Impact of Clinical Supervision in Nursing on Self-Care Evaluation and Intervention

IMPACTO DA SUPERVISÃO CLÍNICA EM ENFERMAGEM NA AVALIAÇÃO E INTERVENÇÃO NO AUTOCUIDADO

Impacto de la Supervisión Clínica de Enfermería en la Evaluación e Intervención del Autocuidado

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How to cite this article: Rocha I, Carvalho AL, Pinto CB, Rodrigues A, Rocha V. Impact of clinical supervision in nursing on self-care evaluation and intervention. Rev baiana enferm. 2021;35:e43356.

Objective: to assess the agreement between researcher, nurses and medical records in relation to self-care dependency levels before and after the implementation of the SafeCare Model and to evaluate the nursing interventions related to self-care provided before and after the implementation of the SafeCare Model. Method: quasi-experimental study. For data collection, in 2017 and 2019, a self-care assessment instrument was used before and after the implementation of the model of clinical supervision in nursing (SafeCare). Results: 216 patients participated in the study. Agreement between researcher and nurses increased from pre-test to post-test in hygiene (k=0.79), self-feeding (k=0.73) and self-transferring (k=0.79). In nursing interventions, there was agreement between all evaluators in the post-test, unlike the pre-test, when there was no agreement between researcher and nurses/medical records in the intervention “promoting self-care: hygiene. Conclusion: the agreement between forms filled out individually by the groups increased significantly in most of the self-care measures assessed and, in the interventions, provided after the implementation of the SafeCare Model.


Objetivo: avaliar concordância, relacionada ao grau de dependência no autocuidado, entre pesquisador, enfermeiros e prontuários antes e após implementação do Modelo SafeCare e avaliar as intervenções de enfermagem relativas ao autocuidado prescritas, antes e após implementação do Modelo SafeCare. Método: estudo quase experimental. Para coleta dos dados, em 2017 e 2019, utilizou-se instrumento de avaliação do autocuidado antes e após implementação do Modelo de supervisão clínica em enfermagem (SafeCare). Resultados: participaram 216 pacientes. A concordância entre pesquisador e enfermeiros aumentou do pré-teste para o pós-teste nos autocuidados higiene (k=0,79), alimentar-se (k=0,73) e posicionar-se (k=0,79). Nas intervenções de enfermagem, verificou-se existência de concordância entre todos os avaliadores no pós-teste, ao contrário do pré-teste em que não existiu concordância na intervenção “incentivar o autocuidado: higiene” entre pesquisador e enfermeiros/prontuários. Conclusão: a concordância entre formulários preenchidos pelos grupos individualmente aumentou significativamente na maioria dos autocuidados avaliados e das intervenções prescritas após implementação do Modelo SafeCare.


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Objetivo: analizar la concordancia relacionada con el grado de dependencia en el autocuidado, entre el investigador, las enfermeras y las historias clínicas antes y después de la implantación del Modelo SafeCare y evaluar las intervenciones de enfermería con respecto al autocuidado, prescritas antes y después de la implantación del Modelo SafeCare. M étodo: estudio cuasi-experimental, en el que se utilizó, para la recolección de datos entre 2017 y 2019, un instrumento para evaluar el autocuidado antes y después de la implementación del Modelo de supervisión clínica en enfermería (SafeCare). Resultados: participaron 216 pacientes. La concordancia entre el investigador y las enfermeras aumentó desde la prueba previa a la prueba posterior en los cuidados personales: higienizarse \((k=0,79)\), alimentarse \((k=0,73)\) y posicionarse \((k=0,79)\). En las intervenciones de enfermería, hubo acuerdo entre todos los calificadores en la prueba posterior, a diferencia de la prueba previa, en la que no hubo acuerdo en la intervención “fomento del autocuidado: higienización” entre investigador y enfermeros/registros. Conclusión: la concordancia entre los formularios rellenados por los grupos de forma individual aumentó significativamente en la mayoría de los autocuidados evaluados y en las intervenciones prescriptas tras la implementación del Modelo SafeCare.


