

La restricción y el aislamiento mostrados a través de imágenes publicadas en Twitter: ¿Cuáles son las implicaciones para los profesionales de la salud?

Restraint and seclusion portrayed via images posted on Twitter – what are the implications for healthcare professionals?

Retenção e isolamento retratados através de imagens publicadas no Twitter: quais são as implicações para os profissionais de saúde?

Annakarin Olsson¹, Martin Salzmann-Erikson² and Charlotta Thunborg³

¹ RN., PhD. Faculty of Health and Occupational Studies, University of Gävle, Sweden.
Correo electrónico: annakarin.olsson@hig.se
Orcid: 0000-0002-6381-1922

² RN., MHN., PhD. Associate Professor. Department of Health and Caring Sciences.
Correo electrónico: martin.salzmamm@hig.se
Orcid: 0000-0002-2610-8998

³ RPT., PhD. Department of Neurobiology, Care Sciences and Society, Division of Clinical Geriatrics, Center for Alzheimer Research Karolinska Institute, Stockholm Sweden.
Correo electrónico: charlotta.thunborg@ki.se
Orcid: 0000-0003-0964-1747

Cómo citar este artículo en edición digital: Olson, A., Salzmamm-Erikson, M. & Thunborg, C. (2020). La restricción y el aislamiento mostrados a través de imágenes publicadas en Twitter: ¿Cuáles son las implicaciones para los profesionales de la salud? *Cultura de los Cuidados* (Edición digital), 24 (56) Recuperado de <http://dx.doi.org/10.14198/cuid.2020.56.16>

Correspondencia: Charlotta Thunborg: Department of Neurobiology, Care Sciences and Society, Division of Clinical Geriatrics, Center for Alzheimer Research Karolinska Institute, Stockholm Sweden.
Karolinska vägen 37A | 171 76 Stockholm.
Correo electrónico de contacto: charlotta.thunborg@ki.se

Recibido: 28/11/2019

Aceptado: 20/02/2020



ABSTRACT

Objective: To map areas of discussion about use of seclusion and restraint in healthcare, as expressed in motifs posted on Twitter. Materials and method: We adopted a qualitative approach with an archival and

cross-sectional observational design. 188 images from Twitter postings were analyzed. Results: Five categories were identified: Informative and educational messages; Equipment as artifacts; Spatiality; The restrained subjects; Sociopolitical connotations of restraint. Conclusions: Based on our results we conclude that

restraint- and seclusion images posted on Twitter included several aspects; the intention to educate others, show the spatiality in relation to restraint, imagining characterized by objects and persons, and a sociopolitical connotation. This in turn means that Twitter posts offer nurses a chance to engage in social marketing and connoting an ethical dimension to a person associated with measures used to exert power over others. This is because communication surrounding certain controversial issues in healthcare is free from hierarchies on Twitter.

Keywords: Complexity, healthcare, images, restraints, seclusion, twitter

RESUMEN

Objetivo: Determinar las áreas de discusión sobre la aplicación del aislamiento y restricción en el campo de la salud, teniendo como base los motivos publicados en Twitter. **Materiales y métodos:** En la investigación se aplicó un enfoque cualitativo basado en un diseño observacional transversal y de archivo. Se analizaron 188 imágenes publicadas en Twitter. **Resultados:** Se identificaron cinco categorías: mensajes informativos y educativos; los equipos como artefactos; espacialidad; los sujetos a los que se le aplica restricción y connotaciones sociopolíticas sobre la aplicación de restricción. **Conclusiones:** Basado en los resultados se concluye que las imágenes publicadas en Twitter sobre la aplicación de la restricción y aislamiento, están relacionados con los siguientes aspectos: Educar a otros sobre el tema, mostrar la espacialidad en la aplicación de la restricción, la percepción que se tiene sobre la restricción según las personas y objetos, y la connotación sociopolítica. Esto significa que las publicaciones de Twitter ofrecen a las enfermeras la oportunidad de participar en marketing social y connotar una dimensión ética a una persona asociada con medidas utilizadas para ejercer poder sobre los demás, ya que la comunicación sobre ciertos temas controvertidos en el cuidado de la salud está libre de jerarquías en Twitter.

Palabras clave: Complejidad, atención médica, imágenes, restricciones, aislamiento, twitter.

RESUMO

Objetivo: Determinar as áreas de discussão sobre a aplicação de isolamento e restrição no campo da saúde, com base nos motivos publicados no Twitter. **Materiais e método:** Uma abordagem qualitativa baseada em um desenho observacional transversal e de arquivo foi aplicada na investigação. Foram analisadas 188 imagens publicadas no Twitter. **Resultados:** foram identificadas cinco categorias: mensagens informativas e educativas; equipamentos como artefatos; espacialidade; os sujeitos a quem são aplicadas restrições e conotações sociopolíticas na aplicação da restrição. **Conclusões:** Com base nos resultados, conclui-se que as imagens publicadas no Twitter sobre a aplicação da restrição e isolamento estão relacionadas aos seguintes aspectos: Educar outros sobre o assunto, mostrar a espacialidade na aplicação da restrição, a percepção de que Trata-se de restrição de acordo com pessoas e objetos e conotação sócio-política. Isso significa que as postagens no Twitter oferecem aos enfermeiros a oportunidade de participar de marketing social e conotam uma dimensão ética a uma pessoa associado a medidas usadas para exercer poder sobre os outros como comunicação sobre certas questões controversas na área da saúde estão livres de hierarquias no Twitter.

