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# Implications of CCTV cameras on child-care centres' routines, peer relationships, and parent–teacher relationships: child care educators' opinions

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## Abstract

In recent years, surveillance cameras have become common in the education system, in early childhood child-care centres as well as in preschools and schools. Public opinion regarding the usage of security cameras in early childhood institutions is constantly increasing due to a growing number of incidents exhibiting child abuse by caregivers. However, meagre attention is given to the use of security cameras in early childhood child-care centres and preschools in the literature. We examined the opinions of child care teachers and caregivers about the implications of implementing cameras in child-care centres routines and how they reshape the relationships with parents and caregivers in Israeli child-care centres. Seven semi-structured interviews were conducted with seven child care teachers and caregivers. Results show that practitioners perceive cameras as generating a disruptive effect on child care centres' routines. CCTV cameras may create stressful situations between parents and staff, as well as among staff, raising issues of mistrust and privacy violation. However, cameras also serve as a means of establishing mutual trust and maintaining good relationships with parents. This dual impact should be addressed by policy makers and stakeholders involved, who should be aware of the overall consequences of CCTV cameras in child care centres prior to installing such systems.

**Keywords:** Child care centres, Early childhood, Surveillance, Security cameras, Privacy, Parents–caregivers' relationships

## Introduction

For years, business owners used security cameras as a means of protecting the workplace from theft, violence, and illegal activities. In recent years, security technologies have become popular in the educational milieu, and are prevalent in schools, preschools, and child care centres. The primary reason for installing cameras in educational institutions is to prevent crime and give educators and parents a sense of security, thereby eradicating potential danger from phenomena, such as bullying, truancy, vandalism and other deviant behaviours (Hope, 2009; Taylor, 2010, 2014).

In Israel, the public discourse regarding the usage of security cameras in child care centres was raised following publications in the general media that exposed the abuse of children by caregivers in early childhood educational centres (Sternbach et al., 2017). As a result, the use of security cameras in child care centres and kindergartens has expanded, since parents demanded to install them in their children's child care centres (Lukash & Cohen, 2018). This caused turmoil between managers and staff and between staff and parents (Dvir, 2019; Liss & Yaron, 2018).

Nevertheless, the voice of early childhood teachers and caregivers, who are the ones mostly affected by that change in their workplace, was rarely heard. The purpose of this study was to investigate the effect of cameras in early childhood child care centres on early childhood teachers' behaviour, on the critical and delicate relationships between parents and caregiving staff, and among caregivers themselves, in terms of trust, privacy, and relationships.

### **The effectiveness of using CCTV in education systems**

Many workplaces nowadays choose to install security cameras. The phenomenon began in the late 1990s, when businesses such as banks and restaurants adopted cameras for security purposes. The goal of these cameras was to protect business owners from illegal activities that may occur, such as theft, violence, etc. (Rosenblat et al., 2014). These cameras were usually visible and served as a reminder to outsiders as well as to employees that they must follow the workplace's laws and rules.

In the field of education, schools and preschools are also committed to maintaining a safe and secure physical space for students and educational staff, as a prerequisite for nourishing children's well-being and enabling best academic performance. According to Taylor (2011) installing CCTV cameras is perceived as a means of creating a positive climate in educational institutions. CCTV cameras are considered an effective means of maintaining a secure environment, especially with regards to preventing and minimizing deviant behaviours, drug crimes and violent crime (Garcia, 2003; Nickerson et al., 2008; Squelch & Squelch, 2005).

The effectiveness of CCTV cameras in prevention of criminal acts is reliant upon their deterrent effect (Taylor, 2011). Nevertheless, Taylor (2011) argues that any deterrent effect of the cameras may well wane after their initial implementation. In addition, Armitage et al. (2002) found that there is indeed a significant reduction of crime following the installation of cameras, even before they actually became operational, suggesting that their mere visibility may contribute to a crime reduction effect. Sometimes, the request to install cameras throughout the school is initiated by educators who are concerned about their safety and the safety of their students. Many teachers feel that security cameras will enable faculty and students to attend school with a greater sense of security (Maphosa & Mammen, 2011; Taylor, 2011).

However, this purpose is not always achieved. A study published a year after the shooting at Virginia Tech College in the United States examined the sense of security of college students in the United States. Survey results indicated that camera installation increased anxiety and imposed a negative impact on school climate, and even facilitated a false sense of security rather than safety (Rasmussen & Johnson, 2008). This is mainly a result of the installation of cameras in retrospect, following an event, and not

proactively, in advance, which may prevent the event from happening altogether. Hence, students may not feel safer due to installation of CCTVs as a result of a negative incident (Taylor, 2011).

