

## Study Protocol

# The implementation of CLES+T questionnaire in the Italian nursing bachelor's degree program for the evaluation of clinical learning environment by nursing students: a study protocol

Pasquale Fava<sup>1,2</sup> , Laura Carocci<sup>1,2</sup>, Carfora Gianluigi<sup>2,3</sup>

<sup>1</sup> Local Health Authority of Latina, Rome, Italy

<sup>2</sup> Sapienza University of Rome, Rome, Italy

<sup>3</sup> Psychiatry Service, Umberto I Hospital, Rome, Italy

## Findings:

*This study protocol describes the application of the CLES+T questionnaire in some Bachelor School of Nursing for the evaluation of clinical training environments.*

## ABSTRACT

**BACKGROUND:** The practical training process represents a crucial step in the university process for students on degree courses in the health and medical professions. This discussion is emphasized for nursing students, who, for each stage of the internship, may have the opportunity to enrich themselves in practical terms and to be able to compare themselves with the reality of work physically. Based on this discussion, it is essential to carry out a periodic evaluation of the working realities.

**OBJECTIVES:** The main objective of this work is to implement an evaluation tool for the clinical training environment to ensure feedback for both the healthcare facility under consideration and to improve the quality of university clinical training.

**METHOD:** This research study protocol envisages an observational study as the type of study, with recruitment of nursing degree courses to subsequently include students from the various academic years. The study involves the application of the CLES+T questionnaire in participating degree courses, initially to be able to have an overall vision and subsequently to be able to implement it as a permanent evaluation tool.

**EXPECTED RESULTS:** It is expected, from the study described in this protocol, that the participating population will consider the questionnaire as a way of critically analysing the clinical environment. A broad participation of the nursing student population and good feedback of the examined environments is expected.

**KEYWORDS:** CLES+T, Nursing education, Evaluation, Nursing Degree, Clinical Learning Environment

### Corresponding author:

Pasquale Fava: [pasquale.fava@uniroma1.it](mailto:pasquale.fava@uniroma1.it)  
Ospedale Santa Maria Goretti,  
via Lucia Scaravelli 04100 Latina (LT)



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Protocollo di studio

## L'implementazione del questionario CLES+T nei corsi di laurea in infermieristica italiani per la valutazione dell'ambiente clinico d'apprendimento da parte degli studenti: un protocollo di studio

Pasquale Fava<sup>1,2</sup> , Laura Carocci<sup>1,2</sup>, Carfora Gianluigi<sup>2,3</sup><sup>1</sup> ASL Latina, Roma<sup>2</sup> Sapienza Università di Roma, Roma<sup>3</sup> Servizio di Psichiatria, Ospedale Umberto I, Roma

### Riscontri:

*Questo protocollo di studio descrive l'applicazione del questionario CLES+T in alcuni corsi di Laurea in Infermieristica per la valutazione degli ambienti di formazione clinica.*

### ABSTRACT

**BACKGROUND:** Per gli studenti dei corsi di laurea delle professioni sanitarie e mediche, il processo di formazione pratica rappresenta una tappa fondamentale del percorso universitario. Questo discorso si accentua per gli studenti di infermieristica, che per ogni fase di tirocinio possono avere l'opportunità di arricchirsi dal punto di vista pratico e di potersi confrontare fisicamente con la realtà lavorativa. Sulla base di questa discussione, è fondamentale effettuare una valutazione periodica delle realtà lavorative.

**OBIETTIVI:** L'obiettivo principale di questo lavoro è l'implementazione di uno strumento di valutazione dell'ambiente di formazione clinica per garantire un feedback sia per la struttura sanitaria in esame sia per migliorare la qualità della formazione clinica universitaria.

**METODO:** Il protocollo di ricerca prevede come tipologia di studio uno studio osservazionale, con reclutamento dei corsi di laurea in infermieristica per poi includere gli studenti dei vari anni accademici. Lo studio prevede l'applicazione del questionario CLES+T nei corsi di laurea partecipanti, inizialmente per avere una visione d'insieme e successivamente per valutarne l'implementazione come strumento di valutazione permanente.

**RISULTATI ATTESI:** Dallo studio, descritto in questo protocollo, ci si aspetta che la popolazione partecipante consideri il questionario come un modo per analizzare criticamente l'ambiente clinico. Ci si aspetta un'ampia partecipazione degli studenti di infermieristica e un buon feedback degli ambienti esaminati.