Palavras-chave: Complexidade, saúde, imagens, restrições, reclusão, twitter

INTRODUCTION

The Complexity of Restraints in Healthcare Settings

The working life of healthcare professionals who care for patients with different kinds of cognitive impairments is

both challenging and complex. The daily work environment of staff includes encounters with people who have limited ability to express their problems and needs through language. Persons with cognitive impairments may use other forms of expression that are difficult for care staff to interpret. These expressions are rarely interpreted by the outside world, including the staff, as worrying, threatening and aggressive. Healthcare professionals, in the context of their daily care work, encounter persons with cognitive impairments, these persons' problems and ways of expressing themselves. This causes healthcare professionals to adapt and act to create a sustainable work environment, thereby controlling what is sometimes a chaos-like existence (Cusack, McAndrew, Cusack, & Warne, 2016; Vedana et al., 2018). The methods that might be permitted legally are force and protective actions. Although legislators have developed control and regulation systems to humanize care and protect individual autonomy, research shows that patients are systematically subject to different methods, treatments and actions that restrict their integrity (Beghi, Peroni, Gabola, Rossetti, & Cornaggia, 2013; Noorthoorn et al., 2015). One possible consequence is patients reacting with anger and aggressiveness, which in turn may lead to increased uncertainty and insecurity in the work environment for healthcare staff. Criticism has been put forward concerning misconduct in the healthcare sector based on

media reports of, for example, medical errors, organizational issues and the negative effects of not staffing enough nurses (van Oostveen, Mathijssen, & Vermeulen, 2015; Welton, Unruh, & Halloran, 2006). Moreover, numerous cases of misconduct have been reported, including isolation, restraint, and other forms of detention and restriction of freedom (Asher et al., 2017; Øye, Jacobsen, & Mekki, 2017).

Use of Restraints in Healthcare Settings

For some time, physical restraints have been used in care settings for the elderly (Eltaliawi, El-Shinawi, Comer, Hamazah, & Hirshon, 2017; Krüger, Mayer, Haastert, & Meyer, 2013; Möhler & Meyer, 2014; Scheepmans, Dierckx de Casterlé, Paquay, & Milisen, 2018), in psychiatric care (Mahmoud, 2017; McKenna, McEvedy, Maguire, Ryan, & Furness, 2017; Stewart, Bowers, Simpson, Ryan, & Tziggili, 2009); and in intensive, acute and emergency care settings (Chapman et al., 2016; Stinson, 2016; van der Kooi et al., 2015). The purpose, frequency and kind of restraint differ across these various care settings. In the event of 'unmanageable' situations, staff may employ measures to create a sense of safety and security, protect, support, and assist an individual, provided that the individual him-/herself agrees (Goethals, Dierckx de Casterlé, & Gastmans, 2013; Kong, Choi, & Evans, 2017). Note that such actions are not to be taken for general purposes, to compensate for resource

shortages or to deal with an anxious person (Möhler & Meyer, 2014; Øye et al., 2017). The Swedish Mental Health Act prohibits staff from restraining patients proactively, thus patients must demonstrate violent behavior or meet other criteria to be eligible for restraint, which puts others at high risk. Recently published research by Kalula and Petros (2016) showed that, concerning the use of restraint, healthcare personnel have poor education, knowledge and training. Less than 15% of nurses reported having received training and 36% of doctors reported having received some guidance on the use of restraint. Only a minority of nurses and physicians were familiar with their hospital's policy on restraint. Documentation on the prescription of and indications for use of restraint was also poor. A systematic review by Goethals et al. (2013) showed that nurses' decision-making process for use of physical restraint could be characterized as an act of balancing ethical and safety values. Furthermore, Salzmann-Erikson (2018) demonstrated that staff express ethical and moral concerns about behaving unprofessionally owing to the expectations and high workloads they deal with in psychiatric in-patient settings.

Using Twitter to Gain Insights into Hidden Settings

During the past decades, social media, e.g., Twitter, have increasingly been used to discuss, reflect on and highlight different kinds of healthcare sector contexts

