

Systematic aggression registration in forensic psychiatric care: A qualitative study on preconditions for successful implementation

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Abstract

Available research emphasizes the importance of getting a systematic overview of inpatient aggression in forensic psychiatric care. However, the same research does not focus on how systematic aggression registration should be introduced in clinical practice. To facilitate the use of systematic aggression registration instruments, it is very relevant to gain insight into the perspective of staff members on the introduction of these instruments in daily clinical practice. Additionally, preconditions for achieving a successful implementation can be considered. Therefore, this study aims to gain insight into the perspective of the staff members on the implementation of a systematic aggression registration instrument – i.e. the MOAS – in a forensic psychiatric unit. Interviews (n=8) and a focus group with staff members were carried out. Three main themes: (1) creating the most appropriate context for introduction, (2) choice for the MOAS as relevant instrument and (3) perpetuating the use of the MOAS in clinical practice are scrutinized. The mentioned preconditions can be used as guidelines when implementing systematic aggression registration in clinical practice. We hope that this paper can inspire other forensic psychiatric facilities to introduce systematic registration of aggressive incidents.

Introduction

Aggression and violence – towards self and others – are of major concern in forensic psychiatric settings (Dickens et al., 2013). Aggression is broadly defined by Morrison (1990), as “any verbal, nonverbal or physical behavior that was threatening (to self, others, or property), or physical behavior that actually did harm (to self, others, or property)” (p. 67). Recent research has shown that up to 60% of forensic psychiatric patients are involved in aggressive incidents during inpatient treatment (e.g. Bowers et al., 2011; Conrad et al., 2014; Daffern et al., 2003; Nicholls et al., 2009). This high prevalence of aggression in inpatient settings may be related to the nexus of acute illness severity, frequent contact with staff and peers, and the confining nature of involuntary hospitalization (Flannery et al., 2011). According to Nijman and colleagues (1999), aggression results from three interacting factors, i.e. patient, ward and staff variables. These factors should be addressed in aggression management plans. Previous research has shown that there is a reciprocal relationship between the living group climate (ward variables) and aggression (e.g. de Decker et al., 2018; Ros et al., 2013). Additionally, an open, supportive and safe climate is positively related to higher treatment motivation (e.g. Craig, 2004; Ros et al., 2013; Van der Helm, 2011; Van der Helm et al., 2014). Furthermore, a recent study in a residential youth care service indicates that monitoring the living climate as such already leads to improvements related to the service’s atmosphere. It facilitates an open and balanced dialogue between staff members and clients about what really matters to them in their daily life (Levrrouw et al., 2018).

Moreover, aggression has negative psychological and physical consequences for both patients and staff members (Kobes et al., 2012), resulting in financial consequences for services (Conrad et al., 2014; Woods & Ashley, 2007). More specifically, negative implications for treatment progress of patients are reported on, since current aggressive behavior is considered a good predictor for future aggression (Conrad et al., 2014), hindering

resocialization (Andreasson et al., 2014). The majority of staff members state that violence and aggression are a routine part of their job (Bilgin, 2009). They also often report feelings of helplessness and anxiety, psychological trauma and more sick-leave when confronted with aggressive behavior (e.g. Needham et al., 2005; Nijman et al., 2005; Rossberg & Friis, 2003). Regular confrontation with aggressive behavior also has an impact on the professional functioning of staff members and may increase the use of restrictive measures, punishment and disciplinary actions (Duxbury, 2002).

Despite this high prevalence rates and major negative consequences of inpatient violence in forensic psychiatry, the topic is still under-examined (Hogan & Olver, 2016). Both researchers and clinicians however agree that it is necessary to increase our understanding of causes, prevention and management of aggression in (forensic) psychiatric settings (Bader & Evans, 2015; Klein Tunte et al., 2021).

A first step in managing aggression is collecting objective information on the behavior, in all its components (Paxton et al., 1997). Forensic psychiatric inpatients' behavior is continuously monitored to decide on future treatment steps. However, this monitoring is mostly based on unstructured observations, which may result in limited reliability (Klein Tunte et al., 2021). Structured staff observations of inpatient aggression have the potential to increase the reliability of this continuous monitoring (Kobes, et al., 2012).

