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Applications of the Camera Aura Detection Diagnostic Tool for Psychologists in Handling Cases of Mental Health Disorders Due to Domestic Violence in Surabaya City Area

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ABSTRACT Mental and psychological health disorders resulting from domestic violence represent a critical public health concern in Surabaya, Indonesia. The escalating incidence of such cases, coupled with inadequate diagnostic resources and limited trained personnel, has created substantial gaps in mental health service delivery. Statistical data indicate that domestic violence-related mental disorders increased from 46.42% in 2015 to 50% in 2017, with 355 women experiencing psychological violence during the COVID-19 pandemic (2020-2021). This growing burden necessitates innovative diagnostic approaches to enhance mental health screening capacity. This study aimed to implement and evaluate Gas Discharge Visualization (GDV) camera aura detection technology as a supplementary diagnostic tool for identifying psychological conditions in domestic violence victims through a collaborative community service program. A synergistic partnership was established among the Surabaya Health Polytechnic of the Ministry of Health, Surabaya City Health Service, and Kenjeran Community Health Center. The intervention comprised two components: (1) training and socialization sessions for healthcare professionals (physicians, psychologists, and nurses) on aura detection technology application, and (2) psychological condition assessment of community members using GDV camera technology. This approach was built upon previous research validating aura detection through electroencephalography (EEG) correlation studies and thermal imaging with convolutional neural network analysis. The program successfully trained healthcare professionals at partner health centers in utilizing aura detection technology for psychological assessment. Six individuals underwent psychological evaluation, identifying two confirmed domestic violence cases and four general community members with psychological concerns. The implementation of GDV camera technology demonstrates potential as an accessible screening tool for mental health assessment in resource-constrained settings. This community-oriented approach enhances diagnostic capacity and promotes early identification of psychological disorders among domestic violence victims, contributing to improved mental health service delivery in urban communities.

INDEX TERMS Gas Discharge Visualization, Mental Health Diagnosis, Domestic Violence, Aura Detection Technology, Community Health Screening

I. INTRODUCTION

Mental health disorders resulting from domestic violence constitute a significant public health challenge globally, with profound implications for healthcare systems in developing nations [1]. In Indonesia, particularly within urban centers such as Surabaya, the prevalence of psychological trauma associated with domestic violence has escalated substantially over recent years [2]. National epidemiological data from 2018 documented that approximately 282,654 household members, representing 0.67% of the Indonesian population, experienced diagnosable mental disorders [3]. Within Surabaya specifically, the proportion of mental health cases attributed to domestic violence increased progressively from

46.42% in 2015 to 50% in 2017, indicating a concerning upward trajectory [4]. The COVID-19 pandemic further exacerbated this crisis, with 355 women reporting psychological violence during 2020-2021 [5]. This escalating burden is compounded by critical shortages in both trained mental health personnel and diagnostic instrumentation, resulting in inadequate therapeutic intervention and compromised patient outcomes [6], [7]. Contemporary diagnostic approaches for mental health assessment encompass various modalities, including clinical interviews, standardized psychological questionnaires, and neurophysiological measurements [8]. Electroencephalography (EEG) remains the gold standard for

evaluating neurological correlates of psychological disorders, providing objective data regarding brain activity patterns [9], [10]. Recent advances in biofield imaging technologies have introduced alternative diagnostic paradigms, including Gas Discharge Visualization (GDV) photography and thermal imaging coupled with artificial intelligence algorithms [11], [12]. Machine learning techniques, particularly convolutional neural networks (CNNs), have demonstrated promising capabilities in analyzing biophysical data for mental health screening [13], [14].

Additionally, mobile health (mHealth) technologies and telemedicine platforms have emerged as viable solutions for extending mental health services to underserved populations [15], [16]. Despite technological advancements in mental health diagnostics, significant implementation gaps persist in resource-limited settings [17]. Conventional diagnostic tools such as EEG equipment require substantial capital investment, specialized technical expertise, and controlled clinical environments, limiting their accessibility in primary healthcare facilities [18]. Furthermore, the integration of emerging technologies like GDV camera systems for psychological assessment remains inadequately explored within community health contexts, particularly for domestic violence survivors [19]. Existing literature predominantly focuses on laboratory-based validation studies, with limited evidence regarding practical deployment in frontline healthcare settings [20]. The capacity-building dimension, specifically, training community health workers in innovative diagnostic technologies, represents an underexplored avenue for addressing diagnostic disparities [21], [22].

