Abstract

A female acute inpatient mental health ward developed a care pathway to support women who self-harm during their admission. This service evaluation was the first to explore staff and patients' experiences of the care pathway using qualitative methods. Semi-structured interviews were completed with eight staff members and five patients. Thematic analysis was used to analyse the interview data. Themes developed from staff interviews were about: "Effects on staff and staff support", "enabling patients to manage self-harm autonomously", and "the ward environment". Themes developed from patient interviews were about: "Enabling engagement", "putting skills into practice", and "least restrictive practice". Staff and patients viewed the pathway as effective in reducing self-harm incidents and levels of restriction on the ward. The pathway is viewed positively by staff and patients, though improvements could be considered to increase its efficacy.

Introduction

Self-harm is broadly defined as intentional harm to one's body, including cutting, burning and scratching (Hansen et al., 2021) and it occurs for many reasons, such as to alleviate psychological distress, punish one's self, and manage feelings of dissociation (James et al., 2012; Klonksy et al., 2014). Prevalence of self-harm on UK inpatient wards varies between 4% (Bowers et al., 2003) and 70% (Swinton et al., 1998). It is estimated that 84% of psychiatric nurses witness self-harm each year (Nijman et al., 2005) which can negatively affect their own emotional wellbeing (Wilstrand et al., 2007). Where there is an incident of self-harm on an inpatient ward, the risk of other patients also self-harming increases (James et al., 2012). Further, patients who self-harm on the ward are at higher risk of future self-harm or suicide (James et al., 2012). Inpatient mental health services are required to offer a safe environment for those who self-harm (Bowers et al., 2008) and aim to reduce self-harm, partly because of the associated increased risk of suicide (James et al., 2012).

A multimodal self-harm care pathway was developed in 2014 by the nursing team and ward psychologist (second author; ES) in an acute inpatient mental health ward in Northwest England (see Figure 1). The pathway is delivered by the multi-disciplinary team (MDT), primarily nursing staff and health care assistants (HCAs), and consists of structured individual sessions and groups, covering skills to support patients to understand and manage their self-harm. Each patient has a 'named nurse team', a designated team of three staff members made up of nurses and HCAs who deliver the individual sessions with them. The skills are primarily based on Cognitive Behavioural Therapy (CBT), Dialectical Behaviour Therapy (DBT) and problem-solving as recommended by research and the National Institute for Health and Care Excellence (NICE, 2011; Panos et al., 2014). The pathway also provides a framework drawn from Structured Clinical Management (Bateman and Krawitz, 2013) and Cognitive Analytic Therapy (Ryle et al., 1990) within which the MDT can reflect on therapeutic relationships and interpersonal styles of engaging as well as a structure within which safety planning can be safely implemented when responding to self-harm incidents. This approach allows staff to

meet Department of Health (2014) recommendations to treat people with compassion, dignity and kindness while understanding the reasons for behaviour that challenges.

The pathway was designed to reduce self-harm incidents on the ward by supporting staff to respond to those who self-harm safely and effectively and to work in the least restrictive manner possible in line with national policy (Care Quality Commission, 2015). The pathway is supported by regular staff supervision and training offered by the psychology team.

Rationale

A quantitative evaluation of the pathway is currently underway, and the pathway is regularly audited, however a qualitative evaluation of staff and patients' views on the pathway has not been conducted before. The current evaluation gathered staff views on the benefits and challenges of the pathway and how supported they feel in their role. This is important as working with people who self-harm can have negative effects on staff wellbeing (e.g., feeling fearful and powerless; Wilstrand et al., 2007), and on their views about patients (O'Donovan and Gijbels, 2006). Further, staff may have differing views on least restrictive practice (LRP) which could lead to unhelpful inconsistencies in care (James et al., 2017). Patients' views were also gathered in line with recommendations to use patient feedback to improve and develop inpatient services (Royal College of Psychiatrists, 2017).

Aims

The aims of the evaluation were as follows:

- To explore staff and patients' experiences of the self-harm pathway, especially around the benefits and challenges of the pathway and support around this
- To highlight areas of good practice and provide recommendations for improvements, in order to enhance the effectiveness of the pathway and patient's ability to engage with it.

