



Balancing security and therapy: Psychiatric inpatients' perspectives on closed-circuit television surveillance

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Abstract

Introduction: The use of Closed-Circuit Television (CCTV) in psychiatric wards aims to enhance security but raises ethical and therapeutic concerns. Existing literature often assumes its benefits without sufficient input from patients, particularly those with psychiatric disorders, prompting the need for further investigation into patients' perspectives. This study aimed to assess psychiatric inpatients' attitudes toward newly installed CCTV cameras in a teaching hospital in Tehran, Iran, and to examine whether psychiatric symptomatology influences these attitudes.

Materials and Methods: A cross-sectional study was conducted with 100 adult inpatients who had been admitted for at least two weeks in the psychiatry ward of the Rasoul Akram Hospital, Tehran- Iran, in 2024. Participants completed a demographics questionnaire, a newly developed CCTV Attitude Survey (CAS) by our team, measuring attitudes in three domains (nursing performance, ward environment, and security assurance), and the Symptom Checklist-90-Revised (SCL-90-R) to identify psychiatric symptoms.

Results: Overall positive attitude was 35.4%. Security assurance had the highest positivity score (41.4%), followed by ward environment (36.1%) and nursing performance (32.5%). No significant differences in attitudes emerged by gender, education, marital status, or the presence of psychiatric symptomatology as measured by SCL-90-R.

Conclusion: Patients expressed moderate acceptance of CCTV, primarily valuing enhanced safety. However, the benefits regarding ward climate and nursing performance were less pronounced. Future guidelines should balance the perceived security advantages with ethical considerations of privacy and therapeutic engagement.

Keywords: Attitude, Closed-circuit television, Patient safety, Psychiatric patients

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Introduction

In the era of video surveillance, there is hardly any public space which isn't under the constant gaze of cameras (1). Hospitals are of no exception, implementing closed circuit

television in various wards including general, emergency, and psychiatry departments with one main aim: enhancing security (2). Among these, use of video surveillance or Closed-Circuit Television (CCTV) in psychiatry wards

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warrants special attention due to unique conditions of these wards (3). Psychiatry wards tend to be locked spaces in which duration of admission is much longer than the average hospital ward; psychiatric patients may not be fully aware of being under watch or the purpose behind it, or competent for giving informed consent (4). In psychiatry wards, patients and staff have to deal with occurrence of violence on a regular basis (5). These may include staff or patients being attacked by other patients or vulnerable patients being assaulted by staff (6,7). Psychiatry wards are frequently understaffed and fraught with incidents of self-harm, suicide attempts, substance use, misconduct, and disobedience (8). The cameras are then presumed to help by providing a record of events taking place and making it easier for the staff to have a more comprehensive view of the ward and the conditions of patients, while avoiding disturbance of over-stimulated patients (3,4,9).

CCTV records allow for better judgement of the course of events and thus provide justice for both patients and staff after a harmful incident has taken place, while providing material for training purposes (4).

Assurance of security with cameras comes with the cost of violation of privacy, data protection issues and possible misuse of patient records (2,3,10). It may also worsen patients' distress and anxiety or paranoid delusions (2). Still the existing research is not enough to enable us to weigh the benefits of such technologies against their disadvantages, and to identify what limitations should be put in place for their use (2,3).

However, it appears that most benefits of CCTV in the psychiatry wards are automatically presumed without provision of adequate evidence (11). The effect of CCTV presence in the wards through the point of view of the patients have particularly been neglected.

The effect of CCTV cameras in psychiatric wards are understudied and their use as a means of providing security is highly debated (2,9,11). While the ethical questions regarding privacy infringements remain unanswered and patients' views are rarely considered (3,4).

Therefore, to add to the existing literature we designed a study to comprehend patients' views regarding the newly installed CCTV in a psychiatry ward of a teaching hospital in Tehran, Iran using a self-report questionnaire by our team. To our knowledge no study in Iran

has so far been conducted in this relation. We aimed to answer these questions:

1. To what extent do CCTV cameras promote patients' sense of safety and security, provide a more peaceful ward environment, and improve nursing performance and care in the eyes of the patients?

