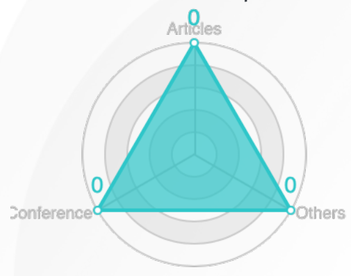
Authors : D Satyasari, ATW Rorong Universa Medicina 42 (2), 214-226, 2023

2023 1 cited

Summary

Article Quartile

Research Output



	Scopus	GScholar
Article	0	12
Citation	0	3
Cited Document	0	3
H-Index	0	1
i10-Index	0	0
G-Index	0	1

YASMINE MASHABI

Universitas Trisakti

S1 - Kedokteran

SINTA ID : 6829811

Clinical Pathology

272
SINTA Score Overall

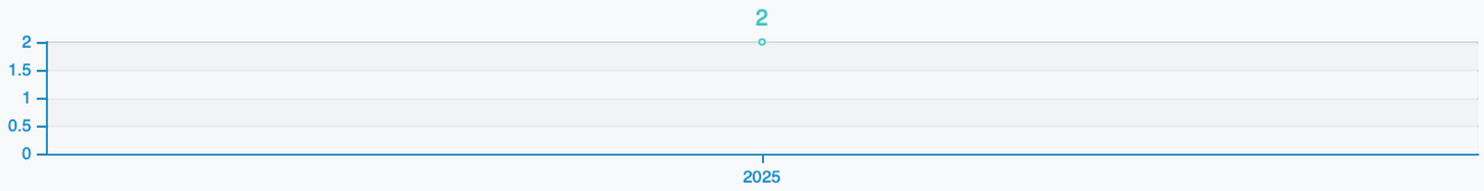
141
SINTA Score 3Yr

272
Affil Score

141
Affil Score 3Yr

Articles Researches Community Services IPRs Books PAK Expertise Metrics

Latest number of publications



Scopus Garuda Google Scholar RAMA

Search...

Scopus Analysis

Multivariate Analysis of Risk Factors for Destructive Behavior in Children in Indonesia

Q4 as Journal Media Kesehatan Masyarakat Indonesia

Author Order : 4 of 6 Creator : Hairunisa N.

2025 0 cited

Handgrip Strength of Public Works Personnel in West Jakarta

Q4 as Journal Kemas

Author Order : 4 of 4 Creator : Alvina

2025 0 cited

Previous 1 Next

Page 1 of 1 | Total Records 2

Summary

Article Quartile

Research Output

	Scopus	GScholar
Article	2	17
Citation	0	18
Cited Document	0	5
H-Index	0	3
i10-Index	0	0
G-Index	1	1

Media Kesehatan Masyarakat Indonesia
Volume 21 Issue 3 2025
DOI : 10.30597/mkmi.v21i3.46018
Website : http://journal.unhas.ac.id/index.php/mkmi

Multivariate Analysis of Risk Factors for Destructive Behavior in Children in Indonesia

Nany Hairunisa[1*], Husnun Amalia[2], Agnes Tineke Waney Rorong[3], Yasmine Mashabi[4], Muhammad Amru Hammam EL Putra[5], Asrenee Ab. Razak[6]
[1]Occupational Medicine Department, Faculty of Medicine, Universitas Trisakti, Jakarta, Indonesia
[2]Ophthalmology Department, Faculty of Medicine, Universitas Trisakti, Jakarta, Indonesia
[3]Psychiatric Department, Faculty of Medicine, Universitas Trisakti, Jakarta, Indonesia
[4]Clinical Pathology Department, Faculty of Medicine, Universitas Trisakti, Jakarta, Indonesia
[5]Undergraduate Medical Study Program, Faculty of Medicine, Universitas Trisakti, Jakarta, Indonesia
[6]Department of Psychiatry, School of Medical Sciences, Health Campus, Universiti Sains Malaysia, Penang, Malaysia
[*]Authors Correspondence: nanyhairunisa@trisakti.ac.id/+6282154171253

ARTICLE INFO

Article History:
Received Jul, 30th, 2025
Accepted Sep, 26th, 2025
Published online Sep, 30th, 2025

Keywords:
Conduct Disorders;
Children;
Disruptive Behavior;
Screen Time;
Parenting Pattern;

ABSTRACT
Conduct disorders pose a significant global burden, affecting an estimated 5.75 million children and adolescents, especially boys. Conduct disorders involve repetitive behaviors that violate others rights and can jeopardize normal relationships between children and those around them. Major behavioral issues in children often occur in both school and family settings and are closely linked to the roles of parents and teachers as educators and guides. Additionally, children at a young age are highly curious and eager to explore new things; the rapid growth of technology introduces new challenges for them. Without parental guidance, considering factors such as parenting styles, education level, socioeconomic status, and occupation, children's social lives may be significantly impacted. This study aims to analyze various risk factors associated with disruptive behavior among children in Indonesia. This cross-sectional study used a guided questionnaire involving 301 parents/guardians of children aged 2-5 years. In this regard, the researchers were assisted by data enumerators residing at the study site. Data collection was conducted in two regions in Indonesia, Greater *Jabodetabek (Jabodetabek)* and Aceh, from October 2024 to January 2025. Bivariate analyses were performed using the Chi-square test, followed by binary logistic regression to determine factors independently associated with disruptive behavior. Bivariate analysis indicated that type of content ($p = 0.017$), screen time allocation ($p = 0.018$), and parenting pattern ($p = 0.043$) were significantly associated with disruptive behavior, while other variables such as parental education, domicile, occupation, marital status, and child's age or gender showed no significant relationships. In the multivariate model, only type of content remained a significant predictor ($p = 0.018$). The study highlights that the quality of media content, rather than the amount of screen time, plays a key role in the emergence of disruptive behavior among children. Parental guidance and the selection of educational media content are essential preventive strategies. Interventions focusing on digital literacy and positive parenting may help mitigate the risk of behavioral problems in early childhood.

INTRODUCTION

Conduct disorder is a significant global burden, with an estimated 5.75 million children and adolescents experiencing this problem, especially boys.[1] Conduct disorder involves a repetitive pattern of behavior that violates the basic rights of others and can threaten normal relationships between children and those around them. The phenomenon of significant conduct disorder in children occurs in both school and family environments, and is closely tied to the roles of parents and teachers as educators and guides. Recent research conducted in Ontario, Canada, shows consistency in the presence of behavioral disorders in the general population, namely 5.5% of children aged 4-16 years have behavioral disorders, in Queensland, 6.7% in children aged 10 years, and in Dunedin, New Zealand, 6.9% in children aged 7 years.[2] Meanwhile, based on *Riset Kesehatan Dasar (RISKESDAS)* data from the Indonesian Ministry of Health in 2028, the prevalence of 9.8% of Indonesians suffering from mental behavioral disorders.[3]

Indonesia has little research on disruptive behavior in early childhood. A study conducted in 2015 by Purwati and Japar (2017:228) at PAUD Magelang found that 35% to 56% of children in each class exhibited disruptive behaveior.[4] This is in line with the results of research on professional practice data from the Center of Public Mental Health, Faculty of Psychology, UGM, which found that 34% of early childhood children have a tendency to experience behavioral disorders.[5] In addition, according to a recapitulation of emotional and behaveioral problems from the Cipto Mangunkusumo Hospital clinic in Jakarta, Bogor, Depok, Tangerang, Bekasi *(JABODETABEK)*, 27.3% of 106 early childhood patients experienced behavioral disorders.[6]

Ages 2-5 years are included in early childhood, during which children exhibit growth and development patterns in physical, cognitive, socio-emotional, creative, language, and communication aspects that adapt to the environment and phases the child is experiencing at that time. Children need to receive positive stimuli so that they can grow and develop in a good direction. One important stimulus is audio-visual media.[7] At this age, the brain is going through a significant development phase in increasing knowledge and education, so that everything received from the stimulus given will greatly impact and affect their personality in the future.[8]

As the world of technology continues to develop, more risk factors will impact society. The increasing use of mobile phones, also known as handphones (HP), also increases screen time (ST) for users who utilize audio-visual media, with children and adolescents often interacting with various types of screens and exploring diverse content.[9] Moreover, children at an early age are inquisitive and very interested in new things, and this increasingly developing technology is something new for children.[5] Without guidance/guidance from parents related to parenting patterns, parental education levels, socioeconomic and parental work, this will affect the child's social life.[9]

Several researchers have conducted numerous studies on mobile phone screen time, examining its relationship with children, both positive and negative, and its impact on the child's social life and personality. It all depends on what is watched and what is seen and learned by the child at that time.[10,11]

A longitudinal study of 491 families showed that there is a bidirectional relationship between parenting style (authoritarian, permissive, overprotective) and children's symptoms of ADHD, ODD, depression, and anxiety that is, parenting styles shape the symptoms of the disorders, and children's symptoms also shape subsequent parenting styles.[12]

Therefore, it is hoped that this study will provide insight into the landscape and examine how various factors, such as mobile phone screen time, parenting patterns, parents education, socioeconomic status, and parental work, are related to the emotional and behavioral health of children.