Introduction

Clinical supervision in Nursing is considered essential for quality professional practice\(^{(1-2)}\). It can be defined as a formal follow-up that, through reflection and analysis of clinical practice, aims to promote autonomous decision-making by nurses, enhancing the safety of care and the protection of patients\(^{(3)}\).

Clinical supervision promotes greater awareness of professional responsibility, favoring professional development and evidence-based practice and reflecting, at the institutional level, in an environment conducive to the well-being of professionals and in a reduction in incidents and complaints\(^{(2,4)}\). Thus, due to the advantages of clinical supervision, its implementation and maintenance are justified\(^{(3)}\).

There are several models of clinical supervision in nursing, but, so far, all of them have been faced with the difficulty of responding to the diversity of contexts of practice and the potential of the different nursing teams\(^{(6)}\). In addition, they usually do not present operationalization in relation to the participants and quantity and content of clinical supervision, which hinders its subsequent replication\(^{(7)}\).

The SafeCare Model, created by a group of Portuguese researchers from the SafeCare Project, emerged as a response to these knowledge gaps. Its purpose is to contribute to the promotion of safety and quality of nursing care and to provide nurses with a set of skills that allow them to achieve professional excellence, identifying interventions that can be implemented in the different contexts of care\(^{(4)}\). In addition, the model also aims to respond to the current needs related to the logic of health services, such as, for example, those arising from the implementation of quality systems\(^{(6)}\). It is also important to emphasize that there is a shortage of studies addressing clinical supervision through a quantitative methodology\(^{(2)}\). As the instruments used in the implementation of the SafeCare Model are quantitative, it goes against what the evidence suggests.

The SafeCare Model has four steps: situation diagnosis; identification of needs in clinical supervision; implementation of the SafeCare Model; and evaluation of results.

The first stage (situation diagnosis) considers the visible needs in the context of care to define, along with the nurse managers (director nurse, nursing supervisors and head nurses), the variables to be studied. In this stage, the self-care assessment instrument is applied. In this stage, the self-care assessment instrument is also applied.

The second stage (identification of needs in clinical supervision) is carried out through meetings with nurses to identify which aspects, in their opinion, need to change: they can be internal, of a personal nature, or external, related to the organization of the service and the provision of care. This step is essential, as it allows the Model to be adapted to the context in which it is being implemented.
The third stage (implementation of the SafeCare Model) is the intervention, in which group supervision sessions are held with the objective of promoting reflection and discussion on the needs in clinical supervision identified by nurses and providing training on the variables defined in the situation diagnosis step.

Finally, the fourth step (evaluation of results) aims to assess the effectiveness of the implementation of the SafeCare Model, reapplying the self-care assessment instrument used in step 1.

Self-care is central in the intervention of nurses. It is one of the areas that enhance health gains and is recognized as an indicator of quality of care and as a quality criterion for professional practice. According to the International Classification for Nursing Practice (ICNP), self-care is defined as “[…] self performing activity: taking care of what is needed to maintain oneself; keep oneself going and handle basic individual and intimate necessities and activities in daily life”, including, among others, bathing, self-feeding, and self-transferring.

In the current context, it is important that the dependency evaluation considers each self-care domain, in order to plan individualized care and define and implement realistic interventions that are adequate to the patients’ needs. Therefore, the use of clinical supervision strategies in nursing is extremely important, as, by acquiring the knowledge and skills that allow them to identify the nursing diagnoses and interventions that are more fit to the needs of patients, nurses can develop a more meaningful nursing practice and provide a more efficient recovery. It is also important to emphasize that clinical supervision in nursing is beneficial for nursing work, as it increases nurses' professional satisfaction and enhances teamwork.

Based on information from the self-care assessment instruments, the objectives of the study are: to assess the agreement between researcher, nurses and medical records in relation to self-care dependency levels before and after the implementation of the SafeCare Model and to evaluate the nursing interventions related to self-care provided before and after the implementation of the SafeCare Model.

**Method**

This is a quantitative, quasi-experimental, pre-test and post-test study, without a control group. The study population is composed of patients admitted to two medical services in a hospital in Northern Portugal. A sample of 216 patients was obtained using non-probabilistic convenience sampling. The patients selected by the nurses had to be hospitalized in one of the two medical services where the research occurred.