2. Does the presence of psychopathological symptomatology (measured through SCL-90-R questionnaire) affect these views?

Material and Methods

We assessed the attitude of patients to the newly installed CCTV cameras in the psychiatry ward of the Rasoul Akram Hospital, Tehran, Iran (located in the communal area and bedrooms of men's ward and only the communal area of the women's ward), in a cross-sectional study in 2024. Our sample consisted of a total of 100 patients who were admitted to the psychiatry ward. Convenience sampling was adopted due to practical constraints. Inclusion criteria were admission to the psychiatry ward for a minimum of 2 weeks, and the ability to comprehend and answer the questions. Patients who had no education (were unable to read and understand the questions) and patients with cognitive disorders or mental retardation were excluded from the study. Written consent forms were obtained from all patients before entering the study and they were informed about the study process. Patients first completed a questionnaire form consisting of demographics (age, gender, marital status, and educational level) and the CCTV Attitude Survey (CAS) which was designed for the purpose of this study. An instructor was present in the room to provide guidance in case of any confusion with the questions. Paper-and-pencil-based questionnaires were utilized. Subsequently, a psychologist took the SCL-90-R test from the patients.

Research instruments

A) *CCTV Attitude Survey (CAS)*: This questionnaire was developed by our team of psychologists and psychiatrists to assess patients' opinions regarding CCTV in the psychiatry ward. It consists of 30 questions that assess three subscales: 1) Nursing performance, which reflects the opinion of patients regarding the impact of CCTV on the attitude and performance of nursing staff in the psychiatry ward. 2) Ward environment, which measures patients' opinions regarding the effect of CCTV on the general atmosphere of the ward such as

abundance by rules and regulations, reduced level of smoking, reduced level of violent and aggressive behavior, and promotion of a more peaceful environment in the ward. 3) Security assurance, which measures patients' feeling of safety and security as a result of the presence of CCTV cameras in the ward. To develop the questionnaire, primary information was gathered by conducting several unorganized face-to-face interviews led by a psychiatrist with patients either as group discussions or individual sessions. Interviews started with open questions, questions based on preconceptions, questions demonstrated by examples or role plays, and proceeded to more in-depth and concise questions. The content of the interviews was recorded in written form and studied meticulously. Main phrases and words were extracted from the texts and divided into topical categories. Subsequently, relations between different categories were established and questions were outlined. Six psychiatry and psychology professors evaluated the preliminary questionnaire for content validity and set the scoring framework. The questions are scored based on a 5-point Likert scale (5 being strongly agree and 1 strongly disagree). Fourteen questions (1,2,3,5, 6, 9, 10,13,14,16, 19,20,22,28,29,30) measure the nursing performance subscale, ten questions measure the ward environment subscale (4,6,5,7,11,15, 17,21,24,27,28,29) and six remaining questions measure the subscale of security assurance (8, 12,18,23,25,26). Questions 5, 13,16,17,23, and 30 are scored in a reverse manner. Each subscale is scored between 0 to 100 measured by the percentage of positive attitude of patients. To determine the reliability of the survey the test was taken two times by 20 patients with an interval of 5 days prior to the execution of the study.

B) The Symptom Checklist-90- Revised (SCL-90-R): This questionnaire was developed by Derogatis et al. (1992) as a tool for self-assessment of psychological symptomatology (12). It consists of a total of 90 questions that assess symptoms relating to nine domains of: somatization, obsessive-compulsive disorder, interpersonal sensitivity, depression, anxiety, hostility, phobic anxiety, paranoid ideation, and psychoticism.

Each item is scored based on a 5-point Likert scale (0= not at all, 1= little, 2= some, 3= very, and 4= severe). Each subscale score was measured by dividing the total score of the

items contributing to the subscale by the number of items. A score of ≥ 2.5 was considered as positive. The validity and reliability of its Persian form have been confirmed in Iran with Cronbach's α from 0.70 to 0.97 (13,14), and test-retest reliability from 0.78 to 0.90 (15).

The data relating to this study was analyzed by SPSS version 16. T-test and Chi-square test were performed to examine the association between variables and attitude subscales. The level of significance was considered to be 0.05.

Results

In this study, 100 patients admitted to the psychiatric department of Rasool Akram Hospital were examined.

Mean age ($\pm$ SE) of the patients was 32.8 ± 1.2 years. Among them, 62% were men and 38% were women. In terms of marital status, 43% of patients were married. The education level of the patients was 37% under diploma, 42% diploma and 21% university education. The frequency of psychiatric symptomatology according to the SCL-90-R questionnaire were depression (32%), paranoia (21%), aggression (15%), obsessive-compulsive disorder (15%), anxiety disorder (14%), psychotic disorder (13%), somatization (12%), phobia (11%), and sensitivity in relationships (11%). In total, 47% of patients were reported to have disorders in at least one of the nine domains.