MATERIAL AND METHOD

Data collection was carried out from October 2024 to January 2025. The study took place in Jakarta, Bogor, Depok, Tangerang, Bekasi (*JABODETABEK)* and Aceh. The research employed an analytical design with a cross-sectional approach, using a guided questionnaire. During this process, the researcher and data enumerator interviewed parents or guardians to gather data. The accessible population consisted of parents or guardians of chil-

dren aged 2-5 years in the selected areas. Purposive sampling was used to select the sample. The total sample included 301 respondents from two targeted regions in Indonesia. The inclusion criteria of this study are parents/guardians who have children aged 2-5 years who live in *JABODETABEK* and Aceh, and the exclusion criteria are parents/guardians who have children with a history of certain psychological illnesses, such as intellectual disability, autism, and Down syndrome (based on observations and interviews with the parents/guardians of the child). The primary data sources included questionnaires, such as the Smartphone Addiction Scale-Short Version (SAS-SV)[13] and the Disruptive Behavior Disorder Scale,[14] as well as assessments of parenting patterns.[15]

Additional questions were added based on research needs, including socio-economic status, education level, and parent's occupations. Participants who met the inclusion and exclusion criteria were chosen as research subjects. Information about the child's gender and age was collected from their responses to the questionnaire. Trained researchers and data enumerators conducted guided interviews with parents or guardians and assisted in completing the questionnaires to ensure all questions were answered.

Statistical analysis was performed using SPSS for Mac v.28. The chi-square test and Fisher's exact test were used for bivariate testing. Multinomial logistic regression was used to determine whether gender, age, duration of gadget use, type of media exposure, parenting style, and smartphone addiction significantly influenced a child's risk of developing a specific behavioral disorder (ADHD, ODD, or combined ADHD and ODD) categorized as disruptive behavior compared to children who did not exhibit the disorder (normal category). The accepted safety level was 95%, and a p-value <0.05 was considered statistically significant. This study received ethical approval from the Research Ethics Committee of the Faculty of Medicine, Universitas Trisakti, with No. 001/KER/FK/11/2024.

RESULTS

This study collected primary data from October 2024 to January 2025 using a validated questionnaire to gather information from parents or guardians of children aged 2-5 years in Jakarta, Bogor, Depok, Tangerang, Bekasi (*JABODETABEK)*, and Aceh.

This study included 301 participants who were parents or guardians of children aged 2 to 5 years. Based on age distribution, the majority of respondents were in the 31–40-year age group (56.1%), followed by those aged 20–30 years (29.9%) and 41–50 years (14.0%), as shown in Table 2. These findings suggest that most respondents were in their productive years, typically involved in active parenting roles. In terms of gender, the majority were female (87.4%), while only 12.6% were male. This gender disparity reflects that women, particularly mothers, tend to be more involved in caregiving and child-related decision-making. Regarding their relationship with the child, most respondents (90%) were biological parents, while 10% were guardians. This suggests that the child's own parents largely undertake caregiving and parenting responsibilities in the sampled population.

Most respondents had a relatively high level of education, with 64.8% having completed a Diploma or Bachelor's degree, and only 2% having an education at the junior secondary level. This level of education may contribute to better knowledge and practices related to child health and behavior. Respondent's occupations varied, with the highest proportion being housewives (28.9%), and the lowest being teachers (4.7%). This diversity indicates a broad range of socioeconomic backgrounds.

A vast majority of respondents (95.7%) were married, with only 4.3% being single or divorced. A stable marital status is often associated with a more supportive family environment, which may influence child development outcomes. Geographically, respondents came from two regions: *JABODETABEK* (52.8%) and Aceh (47.2%). This distribution allows for comparative analysis of regional differences in parenting practices, access to services, and child behavior. Regarding monthly income, 59.8% of respondents earned at or above the provincial minimum wage, while 40.2% earned below it. This provides a useful proxy for the economic diversity of the sample.

The age distribution of the children showed that 69.8% were between 4 and 5 years old, and

30.2% were between 2 and 3 years old. The gender of children was nearly balanced, with 52.8% male and 47.2% female. Only 12% of respondents worked in the health sector, while 88% did not, suggesting that most caregivers were not health professionals. Nonetheless, access to healthcare was relatively high, with 88% of respondents having health insurance. In terms of religion, almost all respondents identified as Muslim (99%), and only 1% identified as Christian or Catholic, indicating a predominantly Muslim population.

A high proportion of respondents (86.4%) reported giving their child screen time, and 84.4% stated they limited this to less than or equal to two hours per day. Only 15.6% allowed more than two hours, indicating general awareness of recommended screen time limits for children. When asked about the type of shows they provided to their children, most chose educational content (83.7%), while a small percentage (1.7%) opted for a combination of both. Regarding the platform or type of content, YouTube was the most commonly reported (74.8%), and social media (1.0%).

Smartphone addiction was identified in 12% of the children, while 88% were not considered addicted. This suggests that problematic screen use is present among a minority of children, warranting further investigation. In terms of parenting patterns, the majority of respondents reported using a democratic style (64.1%), followed by authoritarian (30.2%), and permissive parenting (5.6%). The prevalence of democratic parenting suggests a tendency toward balanced and communicative approaches in child-rearing.

Finally, when examining behavioral outcomes, most children were classified as having normal behavior (92%). However, 4.7% were identified with Attention Deficit Hyperactivity Disorder (ADHD), 2.0% with Oppositional Defiant Disorder (ODD), and 1.3% with a combination of both. Although the overall prevalence of disruptive behavior disorders was low, early identification remains important for appropriate intervention and support.

In summary, the respondents in this study were primarily well-educated, married women of reproductive age with a relatively high rate of health insurance coverage and awareness of child health recommendations. The characteristics of both parents and children, including income, parenting styles, and media exposure, provide essential context for interpreting behavioral outcomes in early childhood.

Table 1a. Distribution of Respondent Characteristics

Variable	n = 301	%
Age (Years Old)		
20-30	90	29.9
31-40	169	56.1
41-50	42	14
Gender		
Female	263	87.4
Male	38	12.6
Relationship with Children		
Parents	271	90
Guardian	30	10
Parents/Guardian Education Level		
Secondary School	6	2
High School	74	24.6
Diploma/Bachelor Degree	195	64.8
Master Degree	26	8.6
Occupation of Parents/Guardians		
Government Employee	61	20.3
Teacher	14	4.7
Housewife	87	28.9
Private Sector	56	18.6
Medical Personnel (doctors/nurses/midwives)	15	5
Self-employed	68	22.6
Marital Status of Parents/Guardian		
Single (Not Married/ Divorced)	13	4.3
Married	288	95.7
Domiciled		
Aceh	142	47.2
JABODETABEK	159	52.8
Monthly Income		
< Provincial Minimum Wage	121	40.2
≥ Provincial Minimum Wage	180	59.8
Children Age		
2-3 y.o	91	30.2
4-5 y.o	210	69.8
Children Gender		
Male	159	52.8
Female	142	47.2

Table 1b. Distribution of Respondent Characteristics

Variable	n = 301	%
Do you Work in The Health Sector?		
Yes	36	12
No	265	88
Do you Have Health Insurance?		
Yes	265	88
No	36	12
Religion		
Islam	298	99
Christian/Catholic	3	1
Do you Give Your Child Screen Time?		
Yes	260	86.4
No	41	13.6
How Long do You Usually Give Your Child a Cell Phone/Tablet?		
≤ 2 Hours	254	84.4
> 2 Hours	47	15.6
What Kind of Shows do You Give Your Child?		
Education	252	83.7
Entertainment	44	14.6
Education and Entertainment	5	1.7
What Content Does Your Child Usually Watch/Play?		
Youtube	225	74.8
Playing games	36	12.0
Television	37	12.3
Social Media	3	1.0
Smartphone Addiction		
Addicted	36	12.0
Not Addicted	265	88.0
Types of Parenting Patterns		
Authoritarian	91	30.2
Democratic	193	64.1
Permissive	17	5.6
Disruptive Behavior		
ADHD	14	4.7
ODD	6	2.0
ADHD + ODD	4	1.3
Normal	277	92.0

Source: Primary Data, 2024

Bivariate Analysis: Factors Associated with Disruptive Behavior in Children

Table 2 presents the results of bivariate analysis examining the relationship between various sociodemographic and behavioral factors and the presence of disruptive behavior in children (ADHD, ODD, and a combination of both).

Based on the results of the Chi Square and Fisher's Exact Tests, several variables were found to have a statistically significant association with the occurrence of disruptive behavior among children ($p < 0.05$).

The analysis revealed that domicile, child age, type of show watched, and parenting pattern were significantly associated with disruptive behavior. Children living in Aceh were more likely to exhibit disruptive behavior compared to those living in *JABODETABEK* (p=0.025). In terms of age, children aged 2–3 years demonstrated a higher proportion of disruptive behavior than those aged 4–5 years (p=0.028).

The type of shows children usually watched was also significantly related to behavioral outcomes. Children who were primarily exposed to non-educational or entertainment shows were more likely to display disruptive behavior compared to those who watched educational content (p=0.021). Furthermore, children raised under a non-democratic parenting pattern had a significantly higher prevalence of disruptive behavior compared to those raised under a democratic parenting style ($p = 0.032$).

In contrast, other variables such as parental age (p=0.165), parental education level (0.207), marital status (p=0.278), child gender (p=0.891), screen time duration (p=0.184), type of media used (passive vs. interactive) (p=0.339), and smartphone addiction (p=0.434) did not show a statistically significant relationship with disruptive behavior ($p > 0.05$).

The lack of statistically significant associations across several variables suggests that disruptive behavior in early childhood may be more strongly influenced by behavioral and environmental factors, such as exposure to digital mediarather than solely by sociodemographic characteristics. However, it is possible that these fac-

tors interact in more complex patterns that are not reflected in simple bivariate analyses.

These results underscore the importance of paying close attention not only to the type of media content children consume but also to the duration of time they spend using digital media. Furthermore, they point to the necessity of conducting more comprehensive multivariate analyses to address potential confounding variables and to gain a deeper understanding of how different risk factors interact in contributing to disruptive behaviors.

Logistic Regression Analysis

The binary logistic regression model was conducted to determine the factors independently associated with disruptive behavior among children. As shown in Table 3, only the type of show variable demonstrated a statistically significant relationship with disruptive behavior (p=0.018). Children who predominantly watched non-educational shows were 3.47 times more likely to exhibit disruptive behavior compared to those who watched educational programs (OR=3.477; 95% CI=1.240–9.751).

