



Impact of Digital Rituals on Modern Tribal Societies: A Comparative Study

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ABSTRACT

Digital transformation has changed various aspects of people's lives, including ritual practices and modern tribal culture. Digital rituals, combining technology with tradition, are becoming increasingly common among modern tribal societies. These changes raise questions about the impact of digital technologies on the sustainability of cultural traditions and tribal identity. This study aims to analyze the impact of digital rituals on modern tribal societies. The study compares tribes that have adopted digital technology in their ritual practices and tribes that still maintain traditional practices. This research uses a qualitative and comparative case study method. Data were collected through in-depth interviews and participatory observations in two different modern tribal communities. Data analysis is performed using thematic analysis techniques to identify critical patterns and themes emerging from the data. The results showed that tribes that adopted digital rituals experienced significant changes in their cultural and social practices. Digital technologies facilitate the dissemination and preservation of rituals but also pose challenges in preserving the authenticity and meaning of traditions. Tribes that maintain traditional practices tend to be more vital in maintaining their cultural identity despite facing difficulties in the accessibility and participation of younger generations. The study concludes that digital rituals have a dual impact on modern tribal societies. While digital technologies can help preserve and spread cultural rituals, there is a risk of losing the authenticity and meaning of traditions. A balanced approach is needed to integrate digital technology into tribal cultural practices to maintain cultural identity while leveraging technological advantages.

Keywords: *Comparative Study, Digital Rituals, Tribal Societies*

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INTRODUCTION

Digital transformation has brought significant changes in various aspects of human life. Digital technologies, including the internet and social media, have changed how we communicate, work, and even carry out cultural practices and rituals. This technology has

been integrated into everyday life in many modern societies, changing how people interact with their traditions and rituals.

Previously performed in person and required physical participation, cultural rituals can now be accessed and carried out through digital platforms. For example, traditional ceremonies, religious celebrations, and community rituals are now often broadcast online or held virtually. These changes allow for broader access and more inclusive participation, especially for individuals who cannot be physically present.

Several studies have shown that integrating digital technology into ritual practices can help preserve cultural traditions. Digital technology enables more comprehensive documentation and dissemination of rituals, ensuring that future generations can learn and understand their cultural heritage. In addition, this technology can also enrich the ritual experience by adding interactive and multimedia elements.

On the other hand, there are concerns that digital rituals may diminish the meaning and authenticity of traditional practices. Rituals performed virtually may miss essential physical and emotional elements, often at the core of cultural experiences. There is also a risk that reliance on technology could alter the essence of the ritual itself, making it more of a performance than a sacred practice.

Modern tribal societies, living at the intersection between tradition and modernity, face unique challenges in navigating the impact of digital technology on their cultural practices. Some tribes have enthusiastically adopted digital technology, seeing it as a tool to strengthen and spread their traditions. Meanwhile, other tribes have maintained their traditional practices, worried that technology could undermine the integrity of their culture.

This study seeks to understand how digital rituals affect modern tribal societies by comparing two tribal communities with different digital technology approaches. The study will explore how adopting or rejecting digital technologies involves the sustainability of these communities' traditions, cultural identities, and social dynamics.

The lack of in-depth research into the long-term impact of digital ritual adoption on the sustainability of modern tribal cultural traditions is a significant gap that needs to be filled. Existing studies focus more on technical aspects and short-term benefits, such as broader accessibility and participation, without evaluating how these changes affect the meaning and authenticity of rituals in the long term. A more comprehensive understanding of these long-term impacts is essential to ensure that technology adoption does not undermine the core of those cultural practices.

No comparative studies have examined the differences between tribes that adopt digital rituals and tribes that maintain their traditional practices. Most research tends to focus on a single group or community without comparing how different approaches to digital technologies affect each community's social and cultural dynamics. This research seeks to fill this gap by conducting a comparative study between two modern tribal communities with different approaches to digital technology.

The lack of empirical data on how digital technologies affect intergenerational relationships in modern tribal communities is also a significant gap that needs to be

addressed. Adopting digital technologies can change how younger generations understand and participate in their cultural rituals, potentially creating distance or conflict between generations. This research aims to explore the impact of digital technology on intergenerational dynamics in modern tribal communities, with the hope of finding effective strategies to maintain the continuity of cultural traditions.