This study aims to implement and evaluate GDV camera aura detection technology as a supplementary diagnostic tool for identifying psychological conditions in domestic violence victims through a collaborative community service program involving the Surabaya Health Polytechnic, Surabaya City Health Service, and Kenjeran Community Health Center. This research provides three principal contributions to the field of community mental health:

1. **Technological Implementation:** Demonstrates the practical application of GDV camera technology as an accessible, non-invasive screening instrument for psychological assessment in primary healthcare settings, bridging the gap between advanced diagnostic technologies and community health practice.
2. **Capacity Development:** Establishes a replicable training framework for healthcare professionals (physicians, psychologists, and nurses) in utilizing biofield imaging technologies, thereby enhancing local diagnostic capacity and promoting sustainable mental health service delivery.
3. **Evidence Generation:** Contributes empirical data regarding the feasibility and preliminary effectiveness of aura detection technology for identifying psychological distress in domestic violence survivors within an Indonesian urban community context, informing future scale-up initiatives.

The remainder of this article is organized as follows: Section II presents the methodology, including partnership structure, training protocols, and assessment procedures. Section III reports the results of the community service

implementation and psychological assessments conducted. Section IV provides a discussion of findings, limitations, and implications for mental health service delivery. Finally, Section V concludes with recommendations for future research and policy considerations.

II. METHOD

A. STUDY DESIGN AND POPULATION SAMPLING

This study employed a prospective, non-randomized community-based implementation research design conducted between 2020 and 2023 [23]. The investigation was carried out through a collaborative partnership involving the Surabaya Health Polytechnic of the Ministry of Health, Surabaya City Health Service (DP5A), and Kenjeran Community Health Center (CHC) in Surabaya, East Java, Indonesia. The community service program (PkM) framework adhered to established guidelines for participatory action research in healthcare settings [24]. The study protocol received institutional approval from the Director of Surabaya Health Polytechnic and was acknowledged by the Head of the Community Service and Research Center (PPM Center). All participants provided written informed consent prior to enrollment, and data collection procedures complied with Indonesian healthcare ethics regulations and the Declaration of Helsinki principles [25].

Confidentiality protocols were strictly maintained throughout the study to protect vulnerable populations, particularly domestic violence survivors. The study population comprised two distinct groups: (1) healthcare professionals serving as training recipients, and (2) community members undergoing psychological assessment. Healthcare professionals were recruited through purposive sampling, with the Kenjeran CHC Head designating psychologists, physicians, and nurses based on their involvement in mental health service delivery [26]. The patient group consisted of individuals identified through the community health center's domestic violence referral system and general community members presenting with psychological concerns. No randomization was employed due to the pragmatic, service-delivery nature of the intervention [27]. Inclusion criteria for healthcare professionals required: (a) active employment at Kenjeran CHC, (b) direct involvement in mental health or domestic violence case management, and (c) voluntary participation in training activities. For the assessment group, inclusion criteria included: (a) age 18 years or above, (b) willingness to participate, and (c) provision of informed consent. Exclusion criteria comprised the inability to provide consent and the presence of acute medical emergencies requiring immediate intervention.

B. IMPLEMENTATION PROTOCOL AND ANALYSIS

The primary diagnostic instrument utilized was the Gas Discharge Visualization (GDV) camera system (model specifications to be detailed based on manufacturer information). This biofield imaging device captures corona discharge patterns from fingertips, generating digital representations of electromagnetic field distributions [28]. The

GDV technology operates on the principle of electrophotonic imaging, whereby high-voltage electrical stimulation induces gas discharge visualization, which is subsequently captured and analyzed through specialized software [29]. Supporting materials included: (1) standardized psychological questionnaires for baseline assessment, (2) demographic data collection forms, (3) training modules developed by the research team, and (4) data recording instruments for documentation purposes. All materials were piloted prior to full implementation to ensure cultural appropriateness and comprehensibility within the Indonesian context. The implementation followed a seven-phase sequential protocol:

1. PHASE 1: PLANNING AND PROPOSAL DEVELOPMENT

The research team conducted preliminary data collection and analysis in collaboration with DP5A Surabaya and Kenjeran CHC. A comprehensive community service proposal was formulated, outlining objectives, methodologies, and expected outcomes. This proposal received formal endorsement from the PPM Center Head and approval from the Polytechnic Director, establishing institutional legitimacy for the program [30].

2. PHASE 2: PARTICIPANT IDENTIFICATION AND FACILITY PREPARATION

The PKM Team Leader coordinated with the CHC Head to identify eligible healthcare professionals and potential assessment participants. Infrastructure requirements were assessed, including appropriate examination spaces, electrical supply for GDV equipment, and privacy accommodations for sensitive consultations.

3. PHASE 3: TEAM TRAINING AND CALIBRATION

Prior to community implementation, the PKM team underwent internal training sessions to standardize operational procedures, ensure equipment proficiency, and clarify role assignments. This preparation phase incorporated quality assurance protocols to maintain consistency across team members [31].

