

Systematization of Nursing Care in Wound Treatment

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Abstract — The present study aims to investigate, in the scientific literature, the Systematization of Nursing Care in Wound Treatment. This is a bibliographic study, systematic-review type. The search for articles was performed; published in the past ten years (2010 to 2020); in Portuguese, English and Spanish; fully available. The following data platforms were consulted: BDENF, LILACS, MEDLINE and SciELO. The data were organized and presented in figures and tables. The results of the study revealed that, of the 506 studies found, 15 were available at BDENF; 29 at LILACS; 459 at MEDLINE; and 3 at SciELO; however, after reading, only those that met the inclusion and exclusion criteria described in the methodology remained, totaling 6 studies. After reading the selected studies, the articles were categorized into thematic clippings, classifying the knowledge produced about the theme. This study revealed the importance of nurses in the clinical care of wounds, and their search to specialize in the care of the patient. An essential professional in the prevention of the disease, restoration of health, patient education and dressing.

Keywords— Nursing Care, Patient Care Planning, Wounds and Injuries, Therapeutics.

I. INTRODUCTION

With numerous causes, wounds are defined with the “discontinuity of a body tissue”, and may be associated with metabolic problems, circulatory impairment, continued pressure, in addition to traumas, surgical procedures and therapeutic measures such as catheter implantations. Skin lesions represent a public health issue, of worldwide scope. In Brazil, approximately 3% of the country’s population have some type of injury [1].

The treatment of wounds was historically inserted as a practice of the nurse class. The care of injuries is attributed to the nurse, as legally established by Resolution of the Federal Nursing Council 501/2015. The treatment of

wounds is a specialization of Nursing, recognized by the Brazilian Society of Dermatological Nursing (SOBEND) and the Brazilian Society of Stomatherapy (SOBEST), which guarantees autonomy to the specialized professional to work at the various levels of complexity in health [2, 3].

As the basis of this type of care, we have the Systematization of Nursing Care (SNC) and the 5 stages of the Nursing Process (NP), which support the organization and clinical reasoning of the nursing professional, aiming to provide comprehensive and holistic care to patients affected with skin injury. And for this care to be recognized internationally, there is a recommendation to standardize vocabulary and classification system [4].

To this end, the Taxonomies NANDA I (North American Nursing Diagnosis Association), NIC (Nursing Interventions Classification) and NOC (Nursing Outcomes Classification) are tools that enable this systematization in accordance with current legislation. This allows nurses to present real or potential problems, in addition to therapeutic possibilities and evaluation parameters of the interventions performed, at the level of nursing competence internationally [3].

The elaboration of this study is associated with the need to explore comprehensively this public health issue that represents so much complexity and challenges, whether in the hospital or outpatient context and that has nursing as the protagonist of the process. The aim of this study is to investigate, in the scientific literature, the Systematization of Nursing Care in wound treatment.

This is a bibliographic study, integrative-review type, in which search for articles for methodological development was carried out and the following steps were covered: elaboration of the guiding question and objective of the study; definition of inclusion and exclusion criteria for scientific production; search for scientific studies at databases and virtual libraries; analysis and categorization of the productions found; results and discussion of the findings [5].

For the survey of the guiding question, the PICO strategy was applied (P-population/patient, I-intervention/interest, C-comparison/Absence and O-outcome). Strategy based on the segmentation of the hypothesis, which aims to collect data systematically [6].

Thus, the following research guiding question was defined: “How is the systematization of nursing care performed for wound treatment?” (Figure 1).

II. METHODS

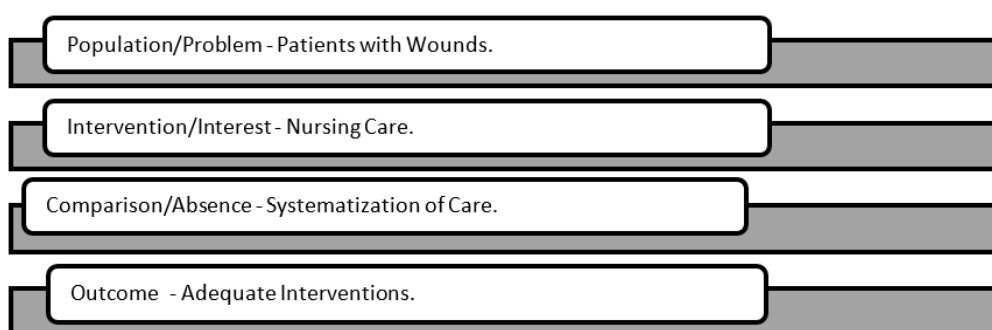


Fig.1: Definition of the guiding question according to the PICO strategy, Recife, Pernambuco, Brazil, 2020.