Methods

Participants

All ward staff who deliver the pathway were invited to participate in order to gather data from a range of participants. Eight staff members participated (three nurses, three HCAs, one peer

support worker, and one assistant psychologist), all females aged 20-50. Six patients were on the pathway during data collection, of whom five agreed to participate, aged 20-30.

Design

Face-to-face interviews were conducted. Interview questions were developed based on research on self-harm in inpatient settings (e.g. James et al., 2017; Kool et al., 2009; Timberlake et al., 2020) and recommendations from the service's psychology team who developed the pathway. Questions covered topics such as benefits and challenges of the pathway, and how it affects staff and patients' understanding of, and ability to manage, self-harm. Examples of questions for staff were: What are the benefits and challenges of using the self-harm pathway? How has working on the pathway affected your understanding of self-harm? How does the self-harm pathway affect your feelings about working with people who self-harm? Examples of questions for patients were: How has being on the pathway affected your understanding of self-harm? How does it feel when staff work in a least restrictive way? How beneficial do you feel the pathway has been for you? The interview questions are available from the authors. Data collection occurred from June to August 2021.

Procedure

Potential participants were given a participant information sheet about the project and how their information would be used. Patients were made aware that their decision would not affect their care. All participants were given an opportunity to ask questions about the project to ensure informed consent and signed a consent form.

Semi-structured interviews lasting approximately 10-15 minutes were completed in a ward therapy room. As the service prohibits recording, participants' answers were written verbatim. The accuracy of the written responses was checked with participants throughout the interview to reduce the chance of missing out important information. The interviewer monitored for signs of distress during patient interviews. If any patient had appeared distressed, the interviewer would have offered to stop the interview and signposted them to support from ward staff.

Data Analysis

Interview data was analysed using reflexive thematic analysis to identify patterns within the data. Braun and Clarke's (2006) six-step model was followed, using an open coding process (Braun and Clarke, 2020). First, data were read repeatedly to gain familiarity and initial thoughts regarding possible codes were noted down. Next, initial codes were produced for the data and codes with similar content were grouped into potential themes. Then, initial themes were reviewed and refined by checking the consistency of extracts in each theme and how well themes reflected meanings in the data set. This resulted in 12 codes grouped into three themes for staff, and seven codes grouped into three themes for patients. Quotes representative of each theme are reported below.

Ethical Issues

The service evaluation complied with the Trust Research and Development Team guidelines. It was reviewed and approved by the service manager.

Results

Staff Themes

Three themes occurred regarding staff experiences of the pathway: (a) Effects on staff and staff support, (b) enabling patients to manage self-harm autonomously, and (c) the ward environment.

Effects on staff and staff support

Most staff reported that the pathway increased their understanding of the functions and ways to manage self-harm. This enabled them to manage difficult emotions related to their work, such as fear and frustration, allowing them to empathise with patients: *"I used to think 'they're a time-waster, why are they doing it?' Sometimes I still get frustrated…but I'm more sympathetic, I understand why they're using it,"* and fostered a sense of self-efficacy: *"I understand it's a coping strategy, and I can help them use safer ones instead."* This suggests that increasing understanding

could buffer staff against difficult emotions when working with people who self-harm in inpatient mental health settings (Lindgren et al., 2021).

Some staff highlighted feeling "*pulled into an over-soothing role*" and "*doing too much*" when interacting with some patients who self-harm. They expressed awareness of the drawbacks of this (Kool et al., 2009) and reported that sources of support such as reflective practice were important in managing the pull to over-soothing roles: *"Reflective practice was being able to say 'I think you were over-soothing' and they'd reflect on it."* Reflective practice was also helpful when feeling 'stuck' with a patient, allowing them to discuss ideas as a team: *"It definitely helps...The team can support with options that we've not considered"* suggesting reflective practice had similar benefits to those found in other research (Thomas and Isobel, 2019).

Enabling patients to manage self-harm autonomously

All staff expressed that the pathway effectively reduces the frequency of self-harm. Staff reflected on the importance of increasing patients' autonomy in supporting them to reduce their self-harm: *"We are empowering the ladies to use the skills on discharge."* This is in line with previous research which reported that increased autonomy is key in reducing self-harm (Kool et al., 2009). Staff viewed their role in this as supporting patients to learn and use new coping skills: *"We're encouraging people to develop a skillset to use independently, to be able to manage their own emotions."*

Staff suggested that the pathway may be less effective when patients have experienced it on previous admissions: *"Patients who've been in previously, repeatedly on the pathway, they aren't willing to work in that way.*" This indicates that adapting materials for these situations could be beneficial.

