



(RESEARCH ARTICLE)



## The effectiveness of Reprofitstacko as an educational game innovation related to sexuality education for urban adolescent females

Dessy Amelia <sup>1\*</sup>, Desiana Merawati <sup>2</sup>, Rizqie Putri Novembriani <sup>1</sup>, Zumroh Hasanah <sup>1</sup>, Alifia Candra Puriastuti <sup>1</sup>, Khamdan Mukharam <sup>2</sup> and Moh. Andi Arif Billah <sup>2</sup>

<sup>1</sup> *Département of Midwifery, Faculty of Medicine, State University of Malang, Malang, Indonesia.*

<sup>2</sup> *Department of Sport Science, Faculty of Sports and Science, State University of Malang, Malang, Indonesia*

GSC Biological and Pharmaceutical Sciences, 2024, 29(01), 302–309

Publication history: Received on 30 August 2024; revised on 24 October 2024; accepted on 26 October 2024.

Article DOI: <https://doi.org/10.30574/gscbps.2024.29.1.0397>

### Abstract

Sexuality education in Indonesian high schools is a complex issue influenced by cultural, religious, and educational frameworks. One of the primary issues affecting adolescents is the lack of access to comprehensive sexual health education. Education empowers individuals, particularly females, to make informed choices about their sexual and reproductive health, thereby improving health outcomes for future generations. In addition, school-based nutrition education programs have been shown to improve adolescents' nutrition-related knowledge, attitudes, and behaviours. Interactive and participatory learning methods, such as games, can enhance engagement and retention of information, this study aims to determine the effectiveness of the educational game “Reprofitstacko” related to sexual and nutritional education in adolescent females. A quasi-experimental study was conducted from July to August 2024 in 2 vocational high schools in Malang City. The sampling technique used was purposive sampling. The number of samples in this study amounted to 70 female students. The provision of sexual education to young female aged 15-19 is crucial for promoting their reproductive health and empowering them to make informed decisions regarding their sexual lives. Comprehensive health education programs should address not only physical health but also cognitive and emotional well-being. Incorporating topics such as nutrition, mental health, and healthy relationships into school curricula can empower adolescents with the knowledge they need to make informed decisions. In this study, the educational game “Reprofitstacko” in urban adolescent female has a significant relationship between age and Sexuality and sexual behaviours and Nutrition.

**Keywords:** Sexual and Reproductive Health; Nutrition; Young Female; Education Game; Secondary Education

### 1. Introduction

Sexuality education in Indonesian high schools is a complex issue influenced by cultural, religious, and educational frameworks. Many parents and educators perceive sex education as inappropriate or as merely teaching sexual intercourse, which contributes to a lack of formal instruction in schools [1,2]. This perception is particularly pronounced in a predominantly Muslim society where discussions about sexuality are often considered taboo [1,3]. Sexuality education is critical to achieving the Sustainable Development Goals (SDGs), particularly health, gender equality, and education. The SDGs emphasise the importance of inclusive and equitable quality education (SDG 4) and the promotion of lifelong learning opportunities for all, which includes comprehensive sexuality education (CSE) as a fundamental aspect of health education and empowerment [4,5]. CSE not only addresses issues of disease prevention and reproductive health but also encompasses broader themes of sexual rights, gender identity, and personal empowerment, aligning with the SDGs' commitment to leaving no one behind [6,7].

\* Corresponding author: Dessy Amelia

One of the primary issues affecting adolescents is the lack of access to comprehensive sexual health education. Many adolescents receive insufficient information about sexual and reproductive health (SRH), which can lead to uninformed decision-making regarding sexual activities [8,9]. In many regions, sexual health education is either not included in school curricula or is delivered in a manner that fails to address the complexities of adolescent sexuality [9]. This lack of education can result in increased rates of unintended pregnancies and sexually transmitted infections (STIs), including HIV [10,11].