Structured measures provide a clear operationalization of "aggression" (Crocker et al., 2006) and increase the accuracy of risk assessment and risk management strategies (Kobes et al., 2012). Furthermore, structured assessment of aggressive incidents may help to reduce frequency and severity of aggression and may contribute to the prevention of these incidents (Daffern & Howells, 2002; Nijman et al., 2006). Therefore, it is necessary to develop and use reliable observation instruments that are suitable for clinical practice (Kobes et al., 2012). Several structured instruments to monitor aggressive behavior have been developed. These

observation instruments can be divided into period-based and incident-based aggression registration instruments (Kobes et al., 2012). Period-based registration instruments focus on the periodical registration of the number of incidents (e.g., each week). An example is the Social Dysfunction and Aggression Scale (SDAS; Wistedt et al., 1990) which records a broad range of aggressive behaviors, including mild forms of aggression. This weekly scoring routine possibly may cause fewer missing data but this instrument does not provide detailed information of discrete aggressive incidents (Nijman et al., 2006). Incident-based registration instrument on the other hand provides this information (Kobes et al, 2012) and accordingly may be more helpful in getting insight into the specific circumstances and triggers of an incident (Nijman et al., 2006). Examples include the Staff Observation Aggression Scale – Revised (SOAS-R; Nijman et al., 1999) and the Modified Overt Aggression Scale (MOAS; Kay et al., 1988). However, incident-based registration is more susceptible to missing data because the instruments heavily rely on systematic and careful recording of aggressive incidents (Tenneij et al., 2009). Training of staff members and introducing supervision to detect unregistered aggressive incidents may ensure that incidents are accurately recorded and result in a detailed overview of aggressive incidents and their triggers (Dickens et al., 2013; Tremmery et al., 2014).

Current research emphasizes the importance of introducing a systematic aggression registration instrument in clinical practice but studies about using these instruments in daily clinical practice remain scarce (Andreasson et al., 2014), also in Belgium (Verhaeghe et al., 2011). Yet, a thoughtful introduction of a systematic observation instrument in daily clinical practice is considered necessary for the assessment and management of inpatient aggression (Klein Tunte et al., 2021). Although two studies in youth forensic psychiatry focused on the necessity of introducing systematic aggression registration in clinical practice as part of aggression management policy (Kaltiala- Heino et al., 2007; Tremmery et al., 2012), these

studies did not tackle in detail how implementation could take place in daily practice. This is addressed in the field of implementation research with a focus on using instruments in the “real world” (Peters et al., 2013). To facilitate the use of systematic aggression registration instruments, it is very relevant to gain insight into the perspectives of staff members on the introduction of these instruments in daily clinical practice and into which preconditions are considered to be necessary for achieving a successful implementation. Insight into these preconditions can help to further introduce systematic aggression registration in other (forensic) psychiatric units, resulting in tailored-made aggression and future risk management plans. The framework of Boswell and colleagues (2015) includes three crucial processes that help to clearly discuss preconditions of a good implementation of Routine Outcome Monitoring (ROM) instruments for measuring treatment progress (De Varé et al., 2017; Vess, 2001), i.e., (1) creating the most appropriate context for introduction, (2) choosing a relevant instrument and (3) perpetuating the use in clinical practice. The first process refers to recognizing and overcoming institutional and practical (e.g. infrastructural, financial, time-related) barriers. The second process refers to defining what and how it should be measured. The third process refers to make sure that the instrument is embedded in daily clinical practice for instance by investing in supporting technology and research (Boswell et al., 2015).

The present study

Research on the perspectives of staff members on the introduction of a systematic aggression registration instrument is – to the best of our knowledge – currently not available. In order to address this dearth, this study aims to gain insight into the perspectives of staff members on the implementation of a systematic aggression registration instrument – i.e. the MOAS – in a forensic psychiatric unit. Since a systematic aggression registration instrument can be considered a ROM instrument, the framework of Boswell et al. (2015) is used to organize the

perspectives of staff members into the preconditions for a good implementation of a systematic aggression registration instrument.