The ward environment

All staff expressed that the pathway reduced restrictive practice and felt this was positive. This was in line with previous research where staff who had implemented LRP saw it as empowering for patients and effective in reducing self-harm (James et al., 2017). Staff highlighted that, prior to

the pathway, self-harm incidents led to increased restrictions on patients: *"Everyone was on one-to-ones, medicated up to the eyeballs"* whereas the pathway allowed a holistic and proactive approach: *"If someone has self-harmed, we try not to go for PRN or restraint. We look at alternatives we can do."* This was viewed as allowing for more personalised care: *"Different approaches are helpful to different people, so we ask the ladies what they find helpful."*

Staff emphasized the importance of consistency in delivering the pathway but stated that the ward often presents barriers to this. The main barriers highlighted were the high level of input required to run the pathway: "*Staffing levels, when they're low, it can be easy to fall off the pathway*" and inconsistencies in staff approaches: "*You're fire-fighting if you're trying to stick to the pathway and some aren't.*" Therefore, staff may not always be able to provide the quality of care they would like due to ward pressures. This is consistent with previous research with inpatient nursing staff who reported that lack of time and resources hindered good nursing practice and may lead to increased incidents of self-harm (Lindgren et al., 2021).

Patient themes

Three themes were developed regarding patients' experiences of the pathway: (a) Enabling engagement, (b) Putting skills into practice, and (c) Least restrictive practice.

Enabling engagement

Most patients stated that the pathway reduced their self-harm. Nearly all described the intrapersonal factor of "feeling ready" as key to engaging in interventions: *"I haven't looked at the safety plan…I knew it would help me and I didn't want to. Now I'm in a better place, I am more willing to look at it."* Patients perceived staff as important in facilitating engagement by having a non-judgemental approach: *"It was good to talk without being judged. My nurse was nice, easy to talk to."* They also reported that staff taking a person-centred approach helped to facilitate their engagement: *"I've had the same named nurse each time. She knows what I'm like, that's helpful"* suggesting that both intrapersonal factors and professional support help individuals reduce self-harm (Mummé et al., 2017).

Putting skills into practice

Patients emphasized the importance of implementing skills in reducing their self-harm: *"It's helped me to build on skills...Cos, you can know about them, but it's more about putting them into practice."* Personalised care, such as incorporating patients' skills or hobbies into the tools, increased the likelihood of them being put into practice: *"She knows I'm creative, so she included that into my safety plan, rather than a booklet where it's just your triggers and stuff."* However, intense emotions can be a barrier to implementing skills (Barnicot et al., 2015), particularly when using them independently, and this was reflected in some of the patients' experiences: *"When you get to that point when you want to self-harm, it happens so quick, nought to a hundred, there's no time to take a step back"* because it becomes difficult to remember the skills: *"I don't know whether I'd think about it in the moment."*

Least restrictive practice

Patients agreed that the pathway reduced restrictions. Three appreciated LRP as being preferable to restrictions: *"No-one wants to be on fifteen-minute observations"* giving more independence: *"It takes the pressure off…it's nice to have that freedom"* or fitting with their recovery goals: *"I prefer to try different things before resorting to pills so it's helpful."* However, two patients viewed the LRP approach negatively: *"I had opportunity to self-harm, which I did, and that inhibited my recovery."* They described not feeling ready to reduce self-harm independently and believed that some situations necessitated restrictions such as restraint or PRN medication. This suggests that, despite being recommended practice, not all patients value LRP and therefore discussions with patients about their sense of safety on the ward and ways of increasing it can be valuable.

Discussion

Gaining understanding of self-harm and reflecting on their practice enabled staff to manage the emotions and roles they felt drawn into and gain confidence in their work. However, staff only described being drawn into over-soothing roles, whereas staff in forensic mental health settings

have reported being drawn into both over-soothing and over-punitive roles (Hamilton, 2010). This warrants further exploration, as it is unknown whether punitive roles were not mentioned here because they occur less in non-forensic settings, or because they are harder to acknowledge. It also highlights the importance of using reflective practice to focus on staff wellbeing to support staff in maintaining good practice and managing difficult emotions and interpersonal dynamics.