Education empowers individuals, particularly female, to make informed choices about their sexual and reproductive health, thereby improving health outcomes for future generations [12,13]. Evidence suggests that educating female leads to better health for their children and contributes to the overall well-being of communities [12]. The Indonesian national curriculum, particularly the 2013 Curriculum, has made attempts to incorporate elements of CSE, although its implementation has been inconsistent across different regions [2,14]. The curriculum aims to produce well-rounded individuals by integrating various subjects, including health education, which encompasses aspects of sexuality [14].

Sexuality education plays a crucial role in empowering adolescent females. Studies have shown that comprehensive sex education can lead to improved knowledge about sexual health, reduced rates of teenage pregnancy, and healthier sexual behaviours [15]. For instance, a systematic review indicated that CSE programs significantly reduced the likelihood of adolescents engaging in risky sexual behaviours [15]. Moreover, addition school-based nutrition education programs have been shown to improve adolescents' nutrition-related knowledge, attitudes, and behaviours. A study in rural China highlighted that interactive and participative components in nutrition education significantly enhanced students' understanding of healthy dietary habits [16].

Interactive and participatory learning methods, such as workshops, role-playing, and games, can enhance engagement and retention of information. For instance, a nutrition education program that utilized games to teach about balanced diets resulted in significant improvements in adolescents' knowledge and dietary practices [17]. Similarly, incorporating interactive elements into sex education can help demystify topics and encourage adolescents to ask questions and express concerns in a safe environment [18,19]. Games can create a non-threatening environment where adolescents feel comfortable discussing sensitive topics. Participatory design approaches that involve adolescents in the development of educational games can ensure that the content is relevant and relatable, thereby fostering open dialogue about sexual health [16,20]. This collaborative approach not only empowers adolescents but also encourages them to engage with their peers and parents in discussions about sexual health, thereby enhancing communication skills and reducing stigma [20]. Due to this situation, this study aims to determine the effectiveness of the educational game "REPROFITSTACKO" related to sexual and nutritional education in adolescent females.

---

## 2. Material and methods

The quasi-experimental study was conducted from July to August 2024 in 2 vocational high schools in Malang City. The sampling technique used was purposive sampling. The inclusion criteria in this study include students registered at the school concerned, willing to be a sample and present during 4 meetings. The exclusion criteria in the study were students who did not attend at least once during the study. The number of samples in this study amounted to 70 female students. The treatment was carried out with the REPROFITSTACKO educational game (Reproductive Health: Fit and Active with Uno Stacko), which is an educational game modified from the UNO Stacko game. This educational game displays case questions related to relationships, values, rights, culture, and sexuality; understanding gender; violence and staying safe; skills for health and well-being; human body and development; sexuality and sexual behaviour; sexual and reproductive health; nutrition; and physical activity that must be answered by students and discussed with the group regarding the best answer related to the case. Ethics approval was received from the State University of Malang Research Ethics Committee. Student consent was obtained from all participating students.

---

## 3. Results

**Table 1** Distribution of Respondents by Age

| Characteristics | Mean  | Min – Max     | Std.Deviation |
|-----------------|-------|---------------|---------------|
| Age             | 16.61 | 15.00 - 19.00 | 1.011         |

The results of the analysis showed that the average age of respondents was 16.61, with the youngest being 15.0 and the oldest being 19.0.

**Table 2** Distribution of Respondents Based on Gender and Grade

| Characteristics | n  | %     |
|-----------------|----|-------|
| <b>Gender</b>   |    |       |
| Male            | 0  | 0.0   |
| Female          | 70 | 100.0 |
| <b>Class</b>    |    |       |
| 10              | 12 | 17.1  |
| 11              | 27 | 38.6  |
| 12              | 31 | 44.3  |

The analysis's results showed that the majority of respondents were female (100.0%) and most were in grade 12 (44.3%).