Other variables, including parent's age (p = 0.068), parent's education level (p = 0.089), domicile (p = 0.130), child's age (p = 0.065), screen time duration (p = 0.301), and parenting pattern (p = 0.098), were not significantly associated with disruptive behavior. However, the p-values of parental age, child's age, and parenting pattern approached the significance level, indicating a potential trend that might become significant in larger samples.

Table 2a. Relationship Between Sociodemographic, Media Use, and Parenting Factors and Disruptive Behavior

Variable	Diagnose				*P-Value*
	Disruptive Behavior		Normal		
	n	%	n	%	
Age (Years Old)					
≤ 35	12	3.99	178	59.13	0.165*
> 35	12	3.99	99	32.89	
Parents/Guardian Education Level					
Higher Education	15	4.98	206	68.44	0.207*
Secondary Education	9	2.99	71	23.59	
Domiciled					
JABODETABEK	6	1.99	135	44.85	0.025*
Aceh	18	5.98	142	47.18	
Occupation of Parents/Guardians					
Formal Employment (Government Employee, Teacher, Private Sector, Medical Personnel)	10	3.32	133	44.18	0.550*
Informal employment (Housewife, Self-employed)	14	4.65	144	47.84	
Marital Status of Parents/Guardian					
Married	22	7.31	266	88.37	0.278+
Single (Not Married/Divorced)	2	0.66	11	3.65	
Children Age (Years Old)					
2 – 3	12	3.99	79	26.25	0.028*
4 – 5	12	3.99	198	65.78	
Child Gender					
Girl	11	3.65	131	43.52	0.891*
Boy	13	4.32	146	48.50	
Do You Give Your Child Screen Time?					
Yes	21	6.98	239	79.40	0.582*
No	3	0.99	38	12.62	
How Long do You Usually Give Your Child A Cellphone/Tablet?					
≤ 2 hours	19	6.31	245	81.39	0.184*
> 2 hours	5	1.66	32	10.63	
What Kind of Shows do You Give Your Child?					
Education-related → Education, Education and Entertainment	17	5.64	243	80.73	0.021*

Non-education → Entertainment	7	2.32	34	11.29	
What Content Does Your Child Usually Watch/Play?					
Passive Media → Television, YouTube	20	6.64	244	81.06	0.339+
Interactive Media → Playing Games, Social Media	4	1.32	33	10.96	
Smartphone Addiction					
Not Addicted	21	6.98	255	84.72	0.434+
Addicted	3	0.99	22	7.31	
Types of Parenting Patterns					
Democratic	11	3.65	187	62.12	0.032*
Non-democratic	13	4.32	90	29.90	

Source: Primary Data, 2024
*Chi-square test p<0.05
+Fisher's Exact test

Table 3. Logistic Regression Result

Variables	B	SE	Wald	p-value	OR (Exp(B))	95%CI
Parent Age (>35 vs ≤35 years)	0.851	0.466	3.340	0.068	2.343	0.940 – 5.839
Parent Education (Higher vs Secondary)	-0.823	0.484	2.895	0.089	0.439	0.170 – 1.133
Domicile (JABODETABEK vs Aceh)	-0.820	0.541	2.296	0.130	0.440	0.153 – 1.272
Child Age (2–3 vs 4–5 years)	0.866	0.469	3.402	0.065	2.377	0.947 – 5.963
Screen Time Duration (>2 vs ≤2 hours)	-0.723	0.700	1.069	0.301	0.485	0.123 – 1.911
Type of Show (Non-education vs Education)	1.246	0.526	5.611	0.018	3.477	1.240 – 9.751
Parenting Pattern (Non-democratic vs Democratic)	0.790	0.477	2.744	0.098	2.204	0.865 – 5.615
Constant	-2.787	0.636	19.232	<0.001	0.062	

Source: Primary Data, 2024

DISCUSSION

The bivariate analysis in this study revealed significant associations between domicile, child age, type of show watched, and parenting style with disruptive behavior among preschool-aged children. Children from Aceh, aged 2–3 years, who primarily watched non-educational entertainment content, and those raised with non-democratic parenting styles, exhibited a higher prevalence of disruptive behavior compared to their counterparts.

The association between media content and disruptive behavior supports evidence from both global and Indonesian studies emphasizing that the *type* of screen exposure is a more critical determinant of socio-emotional outcomes than duration alone. A recent Indonesian study found that exposure to entertainment-oriented or aggressive digital media content was significantly associated with increased externalizing behaviors among preschoolers.[16] Similarly, research in *JABODETABEK* reported that excessive screen exposure correlated with greater emotional difficulties among young children, especially in lower socioeconomic groups.[17] These findings suggest that non-educational digital content may overstimulate or model inappropriate behaviors, contributing to early disruptive tendencies.

The observed relationship between parenting style and child behavior is also consistent with both Indonesian and international literature. Studies in Indonesia have demonstrated that authoritative (democratic) parenting is associated with better emotional regulation and prosocial behavior, whereas authoritarian and permissive approaches are correlated with higher behavioral problems.[18-20] A review of Indonesian parenting practices similarly concluded that parent–child interaction quality strongly predicts child behavioral adjustment and that parenting interventions remain underutilized nationally.[21]

The finding that younger children (2–3 years) were more likely to display disruptive be-

havior aligns with developmental theory, which posits that early toddlerhood is characterized by limited emotional regulation and emerging autonomy factors that may manifest as impulsivity and tantrums.[22] Meanwhile, the difference in disruptive behavior by domicile (Aceh vs. *JABODETABEK*) may reflect variations in socio-economic conditions, parental supervision, ac-cess to early education, or cultural expectations of child behavior. Prior research has shown that Indonesian parenting and early childhood practices vary substantially across provinces and cultural contexts.[23]

The multivariate logistic regression results demonstrated that the type of media content was a significant determinant of disruptive behavior among preschool children, even after adjusting for parental and demographic variables. Children who primarily watched non-educational or entertainment - oriented shows were 3.5 times more likely to display disruptive behavior than those who watched educational content.

This finding aligns with recent evidence showing that the *quality* of digital exposure plays a more crucial role than duration alone. A 2024 longitudinal study revealed that high screen media use was associated with poorer inhibitory control and prefrontal activation in young children.[24] Similarly, studies conducted during the COVID-19 pandemic found that increased screen time and parental stress were associated with heightened behavioral and emotional difficulties among school-aged children.[25] A global systematic review also confirmed that entertainment-based viewing remains dominant and is associated with higher behavioral risk.[26]

Although variables such as parental age, educa-tion, and parenting style were not statistically significant in the final model, they showed meaningful tendencies consistent with recent Indonesian studies.

Democratic or authoritative parenting was associated with lower behavioral problems, while authoritarian and permissive patterns correlated with higher externalizing behaviors.[27-30]

For example, Hasan et al. found that children of parents using inconsistent or punitive approaches had greater emotional-behavioral problems,[27] and Maulida et al. reported that children from single-parent or less cohesive families demonstrated more aggressive and oppositional tendencies.[28]

The relationship between parental mediation and screen exposure is also noteworthy. Children whose parents applied active mediation such as, discussing show content and setting viewing rulestended to have better socio-emotional development.[31] Conversely, passive or absent mediation during entertainment media exposure was associated with increased behavioral risk.[29] These patterns reinforce the protective role of democratic parenting in moderating the effects of screen exposure on behavior.

The environmental variation observed between urban *(JABODETABEK)* and semi-urban (Aceh) settings in the bivariate results may also reflect regional differences in parenting practices, socioeconomic factors, and access to educational resources. UNICEF Indonesia (2022) emphasizes that digital literacy and parental guidance vary widely across provinces, influencing children's behavioral development.[32]

Overall, these findings support a multifactorial model in which media content, parenting practices, and sociocultural context interactively shape behavioral outcomes. This highlights the need for comprehensive interventions that target both media literacy and parenting education in Indonesia. Strengthening parental guidance on media use,[33] promoting educational content, and supporting democratic parenting programs could serve as culturally appropriate strategies to mitigate disruptive behaviors in Indonesian preschoolers.

CONCLUSION AND RECOMMENDATION

This study identified media content type as the strongest independent predictor of disruptive behavior among preschool children. Exposure to non-educational or entertainment content significantly increased the likelihood of behavioral problems compared with exposure to educational content.

Although other variables, such as parenting style and child age, did not achieve statistical significance in the multivariate model, their observed patterns align with previous studies suggesting that they may play an indirect or moderating role in behavioral regulation. These

results highlight the importance of guiding parents to focus not only on-screen time limits but also on the nature of the content and the quality of parent–child interaction during media use.

Based on the results of this study, we recommend that Parents should be encouraged to provide educational and prosocial media content, establish consistent screen routines, and engage in co-viewing and discussion to enhance children's comprehension and emotional control. Pediatricians and educators should integrate screen use assessment and media counseling into routine developmental screening. Early childhood education programs should emphasize digital parenting skills and positive discipline strategies to mitigate behavioral risks. It is also important that National and local authorities should develop policies supporting child-safe programming and promote digital literacy for parents through the public health and education systems. Collaboration with media producers to increase the availability of educational content is essential.

Future research should use a longitudinal design, involve a larger sample, and ensure balance in diagnostic categories to improve the external validity of the findings. Cross-sectional designs, as currently used, only capture relationships at a single point in time.

Consequently, it is uncertain whether media exposure causes behavioral disorders or whether children with behavioral difficulties are more likely to seek entertainment through media. Longitudinal designs allow researchers to follow children over time, allowing them to observe the sequence of events and assess whether media exposure precedes the onset of disruptive behavior.

ACKNOWLEDGMENTS

We would like to express my sincere gratitude to Universitas Trisakti for its invaluable support and encouragement throughout this research. The institution's commitment to academic excellence and research has greatly contributed to the successful completion of this study.