**KEYWORDS:** CLES+T, Formazione infermieristica, Valutazione, Corso di laurea in infermieristica, Apprendimento clinico

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## BACKGROUND AND RATIONALE

Clinical training in the nursing profession, commonly defined as "practical" clinical training, has always had high importance in the context of academic training. The training internship not only constitutes a means to have a first approach and a plenary vision of the professional world that one wishes to undertake, but it allows a practical implementation of the theoretical notions addressed during frontal (or distance) lessons and, therefore, an initial development of practical skills. Scientific literature has long proven the high importance of this university training step through clinical studies spread throughout the world. It must be taken into consideration that university practical training for nurses has undergone changes and improvements over time to accommodate intrinsic incidental factors, such as disabilities, Specific Learning Disorders (SLD), needs of the student population, and more; and extrinsic incident factors, such as social events of various kinds, as well as emergency contexts such as that of the 2020 Sars-Cov2 pandemic(1,2).

In Italy, this phase of nurse training has continued over time, from training through regional training schools to the present day. Historically, a major change and increase in the quality standards of practical training for nursing students occurred in 1992 with legislative decree no. 502(3) (subsequently modified with Legislative Decree 517/1999(4)). With this legislation, a process of agreement was created between the Italian regions and universities, aiming to

maintain a high quality of services and care provided and supervise and optimize university training processes in the healthcare sector(5). Specifically, in the practical training, nursing staff adequately evaluate nursing students through ad hoc objective evaluation questionnaires when they carry out practical activities. This activity is at the expense and discretion of each university body.

However, as far as the practical training environment is concerned, there is no uniform institutional-level evaluation process to verify whether the internship environment suits the student population and whether students can benefit from such training environments. This lack creates the need to consider the student population's subjective point of view to evaluate the internship environment to strengthen or intervene where necessary in training activities in healthcare facilities. A clinical training environment should reflect specific characteristics: physical space, psychosocial factors and interactions, organizational culture, and teaching, and learning components. These attributes often determine the achievement of learning outcomes and student self-confidence(6).

In terms of this conceptual background, several instruments have been developed in the last two decades for this objective. From 1995, Dunn and Burnett(7) to 2008, with Saarikoski et al.(8), six assessment tools were developed (one of them was updated). All these tools analyze the primary constructs for the assessment of clinical learning. However, at the same time, they have several limitations: they partially intercept the presence of all



the elements capable of influencing the effectiveness of clinical learning, stimulate little critical evaluation of learning experiences, do not differentiate the different models of tutoring, and they do not measure the quality of environments in hospital settings. Of these tools introduced, some have been translated into Italian(9). The CLES+T (Clinical Learning Environment and Supervision + Nurse Teacher) by Saarikoski et al.(8) is currently considered a gold standard in the literature, validated and translated in multiple international settings, and analyses the topic based on 34 items. This questionnaire structures the item analysis using a 5-step continuum scale.

In Italy, several study groups have used CLES+T to implement research studies on students' perceptions of the apprenticeship training environment. In 2013 at the university of Modena and Reggio Emilia, the CLES+T was administered to a sample of 179 students; from this study, it was found that their views on the clinical environment corresponded similarly to their final internship evaluation, that the instrument in question can be helpful in the exploration of clinical environments and for highlighting potential criticalities, while as a limitation the researchers reiterated the lack of comparison with other university realities(10). Already in the past, in a validation study of the assessment tool in the Italian language, it was emphasized that the tool has international consistency and culturally sensitive characteristics, as well as the need for analysis of more clinical realities where the assessment tool can be applied. (11)

## AIM

The objectives of the study described in this protocol are as follows:

- Permit all the nursing students of each study academic year to give their P.O.V. (point of view) about the clinical learning environment.
- To have an overall image of the nursing students' perception of the clinical learning environment, from a single bachelor's degree (between each study academic year) until to compare with all the bachelor's degrees that join this study protocol.
- To investigate and evaluate all the clinical learning environments that will be included in the study protocol and, where necessary, intervene with proactive methods for developing and improving the workplace for future students.



## Design

The type of study that will be performed is an observational study, where all the nursing bachelor's degrees that participate could give their students the CLES+T questionnaire. For this study protocol, the SPIRIT Statement for Clinical Trial Protocol) was applied (12).

## METHODS

### Study setting

The study will be carried out on all those nursing bachelor's degrees who will declare their participation in the project, which presents an affiliated healthcare structure as a clinical learning environment.