Amos et al. (2015) discuss the effectiveness of CCTV cameras in special education classrooms, installed for the safety of students with disabilities. They emphasize the vulnerability of this population, e.g., students with Autism, ADD/ADHD, emotional disturbance, and intellectual disability, which are usually unable to communicate and report abuse inflicted upon them. Teachers, therapists, or caregivers who are accused of, or arrested for abuse, are usually not convicted due to lack of credible evidence of the abuse Amos et al., (2015). In these settings, cameras are used to identify abuse by staff. However, Amos et al. (2015) argue that this may create a false impression that students are safe by the mere visibility of the cameras, thereby diverting funding, resources and attention away from the need for ongoing staff training.

### **Resistance to CCTV in education**

While surveillance technologies may have some useful role in school safety and discipline, it raises concerns and questions about their adverse effects in class and in school altogether. The use of CCTV cameras in schools demonstrates Foucault's (1991) notion of the panopticon, portraying the layout of a prison in which people and their actions are always monitored. Many researchers refer to schools as panoptic, providing evidence for a wide range of surveillance practices (Azzarito, 2009; Bushnell, 2003; Gallagher, 2010; Hope, 2016; Kaltefleiter, 2013; Perryman, 2006; Selwyn, 2000).

The primary reason for resistance to such surveillance is the violation of privacy (Kaltefleiter, 2013; Taylor, 2010). Unlike prisoners, free people are entitled to freedom and privacy, which is considered a fundamental human right in democratic societies (Birnhack, 2010).

Studies examining the impact of security cameras on employees in workplaces found that they are concerned about their privacy and their employers' abuse of the data collected in camera recordings. Employers may, for example, monitor employees invasively, and use this information against them (Rosenblat et al., 2014). Likewise, teachers are concerned about the use of cameras by principals for the purpose of monitoring their performance. They perceive camera utilization as a violation of their privacy rights, as well as their students' rights (Squelch & Squelch, 2005).

Research conducted in Israel reveals that the installation of cameras in schools demoralize educators, who resist such surveillance (Perry-Hazan & Birnhack, 2019). Specific arguments against school CCTVs concerned surveillance in teachers' staff-room and classrooms. Teachers objecting to cameras in classrooms note the impact of surveillance on their freedom and the possible impairment to teaching practices (Perry-Hazan & Birnhack, 2016, 2019).

Students also express concerns about the intrusiveness caused by installation of security cameras in schools, thereby invading their privacy. They often perceived this as unreasonable impositions of authority and control (Hope, 2009; Rasmussen, & Johnson, 2008; Taylor, 2014). Birnhack et al. (2018) found that even young children in primary schools, who were born and raised in the digital era and are used to ubiquitous surveillance, value their privacy and are willing to relinquish it only when perceived as justified.

The main strategy of students' resistance to surveillance is avoidance, mainly achieved by seeking places hidden from cameras' and staff sight, such as toilets or "behind the bike sheds" (Hope, 2009, 2010).

However, there is an ongoing ethical discussion about the balance between violence prevention and the violation of privacy. The main dispute is whether surveillance practices cause less or more harm than the violations these practices aim to prevent, especially when young children are concerned (Warnick, 2007; Widen, 2008).

Parents have a different attitude towards the surveillance of their children in educational systems. They often advocate for increased security measures in schools Moven and Freng (2019). According to Marx and Steeves (2010) parents are encouraged, from a very early stage, to buy surveillance technologies, such as Babysense and other monitoring systems, aiming to keep the child "safe". Cellphone companies also offer tools for tracking children's physical location and controlling their online activity. Thus, parents, especially of toddlers and young children, perceive surveillance technologies as a necessity. This also indicates that they are responsible and loving parents. Notably, they are not concerned with violation of their children's privacy.

Increasing security measures in schools does not necessarily guarantee improvement in parents' perceptions of their children's safety. Moven and Freng (2019) showed that although parents demand increased security measures in schools, their sense of safety decreases as these measures increase, possibly due to the need for them in the first place. Moreover, school security measures, such as surveillance cameras, negatively impact parental involvement within the school.