The study is conducted in a high-security forensic psychiatric unit for female patients in Belgium (cf. *infra*). A master level student assisted in the study as part of her Master's dissertation (Grootaert, 2017). At the start of this high-security unit – June 20th, 2016 – the management team emphasized the need to closely monitor the number and nature of aggressive incidents and the importance of a profound framework for aggression management, as a large amount of aggressive incidents and auto-aggression was expected (e.g. Dixon-Gordon et al., 2012; Power et al., 2016). The management team chose to use the MOAS as systematic aggression registration instrument because of their familiarity with this instrument and because of the following reasons. First, it is one of the most commonly used instruments and it has been shown to be applicable in forensic psychiatric settings (Nijman et al., 2006; Tremmery et al., 2014; Verstegen et al., 2020). Second, the MOAS is characterized by good inter-rater reliability (mean weighted kappa's = .90; Kay et al., 1988; Magari et al., 2005). Third, the instrument encompasses a broad definition of aggression – including verbal aggression, physical aggression against objects, physical aggression against persons and auto-aggression – and provides clear behavioral anchors to minimize interpretation by the rater. Additionally, when examining auto-aggression, the MOAS is presented as the most appropriate instrument to use (Steinert et al., 2000). The severity of each type of aggression is also scored (mild – moderate – strong – extreme). Finally, the scale is user-friendly and does not require formal training (Crocker et al., 2006). In June 2016, all staff members of the unit were trained in the use of the MOAS to ensure that each staff member correctly categorized each aggressive incident.

Method and Materials

Research context

High-risk unit

The study was conducted in the forensic high-security unit of the psychiatric hospital in Zelzate (Belgium). The high-security unit opened as the first unit in Belgium to offer forensic psychiatric treatment to high-risk female forensic psychiatric patients subjected to an “internment measure” (Vandeveldt et al., 2011) (1). Female adult mentally ill offenders subjected to this measure of internment; to be likely being a danger to other people or themselves; and/or to have a high risk of recidivism can be admitted to this unit. The service is conceptualized as a pre-treatment unit with three main goals: (1) decreasing aggression, (2) promoting abstinence of legal and/or illegal substance use, and (3) enhancing prosocial functioning. Once these goals are achieved, a transfer to another appropriate setting (medium-risk unit (forensic), general psychiatric setting, ...) can be initiated. The unit has a capacity of 22 beds: 20 treatment places and two external crisis beds.

Patients

In the course of the research period (June 2016 – June 2018), 22 females were admitted to this high-security unit. Their mean age at admission was 33.2 years, ranging from 19 until 58 years. During these two years, two patients were transferred to a medium-security unit and one patient to another high-security setting. The average length of stay was 20 months, ranging from 16 until 21 months. The remaining patients had an average length of stay of 18 months (range: 1-24) at the end of the research period.

All of the 22 patients were subjected to an “internment measure” because of violent offences (e.g. homicide, arson, assault, stalking, violent property crimes, threatening behavior, weapon possession), except one who had committed thefts. The majority had a history of psychiatric treatment either as a juvenile (13; 59%) and/or as an adult (17; 77.2%). For all these women,

at least one previous psychiatric treatment was interrupted because of challenging behavior such as aggression, substance use, and absconding. Psychiatric comorbidity was highly prevalent in the patients of this unit, with a median of psychiatric diagnoses of 3 (range: 1-5). The most prevalent psychiatric diagnosis was a personality disorder (n=19) and more specifically a borderline personality disorder (n=14), next to antisocial, schizotypal, narcissistic, avoidant and dependent personality disorder. Other highly prevalent diagnoses were disruptive behavioral disorders (n=9), neurodevelopmental disorders (n=7), and substance-related disorders (n=7). Eight females were also diagnosed with an intellectual disability.

Modified Overt Aggression Scale

As part of daily record keeping, the staff members registered each aggressive incident committed by a patient on the unit in the electronic patient file., on basis of the Modified Overt Aggression Scale (MOAS; Kay et al.1988). The four types of aggression (i.e. verbal, against objects, against persons and auto-aggression) and their severity level were scored. Additional contextual information such as location, factors leading to the incidents, victims, interventions, weapons and degree to which the involved staff member felt unsafe were also included in this registration file (2).

The method of the MOAS data collection is based on the research protocol of a forensic adolescent ward (de Decker et al., 2018; Tremmery et al., 2014), which involves a screening of the electronic observation files on a weekly basis to ensure that all incidents are correctly registered. This is done by a researcher (first author) in collaboration with the staff member that registered the aggressive incident. This procedure ensures more univocal mind-sets concerning aggression and its severity that took place at the unit (de Decker et al., 2018).