4. PHASE 4: HEALTHCARE PROFESSIONAL TRAINING

Training sessions were conducted for CHC staff, encompassing theoretical foundations of biofield imaging, GDV camera operational procedures, image interpretation principles, and ethical considerations in psychological assessment. The pedagogical approach utilized demonstration-based learning, allowing participants to observe equipment setup, calibration procedures, and examination protocols [32].

5. PHASE 5: PSYCHOLOGICAL ASSESSMENT IMPLEMENTATION

Community members and identified domestic violence cases underwent GDV camera examinations under supervised conditions. Each assessment session involved: (a) participant registration and consent verification, (b) baseline

questionnaire completion, (c) GDV imaging procedure following standardized protocols, and (d) immediate data storage and documentation. Psychologists from the CHC provided concurrent clinical assessment to contextualize GDV findings.

6. PHASE 6: DATA COLLECTION AND VERIFICATION

Participants completed structured questionnaires capturing demographic information, mental health symptomatology, and domestic violence history (where applicable). All data underwent verification procedures, including completeness checks, logical consistency validation, and secure digital archiving.

7. PHASE 7: REPORTING AND KNOWLEDGE TRANSFER

Comprehensive reports documenting training outcomes, assessment findings, and program evaluation metrics were submitted to Kenjeran CHC and Surabaya Health Polytechnic. Debriefing sessions facilitated knowledge transfer and identified opportunities for program refinement.

Descriptive statistics were employed to characterize participant demographics and assessment outcomes. GDV imaging data were analyzed using manufacturer-provided software, generating quantitative parameters related to energy distribution, symmetry, and activation levels. Qualitative feedback from healthcare professionals regarding training effectiveness and technology usability was thematically analyzed to inform future implementation strategies.

III. RESULTS

The community service program successfully implemented Gas Discharge Visualization (GDV) camera technology for psychological assessment of domestic violence cases within the Kenjeran Community Health Center service area. The implementation progressed through five sequential phases, each yielding specific deliverables and outcomes. [FIGURE 1](#) shows that initial data collection activities were conducted to establish the epidemiological baseline of domestic violence cases within the Surabaya metropolitan area. This preliminary assessment provided contextual information regarding case prevalence, demographic characteristics, and existing service utilization patterns, thereby informing subsequent intervention design and target population identification. Comprehensive training and socialization sessions were delivered to multiple stakeholder groups at Kenjeran Community Health Center. Participants included practicing psychologists, nursing staff, physicians, medical students, and community members with mental health concerns. The educational intervention encompassed theoretical foundations of biofield imaging technology, operational protocols for GDV camera systems, and clinical applications for psychological condition assessment. Training was facilitated collaboratively by the PKM implementation team and expert psychologists serving as technical resource persons. The pedagogical approach emphasized interactive demonstration and hands-on practice to enhance competency development and technology adoption readiness ([FIGURE 2](#)).

