

PREVENTING SEXUAL VIOLENCE THROUGH AI-BASED SMART HUG WEBSITE IN EDUCATIONAL INSTITUTIONS IN SEMARANG

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Abstract

Several studies say that the largest percentage, namely around 63% of cases of violence and sexual harassment in educational institutions, has occurred. Violence and harassment experienced by victims took the form of verbal and non-verbal. Much research has focused on using technology to prevent violence and sexual harassment. However, no one has integrated the system with sexual education and focuses on educational institutions, and is developed sustainably. The method used is a literature review of research journals on preventing violence and sexual harassment using technology using reference journals from the last 10 years. Important results discussed include the concept and workings of the website and an analysis of the advantages and disadvantages of the website.

Keywords: Smart Hug, Sexual Violence, Website, Artificial Intelligence, Education

1. Introduction

Recently, sexual violence has become a public concern because it is a problem like an iceberg that has not been properly resolved so far. Acts of sexual violence can happen to anyone and at any time. Cases of sexual violence are complex problems that occur significantly from year to year. This also occurs not only in an environment that is viewed negatively but is rife in the educational environment in Indonesia which causes the collapse of social and moral values. Data obtained from the Central Statistics Agency (BPS) states that 90% of cases of sexual harassment and violence occur in women. Data from Komnas Perempuan's annual record of sexual violence is 299,911 cases in 2020 and 338,496 in 2022 and the data shows that from year to year, there has been an increase in cases of sexual violence and around 63% of cases of sexual violence in the campus environment in 2020. Other data from research conducted by Elindawati (2021) there is 27% of sexual violence that occurs on campus and this data ranks first in 2020 and the latest data in 2021 stated by Kemedikbud. go. id there were 594 reported cases and 717 occurred cases in children with 334 male victims and 383 female victims. Based on these data it can be concluded that sexual violence often occurs in various situations, including in the academic environment.

According to Susiana (2019), sexual violence is sexual contact carried out by someone who causes physical, sexual, or psychological suffering. Meanwhile, sexual harassment according to Bahri (2015) is a form of behavior that has sexual content both verbally and non-verbally. Both are acts of sexual crime because they can harm other parties from various sides. Cases of sexual harassment and violence hurt perpetrators and victims. One of the negative impacts of sexual violence according to Anindiya, et al (2020) is that psychological disturbances can occur in victims of sexual harassment, namely emotional disturbances, behavioral disorders, and cognitive disorders, and even have an impact on the use of addictive substances in cases of sexual harassment and sexual violence are not handled quickly and appropriately. This impact results from the emergence of psychological pressure, fear, and shame so that victims experience depression which allows them to carry out more negative behavior.

The difficulty in dealing with this case was that not many victims reported incidents, so they could not be dealt with immediately. Some of the underlying reasons include the fear of being judged by the community, this is in line with the opinion of Cecep & Humaedi (2018) that many victims of sexual violence do not report incidents, the main cause of which is the negative stigma from society. According to Rabbaniyah & Salsabila (2020), many incidents in the educational environment are not disclosed by victims because victims are afraid that it will affect their academics and be considered negative by their friends. Reasons like these make the victim not want other people to know about this incident and are afraid to deal with it.

As a result of these problems, there are difficulties for academic institutions to deal with cases of violence and sexual harassment because many victims are reluctant to open up and it is also difficult to meet protective parties. There have been several efforts made by the institution, one of which is the establishment of a task force for handling cases of violence and sexual harassment. This is based on the main goal of making it easier for victims to report if they experience acts of violence or sexual harassment. However, there are still many deficiencies that occur in the reporting system at the officer unit (Satgas).

Cases of acts of sexual violence that occur at this time need a solution, one of which is through technology. In current conditions, the use of technology is needed to facilitate access to

reporting so that the process does not drag on. One technology that can be applied to overcome this problem is artificial intelligence. According to Arnesia, DDK (2022) artificial intelligence was created by humans to help operate computer systems. For this reason, the use of artificial intelligence is needed in handling cases of violence and sexual harassment. Sayadi & Jhamtani (2020) have also used an AI system regarding the WPS (Women Protecting System), which is an application to avoid acts of sexual violence with several sensors to frighten perpetrators of sexual violence such as sounds and also location detection still occurs. So it is necessary to develop an assistance system to facilitate victim reporting.