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 Ospedale Santa Maria Goretti,  
 via Lucia Scaravelli 04100 Latina (LT)



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## Eligibility criteria

*Inclusion criteria:* All bachelor nursing students can participate in the study, regardless of their academic year.

*Exclusion criteria:* Nursing students next to graduation cannot participate due to their inability to have other experiences in the clinical learning environment.

## Who will take informed consent?

The informed consent, where they are being collected, will be conserved by the study researchers, as dictated by the Good Clinical Practices.

## Sampling

For this study protocol, all nursing bachelor's degree students who want to participate can be part of the sample population. Randomization of the sample is not envisaged as there will have to be a breakdown and analysis of the data for each academic year and each educational and clinical step.

## Recruitment

The first step involves sending an invitation to participate in the study protocol to various nursing degree courses, first on a regional level and later going to an extra-regional level, to extend the participant population and broaden the comparison process with other universities and healthcare institutions.

The student population's recruitment phase will be done with the contribution of the bachelor's director and didactic director of the nursing bachelor degree involved.

## Data collection and management

### Plans for assessment and collection of outcomes

Once the student population has been recruited for the various academic years, the CLES+T questionnaire (Italian version) is administered with accompanying framing questions for the sample population (general data, information on the placement step...) at the end of each placement step. This process is carried out for an entire academic year to evaluate all the students and all the clinical learning environments involved.

### Plans to promote participant retention and complete follow-up

As a plan to promote participant retention and to complete the survey, the role of the entire teaching staff is essential in order to understand the importance of the participation of all the nursing students in the research activity as an instrument of development and improvement for the clinical learning environment and the nursing bachelor's degree, not only as a tool for the students' perception.

### Data management and analysis

The data collected will be managed and stored via a cloud system (using GOOGLE FORM with the university account/email), which will also be used to administer the questionnaire and catalog the data for subsequent statistical analysis. Only fully completed questionnaires will be considered in the analysis. Statistical analysis of the survey data will be





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performed using open-source analysis software JAMOVI and JASP(13–15).

## Results

It is expected from this study protocol that the participating population will consider the questionnaire as a way of critically analyzing the clinical environment. A broad participation of the nursing student population and good feedback of the examined environments is expected.

## Found Declarations

This research received no specific funding or grant from public, commercial, or not-for-profit funding agencies.

## Competing interests

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

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**Corresponding author:**

*Pasquale Fava: [pasquale.fava@unimiroma1.it](mailto:pasquale.fava@unimiroma1.it)  
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via Lucia Scaravelli 04100 Latina (LT)*