and subject areas (Dyson et al., 2017; Hawkins et al., 2016; Hswen et al., 2017). Internet provides the advantage of anonymous posting in social media. Several research studies (Beguerisse-Díaz, McLennan, Gardunõ-Hernández, & Ulijaszek, 2017; Chan & Leung, 2018) have been published during recent years, and Twitter data have been used to answer research questions, searching for, e.g., attitudes, knowledge and describing incidents of different kinds among healthcare staff and students (Lee, DeCamp, Dredze, Chisolm, & Berger, 2014; Sandlin & Hinmon, 2016; Waldrop & Wink, 2016). Healthcare staff consider physically restraining individuals under one's care to be unethical (Goethals et al., 2013; Kontio et al., 2010; Saarnio & Isola, 2010) and a last resort, but also as "part of the job" (Eskandari, Abdullah, Zainal, & Wong, 2017; Kong et al., 2017). Moreover, discussing physical restraint with colleagues and/or managers may be a source of anxiety among staff. Therefore, many healthcare staff can use social media like Twitter to reflect on, discuss and understand other staff members' opinions without "exposing" themselves. However, other studies have shown that topics of special interest to healthcare staff are also discussed by non-professionals who engage in social media debates (Chan & Leung, 2018; Nawaz et al., 2017; Pemmaraju, Thompson, & Qazilbash, 2017; Robillard, Johnson, Hennessey, Beattie, & Illes, 2013; Salem et al., 2016).

The Power of Social Media in Relation to Work

When individuals who represent an organization use social media to engage in work-related matters, the behavior is called “cyber-loafing” (Huma, Hussain, Thurasamy, & Malik, 2017). In these situations, the boundaries between the private and the professional are blurred, and there is a risk of harming both the individual poster and the organization. This phenomenon was explored by Meijer and Torenvlied Meijer and Torenvlied (2016) in their investigation of police officers’ use of social media at work. They theorized that police officers’ communication with citizens using new technology is driving a transformal change in which governmental organizations are being de-bureaucratized. Nonetheless, the intersecting dynamics of the blurring of private and professional life roles not only affects the dynamics of work-professional boundaries, but also gives rise to issues regarding social media use policies (Allen, Cho, & Meier, 2014; Desrochers, Hilton, & Larwood, 2005; Madden & Jones, 2008). In addition, new opportunities for de-bureaucratizing organizations via social media may risk damaging an organization’s reputation based on incorrect or undifferentiated information. Although Cao et al. Cao, Guo, Vogel, and Zhang (2016) reported that employees use of social media at work may have positive effects, by promoting social capital and a shared vision, there are also several examples of employees

who have faced disciplinary action for their unsuitable and/or unethical use of social media – a phenomenon also known as *Facebook fired* (Hidy & McDonald, 2012; O’Connor & Schmidt, 2015). Furthermore, Salzman-Erikson (2017) analyzed tweets about psychiatric intensive care units from virtual discussions on Twitter and found that three social actor representatives socially constructed an understanding: hospitals and agencies, healthcare professionals and service users and relatives. In our research project, the main focus is on restraint and seclusion in healthcare. To our knowledge, no studies thus far have specifically investigated virtual discussions about seclusion and restraint in healthcare on social media. Hence, the purpose of the present study is to map areas of discussion about seclusion and restraint in healthcare as expressed in motifs posted on web-based platforms. We posed a broad research question aimed at describing and presenting categories of seclusion and restraint in healthcare motifs, as depicted in images posted online.

MATERIAL AND METHODS

The present study is part of a larger project aimed at theorizing seclusion and restraint in healthcare. In the study, we accessed data that were freely available from Twitter postings, also called tweets. In planning the study, we adopted a qualitative approach with an archival and cross-sectional observational design. Based on our

constructivist epistemology, we do not make claims about having achieved replicability or objectivity. Rather, our intention was to present a subjective interpretation of the data; hence we acknowledge that our interpretation is one of many plausible interpretations.

Data Collection

To collect the Twitter data, we used an advanced social intelligence platform that employs an Alchemy streaming application (API) (Pulsar Trac Api v1). In the first phase, we engaged in internal discussion within the research group to identify and determine relevant keywords for the search. In addition, a senior account coordinator from the company who provided the platform's license was also consulted. To include a variety of tweets, we used keywords in different combinations and with different inflections. The main keywords were "restraint", "hospital", "nurse", "seclusion", and "coercion", and the full combinations of keywords (N=112) are displayed in (Table 1). We chose to limit the data collection to Twitter (www.twitter.com) content only, as it is the largest social media platform on which societal discussions are held. Based on these keywords, we conducted a search for historic data, thus the search was conducted retrospectively between October 2010 and October 2016. The search resulted in 29,442 tweets, or *mentions* to use the platform's own terminology. A mention is a

new post by a user and includes both original tweets and retweets, but not likes, views or clicks (Dearborn, 2013). The total sample was briefly scanned to get an overview of the content. Even though all tweets were hashtagged without keywords, many were considered totally irrelevant for the purpose of the study. Similar phenomena are often experienced in interview data, when the interviewee suddenly begins diverging from the main topic. Thus, we used the platform to exclude irrelevant information by excluding words, for example words that included pets and sexual connotation. From this point onward, our dataset became much more stringent and robust. The sample was then reduced to 17,472 mentions. The platform allowed us to filter tweets that only included images and to exclude retweets, resulting in 563 mentions. All URLs to the tweets were temporarily stored in an Excel sheet. Because 563 images were considered too cumbersome for a qualitative analysis, we chose to only include one third of the images. To choose among the images, every third image was included, resulting in 188 images. Each URL was opened in a web browser and the image was temporarily stored in a shared folder so that all researchers were able to access the same dataset.