Data collection was carried out using a form – Self-Care Assessment Instrument (IAC) – designed for this purpose and based on the “Self-Care Dependency Evaluation Form”. The IAC form was created as there was no instrument that would enable the evaluation of agreement on the level of dependency and on nursing interventions related to self-care, hygiene, self-feeding and self-transferring, as indicated by the researcher, nurses, and medical records. After the elaboration of the form, meetings with nursing professors and specialists in information systems and reconstruction of autonomy were held, and the professionals understood that the IAC could be used as a data collection instrument (content validity). The form was applied to 20 nurses who worked in services other than those selected for the implementation of the SafeCare Model. These nurses did not propose any changes. The form is divided in two parts: socio-demographic and clinical characterization of the patients; and assessment of the level of dependency and the nursing interventions related to self-care, hygiene, self-feeding, and self-transferring. The form also includes 156 items. The answers are scored on a 4-point Likert scale, in which 1 corresponds to “independent” and 4 to “highly dependent”, with an adequate internal consistency (α=0.99), measured by the Cronbach's alpha coefficient.

The form was applied in two different moments: before and after the implementation of the SafeCare Model (pre-test and post-test). The pre-test occurred from October to December 2017, and the post-test occurred from January to
March 2019. The data collection procedure was identical in the pre-test and in the post-test.

Each nurse was asked to select two patients among those under their care in that shift to participate in the study and to fill in the form for these same patients.

For each patient, three forms were completed: the researcher completed, individually, the form for each patient; the nurse completed, individually, the form for each patient; and the researcher also filled out a form for each patient, with the transcription of the information registered by the nurses in the medical record on the nursing diagnoses and the nursing interventions provided to the patient in SClínico®. The Hospital Health Care System (SClinico®) is an evolving information system present in practically all hospitals in Portugal and common to all health care providers (nurses, doctors and other health care professionals)(14). SClinico® provides for the standardization of medical records, guaranteeing the standardization of information and the homogeneity of practices in the National Health Service, which results in better support, assistance, and follow-up for the patient(14).

Once completed, the forms were grouped so that, for the same patient, there was an analysis of agreement between the data obtained from the three sources (researcher, nurses, medical records).

The SafeCare Model was implemented from January to December 2018. Each nurse was asked to complete the clinical supervision contract to formally assume a commitment. First, training in Clinical Supervision was provided to all nurses, addressing, among others, the following topics: models of clinical supervision with an emphasis on the SafeCare Model, supervisory relationship, learning and personal and professional development, quality of care, and safety of the client. Then, the clinical supervisors and supervised nurses were identified. Along with the head nurses, supervision teams were created, with a ratio of one clinical supervisor nurse to eight to ten supervised nurses(4). Group supervision sessions were scheduled, with a monthly session per supervision team, lasting 90 minutes. The theme of self-care was addressed with special emphasis: the self-care measures of hygiene, self-feeding, self-transferring; the clinical supervision needs identified by nurses, such as, for example, communication and management of emotions; and the medical records (SClinico®).

**Flowchart 1 – Steps of the study**

Source: Created by the authors.
For data analysis, descriptive statistics and Cohen’s Kappa coefficient of agreement were used in the Statistical Package for Social Sciences (SPSS) version 25.0. The level of significance was set at 5%. To interpret Cohen’s Kappa coefficient of agreement, the cutoff points indicated by McHugh\(^{15}\) were considered: values between 0 and 0.20 indicate non-existent agreement; values between 0.21 and 0.30 indicate minimum agreement; values between 0.40 and 0.59 indicate weak agreement; values between 0.60 and 0.79 indicate moderate agreement; values between 0.80 and 0.90 indicate strong agreement; and values above 0.90 indicate an almost perfect agreement.

The study was authorized by the Board of Directors and the Health Research Ethics Committee of the hospital on July 14, 2017 (No. 71/CE/JAS).