**Table 3** Distribution of Respondents Based on Relationships, Values, Rights, Culture, and Sexuality, Understanding Gender, Violence and Staying Safe, Skills for Health and well-being, Human Body and Development, Sexuality and Sexual Behavior, Sexual and Reproductive Health, and Nutrition

| Characteristics                              | n  | %    |
|--|----|------|
| <b>Relationships</b>                         |    |      |
| Bad  | 0  | 0.0  |
| Medium                                       | 39 | 55.7 |
| Good   | 31 | 44.3 |
| <b>Value, rights, culture, and sexuality</b> |    |      |
| Bad  | 1  | 1.4  |
| Medium                                       | 17 | 24.3 |
| Good   | 52 | 74.3 |
| <b>Understanding gender</b>                  |    |      |
| Bad  | 3  | 4.3  |
| Medium                                       | 49 | 70.0 |
| Good   | 18 | 25.7 |
| <b>Violence and Staying Safe</b>             |    |      |
| Bad  | 2  | 2.9  |
| Medium                                       | 7  | 10.0 |
| Good   | 61 | 87.1 |
| <b>Skills for health and well-being</b>      |    |      |
| Bad  | 13 | 18.6 |
| Medium                                       | 20 | 28.6 |
| Good   | 37 | 52.9 |
| <b>Human body and development</b>            |    |      |

|                                |    |      |
|--------------------------------|----|------|
| Bad                            | 2  | 2.9  |
| Medium                         | 28 | 40.0 |
| Good                           | 40 | 57.1 |
| Sexuality and sexual behaviour |    |      |
| Bad                            | 7  | 10.0 |
| Medium                         | 6  | 8.6  |
| Good                           | 57 | 81.4 |
| Sexual and reproductive health |    |      |
| Bad                            | 0  | 0.0  |
| Medium                         | 32 | 45.7 |
| Good                           | 38 | 54.3 |
| Nutrition                      |    |      |
| Bad                            | 1  | 1.4  |
| Medium                         | 27 | 38.6 |
| Good                           | 42 | 60.0 |

The results of the analysis showed that most respondents had moderate relationships (55.7%), had good values, rights, culture, and sexuality (87.1%), moderate gender understanding (70.0%), had good violence and staying safe (87.1%), had good skills for health and well-being (52.9%), had good human body and development (57.1%), had good sexuality and sexual behaviour (81.4%), had good sexual and reproductive health (54.3%), and had good nutrition (60.0%).

**Table 4** Relationships between Age and Relationships, Values, Rights, Culture and Sexuality, Understanding Gender, Violence and Staying Safe, Skills for Health and well-being, Human Body and Development, Sexuality and Sexual Behavior, Sexual and Reproductive Health, and Nutrition.

| Characteristics                       | P value |
|---------------------------------------|---------|
| Relationships                         | 0.358   |
| Value, rights, culture, and sexuality | 0.971   |
| Understanding gender                  | 0.438   |
| Violence and Staying Safe             | 0.052   |
| Skills for health and well-being      | 0.479   |
| Human body and development            | 0.667   |
| Sexuality and sexual behaviours       | 0.009*  |
| Sexual and reproductive health        | 0.407   |
| Nutrition                             | 0.035*  |

\*) p value <  $\alpha$ ;  $\alpha = 0.05$ ; Kruskal-Wallis Test

Statistical test results show that there is a significant relationship between age and sexuality and sexual behaviours and nutrition (p-value = 0.000; 0.013).

#### 4. Discussion

The respondents in this study had an average age of 15-19 years. The provision of sexual education to young female aged 15-19 is crucial for promoting their reproductive health and empowering them to make informed decisions

regarding their sexual lives. This age group is particularly vulnerable to various sexual health issues, including unintended pregnancies, sexually transmitted infections (STIs), and sexual coercion. Comprehensive sexual education can significantly impact young female's knowledge and attitudes towards sexual health, thereby influencing their behaviours and choices [21,22]

In this study, significant results were obtained between the age of females and sexual behaviour. Young female who receives sexual education before their first sexual experience are more likely to engage in safer sexual practices, such as using condoms and other forms of contraception [22]. This is particularly important in regions where cultural norms may discourage open discussions about sexual health, leading to misinformation and risky behaviours [23]. For instance, Rahmani et al. highlight that despite criticisms of sexual education programs, they play a vital role in equipping young females with the knowledge necessary to navigate their sexual health responsibly [22].