Data Analysis

In the first step, we constructed a matrix consisting of several columns to work with the data. The columns in the matrix

contained the number of each image (1-188), the actual text in the post and hashtags. Each image was described in as much detail as possible based on what was manifest in the picture, and then all data were written down in a text page. In the text page, the focus of the image was highlighted. During this descriptive phase, some images were not explicitly about restraint and seclusion, however, when the image was put into context along with tweeted text and the hashtag(s), this guided the analysis in a more interpretative description. Posts that were similar in content were grouped together and given a preliminary category name. During the analysis process, we alternated between being immersed and crystallized of the data, as recommended by Borkan (1999). The research group ensured that the categories were internally homogenous and externally heterogeneous to ensure trustworthiness in the process of analysis and interpretation. In total, we identified five categories. We reviewed them and engaged in joint in-depth discussions, finally arriving at a consensus about the final labeling. Finally, we wrote interpretive descriptions of each category and referred back to the raw data to include examples, which is also a way of ensuring trustworthiness in qualitative studies (Patton, 2002).

Ethical Considerations

The present study is not considered human subjects research, as only

information that was freely accessible on the Internet was collected. Furthermore, no interaction took place between the researchers and the profiles responsible for the tweets. We argue for the ethical responsibility of conducting this research in order to describe how the issues of seclusion and restraint are being discussed in social media.

RESULTS

Our description of images posted on Twitter that address the matter of seclusion and restraint in healthcare settings is presented here using five categories: 1) Informative and educational messages; 2) Equipment as artifacts; 3) Spatiality; 4) The restrained subjects; 5) Sociopolitical connotations of restraint.

Signaling Informative and Educational Messages

Images related to the category education were highly connoted with grounding, information and pointers warning about restraints. Some pictures showed statistics on “restraint actions” in an Excel file (#40) or the rate of medication use (#117) on PowerPoint pictures, for example. In some images, the informative and educational message was signaled in a manifest manner. For example, a tutor demonstrated how to immobilize a patient (#44), while another image (#52) instructed on how to place a patient on the floor. The

images were associated with hashtags related to the learning situation. Moreover, there were images showing dignified restraint in healthcare training (#45). Similarly, several images depicted students and their teachers. In one image (#106) there were three persons, one of them acting as a “patient” and the other two restraining the patient. Other images were also instructive, demonstrating grips and how to stop an aggressive situation with a patient (#86, #107). Another image showed a business card of a teacher/consultant who provides restraint training (# 132). Although, the majority of images showed how to handle violent situations in different hospitals, some pictures showed pointers warning about “how restraint and seclusion should be the last choice” (#148). We interpret these to be signals of espoused values that the poster wants to share. Some images were from non-clinical settings, for instance, communicating parental education about restraints related to infant protection in cars (#147, #137, #158). One image showed a baby in an incubator (#2).

Manifestation of Equipment as artifacts

The many and varying images within this category show how seclusion and restraint were characterized by objects: handcuffs, beds, chairs, belts, straight jackets, etc. (#28, #30, #85). One feature of the images in this category was that objects were in focus, rather than subjects. Sometimes an arm could be part of the

picture or an ankle, even a torso (#149, #161). One image showed “soft handcuffs” used to restrain self-harming persons (#131). Although some of the photos included people, the focus was on objects, for example pictures of persons (with their face covered) in belt beds (#126) or cartoon pictures of persons in belt beds (#37). Several other posts illustrated different kinds of patient restrictions, such as the adverse effects associated with use of restraint in police work (#72; #82). These posts presented pictures of persons or links to newspaper articles about people who died at the hospital after a police intervention. The posts concerning actual and potential causes of death proximal to the use of physical restraint by police were linked to pictures of hospitals with text saying “Police restraint man dies in hospital” (#78). Throughout the hospital and police posts, there were also pictures of police roping off areas with white-blue ribbon or pictures of guards in a hospital. One post stated “a guard was killed when he tried to restrain a patient” (#151). At the other end of the theme associated with equipment, there were images of ads for sexual arousal restraint equipment (#34, #44). These images showed beds, handcuffs, belts, clothes, dolls in nurse cloths and one twitter text example stated “Take your hospital role play to a new level!” (#39) or “Back in stock - Hospital Style Restraints - Ankles” (#46). Based on our interpretation of the connection between the texts, hashtags and pictures, these kinds of artifacts occurred frequently on Twitter. Another post

showed images of restraint clothing used at Bedlam Hospital in the 19th century (#113). The text and the image demonstrated that controversial and highly regulated restraint practices have unfortunately progressed little.

