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Research article

A qualitative exploration of undergraduate nursing students' experience of emotional safety for learning during their clinical practice

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ABSTRACT

Background: During their clinical practice, nursing students learn to manage patient safety through their experiences, emotions, and interpersonal relationships.
Objectives: To explore contextual and mechanistic factors that facilitate a sense of emotional safety for learning in nursing students, particularly regarding patient safety events experienced during their placements.
Design: A descriptive qualitative study using narratives and thematic analysis.
Settings: A university in Northern Italy.
Participants: Undergraduate nursing students recruited through purposive sampling.
Methods: Twenty cases relevant to the present study were selected from the "Sharing LearnIng from Practice for Patient Safety" (SLIPPS) project database containing 100 narratives collected using the patient safety learning Event Recording Tool. The data were analysed using thematic analysis according to Braun & Clarke's methodology. The themes that emerged from the thematic analysis were rearranged in Context-Mechanism-Outcomes.
Results: Students identified clinical practice experiences as important occasions for their personal and professional development. Emotional safety and tutoring were the elements that effectively "govern" the students' learning and development process.
Conclusions: Emotional safety is key for nursing students because it enables them to constructively overcome any relational and emotional tensions that may develop during their clinical placements.

1. Introduction

"Sharing LearnIng from Practice for Patient Safety" (SLIPPS) was a collaborative multidisciplinary European project co-funded by the Erasmus+ Program of the European Union (SLIPPS, 2018). SLIPPS aimed to explore students' placement experiences, using them as a basis for research and educational developments (SLIPPS, 2018; Steven et al., 2019; Bagnasco et al., 2021). Fundamental was the development of the 'SLIPPs Learning Event Recording Tool' (SLERT), a pedagogical device and data collection mechanism which enables students to record, reflect on and learn about, patient safety from important learning events experienced in practice placements (SLIPPS, 2018; Steven et al., 2019; Steven et al., 2020; Bagnasco et al., 2021). SLERT data (narratives and demographics), formed the basis for simulation scenarios, seminars and a patient safety game (Steven et al., 2019; Bagnasco et al., 2021), and a rich source of material for further analysis. The project reported in this paper used 'SLIPPs Learning Event Recording Tool' (SLERT) data.

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2. Background

Patient safety is a global priority (WHO, 2021), with nurses considered leaders in ensuring patient safety (Ulrich and Kear, 2018; Fisher and Kiernan, 2019) and education seen as key in developing improved understanding and practice related to patient safety (Cresswell et al., 2013; Bagnasco et al., 2021). Nursing students' "professional knowledge" is the synthesis of academic theoretical knowledge, with practical and organisational skills learned during their clinical internships (Eraut, 2000). In nursing curricula patient safety is seldom present as an independent course, and often integrated with other subjects (Cresswell et al., 2013; Tella et al., 2014; Murray et al., 2018).

Nurse education providers are responsible for designing curricula focusing on graduates' competence for practice, hence the importance of developing courses which attend to patient safety learning and consider contexts and mechanisms that may enhance such learning (Levett-Jones et al., 2020; Bagnasco et al., 2021). It is envisaged that positive patient safety learning outcomes could enhance practice which attributes importance to patient-centred care, clinical thinking, evidence-based practice, preventing, minimizing, and responding to safety events, teamwork (Levett-Jones et al., 2017) and transparency (Fisher and Kiernan, 2019).

Nursing students are influenced both by time spent in class and by academic and practice staff, and other students (Eraut, 2000; Steven et al., 2014; Jackson and Steven, 2020). Thus, clinical practice becomes a place where learning occurs through a 'hidden curriculum' which is everything related to learning in an informal and unwritten way and may include accepted ways of doing, thinking, and speaking; traditions, opinions, practices, and values (Eraut, 2000; Akçakoca and Orgun, 2021). Nursing tutors and mentors become role models both for the positive and negative attitudes students observe in class and during clinical placements (Raso et al., 2019; Morey et al., 2021). Therefore, patient safety 'knowledge' is learned by students often indirectly in the context of clinical placements via the hidden curriculum (Bradley et al., 2011; Cresswell et al., 2013; Bagnasco et al., 2021). In practice settings, students may witness or experience a range of patient safety practices, ranging from best to sub-optimal practice. Therefore, it is important to develop reflective practice, coping skills and moral courage in nursing students, enabling them to question the situations, both good and bad, they experience during their learning experiences (Fisher and Kiernan, 2019; Steven et al., 2020; Jack et al., 2021). Students also require the skills and the abilities to identify errors, report and analyse them (Bagnasco et al., 2021). However, to promote such learning through dialogue involving questioning, challenging, discussion and shared reflection, students need to feel they are in an environment which is conducive - one of 'emotional safety for learning' (Steven et al., 2014; Steven et al., 2020; Allan et al., 2020).