**Results**

The sample was composed of 216 patients, 123 men (56.9%) and 93 women (43.1%). The age of the participants ranged between 23 and 96 years, with a mean age of approximately 71 years (M=71.44; SD=14.16). Patients had a wide range of medical diagnoses. The disease categories with the highest frequency of cases were circulatory system diseases (n=99; 45.83%), respiratory system diseases (n=42; 19.44%), neurological system diseases (n=19; 8.80%) and urinary system diseases (n=15; 6.94%).

Regarding the self-care measure “hygiene”, there was agreement between the three observations in the pre-test and in the post-test, but, in both, the agreement was higher between the researcher and the medical records (pre-test: k=0.72; post-test: k=0.83) and lower between the researcher and the nurses (pre-test: k=0.65; post-test: k=0.68). The agreement between the researcher and the medical records increased from weak in the pre-test (k=0.53) to moderate in the post-test (k=0.68), and the agreement between nurses and medical records increased from moderate in the pre-test (k=0.72) to strong in the post-test (k=0.83).

Regarding the self-care measure “self-feeding”, there was agreement between the three observations in the pre-test and in the post-test, but, in both, the agreement was lower between the researcher and the medical records (pre-test: k=0.57; post-test: k=0.63). The agreement between the researcher and the nurses increased from weak in the pre-test (k=0.59) to moderate in the post-test (k=0.63), as did the agreement between the researcher and the medical records (pre-test: k=0.57; post-test: k=0.63). Agreement between nurses and medical records remained moderate at both times (pre-test: k=0.71; post-test: k=0.72).

Finally, in the self-care measure “self-transferring” there was agreement between the three observations in the pre-test and in the post-test, but, in both, the agreement was higher between nurses and medical records (pre-test: k=0.74; post-test: k=0.80). The degree of agreement between the three sources of data collection increased from pre-test to post-test.

Table 1 shows the results regarding the agreement between the three sources of data collection (researcher, nurses, medical records), obtained using Cohen’s Kappa coefficient of agreement, regarding the self-care dependency of patients in the pre-test and in the post-test.

**Table 1 – Agreement between researcher, nurses, and medical records in the evaluation of the self-care dependency of patients (hygiene, self-feeding, and self-transferring) in the pre-test and post-test. Porto, Portugal – 2017-2019. (N=216)**

| Degree of dependence of patients | Cohen’s Kappa | | | |
|----------------------------------|---------------|---------------|---------------|
|                                  | Researcher-Nurses | Researcher-Records | Nurses-Records |
| Pre-test                         |                |                |               |
| Hygiene                          | 0.65*          | 0.53*          | 0.72*          |
| Self-feeding                     | 0.59*          | 0.57*          | 0.71*          |
| Self-transferring                | 0.56*          | 0.55*          | 0.74*          |

(continued)
Impact of clinical supervision in nursing on self-care evaluation and intervention

Table 1 – Agreement between researcher, nurses, and medical records in the evaluation of the self-care dependency of patients (hygiene, self-feeding, and self-transferring) in the pre-test and post-test. Porto, Portugal – 2017-2019. (N=216)

<table>
<thead>
<tr>
<th>Degree of dependence of patients</th>
<th>Cohen's Kappa</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Researcher-Nurses</td>
</tr>
<tr>
<td>Hygiene</td>
<td>0.79*</td>
</tr>
<tr>
<td>Self-feeding</td>
<td>0.73*</td>
</tr>
<tr>
<td>Self-transferring</td>
<td>0.79*</td>
</tr>
</tbody>
</table>

Source: Created by the authors.

* p < 0.05

Regarding the self-care measure “hygiene”, it was found that, for the nursing intervention “promoting self-care: hygiene”, there was only agreement between nurses and medical records (k=0.54) in the pre-test, while in the post-test, there was an agreement between the three observations. The agreement between nurses and medical records increased from weak in the pre-test (k=0.54) to almost perfect in the post-test (k=0.92). In the nursing intervention “assessing self-care: hygiene”, there was agreement between the three observations in the pre-test and in the post-test, but, in both, the agreement was lower between the researcher and the medical records (pre-test: k=0.40; post-test: k=0.52). The agreement between the researcher and the nurses remained moderate from the pre-test (k=0.70) to the post-test (k=0.78) and the agreement between the researcher and the medical records remained weak from the pre-test (k=0.40) to the post-test (k=0.52). The agreement between nurses and medical records increased from weak in the pre-test (k=0.53) to moderate in the post-test (k=0.79).