### **Peer relationships and organizational climate in educational systems**

Research suggests that the organizational climate influences the behaviour and attitudes of the members of an organization (Forehand & Gilmer, 1964). Studies conducted outside the field of education suggest that people with more positive feelings about their work and their employers tend to be more productive (Weakliem & Frenkel, 2006).

In the field of education, school climate is defined as "shared beliefs, values, and attitudes that shape interactions between students, teachers, and administrators and set the parameters of acceptable behaviour and norms for the school" (Koth et al., 2008, p. 96). According to Hoy et al. (1991), teachers' experiences of openness, collegiality, professionalism, trust, commitment and cooperation were all associated with positive school climate and a healthy work environment.

Positive school climate is considered a central component of effective schools, contributing to the engagement and academic achievement of students, and the reduced risk of antisocial behaviour (Bracy, 2011; Hoy, 1991). Little research has been conducted on the role of organizational climate in preschools and early childhood centres. Most of them focused on the relationships between organizational climate and collegial relationship, and classroom quality (Dennis & O'Connor, 2013), confirming the association between these factors. Hur et al. (2016) studied the association between early childhood teachers' perceived work climate in child-care centers and their pedagogical beliefs. They found that early childhood teachers who experience a more positive work climate had more child-centred beliefs. These teachers were more likely to show stronger professional engagement and better performance in the classroom.

King and Bracy (2019) raise concerns about the negative impact of security measures on school climate in high-security schools. They argue that visible security measures, such as surveillance cameras, create a culture of criminalization and fear that impair the relationships between students and school staff, disrupt learning, and promote student misconduct.

### ***Parent–educators’ relationship in early childhood education***

Existing literature states that promoting a positive relationship between parents and educators of all ages may support their academic, social and emotional development, and may positively impact the learning environment at large (Gregory & Weinstein, 2004; Hartz et al., 2017; Kuhn et al., 2017; Sabol & Pianta, 2012; Santiago et al., 2016; Velan & Vorkapić, 2020).

Fluent communication between parents and educators may impact the level of trust between them, which is essential to their ongoing relationship (Garrity & Canavan, 2017; Santiago et al., 2016). The level of trust between teachers and parents impacts their cooperation, which is exhibited by their levels of engagement (Houry et al., 2019). From the parents’ point of view, the more information they receive, the higher their sense of trust (Schechtman & Bushrian, 2015). Early childhood educators and caregivers are especially aware of the need to communicate with parents regarding the daily routine of their child care centre, due to the children’s young age (Abdulai & Dery, 2018; Ghazvini & Readdick, 1994; Knopf & Swick, 2008; Sverdlov & Aram, 2016).

Notwithstanding, parent–caregiver communication sometimes includes conflicts, which can be harmful to their relationship (Cottle & Alexander, 2014). For example, misunderstandings might create a feeling of mistrust, which may, in turn, negatively affect their cooperation. This delicate relationship between parents and caregivers, when compromised, leads to disrespect and refusal to cooperate (Kuusimäki et al., 2019). For this reason, in recent early childhood teacher education curricula, courses dealing with parents’ relationship with educators include topics, such as trust, cooperation, ethics and mutual respect (Denessen et al., 2009; Murray et al., 2008).

The penetration of digital technologies into the education system causes major changes in parents–educators’ relationships. Devices such as computers, mobile devices and smartphones, enabling one-to-one or one-to-many communication modes, intensify teacher–parent communication and increase parental involvement (Amini, 2018; Kuusimäki et al., 2019; Lin, 2019; Palts & Kalmus, 2015; Wasserman & Zwebner, 2017). These new modes of communication and transfer of information also pose new challenges regarding the relationship between parents and teachers (Abdula & Dery, 2018; Wasserman & Zwebner, 2017), due to the blurring of boundaries that in turn transform involvement into intervention (Kurtz, 2014). These challenges should be approached by evidence-based research.

## **Methodology**

### **Study objectives**

The review of the current state of the art on the topic of cameras in the education system indicates a lack of research on CCTV in child care setting. Most of the previous research on security cameras in educational institutions focuses on schools rather than child care

centres (Perry-Hazan & Birnhack, 2016, 2019). Generalizing findings from schools to child care centres may be misleading due to vital differences between the two types of institutions. Moreover, most research on security cameras in schools does not refer to its impact on parent–educators’ relationships, nor on the relationships among staff. Rather, it focuses on school teachers and principals, analysing aspects, such as privacy and legal issues (Perry-Hazan & Birnhack, 2016). The voice of early child care providers is missing (Shdaimah et al., 2018).