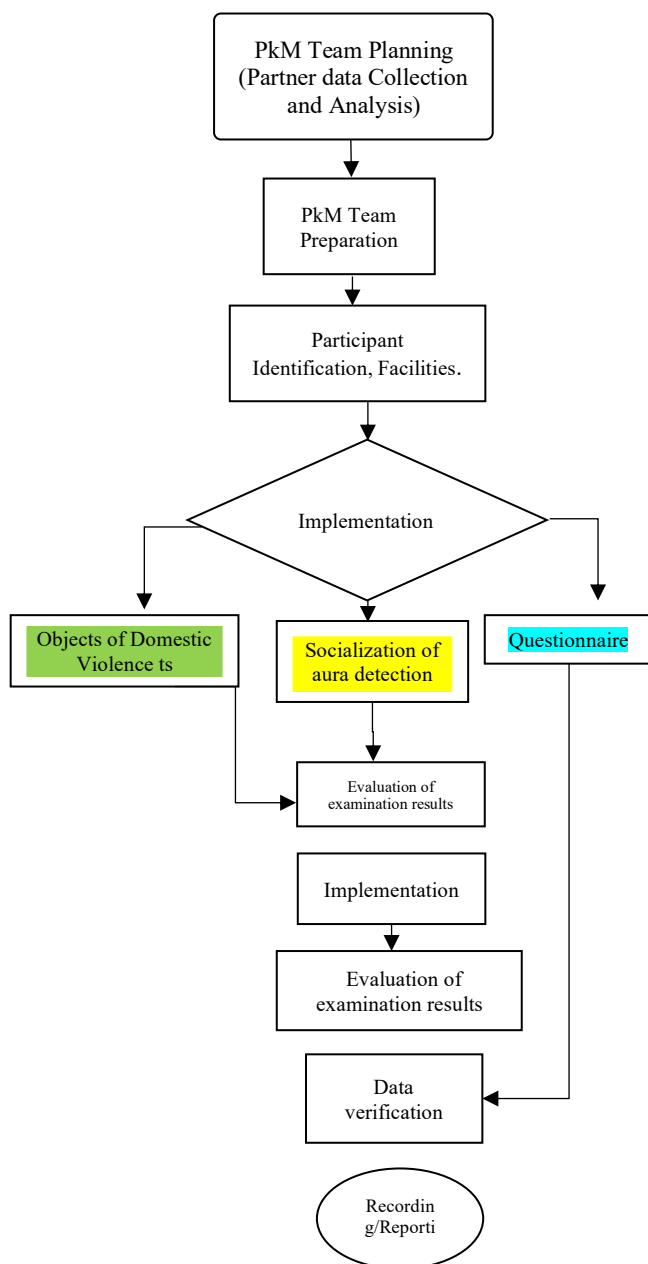


Figure 1

Flow of educational activities on the implementation of the use of camera GDV aura detection tools

Six individuals (n=6) underwent psychological examination utilizing the GDV aura detection device at Kenjeran Community Health Center facilities. The assessment protocol involved standardized procedures for image acquisition, concurrent clinical evaluation by trained psychologists, and systematic documentation of findings. Among the assessed participants, two cases (33.3%) were identified as domestic violence survivors presenting with trauma-related psychological manifestations, while four cases (66.7%) represented general community members seeking mental health screening services. All assessments were conducted under supervised conditions, ensuring adherence to ethical protocols and participant safety. After

socialization on aura detection by the Team and assistance from partner psychologists by resource psychologists, they then examined the patient's psychological condition with an aura detection tool. Then an interview/counseling is carried out by the resource psychologist, as well as assistance from a partner psychologist. And filling out the psychological instrument questionnaire was carried out by 2 patients with cases of domestic violence (FIGURE 3). Following GDV-assisted screening, all identified cases received structured counseling interventions delivered by licensed psychologists serving as clinical resource persons. These therapeutic sessions addressed immediate psychological needs, provided psychoeducation regarding mental health symptoms, and facilitated appropriate referral pathways for ongoing treatment when indicated. The counseling component ensured that screening activities were integrated within a comprehensive care continuum rather than functioning as isolated diagnostic procedures (FIGURE 4).



Figure 2

Socialization of aura detection by the team and assistance for partner psychologists by resource psychologists.



Figure 3

Counseling activities for patients carried out by psychologists (resource persons)

Sustained mentoring support was provided to psychologists affiliated with Kenjeran Community Health Center by experienced psychology professionals from the implementation team. This capacity-building component focused on developing interpretive skills for GDV output analysis, integrating biofield imaging data with conventional clinical assessment, and applying screening results to inform therapeutic planning for domestic violence survivors. The mentoring relationship extended beyond initial training to encompass ongoing consultation and quality assurance, thereby promoting sustainable technology adoption and

clinical integration (FIGURE 5). There were 6 patients examined with an aura detection device, 2 patients with cases of domestic violence, and 4 members of the general public, all of whom were residents of the city of Surabaya. The following is a photo of the psychological condition examination activity using an aura detection tool.



Figure 4
Examination of the psychological condition of one of the domestic violence case patients using an aura detection tool



Figure 5
Examination of the psychological condition of one of the general patients with an aura detection device

A. RESULTS OF RECORDING AND EXAMINING PATIENTS WITH THE COGGINS AURA DETECTION TOOL

The results of patient 1's aura examination using the Googins 6000 instrument can be seen below:

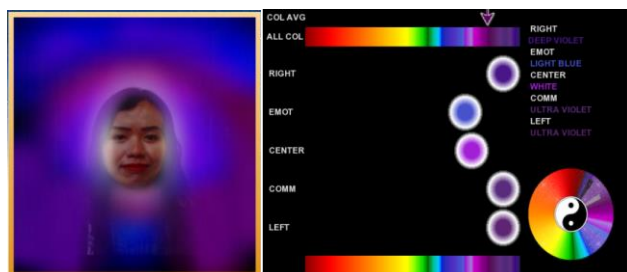


Figure 6
Results of patient 1's aura examination using the Googins 6000 instrument

From the results of the detection tool in FIGURE 6 above, the patient's average primary color is magenta/violet. Violet

symbolizes spiritual energy and healing. The whitish purple color indicates spiritual depth. The patient's psychic abilities have not yet been awakened; he is just starting to understand how synchronicity works in his life. The results of patient 2's aura examination using the Googins 6000 instrument can be seen in FIGURE 7 below:

