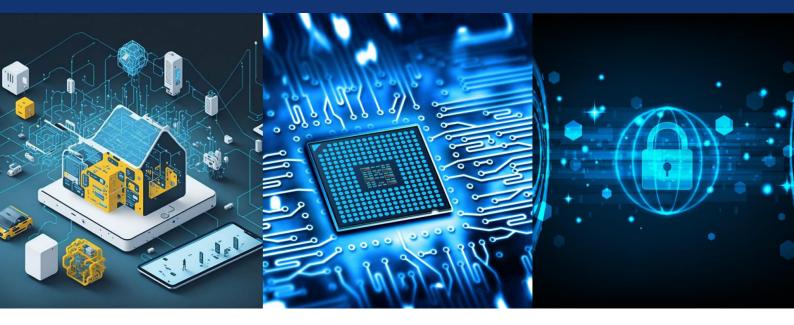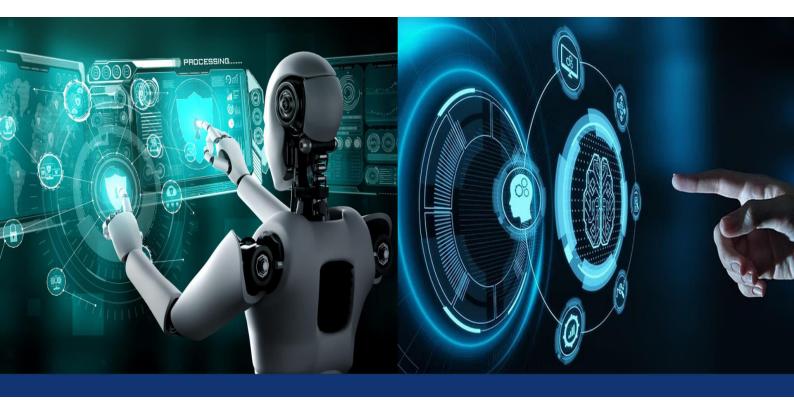# International Journal of Innovative Research in Computer and Communication Engineering

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Digital Solutions for Domestic Violence: Addressing Dowry, Abuse, and Recovery Pathways

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ABSTRACT: Domestic violence, including dowry harassment and abuse, remains a significant issue in Indian society, particularly in rural and semi-urban areas, where victims often fail to recognize their experiences as domestic violence. Our project, **"Digital Solutions for Domestic Violence: Addressing Dowry, Abuse, and Recovery Pathways,"** focuses on developing an Android application that serves as a comprehensive support system for victims. At the heart of the application is a chat-based assistant designed to act as a virtual counsellor, guiding users through sensitive questions to help them identify domestic abuse and understand its impact. The app also offers features such as educational resources, legal aid, anonymous reporting, and access to community support networks. By addressing the lack of awareness and providing tailored support, our solution empowers victims to take informed steps toward recovery and justice. While initially tailored to the unique cultural and social challenges of Indian society, this platform has the potential to evolve into a global solution for combating domestic violence.

KEYWORDS: Domestic violence, dowry harassment, virtual counselling, Android application, legal aid, victim awareness, rural and semi-urban support, Indian society, community support, abuse recovery.

I. INTRODUCTION

Domestic violence is a deeply rooted issue in Indian society, manifesting in forms such as dowry harassment, physical abuse, and emotional neglect. [1] Under the visible cases lies an overwhelming number of unreported instances of domestic violence. Many victims of domestic violence are unable or unwilling to report their experiences due to fear, shame or safety concerns. This iceberg phenomenon represents a multitude of victims who continue to suffer in silence.[5]. Research has shown that smartphone applications can empower victims by providing real-time assistance, access to educational resources, and legal aid while maintaining privacy and anonymity and integrating artificial intelligence into such tools has proven effective for real-time sentiment analysis, enabling the detection of distress and generating appropriate interventions.[2].