Measures

This study consisted of two parts: (1) interviews nine months after the start of systematic registration of aggressive incidents and (2) a focus group two years later (3). No incentives for participation were offered.

Interviews

Each staff member of the high-security unit was asked to participate in the interview phase which was carried out approximately nine months after the introduction of the systematic aggression registration. Sixteen of the 24 staff members agreed to participate (66.7%) but only eight interviews (50% of those willing to be interviewed) were actually carried out in March 2017. The drop-out was related to the change of the team structure in the first months after the start of the unit and because lack of sufficient time to participate in the interview phase despite different reminders by the researcher. This lack of time was related to the (too) large workload when starting a new unit. However, a preliminary analysis of the eight interviews indicated that data saturation was achieved.

The mean age of the participants was 31.7 years (range: 24-50 years). Six of the eight participants were females. The mean years of work experience in forensic psychiatry was 5.6 years (range: 1-16 years). The staff members participating in the interviews included a researcher, a criminologist, a psychologist, three therapists, the unit director and a psychiatric nurse.

The semi-structured interviews addressed the following topics: (1) the introduction of the MOAS at the unit, (2) the process and evolution of using the MOAS and (3) the participants' expectations towards the future use of the MOAS. To address this topics, open questions about the guidance and monitoring function, the changes in perspective on using the MOAS, the impact of the MOAS on workload of the staff members and on aggression at the unit, actions linked to the results of the MOAS and recommendations for the future were asked (4). The duration of each interview was approximately one hour.

Focus group

To gain insight into the evolution in terms of use and relevance of the MOAS, a focus group was organised in June 2018, two years after the start of systematic registration of aggressive incidents. This method was chosen because it leads to in-depth insight into different opinions (Barbour, 2005). Seven staff members were invited to participate in this focus group. The choice of the participants was guided by their degree of experience with the MOAS, all being present since the start of the unit. All seven agreed to participate. The mean age of the participants was 38.3 years (range: 31-56 years). The mean years of work experience in forensic psychiatry was 8.3 years (range: 3-16 years). Four of the seven participants were males.

Three participants already participated in the interview phase (i.e., the researcher, criminologist, and psychologist) because they already had a detailed perspective on the use and relevance of the MOAS at the time. The other participants (a social worker, therapist and two psychiatric nurses) were selected because of their pronounced “*pro, neutral and against*” perspective at the start of the systematic registration of aggressive incidents. This purposive sample ensured that the different perspectives on this topic were present, stimulating the discussion (Barbour, 2005). In our opinion, the familiarity between the participants did not negatively influence the course of the focus group, since discussing disagreements is part of the participants’ daily practice (e.g., in intervision and supervision meetings).

The focus group was moderated by the same person who carried out the interviews. Hence, the moderator already had knowledge of the different opinions present. Additionally, an observer assisted the moderator to make sure that every participant was equally involved and possible non-verbal disagreements were noticed. The focus group started with a general question to grasp the general appreciation of aggression registration (i.e., give three words that pop into your head when thinking of systematic registration of aggressive incidents), two

years after the start of the unit. Afterwards, several themes were discussed: (1) advantages of aggression registration (e.g., value of aggression registration in practice, motivation, ...), (2) disadvantages of aggression registration (e.g., subjectivity, balance in workload, ...), and (3) feedback on the monitoring function by the researcher (5). The focus group lasted for two hours. Since a purposive sampling method was used, the researcher assumed that data saturation was achieved.