The term 'emotional safety for learning' (Steven et al., 2014; Steven et al., 2018; Allan et al., 2020), describes "a transient contextual state" (Steven et al., 2018 - p.61), that is a learning atmosphere "in which participants feel relaxed and confident to discuss their concerns, experiences, and areas of uncertainty" (Steven et al., 2018 - p.62). Whilst sharing similarities with psychological safety (Frazier et al., 2017), emotional safety for learning differs in that it focuses on learners who are in learning environments for limited periods of time (such as student nurses), while psychological safety often focuses on organisations, work engagement, change and leadership (Frazier et al., 2017). In Steven et al.'s (2018) study, this state of emotional safety for learning appeared particularly important, because participants passed from abstract and theoretical considerations to reflect on their own practical experiences. For nursing students, the nature of educational programmes may also impact on their sense of emotional safety for learning given they entail multiple clinical placements and repeated movement between academic and clinical practice knowledge contexts (Eraut, 2000). Thus, emotional safety for learning, and learning about patient safety may be affected by tensions experienced by students between what is taught in academia, what is experienced in clinical practice, and the hidden curriculum (Steven et al., 2018; Jackson and Steven, 2020; Bagnasco et al., 2021).

It is important to study clinical placements as patient safety learning environments for nursing students (Tella et al., 2015; Murray et al., 2018; Bagnasco et al., 2021). When nursing students experience episodes related to patient safety, they may develop emotions such as fear, anger, or sadness, and depending on their sense of emotional safety for learning may, or may not, feel able to raise and discuss these episodes and emotions (Fisher and Kiernan, 2019). Exploring and analysing the emotions experienced by nursing students will help to understand the context and the mechanisms that enable to achieve a "sense of emotional safety for learning" in nursing students.

2.1. Aim

To explore contextual and mechanistic factors that facilitate a "sense of emotional safety for learning" in nursing students, particularly regarding patient safety events experienced during their placements.

3. Methods

Based on critical realism, realistic evaluation (Pawson and Tilley, 1997; Pawson and Manzano-Santaella, 2012) views social reality as complex and multi-layered. Realistic evaluation employs three interrelated concepts: contexts (C), mechanisms (M), and outcomes (O) to consider questions regarding what works, for whom and in what circumstances (Wong et al., 2013). In relation to emotional safety for learning, 'context' may encompass environments, settings, people and cultural or historical timeframes within which events happened (Steven et al., 2019; Allan et al., 2020). However not always are all such elements pertinent. Mechanisms could include aspects and conditions related to resource availability and "event" processes, for example, behaviours, relationships, and reciprocity (Allan et al., 2020). Thus, people can be both part of the context, whilst their behaviours, attitudes and interactions can also act as mechanisms. Activation of specific mechanisms contribute to creating differing results (Pawson and Manzano-Santaella, 2012; Barry et al., 2019), which could include a sense of 'emotional safety for learning' and patient safety learning (knowledge and/or skills). The presence of a sense of emotional security as an outcome, may be indicated by relevant feelings perceptions, interactions, and experiences.

Thus, a realistic evaluation approach was adopted to explore links between contextual and mechanistic factors in SLIPPs learning event records (SLERs), and emotional safety "outcomes".

3.1. The SLIPPS Learning Event Recording Tool (SLERT)

The SLERT (Steven et al., 2022) facilitates students to record and reflect upon (either negative or positive) events related to patient safety that they observe during their clinical placements and consider significant for their personal and professional development. Section A of the tool asks the student to describe the event and offers a series of prompts for them to consider: people involved, setting, influencing factors, outcomes, etc. Section B assists students to write a reflection, encouraging a focus on emotions, what was learned and elements that may have contributed to the event. Section C collects demographic data: age, year of course and profession. Students also indicate the type of setting, if they know of any reports related to the event and to classify the event (near miss, hazard, good practice, adverse event).