Regarding the self-care measure “self-feeding”, it was found that, for the nursing intervention “observing the meal”, there was agreement between the three observations in the pre-test and in the post-test, but, in both, the agreement was higher between the researcher and the nurses (pre-test: k=0.55; post-test: k=0.72), and lower between the researcher and the medical records (pre-test: k=0.26; post-test: k=0.38). The agreement between the researcher and the nurses increased from weak in the pre-test (k=0.55) to moderate in the post-test (k=0.72), as did the agreement between nurses and medical records (pre-test: k=0.46; post-test: k=0.61). The agreement between the researcher and the medical records remained minimal before and after the intervention (pre-test: k=0.26; post-test: k=0.38). In the nursing intervention “assessing self-feeding”, there was agreement between the three observations in the pre-test and in the post-test, but, in both, the agreement was higher between the researcher and the nurses (pre-test: k=0.63; post-test: k=0.71), and lower between the researcher and the medical records (pre-test: k=0.28; post-test: k=0.37). The agreement between the researcher and the nurses remained moderate from the pre-test (k=0.63) to the post-test (k=0.71), as did the agreement between the nurses and the medical records (pre-test: k=0.62; post-test: k=0.62). The agreement between the researcher and the medical records remained minimal from the pre-test (k=0.28) to the post-test (k=0.37).

Finally, in the self-care measure “self-transferring”, for the nursing intervention “promoting self-transferring”, there was only agreement between the researcher and the nurses (k=0.62) and between the nurses and the medical records (k=0.44) in the pre-test. In the post-test, there was agreement between the three observations. The agreement between the researcher and the nurses decreased from moderate in the pre-test (k=0.62) to weak in the post-test (k=0.59), while the agreement between the nurses and the medical records increased from weak in the pre-test (k=0.44) to

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strong in the post-test \((k=0.80)\). In the nursing intervention “assessing self-transferring”, it was found that there was agreement between the three observations in the pre-test and in the post-test, but, in both, the agreement was lower between the researcher and the medical records (pre-test: \(k=0.34\); post-test: \(k=0.58\)). Agreement between the three observations increased from pre-test to post-test.

Table 2 presents the results regarding the agreement between the three sources of data collection (researcher, nurses, medical records), obtained using Cohen’s Kappa coefficient of agreement, regarding the nursing interventions in the pre-test and post-test. It is worth noting that it was not possible to assess the agreement in all nursing interventions included in the form due to the small sample size (number of responses obtained) for some of these interventions.

<table>
<thead>
<tr>
<th>Table 2 – Agreement between researcher, nurses, and medical records in the assessment of nursing interventions related to self-care (hygiene, self-feeding, and self-transferring) in the pre-test and post-test. Porto, Portugal – 2017-2019. (N=216)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Nursing interventions related to self-care</strong></td>
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<tr>
<td></td>
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<tr>
<td><strong>Pre-test</strong></td>
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<tr>
<td>Hygiene</td>
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<td>Self-feeding</td>
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<td>Self-transferring</td>
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<tr>
<td><strong>Post-test</strong></td>
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<tr>
<td>Hygiene</td>
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<td>Feeding</td>
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<td></td>
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<tr>
<td>Self-transferring</td>
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</table>

Source: Created by the authors.

* \( p < 0.05 \)

Discussion

Regarding the first objective of this study, there was an increase in the agreement between the three observations regarding the dependency of patients in all self-care measures (except between the researcher and nurses in the self-care measure “hygiene”, and between nurses and medical records in the self-care measure “self-feeding”, in which agreement remained moderate at both times). The results obtained are similar to those found in another study \(^{16}\), which found that, after the implementation of a model of clinical supervision with 111 patients in a hospital in Northern Portugal, there was an increase in the agreement between specialist nurses and generalist nurses regarding the level of dependency.