Data analysis

The interviews and the focus group were audio recorded and transcribed verbatim after the interviews and focus group were conducted. These transcripts were verified by the participants and analysed afterwards, using Nvivo 11, a qualitative data analysis software package. This software helps organizing large amounts of qualitative data. Thematic analysis was used for both the interviews and the focus group. Thematic analysis is described as “a method for identifying, analysing, and reporting patterns (themes) within the data. It minimally organises and describes your data set in (rich) detail” (Braun & Clarke, 2006, p. 6). The topics of the interviews were the first basis for the thematic structure and were discussed by the master student and the other authors. Since the interviews and the focus group addressed some of the same themes (e.g. relevance, monitoring function, preconditions for implementation), the same thematic structure was used for both types of data, and the focus group data were seen as a further elaboration of the interview data. When discussing this thematic tree structure, a similarity with the preconditions for introducing routine outcome monitoring in clinical practice came to the fore (Boswell et al., 2015; De Varé et al., 2017). Therefore, the decision was taken to reorganize the thematic structure of the interviews and focus group data in these three preconditions: (1) creating the most appropriate context for introduction, (2) choosing a relevant instrument and (3) perpetuating the use in clinical practice.

Results

In this section, the three main themes: (1) creating the most appropriate context for introduction, (2) choice for the MOAS as relevant instrument and (3) perpetuating the use of the MOAS in clinical practice are scrutinized.

The most important guidelines relating to each of the three themes are summarized in Table 1.

[insert Table 1]

1. Creating the most appropriate context for introduction

The MOAS was introduced at the start of the unit. The respondents stated that the combination of familiarizing with the patients and systematic registering of aggressive incidents was quite challenging. They found it more important to get to know the patients and the structure of the unit than registering each aggressive incident, which meant that the registration was not perceived as a priority first. Some specific institutional and practical barriers also interfered with their belief in the relevance of systematic registration of aggressive incidents.

1.1. Institutional barriers

The major institutional barrier mentioned was that there was no registration culture present in the hospital. The first steps in introducing ROM-instruments were only recently taken at that time. This lack of a registration culture resulted in an initial resistance against systematic registration of aggressive incidents because staff feared an administrative overload. This was especially true for the nursing staff members and therapists daily running the ward. The middle management disciplines (psychologist, criminologist, unit director) were – from the start – more convinced of the added value of the systematic aggression registration and more specifically of the MOAS, because of their case knowledge and their academic background.

They stated that they were convinced of the usefulness of the MOAS since a lot of aggression – and more specifically auto-aggression – was expected. Therefore, they invested a significant amount of their time in motivating the team to accurately register each aggressive incident and in convincing them of the added value thereof.

Another aspect that was introduced to augment the motivation was the “candy jar”. The whole team chose to introduce the candy jar and placed it visible in the nursing station as a reminder to fill in a MOAS. The candy jar was seen as the first necessary push for the staff members to register a MOAS.

“The MOAS jar also helps you to remind, because sometimes in therapy, or between things, something happens but then you’re busy with something else.” [Interviews, R4]

However, everyone stated that the first feedback moment on the (incorrect) numbers of aggressive incidents was really an eye-opener. It motivated each staff member to pay more attention to correctly registering each aggressive incident.

“At the first feedback moment, you look at the numbers and you conclude: this isn’t right. We had more aggressive incidents but we didn’t register them. This is our fault, so we need to correctly register to make it useful.[...] Having correct numbers was the largest motivation.” [Focus group, R2]

Additionally, the participants mentioned that each team member used his/her own definition of aggression and that the introduction of the MOAS helped to get everyone on the same track. A culture of discussing whether a MOAS needed to be filled out, was introduced. There was no fear of being judged and the employees trusted each other that incidents would be added correctly.

Finally, it was stated in both the interviews and the focus group that the translation of the MOAS scores to the hospital policy level could be improved. The participants stated that the analysis of aggressive incidents could better inform intervention and prevention policy (e.g.

introducing de-escalating strategies) and handling the work climate of the staff members (e.g. psychosocial well-being, and a healthy work environment).

1.2. Practical barriers

The major practical barrier referred to – both in the interviews and the focus group – was time. The respondents agreed on the fact that filling out the MOAS itself is not time-consuming and only required “two minutes” of work. However, the administrative workload at the unit was considered to be high, so each additional registration task risked to be perceived as “too much”. The participants stated that optimizing the IT-system of the electronic patient records could help to address this practical barrier. There should be clear connections between different parts of these records to reduce the workload.

“Maybe when it should be possible in the observation form of the electronic patient file to thick a box ‘MOAS’ and then have a direct connection to the registration form. [...] A better connection between the registration of observations and the MOAS, one click.” [Interviews, R4]

Furthermore, the importance of easy access to the data and the graphic representation of the data was emphasized. The processing of the data was – at the time of the focus group – carried out manually which was said to be time-consuming. The participants stated it would be an added value if they would not be dependent on the researcher for accessing the data when deemed necessary.