Digital Solutions for Domestic Violence: Addressing Dowry, Abuse, and Recovery Pathways, aims to develop an Android application designed to assist victims in identifying and addressing abuse. At its core, the app features a chat-based virtual assistant, which acts as a counsellor, asking tailored questions to help users recognize domestic violence and guide them toward appropriate resources. [1] It include anonymous reporting, access to legal aid, educational materials, and community support networks, ensuring a comprehensive support ecosystem [2]. This assess immediate needs but also works toward empowering victims through awareness and education, particularly in regions where technological penetration is increasing but societal barriers persist .

By keeping culturally relevant and incorporating innovative digital strategies, this paper explores the methodology and results of our project, highlighting its potential to create a culturally sensitive solution for combating domestic violence in India.[1]

II. LITERATURE SURVEY

Domestic violence is a pervasive issue in India, where cultural norms and societal stigma often prevent victims from recognizing abuse or seeking help.[5] Research highlights that empowering victims through digital tools can play a transformative role, offering resources to identify abuse, access legal aid, and connect with support systems.[6]

Mobile applications have emerged as a vital intervention in addressing domestic violence. A systematic review of smartphone apps revealed their ability to provide features such as emergency assistance, anonymous reporting, and educational content. However, most existing apps are limited by their lack of automation and reliance on user-triggered alerts, which may not be feasible in emergency situations [9].

Furthermore, many victims in rural and semi-urban areas are unaware of what constitutes domestic violence, underscoring the need for apps that include self-assessment tools and educational resources tailored to the Indian cultural context. These tools can help victims identify abusive behaviors and take informed steps toward recovery [7].

While digital interventions hold promise, challenges such as accessibility, privacy concerns, and the need for localized content remain significant barriers. A review of app-based interventions highlights the importance of integrating artificial intelligence and multimedia capabilities, such as voice and sentiment analysis, to create automated, real-time responses for victims. Future innovations should focus on addressing these limitations while ensuring cultural sensitivity and scalability [6].

III. METHODOLOGY / APPROACH

3.1 Features of the App:
The proposed Android application addresses domestic violence with a victim-centered approach. Its key features include:
1.SOS Alerts: Real-time alerts sent to emergency contacts with location details to ensure immediate safety [9].

2.Incident Reporting: Enables victims to report abuse anonymously with options to attach encrypted evidence (text, audio, or video) [1].

3.Educational Resources: Provides multilingual guides on recognizing abuse, legal rights, and recovery pathways tailored for the Indian context [8].

4.Support Network: Connects users to counselors, legal advisors, and community organizations for real-time assistance [3].

5.Silent Mode: Includes a disguise feature to allow discreet access without raising suspicion [1].

6.Chat-Based Virtual Counselor and Self-Assessment Tools: Offers personalized guidance and self-evaluation modules to help victims identify abuse and seek support [5].

3.2 User-Centric Design: The app prioritizes safety and accessibility through:

1.Disguise Mode and Privacy Features: Masks the app's true purpose and ensures data encryption for user safety [4].

2.Inclusivity: Supports multiple languages, voice-guided navigation, and an intuitive interface for users with low digital literacy [5].

3.Rural Adaptability: Optimized to function offline for users in regions with poor connectivity [8].

3.3 Research and Development: The development process is research-driven and iterative:

1.Stakeholder Input: Surveys with survivors and collaboration with legal experts and non-profits guide app design [3].

2.Iterative Testing: Feedback from focus groups refines features and usability [1].

3.Localized Content: Educational modules and self-assessment tools align with Indian laws and cultural contexts [6].

4.Scalability: Future updates will integrate advanced technologies like artificial intelligence to enhance automation and real-time responses [5].

IV. DISCUSSION

4.1 Discussion:
The findings demonstrate the app's potential in addressing domestic violence in diverse settings like India.

 Key points include:
1.Empowering Victims: Educational resources and virtual counselling address awareness gaps, especially in rural areas with patriarchal norms [3].
2.Accessibility and Inclusivity: The app's multilingual support and offline functionality ensure accessibility for users with limited digital literacy [5].
3.Privacy and Safety: Anonymous reporting, encryption, and silent mode protect victims 'privacy and ensure discreet use [1].
4.Scalability: Future integration of AI and machine learning can enhance the app with real-time analysis and insights for policymakers [5].
5.Challenges: Adoption barriers such as digital illiteracy and privacy concerns remain, requiring partnerships with non-profits and legal organizations to build trust and scale [2].