Departing from this problem, a solution is needed to facilitate access for victims of violence and sexual harassment to receive assistance and protection from related parties. Therefore, the author initiated an idea, namely to create a system that could help victims get quick action and special assistance from a unit of officers. The system is a website entitled Smart Hug, which is an AI (artificial intelligence) based website that can help victims of violence and sexual harassment to get immediate assistance and assistance by facilitating access to scheduled and appropriate reports. Through Smart Hug assistance, everyone who reports their case and receives assistance until the problem is resolved will be assisted to be able to develop their potential as an initial follow-up, this is done to make it easier for the victim not to focus on the problem. With the existence of this assistance system, it is hoped that it will help reduce the level of sexual violence and help victims to be able to solve problems immediately so that disturbances do not arise that cause depression or other mental disorders.

2. Method

The method used is a literature review. This method is carried out using previous research by concluding the compilation of research results on figures within a certain period. The previous research studied was regarding the prevention of violence and sexual harassment through technology, which concluded 12 national and international journals related to the last 10 years through Google Scholar, Garuda, and other accredited journals. The literature review was selected based on the number of studies that have been conducted over the past 10 years regarding the prevention of violence and sexual harassment through technology.

3. Results and Discussion

According to Lewoleba & Fahrozi (2020), Sexual violence is an explicit behavior that causes negative emotions and mental and physical harm to the victim. Another opinion put forward by Puspytasari (2022) is that sociologically violence is considered a means of socializing interest groups and violence is generally based on gender. Salamor, et al (2021) stated that sexual violence can occur in public or domestic spaces and can be committed by anyone against the people the perpetrator wants. Meanwhile, according to the Quran (2022), sexual violence is a direct action taken against another person that involves coercive sexual activity without the consent of the victim. The occurrence of sexual violence has many causal factors including considering women to be weak and a patriarchal culture that is still high (Cecep & Hurnaedi, 2018). Another opinion says that there are still many people who do not have the concern to see sexual violence that occurs and from the victim's side it is still difficult to report acts that occur because they receive threats and various other things (Ariyani, 2016). Based on this, there is a need for concern and protection to reduce the level of sexual violence that occurs. Forms of concern for violence and

sexual harassment that occur that can be carried out in educational institutions are implementing sexual education and first aid systems for acts of violence and sexual harassment.

Cases of violence and sexual harassment committed can be detrimental to victims, especially in the era of Society 5.0, there is a lot of harassment through social media, and in the era of technology that should make it easier for victims to report, not all educational institutions have websites that can connect directly with protective parties. According to Simanjuntak & Ibah (2022), the handling of cases of sexual violence in universities is mostly facilitated by the Student Executive Board (BEM), while the handling of cases like this in schools has not been fully effective and efficient. Meanwhile, the handling of cases of sexual violence in schools is still relatively low because the system is still limited (Hinga, 2019).

Cases of violence and sexual harassment can cause a lot of harm as well as losses experienced by educational institutions because they are considered unable to protect their students from the crimes that occur so a lot of people distrust the good education system (Fridha & Haryanti, 2020). If this incident continues without being properly addressed, it will have an impact on the education system itself.

Reviewing several previous studies regarding the prevention and assistance of acts of violence and sexual harassment carried out by Pavithra, et al (2018), namely using IOT-based technology by designing a system for protecting women's safety by implementing tools that have sensors that inform about crimes. IOT-based research on dealing with sexual violence was also carried out by Mohapatra, et al (2022) with the results of applications that have access to emergency help via telephone and video calls. Research using technology to protect against sexual violence was also carried out by Thavil, et al (2017) with smart security using AI which can connect to the protection center automatically. Pathak & Choudhary (2023) have also researched sexual crime protection using AI which emphasizes contact and accurate location of the victim and has been successfully applied in Singapore regularly.