3.2. Design

This study employed secondary qualitative analysis of a section of data collected from undergraduate nursing students via the SLERT. The patient safety events selected from students could either be negative or positive (SLIPPS, 2018).

3.3. Ethical approval

The study was approved by the Local Regional Ethics Committee (Reg. N. 300REG2017). Participation was voluntary with informed consent. Ethical principles were adhered to throughout. No personal identifying data were collected.

3.4. Data collection

Data were collected in one University in Northern Italy between October and November 2017. Undergraduate nursing students were invited to write accounts of the most important patient safety learning event they had experienced during clinical placements. To ensure heterogeneity of the sample, data were collected from first, second, and third-year students doing their placements in different clinical settings. The SLERT was accessible online and had to be fully completed. From the Italian SLIPPS project repository containing a total of 100 SLERT narrative reports, 20 reports were purposively selected in line with the study aim. Initial sampling was undertaken by four researchers who discussed all 100 reports in terms of: their narrative richness regarding the patient safety event; the detail or strength of feelings expressed; and student's reflections regarding their learning experience. Inclusion of a range of placement areas and event types (near miss, good practice, hazard etc) was also considered. Twenty final reports were selected, then considered and agreed by the wider research team.

3.5. Data analysis

Analyses drew on principles of realistic evaluation including the concepts of "Context (C), Mechanism (M) and Outcome (O)" (Pawson and Manzano-Santaella, 2012; Barry et al., 2019) which acted as a theoretical framework and followed Braun and Clarke's thematic analysis (Braun and Clarke, 2006). All researchers familiarised themselves with the data through careful reading of the reports. Data were analysed manually using word documents and Excel. Initial coding was undertaken independently by two researchers, periodically supervised by a third, who intervened in case of divergent opinions. Coding sought to identify and describe aspects perceived as constituting contextual or mechanistic features and their outcomes. All results of coding were then reviewed by a fourth researcher. Team discussions were held to compare, critique and agree aspects identified as external or internal factors related to contexts, mechanisms and outcomes for students. Attending to the temporal aspects of the experiences described in the reports (before, during, after) assisted the researchers in collating codes (Braun and Clarke, 2006) around the three C,M,O themes which developed.

3.6. Trustworthiness

Phased analysis and the involvement of multiple researchers enabled analytical rigour through researcher triangulation and various perspectives being brought to bear on the data. This was not to seek a 'truth' via coder reliability (Braun and Clarke, 2020), but to allow a range of insights to inform the analysis process, thus adding richness, facilitating reflexive challenge, and enhancing credibility (Seale, 1999). The team included experienced Italian and UK researchers, educationalists, Italian nursing students and qualified nurses, this alongside the inclusion of multiple participant perspectives in the quotes further enhances authenticity and credibility. Inclusion of participant characteristics and placement locations may enable a certain amount of transferability, heightened through the use of theoretical abstraction around the concept of emotional safety for learning.

4. Results

4.1. Participants' characteristics

The sample included 20 SLERT reports from male ($n = 6$) and female ($n = 14$) undergraduate Italian adult nursing students, and the total mean age was 28.75 years. Reports selected were broadly representative of undergraduate nursing placements: general medicine units ($n = 7$), general surgery (n = 6), home care ($n = 3$), cardiology (n = 1), neurology (n = 1), maternity (n = 1), and rehabilitation (n = 1). Participants reported various situations classifying events as near miss ($n = 2$), hazard ($n = 10$), good practice (n = 3), and adverse event ($n = 5$).

4.2. Themes

The notion of internal and external circumstances and factors emerged from the analysis, and drawing on realistic evaluation concepts (C,M,O) as a heuristic device, these were developed into three themes. The themes describe circumstances and conditions impacting on students' learning and emotional outcomes during clinical practice: the "Learning context", understood as the environment and circumstances in which the student was immersed; Emotional Safety mechanisms encompass behaviours, attitudes and relationships that prompt reactions and emotions related to 'emotional safety for learning'; Outcomes relate to what the students took from the events.