“There is a lot of manual work [...]it becomes very interesting if you can take a look very quickly, for example we started an intervention and the next four weeks we are going to see each week what the effects are.” [Focus group, R1]

2. The choice for the MOAS as relevant instrument

As stated in the introduction, the MOAS was selected by the hospital management team.

Nevertheless – at the time of the interviews – also the staff members became convinced that

the MOAS was a relevant instrument because of the clear connection with one of the main treatment goals of the ward, i.e. reducing aggression.

“Forensic psychiatric treatment focuses on aggression[management] ... so the least you can do is register it. For me it is common sense to collect data objectively and base decisions on these data.” [Interviews, R7]

By systematically scoring the MOAS, staff members could objectify this reduction and make a pondered decision on further resocialization steps. However, the respondents also emphasized that aggression should not be the only parameter to base decisions on.

When discussing the relevance of systematic registration of aggressive incidents in the medium-security units, the respondents indicated that the added value may perhaps be less visible in the beginning because of the lower numbers and because incidents may be less pronounced. However, they stated that it is important to have a data-driven policy. Even in medium -security units insight into aggressive behavior could also inform risk management and resocialization plans. Good examples would help these units to see the added value.

“Why we introduce it [systematic aggression registration] in this acute setting, it is quite clear. Because you have a lot data, you can deduce clear guidelines to address aggressive behavior. In settings with less aggression, it may be take more time to see the added value.” [Interviews, R6]

“I should invite other units to discuss the introduction with us. We can give some good leads to smoothly introduce systematic registration of aggressive incidents in their daily practice. You should take advantage of that.” [Focus group, R5]

Second, the relevance of the instrument was considered high because it is easy to administer given the clear behavioral anchor points for each type of aggression.

“The anchor points are crystal clear. In the beginning, you are more doubting which severity level you need to choose but now, you can blindly fill it out” [Focus group, R5]

Participants also stressed that the contextual information (e.g. location, time, target) made the instrument even more relevant. The adjustability of this additional information to each context was considered a major advantage of the current form for systematic aggression registration.

“It is really great that it is a dynamic instrument. You can really adjust it to the context you are working in.” [Focus group, R1]

However, the relevance of the MOAS was also questioned since this instrument only concerns overt aggressive behavior and not passive aggressive behavior. In order to address this shortcoming, the participants emphasized to introduce an additional instrument to objectify this behavior, in order to more profoundly discuss this with the patients.

3. Perpetuating the use of the MOAS in clinical practice

When discussing what helps to perpetuating the use of the MOAS in daily clinical practice – both in the interviews and the focus group –the following two aspects were referred to: (1) introduce and retain an independent quality check of the registered incidents and (2) use the data at all levels (individual – unit – hospital policy).

3.1. Quality check

The presence of an independent person who checks whether all incidents have been registered was emphasized to be essential, both during the introduction (interviews) as well as two years after the start (focus group). First, the monitoring function considered to be necessary because team members sometimes forget to register an incident due to the high workload.

Second, the independent status of this quality check was considered of additional value because it helped the staff members to critically think whether an incident could be labeled as

aggression and to make sure that the boundary whether particular behavior is aggression did not subconscious shift due to being confronted with aggression on a regular basis.

“It is positive that she lets me think about what aggression is and what isn’t, the incidents that are on the edge. Of course it is always subjective but you do debate about it more and that is something very positive [...] where is your limit, where is mine, shouldn’t we register it after all...” [Interviews, R2]

The participants remarked that the final decision to register an incident as aggression needed to be made by the person present during the incident as that team member was the only one who witnessed the actual behavior.

“[...]the responsibility to say “okay, it is or it isn’t aggression” lies with the person who registered or who wrote down the observations, because I as an outsider am not aware of everything, but I do have the reflex ‘is it necessary [to register] or not’ every single time.” [Interviews, R1]

3.2. Use of the data

The respondents emphasized that using the data from the systematic registration at all levels is necessary to keep the registration on track in the long term.