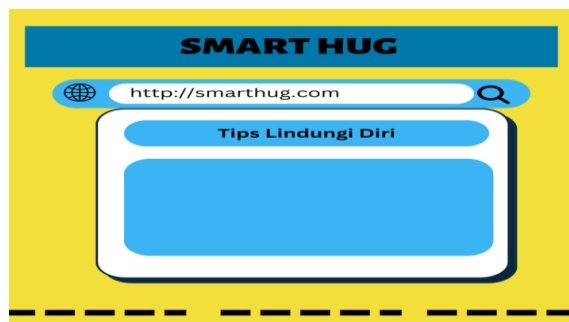
Another study from Hidumathi (2023) has also succeeded in implementing an AI-based website system called Protecta Watch, namely using a website connected to Cellular Global Positioning (GPS) which can be updated once every 5 minutes using the Blynk server, so that it will quickly connect to protection contacts. which is aimed. The results of the research that describe the success of self-protection systems from violence and sexual harassment are researched by Paradark (2015) with the results of system development research using AI with application systems that are directly connected to parties who are considered able to protect such as families, police and other task forces.

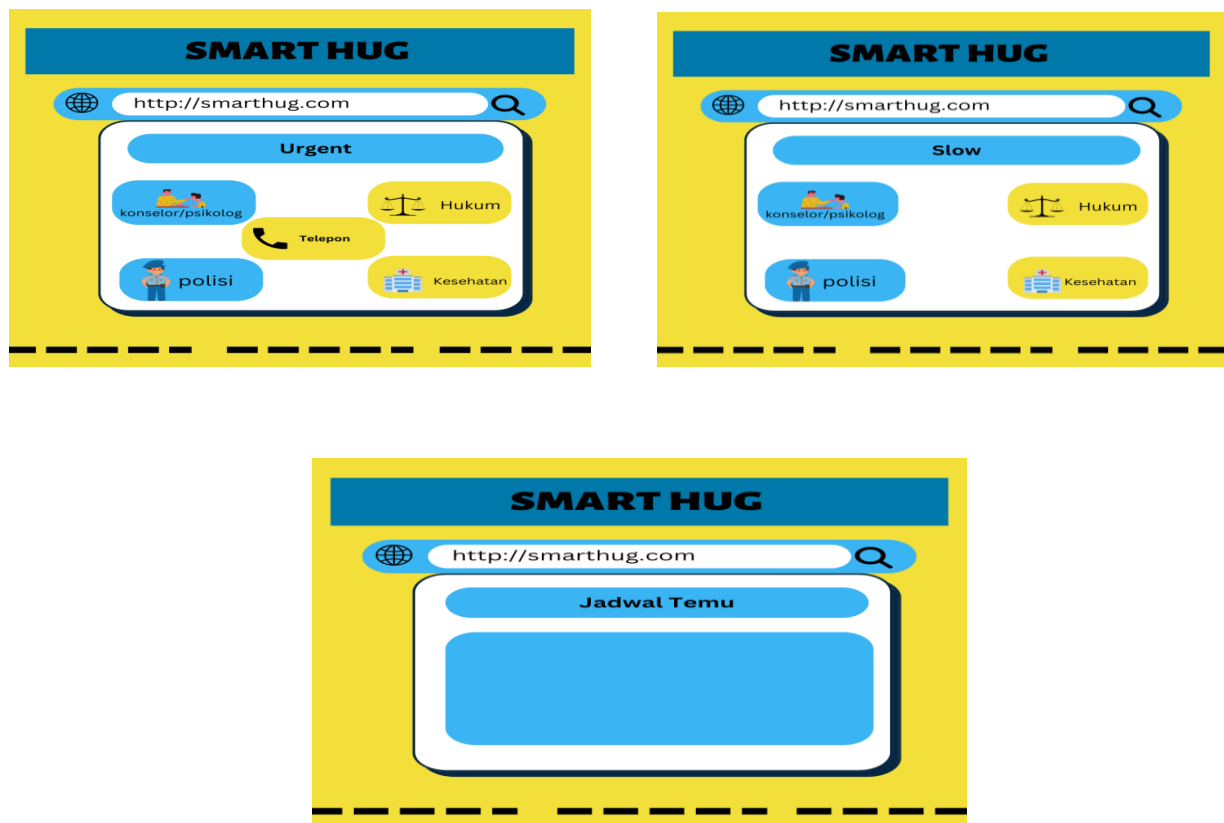
Indonesia itself has implemented AI-based protection several times, one of which was reported by ugm.ac.id (2018) the "Wonder" application was created as a form of first aid for women who experience sexual harassment. However, this application was developed only for women and had not been equipped with a follow-up system. Even according to news from Jawa Pos (2018) Google already has an AI system to detect sexual abuse in children.