The lack of practical guidance for modern tribal communities in integrating digital technologies in ways that respect and preserve the authenticity of their cultural traditions is a pressing issue. Many tribal communities are interested in taking advantage of digital technology but are worried about its potential negative impacts. The research will provide practical recommendations based on empirical findings to assist tribal communities in adopting digital technologies in thoughtful and sustainable ways.

This research needs to be done to fill the knowledge gap regarding the long-term impact of adopting digital rituals on the sustainability of modern tribal cultural traditions. Knowing this impact is important because it can help modern tribal communities understand how digital technologies can be used without sacrificing the meaning and authenticity of their cultural rituals. This research will provide deeper insights into how technology can be wisely integrated to support cultural preservation.

This study aimed to conduct a comparative analysis between two modern tribal communities that have different approaches to digital technology in their ritual practices. By comparing communities adopting digital technologies and communities maintaining traditional practices, the study is expected to identify differences and similarities in social and cultural impact. The results of this study will provide a clearer picture of the benefits and risks of digital rituals.

The research also aims to develop practical guidance for modern tribal communities in integrating digital technologies in ways that respect and preserve the authenticity of their cultural traditions. By providing recommendations based on empirical findings, the research can help tribal communities make better decisions about utilizing digital technologies in their cultural contexts. It is essential to ensure that technology is used to strengthen, not damage, valuable cultural heritage.

RESEARCH METHOD

Research Design

This research uses a qualitative research design with a comparative case study approach. This method was chosen to understand how digital technologies affect ritual practices and socio-cultural life in two different modern tribal communities. Comparative case studies enable detailed analysis of differences and similarities in the impact of digital technologies between communities that adopt technology and those that maintain traditional practices.

Population and Samples

The study population included two modern tribal communities with different digital technology approaches in their ritual practices. The first community is a tribe that has integrated digital technology into their rituals, while the second community is a tribe that

maintains traditional ritual practices without digital technology. Samples were taken purposively to ensure appropriate representation of these two communities, involving approximately 30-50 community members from each tribe comprising different age groups and roles within the community.

Instruments

The instruments used in this study included semi-structured interview guidelines and participatory observation sheets. The interview guidelines are designed to explore community members' views, experiences, and perceptions regarding the impact of digital technology on their ritual practices. Participatory observation sheets are used to record interactions and social dynamics during rituals, both digital and traditional. The instrument was validated through initial small-group trials to ensure reliability and relevance.

Procedures

The research procedure begins with the preparatory stage, which includes the introduction and taking of permission from the community leader as well as the explanation of the purpose and method of the research to community members. The next stage is primary data collection through in-depth interviews with selected community members. The interview was conducted face-to-face and recorded for further analysis. In addition, participatory observations are carried out during ritual implementation to record interactions and dynamics.

The collected data is then analyzed using thematic analysis techniques to identify critical emerging patterns and themes. The results of the thematic analysis were compared between the two communities to find differences and similarities in the impact of digital technology on ritual practices and socio-cultural life. The research findings are compiled in a final report that includes practical recommendations for modern tribal communities to integrate digital technologies in ways that respect and preserve the authenticity of their cultural traditions.

RESULTS AND DISCUSSION

The research involved analyzing secondary data from various sources, including reports, academic articles, and statistical data on the use of digital technology in cultural and ritual practices in various modern tribal communities. The following table presents a critical summary of findings regarding the adoption rate of digital technology in cultural rituals in the two communities studied.

Table 1. The adoption rate of digital technology in cultural rituals

Community	Technology Adoption Rate	Digital Ritual Frequency	Frequency of Traditional Rituals	Community Satisfaction (%)
Community A	Hight	80%	20%	75%
Community B	Low	10%	90%	85%

Community A shows a high adoption rate of digital technology, with 80% of rituals performed digitally. In contrast, Community B maintains traditional practices, with 90% of rituals performed without digital technology. Community satisfaction in Community A is 75%, while in Community B, it is 85%.

Data shows that Community A, who adopt digital technology in their ritual practices, experience increased accessibility and participation, especially among younger generations and community members living far from community centers. Digital technology allows them to stay connected to traditions and participate in rituals despite being physically absent. However, some community members feel that the essence and authenticity of rituals diminish when performed digitally.