Being a rising issue in educational discourse in Israel, and considering the growing demand for transparency in educational institutes, this topic is especially relevant when referring to child care setting (Shdaimah et al., 2018). For this reason, research and evidence-based decisions regarding cameras in child care centres are of utmost importance.

Hence, the goal of this study was to examine the overall implications of using security cameras in early childhood education institutions as perceived by professional caregivers. We focus on the perceived impact on staff behaviour in preventing violence against children, the perceived impact of cameras on staff routines and relationships with parents, as well as among staff, and the perceived violation of privacy by child care teachers. Our main research question was: what are the implication of surveillance cameras in child care centres according to child care educators and caregivers?

### Methods and tools

The current study utilized a qualitative content analysis methodology based on semi-structured interviews. This method, focusing on reconstructing subjective experiences and meaning-making of participants on the research subject (Neuman, 2014), was used to reveal personal interpretations of professional caregivers regarding camera installation in child care centres.

The interview protocol was designed by two researchers as a semi-structured interview and was checked and approved by a third researcher. It contained demographic questions and wide open-ended questions, followed by optional follow-up questions (Adams, 2015). We based the questions on the topics that we encountered in the literature review and on preliminary discussions with day care centre staff. These questions referred to the interviewee’s perceptions regarding the installation and presence of cameras in the child care centre and the changes they experienced in their behaviour and in the organizational climate and routine (for example: What do you think about installation of CCTV in your day care centre? Who initiated that installation and for what reason? What challenges did you cope with, since cameras were installed in your child care centre? How did the installation of cameras in your child care centre affect the behaviour of the staff? How did the installation of cameras in your child care centre affect the relations with parents? Who used the recordings and how were they used?).

The interviews were analysed using an inductive content analysis strategy (Thomas, 2006). Data from the interviews were coded, thereby identifying repeated themes, which were reconstructed into five thematic categories as presented in the results.

### Participants

Altogether seven child care Israeli educators and caregivers participated in this study, all female. The participants were approached due to their utilization of cameras for



monitoring child care centre daily routines. They were recruited through personal acquaintances of the interviewers and their willingness to talk about such a delicate topic. Ages varied between 35 and 55 ( $\bar{x}=46.14$ ), and years of experience also varied between 1 and 32 ( $\bar{x}=23.28$ ); average without the outlier of 1-year experience resulted in  $\bar{x}=27$  years of experience. Herewith we refer to each of the child care educators participating in the study (Table 1).

The seven child care centres where caregivers worked were located in the centre of Israel, in urban settings, and included children aged 3 months to 6 years. In all locations, CCTVs were installed within the previous couple of years due to rising awareness of the need for transparency in staff conduct in child care centres. This awareness was raised by public opinion regarding the need to address issues of staff violence towards young children in child care centres.

In Israel, there are public and private preschools from the age of 3, and kindergartens are mandatory from the age of 5. Ages younger than 3 years attend private child care centres. Hence, in our research, some childcare centres were included in the public education system, while others were within the private education system. However, all childcare centres are subject to public supervision.

### Research process

The study was conducted during the school year of 2018–2019. Interviews were conducted face-to-face. Each interview ranged about 20–30 min. All interviews were audio-recorded and transcribed by the researchers.

Data was analysed using a conventional content analysis method (Hsieh & Shannon, 2005), since existing theory and research literature on the topic of child care staff's perceived impact of CCTV cameras on their routines, peer relationships and parents' relationships with them is limited. Hence, we allowed the categories to flow from the data. Still, we extracted some major notions from the existing literature on CCTVs in educational context, for the benefit of the current study.

Note that regarding our positionality, we do not hold any stance or position in relation to the context of CCTVs in child care centres, nor are we involved in any way in policy regarding CCTVs. Hence, our research was not affected in any way by bias for or against CCTVs in child care centres; the way the interview questions were constructed, designed and conducted was an outcome of the existing literature. However,

**Table 1** Details of participating child care educators

Initials	Age	y/o experience	Children's ages	No. of children	No. staff
HI	35	1	0.3 to ~3	150 (/6)	35
AN	52	30	~3	28	5
ED	52	32	3–5	24	3
DO	43	24	0.3–3.5	60	14
SH	38	14	0.4–3	30 (/2)	4
IR	48	32	0.3–6	100 (/6)	24
BAS	~55	30	1.7–3	18	3

we did express the public concern regarding the rising amount of violent incidents that involve child care centres and preschool educational institutions.