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**Risultati**

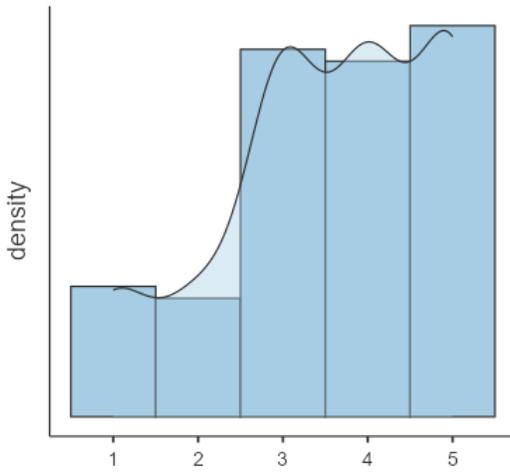
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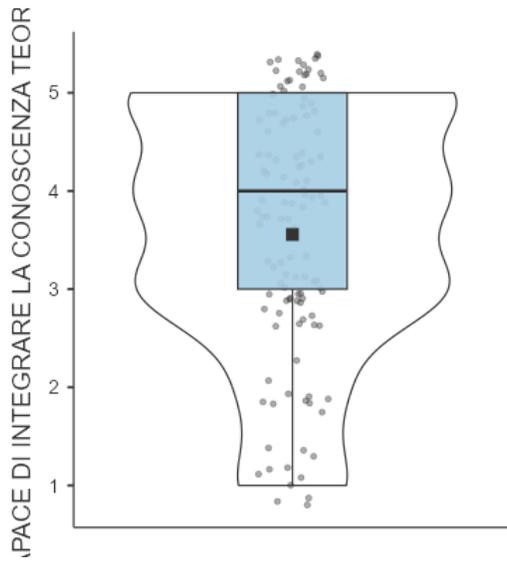
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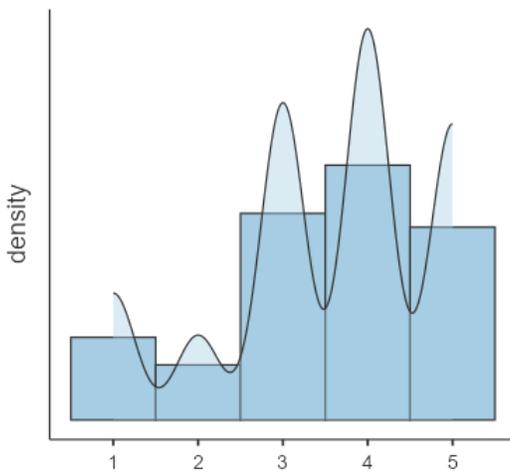
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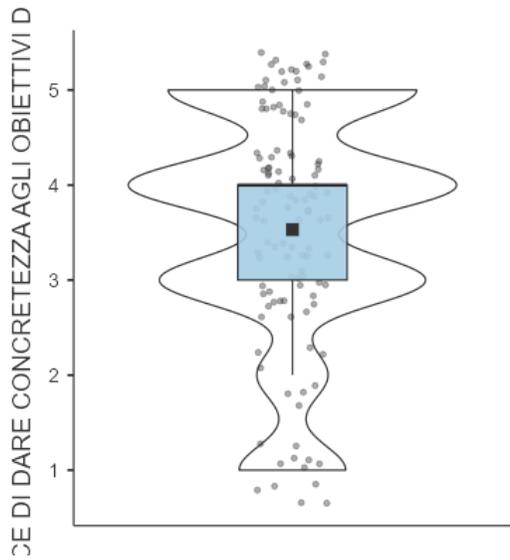
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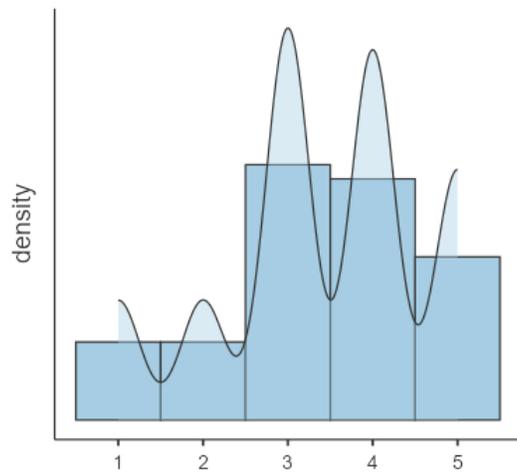
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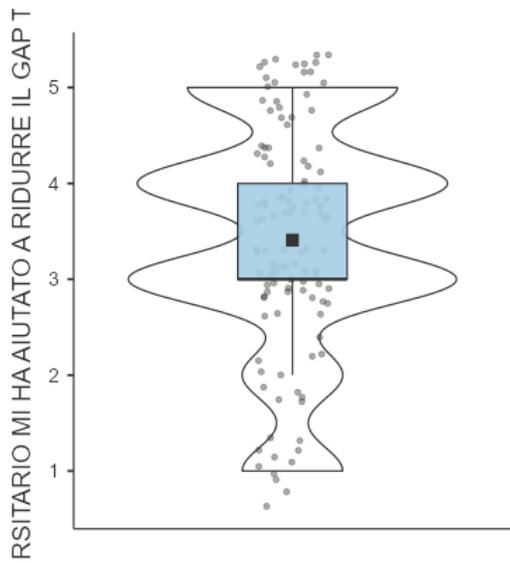