We are also deeply thankful to all individuals and parties who have provided assistance and cooperation during the research process, particularly those from the *JABODETABEK* area and Aceh. Your support, insights, and contributions have been instrumental in enriching the quality of this work.

AUTHOR CONTRIBUTIONS

For research articles with several authors, a NH organized and planned the research concept, designed the methodology, conducted the research, analyzed the data, and drafted the manuscript. HA, ATWR, YM, MAHEP, and AAR assisted with the research and provided feedback on the manuscript. All authors reviewed and approved the final version. NH = Nany Hairunisa; HA = Husnun Amalia; ATWR = Agnes Tineke Waney Rorong; YM = Yasmine Mashabi; MAHEP = Muhammad Amru Hammam El Putra; AAR = Asrenee Ab. Razak.

CONFLICTS OF INTEREST

The authors declare no conflict of interest.

REFERENCES

1. Salmanian M, Mohammadi MR, Hooshyari Z, Mostafavi SA, Zarafshan H, Khaleghi A, et al. Prevalence, Comorbidities, and Sociodemographic Predictors of Conduct Disorder: The National Epidemiology of Iranian Children and Adolescents Psychiatric Disorders (IRCAP). *European Child & Adolescent Psychiatry*. 2020;29(10): 1385–1399. https://doi.org/10.1007/s00787-019-01448-9
2. Asizah. Children Disruptive Behavior Well-being: Pentingnya Hubungan Anak dan Orang Tua. *Seminar Psikologi & Kemanusiaan: Psychology Forum UMM.* 2015. https://id.scribd.com/document/668896962/46-54-Asizah
3. Suryani L, Seto SB. Penerapan Media Audio Visual untuk Meningkatkan Perilaku Cinta Lingkungan pada Golden Age. *Jurnal Obsesi : Jurnal Pendidikan Anak Usia Dini.* 2020; 5(1):900–908. https://doi.org/10.31004/obsesi.v5i1.601
4. Purwati, Japar M. Parents' Education, Personality, and Their Children's Disruptive

Behaviour. *International Journal of Instruction.* 2017;10(3):227–240. https://doi.org/10.12973/iji.2017.10315a

5. Novitasari R. Intuisi Kecenderungan Perilaku Disruptif pada Anak Usia Prasekolah Ditinjau Dari Stres Pengasuhan Ibu. *Intuisi Jurnal Ilmu Psikologi.* 2016;8(2): 61-70. https://id.scribd.com/document/891029178/8597-19087-1-SM-2
6. Wiguna T, Manengkei PSK, Pamela C, et al. Masalah Emosi dan Perilaku pada Anak dan Remaja di Poliklinik Jiwa Anak dan Remaja RSUPN dr. Ciptomangunkusumo (RSCM), Jabodetabek. *Sari Pediatri.* 2010;12(4): 270-277. https://saripediatri.org/index.php/sari-pediatri/article/view/505/0
7. Kemenkes RI. Laporan Nasional RISKESDAS 2018. Gangguan Mental Emosional. Lembaga Penerbit Balitbangkes Kementrian Kesehatan Republik Indonesia. 2018:226-228. https://repository.badankebijakan.kemkes.go.id/id/eprint/3514/1/Laporan%20Riskesdas%202018%20Nasional.pdf
8. Kurniasih E. Media Digital pada Anak Usia Dini. Jurnal Kreatif. 2019;9. *Jurnal Kreatif Jurnal Pendidikan Dasar*. 9(2):87-91. https://doi.org/10.15294/kreatif.v9i2.25401
9. Aslan. Peran Pola Asuh Orang tua di Era Digital. *Jurnal Studia Insania*. 2019;7(1):20-34. https://jurnal.uin-antasari.ac.id/index.php/insania/article/download/2269/1810
10. Amelia RF, Lestari T. Tanggapan Orang Tua Mengenai Pengaruh Youtube Terhadap Emosi Anak Usia Sekolah Dasar. *Jurnal Pendidikan Tambusai.* 2021;5(1):1482-1489. https://jptam.org/index.php/jptam/article/view/1124
11. Novianti R, Garzia M. Penggunaan Gadget pada Anak; Tantangan Baru Orang Tua Milenial. *Jurnal Obsesi : Jurnal Pendidikan Anak Usia Dini.* 2020;4(2):1000-1010. https://doi.org/10.31004/obsesi.v4i2.490
12. Allmann AE, Klein DN, Kopala-Sibley DC. Bidirectional and Transactional Relationships Between Parenting Styles and Child Symptoms of ADHD, ODD, Depression, and Anxiety Over 6 Years. *Development and Psychopathology*. 2022;34(4):1400-1411. https://doi.org/10.1017/s0954579421000201
13. Arthy CC, Effendy E, Amin MM, Loebis B, Camellia V, Husada MS. Indonesian Version of Addiction Rating Scale of Smartphone Usage Adapted from Smartphone Addiction Scale-Short Version (SAS-SV) In Junior High School. *Open Access Macedonian Journal of Medical Sciences.* 2019;7(19):3235-3239. https://doi.org/10.3889/oamjms.2019.691
14. Maharani EA, Puspitasari I. Deteksi gangguan emosi dan perilaku disruptif pada anak usia prasekolah. *JECCE: Journal of Early Childhood Care and Education.* 2019;2(1):1-13. https://doi.org/10.26555/jecce.v2i1.566
15. Firdaus SA, Kustanti ER. Hubungan Antara Pola Asuh Otoriter Dengan Pengambilan Keputusan Karier Pada Siswa Smk Teuku Umar Semarang. *Jurnal EMPATI*. 2019;8(1): 212-220. https://doi.org/10.14710/empati.2019.23596
16. Berutu RF. The Influence of Digital Media on Aggression in Indonesian Children: A Systematic Review. *International Journal of Humanities and Social Sciences Reviews.* 2024;1(4):7-16. https://doi.org/10.62951/ijhs.v1i4.341
17. Sari W, Astrada A, Septiana V, Pamungkas RA. Screen Time and Emotional Development Among Indonesian Preschoolers: A Comparative Study Across Socioeconomic Contexts in Jabodetabek. *Media Publikasi Promosi Kesehatan Indonesia (MPPKI).* 2025;8(9):1001-1012. https://jurnal.unismuhpalu.ac.id/index.php/MPPKI/article/view/7879
18. Boediman LM, Desnawati S. The Relationship Between Parenting Style and Children's Emotional Development Among Indonesian Population. *Jurnal Ilmiah Psikologi MIND SET*. 2019;10(1):17-24. https://scholar.ui.ac.id/en/publications/the-relationship-between-parenting-style-and-childrens-emotional-

19. Riany YE, Haslam DM, Sanders M. Parental Mood, Parenting Style and Child Emotional and Behavioural Adjustment: Australia-Indonesia Cross-cultural Study. *Journal of Child and Family Studies.* 2022;31(9):2331-2343. https://doi.org/10.1007/s10826-021-02137-5
20. Putra A. Parental Education Conditions in Rural Areas of Bengkulu: Case Study on Responsive Gender, Parenting Styles, Equality Behavior, and Learning Needs. *Muwazah; Jurnal Kajian Gender.* 2023 30;15(2):227-250. https://doi.org/10.28918/muwazah.v15i2.2012
21. Puspitasari MD, Rahmadhony A, Prasetyo S, Fadila W. Early Childhood Parenting Practices in Indonesia. *Population Review.* 2020;59(2):139-155. https://doi.org/10.1007/s10826-021-02137-5
22. Thompson RA. Emotion Dysregulation: A Theme in Search of Definition. *Development and Psychopathology.* 2019;31(3):805-815. https://doi.org/10.1017/s0954579419000282
23. Karmila E, Kiswanto E, Sekarjati C, Hadna AH, Pitoyo AJ. Policy (In) Coherence in Early Childhood Development-Insights from Indonesia. *Populasi: Jurnal Kependudukan dan Kebijakan*. 2025;33(1):1-7. https://doi.org/10.22146/jp.102590
24. Meng X, Liang X, Liu C, Cheng N, Lu S, Zhang K, Yin Y, Cheng T, Lu C, Wang Z. Associations Between Screen Media Use and Young Children's Inhibitory Control: Evidence from Behavioral and fNIRS Study. *Computers in Human Behavior*. 2024;152: 108041. https://doi.org/10.1016/j.chb.2023.108041
25. Hmidan A, Seguin D, Duerden EG. Media Screen Time Use and Mental Health in School Aged Children During the Pandemic. *BMC Psychology*. 2023;11(1):202. https://doi.org/10.1186/s40359-023-01240-0
26. Qi J, Yan Y, Yin H. Screen Time Among School-aged Children of Aged 6–14: A Systematic Review. *Global Health Research and Policy*. 2023 Apr 19;8(1):12. https://doi.org/10.1186/s41256-023-00297-z
27. Hasan S, Teresa A, Widjaja NT. Relationship between Parenting Style, Family Relationship and Emotional Behavioral Problems among Elementary-School Children. *Jurnal Kedokteran Meditek.* 2023; 29(2):120-128. https://doi.org/10.36452/jkdoktmeditek.v29i2.2548
28. Maulida I, Abdurrahman A. Parenting Patterns and Child Behavior: A Comparative Study of Single and Full Parents. *Ascarya: Journal of Islamic Science, Culture, and Social Studies.* 2024;4(1):135-146. https://doi.org/10.53754/iscs.v4i1.676
29. Rahman FN, Hasanah U, Dewi NA. Influence of Media Exposure and Parenting Style on Behavioral Problems Among Preschool Children in Indonesia. *Asian Journal Public Health Res*. 2024;6(3):210–219.
30. Haslam D, Poniman C, Filus A, Sumargi A, Boediman L. Parenting Style, Child Emotion Regulation and Behavioral Problems: The Moderating Role of Cultural Values in Australia and Indonesia. *Marriage & Family Review.* 2020;56(4):320-342. https://doi.org/10.1080/01494929.2020.1712573
31. Xu Y, Qiao L. Digital Screen Exposure and Emotional Symptoms in Preschool Children: Mediation by Parent–Child Relationship and Moderation by Peer Relationships. *Frontiers in Psychology.* 2025;16:1584919. https://doi.org/10.3389/fpsyg.2025.1584919
32. UNICEF Indonesia. Digital Literacy and Child Online Safety in Indonesia: Policy Brief. Jabodetabek: UNICEF; 2022.
33. Salam A, Briawan D, Martianto D, Thaha AR, Arundhana AI. Efek Suplementasi Vitamin A, Minyak Fortifikasi dan Edukasi Gizi Ibu Nifas terhadap Morbiditas Ibu dan Bayi. *Media Kesehatan Masyarakat Indonesia.* 2018;14(3):209-216. https://doi.org/10.30597/mkmi.v14i3.4348