Based on previous research, the development of a protection system against violence and sexual harassment has significantly protected its users. The solutions offered in general have been able to facilitate access for victims. But of course, it has several weaknesses, including (1) The system only directs assistance from the protection party from emergency numbers, cannot access specific tasks in the task force if this is implemented in educational institutions, (2) Cannot follow up on victims who have experienced acts of violence and harassment sexual.

The system implemented to prevent acts of violence and harassment has been widely tested and used in every country and specifically for women, but there are not many systems that work specifically for educational institutions, not only focusing on women and getting access to follow-up including healing, after the incident in cases in Indonesia through professional helpers.

Smart Hug is an artificial intelligence-based website that is used to be able to monitor events, have help alarms, sexual education, provide first aid, and psychological follow-up to users. This website is used in educational environments with several modes or menus that make it easier to report sexual crimes. There are parties related to this website including counselors, psychologists, police, legal entities, and health centers. These parties can be contacted according to needs ranging from legal needs to health and psychological services.





This website will be connected directly to the system in the task force formed. In the form of a brief complaint report that does not include the victim's real name or identity to protect personal identity leaks, with the initial feature namely urgent which is intended for victims who urgently need assistance, namely being able to make emergency and slow calls for victims who still want to discuss the case they are experiencing by doing schedule a meeting with the task force at the respective educational institution. These two features will be connected to the relevant admin so that a meeting schedule system can be created according to the level of urgency chosen. Apart from that, there is a menu for education to prevent acts of sexual violence or information media for users, namely on the Care for you menu. The purpose of having a menu with educational content is so that users do not only focus on reporting violence and sexual harassment that occur but can understand acts of violence and sexual harassment to prevent these incidents from happening to users.

This website has been considered from several aspects both intended use for academic institutions, complementing the previous website that was created in the form of a prevention website. So that the "Smart Hug" website can be used both to educate the public as a prevention function and as a center for assistance and protection for victims of sexual violence. Based on previous research, the system developed only stops as an alarm when acts of violence and sexual harassment occur and partly at the reporting stage, while through this Smart Hug users can use it according to their needs and facilitate follow-up.

Police and legal facilities are used as a form of advocacy assistance for users and victims who need it. Reporting to the police can also be a first step when an urgent incident occurs to the user. While in the health section, it is used for purposes such as post-mortem and physical

healing. Moving on to follow-up, namely in the form of counseling through professional helpers, one of which is a counselor. The existence of this follow-up facility aims to reduce negative psychological conditions in victims after the incident and help users to have insight into the possibilities of violence and sexual harassment. All the needs of the victim will be directly connected to the relevant parties to the point where the action is detected in the system.

The use of this website does not stop as a center for reporting, assistance, and protection, but there is a follow-up process for victims after completion, namely at the writing for healing and motivation stages for healing victims of sexual violence who have experienced trauma. Overcoming matters related to a person's psychology is carried out as a follow-up by a professional helper, namely by counseling. This service or feature is an added value that prevents dismissal from being only limited to reporting to the authorities or the police, but the mental conditions of the victim are not simply ignored.

The weaknesses in the use of this website require access to registration with anonymous identities and the possibility of fraud occurring against officers and requires the preparedness of the officers involved and the use of substantial funds. Based on research that was conducted by Rakhamansyah (2021), this AI-based website requires quite an expensive fee. This is because the system used has high specifications and fast internet. However, everything will be resolved if every educational institution and government can work together to build facilities properly. The use of AI systems as a form of education and protection provides an effective and efficient value because it can quickly connect with the protector. The form of technological display that is presented as a form of education can also be interesting for users to read and learn about important things that must be understood in sexuality.

4. Conclusion

This website system was created to make it easier for users to get free sexual education and sexual violence protection from various aspects of protection needed to reduce the number of acts of sexual violence in educational environments or institutions. Referring to the suitability of the SGD targets, this idea is relevant for improving the quality of welfare and justice, as well as in adapting educational institutions to society 5.0 with technological developments in the education system. Alternative assistance and protection through the Smart Hug website, is expected to be able to stimulate victims to report acts of sexual violence and obtain protection rights both physically, psychologically, and legally even on an ongoing basis.

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