In this study, it was found that nutrition was also significantly associated with female age. Adolescent females are at a higher risk of undernutrition and related health issues [24]. Furthermore, the dietary practices of adolescent female are often inadequate, with many lacking awareness of essential nutrients and their roles in health. School-based nutrition education could enhance dietary practices and nutritional awareness among adolescent female, emphasizing the need for comprehensive programs that address both knowledge and practical dietary habits [25].

Relationships, values, rights, culture, and sexuality, and reproductive health have no significant relationship with the age of females. Innovative approaches to sexual education, such as the use of digital platforms and peer-led initiatives, have shown promise in reaching young female effectively. These methods can provide a safe space for young female to learn about sexual health in a non-judgmental environment, facilitating open discussions and reducing feelings of shame associated with seeking information [26,27]. Additionally, integrating sexual education into school curricula can ensure that all adolescents receive consistent and accurate information, regardless of their home environment [28].

Moreover, the educational environment plays a pivotal role in shaping adolescents' knowledge and attitudes towards reproductive health. Research has shown that school-based health education significantly enhances adolescents' understanding of reproductive health topics, including the risks associated with early sexual activity and the importance of safe practices [29,30]. Health education can effectively increase adolescents' awareness of issues such as early marriage and sexually transmitted infections (STIs)[31]. Furthermore, innovative educational tools, such as digital applications and interactive media, have been found to improve access to reproductive health information, making it more engaging for adolescents [32].

This study also explains that gender understanding is not related to age in female. Research conducted at Diponegoro University shows that adolescent female has a good perception of gender roles and gender sexuality, with a percentage of 51.6% [33]. Empowerment programs aimed at young female, such as the "Girls' Voices" curriculum, have shown promise in enhancing self-efficacy and agency among participants. These programs focus on developing life skills and fostering a supportive environment where female can express their concerns and aspirations. By addressing the specific challenges faced by female, such programs can help mitigate the effects of gender inequity and promote positive health [11].

Violence and Staying Safe, Human Body and Development, and Skills for Health and Well-Being in this study gave insignificant results with the age of adolescent females. Interventions aimed at preventing violence against female have shown varying degrees of effectiveness. For example, school-based programs that focus on peace education and community social norms have been implemented in Afghanistan, demonstrating some success in reducing peer violence and corporal punishment in schools [34]. The recent introduction of the Merdeka Curriculum, which emphasizes flexibility and student-centred learning, provides an opportunity to improve the delivery of sex education in secondary schools in Indonesia. The curriculum encourages educators to adapt their teaching methods to better meet the needs of students, allowing for more open discussions on sexuality and health [35,36].

Urban adolescents generally have better access to health information and resources, which can enhance their understanding of physical development during adolescence. Studies have shown that urban adolescents are more likely to receive education about puberty and bodily changes through school programs and health services [37]. Urban adolescents may have more opportunities to engage in educational activities that promote cognitive skills, as indicated by research showing that urban environments often provide more diverse educational resources [38]. Social development during adolescence is heavily influenced by peer interactions and community engagement. Urban adolescents typically have access to a wider range of social activities and peer groups, which can enhance their social skills and understanding of interpersonal relationships [39]. Comprehensive health education programs are necessary to effectively support urban adolescents in their growth and development. These programs should address not only

physical health but also cognitive and emotional well-being. Incorporating topics such as nutrition, mental health, and healthy relationships into school curricula can empower adolescents with the knowledge they need to make informed decisions [40,41]

---

## 5. Conclusion

In this study, the educational game Reprofitstacko in urban adolescent female have different levels of knowledge about sexual education and nutrition, a significant relationship between age and Sexuality and sexual behaviours and Nutrition. However, the relationship between Relationships, Values, Rights, Culture and Sexuality, Understanding Gender, Violence and Staying Safe, Skills for Health and well-being, Human Body and Development, and Sexual and Reproductive Health to age did not show a significant relationship. This could be influenced by factors such as access to education, social dynamics, and community resources. By implementing comprehensive health education programs that address various aspects of adolescent development, stakeholders can empower urban adolescents to effectively navigate this critical period and improve their overall well-being.