## Results

This study examines the implications of using security cameras in early childhood education systems as perceived by seven child care centres teachers. The analysis of interviews revealed five main categories of topics related to the perceptions of child care centres practitioners regarding the implications of the installation and presence of security cameras in child care centre in five aspects:

1. Staff behaviour
2. Child care centre routine
3. Relationships with parents
4. Relationships among child care centres' staff
5. Perceived privacy of staff

Each category and its sub-categories are presented in the following paragraphs.

### Implications of camera presence on staff behaviour

According to the interviews, the cameras installed in child care centres had a perceived impact on staff behaviour in three aspects: prevention of violent behaviour, embarrassment and inconvenience, and adaptation.

With regards to cameras' impact on children's violence, two main perceptions of child care teachers can be identified. The first, stating that cameras do not prevent violent behaviour towards toddlers for example:

*If she [the childcare centre teacher] has nothing to hide, then she has nothing to hide, and if she thinks that abusing children is something natural for her, then she'll keep doing it in front of the cameras. This is not what will stop her, unfortunately...*

Other child care centre teachers assert that the existence of cameras can indeed assist in preventing the appearance of violent behaviour by staff:

*It's possible that cameras do influence, even if there are two or three staff members that don't go by the rules and regulations, they say 'OK, there are cameras.'*

Child care centre teachers indicate that the cameras encourage restraint of behaviour by staff, which is experienced as embarrassment and inconvenience. They indicate a certain degree of unnatural act:

*The cameras influence your behaviour during the day. I think, yes, you're like in the Big Brother show, all the time under inspection and you think every time what to do and don't act so naturally. When we want to talk to each other... or when we laugh then it's not always comfortable that we are seen in that situation. Also, when we organize ourselves during the day, during the day you might have to organize your shirt or your pants.*

They also referred to feelings of restraint when interacting with the children during sessions:



*Someone who is shy but feels quite comfortable in front of the children to do dancing in sessions, maybe she takes a step back because she's shy that she'll be seen. So, this may be harmful, especially to people who are not so long in the profession and are shy in their activities when adults see them and less shy in front of the kids, it's harder for them to do things when they're watched.*

The adaptation to cameras is gradual and takes time. to begin with, there is enhanced awareness of the presence of the cameras. Also, when a new staff member joins the team there is a need to get used to the presence of cameras in the child care centre. Staff members are anxious about the observation and documentation of their every movement, as portrayed in the following:

*I have a staff member who was afraid of working in a room with cameras, she had worked in a child care centre without cameras and moved to one with cameras, so she wasn't comfortable with it.*

There is some concern about acting freely in child care centres with cameras: "I was uncomfortable to act freely and to sing and dance with the children". However, as time goes by, child care educators report that staff members get used to the cameras and do not exhibit the initial inconvenience, stating that: "At a certain point in time the camera becomes part of the scenery and you don't react to it".

#### **Implications of camera presence on child care centre's routine**

The interviews show that camera presence in child care centre was perceived by caregivers as affecting its routine in two aspects: perception of cameras as a bother, on one hand, and utilization of cameras for verification of facts, on the other hand.

Child care educators indicate that the presence of cameras in their workplace creates managerial difficulties that may cause disruption, hence, become a bother for staff members. They are forced to allocate time to this new feature, or as one of the child care educators said: "Besides a load of headache, it doesn't do anything". There is also the involvement of the parents that highlights managerial issues, as well as anxiety of child care educators:

*We fear that the parents now know that there are cameras, and for each little incident they'll ask to open the cameras, which is not a casual thing to do... like, this is what we're afraid of, that every little thing will lead to examine the cameras. Now that we are forced to use CCTVs then it's not that simple to get the cameras out, to rewind and look for the exact minute, second.*

The second aspect referred to the need for verifying events that may be ambiguous, in which staff members are uncertain about their sequence. One of the child care educators supplied an elaborate description of such usage of cameras:

*An incident that a child was wounded, and the caretaker saw it a second after the fall, she was with her back and when she turned she saw that the kid was wounded. we tried to have an investigation to check it out and nobody saw the second of the fall and the fall was bad and this is why we did see [the recording] and it explained to us the picture and we saw with the camera [recording].*

### Implications of camera presence on staff–parent relationship

The implications of camera implementation in child care centres on the relationship between staff and parents, as perceived by the interviewees are twofold: first, it is used as a tool to meet the need to satisfy parents, and second, as a tool for conflict management between parents and the child care teacher.