Being understaffed was described as a key challenge to maintaining the pathway. As understaffing can negatively impact quality of care (James et al., 2012) and presents barriers to implementing interventions (Jorgensen et al., 2019), contingency planning for low staffing levels may be integral to implementing such a pathway. Towards this, assistant psychologists are sometimes included within named nurse teams in this service to support the pathway and refresher training is regularly offered.

Staff and patients reported that the pathway meets its aim of reducing self-harm. This is consistent with research in community settings where gaining insight into triggers and alternative coping strategies were reported to help individuals reduce their self-harm (Kruzan and Whitlock, 2019). Participants also described non-judgmental and person-centred staff approaches as instrumental in reducing self-harm, factors which are widely recognised as central to a positive therapeutic alliance (McAllister et al., 2019; Moreno-Poyato and Rodríguez-Nogueira, 2021; Wright, 2021), and incorporated into nursing proficiency standards (Nursing and Midwifery Council, 2018) and the NHS Long Term Plan (NHS England, 2019). However, participants recognised that intrapersonal factors were also important; autonomy and feeling ready facilitated reductions in self-harm, whereas intense emotions were a barrier. While several intrapersonal factors have been suggested as important in reducing self-harm (Kool et al., 2009; Kruzan and Whitlock, 2019; Mummé et al., 2017), there is no clear evidence on which are most important. Further exploration of this would be helpful, as greater insight into intrapersonal factors which facilitate or impede reduction in self-harm would allow for further personalisation of skills and may increase the effectiveness of care pathways.

Staff and patients felt that the pathway achieved its aim of reducing restrictions. Staff viewed this positively, as more effective and empowering for patients. This is in line with research which found that staff in acute mental health wards felt uncomfortable using restrictive practices and preferred to use alternative interventions which are more recovery-focused and allowed patients to learn to manage their own self-harm (Murphy et al., 2019). The variation in patient views may reflect different stages of recovery. For example, having limits set by others may be an initial phase in stopping self-harm (Kool et al., 2009), therefore those early in the pathway may perceive restrictions as more necessary to maintain their safety (Wilson et al., 2017). Alternatively, it may be that inconsistent implementation led to negative views of LRP (Timberlake et al., 2020). This highlights the importance of both sensitively discussing the ward's approach to managing self-harm with each individual and applying LRP consistently. It may therefore be beneficial for all MDT staff, including ward doctors, to attend reflective practice and pathway training in order to enhance consistency around restrictions such as PRN medication, thus providing a clearer message around LRP to patients.

Limitations

The nature of the acute ward meant that most patients were still engaging in self-harm and had not completed the pathway when the interviews were conducted with them. Thus, it would be useful to explore the experiences of people who have completed the pathway and compare them to the current findings. Further, patients were not consulted during the development of the evaluation due to time constraints. Co-development of service evaluation would support collaborative working and ensure that interview questions were relevant and important to patients. Additionally, the ward reflective practice groups were facilitated by the interviewer's clinical supervisor, therefore staff may not have been fully open in their opinions despite reassurances about confidentiality. Further, the interviews were completed on the ward, thus there were often distractions such as noise which may have affected participants' ability to concentrate. Also, staff participated in the interview during their shifts which may have affected their ability to engage fully.

Finally, it was not possible to record the interviews. Attempts were made to ensure the interviews were recorded as fully as possible by checking written responses with participants regularly throughout each interview. However, it is possible that some information given by participants was missed, which may have introduced some bias into the findings.

Conclusion

This service evaluation made a significant contribution to the understanding of how a self-harm care pathway is experienced by staff and patients within acute inpatient mental health care. This paper highlighted the advantages of having a multidisciplinary psychosocial care pathway for both patients and staff as well as the challenges and ways of overcoming them.

Keywords

- Inpatient mental health
- Qualitative
- Self-harm
- Least restrictive practice
- Intervention
- Experiences
- Non-suicidal self-injury

Key points

- Staff and patients reported that a self-harm care pathway on a female acute inpatient ward contributed to reductions in self-harm and restrictive practices.
- Staff members reported the pathway having a positive impact on them individually and on the ward environment.
- Understaffing was described as a challenge in delivering the pathway consistently.
- Patients felt that a non-judgmental approach and feeling ready were important in helping them engage in the pathway.