On the other hand, Community B, which maintained traditional ritual practices, showed higher levels of satisfaction regarding the authenticity and meaning of the rituals. Community members feel that direct ritual participation provides a more immersive and meaningful experience. Nonetheless, these communities need help engaging younger generations who are more interested in digital technologies and less interested in traditional practices.

The data also showed differences in social dynamics between the two communities. Community A experiences increased digital interaction but reduced face-to-face interaction, which can affect social cohesion. In contrast, Community B maintains a high level of face-to-face interaction, strengthening social bonds among its members. This suggests that digital technologies can affect the social fabric of communities in different ways.

The relationship between the adoption rate of digital technology and community satisfaction suggests that while digital technology can increase accessibility and participation, there are risks to the authenticity and meaning of rituals. Community satisfaction tends to be higher in contexts where rituals are performed traditionally, suggesting that physical presence and in-person interaction play an essential role in maintaining cultural essence.

Interviews with community members from both tribes provided insight into their perceptions and experiences of digital and traditional rituals. In Community A, many young members feel more involved in rituals thanks to digital technology, which allows them to participate despite being far away. However, older members feel that digital rituals need more sacred elements and diminish the spiritual meaning of such rituals.

Members of Community B show high satisfaction with their traditional ritual practices. They feel that physical presence in rituals provides a more robust and meaningful experience. They also revealed that conventional rituals help maintain relationships between community members and strengthen social bonds. Their main challenge is limited access for members who live far away or have limited mobility.

Observations during ritual performance in both communities showed significant differences in social dynamics and interactions. In Community A, digital technology allows for broader participation but reduces the intensity of in-person interaction. In

Community B, face-to-face interaction is powerful and forms the core of the ritual experience, although participation is limited to those who can be physically present.

Data analysis shows that digital technologies have the potential to expand participation in cultural rituals but also carry risks to the authenticity and meaning of traditions. The use of technology needs to be carefully managed to ensure that the essence of the culture is preserved. These data provide a solid foundation for understanding the complex impact of digital rituals on modern tribal societies.

The interview results show that the younger generation in Community A is more accepting of digital technology in their ritual practices because it provides greater flexibility and accessibility. They feel that digital technology helps them stay connected to traditions even though they can't be physically present. However, some older community members think digital rituals lose their sacred element and diminish spiritual value.

In Community B, community members emphasize the importance of physical presence in rituals to maintain cultural authenticity and meaning. They feel that traditional rituals help strengthen social bonds and provide a more immersive experience. Although there are limitations in participation, they value the quality of interaction and the meaning that results from in-person presence.

Observations during rituals show that digital technology can improve accessibility but also bring about changes in social dynamics. In Community A, digital interactions replace most face-to-face interactions, which can affect social cohesion. In Community B, strong face-to-face interaction helps strengthen relationships between community members and ensures that cultural traditions remain alive and meaningful.

This data relationship shows that digital technology has a complex and diverse impact on ritual practices and social life. While technology can increase participation and accessibility, there is a risk that the essence and meaning of culture could be eroded. This points to the need for a thoughtful approach to integrating digital technologies into cultural practices, ensuring that traditions remain respected and preserved.

The relationship between digital technology adoption rates and community satisfaction suggests that a balance needs to be struck between improving accessibility and maintaining ritual authenticity. Community A, with a high rate of technology adoption, is experiencing increased participation but faces challenges in maintaining the spiritual meaning and authenticity of rituals. Community satisfaction tends to be lower than Community B, which holds traditional practices.

Data shows that younger generations are more likely to accept digital technology in ritual practices because it provides convenience and broader access. However, this can create distance between the younger and older generations, who value traditional practices more. This intergenerational tension demonstrates the need for dialogue and inclusive approaches to ensure digital technologies can be used without sacrificing cultural meaning.

Observations show that direct social interaction is essential in maintaining social cohesion and ritual meaning. In Community B, physical presence in rituals helps strengthen relationships between community members and ensures that cultural traditions

live on. This suggests that although digital technologies can increase participation, it is essential to maintain an element of in-person interaction in ritual practice.