Source: Created by the authors.

For the selection of articles, the following inclusion criteria were used: be an original article, published in Portuguese, English or Spanish, in the past ten years (2009 to 2019) and be fully available. Theses, dissertations and monographs, editorials, case studies, integrative, systematic and conceptual reviews, as well as repeated studies found at more than one database or virtual library, as well as articles that did not answer the guiding question, were excluded.

Data collection occurred during January and March 2020 at the following databases and virtual libraries: Nursing Database (BDENF), Latin American and Caribbean Health Sciences Literature (LILACS), Medical Literature Analysis and Retrieval System Online (MEDLINE) and Scientific Electronic Library Online Library (SciELO). Those databases and libraries were chosen because they comprise the published literature, as well as Brazilian technical-scientific references in public

and collective health. The descriptors were crossed. “Nursing Care”, “Patient Care Planning”, “Wounds and Injuries” present at the base of Health Sciences Descriptors (DeCS) combined with the Boolean operators AND and OR, performing joint and individual search for possible differences to be corrected.

The selection of studies was based on the Preferred Reporting Items for Systematic Reviews and Meta-Analyses – PRISMA, a checklist with 27 items and a four-step flowchart, with the objective of assisting in the development of articles [7]. At first, duplicate studies were eliminated by reading titles and abstracts. Those pre-selected were fully read in order to verify those that met the guiding question and the inclusion/exclusion criteria. The final sample was then constructed with studies relevant to the pre-established criteria (Figure 2).