Nany Hairunisa

Multivariate Analysis of Risk Factors for Destructive Behavior in Children in Indonesia

Manuscript 14

MKMI new

Universitas Hasanuddin

Document Details

Submission ID
trn:oid:::1:3366797228

Submission Date
Oct 9, 2025, 9:55 AM GMT+7

Download Date
Oct 9, 2025, 10:01 AM GMT+7

File Name
REVISI_-_46018.docx

File Size
6.0 MB

12 Pages

5,231 Words

31,496 Characters

12% Overall Similarity

The combined total of all matches, including overlapping sources, for each database.

Filtered from the Report

- Bibliography
- Quoted Text

Match Groups

39 Not Cited or Quoted 10%
Matches with neither in-text citation nor quotation marks

9 Missing Quotations 2%
Matches that are still very similar to source material

0 Missing Citation 0%
Matches that have quotation marks, but no in-text citation

0 Cited and Quoted 0%
Matches with in-text citation present, but no quotation marks

Top Sources

9% Internet sources
7% Publications
3% Submitted works (Student Papers)

Match Groups

- **39** Not Cited or Quoted 10%
  Matches with neither in-text citation nor quotation marks
- **9** Missing Quotations 2%
  Matches that are still very similar to source material
- **0** Missing Citation 0%
  Matches that have quotation marks, but no in-text citation
- **0** Cited and Quoted 0%
  Matches with in-text citation present, but no quotation marks

Top Sources

9% Internet sources
7% Publications
3% Submitted works (Student Papers)

Top Sources

The sources with the highest number of matches within the submission. Overlapping sources will not be displayed.

1	Internet	www.coursehero.com <1%
2	Internet	primary.ejournal.unri.ac.id <1%
3	Internet	irisjournal.org <1%
4	Internet	www.medrxiv.org <1%
5	Publication	Zuhair Al-Nerabieah, Muaaz AlKhouli, Mayssoon Dashash. "Parental Satisfaction ... <1%
6	Internet	www.researchgate.net <1%
7	Publication	Widya Sepalanita, Alif Faturachman, Toto Subiakto. "The Effect of Diaphragmatic ... <1%
8	Internet	www2.mdpi.com <1%
9	Internet	perpustakaan.poltekkes-malang.ac.id <1%
10	Internet	www.frontiersin.org <1%

11	Publication	Vlad Alexandru Ionescu, Gina Gheorghe, Coralia Bleotu, Liliana Puiu et al. "Circul... <1%
12	Internet	www.merckmanuals.com <1%
13	Internet	ijsred.com <1%
14	Internet	www.biomedcentral.com <1%
15	Publication	Kimberly J. Harris, Kevin S. Murphy, Robin B. DiPietro, Nathaniel D. Line. "The ant... <1%
16	Internet	go.gale.com <1%
17	Internet	consortiacademia.org <1%
18	Publication	Bilandi Hakim Estu Mukti, Novendy Novendy. "INTEGRATIVE MANAGEMENT OF H... <1%
19	Publication	Fransiska Kaligis, R. Irawati Ismail, Tjhin Wiguna, Sabarinah Prasetyo et al. "Trans... <1%
20	Student papers	University of Lincoln <1%
21	Internet	www.circumpolarhealthjournal.net <1%
22	Internet	advancesinresearch.id <1%
23	Internet	ejournal.poltekharber.ac.id <1%
24	Internet	ejournal.undiksha.ac.id <1%

25	Internet	
journal.ascarya.or.id		<1%
26	Internet	
www.cambridge.org		<1%
27	Internet	
www.ncbi.nlm.nih.gov		<1%
28	Publication	
Rouwaida Halawani, Iman Kamal Ramadan, Zuhair S. Natto. "Burnout and Work E...		<1%
29	Internet	
assets.cureus.com		<1%
30	Internet	
ijrp.org		<1%
31	Internet	
www.journalmpci.com		<1%
32	Publication	
Amjad H Jarrar, Pariyarath S Thondre, Leila Cheikh Ismail, Helen Lightowler et al. ...		<1%
33	Internet	
journal.fk.unpad.ac.id		<1%
34	Internet	
jurnal.umsu.ac.id		<1%
35	Internet	
www.science.gov		<1%
36	Publication	
Roberta Rizzo, Gaia Fusto, Serena Marino, Iside Castagnola, Claudia Parano, Xena...		<1%
37	Publication	
Fengqiang Gao, Chunze Xu, Qing Lv, Yufei Zhao, Lei Han. "Parent-child communic...		<1%
38	Publication	
Qi Li, Sen Dong, Taiqiang Yan, Hong Zhao. "Association between intraoperative fl...		<1%

Media Kesehatan Masyarakat Indonesia
Volume 18 Issue 2 2022
DOI : 10.30597/mkmi.v16i2.9090
Website : http://journal.unhas.ac.id/index.php/mkmi

Multivariate Analysis of Risk Factors for Destructive Behavior in Children in Indonesia

ARTICLE INFO

Article History:
Received
Accepted
Published online

Keywords:
Conduct disorders;
children;
disruptive behavior;
screen time;
parenting pattern

ABSTRACT

Background. Conduct disorders pose a significant global burden, affecting an estimated 5.75 million children and adolescents, especially boys. Conduct disorders involve repetitive behaviors that violate others' rights and can jeopardize normal relationships between children and those around them. Major behavioral issues in children often occur in both school and family settings and are closely linked to the roles of parents and teachers as educators and guides. Additionally, children at a young age are highly curious and eager to explore new things; the rapid growth of technology introduces new challenges for them. Without parental guidance, considering factors such as parenting styles, education level, socioeconomic status, and occupation, children's social lives may be significantly impacted. This study aims to analyze various risk factors associated with disruptive behavior among children in Indonesia. Materials and methods. This cross-sectional study used a guided questionnaire involving 301 parents/guardians of children aged 2-5 years. In this regard, the researchers were assisted by data enumerators residing at the study site. Data collection was conducted in two regions in Indonesia, Greater Jabodetabek (Jabodetabek) and Aceh, from October 2024 to January 2025. Bivariate analyses were performed using the Chi-square test, followed by binary logistic regression to determine factors independently associated with disruptive behavior. Results. Bivariate analysis indicated that type of content (p = 0.017), screen time allocation (p = 0.018), and parenting pattern (p = 0.043) were significantly associated with disruptive behavior, while other variables such as parental education, domicile, occupation, marital status, and child's age or gender showed no significant relationships. In the multivariate model, only type of content remained a significant predictor (p = 0.018). Conclusion. The study highlights that the quality of media content, rather than the amount of screen time, plays a key role in the emergence of disruptive behavior among children. Parental guidance and the selection of educational media content are essential preventive strategies. Interventions focusing on digital literacy and positive parenting may help mitigate the risk of behavioral problems in early childhood.

INTRODUCTION

Conduct disorder is a significant global burden, with an estimated 5.75 million children and adolescents experiencing this problem, especially boys.[1] Conduct disorder involves a repetitive pattern of behavior that violates the basic rights of others and can threaten normal relationships between children and those around them. The phenomenon of significant conduct disorder in children occurs in both school and family environments, and is closely tied to the roles of parents and teachers as educators and guides. Recent research conducted in Ontario, Canada, shows consistency in the presence of behavioral disorders in the general population, namely 5.5% of children aged 4-16 years have behavioral disorders, in Queensland, 6.7% in children aged 10 years, and in Dunedin, New Zealand, 6.9% in children aged 7 years.[2] Meanwhile, based on RISKESDAS data from the Indonesian Ministry of Health in 2028, the prevalence of 9.8% of Indonesians suffering from mental behavioral disorders.[3]

Indonesia has little research on disruptive behavior in early childhood. A study conducted in 2015 by Purwati and Japar (2017:228) at PAUD Magelang found that 35% to 56% of children in each class exhibited disruptive behavior.[4] This is in line with the results of research on professional practice data from the Center of Public Mental Health, Faculty of Psychology, UGM, which found that 34% of early childhood children have a tendency to experience behavioral disorders.[5] In addition, according to a recapitulation of emotional and behavioral problems from the Cipto Mangunkusumo Hospital clinic in Jabodetabek, 27.3% of 106 early childhood patients experienced behavioral disorders.[6]

Ages 2-5 years are included in early childhood, during which children exhibit growth and development patterns in physical, cognitive, socio-emotional, creative, language, and communication aspects that adapt to the environment and phases the child is experiencing at that time. Children need to receive positive stimuli so that they can grow and develop in a good direction. One important stimulus is audio-visual media.[7] At this age, the brain is going through a significant development phase in increasing knowledge and education, so that everything received from the stimulus given will greatly impact and affect their personality in the future.[8]

As the world of technology continues to develop, more risk factors will impact society. The increasing use of mobile phones, also known as handphones (HP), also increases screen time (ST) for users who utilize audio-visual media, with children and adolescents often interacting with various types of screens and exploring diverse content.[9] Moreover, children at an early age are inquisitive and very interested in new things, and this increasingly developing technology is something new for children.[5] Without guidance/guidance from parents related to parenting patterns, parental education levels, socio-economic and parental work, this will affect the child's social life.[9]

Several researchers have conducted numerous studies on mobile phone screen time, examining its relationship with children, both positive and negative, and its impact on the child's social life and personality. It all depends on what is watched and what is seen and learned by the child at that time.[10,11]

A longitudinal study of 491 families showed that there is a bidirectional relationship between parenting style (authoritarian, permissive, overprotective) and children's symptoms of ADHD, ODD, depression, and anxiety—that is, parenting styles shape the symptoms of the disorders, and children's symptoms also shape subsequent parenting styles.[12]

Therefore, it is hoped that this study will provide insight into the landscape and examine how various factors, such as mobile phone screen time, parenting patterns, parents' education, socioeconomic status, and parental work, are related to the emotional and behavioral health of children.