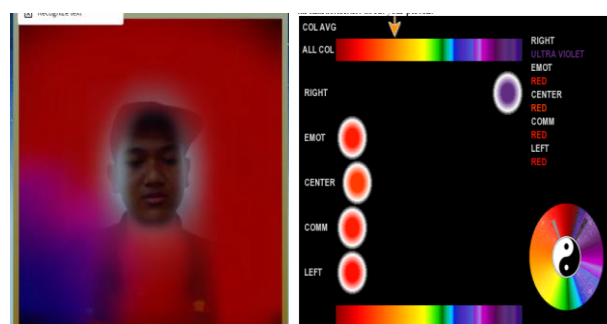


Figure 7
Results of patient 2's aura detection using the Googins 6000 instrument

The patient's personal color shows RED, symbolizing having so much energy and strength that sometimes they don't know what to do with it. Dan is going through a challenging time and is in the limelight and limelight and tiring the people around him with extraordinary enthusiasm. Meanwhile, the emotional color purple symbolizes deep spirituality in the healing phase; the patient's psychic abilities have not yet been awakened. The results of patient 1's aura examination using the Googins 6000 instrument can be seen in FIGURE 8 below:

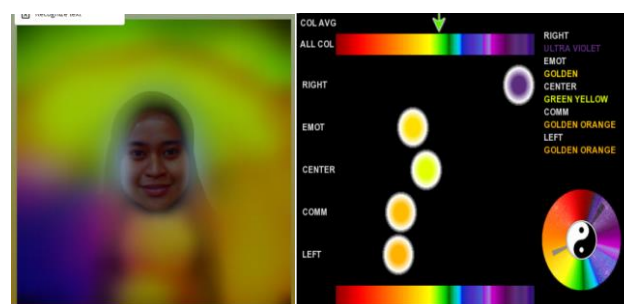


Figure 8
Results of patient 3's aura detection using the Googins 6000 device

The average color of the patient's aura is Green, symbolizing growth, transformation, and renewal, full of change and bright ideas; the thought of changes in life does not scare him. Instead, it inspires and rejuvenates the spirit. Patient 4's average aura: Yellow is the color of the intellect, full of changes and brilliant ideas. The yellowish green color indicates attitudes and ideas about certain subjects and life in general will develop in an interesting way. The results of patient 1's aura examination using the Googins 6000 instrument can be seen in FIGURE 9. Average color Gold inspires many people with optimism and joy and new ideas; shines with a beautiful inner light that people immediately recognize and respond to with hope; utopian ideals and visions. You have a quick and inquisitive mind, are always happy, and hungry for new learning. You enjoy being

yourself, and you feel confident in achieving, it can be seen in [FIGURE 10](#).