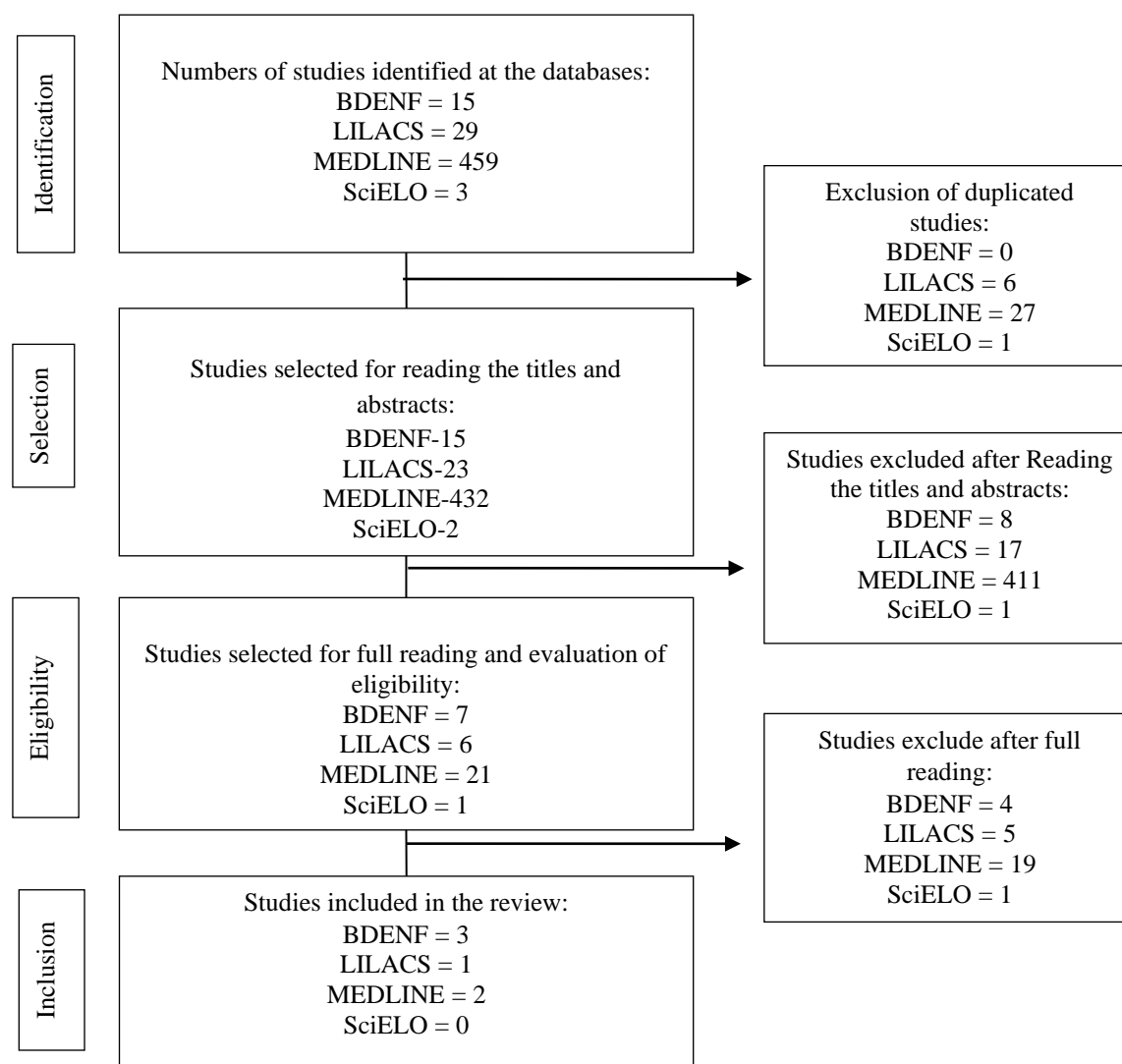


Fig.2: Flowchart of the selection of studies according to the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA 2015). Recife, Pernambuco (PE), Brazil, 2020.

Source: Created by the authors.

The level of evidence of the selected studies was determined according to the Agency for Healthcare Research and Quality [8]: Level I- Meta-analysis of multiple controlled studies; Level II - Individual studies with experimental design; Level III- Study with a quasi-experimental design as a study without randomization with a single pre- and post-test group, time series or case-control; Level IV - Study with non-experimental design as correlational and qualitative descriptive research or case studies; Level V- Case report or data obtained systematically, of verifiable quality or program evaluation data; and Level VI- Opinions of reputable authorities based on clinical competence or opinion of expert committees, including interpretations of information not based on research.

In order to simplify the understanding of the publications selected in this integrative review, the data were organized in figures and tables, exposed descriptively.

III. RESULTS

Of the 506 studies found, 15 were available at BDENF; 29 at LILACS; 459 at MEDLINE; and 3 at SciELO; however, after reading, only those that met the inclusion and exclusion criteria described in the methodology remained, totaling 6 studies.

Table 1 highlights the selected publications according to the databases analyzed.

Table 1: Selected publications on the topic, organized according to Databases/Virtual Library. Recife, Pernambuco (PE), Brazil, 2020.

Database/ Virtual Library	Articles Found	Articles Selected for Full Reading	Final Sample
BDENF	15	7	3
LILACS	29	6	1
MEDLINE	459	21	2
SciELO	3	1	0

Source: Created by the authors.

In table 2, the studies surveyed are arranged highlighting their titles, authors, years of publication, design, location and language. Most studies were national, published in Portuguese in the past 4 years (n=4), an article was international and published in Spanish.

Table 2: Results found in studies according to title, database, authors, year of publication, design, location and language. Recife, Pernambuco (PE), Brazil, 2020.

	Title/Database	Author/Year	Design	Location/Language
A	Nurses' performance in the care of skin lesions (BDENF).	(CAUDURO et al., 2018).	Descriptive and exploratory study with a qualitative approach.	Rio Grande do Sul (Portuguese).
B	Nursing diagnoses in outpatient care for patients with wounds: cross-mapping (BDENF).	(OLIVEIRA et al., 2017).	Retrospective observational, cross-mapping research.	Rio de Janeiro (Portuguese).
C	Nursing care for adult patients: prevention of cutaneous mucous lesions and patient safety (BDENF).	(BUSANELLO et al., 2015).	Descriptive and exploratory study with a qualitative approach.	Rio Grande do Sul (Portuguese).
D	Classifications of nursing interventions and outcomes in patients with wounds: cross-mapping (LILACS).	(OLIVEIRA et al., 2016).	Retrospective observational, cross-mapping research.	Rio de Janeiro (Portuguese).
E	Care for people with oncological wounds: permanent nursing education mediated by educational technologies (MEDLINE).	(VICENTE et al., 2019).	Qualitative, exploratory-descriptive research.	Santa Catarina (Portuguese).
F	The advanced practice nurse in the adequacy of care of chronic complex wounds (MEDLINE).	(JIMÉNEZ-GARCÍA et al., 2019).	Quasi-experimental pre-post-study without a control group.	Andalusia (Spanish).