Broadcasting the Spatiality

Some images also displayed spatiality in relation to restraint. These were posted from hospitals from a news-related perspective on restraint and complications in the designated hospitals (#85, #151). However, most of the images contained pictures from seclusion rooms, but there were even depictions of death cells and execution chairs, with belts and a syringe on a nearby table (#89). One poster wrote “Picture I took of the force-feeding kit and restraint chair at Guantanamo detainee hospital” and used the hashtag #GTMO17 along with the restraint hashtag (#15). There were also photographic images taken from outside and above the hospitals (#57). Another kind of artifact depicted in the images was hospital buildings paired with text about civil rights as well as malpractice and hospital negligence cases (#8;#140). Regarding those images, our interpretation was that the poster wanted to show spatiality in relation to restraint, as a hidden language of inaccessible spaces. The photos in this category also presented very concretely barred doors in psychiatric wards and doors with a peephole (#50, #89). One image

demonstrated remodeling of a workplace to improve the safety of the inpatient setting, including images (collage) *before* and *after* restoration of a seclusion room (#56); the post says “Altro flexi flow acoustic and comfort screeds to floors and walls at a hospital seclusion unit.” In this theme there were also pictures of corridors taken with great focal depth, and even though they were stark and uncluttered, it seems they were intended to tell the story of historical events.

Displaying the Restrained Subject

Many posters displayed persons in hospital wards who were restrained in a wheelchair or a belt bed. These posters demonstrated the persons’ dissatisfaction through their facial expressions (#112). Some posters demonstrated the persons’ aversion through body language, with the depicted persons holding up a hand or looking down (#39). There was, however, also one picture of a person lying in a belt bed and showing enjoyment (#120). The text and hashtag were connected to the manufacturing and sales of bed belts. One characteristic of the images in this category was that the subjects were in focus, rather than objects. There were pictures of persons who had been in seclusion rooms in psychiatric wards accompanied by text saying “Excessive use of face down restraint in mental health hospitals” (#54) or images of demented older people in restraint situations followed by the text “Hospitals

admit they use security guards to restrain dementia patients” (#84). Another picture shows sheriff’s deputies aiming a Taser at a mentally ill man’s groin while he was restrained in a chair. Older people are depicted so that they seem to be contemplating their situation, paired with text saying “Restraint-Free #ElderCare” (#123). All photos included a text message with a hashtag stating that restraint methods have no place in modern psychiatry or elderly care. This was explicitly manifest in a post saying; “trained nurse, uses #dementia #mentalhealth to abuse & refers to restraint? Worrying” (#55). There is also a picture with rescue workers restraining a drunk man and text explaining that they are taking him to the hospital (#153). Some pictures displayed patients’ feeling of lost freedom from bodily restraints after a period of mental illness (#35). In contrast to the overall images in this theme, another picture showed a mother and her son in a post, and based on our interpretation of the connection between text and the picture, it appears that fears about health and safety prohibited care professionals from restraining him and the boy was allowed to fall to his death (#6). One picture shows handcuffs and text saying “Restraints should never be used. Help stop abuse in hospitals. I live with PTSD because of these. I need justice” (#159). Also, a humoristic approach was found in some images in this category. For example, one image displayed a man drinking beer, with four glasses of beer on the table. The accompanying text says he needs to be

restrained by a nurse because he can't drink beer: “last time I was looking forward to beer this much, it did not end well. Restraints please nurse” (#49). One picture showed a conference setting and the text was about participants discussing restraints on pregnant women (#144). The tweet was posted by @ NAPICU, which is a multi-disciplinary clinician-led organization committed to the development of psychiatric intensive care and low-security services.

Signaling the Sociopolitical Connotations of Restraint

Within the theme, the posts communicated an image of nurses and other healthcare workers as low-paid workers. The pictures were of a blue-collar worker (torso of a woman) with a stethoscope and pencil and notepad, as well as of a face and respiratory protective equipment (#52). This was sometimes captured very concretely with text such as “Low wages are a restraint for nurses this must come to an end as a call for wage claims” (#141). Pictures of female nurses were paired with text claiming that low wages are a restraint on employment of additional nurses and that, if there were more employed nurses, there would be fewer restraints at the hospital. Based on our interpretation, these images and statements were intended to characterize the relation between nurse staffing levels, low wages, having “one hand tied behind one’s back” and poor patient outcomes (#174); hence the statements had sociopolitical connotations. However, we found several other posts

illustrating different kinds of political claims. One example was a newspaper picture telling the reader that generic medicine is expensive and that this in some way restrains hospitals' economy. There was also a picture from a debate or conference in a room that appeared to be a courtroom or political meeting. The text says that psychiatrists criticize use of seclusion and restraint in psychiatric care (#184). The text and the images in this theme demonstrated that the political saliency of nursing and care quality issues is uneven. There were also pictures of handcuffs and bed belts accompanied by text claiming that increased staffing reduces restraint (#175, #179).

DISCUSSION AND CONCLUSIONS

The purpose of the present study was to map areas of discussion about use of seclusion and restraint in healthcare, as expressed in motifs posted on Twitter. Based on our qualitative analysis, we identified five areas/categories that covered the diversity found in the discussions. First of all, some discussions and postings were devised in a fashion that signaled information, thus being informative in nature. These had an underlying educational tone and seemed to be trying to inform for 'the greater good.' Our interpretation is that these posters intended to educate others on how to use restraint properly, thus connoting an ethical dimension to a subject associated with measures used to exert power over others.