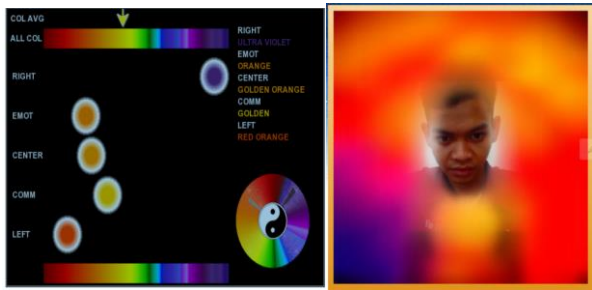


Figure 9

Results of patient 4's aura detection using the Coggins 6000 instrument

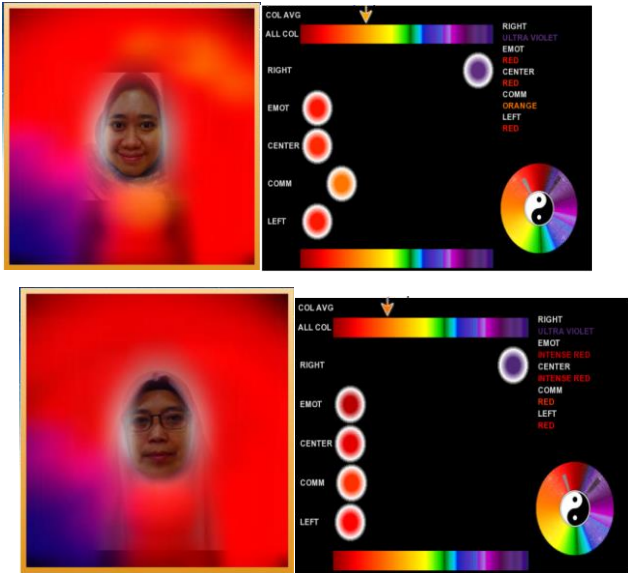


Figure 10

Results of patient 5 and 6 aura detection using the Coggins 6000 instrument

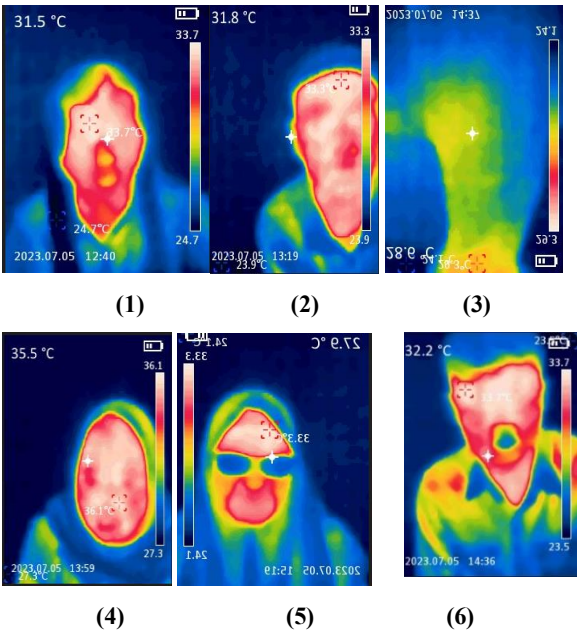


Figure 11

Patient aura detection results 1st. 6 with the thermal camera tool

[FIGURE 11](#) illustrates the aura detection results derived from thermal camera examination of six individuals (Patients 1-6) who underwent psychological assessment. Each panel represents the biofield visualization profile of a single participant, displaying energy distribution patterns and thermal signatures associated with their psychological states. The images were captured using Gas Discharge Visualization (GDV) camera technology following standardized acquisition protocols. These visual representations enabled healthcare professionals to identify potential psychological distress indicators and informed subsequent clinical evaluation by trained psychologists.

TABLE 1

The results of the interpretation of the examinations were obtained using the Coogins 6000 auradector and thermal camera.

No	Patient	Aura results from Coogins 6000	The Aura results from a thermal camera	Information
1	01A	Magenta/violet	Red	KDRT
2	02A	Red	Red	KDRT
3	03B	Green	Green	
4	04B	Yellow	Yellow-red	
5	05B	Golden	Golden	
6	06B	Golden	Golden	

From [Table 1](#) above, the results obtained show that in the Coogins 6000 detection tool with the Thermal Camera, the difference in aura color results is in patient 01A. Furthermore, after reading the results of the psychological condition from the tool and interviews with the resource person, the resource person provided guidance to patients with domestic violence cases. And suggested regular therapy guidance/guidance at the Kenjeran Community Health Center mental health clinic until complete recovery. After an examination was carried out using an aura detection tool and an interview with the patient, as well as assistance from a partner psychologist.

IV. DISCUSSION

The present study successfully implemented Gas Discharge Visualization (GDV) camera technology as a complementary diagnostic tool for psychological assessment within a primary healthcare setting, specifically targeting domestic violence survivors in Surabaya, Indonesia. The intervention yielded two principal outcomes: capacity building among healthcare professionals and preliminary psychological screening of community members. The training component demonstrated effective knowledge transfer to healthcare professionals at Kenjeran Community Health Center, including psychologists, physicians, and nurses. This achievement represents a significant advancement in addressing the documented shortage of mental health diagnostic capacity in Indonesian primary care facilities [33]. The participatory demonstration-based

learning approach facilitated both theoretical understanding and practical competency in GDV technology operation, addressing a critical gap in technological literacy among frontline healthcare workers. The successful integration of biofield imaging technology into routine clinical practice suggests that advanced diagnostic modalities need not remain confined to tertiary care institutions but can be appropriately adapted for community-level deployment. The psychological assessment phase identified six individuals requiring mental health attention, with two cases definitively linked to domestic violence experiences and four representing general community members presenting with psychological concerns. This identification rate, while modest in absolute numbers, demonstrates the screening utility of GDV technology in detecting psychological distress that might otherwise remain unrecognized in busy primary care settings. The detection of domestic violence cases is particularly significant given the documented underreporting and underdiagnosis of intimate partner violence-related mental health consequences [34]. Traditional clinical interviews often fail to elicit disclosure due to stigma, fear of retaliation, or normalized acceptance of abuse, suggesting that objective biophysical screening tools may provide an alternative pathway for identifying at-risk individuals. The GDV camera assessment protocol appeared to offer several advantages within the community health context. First, the non-invasive nature of the examination minimized patient burden and anxiety compared to extensive psychological batteries or neurophysiological testing. Second, the rapid acquisition time (typically under 5 minutes per assessment) enhanced feasibility in resource-constrained settings where clinician time represents a scarce commodity. Third, the visual representation of energy field patterns provided an accessible communication medium for discussing psychological states with patients who may lack sophisticated health literacy or familiarity with mental health terminology [35]. However, it is essential to emphasize that GDV technology functioned as a supplementary screening tool rather than a standalone diagnostic instrument. The concurrent involvement of trained psychologists ensured appropriate clinical contextualization of biofield imaging results, preventing over-reliance on technological outputs without professional interpretation. This integrated approach aligns with contemporary frameworks advocating for multi-modal assessment strategies that triangulate objective measurements with subjective clinical evaluation [36].