Source: Created by the authors.

After reading the selected studies, the articles were categorized into thematic clippings, classifying the knowledge produced about the theme, in levels of evidence, mostly level IV- Study with non-experimental design as descriptive correlational and qualitative research or case studies [8].

The main findings, arranged in the objectives and conclusions, are directly associated with nurses' actions in the care of skin lesions as shown in table 3.

Table 3: Results found in the studies according to the levels of evidence, objectives and conclusions. Recife, Pernambuco (PE), Brazil, 2020.

	Level of Evidence	Objective	Conclusion
A	IV	To know the role of nurses in caring for patients with skin lesions.	There was improvement of nurses, through permanent education, teamwork and the assistance of the Commission for Prevention and Treatment of Wounds, a strategy for skin care stimulating clinical reasoning through discussions of case studies, analyzing the nurses' behavior and directing professional practice towards collective, dialogic and critical care.
B	II	To cross-map the terms identified in the medical records of patients with wounds according to the NANDA International Nursing Diagnosis Classification.	Cross-mapping allowed the identification of the main nursing diagnoses in patients with wounds, indicating the possibility of developing a clinical protocol, which will contribute to a nursing advanced practice.
C	IV	To identify nursing care for the prevention of cutaneous-mucosal injuries in adult inpatients and possible difficulties found by professionals to promote those actions.	The care provided for the prevention of cutaneous-mucosal lesions is mostly in accordance with what the literature recommends. However, the meaning of patient safety is restricted to care with the prevention of falls and the prevention of pressure ulcers.
D	II	To cross-map the terms referring to nursing interventions and outcomes in the medical records of patients with wounds compared to the classification of nursing interventions and outcomes.	The cross-mapping of nursing interventions and outcomes in patients with wounds suggested the inclusion of taxonomies to adapt to outpatient care.
E	IV	To recognize the educational technologies used in the process of updating nurses in the care of people with head and neck cancer.	The technologies should be integrated with permanent education, in order to achieve the various benefits recognized in professional practice.
F	III	To determine the impact of nurses with advanced practice in the care of chronic wounds in the adequacy of treatments for patients with chronic wounds and in the consumption of dressings in the districts where they were implemented.	The prevalence of chronic wounds during the 2 years of implantation decreased by half, a correct adaptation of the training and consultancy plan was achieved, managing to rationalize health expenses and an efficient service to people with chronic wounds.

Source: Created by the authors.

IV. DISCUSSION

The treatment of wounds aims to accelerate healing, consists of a complex approach of the individual who is injured and needs treatment, being more than a simple execution of the dressing, and the nurse has autonomy for evaluation and intervention in this situation, and must structure his/her actions in the Nursing Process, as well as document it. Technical-scientific knowledge is required to address the needs of patients with wounds. Therefore, to organize nursing care, it is essential to use the Systematization of nursing care [9, 10].

The nurse's knowledge of acting before people with wounds is protected by several authors as an evaluation, in which systematic steps ordered by a routine are preferably used, almost always by the Nursing Process. Thus, the evaluation is seen as support for the elaboration and development of an appropriate strategic treatment plan, bringing together a broad therapeutic approach with varieties of methods conducive to perform it, providing effective healing and comfort for the patient [11, 12, 13].

The construction of the Systematization of nursing care is also composed of the elaboration of diagnoses, which adds the imprescindibility of modifying the focus for the patient as a whole, to plan effective actions that can enable an improvement in quality of life. Therefore, it is essential that the nursing professional responsible for the basic team be trained with essential knowledge about wound care, providing individualized and comprehensive care to the patient and his/her family. As it is a complex process, it is crucial that nurses perform systematized evaluations, with different prescribed frequency of type of dressings ideal for tissue reconstitution, considering the environmental and physiological factors that interfere in the evolution, in quality and healing time [10, 14].