MATERIAL AND METHOD

Data collection was carried out from October 2024 to January 2025. The study took place in JABODETABEK and Aceh. The research employed an analytical design with a cross-sectional approach, using a guided questionnaire. During this process, the researcher and data enumerator interviewed parents or guardians to gather data. The accessible population consisted of parents or guardians of children aged 2-5 years in the selected areas. Purposive sampling was used to select the sample. The total sample included 301 respondents from two targeted regions in

Indonesia. The inclusion criteria of this study are parents/guardians who have children aged 2-5 years who live in Jabodetabek and Aceh, and the exclusion criteria are Parents/guardians who have children with a history of certain psychological illnesses, such as intellectual disability, autism, and Down syndrome (based on observations and interviews with the parents/guardians of the child). The primary data sources included questionnaires, such as the Smartphone Addiction Scale-Short Version (SAS-SV)[13] and the Disruptive Behavior Disorder Scale[14], as well as assessments of parenting patterns.[15]

Additional questions were added based on research needs, including socio-economic status, education level, and parents' occupations. Participants who met the inclusion and exclusion criteria were chosen as research subjects. Information about the child's gender and age was collected from their responses to the questionnaire. Trained researchers and data enumerators conducted guided interviews with parents or guardians and assisted in completing the questionnaires to ensure all questions were answered.

Statistical analysis was performed using SPSS for Mac v.28. The chi-square test and Fisher's exact test were used for bivariate testing. Multinomial logistic regression was used to determine whether gender, age, duration of gadget use, type of media exposure, parenting style, and smartphone addiction significantly influenced a child's risk of developing a specific behavioral disorder (ADHD, ODD, or combined ADHD and ODD) categorized as disruptive behavior compared to children who did not exhibit the disorder (normal category). The accepted safety level was 95%, and a p-value <0.05 was considered statistically significant. This study received ethical approval from the Research Ethics Committee of the Faculty of Medicine, Universitas Trisakti, with No. 001/KER/FK/11/2024.

RESULTS

This study collected primary data from October 2024 to January 2025 using a validated questionnaire to gather information from parents or guardians of children aged 2-5 years in Jabodetabek, Bogor, Depok, Tangerang, Bekasi (JABODETABEK), and Aceh.

Table 1. Distribution of respondent characteristics (n=301)

Variable	N	Percentage (%)
Age		
20-30 y.o	90	29.9
31-40 y.o	169	56.1
41-50 y.o	42	14
Gender		
Female	263	87.4
Male	38	12.6
Relationship with Children		
Parents	271	90
Guardian	30	10
Parents/guardian Education level		
Secondary School	6	2
High School	74	24.6
Diploma/Bachelor degree	195	64.8
Master Degree	26	8.6
Occupation of Parents/Guardians		
Government employee	61	20.3
Teacher	14	4.7
Housewife	87	28.9
Private sector	56	18.6
Medical Personnel (doctors/nurses/midwives)	15	5
Self-employed	68	22.6
Marital Status of parents/guardian		
Single (not married/Divorced)	13	4.3
Married	288	95.7
Domiciled		
Aceh	142	47.2
Jabodetabek	159	52.8
Monthly income		
< Provincial Minimum Wage	121	40.2
≥ Provincial Minimum Wage	180	59.8
Children Age		
2-3 y.o	91	30.2
4-5 y.o	210	69.8
Children gender		
Male	159	52.8
Female	142	47.2
Do you work in the health sector?		
Yes	36	12
No	265	88
Do you have Health Insurance?		
Yes	265	88
No	36	12
Religion		
Islam	298	99

Christian/Catholic	3	1
Do you give your child screen time?		
Yes	260	86.4
No	41	13.6
How long do you usually give your child a cellphone/tablet?		
≤ 2 hours	254	84.4
> 2 hours	47	15.6
What kind of shows do you give your child?		
Education	252	83.7
Entertainment	44	14.6
Education and Entertainment	5	1.7
What content does your child usually watch/play?		
Youtube	225	74.8
Playing games	36	12.0
Television	37	12.3
Social Media	3	1.0
Smartphone Addiction		
Addicted	36	12.0
Not Addicted	265	88.0
Types of Parenting Patterns		
Authoritarian	91	30.2
Democratic	193	64.1
Permissive	17	5.6
Disruptive Behavior		
ADHD	14	4.7
ODD	6	2.0
ADHD + ODD	4	1.3
Normal	277	92.0

Source: Primary Data, 2024

This study included 301 participants who were parents or guardians of children aged 2 to 5 years. Based on age distribution, the majority of respondents were in the 31–40-year age group (56.1%), followed by those aged 20–30 years (29.9%) and 41–50 years (14.0%), as shown in Table 2. These findings suggest that most respondents were in their productive years, typically involved in active parenting roles. In terms of gender, the majority were female (87.4%), while only 12.6% were male. This gender disparity reflects that women, particularly mothers, tend to be more involved in caregiving and child-related decision-making. Regarding their relationship with the child, most respondents (90%) were biological parents, while 10% were guardians. This suggests that the child's own parents largely undertake caregiving and parenting responsibilities in the sampled population.

Most respondents had a relatively high level of education, with 64.8% having completed a Diploma or Bachelor's degree, and only 2% having an education at the junior secondary level. This level of education may contribute to better knowledge and practices related to child health and behavior. Respondents' occupations varied, with the highest proportion being housewives (28.9%), and the lowest being teachers (4.7%). This diversity indicates a broad range of socioeconomic backgrounds.

A vast majority of respondents (95.7%) were married, with only 4.3% being single or divorced. A stable marital status is often associated with a more supportive family environment, which may influence child development outcomes. Geographically, respondents came from two regions: Jabodetabek (52.8%) and Aceh (47.2%). This distribution allows for comparative analysis of regional differences in parenting practices, access to services, and child behavior. Regarding monthly income, 59.8% of respondents earned at or above the provincial minimum wage, while 40.2% earned below it. This provides a useful proxy for the economic diversity of the sample.

The age distribution of the children showed that 69.8% were between 4 and 5 years old, and 30.2% were between 2 and 3 years old. The gender of children was nearly balanced, with 52.8% male and 47.2% female. Only 12% of respondents worked in the health sector, while 88% did not, suggesting that most caregivers were not health professionals. Nonetheless, access to healthcare was relatively high, with 88% of respondents having health insurance. In terms of religion, almost all respondents identified as Muslim (99%), and only 1% identified as Christian or Catholic, indicating a predominantly Muslim population.

A high proportion of respondents (86.4%) reported giving their child screen time, and 84.4% stated they limited this to less than or equal to two hours per day. Only 15.6% allowed more than two hours, indicating general awareness of recommended screen time limits for children. When asked about the type of shows they provided to their children, most chose educational content (83.7%), while a small percentage (1.7%) opted for a combination of both. Regarding the platform or type of content, YouTube was the most commonly reported (74.8%), and social media (1.0%).

Smartphone addiction was identified in 12% of the children, while 88% were not considered addicted. This suggests that problematic screen use is present among a minority of children, warranting further investigation. In terms of parenting patterns, the majority of respondents reported using a democratic style (64.1%), followed by authoritarian (30.2%), and permissive parenting (5.6%). The prevalence of democratic parenting suggests a tendency toward balanced and communicative approaches in child-rearing.

Finally, when examining behavioral outcomes, most children were classified as having normal behavior (92%). However, 4.7% were identified with Attention Deficit Hyperactivity Disorder (ADHD), 2.0% with Oppositional Defiant Disorder (ODD), and 1.3% with a combination of both. Although the overall prevalence of disruptive behavior disorders was low, early identification remains important for appropriate intervention and support.

In summary, the respondents in this study were primarily well-educated, married women of reproductive age with a relatively high rate of health insurance coverage and awareness of child health recommendations. The characteristics of both parents and children, including income, parenting styles, and media exposure, provide essential context for interpreting behavioral outcomes in early childhood.

Bivariate Analysis: Factors Associated with Disruptive Behavior in Children

Table 2 presents the results of bivariate analysis examining the relationship between various sociodemographic and behavioral factors and the presence of disruptive behavior in children (ADHD, ODD, and a combination of both).

Based on the results of the Chi-square and Fisher's exact tests, several variables were found to have a statistically significant association with the occurrence of disruptive behavior among children ($p < 0.05$).

The analysis revealed that domicile, child age, type of show watched, and parenting pattern were significantly associated with disruptive behavior. Children living in Aceh were more likely to exhibit disruptive behavior compared to those living in Jabodetabek ($p = 0.025$). In terms of age, children aged 2–3 years demonstrated a higher proportion of disruptive behavior than those aged 4–5 years ($p = 0.028$).