First, the data were used at unit level through periodically feedback loops of the results at team meetings. Respondents referred to its value with regard to the ward organization, especially during the first months of the unit. Graphical representations of time and location of incidents helped to revise the daily structure. Examples mentioned were the introduction of extra resting moments during the day, removing conversations from the individual room to a more neutral place and applying additional rules when secluding a patient to prevent further escalation. The information was also said to be valuable during evaluation moments of the ward.

“There is a peak of aggressive incidents each Wednesday afternoon. What is going on and how can we change that? It helps to get the discussion started on what needed to be changed.” [Interviews, R6]

Second, the data were used at individual level by discussing these at treatment evaluation moments. Participants first started to use the data to map an individual’s progress with regard to aggressive behavior. Impact of individual treatment decisions could be graphically visualized.

“The individual graphic of [name of patient] really showed that change of medication resulted in drop of aggressive incidents.” [Focus group, R7]

Furthermore, the value of objective aggression data in individual risk assessment and communication to the patient was emphasized.

“It helps to let the patients think about “what is aggression” because they think that every aggression incident ends with a seclusion, while there are many mild forms of verbal aggression. These incidents are also registered so for patients it is good to think about this non-criminal aggressive behavior... It would be nice to do this with everybody.” [Interviews, R2]

The individual data on aggressive incidents – in addition to other elements – were also used in the obligatory progress report to the judicial system to argue why further treatment in the current setting or transfer to another setting is needed.

Finally, the data were also considered to be useful and applied to the hospital policy level.

“But it is a signal to the people in charge, “your team is feeling less safe”. This was an evolution that could easily be linked to the MOAS, there were less incidents but the severity was worse.” [Focus group, R1]

Overall, the systematic feedback loop of the results on both the group and individual level was considered as an important motivational factor to keep on registering each aggressive incidents.

“[...] Yes we need to see it [results] and if it is visualized nicely, you begin to think about it more [...] you become motivated to keep doing your best and to keep reflecting about your actions and what the patients do, and to deal with it correctly.”

[Interviews, R5]

Discussion

To facilitate the use of systematic aggression registration instruments in daily clinical practice, this study aimed at gaining insight into the perspective of staff members on the introduction of these instruments and which preconditions they considered necessary to achieve a successful implementation. Overall, the respondents agreed on the fact that systematic aggression registration has quickly proven its value and will remain relevant in the future. It appeared that systematic registration based on an incident-driven observation instrument is perceived as a valuable and feasible data collection method in clinical practice (Nijman et al., 2006; Verstegen et al., 2017).

However, the results also showed that introducing and maintaining systematic registration of aggressive incidents is a quite difficult task. Institutions planning on introducing a systematic aggression registration instrument need to consider the conditions mentioned in Table 1.

Related to the first precondition – creating the most appropriate context for introduction – two specific processes were mentioned in this study. The first referred to installing a registration culture supported by the hospital management. In order to achieve this, it is important to have stakeholders who “carry out” this registration culture and boost it from time to time by training courses for both new and experienced staff members (De Varé

et al., 2017). These stakeholders should be attentive for resistance or a diminishing drive to register these incidents. Motivators should be periodically explored – together with staff members – to keep the systematic registration on the right track (Boswell et al., 2015). It is imperative that stakeholders agree on the definition of aggression and make sure that each staff member is aware of and complies to this definition (Tremmery et al., 2012). Second, some practical issues should be addressed. Most importantly, the registration and data-access should be made as time-efficient as possible (Nugter & Buwalda, 2012). Crucial aspects in promoting the time-efficiency are limiting the time needed for registration, connecting the different registration tasks and providing quick access to the data and their graphical representation. Thus – despite inevitable costs – a good and smoothly working IT-system for electronic patient files and for data visualization should be strived for (De Varé et al., 2017; Vess, 2001).

The second precondition is first concretized by choosing an aggression registration instrument that is applicable to the population and that delivers relevant information (Tremmery et al., 2012; Verstegen et al., 2017). Each institution should list the needed information based on the population they are working with. In case of the ward where the instrument was implemented, we expected a substantial number of auto-aggressive incidents, so the selected instrument needed to include auto-aggression. Additionally, the respondents stressed the need for a dynamic instrument, that could be adapted to the context in which it is used (e.g. adding specific locations, newly introduced interventions, etc.; Nijman et al., 2006).