Drawing on previous research, it has been found that psychiatric staff express divergent attitudes towards using restraint, claiming that it is sometimes needed but also stressing that it should be used as 'a last resort'¹⁷. Moreover, we also believe there is a need for education and information, as previous research has reported that healthcare personnel have poor education, knowledge and training concerning the use of restraint (Kalula & Petros, 2016).

We nevertheless argue that practical training in restraint techniques should be the responsibility of managers in the settings in which restraint is practiced, but educational postings might neutralize the abuse committed following a restraint measure and signal that restraint techniques are important in healthcare services and should be practiced properly and safely. Restraint should not be used to cope with staff shortages or when relatives demand that an older person be prevented from wandering. It has been reported that patients with dementia may experience feelings of injustice, frustration and distress as well as feel "like a prisoner" when they are restrained (Moore, Hollett, Pilkington, & Jonas-Simpson, 2003). However, although the act of cyber-loafing among professionals who practice restraint at work would normalize and support creation of a shared vision as well as give transparency to the practice, it would also be highly unethical in terms of exposing individual subjects to being restrained (cf. Cao et al. Borkan 2016;

Hidy & McDonald, 2012; O'Connor & Schmidt, 2015). Furthermore, by being reflective and adhering to well-known policies concerning what is acceptable to share on social media from work, professionals at workplaces that practice restraint should support cyber-loafing, as it also can de-bureaucratize and provide insights into public organizations that are otherwise hidden from the public (cf. Meijer & Torenvlied, 2016). One risk of using Twitter is that it enables us to have conversations with no restrictions on who can engage, which may lead to a blurring of personal and professional personas (Eggers & McGonigle, 2012). As a counterpart to those signals, we also found images that displayed artifacts from a historic era of psychiatry, when restraint was the only option for controlling patients prior to the introduction of antipsychotic agents. Although these images could be understood as stigmatizing when displayed alone, we argue that they act as a counterpart to the first category, thus establishing a larger picture of the development across different historical timelines and of the perception of human and humanistic values. Twitter is a modern form of conversation, and motifs of equipment in a historical context, for example, are symbols of an epoch in psychiatric care when the patient was marginalized. Sharing posts about deaths occurring during restraint is the result of societal mobilization against misconduct by the police force and in the healthcare sector. Hence, we view sharing stories of these

kinds as a way to support scrutiny of an activity that is often closed to outside observation. These kinds of postings may send signals to healthcare that cases of overuse of restraint or misconducts are being reported and shared globally via social media, as though through a panoptic eye.

When images of equipment were shared, there were several associations with sex. Initially, we considered these images irrelevant to our purpose and research questions. However, after deciding to analyze these as well and not dismiss them in the first round, we found they should be included. Although professionals who practice restraint do not (or should not) associate it with sexuality, it is apparent from the data that people in general may make that connection. Hence, we believe it is necessary for professionals to bear in mind that those who become the subjects of restraint might make such associations and fear they will also be victims of sexual harassment. We recommend that professionals reflect upon these potential issues, as many people have been sexually assaulted in the past. The sociopolitical connotations of restraint and the specific problems of nursing and care quality shared on Twitter posts offer nurses a chance to engage in social marketing. When posted on Twitter, sociopolitical communication surrounding certain controversial issues in healthcare is free from hierarchies.

There are several methodological issues regarding research on social media, even so it has come to have a tremendous

impact on the study of social phenomenon. For example, we cannot fully control the characteristics of or present any demographic data on the posters; we can only make use of what exists “out there” in the blogosphere. Further, the tweet message collection process we used was limited by the capabilities of consumer-grade archiving software, meaning we do not know the authenticity of these tweets, given the troll farms that operate on Twitter.

Declaration of Conflicting Interests

The Authors declares that there is no conflict of interest.

Funding

This research received no specific grant from any funding agency in the public, commercial, or not-for-profit sectors.

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APPENDIX (Analyzed tweets)