V. CONCLUSION AND FUTURE WORK

Conclusion:
This research demonstrates the potential of technology in addressing domestic violence in India. The proposed app provides vital features such as SOS alerts, secure reporting, educational resources, virtual counseling, and a chat-based assistant for personalized guidance. This counselor feature will help victims receive immediate support, identify abusive behaviors, and make informed decisions. While the app shows promising outcomes, challenges like digital illiteracy and privacy concerns remain. Partnerships with legal and non-profit organizations will be crucial for scaling and ensuring wider adoption. This study emphasizes the need for technological solutions to combat domestic violence and create a safer society.

Future Work:
Future development of the app should focus on:
1.AI and Machine Learning Integration: To enhance real-time alerts, predictive analysis, and personalized support.
2.Expansion of Support Resources: Collaborating with legal professionals and psychologists to offer comprehensive assistance.
3.Improved User Experience: Enhancing accessibility features and offline functionality to increase adoption.
4.Impact Evaluation: Conducting studies to assess long-term effectiveness in reducing domestic violence.
5.Policy Collaboration: Partnering with policymakers to use data-driven insights for influencing domestic violence prevention policies.

REFERENCES

1. Chitra, D. & Lokesh, G. Innovative Solutions for Addressing Domestic Violence Through Technological Innovation. IJCRT, Volume 12, Issue 5, 2024 .
2. Sumra, M., et al. Smartphone Apps for Domestic Violence Prevention: A Systematic Review. Int. J. Environ. Res. Public Health, 2023, 20, 5246 .
3. World Health Organization (WHO). Violence against women: Intimate partner and sexual violence against women. Available online at WHO's official website .

4.Rodríguez, D. A., et al. A systematic review of computer science solutions for addressing violence against women and children. IEEE Access, 2021 .

5.Sudirham, Tika Bela Sari, I Wayan Gede Suarjana, Parno Sumanro Mahulae. Digital empowerment: a path to combat domestic violence in India. Journal of Public Health, Volume 46, Issue 1, March 2024, Pages e219–e220.

6.Smartphone Apps for Domestic Violence Prevention: A Systematic Review NIH National library of medicine.

Mehreen Sumra , Sohail Asghar , Khalid S Khan , Juan M Fernández-Luna , Juan F Huete , Aurora Bueno-Cavanillas .

7.Sneha Shashidhara , Centre for Social and Behavior Change (CSBC).

Harnessing machine learning to combat domestic violence in India.

8.Mobile Phone Apps for Intimate Partner and Sexual Violence Prevention and Response: Systematic Search on App Stores. Jessica Draughon Moret[1] ; Angela Todd[1] ; Lauren Rose[2] ; Erin Pollitt[3] ; Jocelyn Anderson[2].

9. Daga, A S., S. Jejeebhoy and S. Rajgopal (1999). Domestic Violence against Women: An Investigation of Hospital Causality Records, Mumbai. Journal of Family Welfare, 45 (1): 1-11.

10. Heise, L., Ellsberg, M and Gottemoeller, M. (1999). Ending Violence Against Women. Population Reports, Series L, No. 11. Baltimore, John Hopkins University School of Public Health, Population Information Program, December

11. Heise L.L., Pitanguy J. and Germaine A. (1994) Violence against Women. The Hidden Health Burden. Discussion,Paper No 225, Washington DC: The World Bank.

12. Mishra, Jyotsana, ed. (2000). Women and Human Rights, Kalpaz Publications, New Delhi 5. Murthy, M S R; P. Ganesh; J. Srivirajarani and R. Madhusudan(2004). Proximate Determinants of Domestic Violence: An Exploratory Study on Role of Menstrual Problems and Life Style of Men. Demography India. 33(1): 85-105.

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