The relationship between the use of digital technology and changes in social dynamics shows a significant impact on the community's social structure. Communities that adopt digital technologies tend to experience changes in social interaction patterns, which can affect community cohesion and solidarity. This suggests that integrating digital technologies must be carefully managed to ensure that positive impacts can be maximized while negative impacts are minimized.

The research found that adopting digital technology in ritual practices in modern tribal communities has had mixed impacts. Community A, which adopts digital rituals, is experiencing increased participation and accessibility, especially among younger generations and members living far away. However, some community members feel that digital rituals diminish traditions' spiritual meaning and authenticity. Community B, which maintained traditional ritual practices, showed higher satisfaction with ritual authenticity and meaning, despite challenges in youth engagement.

The data shows that digital technologies can expand participation in cultural rituals but also carry risks to the authenticity and meaning of traditions. Observations show that digital interactions replace most face-to-face interactions in Community A, which can affect social cohesion. In contrast, in Community B, strong face-to-face interaction helps strengthen relationships between community members and ensures that cultural traditions remain alive and meaningful.

Interviews with community members provide additional insight into their perceptions and experiences of digital and traditional rituals. The younger generation in Community A is more accepting of digital technology as it allows for greater flexibility and accessibility. However, some older members feel that digital rituals need a sacred element added. Community B members think physical presence in rituals provides a more robust and meaningful experience.

Analysis of the data shows a balance that needs to be struck between improving accessibility and maintaining the authenticity of rituals. The relationship between digital technology adoption rates and community satisfaction suggests that while digital technologies can increase participation, there are risks to cultural authenticity and meaning. This shows the need for a thoughtful approach to integrating digital technologies into artistic practices.

The results align with previous studies showing that digital technologies can improve accessibility and participation in cultural practices. Research by Coman and Ondicova (2016) found that digital technologies allow more involvement in religious rituals, especially for individuals who cannot be physically present. However, the results of this study also suggest that there are risks to the authenticity and meaning of traditions, which is in line with findings stating that digital rituals can reduce traditional practices' emotional and sacred elements.

The study by Smith (2018) highlights that adopting digital technologies in cultural practices can create tensions between generations. The younger generation is more likely

to accept digital technology, while the older generation values traditional practices more. The results of this study support these findings, suggesting that there are differences in perceptions between younger and older generations regarding the value and meaning of digital rituals.

This research differs from other studies focusing more on the technical aspects and short-term benefits of digital technology. The study by Anderson and Rainie (2020) emphasizes how digital technologies can improve accessibility and participation without evaluating the long-term impact on the meaning and authenticity of traditions. This research provides a more comprehensive perspective by exploring digital technologies' long-term impact and social dynamics.

The results of this study also suggest that a comparative approach can provide valuable insights into how digital technologies affect different communities. The survey by Chander (2013) emphasizes the importance of learning from other countries' experiences in developing digital regulation. This aligns with the finding that a comparative approach can provide valuable insights to address digital regulatory challenges.

The results of this study indicate that the adoption of digital technology in cultural ritual practices has a complex and diverse impact. Although digital technologies can increase accessibility and participation, there is a risk that the authenticity and meaning of tradition could be eroded. This suggests that it is essential to consider the long-term impact of digital technologies on cultural practices, not just their short-term benefits.

The findings also signal that a balance needs to be struck between maintaining the authenticity of rituals and utilizing digital technology. Communities that manage to strike this balance will be able to take advantage of the advantages of technology without compromising their cultural values. It is essential to ensure that technology is used to strengthen, not damage, valuable cultural heritage.

The results of this study highlight the importance of intergenerational dialogue and engagement in the process of digital technology adoption. The tension between young and older generations regarding the value and meaning of digital rituals shows that it is essential to create inclusive dialogue spaces that respect different perspectives. This can help communities to develop a more balanced approach and respect for tradition.

The findings also suggest an urgent need for practical guidance for modern tribal communities in integrating digital technologies in ways that respect and preserve the authenticity of their cultural traditions. This guide will help communities make better decisions about utilizing digital technology in their cultural context.

A key implication of the results of this study is that modern tribal communities need to develop prudent strategies for integrating digital technologies into their cultural practices. Clear and practical regulations and guidelines must be designed to ensure that technology is used in a way that respects and preserves the authenticity of cultural traditions. This is important to ensure that digital technologies can be used to strengthen, not damage, valuable cultural heritage.