The type of shows children usually watched was also significantly related to behavioral outcomes. Children who were primarily exposed to non-educational or entertainment shows were more likely to display disruptive behavior compared to those who watched educational content ($p = 0.021$). Furthermore, children raised under a non-democratic parenting pattern had a significantly higher prevalence of disruptive behavior compared to those raised under a democratic parenting style ($p = 0.032$).

In contrast, other variables such as parental age ($p = 0.165$), parental education level (0.207), marital status ($p = 0.278$), child gender ($p = 0.891$), screen time duration ($p = 0.184$), type of media used (passive vs. interactive) ($p = 0.339$), and smartphone addiction ($p = 0.434$) did not show a statistically significant relationship with disruptive behavior ($p > 0.05$).

The lack of statistically significant associations across several variables suggests that disruptive behavior in early childhood may be more strongly influenced by behavioral and environmental factors—such as exposure to digital media—rather than solely by sociodemographic characteristics. However, it is possible that these factors interact in more complex patterns that are not reflected in simple bivariate analyses.

These results underscore the importance of paying close attention not only to the type of media content children consume but also to the duration of time they spend using digital media. Furthermore, they point to the necessity of conducting more comprehensive multivariate analyses to address potential confounding variables and to gain a deeper understanding of how different risk factors interact in contributing to disruptive behaviors.

Logistic Regression Analysis

The binary logistic regression model was conducted to determine the factors independently associated with disruptive behavior among children. As shown in Table 3, only the type of show variable demonstrated a statistically significant relationship with disruptive behavior ($p = 0.018$). Children who predominantly watched non-educational shows were 3.47 times more likely to exhibit disruptive behavior compared to those who watched educational programs (OR = 3.477; 95% CI = 1.240–9.751).

Other variables, including parent's age (p = 0.068), parent's education level (p = 0.089), domicile (p = 0.130), child's age (p = 0.065), screen time duration (p = 0.301), and parenting pattern (p = 0.098), were not significantly associated with disruptive behavior. However, the p-values of parental age, child's age, and parenting pattern approached the significance level, indicating a potential trend that might become significant in larger samples.

DISCUSSION

The bivariate analysis in this study revealed significant associations between domicile, child age, type of show watched, and parenting style with disruptive behavior among preschool-aged children. Children from Aceh, aged 2–3 years, who primarily watched non-educational entertainment content, and those raised with non-democratic parenting styles, exhibited a higher prevalence of disruptive behavior compared to their counterparts.

The association between media content and disruptive behavior supports evidence from both global and Indonesian studies emphasizing that the *type* of screen exposure is a more critical determinant of socio-emotional outcomes than duration alone. A recent Indonesian study found that exposure to entertainment-oriented or aggressive digital media content was significantly associated with increased externalizing behaviors among preschoolers.[16] Similarly, research in Jabodetabek reported that excessive screen exposure correlated with greater emotional difficulties among young children, especially in lower socioeconomic groups.[17] These findings suggest that non-educational digital content may overstimulate or model inappropriate behaviors, contributing to early disruptive tendencies.

The observed relationship between parenting style and child behavior is also consistent with both Indonesian and international literature. Studies in Indonesia have demonstrated that authoritative (democratic) parenting is associated with better emotional regulation and prosocial behavior, whereas authoritarian and permissive approaches are correlated with higher behavioral problems.[18-20] A review of Indonesian parenting practices similarly concluded that parent–child interaction quality strongly predicts child behavioral adjustment and that parenting interventions remain underutilized nationally.[21]

The finding that younger children (2–3 years) were more likely to display disruptive behavior aligns with developmental theory, which posits that early toddlerhood is characterized by limited emotional regulation and emerging autonomy—factors that may manifest as impulsivity and tantrums.[22] Meanwhile, the difference in disruptive behavior by domicile (Aceh vs. Jabodetabek) may reflect variations in socioeconomic conditions, parental supervision, access to early education, or cultural expectations of child behavior. Prior research has shown that Indonesian parenting and early childhood practices vary substantially across provinces and cultural contexts.[23]

The multivariate logistic regression results demonstrated that the type of media content was a significant determinant of disruptive behavior among preschool children, even after adjusting for parental and demographic variables. Children who primarily watched non-educational or entertainment-oriented shows were 3.5 times more likely to display disruptive behavior than those who watched educational content.

This finding aligns with recent evidence showing that the *quality* of digital exposure plays a more crucial role than duration alone. A 2024 longitudinal study revealed that high screen media use was associated with poorer inhibitory control and prefrontal activation in young children.[24] Similarly, studies conducted during the COVID-19 pandemic found that increased screen time and parental stress were associated with heightened behavioral and emotional difficulties among school-aged children.[25] A global systematic review also confirmed that entertainment-based viewing remains dominant and is associated with higher behavioral risk.[26]

Although variables such as parental age, education, and parenting style were not statistically significant in the final model, they showed meaningful tendencies consistent with recent Indonesian studies.

Democratic or authoritative parenting was associated with lower behavioral problems, while authoritarian and permissive patterns correlated with higher externalizing behaviors.[27-30]

For example, Hasan et al. found that children of parents using inconsistent or

punitive approaches had greater emotional-behavioral problems,[27] and Maulida et al. reported that children from single-parent or less cohesive families demonstrated more aggressive and oppositional tendencies.[28]

The relationship between parental mediation and screen exposure is also noteworthy. Children whose parents applied active mediation—such as discussing show content and setting viewing rules—tended to have better socioemotional development.[31] Conversely, passive or absent mediation during entertainment media exposure was associated with increased behavioral risk.[29] These patterns reinforce the protective role of democratic parenting in moderating the effects of screen exposure on behavior.

The environmental variation observed between urban (Jabodetabek) and semi-urban (Aceh) settings in the bivariate results may also reflect regional differences in parenting practices, socioeconomic factors, and access to educational resources. UNICEF Indonesia (2022) emphasizes that digital literacy and parental guidance vary widely across provinces, influencing children's behavioral development.[32]

Overall, these findings support a multifactorial model in which media content, parenting practices, and sociocultural context interactively shape behavioral outcomes. This highlights the need for comprehensive interventions that target both media literacy and parenting education in Indonesia. Strengthening parental guidance[33] on media use, promoting educational content, and supporting democratic parenting programs could serve as culturally appropriate strategies to mitigate disruptive behaviors in Indonesian preschoolers.

Table 2. Relationship between Sociodemographic, Media Use, and Parenting Factors and Disruptive Behavior

Variable	Diagnose				*P-Value*
	Disruptive Behavior		Normal		
	n	%	n	%	
Age					
≤ 35 y.o	12	3.99	178	59.13	0.165*
> 35 y.o	12	3.99	99	32.89	
Parents/guardian Education level					
Higher education	15	4.98	206	68.44	0.207*
Secondary education	9	2.99	71	23.59	
Domiciled					
Jabodetabek	6	1.99	135	44.85	**0.025***
Aceh	18	5.98	142	47.18	
Occupation of Parents/Guardians					
Formal employment (Government employee, Teacher, Private sector, Medical Personnel)	10	3.32	133	44.18	0.550*
Informal employment (Housewife, Self-employed)	14	4.65	144	47.84	
Marital Status of parents/guardian					
Married	22	7.31	266	88.37	0.278+
Single (not married/Divorced)	2	0.66	11	3.65	
Children Age					
2 – 3 y.o	12	3.99	79	26.25	**0.028***
4 – 5 y.o	12	3.99	198	65.78	
Child Gender					
Girl	11	3.65	131	43.52	0.891*
Boy	13	4.32	146	48.50	
Do you give your child screen time?					
Yes	21	6.98	239	79.40	0.582*
No	3	0.99	38	12.62	
How long do you usually give your child a cellphone/tablet?					
≤ 2 hours	19	6.31	245	81.39	0.184*
> 2 hours	5	1.66	32	10.63	
What kind of shows do you give your child?					
Education-related → Education, Education and Entertainment	17	5.64	243	80.73	**0.021***
Non-education → Entertainment	7	2.32	34	11.29	
What content does your child usually watch/play?					
Passive media → Television, YouTube	20	6.64	244	81.06	0.339+
Interactive media → Playing games, Social media	4	1.32	33	10.96	
Smartphone Addiction					
Not Addicted	21	6.98	255	84.72	0.434+
Addicted	3	0.99	22	7.31	
Types of Parenting Patterns					**0.032***

Democratic	11	3.65	187	62.12
Non Democratic	13	4.32	90	29.90

*Chi-square test p<0.05
+Fisher's Exact test

Table 3. Logistic Regression Result

Variables	B	SE	Wald	p-value	OR (Exp(B))	95%CI
Parent Age (>35 vs ≤35 years)	0.851	0.466	3.340	0.068	2.343	0.940 – 5.839
Parent Education (Higher vs Secondary)	-0.823	0.484	2.895	0.089	0.439	0.170 – 1.133
Domicile (Jabodetabek vs Aceh)	-0.820	0.541	2.296	0.130	0.440	0.153 – 1.272
Child Age (2–3 vs 4–5 years)	0.866	0.469	3.402	0.065	2.377	0.947 – 5.963
Screen Time Duration (>2 vs ≤2 hours)	-0.723	0.700	1.069	0.301	0.485	0.123 – 1.911.
Type of Show (Non-education vs Education)	1.246	0.526	5.611	**0.018**	3.477	1.240 – 9.751
Parenting Pattern (Non-democratic vs Democratic)	0.790	0.477	2.744	0.098	2.204	0.865 – 5.615.
Constant	-2.787	0.636	19.232	<0.001	0.062	

Source: Primary Data, 2024

CONCLUSION AND RECOMMENDATION

This study identified media content type as the strongest independent predictor of disruptive behavior among preschool children. Exposure to non-educational or entertainment content significantly increased the likelihood of behavioral problems compared with exposure to educational content.