4.3. Learning context

Analysis indicated the 'context' as encompassing a set of internal and external circumstances in which a learning situation occurs. 'External circumstances' are factors in the environment in which the student has the learning experience and included both physical settings and people present who constitute the environment and 'social framework':

> "on a community placement caring for paediatric oncology patients, in one patients house"
>
> (ID 175)

> "Moving him from the ward to the terrace I used a wheelchair, going out through the terrace doors all went well, however when returning inside the patient fell towards me"
>
> (ID 93)

These may include health professionals, patients, family members, caregivers, students, and trainees:

> "Oral hygiene had never been performed. Some nurses asserted that since he was fasting, he did not need it. Every morning a speech-language therapist came[…] One day[…] the speech-language therapist had to suspend the activity and perform hygiene. […] The nurses […], justified themselves by saying that, due to lack of time, they had asked for the collaboration of family members."
>
> (ID 30)

In addition, the students' internal personal contextual factors may include emotional aspects, expectations, previous knowledge, and experience:

> "Before the event, I was very curious, as I had never seen a transfusion performed before. […] During the procedure I was grateful that the procedures had been done in the best way"
>
> (ID 175)

4.4. Emotional Safety Mechanisms

External factors influenced implementation of mechanisms prompting outcomes. These included: the official professional of reference,

understood as the formal internship tutor or the department coordinator, designated by the university; the mentor, understood as the professional that students identify as their tutors; and the negative or positive examples that the students told.

In each situation, students identified internal personal factors, acting as mechanisms creating processes, behaviours, or activities in response to the event. Some mechanisms were latent and unconscious, and were identified in the interactions, relationships, and activities, which affected students and their competencies:

> "I tell the nurse that I'm concerned about the possible psychophysical involution of the patient. The nurse replies we are in a cardiology unit, and doesn't want to have anything to do with an addict and tells the patient that if he does not want to die, it is better that he does not think of substance abuse. He (the nurse) leaves the room and exclaims that today I have learned to deal with drug addicts. The patient is in clear psychophysical discomfort but is not considered."
>
> (ID 158)

Nursing students are guided by education which promotes critical analysis of the operational context in which they find themselves, and through relationships with their clinical tutors, so they put this formative vision into practice by creating relationships:

> "Asked the nurse if it was better to remove half of one of the two [medication] bottles already during preparation [for medication administration]. I tell her (to the nurse) that delaying the preparation or administration of drug therapy slightly avoids adverse events and harm to patients. She (the nurse) answered that when I become a nurse, and I don't have time, I will not think in this way anymore."
>
> (ID 163)

In both of the previous examples (ID 158 & ID163) the attitudes and reactions of the staff working with the students act as mechanisms influencing the sense of emotional safety for learning that the students feel. The relational mechanisms generated comparisons between the students and the clinical practice tutors, the other nurses with whom they work, other health professionals, the patients they cared for, and their peer group:

> "I apologized to the patient who tried to reassure me."
>
> (ID 93)

> "The next day, the social worker came to talk to us and pointed out that the day before he had made a mistake by suggesting an incorrect mode that had put the patient and health workers at risk."
>
> (ID 90)

In the data it was noticeable how students compared themselves with their peers to feel confident in their knowledge, or spoke to a health professional to obtain feedback about an error or an intervention. Debate with peers mainly occurred when the relationship with clinical educators was missing (i.e., the mechanism was lacking) and it was often challenging to start a conversation:

> "There was no talk about the incident with those directly involved for fear of reproach or reprimand."
>
> (ID 20)

The absence of a relationship with clinical educators (external factor/mechanism), during a patient safety event, generated cognitive responses (internal mechanism) in the nursing student potentially triggered by the emotions experienced. If an error was committed by a clinical educator, the student felt guilty or powerless (emotive outcome):

> "The nurse accidentally pricked the patient another two times, always with the same needle and always laid it down on the bedside table […] I felt a sense of helplessness towards the patient because I could not protect [the patient]."
>
> (ID 57)

This situation allowed the students to learn what puts patient safety at risk, by simply observing what was mistakenly carried out, but at the same time puts at risk the relationship between nursing students and clinical tutors or clinical educators, potentially impacting upon the students' sense of emotional safety. Therefore, the relationships and the comparisons between students, professionals, and clinical tutors directly or indirectly played a fundamental role in learning patient safety correctly and feeling 'safe' to raise issues.