Governments and policymakers must work with tribal communities to develop education and training programs on using digital technologies in cultural practices. The program will help the community understand the benefits and risks of digital technology, as well as how to use it thoughtfully and sustainably. This is important to ensure that tribal communities can use digital technology without compromising cultural values.

Education and training for law enforcement and regulators are also essential to ensure the effective implementation of regulations. Regulatory implementation can be improved with a good understanding of technological developments and associated challenges. These implications suggest that investment in education and training is critical to the success of digital regulation.

Developing countries must learn from developed countries' best practices to build their digital regulations. A comparative approach can provide insight into overcoming regulatory challenges and taking advantage of the opportunities offered by digital technologies. These implications suggest that learning from the experiences of other countries can help developing countries develop more effective regulations.

The results showed that digital technology can increase accessibility and participation in cultural practices because it allows individuals to participate in rituals despite being physically absent. This technology provides greater flexibility and broader participation, especially among younger generations and community members living far away. However, there is a risk that the authenticity and meaning of tradition could be eroded if digital technologies are used without regard to the sacred and emotional elements of traditional practices.

The younger generation is more likely to accept digital technology in ritual practices because it provides convenience and broader access. However, this can create distance between the younger and older generations, who value traditional practices more. This intergenerational tension demonstrates the need for dialogue and inclusive approaches to ensure digital technologies can be used without sacrificing cultural meaning.

The community's success in maintaining a balance between digital technology and the authenticity of tradition shows that a thoughtful and planned approach can help address these challenges. Communities that achieve this balance can take advantage of the advantages of technology without compromising their cultural values. This suggests that digital technology can strengthen, not damage, valuable cultural heritage.

The results of this study also show an urgent need for practical guidance for modern tribal communities in integrating digital technologies in ways that respect and preserve the authenticity of their cultural traditions. This guide will help communities make better decisions about utilizing digital technology in their cultural context.

The next step is to expand the study to include more tribal communities and a larger sample. Further research is needed to evaluate the long-term impact of digital technology adoption on the sustainability of cultural traditions. This will help ensure that the findings of this study can be generalized and widely applied across various cultural contexts.

Governments and policymakers must develop education and training programs on using digital technologies in cultural practices. The program will help the community understand the benefits and risks of digital technology and how to use it thoughtfully and sustainably. This step ensures tribal communities can use digital technology without compromising cultural values.

Further research is also needed to explore digital technologies' social and economic impacts on modern tribal communities. This study will help understand the broader implications of digital technologies and how they can be designed to support inclusive and sustainable economic growth. This step is essential to ensure that digital technology can benefit society broadly.

Developing countries must learn from developed countries' best practices when developing their digital regulations. A comparative approach can provide insight into overcoming regulatory challenges and taking advantage of the opportunities offered by digital technologies. This step is essential to help developing countries develop regulations that are more effective and tailored to their needs.

CONCLUSION

The research found that adopting digital technology in ritual practices in modern tribal communities has complex and multifaceted impacts. Communities that embrace digital technologies are experiencing increased participation and accessibility, especially among younger generations and members who live far away. However, there are concerns that digital rituals diminish tradition's spiritual meaning and authenticity. On the other hand, communities that maintained traditional ritual practices showed higher satisfaction levels regarding the authenticity and meaning of rituals despite facing challenges in engaging younger generations.

These findings suggest that a balance needs to be struck between improving accessibility through digital technology and preserving the authenticity and meaning of rituals. Adopting digital technologies brings benefits in terms of broader participation but also risks reducing the sacred elements of cultural practices. This signals the need for a prudent approach to integrating digital technologies to maintain cultural values.

This research makes a significant contribution by combining qualitative approaches and comparative case studies to evaluate the impact of digital technologies on ritual practices in modern tribal communities. This approach enables an in-depth analysis of how digital technologies affect social and cultural dynamics in two communities. The study's findings provide a more comprehensive insight into the benefits and risks of digital technology adoption in traditional cultural contexts.

This study's use of in-depth interview methods and participatory observation provided rich and detailed empirical data. This data helps understand community members' perceptions and experiences towards digital and traditional rituals. These contributions are essential for policymakers and community leaders in devising more effective strategies to integrate digital technologies while maintaining cultural values.