The nurse should perform a thorough evaluation of the wounds, since their characteristics will guide the selection of treatment. For this reason, the professional must have technical and scientific knowledge to be able to point out the appropriate individualized therapeutic option. Studies have shown low knowledge about the evaluation and treatment of injuries, which may end up harming the nursing process in the early stages. Inadequate treatment can cause the development of infections, delay the healing process, increase the length of hospitalization, the use of multiple antimicrobial therapies, compromise patient safety, reduce the quality of life of individuals and burden the costs of care [15].

Under the interventionist view of nursing, the information collected should be recorded in specific documents or systems of each institution, aiming at

improving care, maintaining multidisciplinary communication and conferring security of the client's records, containing the essential findings for treatment. The records also contribute to the continuation of care after the individual returns to his/her residence, considering several aspects, such as the socioeconomic, family and nutritional situation that directly influence the care plan, especially in the acquisition of medications and dressing materials, which portrays the vulnerability of the person [13, 16].

Studies reveal a scarcity of nursing documentation in different aspects of care. Referring to wound care, a study in an Intensive Care Unit showed that in 65% of the wound records there was no type of tissue, in 85% the type of exudation was missing, in 100% there was no measurement of the wound and in 80% there was no record of the characteristics of the margins and the bed of the wounds [15].

The guidelines are of great significance in outpatient care, especially in the care of wounds. In services where patients receive care weekly, or fortnightly, the guidelines on the procedures for performing the dressings at home are duties of the nursing team. Through them, self-care can be provided and patients can be empowered by the necessary subsidies for their own care. Among the guidelines, we highlight factors associated with the periodicity of dressing change according to the product in use and measures to control infection in wounds [1].

Therefore, nursing professionals are among the members of the multidisciplinary team most requested to perform care for people with wounds. As for institutional protocols, its importance is perceived for the team, because, in addition to contributing to the members of the skin/wound committee, they can provide security to other professionals who answer the client, guiding people with wounds regarding the importance of continuity of treatment [10, 15].

V. CONCLUSION

The integrative review elaborated allowed detecting the apprehension with the treatment of wounds, since they can lead to a high degree of dependence and alter the patient's quality of life. Thus, it was observed the importance of nurses in directing their care to the person individually, preserving his/her autonomy in an attempt to contribute positively to the treatment. However, there is a scarcity of studies valuing the professional, essential in prevention, health promotion and ongoing education.

The execution of the steps of the SNC, especially collection of data, diagnoses and interventions, tends to provide a greater promotion of good outcomes. Therefore, this study revealed the importance of nurses in the clinical care of wounds and their search to specialize in care for the patient. An essential professional in the prevention of the disease, restoration of health, patient education and dressing.