The mean scores of CAS (in terms of percentage of positive attitude between 0 and 100) were 32.50 ± 2.20 in nursing performance, 36.10 ± 1.98 in ward environment, and 41.45 ± 2.30 in security assurance. No statistically significant relationship was found between patients' attitude scores and their gender, marital status, and education in the general attitude levels and in the mentioned three subscales (Table 1).

The mean scores of the CAS did not show a significant difference among patients with or without psychological symptomatology (based on SCL-90-R) in terms of overall scores and in the subscales of nursing performance, ward environment and security assurance. Also, based on the statistical association test, no statistically significant association was observed between the age of the patients and their attitude scores in general and in any of the subscales (Table 2).

Table 1. Attitude scores of patients based on demographic characteristics

Variable	Nursing performance	Ward environment	Security assurance	Overall score	P
Sex					N.S.
Male	30.6 ± 2.6	35.8 ± 2.6	41.1 ± 2.9	34.3 ± 2.4	
Female	35.6 ± 4.0	36.6 ± 3.1	43.1 ± 3.8	37.2 ± 3.1	
Marital status					N.S.
Married	30.2 ± 2.8	34.4 ± 2.8	37.9 ± 3.4	33.2 ± 2.4	
Single	34.3 ± 3.3	37.4 ± 2.7	44.2 ± 3.2	37.2 ± 2.7	
Education					N.S.
High school and below	3.7 33.7 ±	39.7 ± 3.4	46.2 ± 4.0	38.0 ± 3.2	
Diploma and above	31.9 ± 2.8	34.0 ± 2.4	38.7 ± 2.8	33.9 ± 2.3	

N.S.: Not significant, Students t-test for all two sets of means

Table 2. Demographic characteristics and attitude scores of patients based on having disorder according to SCL-90-R

Variable	Total (n=100)	With disorders * (n=47)	Without disorders (n=53)	P
Age (Mean ± SE)	32.8 ± 1.2	33.5 ± 1.6	32.2 ± 1.6	0.572†
Gender; male, percentage	62.0%	59.6%	40.4%	0.638‡
Married, percentage	43.0%	48.9%	37.7%	0.259‡
Ward environment	36.1 ± 2.0	36.0 ± 2.9	36.2 ± 2.7	0.966†
Nursing performance	32.5 ± 2.2	33.1 ± 3.0	32.0 ± 3.3	0.805†
Security assurance	41.4 ± 2.3	42.6 ± 3.2	40.4 ± 3.3	0.634†
Overall score	35.4 ± 1.8	35.9 ± 2.6	34.9 ± 2.7	0.801†

*Based on SCL-90-R (a score higher than or equal to 2.5 in one of the 9 subscales) †. Based on students t-test; ‡Based on the Chi-Square test

Discussion

This study examined psychiatric patients' attitude towards the CCTV cameras installed in the psychiatry ward of a teaching hospital in Tehran, Iran, using a self-report questionnaire developed by our team for this purpose. Patients' positive attitude to CCTV cameras were measured in percentages overall and in three subscales of nursing performance, ward environment, and security assurance. Our findings indicated an overall positive attitude of 35.4%. Security assurance (patients' sense of psychological security), with a score of 41.4% had the highest percentage of positive attitude, while ward environment (patients' opinions regarding the effect of CCTV on the general atmosphere of the ward) and nursing performance (opinion of patients regarding the impact of CCTV on the attitude and performance of nursing staff) scored at 36.1% and 32.5%, respectively. Additionally, none of the scales significantly differed in scores between patients with and without disorders based on the SCL-90-R.

The security assurance subscale reflected patients' sense of safety and comfort with surveillance. Prior studies similarly report that both patients and staff feel safer in the presence of CCTV (3,16,17). Because psychiatric wards present high risks of violence (5), security and

safety are among the main goals of installing cameras (4). Yet patient views are mixed. Some welcome constant monitoring, while others experience CCTV as intrusive, anxiety-provoking, and privacy-violating (2). Concerns also arise over who monitors the footage and whether surveillance occurs in common versus private spaces. Ethical debates emphasize that while cameras may increase perceived safety, they risk undermining patient rights, replacing therapeutic interactions with hierarchical or judgmental attitudes, or even criminalizing patient distress (4,18). Excessive reliance on technology may also reduce staff vigilance and paradoxically weaken security (19). A recent research concluded that perceived improvements in safety may not correspond to actual reductions in violence, underscoring the need to balance surveillance benefits with respect for autonomy and privacy (3).