---

## Compliance with ethical standards

### *Acknowledgments*

We thank all parties involved in this research for their support. This research uses internal funding from the State University of Malang Year 2024.

### *Disclosure of conflict of interest*

The authors declare no financial or ideological conflicts of interest.

### *Statement of ethical approval*

The State University of Malang approved ethical clearance (No.26.07.9/UN32.14.2.8/LT/2024).

### *Statement of informed consent*

Informed consent was obtained from all participants involved in this study.

---

## References

- [1] Maddussila SA. Criminal Code Bill Article 414 and Sex Education in Indonesia. *Jurnal Hukum Dan Peradilan* 2019;8:407. <https://doi.org/10.25216/jhp.8.3.2019.407-419>.
- [2] Leowalu S, Hendriks J. Perspectives of Indonesian Parents Towards School-Based Sexuality Education. *Asia Pacific Journal of Education* 2021;43:572–85. <https://doi.org/10.1080/02188791.2021.1944842>.
- [3] Iyer P, Clarke D, Aggleton P. Barriers to HIV and Sexuality Education in Asia. *Health Educ* 2014;114:118–32. <https://doi.org/10.1108/he-06-2013-0025>.
- [4] Miedema E, Mat MLJL, Hague F. But Is It *Comprehensive*? Unpacking the ‘Comprehensive’ in Comprehensive Sexuality Education. *Health Educ J* 2020;79:747–62. <https://doi.org/10.1177/0017896920915960>.
- [5] Alkaabi K. Sustainable Development Goals From Theory to Practice Using Spatial Data Infrastructure: A Case Study of UAEU Undergraduate Students. *Sustainability* 2023;15:12394. <https://doi.org/10.3390/su151612394>.
- [6] Logie CH. Sexual Rights and Sexual Pleasure: Sustainable Development Goals and the Omitted Dimensions of The *leave No One Behind* Sexual Health Agenda. *Glob Public Health* 2021;18. <https://doi.org/10.1080/17441692.2021.1953559>.
- [7] Mantula F. Perspective Chapter: Sexual Health Interventions for Adolescents 2023. <https://doi.org/10.5772/intechopen.1001605>.
- [8] Janighorban M, Boroumandfar Z, Pourkazemi R, Mostafavi F. Barriers to Vulnerable Adolescent Girls’ Access to Sexual and Reproductive Health. *BMC Public Health* 2022;22. <https://doi.org/10.1186/s12889-022-14687-4>.