These results prove that the implementation of the SafeCare Model was effective, as nurses began to identify the level of self-care dependency of patients in a more consistent way, agreeing with the researcher, which is considered the gold standard. This result may indicate that the clinical supervision strategies used in the SafeCare Model were also effective in promoting critical reflection and, consequently, producing a change in nurses’ practices related to self-care.

As for the second objective of this study, it was found that significant agreement between the three sources of data collection was not
always present before the intervention. In fact, the only sources of data collection that always showed agreement in the pre-test were nurses and medical records. In turn, in the post-test, there was significant agreement between the three sources of data collection and in all nursing interventions. These results are similar to those of another study\(^{(16)}\), which found an increase in the number of correspondences in the selection of interventions by specialist nurses and generalist nurses after the implementation of a clinical supervision model.

In the present study, it was also observed that, in the post-test, there was an increase in the agreement between the researcher and the nurses in all nursing interventions which had lower than moderate agreement in the pre-test, with the exception of the nursing intervention “promoting self-transferring”, in which the agreement between these two sources of data collection decreased after the intervention. This result indicates the need to increase awareness among nurses to request the active participation of patients when transferring them.

Therefore, it can be said that there was, for the most part, an increase in the agreement between the three sources of data collection in the identification of self-care dependency and in the selection of nursing interventions after the implementation of the SafeCare Model. Thus, it is possible to conclude that the model allowed nurses to critically reflect on the planning of care, identify aspects that needed change and change their way of conceptualizing care, making it more meaningful for patients and directed towards their real needs.

The present study has some limitations that restrict and make it difficult to interpret and extrapolate the results. The sampling technique and the fact that data was collected in only two medical services of the same hospital are a limitation to the generalization of the results. In addition, the absence of a control group is also considered a limitation, as the control group allows establishing causality through comparison, ensuring that the differences observed between the experimental group and the control group can be attributed to the intervention performed\(^{(17)}\).

Another limitation is related to the fact that the IAC is a self-reporting form, which can lead to biases related to social desirability, random responses, or others. It should also be noted that it was not possible to assess agreement in all nursing interventions included in the form due to the small sample size (number of responses obtained) for some of the interventions.

Nevertheless, this study addresses important and innovative aspects. In fact, the evidence suggests that, although there are models of clinical supervision with a positive impact on health institutions\(^{(7)}\), on the work of nurses\(^{(1)}\) and on the care provided to patients\(^{(18)}\), their operationalization is not clear, hindering its replication in other contexts\(^{(2,19)}\). By addressing the operationalization and impact of the implementation of the SafeCare Model in the context of self-care, this study stands out for its originality. In addition, there are few quantitative studies addressing clinical supervision in nursing\(^{(2)}\). The present study aimed to fill this gap, providing an important contribution to the advancement of scientific knowledge in the area of clinical supervision in nursing. The SafeCare Model emerges as an instrument that allows the achievement of skills that enable improvements in nurses’ professional practice and in the identification of areas of intervention, specifically in the context of identifying diagnoses and nursing interventions.

**Conclusion**

Considering the objectives defined for this study, it was found that the implementation of the SafeCare Model increased agreement in the identification of the self-care dependency by the researcher, nurses, and medical records, as well as in nursing interventions, with the exception of the intervention “promoting self-transferring”. The SafeCare Model, by using clinical supervision strategies appropriate to the context of its implementation, enabled the development of skills to assess and intervene in self-care, which were observed in the results of this study. In
short, the SafeCare Model, by allowing nursing care to be more adequate to the real needs of patients, increases quality of care and can lead to significant gains in clinical practice.

Collaborations:

1 – conception, design, analysis and interpretation of data: Inês Rocha, António Luís Carvalho, Cristina Barroso Pinto, Agostinho Rodrigues e Vânia Rocha;

2 – writing of the article and relevant critical review of intellectual content: Inês Rocha, António Luís Carvalho, Cristina Barroso Pinto e Vânia Rocha;

3 – final approval of the version to be published: Inês Rocha, António Luís Carvalho, Cristina Barroso Pinto, Agostinho Rodrigues e Vânia Rocha.

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Received: February 5, 2021
Approved: May 30, 2021
Published: July 22, 2021

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