Although other variables, such as parenting style and child age, did not achieve statistical significance in the multivariate model, their observed patterns align with previous studies suggesting that they may play an indirect or moderating role in behavioral regulation. These results highlight the importance of guiding parents to focus not only on-screen time limits but also on the nature of the content and the quality of parent–child interaction during media use.

Based on the results of this study, we recommend that Parents should be encouraged to provide educational and prosocial media content, establish consistent screen routines, and engage in co-viewing and discussion to enhance children's comprehension and emotional control. Pediatricians and educators should integrate screen use assessment and media counseling into routine developmental screening. Early childhood education programs should emphasize digital parenting skills and positive discipline strategies to mitigate behavioral risks. It is also important that National and local authorities should develop policies supporting child-safe programming and promote digital literacy for parents through the public health and education systems. Collaboration with media producers to increase the availability of educational content is essential.

Future research should use a longitudinal design, involve a larger sample, and ensure balance in diagnostic categories to improve the external validity of the findings. Cross-sectional designs, as currently used, only capture relationships at a single point in time.

Consequently, it is uncertain whether media exposure causes behavioral disorders or whether children with behavioral difficulties are more likely to seek entertainment through media. Longitudinal designs allow researchers to follow children over time, allowing them to observe the sequence of events and assess whether media exposure precedes the onset of disruptive behavior.

ACKNOWLEDGMENTS

We would like to express my sincere gratitude to Universitas Trisakti for its invaluable support and encouragement throughout this research. The institution's commitment to academic excellence and research has greatly contributed to the successful completion of this study.

We are also deeply thankful to all individuals and parties who have provided assistance and cooperation during the research process, particularly those from the Jabodetabek area and Aceh. Your support, insights, and contributions have been instrumental in enriching the quality of this work.

AUTHOR CONTRIBUTIONS

NH organized and planned the research concept, designed the methodology, conducted the research, analyzed the data, and drafted the manuscript. HA, ATR, YM, MAH, and AAR assisted with the research and provided feedback on the manuscript. All authors reviewed and approved the final version.

CONFLICTS OF INTEREST

The authors declare no conflict of interest.

REFERENCES

1. Salmanian M, Mohammadi MR, Hooshyari Z, Mostafavi SA, Zarafshan H, Khaleghi A, et al. Prevalence, comorbidities, and sociodemographic predictors of conduct disorder: the national epidemiology of Iranian children and adolescents psychiatric disorders (IRCAP). Eur Child Adolesc Psychiatry. 2020;29(10):1385–99.
2. Asizah. Children Disruptive Behavior Well-being: Pentingnya Hubungan Anak dan Orang Tua. 2015;Psychology Forum UMM.
3. Suryani L, Seto SB. Penerapan Media Audio Visual untuk Meningkatan Perilaku Cinta Lingkungan pada Golden Age. Jurnal Obsesi : Jurnal

Pendidikan Anak Usia Dini. 2020;5(1):900–8.
4. Purwati, Japar M. Parents' education, personality, and their children's disruptive behaviour. International Journal of Instruction. 2017;10(3):227–40
5. Novitasari R. Intuisi Kecenderungan Perilaku Disruptif pada Anak Usia Prasekolah Ditinjau Dari Stres Pengasuhan Ibu. Intuisi Jurnal Ilmu Psikologi. 2016;8(2)
6. Wiguna T, Manengkei PSK, Pamela C, et al. Masalah Emosi dan Perilaku pada Anak dan Remaja di Poliklinik Jiwa Anak dan Remaja RSUPN dr. Ciptomangunkusumo (RSCM), Jabodetabek. Sari Pediatri. 2016;12(4)
7. Kemenkes RI. Laporan Nasional RISKESDAS 2018. Kementerian Kesehatan RI. Gangguan Mental Emosional. Lembaga Penerbit Balitbangkes Kementrian Kesehatan Republik Indonesia. 2018:226-228. Available from: https://repository.badankebijakan.kemkes.go.id/id/eprint/3514/1/Laporan%20Riskesdas%202018%20Nasional.pdf
8. Kurniasih E. Media Digital pada Anak Usia Dini. Jurnal Kreatif. 2019;9
9. Aslan. Peran Pola Asuh Orang tua di Era Digital. Jurnal Studia Insania, Mei 2019;7(1):20 - 34.
10. Fauzi Amelia R, Lestari T. Tanggapan Orang Tua Mengenai Pengaruh Youtube Terhadap Emosi Anak Usia Sekolah Dasar.
11. Novianti R, Garzia M. Penggunaan Gadget pada Anak; Tantangan Baru Orang Tua Milenial. Jurnal Obsesi : Jurnal Pendidikan Anak Usia Dini. 2020;4(2):1000.
12. Allmann AE, Klein DN, Kopala-Sibley DC. Bidirectional and transactional relationships between parenting styles and child symptoms of ADHD, ODD, depression, and anxiety over 6 years. Development and Psychopathology. 2022 Oct;34(4):1400-11.
13. Arthy CC, Effendy E, Amin MM, Loebis B, Camellia V, Husada MS. Indonesian Version of Addiction Rating Scale of Smartphone Usage Adapted from Smartphone Addiction Scale-Short Version (SAS-SV) In Junior High School. Open Access Maced J Med Sci [Internet]. 2019 Oct. 10 [cited 2025 Jul. 29];7(19):3235-9. Available from: https://oamjms.eu/index.php/mjms/article/view
14. Maharani EA, Puspitasari I. Deteksi gangguan emosi dan perilaku disruptif pada anak usia prasekolah. Journal of Early Childhood Care and Education. 2019 May 4;2(1):1-3
15. Firdaus SA, Kustanti ER. Hubungan Antara Pola Asuh Otoriter Dengan Pengambilan Keputusan Karier Pada Siswa Smk Teuku Umar Semarang. Jurnal EMPATI [Online]. 2019 Mar;8(1):212-220. https://doi.org/10.14710/empati.2019.23596
16. Berutu RF. The Influence of Digital Media on Aggression in Indonesian Children: A Systematic Review. International Journal of Humanities and Social Sciences Reviews. 2024 Nov 30;1(4):07-16.
17. Sari W, Astrada A, Septiana V, Pamungkas RA. Screen Time and Emotional Development Among Indonesian Preschoolers: A Comparative Study Across Socioeconomic Contexts in Jabodetabek. Media Publikasi Promosi Kesehatan Indonesia (MPPKI). 2025 Sep 11;8(9):1001-12
18. Boediman LM, Desnawati S. The relationship between parenting style and children's emotional development among Indonesian population. Jurnal Ilmiah Psikologi MIND SET. 2019 Jul 29;10(01):17-24.
19. Riany YE, Haslam DM, Sanders M. Parental mood, parenting style and child emotional and behavioural adjustment: Australia-Indonesia cross-cultural study. Journal of Child and Family Studies. 2022 Sep;31(9):2331-43
20. Putra A. Parental education conditions in rural areas of

Bengkulu: Case study on responsive gender, parenting styles, equality behavior, and learning needs. Muwazah. 2023 Dec 30;15(2):227-50.
21. Puspitasari MD, Rahmadhony A, Prasetyo S, Fadila W. Early childhood parenting practices in Indonesia. Population Review. 2020;59(2).
22. Thompson RA. Emotion dysregulation: A theme in search of definition. Development and psychopathology. 2019 Aug;31(3):805-15.
23. Karmila E, Kiswanto E, Sekarjati C, Hadna AH, Pitoyo AJ. Policy (In) Coherence in Early Childhood Development-Insights from Indonesia. Populasi.;33(1):1-7
24. Meng X, Liang X, Liu C, Cheng N, Lu S, Zhang K, Yin Y, Cheng T, Lu C, Wang Z. Associations between screen media use and young children's inhibitory control: Evidence from behavioral and fNIRS study. Computers in Human Behavior. 2024 Mar 1;152:108041.
25. Hmidan A, Seguin D, Duerden EG. Media screen time use and mental health in school aged children during the pandemic. BMC psychology. 2023 Jul 10;11(1):202.
26. Qi J, Yan Y, Yin H. Screen time among school-aged children of aged 6–14: a systematic review. Global health research and policy. 2023 Apr 19;8(1):12.
27. Hasan S, Teresa A, Widjaja NT. Relationship between Parenting Style, Family Relationship and Emotional Behavioral Problems among Elementary-School Children. Jurnal Kedokteran Meditek. 2023 May 22;29(2):120-8.
28. Maulida I, Abdurrahman A. Parenting Patterns and Child Behavior: A Comparative Study of Single and Full Parents. Ascarya: Journal of Islamic Science, Culture, and Social Studies. 2024 Aug 1;4(1):135-46.
29. Rahman FN, Hasanah U, Dewi NA. Influence of media exposure and parenting style on behavioral problems among preschool children in Indonesia. *Asian J Public Health Res*. 2024;6(3):210–219.
30. Haslam D, Poniman C, Filus A, Sumargi A, Boediman L. Parenting style, child emotion regulation and behavioral problems: The moderating role of cultural values in Australia and Indonesia. Marriage & family review. 2020 May 18;56(4):320-42.
31. Xu Y, Qiao L. Digital screen exposure and emotional symptoms in preschool children: mediation by parent–child relationship and moderation by peer relationships. Frontiers in Psychology. 2025 May 9;16:1584919.
32. UNICEF Indonesia. *Digital Literacy and Child Online Safety in Indonesia: Policy Brief*. Jabodetabek: UNICEF; 2022.
33. Salam A, Briawan D, Martianto D, Thaha AR, Arundhana AI. Efek Suplementasi Vitamin A, Minyak Fortifikasi dan Edukasi Gizi Ibu Nifas terhadap Morbiditas Ibu dan Bayi. Media Kesehatan Masyarakat Indonesia. 2018 Sep 30;14(3):209-16