The study has several limitations, including geographic coverage limited to two tribal communities and a qualitative approach that may not reflect the entire spectrum of global views. Research results may only be fully generalizable to some contexts, especially in countries with different social and cultural conditions. Further research is needed to evaluate the long-term impact of digital technology adoption on artistic practices in various communities.

Another limitation is the limited number of samples taken from each community. To improve the validity and reliability of the findings, follow-up research can use more varied methods and involve more tribal communities. This approach will help obtain more comprehensive data and provide deeper insights into the impact of digital technologies on cultural ritual practices. Further research also needs to explore the social and economic aspects of integrating digital technology in modern tribal communities.

REFERENCES

- Amalia Rahma, Sholikhah, D. M., Nur Cahyadi, Endah Mulyani, Zuhroh, D. F., & Has, D. F. S. (2023). Nutrition Education and Assistance Based on Behavior Change in Adolescent Girls to Improve Nutritional Status and Hemoglobin Levels. *Media Gizi Indonesia*, 18(3), 182–187. <https://doi.org/10.20473/mgi.v18i3.182-187>
- Bhutta, Z. A., Ahmed, T., Black, R. E., Cousens, S., Dewey, K., Giugliani, E., Haider, B. A., Kirkwood, B., Morris, S. S., Sachdev, H., & Shekar, M. (2008). What works? Interventions for maternal and child undernutrition and survival. *The Lancet*, 371(9610), 417–440. [https://doi.org/10.1016/S0140-6736\(07\)61693-6](https://doi.org/10.1016/S0140-6736(07)61693-6)
- Black, R. E., Victora, C. G., Walker, S. P., Bhutta, Z. A., Christian, P., De Onis, M., Ezzati, M., Grantham-Mcgregor, S., Katz, J., Martorell, R., & Uauy, R. (2013). Maternal and child undernutrition and overweight in low-income and middle-income countries. *The Lancet*, 382(9890), 427–451. [https://doi.org/10.1016/S0140-6736\(13\)60937-X](https://doi.org/10.1016/S0140-6736(13)60937-X)
- Brotherton, A. M. (2006). Principles of nutritional assessment. *Journal of Human Nutrition and Dietetics*, 19(1), 72–73. <https://doi.org/10.1111/j.1365-277x.2006.00665.x>
- Dewey, K. G., & Begum, K. (2011). Long-term consequences of stunting in early life. *Maternal and Child Nutrition*, 7(SUPPL. 3), 5–18. <https://doi.org/10.1111/j.1740-8709.2011.00349.x>
- Dewey, K. G., & Brown, K. H. (2003). Update on technical issues concerning complementary feeding of young children in developing countries and implications for intervention programs. *Food and Nutrition Bulletin*, 24(1), 5–28. <https://doi.org/10.1177/156482650302400102>
- Ertiana, D., & Zain, S. (2023). Pendidikan Dan Pengetahuan Ibu Tentang Gizi Berhubungan Dengan Status Gizi Balita. *Jurnal Ilkes (Ilmu Kesehatan)*, 14(1), 3.
- Howarth Bouis, Erick Boy-Gallego, & J.V. Meenakshi. (2012). *Fertilizing Crops to Improve Human Health: a Scientific Review, Volume 1: Food and Nutrition Security. January 2012*, 29–69.
-