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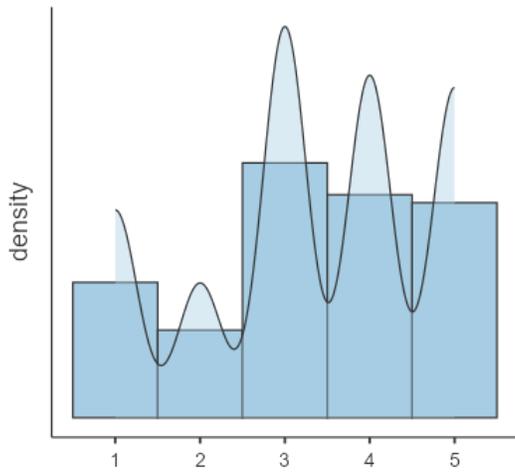
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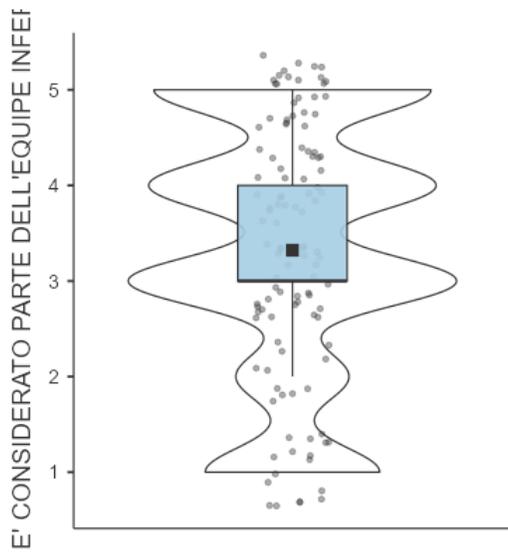
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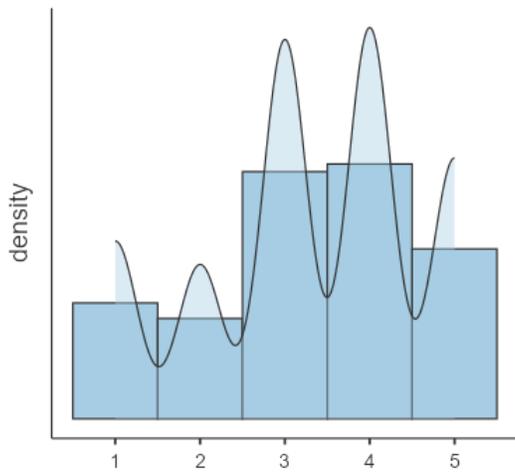
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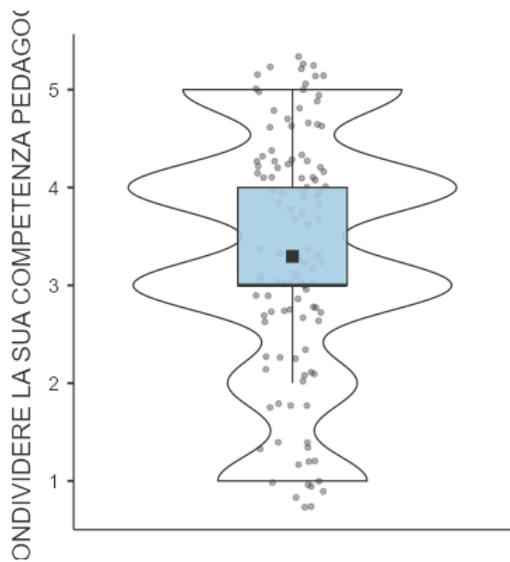
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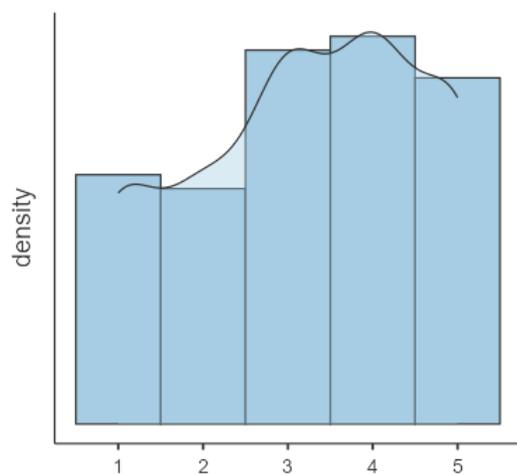
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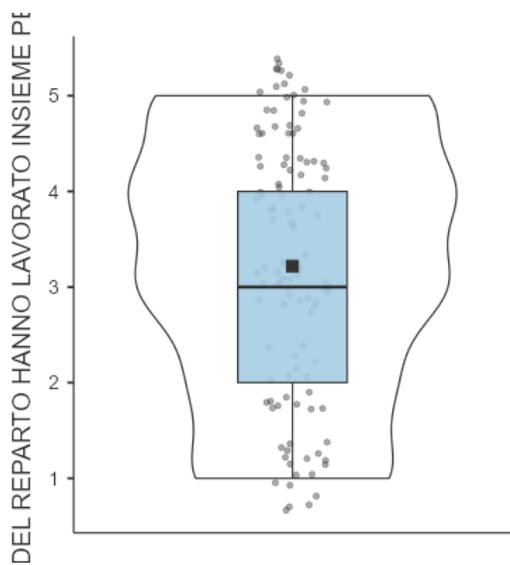