- [9] Byers ES, O'Sullivan LF, Mitra K, Sears HA. Parent-Adolescent Sexual Communication in India: Responses of Middle Class Parents. *J Fam Issues* 2020;42:762–84. <https://doi.org/10.1177/0192513x20930343>.
- [10] Singh DR, Shrestha S, Karki KB, Sunuwar DR, Khadka DB, Maharjan D, et al. Parental Knowledge and Communication With Their Adolescent on Sexual and Reproductive Health Issues in Nepal. *PLoS One* 2023;18:e0289116. <https://doi.org/10.1371/journal.pone.0289116>.
- [11] Meherali S, Rehmani M, Ali S, Lassi ZS. Interventions and Strategies to Improve Sexual and Reproductive Health Outcomes Among Adolescents Living in Low- And Middle-Income Countries: A Systematic Review and Meta-Analysis. *Adolescents* 2021;1:363–90. <https://doi.org/10.3390/adolescents1030028>.
- [12] Al-Mandhari A, El-Adawy M, Khan W, Ghaffar A. Health for All by All-Pursuing Multi-Sectoral Action on Health for SDGs in the WHO Eastern Mediterranean Region. *Global Health* 2019;15. <https://doi.org/10.1186/s12992-019-0504-8>.
- [13] Daher-Nashif S, Bawadi H. Women's Health and Well-Being in the United Nations Sustainable Development Goals: A Narrative Review of Achievements and Gaps in the Gulf States. *Int J Environ Res Public Health* 2020;17:1059. <https://doi.org/10.3390/ijerph17031059>.
- [14] Mukminin A, Habibi A, Prasojo LD, Idi A, Hamidah A. Curriculum Reform in Indonesia: Moving From an Exclusive to Inclusive Curriculum. *Center for Educational Policy Studies Journal* 2019;9:53–72. <https://doi.org/10.26529/cepsj.543>.
- [15] Gonçalves R d. S, Alves C dos SF, Luz A, Ramalho SIHSM de A, Gordo CMG de O, Barros TMKBH, et al. Importance Attributed by Adolescents to Sexual Education: Correlation With Their Attitudes, Knowledge, and Sexual Behavior. *Brazilian Journal of Health Review* 2023;6:813–25. <https://doi.org/10.34119/bjhrv6n1-062>.
- [16] Wang D, Stewart DE, Chang C, Shi Y. Effect of a School-Based Nutrition Education Program on Adolescents' Nutrition-Related Knowledge, Attitudes and Behaviour in Rural Areas of China. *Environ Health Prev Med* 2015;20:271–8. <https://doi.org/10.1007/s12199-015-0456-4>.
- [17] Fayasari A. Effect of UNAGI (Nutrition Snakes and Ladders Game) on Knowledge of Balanced Diet and Nutritional Intake in Adolescents in Bekasi. *Indonesian Journal of Human Nutrition* 2023;10:135–45. <https://doi.org/10.21776/ub.ijhn.2023.010.02.5>.
- [18] Mohandespour F, Maasoumi R, Pourmand H, Shahkarami SNA, Daemi F. The Impact of Theatre-Based Interventions for Sexual Health Education to Adolescents: A Systematic Review. *Journal of Holistic Nursing and Midwifery* 2023;33:34–42. <https://doi.org/10.32598/jhnm.33.1.2342>.
- [19] Breuner CC, Adelman WP, Alderman EM, Garofalo R, Marcell A V, Powers M, et al. Sexuality Education for Children and Adolescents. *Pediatrics* 2016;138. <https://doi.org/10.1542/peds.2016-1348>.
- [20] D'CruzJina, Maria DS, DubeSara, MarkhamChristine, McLaughlinJeffrey, WilkersonJohnny M, et al. Promoting Parent-Child Sexual Health Dialogue With an Intergenerational Game: Parent and Youth Perspectives. *Games Health J* 2015;4:113–22. <https://doi.org/10.1089/g4h.2014.0080>.
- [21] Lys C, Reading C. Coming of Age: How Young Women in the Northwest Territories Understand the Barriers and Facilitators to Positive, Empowered, and Safer Sexual Health. *Int J Circumpolar Health* 2012;71:18957. <https://doi.org/10.3402/ijch.v71i0.18957>.
- [22] Rahmani A, Khoei EM, Fallahi A. Perceived Advantages and Disadvantages of Sex Education in Young Women: A Qualitative Study. *International Journal High Risk Behaviors & Addiction* 2018;7. <https://doi.org/10.5812/ijhrba.57221>.
- [23] Buwono HA, Tyas TH. Understanding the Importance of Sexual Consent Among University Students. *Jurnal Psikologi* 2021;48:240. <https://doi.org/10.22146/jpsi.64969>.
- [24] Hossen K, Rahman F, Mashreky SR. Nutritional Status of Adolescent Girls in Bangladesh: Findings of a Community Based Survey. *South East Asia Journal of Public Health* 2016;6:3–7. <https://doi.org/10.3329/seajph.v6i1.30337>.
- [25] Deepika K. A Study on Dietary Practices and Nutritional Awareness Among Adolescent Girls. *Int J Curr Microbiol Appl Sci* 2019;8:2108–14. <https://doi.org/10.20546/ijcmas.2019.807.253>.
- [26] Mkama SW. Prevalence and Associated Factors of Adolescent Pregnancy Among Women Attending Antenatal Clinic at Tumbi Regional Referral Hospital, Coast Region, Tanzania. *International Journal of Science and Research Archive* 2023;10:597–604. <https://doi.org/10.30574/ijrsra.2023.10.1.0783>.