4.5. Outcomes

As academic education and clinical experience progressed, diverse outcomes emerged and were consolidated by students through their intellectual mechanisms. Through their practical training, students needed to understand what it meant to be a nurse, by exploring the "core" of their profession. The students saw themselves as "nurses of the future" and developed their professional identity through clinical practice:

> "Afterwards, I reproached myself for not having the courage to express my thoughts and avoid the incorrect manoeuvre. I couldn't forget the fear and disappointment I felt, and I promised myself to have the courage to express my opinions, even if they are against people who have more experience than me, but realize that they endanger me and the patient."
>
> (ID 90)

The students reflected on their experience, learned through conscious and unconscious mechanisms, and identified what was important for the nursing profession. This episode also highlighted the student's sense of a lack of emotional safety for learning in a particular situation. Thinking back on an experience without the benefit of relationships and comparisons with their peers or a clinical educator, students were limited to learning about patient safety through personal reflection.

> "[professionals] performed a transfusion following the guidelines […]. Our presence had a tranquillizing effect both on the patient and his/her mother. […] important reason for reflection, as I understood how, by ensuring patient safety during delicate procedures, this has a beneficial effect on the emotions of patients and their caregivers."
>
> (ID 175)

One core outcome appeared to be the nurses with a sense of purpose and strong professional identity linked to patient safety:

> "The lesson I have learned is that we must put the patient and his safety at the centre even if it requires more time and energy in a situation of technical difficulty."
>
> (ID 57)

From the students' narratives emerged the shared need to learn how to be a nurse and prepare for a profession that aims to abandon the legacy of task-oriented nursing care and take a new path towards professional autonomy. This dynamic could help both the students and the healthcare professionals to approach the clinical context:

> "Nurses who work with students should take advantage of these opportunities as they could update themselves on new techniques to improve their work rather than just keeping on thinking that students have no experience."
>
> (ID 198)

5. Discussion

In Italy, there has been a significant move towards a culture of patient safety in all healthcare agencies since the beginning of 2007 when

the National Reference System for Patient Safety was established (Italian Ministerial Decree of January 10th January, 2007). This was followed a decade later by a law which recognizes patient safety as a fundamental right (Italian Law of the 8th March 2017). Thus all Italian healthcare agencies are tasked with implementing a culture of patient safety irrespective of whether they are organisations which train health care professionals or not. In Italy, the accreditation of healthcare agencies for clinical training purposes is based on their educational potential, in terms of having appropriate numbers of supervisors for students. However, similarly to many other countries, Italy is suffering a shortage of nurses (Sasso et al., 2017) and this is also undermining patient safety in agencies where students are trained. Therefore, as highlighted in the present study, while academics and clinical supervisors are working closely to raise students' awareness about patient safety and teach them how to identify risks and prevent harm, day to day clinical practice varies and this is the reality that students experience.

In the present study, the employment of realistic evaluation principles (Pawson and Manzano-Santaella, 2012) enabled the conceptualisation of contextual and mechanistic factors, seemingly associated with patient safety outcomes. Contexts and mechanisms were found to be highly important in learning about patient safety, with internal and external contextual factors inhibiting or facilitating learning. Theoretical knowledge is often not visible, verbalised or clearly reflected in clinical practice, creating either a real or perceived mismatch between what is taught and what is observed (a theory-practice gap), which may negatively impact on nursing students' professional preparation (Murray et al., 2018). Such 'gaps' may also generate tensions between academic, organisational and practice contexts (Murray et al., 2018; Eraut, 2000). Tensions are also perceived by students when they feel unsupported in practice settings and suffer discontinuity between the academia and practice (Steven et al., 2014). This dissonance may exacerbate the perceived theory-practice gap because students are not offered the opportunity to apply in practice what they have learned in theory (Murray et al., 2017). Despite previous studies having identified the importance of reducing tensions between academic, organisational and practice contexts this issue persists (Steven et al., 2014; Murray et al., 2017; Jackson and Steven, 2020). Such tensions and related dissonance may negatively impact the students' sense of Emotional safety for learning (Jackson and Steven, 2020). Contexts are closely related to mechanisms, such as students' emotions and their approach to their preparation as future health professionals (Morey et al., 2021). When uncertainty permeates the students' learning experience (before and during clinical placements), and their relationships with nurses and patients, this generates inhibitory mechanisms, which may undermine any sense of emotional safety, and have knock-on effects for clinical education outcomes (Fisher and Kiernan, 2019). Thus, in clinical contexts that do not foster a favourable 'emotionally safe' learning climate, students may end up feeling very vulnerable and lose self-confidence in their ability to put into practice what they have learned (Fisher and Kiernan, 2019; Jackson and Steven, 2020). Furthermore, it is important to ensure that students are regularly signposted to relevant country specific professional body policies (e.g., Federazione Nazionale degli Ordini delle Professioni infermieristiche in Italy or its equivalent, the Nursing and Midwifery Council in the UK) regarding patient safety, which may enhance their confidence in raising concerns or asking questions in practice.