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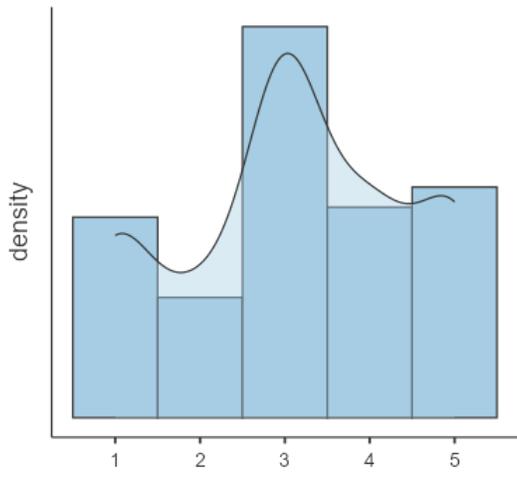
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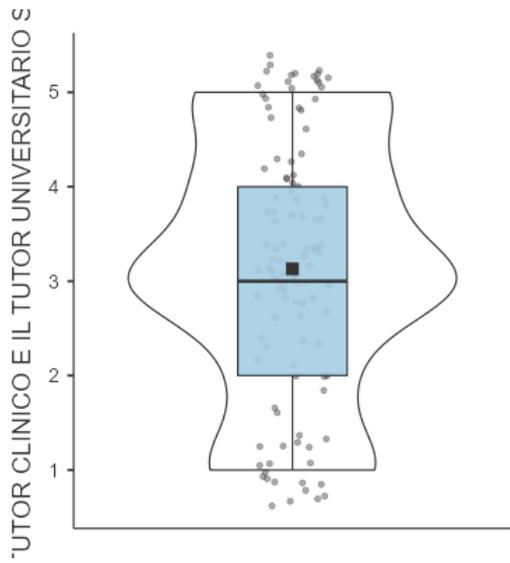
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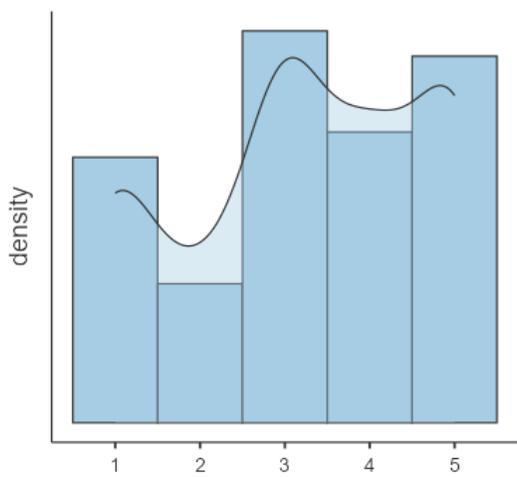
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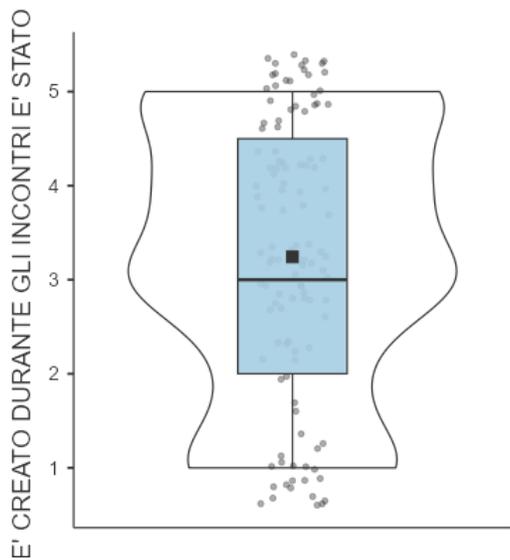
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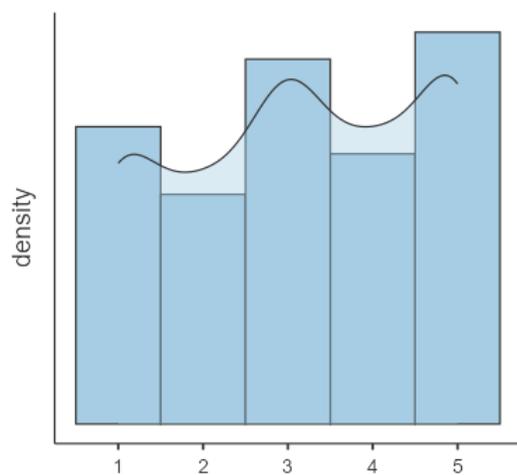
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