1. <https://twitter.com/chrissssstina/status/113814231161389057>
4. https://twitter.com/loving_mytae212/status/155139843570155523
7. https://twitter.com/Xander_Vamp/status/162935006212263936
10. https://twitter.com/Neal_Grant/status/197312632926109696
13. <https://twitter.com/alisonwaring/status/243785667417608193>
16. https://twitter.com/cu_mr2ducks/status/256122443679268864
19. <https://twitter.com/amoli09/status/277924876789100544>
22. https://twitter.com/XxHAM_IAMxX/status/288996450317262849
25. <https://twitter.com/PhillyBandMerch/status/291999425889452033>
28. <https://twitter.com/vwstickers/status/300488580709642240>
31. <https://twitter.com/leafwarbler/status/309561148271890432>
34. <https://twitter.com/vghrk/status/319269944372129792>
37. <https://twitter.com/Suzasaurusrex/status/327810492657713152>
40. <https://twitter.com/ChicagoEstate/status/333018536521920512>
43. <https://twitter.com/SebastosPublius/status/335513713626992640>
46. <https://twitter.com/RagingRuffsack/status/335524418052841472>
49. <https://twitter.com/LeonardoGiron/status/335598342333689856>
52. <https://twitter.com/SomersetBean/status/335600221780328448>
55. <https://twitter.com/WaleedALSubhi/status/335606959418011648>
58. <https://twitter.com/AshBaxNYC/status/335609004875210752>
61. <https://twitter.com/ZaeemArsenaly/status/335621238565244928>
64. https://twitter.com/Anonymous_Felly/status/335643831267643392
67. <https://twitter.com/cawboy112/status/335718120058671104>
70. <https://twitter.com/jaykelly26/status/335807135751483395>
73. <https://twitter.com/Smithdownslim/status/335948122368913408>
76. https://twitter.com/Emilia_Franklyn/status/338441367598538752
79. <https://twitter.com/Kheitot/status/341451148298964992>
82. https://twitter.com/DLH_Warrior/status/342729034435809280
85. <https://twitter.com/CourtneycABC/status/343077205989003264>
88. <https://twitter.com/iamroold/status/347675984864100352>
91. https://twitter.com/colour_fixation/status/349951761332715520
94. <https://twitter.com/JimmyMarco1/status/373176580350025728>
97. <https://twitter.com/Rubberasylum/status/379352165245915136>
100. <https://twitter.com/pez6660/status/382126933158281217>
103. https://twitter.com/casi_lynn_3/status/386663827569250305
106. <https://twitter.com/samanthaculp/status/403114117218975744>
109. <https://twitter.com/healthorder/status/415830281506263040>
112. <https://twitter.com/ISexDoll/status/420250387019358208>
115. <https://twitter.com/usefewermeds/status/423791489701801985>
118. <https://twitter.com/NeilPuffett/status/430667829981876224>
121. <https://twitter.com/healthorder/status/432299591183380480>
124. <https://twitter.com/healthorder/status/435995313095335936>
127. <https://twitter.com/healthorder/status/439860875198226432>
130. <https://twitter.com/infocassidy/status/443824435561525248>
133. <https://twitter.com/bfkonline/status/445356969163886592>
136. <https://twitter.com/healthorder/status/448558946484508624>
139. https://twitter.com/AS_Scotland/status/454688108718477312
142. <https://twitter.com/dvngl/status/468476538300940288>
145. <https://twitter.com/contactedorg/status/483585014731247617>
148. <https://twitter.com/hentaijaw/status/492148194592448512>
151. <https://twitter.com/Disabledrights1/status/497479246500360192>
154. <https://twitter.com/FastUpdate9/status/500058320430825473>
157. <https://twitter.com/ANHAtweets/status/504992411891023873>
160. <https://twitter.com/JBLittlemore/status/515073162984558592>
163. <https://twitter.com/epoxyresinfloor/status/517410144427470848>
166. <https://twitter.com/MollyTetsuya/status/533369138367180800>
169. <https://twitter.com/PushtDon/status/535644257650880512>
172. <https://twitter.com/puregag/status/535888829073223681>
175. <https://twitter.com/TheFunnyClan/status/535924445614182400>
178. <https://twitter.com/XaunPa/status/535933788111798272>
181. <https://twitter.com/XaunPa/status/535933804192747520>
184. <https://twitter.com/Samuelaloha/status/535934154463277056>
187. <https://twitter.com/Helennalio/status/535934355617882113>
190. <https://twitter.com/Helennalio/status/535934453420654593>
193. <https://twitter.com/Helennalio/status/535934588586299393>
196. <https://twitter.com/Helennalio/status/535935404843995136>
199. <https://twitter.com/Helennalio/status/535935440109715456>

202. <https://twitter.com/Helennalio/status/535939923778764800>
 205. <https://twitter.com/OnlyKollywood/status/544474925709283328>
 208. <https://twitter.com/SharkDoctor/status/550386496226992128>
 211. https://twitter.com/_Adrenalize/status/558207042612363265
 214. <https://twitter.com/Schreibemews/status/563024954565070850>
 217. <https://twitter.com/londonnewsnow/status/567354620192624640>
 220. https://twitter.com/Camilla_Deamer/status/569168803659190273
 223. https://twitter.com/Daily_Record/status/580342201579769856
 226. <https://twitter.com/msjolene/status/585816853244731393228>
 229. <https://twitter.com/1001ptsUK/status/594785788342198272>
 232. <https://twitter.com/NewsTweets24/status/594788063483531264>
 235. <https://twitter.com/FindSource/status/594788231981445122>
 238. <https://twitter.com/1001ptsUK/status/594789339630084096>
 241. <https://twitter.com/1001ptsUK/status/594791579677827072>
 244. https://twitter.com/_dpaj/status/594811819140587520
 247. <https://twitter.com/NewsInTweetsCom/status/595180017186770944>
 250. <https://twitter.com/healthoutbreaks/status/595537989893251072>
 253. <https://twitter.com/PlanningforCare/status/600556550776717313>
 256. <https://twitter.com/EroticSuperS/status/608781480387555328>
 259. <https://twitter.com/dietWeight10/status/613546584450670592>
 262. <https://twitter.com/DynamisInsight/status/620511559291310080>
 265. <https://twitter.com/happgoodness/status/622774418180284416>
 268. https://twitter.com/SaintPaul_News/status/626488954309746892
 271. <https://twitter.com/InventiveDom/status/634803752634073088>
 274. <https://twitter.com/slimWeightlos02/status/635049892575092736>
 277. <https://twitter.com/anderscharpent2/status/635049906928005121>
 280. <https://twitter.com/legitWeightlos5/status/635049922849586720>
 283. <https://twitter.com/InventiveDom/status/635167314313396224>
 286. <https://twitter.com/InventiveDom/status/635204453751255040>
 289. <https://twitter.com/InventiveDom/status/635271429454462976>
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 319. https://twitter.com/Nurse_Helms/status/641612932137271296
 322. <https://twitter.com/forensiomed/status/646308374687162368>
 325. <https://twitter.com/InventiveDom/status/649396957727879168>
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 331. <https://twitter.com/InventiveDom/status/652890393747529728>
 334. <https://twitter.com/Obitolizer/status/653724817825337344>
 337. <https://twitter.com/haverda/status/654743930387337216>
 340. <https://twitter.com/DrLindseyFitz/status/659396830908829696>
 343. <https://twitter.com/dementiacentre/status/661840476698501120>
 346. <https://twitter.com/IntimateCollect/status/665261001806245888>
 349. <https://twitter.com/modrnhealthcr/status/666295132120068096>