REFERENCES

- [1] Oliveira, F.P., Oliveira, B.G.R.B., Santana, R.F., Silva, B.P., Candido, J.S.C. (2016). Classificações de intervenções e resultados de enfermagem em pacientes com feridas: mapeamento cruzado. *Rev. Gaúcha Enferm., Porto Alegre*, 37(2), e55033. doi: 10.1590/1983-1447.2016.02.55033.
- [2] Conselho Federal de Enfermagem. Resolução COFEN-0501/2015. (2015). Norma técnica que regulamenta a competência da equipe de enfermagem no cuidado às feridas e dá outras providências. Brasília: COFEN. Disponível em: <http://www.cofen.gov.br/wpcontent/uploads/2015/12/ANEXORResolução501-2015.pdf>.
- [3] Alvarenga-Martins, N., Arreguy-Sena, C., Alves, M.S., Moura, D.C.A. (2015). Teoria de Intersistemas de Bárbara Artinian na Consulta de Enfermagem Junto à Pessoa Com Lesão de Pele. *Rev. Cuidarte Enfermagem*, [S.L.], 9(1), 9-17.
- [4] Oliveira, F.P. de, Oliveira, B.G.R.B., Santana, R.F., Silva, B.P., Candido, J.S.C., Tosin, M.H.S., Oliveira, B.G.R.B. (2017). Diagnósticos de enfermagem na assistência ambulatorial ao paciente com ferida: mapeamento cruzado [nursing diagnoses in ambulatory care for wound patients. *Revista Enfermagem Uerj*, [S.L.], 25, e20028. doi: <http://dx.doi.org/10.12957/reuerj.2017.20028>.
- [5] Soares, C.B., Hoga, L.A.K., Peduzzi, M., Sangaleti, C., Yonekura, T., Silva, D.R.A.D. (2014). Integrative Review: Concepts and Methods Used In Nursing. *Revista da Escola de Enfermagem da Usp*, [S.L.], 48(2), 335-345. doi: <http://dx.doi.org/10.1590/s0080-6234201400002000020>.
- [6] Santos, M.A.R.C., Galvão, M.G.A. (2014). A elaboração da pergunta adequada de pesquisa. *ResidPediatri.*, Rio de Janeiro, 4(2), 53-56.
- [7] Galvão, T.F., Pansani, T.S.A., Harrad, D. (2015). Principais itens para relatar Revisões sistemáticas e Meta-análises: A recomendação PRISMA. *Epidemiol. Serv. de Saúde*, Brasília, 24(2), 335-342. Tradução para o idioma português do documento: Moher D., Liberati A., Tetzlaff J., Altman D.G., The PRISMA Group. Preferred Reporting Items for Systematic Reviews and Meta-Analyses: The PRISMA Statement. Disponível em: www.prisma-statement.org.
- [8] Agency For Health Care Research And Quality. (2016). (Rockville) (Org.). Quality Improvement and Monitoring at your Fingertips. Disponível em: <https://www.qualityindicators.ahrq.gov/>.
- [9] Jones, C. M., Rothermel, A.T., Mackay, D.R. (2017). Evidence-Based Medicine. *Plastic and Reconstructive Surgery*, [S.L.], 140(1), 201-216. Ovid Technologies (Wolters Kluwer Health). Disponível em: <http://dx.doi.org/10.1097/prs.0000000000003486>.
- [10] Costa, J. dos S., Rodrigues, I.D.C.V. (2018). Importância da Assistência de Enfermagem no Tratamento de Feridas Complexas: Uma Revisão Integrativa. In: II Congresso Norte-Nordeste de Feridas e Coberturas - Hotel Best Western Premier - Maceió/AL.
- [11] Ferreira, D.P.C., Bezerra, P.B., Duque, A.F.C., Silva, V.B., Castanha, E.R. (2016). Contribuições do projeto terapêutico singular na anemia falciforme em um hospital regional: relato de caso. *Revista de Enfermagem UFPE online*, [S.L.], 10(7), 2650-2655. ISSN 1981-8963. doi: 10.5205/reuol.9106-80230-1-SM1007201644.
- [12] Zangenah, S., Abbasi, N., Andersson, A.F., Bergman, P. (2016). Whole genome sequencing identifies a novel species of the genus *Capnocytophaga* isolated from dog and cat bite wounds in humans. *Scientific Reports*, [S.L.], 6(1), 1-10. Springer Science and Business Media LLC. doi: <http://dx.doi.org/10.1038/srep22919>.
- [13] Machado, F.S., Costa, A.E.K. (2017). Perspectiva do enfermeiro frente ao cuidado de enfermagem no tratamento de feridas em hospitais. *Journal of Epidemiology and Infection Control*, [S.L.], 7(3), 134-139. ISSN 2238-3360.
- [14] Favreto, F.J.L., Betioli, S.E., Silva, F.B., Campa, A. (2017). O Papel do Enfermeiro na Prevenção, Avaliação e Tratamento das Lesões Por Pressão. *Revista Gestão & Saúde, Paraná*, 2(17), 37-47. ISSN 1984 – 8153.
- [15] Galdino Júnior, H., Tipple, A.F.V., Lima, B.R., Bachion, M.M. (2018). Processo de Enfermagem na Assistência a Pacientes com Feridas em Cicatrização por Segunda Intenção. *Cogitare Enfermagem*, [S.L.], 23(4), 1-11. Universidade Federal do Paraná. doi: <http://dx.doi.org/10.5380/ce.v23i4.56022>.
- [16] Nilsson, D., Ängarne-Lindberg, T. (2016). Children who lose a parent suddenly: what kind of assistance do they feel provides relief? A content analysis study of children and their parents. *Child Care In Practice*, [S.L.], 22(2), 197-209. Informa UK Limited. doi: <http://dx.doi.org/10.1080/13575279.2015.1118014>.