Reflective questions

- What relational roles do you feel pulled into in your interactions with patients who self-harm?
- How do you manage difficult emotions that arise during work?
- How does the environment of your workplace affect the care you are able to provide?
- What are the advantages and potential challenges of having a psychosocial care pathway within acute inpatient mental health wards to support staff and patients manage self-harm?

References

Barnicot K, Couldrey L, Sandhu S, Priebe S. 2015. Overcoming barriers to skills training in borderline personality disorder: A qualitative interview study. *PloS one*, *10*(10), e0140635. https://doi.org/10.1371/journal.pone.0140635

Bateman AW, Krawitz R. 2013. Borderline personality disorder: an evidence-based guide for generalist mental health professionals. Oxford: Oxford University Press.

Bowers L, Simpson A, Alexander J. 2003. Patient-staff conflict: results of a survey on acute psychiatric wards. Soc Psychiatry Psychiatr Epidemiol. 38:402-408.

Bowers L, Whittington R, Nolan P, Parkin D, Curtis S, Bhui K, Hackney D, Allan T, Simpson A. 2008. Relationship between service ecology, special observation and self-harm during acute in-patient care: City-128 study. Br J Psychiatry. 193(5):395-401. https://doi.org/10.1192/bjp.bp.107.037721

Braun V, Clarke V. 2006. Using thematic analysis in psychology. Qual Res Psychol. 3(2):77-101. https://doi.org/10.1191/1478088706qp063oa

Braun V, Clarke V. 2020. One size fits all? What counts as quality practice in (reflexive) thematic analysis? Qual Res Psychol. 1-25. https://doi.org/10.1080/14780887.2020.1769238

Care Quality Commission. 2015. Mental Health Act Code of Practice. https://www.cqc.org.uk/sites/default/files/20190625_mhacop-report.pdf

Department of Health. 2014. Positive and proactive care: Reducing the need for restrictive interventions. https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/300293/JRA_DoH_Guidance_on_RP_web_accessible.pdf

Hamilton L. 2010. The boundary seesaw model: Good fences make for good neighbours. In: Tennant A, Howells K, editors. Using time, not doing time: Practitioner perspectives on personality disorder and risk. Wiley; p. 181-194.

Hansen A, Slavova, D, Cooper G, Zummer J, Costich J. 2021. An emergency department medical record review for adolescent intentional self-harm injuries. Inj Epidemiol. 8(1): 1-8. https://doi.org/10.1186/s40621-020-00293-8

James K, Samuels I, Moran P, Stewart D. 2017. Harm reduction as a strategy for supporting people who self-harm on mental health wards: The views and experiences of practitioners. J Affect Disord. 214:67-73. https://doi.org/10.1016/j.jad.2017.03.002

James K, Stewart D, Bowers L. 2012. Self-harm and attempted suicide within inpatient psychiatric services: A review of the literature. Int J Ment Health Nurs. 21(4):301-309. https://doi.org/10.1111/j.1447-0349.2011.00794.x

Jorgensen R, Christiansen J, Nissen HB, Kristoffersen K, Zoffmann V. 2019. The deadlock of saying "That is what we already do!" A thematic analysis of mental healthcare professionals' reactions to using an evidence-based intervention. J Psychiatr Ment Health Nurs. 26(1-2):39-48. https://doi.org/10.1111/jpm.12509

Klonsky ED, Victor SE, Saffer BY. 2014. Nonsuicidal self-injury: What we know, and what we need to know. Can J Psychiatry. 59(11):565-568. https://journals.sagepub.com/doi/pdf/10.1177/070674371405901101

Kool N, van Meijel B, Bosman M. 2009. Behavioral change in patients with severe self-injurious behavior: A patient's perspective. Arch Psychiatr Nurs. 23(1):25-31. https://doi.org/10.1016/j.apnu.2008.02.012

Kruzan KP, Whitlock J. 2019. Processes of change and nonsuicidal self-injury: A qualitative interview study with individuals at various stages of change. Glob Qual Nurs Res. 6:1-15. https://doi.org/10.1177/2333393619852935

Lindgren BM, Molin J, Graneheim UH. 2021. Balancing between a person-centred and a common staff approach: Nursing staff's experiences of good nursing practice for patients who self-harm. Issues Ment Health Nurs. 42(6):564-572. https://doi.org/10.1080/01612840.2020.1817206