400. <https://twitter.com/erotikshops/status/698272890689441792>
403. <https://twitter.com/SandraKing05/status/700362424000606208>
406. <https://twitter.com/ProTactical/status/701398596827136000>
409. <https://twitter.com/invstandsucceed/status/701669376701947905>
412. https://twitter.com/RAF_SA/status/704647141143265280
415. <https://twitter.com/RondaDasheau/status/705148859467497472>
418. <https://twitter.com/walkileaks/status/705396171003469825>
421. https://twitter.com/Cush_Synergy/status/705404513734283264
424. <https://twitter.com/MishkindLawFirm/status/705827379436859392>
427. <https://twitter.com/BBCBerkshire/status/707218663393378305>
430. <https://twitter.com/AlexanderQuon/status/710115880080953344>
433. <https://twitter.com/NaughtyPlaying/status/712398502110711810>
436. <https://twitter.com/ProTactical/status/714852348514934785>
439. <https://twitter.com/DrLindseyFitz/status/718333405306466304>
442. <https://twitter.com/harryknox/status/723097452727803904>
445. <https://twitter.com/rcni/status/728652454162771968>
448. <https://twitter.com/rumphchilders/status/730759639151697921>
451. <https://twitter.com/ABCNewsBrisbane/status/731770546308796416>
454. <https://twitter.com/safeatworkUNION/status/731824801984045056>
457. https://twitter.com/NathanHawks_US/status/734920013803454465
460. <https://twitter.com/CrusaderKings/status/737613231938637826>
463. <https://twitter.com/IntimateTickles/status/737976756221661184>
466. <https://twitter.com/napicu/status/738692499103993856>
469. <https://twitter.com/PittsburghPG/status/740685577297760256>
472. <https://twitter.com/BernieVolunteer/status/742402882574503937>
478. <https://twitter.com/Jessicanims89/status/747697740528893953>
479. https://twitter.com/Jenna_Siewert/status/749168655120814080
484. <https://twitter.com/phystherapycom/status/752595392383123456>
487. <https://twitter.com/yorkpress/status/754901054337142784>
490. <https://twitter.com/EroticSuperS/status/758985284700602368>
493. <https://twitter.com/IsabelleTaft/status/760482230393118724>
496. <https://twitter.com/eramshaw/status/760487317089824768>
499. <https://twitter.com/TexasTribune/status/760523565619785728>
502. <https://twitter.com/TexasTribune/status/760601327386845184>
505. https://twitter.com/Ws_LostMother/status/762540058532610048
508. <https://twitter.com/Harmonyhlthcare/status/765581666656129024>
511. <https://twitter.com/GUILLERMORAPO1/status/765854087783079936>
514. <https://twitter.com/elizave24649196/status/767440820404453376>
517. <https://twitter.com/SpringerNature/status/768434565530677248>
520. <https://twitter.com/PaleoDietxxx/status/768516315468271616>
523. <https://twitter.com/AmerNurse2Day/status/768946276780089345>
526. <https://twitter.com/NewIndianXpress/status/769551112516935680>
529. <https://twitter.com/PatientSafetyRR/status/769864811228168192>
532. <https://twitter.com/IntimateTickles/status/770299836096614400>
535. <https://twitter.com/ocon365/status/770678797146394624>
538. <https://twitter.com/BBCRadioStoke/status/771096347416076288>
541. <https://twitter.com/walkileaks/status/772236136789880832>
544. <https://twitter.com/Heshin20/status/772238824441196544>
547. <https://twitter.com/VictoriaRage/status/775184360374886400>

- 550. <https://twitter.com/VictoriaRage/status/775184360374886400>
- 553. <https://twitter.com/KTVM6/status/778367414111047680>
- 556. <https://twitter.com/Harmonyhlthcare/status/779023588917710848>
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