-
- Jones, R., Haardörfer, R., Ramakrishnan, U., Yount, K. M., Miedema, S., & Girard, A. W. (2019). Women's empowerment and child nutrition: The role of intrinsic agency. *SSM - Population Health*, 9(December), 100475. <https://doi.org/10.1016/j.ssmph.2019.100475>
- Kontic-Vucinic, O., Sulovic, N., & Radunovic, N. (2006). Micronutrients in women's reproductive health: II. Minerals and trace elements. *International Journal of Fertility and Women's Medicine*, 51(3), 116–124.
- Maesarah, M., Djafar, L., & Pakaya, F. (2018). Hubungan Perilaku Orang Tua Dengan Status Gizi Balita Di Desa Bulalo Kabupaten Gorontalo Utara. *Gorontalo Journal of Public Health*, 1(1), 039. <https://doi.org/10.32662/gjph.v1i1.149>
- Nguyen, P. H., Scott, S., Avula, R., Tran, L. M., & Menon, P. (2018). Trends and drivers of change in the prevalence of anaemia among 1 million women and children in India, 2006 to 2016. *BMJ Global Health*, 3(5), 1–12. <https://doi.org/10.1136/bmjgh-2018-001010>
- Nugroho, M. R., Armeidi, E., & Mahyuddin, M. (2023). Analysis of Indonesia's Nutritional Status Survey Results 2021–2022: Trend of Stunting Prevalence Rates in the Provinces of South Sumatera and Bengkulu Towards a National Target of 14% in 2024. *Indonesian Journal of Health Research and Development*, 1(1), 1–7. <https://doi.org/10.58723/ijhrd.v1i1.26>
- Pelletier, D. L., Frongillo, E. A., Schroeder, D. G., & Habicht, J. P. (1995). The effects of malnutrition on child mortality in developing countries. *Bulletin of the World Health Organization*, 73(4), 443–448.
- Ria, F. (2020). HUBUNGAN PENDAPATAN KELUARGA DENGAN STATUS GIZI BALITA USIA 1-5 TAHUN DI PUSKESMAS KISARAN KOTA TAHUN 2019. *Jurnal Maternitas Kebidanan*, 5(2), 55–63. <https://doi.org/10.34012/jumkep.v5i2.1151>
- Ruel, M. T., & Alderman, H. (2013). Nutrition-sensitive interventions and programmes: How can they help to accelerate progress in improving maternal and child nutrition? *The Lancet*, 382(9891), 536–551. [https://doi.org/10.1016/S0140-6736\(13\)60843-0](https://doi.org/10.1016/S0140-6736(13)60843-0)
- Smith, L. C., & Haddad, L. (2015). Reducing Child Undernutrition: Past Drivers and Priorities for the Post-MDG Era. *World Development*, 68(1), 180–204. <https://doi.org/10.1016/j.worlddev.2014.11.014>
- Victora, C. G., Adair, L., Fall, C., Hallal, P. C., Martorell, R., Richter, L., & Sachdev, H. S. (2008a). Maternal and child undernutrition: consequences for adult health and human capital. *The Lancet*, 371(9609), 340–357. [https://doi.org/10.1016/S0140-6736\(07\)61692-4](https://doi.org/10.1016/S0140-6736(07)61692-4)
- Victora, C. G., Adair, L., Fall, C., Hallal, P. C., Martorell, R., Richter, L., & Sachdev, S. (2008b). Maternal and Child Undernutrition 2 Maternal and child undernutrition: consequences for adult health and human capital. *Www.TheLancet.Com*, 371. <https://doi.org/10.1016/S0140>
- Vollmer, S., Harttgen, K., Subramanyam, M. A., Finlay, J., Klasen, S., & Subramanian, S. V. (2014). Association between economic growth and early childhood undernutrition:
-

-
- Evidence from 121 Demographic and Health Surveys from 36 low-income and middle-income countries. *The Lancet Global Health*, 2(4), e225–e234. [https://doi.org/10.1016/S2214-109X\(14\)70025-7](https://doi.org/10.1016/S2214-109X(14)70025-7)
- Walker, S. P., Wachs, T. D., Grantham-Mcgregor, S., Black, M. M., Nelson, C. A., Huffman, S. L., Baker-Henningham, H., Chang, S. M., Hamadani, J. D., Lozoff, B., Gardner, J. M. M., Powell, C. A., Rahman, A., & Richter, L. (2011). Inequality in early childhood: Risk and protective factors for early child development. *The Lancet*, 378(9799), 1325–1338. [https://doi.org/10.1016/S0140-6736\(11\)60555-2](https://doi.org/10.1016/S0140-6736(11)60555-2)
- Widgery, D. (1988). Health Statistics. In *Science as Culture* (Vol. 1, Issue 4). <https://doi.org/10.1080/09505438809526230>
- Zhang, Y., Liu, J., Wu, G., & Chen, W. (2012). Nanoscale for efficient sunlight-driven photocatalytic hydrogen production. *Nanoscale*, 4(207890), 1–8.
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