The last precondition, embedding the use of the instrument in the institution, is only possible when safeguarding the assessment of reliable data. Therefore, introducing an independent quality check seemed to be inevitable, especially when working with an incident-based instrument; as each missing incident may bias the findings (Tenneij et al., 2009). This requires an extensive amount of manpower, but is necessary to fulfill the expectation of

getting more objective information through the use of a systematic registration instrument. Additionally, the unit should actively use the data provided from the systematic aggression registration forms. Data should be frequently applied on individual, unit and hospital policy level (Hoenders et al., 2014). In the research setting, this was concretized by making individual data available for the staff members and by installing feedback loops on ward and hospital level. In the future, it seems necessary that these gathered data are connected to other available information – such as the living group climate and early recognition method – in order to support the selection of specific actions that may prevent further aggressive behavior (Fluttert et al., 2008; Kaltiala-Heino et al., 2007; Tremmery et al., 2014). Attention should be paid to individual and environmental factors in explaining the number and type of aggression reported (de Decker et al., 2018; Kobes et al., 2012; Ros et al., 2013) and in explaining the effectiveness of treatment (Oliver et al., 2007). On the hospital level, the registration delivers valuable information when developing or adapting the institutional policy with regard to the safety of both patients and staff members.

Several limitations to this study should be acknowledged. First, the MOAS was not psychometrically validated in Belgian forensic psychiatric populations. However, this instrument is already used for two decades in a (forensic) psychiatric hospital in Belgium and is also used in forensic psychiatry in the Netherlands (de Decker et al., 2018; Tremmery et al., 2014; Verstegen et al., 2020). Additionally, the quality check by the researcher and the training of staff members are considered to sufficiently ensuring a correct registration of each aggressive incident at this unit. Second, the context in which this study is conducted – a high-security unit of female patients – may have influenced the results. The added value of systematic aggression registration may be more distinctively present in this setting. Large numbers of aggressive incidents were expected and the more data present the more profoundly hypotheses could be tested and discussed (e.g. introducing an extra resting

moment). As is stated above, the results show that even for settings with less incidents, systematic aggression registration is useful. More investment in motivating the staff to keep on registering and in the independent quality check may be needed to gather reliable data to base treatment and policy on. Finally, the focus of this study on the introduction of systematic registration of aggressive incidents may give the impression that aggression is the only aspect that should be considered in forensic psychiatric treatment. This is certainly not the case. Other – also strength-based – aspects should be monitored to get a comprehensive overview of the treatment progress of forensic psychiatric patients.

The three preconditions and their processes require continuous investments from an institution, both at the personal and financial level. Despite these required investments, each respondent is convinced that implementing systematic aggression registration is an unconditional first step in making a ‘good’ aggression management plan and in the profound understanding of aggressive behavior (Crocker et al., 2006). We hope that this paper can inspire other forensic psychiatric facilities to introduce systematic registration of aggressive incidents. The mentioned preconditions can be used as guidelines when implementing systematic aggression registration in clinical practice. Due to gaining detailed insight into the patterns in aggression and adjusting management plans to these patterns, aggression is likely to diminish (Daffern & Howells, 2002; Nijman et al., 2006). Additionally, by focusing on developing and maintaining a positive living and working climate in which both patients and staff members are able to grow and thrive, aggression will possibly even further diminish (de Decker et al., 2018; Ros et al., 2013). To further investigate this, future research on registered aggression incidents should also focus on its relationship with living group climate, quality of life and treatment outcomes.

Notes

1. The Law on Internment of Mentally Ill Offenders (May 5, 2014, amended by the Potpourri III-law of May 4, 2016) describes the measure of “internment” as a safety measure to protect society and that simultaneously aims to ensure that the mentally ill offender is provided with the care his/her condition requires in view of his/her integration into society” (Heimans et al., 2015: 1051).
2. This registration instrument can be obtained from the author(s).
3. The study of Grootaert (2017) also consists of questionnaires administered before the start of the unit and two and six months after the start of the unit. However, missing data made it impossible to use these data for this article. The topics of these questionnaires were also addressed in the interviews.
4. The questions of the semi-structured interviews can be obtained from the first author.
5. The topic list of the focus group can be obtained from the first author.

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