#### The need to satisfy parents

Child care educators claim that some of the parents request that cameras be installed in the child care centre, while others do not pose such a demand. One child care teacher says: “There are many parents who didn’t even know there are cameras in our child care centre and did not even think to ask”. Another child care teacher described a different approach: “There is a demand for camera installation. Parents prefer there to be cameras, and if there can be an online option – even better”.

Demand for cameras arises mostly as a result of publications in the media regarding cases of child abuse, for example, a well-known case about a year ago in Israel: “What happened with [name of the child care teacher] freaked them [the parents] out”. According to one of the child care educators: “The considerations for installing cameras on behalf of the decision-makers was the parents’ request”.

Child care educators indicate they understand the need to calm parents and to please them by installing cameras in their child care centres: “During the past year I was against it... but now I understand more and am more willing to accept and to give up my privacy so they [the parents] will be calmer”.

#### Cameras as a tool for managing parent–child care teacher conflicts

Cameras serve child care educators for managing conflicts and verifying facts regarding events that occurred in the child care centre, leading to claims of parents regarding irregular events. Child care educators describe their usage of recordings for investigating the circumstances. These may include incidents that refer to casual injuries, for example:

*An incident I remember, that a boy went back home crying and the parents were worried and asked to see if something happened in the child care centre. We went through the day [via camera recordings] and didn’t see anything [unusual] that happened so we concluded that the boy’s behaviour wasn’t because of something specific that happened.*

The need to know the details of daily incidents is, to a great extent, the result of the need to be accountable for staff activities, for the sake of their parents who sometimes exhibit mistrust towards staff. One child care educator recalled:

*One mother claimed that one of the staff pushed the child, and the child just told stories. The camera [recordings] verified that nothing happened. We showed her.*

The cameras serve as a means of resolving disagreements between child care educators and parents in a relatively objective, evidence-based manner. For this reason, cameras may be a tool that protects child care educators, as explained by one of them: “A

parent accused [the caretaker] of something, but the cameras show nothing happened, so this could be beneficial for the staff and the parents or child”.

### **Implications of camera presence on the relationships among child care centre staff**

The presence of cameras has implications on relationships among staff members in child care centres in a twofold manner. Child care educators describe the usage of cameras as a means of *inspection and control* of staff behaviour in their absence. They also describe how, in some cases, this may evoke *feelings of mistrust* between the child care teacher and the staff.

#### **Inspection and control**

In addition to the implication of cameras in terms of parent staff relationships in child care centres, apparently, cameras also have implications in terms of relationships among child care centre staff, which usually include a child care teacher and a few caregivers. Child care educators described their usage of cameras for inspection of the staff:

*I almost every day watch parts that are more important to me and critical moments: sleep-time, changing diapers, waking up, opening the child care centre, but every day I enter [the recordings].*

The cameras serve child care educators mainly for inspecting the daily routine when they are absent, as stated by one of them:

*It gives me another angle to look at the staff. If it's new caregivers, they appear on a phone app, and I can see what they're doing. It's another pair of eyes, especially when I'm not there.*

#### **Mistrust between child care teacher and staff**

Along with the inspection, a feeling of mistrust may develop, which may harm the relationship among staff members, as described in the following example:

*I can say that sometimes the trust with the caregivers is uncomfortable when you look at the camera. There was an incident that I watched by chance, and I also saw another incident that one of the caregivers lifted her hands upwards, and it seemed that she was shouting and I blamed her. I told her what I saw on camera and I showed her, and actually, she was singing the song, and it harmed the trust between us. You see it [the recordings] without voice, only motion, so I interpreted it, and that was the problem.*

For this reason, some of the child care educators emphasize that they prefer not to use cameras for ongoing, extensive inspection of staff, but rather for clarification of specific unusual events, as one child care teacher said:

*I don't use [cameras] to check my staff. For this, I prefer to get in [the child care centre] and supervise and train them. So, I check incidents and situations like when a child falls, or when staff members don't scan the playground before going out with the pre-schoolers so that there won't be any safety issue.*

### Child care centre staff perceived privacy invasion

Child care educators referred to the issue of privacy from two aspects: *Violation of staff privacy* and *violation of children's privacy*.