The ward environment subscale (scored at 36.1% positive attitude) assessed patients' views on the impact of CCTV on the atmosphere of the ward, including the level of violent incidents and physical fights among patients, smoking and use of substances in the ward, stealing patients' belongings, and abidance by ward rules. Regarding ward environment, the focus of most studies has been on the reduction of violence, with studies

providing evidence for the reduction of violent incidents in the presence of CCTV (17), and detect intrusive conduct early (9).

In contrast, while the study found that patients were comfortable using the ward environment in the presence of cameras and reported that indirect observation through cameras may be more preferable for some patients than more direct and close methods of surveillance, they also observed that most violent acts in the locked wards occur in relation with the security measures aimed at controlling non-compliant behavior and suggested that cameras may precipitate violent behavior as an extra measure exerted to control patients (19). Other aspects of patient views on the ward environment have rarely been studied. Studies in this regard found that, from the patients' perspective, the presence of cameras prevents other patients from breaking the rules and stealing property. They also found that patients preferred surveillance through cameras, especially during the night, as it was less disruptive to their sleep compared with in-person checks (3). However, studies on the effect of exit security measures in psychiatry wards did not find any effect of the presence of CCTV on substance or alcohol consumption (2).

Nursing performance had the lowest positivity score (32.5%). While cameras can document events and provide accountability for both staff and patients (16), their use must be limited. Reliance on recordings cannot replace staff vigilance, as illustrated by the fatal assault of a staff member in a psychiatric unit despite CCTV monitoring (3,20).

Furthermore, concerns exist that surveillance may reduce in-person observations and interactions, which are crucial to therapeutic care (21). Cameras may also create a false sense of security, leading to neglect in monitoring footage or reductions in staffing levels (22). Ultimately, surveillance risks shifting nurses' roles from caregivers to controllers (4), potentially weakening therapeutic engagement.

Our findings showed no significant differences in CCTV attitudes between patients with and without psychiatric symptoms. This aligns with earlier research (23).

While the full spectrum of CCTV effects on the experience of patients in psychiatric wards has yet to be explored, concerns have been raised on how being under constant observation may negatively impact patients' mental state especially those with paranoia or delusions (4).

Surveillance technologies could be perceived as a means of coercion and control and a source of constant threat in the psychiatry wards, and may therefore exacerbate patients' underlying distress or paranoia leading to increased feelings of anxiety and hypervigilance which undermine personal freedom and authenticity, or trigger reasonable feelings of distrust in patients (2,24-27).

Surveillance technologies may be perceived as coercive or threatening, heightening anxiety and hypervigilance, undermining freedom, or increasing distrust. In one reported case, a schizophrenic patient expressed distress after discovering a camera in her room; her psychiatrist misinterpreted this as paranoia, which may have prolonged hospitalization (25,28). These examples highlight that ethical concerns remain even when group-level statistical differences are absent. CCTV should therefore be applied with caution, tailored to individual needs, and governed by clear regulations prioritizing patient dignity and therapeutic benefit.

While CCTV can enhance perceived safety, it cannot replace therapeutic engagement. Nurses should use cameras as a supplement to direct observation, remain attentive to patient concerns, and protect privacy and dignity. Training on the purpose and limits of surveillance may help staff prevent distress and uphold respectful care.

This study lacked pre-installation baseline measures, was limited to one psychiatric ward, and included a relatively small sample, limiting generalizability.

The absence of direct comparisons with similar studies also restricts contextualization. Future research should explore patient perspectives across diverse psychiatric settings and investigate how specific diagnoses influence CCTV attitudes.

Conclusion

Inpatients showed moderate acceptance of CCTV, valuing security most but expressing less confidence in its effect on the ward environment and nursing performance. Attitudes did not vary by psychiatric symptoms. While surveillance may support safety, ethical and therapeutic challenges persist.

Larger studies are needed to develop evidence-based, patient-centered policies that balance safety, privacy, and therapeutic engagement.

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Conflict of Interests

The authors declare no conflict of interests.

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Ethical Considerations

Written consent forms were obtained from all patients before entering the study and they were informed about the study process. This study

received ethical approval from the ethics committee of the Iran University of Medical Sciences.

Code of Ethics

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Authors' Contributions

Atefeh Ghanbari Jolfaei, Razieh Salehian, and Mehdi Nasr Esfahani: Study design, conceptualization, and supervision. Nafise Jahangiri Zarkani, Ahmadreza Pirhayati, and Sara Nooraeen: Data collection, analysis and interpretation. Mohammad Pirhayati: Critical revision of the manuscript, Final approval of the version to be published

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