A safe learning climate encompassing constructive relationships between nurses and nursing students is fundamental for developing students' professional identity (Fisher and Kiernan, 2019) and improving patient safety learning outcomes (Akçakoca and Orgun, 2021; Steven et al., 2014). Therefore, raising the awareness of practice and academic educators (mentors, tutors, and supervisors) regarding the influence and impact of emotional aspects of learning is crucial. Furthermore, educators may require updating or instruction around recognising and reacting to verbal and non-verbal signs of unease or distress from students, and techniques for relationship building. Tutors and clinical supervisors need to be carefully selected and prepared with provisions made for long term consistent updating through appropriate continuing professional development activities (Murray et al., 2017, Fisher and Kiernan, 2019; Jackson and Steven, 2020).

During clinical education, the interplay between contexts and mechanisms contributes to the development of knowledge about patient safety. If students during clinical practice have a positive learning experience, they will develop skills and professional competence with an interactivity mechanism based on emotional experience. Students' emotions are influenced not only by the learning outcomes but also by their social and professional identity (Jackson and Steven, 2020). Professional identity is important, not only for educational processes, but also for the transition from student to newly qualified nurse. Thus, the role of emotions in patient safety education should not be underestimated. Indeed, a decade of literature has placed increasing attention on the importance of perceiving, understanding, and managing emotions in relation to nursing education (Foster et al., 2017; Steven et al., 2014), again highlighting the importance of creating contexts in which students feel 'emotionally safe'.

Patient safety issues have a strong emotional impact on nursing students, and we suggest academic institutions should invest more in training educators and clinical supervisors on emotional intelligence and on the creation of emotional safety for learning within all learning environments, to avoid patient safety being addressed by nursing students only through a hidden curriculum (Akçakoca and Orgun, 2021).

5.1. Limitations

Although the SLIPPS project was European, only the Italian narratives were used to conduct the analysis present in this secondary study. This may have limited the results. However, the narratives from the various European contexts yielded similar contents (Bagnasco et al., 2021). In addition, to avoid cultural and role bias during the analyses, the research team consisted of two undergraduate nursing students not directly involved in the data collection, a nursing doctoral student, and two nurse academics who were experts in qualitative research. In addition, to ensure the accuracy of the data, the quotations were translated by a researcher who graduated in languages and two training experts.

6. Conclusions

Nursing students deserve to be educated in clinical placements with high-quality learning environments, they need positive role models to emulate, and a safe and blame-free educational environment that enables them to feel 'emotionally safe'. The results of this study add to current knowledge about the emotional learning mechanisms of nursing students, which could help clinical supervisors improve the quality of their educational relations by valuing also the students' emotions triggered during their clinical placements.

CRediT authorship contribution statement

Alison STEVEN: Conceptualization, Methodology, Analysis, Writing-Original draft preparation and overall supervision.

Silvia ROSSI: Conceptualization, Analysis, Writing-Original draft preparation.

Nicoletta DASSO: Data curation, Writing-Original draft preparation.

Francesca NAPOLITANO: Data curation, Analysis, Writing-Original draft preparation.

Alessandro GROSSO: Writing-Original draft preparation.

Silvia VILLA: Data curation, Writing-Original draft preparation.

Giuseppe ALEO: Data curation, Reviewing and editing final draft.

Gianluca CATANIA: Reviewing and editing final draft.

Loredana SASSO: Conceptualization, Methodology, and overall supervision.

Milko ZANINI: Data curation and overall supervision.

Annamaria BAGNASCO: Conceptualization, Methodology, Analysis, and overall supervision.

Declaration of competing interest

The authors have no conflict of interest to declare.

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Ethical approval

The study was approved by the Liguria Regional Ethics Committee (Reg. N. 300REG2017). Participation was voluntary with informed consent. Ethical principles were adhered to throughout. No personal identifying data were collected.

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