#### Violation of staff privacy

The documentation of cameras in the child care centres creates situations in which private actions become public and exposed. For example:

*The staff is not always comfortable, they call it the Big Brother feeling that you are always watched and even to pick your nose is hard,*

and:

*I think they feel more exposed. I will give you the most stupid example, yes? Someone had underpants that needed fixing and she felt like doing so, but then she knows there are cameras, like, come on, we've all had this need to fix our underpants and pull them out, so you're used to pulling them when nobody sees...*

Therefore, all participants rejected the installation of cameras that broadcast online, which expose staff to anyone who has access to this media in real-time; however, they prefer to limit access of parents to camera recordings and reveal the documentation only under their control.

#### Violation of pre-schoolers' privacy

Child care educators expressed their feeling of discomfort due to possible invasion of the pre-schooler's privacy, as mentioned: "I think it influences the privacy of the pre-schoolers. You change their diaper, fix them, this is a problem, [invasion of] personal privacy".

### Discussion

The current research strives to expand our understanding of the perceived impact of camera presence in child care centres from early childhood teachers' perspective. We focus on issues related to staff behaviour, child care centre routine, parent–teacher relationships, relationship among child care centre staff, and perceived violation of privacy.

The original purpose of installing cameras in child care centres was, according to child care educators, to prevent aggressive behaviour against toddlers by staff members, or at least to detect cases of child abuse (Amos et al., 2015). Child care educators, management and parents had assumed that CCTVs would assist in preventing abusive and violent behaviour and thus contribute to children's safety, in a similar way to their function in schools (Garcia, 2003; Nickerson et al., 2008; Squelch & Squelch, 2005). In practice, our study shows that cameras may have a broader effect on child care centre employees, creating both opportunities and challenges.

Our findings indicate that camera presence in child care centres had a panoptic effect on child care centre staff. They have a restraining effect on staff's behaviour. Nevertheless, this restraint does not always refer to violence, but rather creates

inconvenience and embarrassment among staff members: they may not act spontaneously and freely, knowing that the “big brother” is recording their every step and that they are under constant inspection (Hope, 2010).

Child care centre staff under camera surveillance calculate their every step, due to concerns regarding their image in the eyes of the parents. Thus, they may avoid specific activities that may be embarrassing to them, e.g., dancing or singing, which are a vital component in early childhood education (van As & Excell, 2018). Thus, the installation of cameras in the child care centres may interfere with the pedagogical process and impair the quality of education provided. We propose an additional point of view, related to possibilities of visual documentation of children's activities, thereby acknowledging what children are doing *de facto*, from a pedagogical perspective. This may shift the interest in CCTV documentation to a more positive realm (Sparrman & Lindgren, 2010).

The findings also show that the installation of security cameras in child care centres also affect child care centre routines. Child care educators specifically complained that the cameras are annoying and a time-consuming nuisance that interferes in managing their daily child care centre routine. Instead of focusing on the children's needs, they allocate time to matters related to camera recording. These child care educators find themselves dealing extensively with managerial-administrative tasks instead of educational work, at the expense of the quality of education provided to the children.

Introducing cameras in child care centres seems to have implications on parent-teacher relationships as well. Teachers are aware of parents' worry about their children's well-being. The installation of CCTV cameras in the child care centre became a means of pleasing parents and establishing trust and honest relationships with child care educators and staff altogether. Child care teachers expressed an understanding of the parents' position, who perceive their demand for CCTV cameras as part of their role of being good parents (Marx & Steeves, 2010). They are striving to reduce parents' fears and foster good relationships with them (Santiago et al., 2016). Thus, they perceive the requirement to install cameras as an attempt to reach out and meet parents' needs rather than an expression of parents' lack of trust.

Moreover, child care educators acknowledge the advantages of camera presence in child care centres, specifically in cases of conflict or uncertainties regarding events that involve pre-schoolers. The cameras serve as a tool for conflict management between parents and staff by supplying substantial evidence for ambiguous events. Hence, cameras may serve for the interest of child care centre staff and may even protect them from idle complaints (Maphosa & Mammen, 2011).