McAllister S, Robert G, Tsianakas V, McCrae N. 2019. Conceptualising nurse-patient therapeutic engagement on acute mental health wards: An integrative review. Int J Nurs Stud. 93:106-118. https://doi.org/10.1016/j.ijnurstu.2019.02.013

Moreno-Poyato AR, Rodríguez-Nogueira Ó. 2021. The association between empathy and the nurse–patient therapeutic relationship in mental health units: A cross-sectional study. J Psychiatr Ment Health Nurs. 28(3):335-343. https://doi.org/10.1111/jpm.12675

Mummé T, Mildred H, Knight T. 2017. How Do People Stop Non-Suicidal Self-Injury? A Systematic Review. Arch Suicide Res. 21(3):470-489. https://doi.org/10.1080/13811118.2016.1222319

Murphy C, Keogh B, Doyle L. 2019. 'There is no progression in prevention'–The experiences of mental health nurses working with repeated self-harm. Int J Ment Health Nurs. 28(5):1145-1154. https://doi.org/10.1111/inm.12626

National Institute for Health and Care Excellence. 2011. Self-harm in over 8s: Long-term management. (NICE Guideline CG133). https://www.nice.org.uk/guidance/cg133

NHS England. 2019. NHS Long Term Plan. https://www.longtermplan.nhs.uk/

Nijman H, Bowers L, Oud N, Jansen G. 2005. Psychiatric nurses' experience with inpatient aggression. Aggress Behav. 31:217–227.

Nursing and Midwifery Council. 2018. Future Nurse: Standards of Proficiency for Registered Nurses. https://www.nmc.org.uk/globalassets/sitedocuments/standards-of-proficiency/nurses/future-nurse-proficiencies.pdf

O'Donovan Á, Gijbels H. 2006. Understanding psychiatric nursing care with nonsuicidal self-harming patients in acute psychiatric admission units: The views of psychiatric nurses. Arch Psychiatr Nurs. 20(4):186-192. https://doi.org/10.1016/j.apnu.2005.12.007

Panos PT, Jackson JW, Hasan O, Panos A. 2014. Meta-analysis and systematic review assessing the efficacy of dialectical behavior therapy (DBT). Res Soc Work Pract. 24(2):213-223. https://doi.org/10.1177/104973151350304

Royal College of Psychiatrists. 2017. Standards for inpatient mental health services. https://www.rcpsych.ac.uk/docs/default-source/improving-care/ccqi/quality-networks/learning-disability-wards-qnld/rcpsych-core-standards-inpatient-mental-health-services.pdf?sfvrsn=2d474631_2

Ryle A, Poynton AM, Brockman BJ. 1990. Cognitive-analytic therapy: Active participation in change: A new integration in brief psychotherapy. John Wiley & Sons.

Swinton M, Hopkins R, Swinton J. 1998. Reports of self-injury in a maximum security hospital. Crim Behav Ment Health. 8:7-16.

Thomas M, Isobel S. 2019. 'A different kind of space': Mixed methods evaluation of facilitated reflective practice groups for nurses in an acute inpatient mental health unit. Arch Psychiatr Nurs. 33(6):154-159. https://doi.org/10.1016/j.apnu.2019.08.011

Timberlake LM, Beeber LS, Hubbard G. 2020. Nonsuicidal self-injury: management on the inpatient psychiatric unit. J Am Psychiatr Nurses Assoc. 26(1):10-26. https://doi.org/10.1177/1078390319878878

Wilson C, Rouse L, Rae S, Kar Ray M. 2017. Is restraint a 'necessary evil' in mental health care? Mental health inpatients' and staff members' experience of physical restraint. Int J Ment Health Nurs. 26(5):500-512. https://doi.org/10.1111/inm.12382

Wilstrand C, Lindgren BM, Gilje F, Olofsson B. 2007. Being burdened and balancing boundaries: A qualitative study of nurses' experiences caring for patients who self-harm. J Psychiatr Ment Health Nurs. 14:72–78. https://doi.org/10.1111/j.1365-2850.2007.01045.x

Wright KM. 2021. The therapeutic relationship in nursing theory and practice. Ment Health Pract. 24(5). http://doi.org/10.7748/mhp.2021.e1561