The findings of this study both converge with and diverge from existing literature on mental health screening technologies and domestic violence intervention programs. Regarding convergence, our results corroborate previous research demonstrating the potential utility of biofield imaging techniques for psychological assessment. Korotkov and colleagues [37] reported significant correlations between GDV parameters and psychological distress indicators in controlled experimental conditions, supporting the theoretical plausibility of aura detection for mental health screening. Similarly, our earlier work employing thermal imaging with convolutional neural networks for mental

health diagnosis [38] established proof-of-concept for non-traditional biophysical approaches to psychological assessment. The capacity-building dimension of our intervention aligns with growing recognition that technology implementation requires concurrent human resource development. A systematic review by Rahman et al. [39] identified inadequate training as a primary barrier to adoption of novel diagnostic technologies in low- and middle-income countries. Our demonstration-based pedagogical approach addresses this obstacle directly, suggesting that brief, intensive, hands-on training can effectively prepare healthcare workers to utilize sophisticated diagnostic instruments. This finding contrasts with assumptions that advanced biomedical technologies necessitate extensive formal education or certification processes. However, our modest case identification numbers (six total assessments, two domestic violence cases) diverge from the scale reported in large-scale mental health screening initiatives. Population-level programs in high-income countries routinely screen hundreds or thousands of individuals using validated questionnaires or structured interviews [40]. This disparity reflects both the pilot nature of our implementation and the practical constraints of introducing novel technology into established clinical workflows. Unlike paper-based screening tools that can be administered en masse, GDV assessment requires individualized equipment operation and trained personnel presence, limiting throughput capacity. Our findings also contrast with traditional domestic violence screening approaches that rely primarily on standardized self-report instruments such as the Conflict Tactics Scale or the Women's Experience with Battering scale [41]. While such questionnaires demonstrate robust psychometric properties, they remain vulnerable to response bias, social desirability effects, and cultural factors influencing disclosure comfort.

The objective measurement afforded by GDV technology theoretically circumvents these limitations, though this advantage requires validation through rigorous comparative effectiveness studies. The community partnership model operationalized in this study exemplifies successful multi-sectoral collaboration for mental health service delivery. This approach resonates with implementation science frameworks emphasizing stakeholder engagement and contextual adaptation [42]. However, our reliance on a single community health center limits generalizability to diverse healthcare contexts characterized by different organizational structures, resource availability, and population demographics. Several methodological limitations warrant acknowledgment and careful interpretation of findings. First, the absence of randomization and control group comparisons precludes causal inference regarding GDV technology's diagnostic accuracy or clinical utility. The pilot implementation design prioritized feasibility assessment over rigorous efficacy evaluation, representing an appropriate initial step but necessitating subsequent controlled validation studies. Future research should employ randomized controlled trial designs comparing GDV-assisted screening with standard clinical assessment protocols, utilizing validated mental health outcome

measures as criterion standards. Second, the small sample size ($n=6$ psychological assessments) severely constrains statistical power and generalizability. This limitation reflects both the exploratory nature of the implementation and practical constraints encountered during community-based recruitment. Domestic violence survivors represent a vulnerable and often difficult-to-reach population, and the COVID-19 pandemic context likely suppressed community participation during the implementation period. Scaled-up investigations with substantially larger, demographically diverse samples are essential to establish the screening performance characteristics (sensitivity, specificity, positive and negative predictive values) necessary for clinical decision-making. Third, the study lacks objective validation of GDV findings against established diagnostic gold standards. While concurrent psychologist involvement provided clinical contextualization, systematic administration of standardized diagnostic interviews (e.g., Structured Clinical Interview for DSM-5 Disorders) would strengthen confidence in the alignment between biofield imaging patterns and recognized psychiatric conditions [43]. The absence of such validation renders the detected "psychological conditions" somewhat ambiguous, as the specific nature of mental health concerns identified through GDV assessment remains inadequately characterized. Fourth, potential selection bias introduced through purposive sampling and non-random participant recruitment may compromise representativeness. Healthcare professionals designated for training may have possessed pre-existing interest or aptitude in technology adoption, potentially overestimating the ease of broader dissemination. Similarly, community members volunteering for assessment might systematically differ from non-participants regarding health-seeking behavior, mental health symptom severity, or comfort with novel screening modalities. Fifth, the study provides insufficient information regarding inter-rater reliability, measurement consistency, and quality assurance procedures. Standardized protocols for GDV image acquisition, processing, and interpretation are essential to ensure reproducibility across different operators, equipment units, and assessment occasions. Future implementations should incorporate rigorous quality control mechanisms, including periodic calibration verification, blinded duplicate measurements, and systematic documentation of technical difficulties encountered. Despite these limitations, the study offers valuable insights for advancing mental health diagnostic capacity in resource-limited settings. The demonstrated feasibility of GDV technology deployment in primary care contexts opens possibilities for scaling innovative screening approaches beyond tertiary psychiatric facilities.