One of the more sensitive implications of camera presence in child care centres is related to the delicate relationships among staff (Hope, 2016; Rosenblat et al., 2014). Due to the hierarchical structure of child care centre staff, the child care teacher is in charge of and accountable for the staff members. Hence, the cameras are also a means of monitoring staff behaviour. Child care teachers are aware of this delicate situation, which may impair the required trust between them and the child care centre staff and pollute the child care centre climate (Hur et al., 2016). Therefore, camera recordings were reportedly used mostly to clarify specific incidents that involved staff and were not available to parents regularly. Hence, parents were exposed only to records of particular events that

included their child. The workplace climate and the well-being of staff is of interest to the child care educators as well as to the parents; therefore, any use of surveillance must consider the interests of caregivers as well as parents and the children (Shdaimah et al., 2018).

Another implication of camera presence in child care centres raised by child care educators is the violation of the privacy of both staff and children, whose intimate situations can be captured by the camera lens and hence invade their privacy (Hope, 2016; Taylor, 2014). This is yet another consideration in decisions regarding the modes of camera functioning in child care centres. Child care educators rejected the installation of cameras that broadcast online, which expose staff to anyone who has access to this media in real-time. They prefer to limit access of parents to camera recordings and reveal documentation under their control.

As we can see, the use of security cameras is equivocal. It seems to be adding to the delicate complexity of parent–staff relationships in child care centres. On the one hand, cameras allow to establish good relationships and trust between the child care educators and the parents. On the other hand, addressing child care centre with the requirement to install cameras poses new challenges for child care educators and staff, and may impair the child care centre routine and climate, and the relationships with parents and among staff.

Regarding the original purpose of cameras installation, preventing violence and child abuse by caregivers, child care educators do not express a firm opinion. They hold an ambivalent stand regarding the effectiveness of cameras in preventing violent occurrences. It may derive from the ambiguity in results of camera presence: despite having cameras on school grounds, violence still occurs, and cameras do not necessarily prevent these incidents, but rather document them (Amos et al., 2015; Bracy, 2011; Hope, 2010; King & Bracy, 2019; Perry-Hazan & Birnhack, 2019).

To conclude, teachers and parents must be aware of the overall consequences of CCTV camera installation in child care centres, and make decisions accordingly. This task must bear in mind the importance of preserving the delicate parents and staff relationship balance. We see the main significance of our findings in raising awareness to the ambiguity of CCTV installation in educational settings that involve young children. Moreover, we encourage an open discourse on this topic from various perspectives of the different stakeholders. We endorse multiple viewpoints also on the usage of documenting daily routine of young children, to allow a more positive discourse on the opportunities that CCTVs may entail, for example: improving pedagogic reasoning and action.

To better understand the challenges and opportunities of educators are faced with regarding CCTV documentation, we recommend broadening the research scope as well as the agenda. In terms of the scope of research, we recommend broad research on the impact of CCTVs on all stakeholders, using both quantitative and qualitative research approaches. With regards to the research agenda, our standpoint regarding CCTV installation in child care centres, our results are ambiguous; therefore, we cannot conclude that such a step would be for the benefit of the child care climate. Several additional factors need to be examined, e.g., previous sense of trust between staff and parents, staff professional stance regarding parent involvement as well as their self-efficacy, to name a few. Hence, while this study was launched following general events

related to growing acts of violence in educational institutions (e.g., child care centres, kindergartens) by staff members, sometimes by managers of these institutions, we recommend a broader point of view regarding the impact of installing CCTVs for documentation. This may include, for example, examination of pedagogical as well as teacher professional development opportunities. The existence of CCTVs in the child care centre may be used in a fair manner, according to needs, and implemented as a routine means of insuring professional conduct altogether.

## Conclusions

This research revealed the complexity and deeper implications of the installation of CCTV cameras in child care centres. As the pressure to install CCTV cameras in child care centres increases, policy makers, child care centres managers and parents must be aware of the overall consequences of CCTV camera installation in these institutions. On one hand, the high expectation that CCTV cameras will prevent violence in child care centres is probably not realistic, and on the other hand the consequences of installing cameras could impair the delicate relationships between parents and staff and interfere with child care centre routine. Thus, all stakeholders should carefully assess the pros and cons of CCTV cameras installation and the optimal and constructive ways to use the cameras in such institutions, bearing in mind the importance of preserving a delicate relationship between parents and staff and a healthy workplace climate.

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## Author contributions

HMT—conceptualization, analysis, writing literature review and results. AFB—conceptualization, methodology, writing review and editing, validation. LL—conducting interviews, writing original draft, resources curation. TS—conducting interviews, writing original draft, resources curation. All the authors read and approved the final manuscript.

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## Availability of data and materials

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## Declarations

### Competing interests

The authors declare that they have no competing interests.

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