- [27] Fernández-Ruiz M. Young Women's Attitudes and Concerns Regarding Pornography and Their Sexual Experiences: A Qualitative Approach. *Healthcare* 2023;11:2877. <https://doi.org/10.3390/healthcare11212877>.
- [28] Maruf MA, Richter K, Soonthorndada A. Predisposing, Enabling and Reinforcing Factors Associated With Sexual Intercourse Intention Among Indonesian Young Men. *Jurnal Kedokteran Dan Kesehatan* 2021;17:66. <https://doi.org/10.24853/jkk.17.1.66-76>.
- [29] Laili AN. Strengthening Adolescent Reproductive Health in the Information Age. *Frontiers in Community Service and Empowerment* 2023;2:40–4. <https://doi.org/10.35882/ficse.v2i2.36>.
- [30] Dewi NP, Fegita PD, Abdullah D. The Effect of Health Education on Knowledge of Health Reproductive of Junior High School Students. *Journal on Education* 2023;5:16312–6. <https://doi.org/10.31004/joe.v5i4.2782>.
- [31] Laili AN. Strengthening Adolescent Reproductive Health in the Information Age. *Frontiers in Community Service and Empowerment* 2023;2:40–4. <https://doi.org/10.35882/ficse.v2i2.36>.
- [32] Solihah R, Sunarni N, Asmarani SU. Smart Teens With Reproductive Health Digital Pocket Book. *Abdimas Jurnal Pengabdian Masyarakat* 2022;4:905–9. <https://doi.org/10.35568/abdimas.v4i2.1476>.
- [33] Boediarsih B, Shaluhiah Z, Mustofa SB. Persepsi remaja tentang peran gender dan gender seksualitas di Kota Semarang. *Jurnal Promosi Kesehatan Indonesia* 2016;11:28–37.
- [34] Corboz J, Siddiq W, Hemat O, Chirwa E, Jewkes R. What Works to Prevent Violence Against Children in Afghanistan? Findings of an Interrupted Time Series Evaluation of a School-Based Peace Education and Community Social Norms Change Intervention in Afghanistan. *PLoS One* 2019;14:e0220614. <https://doi.org/10.1371/journal.pone.0220614>.
- [35] Karo NHB. Implementation of the Principal's Democratic Leadership Style in the Independent Learning Curriculum. *Didaktika Jurnal Kependidikan* 2024;13:1683–90. <https://doi.org/10.58230/27454312.711>.
- [36] Masrura L. Bridging Imagination and Education: How Students Perceive Fantasy Stories Within the Merdeka Curriculum. *Asian Journal of Education and Social Studies* 2023;49:159–67. <https://doi.org/10.9734/ajess/2023/v49i31144>.
- [37] Yulia C. Reflections of Well-Being: Navigating Body Image, Chronic Energy Deficiency, and Nutritional Intake Among Urban and Rural Adolescents. *Front Nutr* 2024;11. <https://doi.org/10.3389/fnut.2024.1346929>.
- [38] Ramya K. Exploring the Relationship of Adolescents Resilience With Subjective Well-Being and General Intelligence. *International Journal of Advanced Biochemistry Research* 2024;8:193–6. <https://doi.org/10.33545/26174693.2024.v8.i2c.546>.
- [39] Wiafe S, Mihan A, Davison C. Neighborhood-Level Influences and Adolescent Health Risk Behaviors in Rural and Urban Sub-Saharan Africa: A Systematic Review. *Int J Environ Res Public Health* 2021;18:7637. <https://doi.org/10.3390/ijerph18147637>.
- [40] Trivedi N, Kakkar MK, Bohra D, Gupta J, Saini Y. Sleep Patterns of Urban and Rural School-Going Adolescents. *Journal of Mahatma Gandhi University of Medical Sciences and Technology* 2016;1:20–3. <https://doi.org/10.5005/jp-journals-10057-0005>.
- [41] Knöll M, Roe J. Ten Questions Concerning a New Adolescent Health Urbanism. *Build Environ* 2017;126:496–506. <https://doi.org/10.1016/j.buildenv.2017.10.006>