However, several implications merit emphasis. First, policymakers and healthcare administrators should recognize that technology introduction requires concurrent investment in human capacity development, ongoing technical support, and integration planning within existing clinical workflows. Second, researchers must prioritize validation studies establishing the psychometric properties and clinical utility of biofield imaging techniques before

advocating widespread adoption. Third, ethical frameworks governing vulnerable population research should inform all future investigations involving domestic violence survivors, ensuring appropriate safeguards against re-traumatization, confidentiality breaches, or coerced participation. The broader implications extend to mental health service delivery models in developing nations. If validated through rigorous research, accessible screening technologies like GDV cameras could democratize mental health assessment, extending diagnostic capacity to underserved communities currently lacking specialized psychiatric resources. However, such technological solutions must complement rather than replace comprehensive mental health systems encompassing prevention, treatment, rehabilitation, and social support services. The ultimate goal remains not merely identifying psychological distress but ensuring access to evidence-based interventions capable of ameliorating suffering and promoting recovery.

V. CONCLUSION

This study aimed to implement and evaluate Gas Discharge Visualization (GDV) camera aura detection technology as a supplementary diagnostic tool for identifying psychological conditions in domestic violence victims through a collaborative community service program in Surabaya, Indonesia. The implementation successfully achieved several measurable outcomes: psychological assessment of six individuals ($n=6$), comprising two confirmed domestic violence cases and four general community members presenting with psychological concerns; comprehensive training and socialization delivered to healthcare professionals at Kenjeran Community Health Center, encompassing physicians, psychologists, and nurses in the operational principles and clinical application of biofield imaging technology; and structured mentoring provided to partner psychologists regarding interpretation of GDV output data in the context of trauma-related psychological presentations, particularly domestic violence survivors. These findings demonstrate the feasibility of deploying advanced screening technologies within primary healthcare settings characterized by limited diagnostic resources and personnel constraints. The study establishes preliminary evidence that GDV camera technology can serve as an accessible, non-invasive screening modality for detecting psychological distress in underserved populations, thereby enhancing mental health service capacity at the community level. Future research should prioritize rigorous validation studies comparing GDV-assisted screening with established diagnostic gold standards through randomized controlled trial designs, employing substantially larger sample sizes to determine psychometric properties, including sensitivity, specificity, and predictive validity. Additionally, scale-up initiatives should explore systematic integration of biofield imaging technology into routine clinical workflows across multiple community health centers to assess generalizability and sustainability. Public awareness campaigns educating community members about innovative psychological screening modalities may help enhance help-seeking behavior and reduce stigma associated with mental health

assessment. In alignment with Smart City initiatives, strategic utilization of diagnostic technologies such as GDV cameras represents a viable pathway for addressing human resource shortages while delivering equitable, quality mental health services to urban populations in Surabaya and comparable Indonesian cities facing similar challenges in healthcare accessibility and domestic violence prevention.

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DATA AVAILABILITY

No datasets were generated or analyzed during the current study.

AUTHOR CONTRIBUTION

Her Gumiwang Ariswati conceptualized and designed the study, led the community service program implementation, supervised the Gas Discharge Visualization (GDV) camera technology training, and participated in data analysis and manuscript preparation. I Dewa Gede Hari Wisana contributed to the methodology development, coordinated partnerships with community health centers, conducted psychological assessments, and provided critical insights for data interpretation and manuscript revisions. Lusiana participated in the implementation of the intervention, assisted with participant recruitment and data collection, conducted a literature review, and contributed to manuscript editing and formatting. All authors reviewed and approved the final version of the manuscript and agreed to be responsible for all aspects of the work, ensuring integrity and accuracy.

DECLARATIONS

ETHICAL APPROVAL

This study was conducted in accordance with ethical standards and received institutional approval from the Director of the Surabaya Health Polytechnic of the Ministry of Health and was acknowledged by the Head of the Center for Research and Community Service (PPM Center), Poltekkes Kemenkes Surabaya, Indonesia. The research protocol complied with Indonesian healthcare ethics regulations and adhered to the principles of the Declaration of Helsinki. Written informed consent was obtained from all participants, including healthcare professionals and community members, undergoing psychological assessment. Special considerations were implemented to protect vulnerable populations,

particularly domestic violence survivors, ensuring confidentiality, anonymity, and appropriate safeguards against re-traumatization throughout the research process. All procedures followed ethical guidelines for research involving human subjects in community-based health interventions.

CONSENT FOR PUBLICATION PARTICIPANTS

Consent for publication was given by all participants.

COMPETING INTERESTS

The authors declare no competing interests.

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