Brazilian Journal of Physical Therapy 25 (2021) 450–459

abrapg·ft
Associação Brasileira de Pesquisa e Pós-Graduação em Fisioterapia

Brazilian Journal of Physical Therapy

https://www.journals.elsevier.com/brazilian-journal-of-physical-therapy

ORIGINAL RESEARCH

Functioning of women in the postpartum period: an International Classification of Functioning, Disability and Health-based consensus of physical therapists

Élida Raquel Freitas Neri Bulhões[a], Thaissa Hamana De Macedo Dantas[a], Jardelina Hermecina Dantas[a], Íris Nascimento De Souza[b], Luciana Castaneda[b], Diego De Sousa Dantas[a,c,*]

[a] *Programa de Pós-graduação em Ciências da Reabilitação, Universidade Federal do Rio Grande do Norte (UFRN), Santa Cruz, RN, Brazil*
[b] *Federal Institute of Education, Sciences and Technology of Rio de Janeiro, Rio de Janeiro, RJ, Brazil*
[c] *Programa de pós-graduação em Fisioterapia, Universidade Federal de Pernambuco, Recife, PE, Brazil*

Received 26 July 2019; received in revised form 23 November 2020; accepted 1 December 2020
Available online 16 December 2020

KEYWORDS
Disability;
Health status indicators;
Puerperium;
Rehabilitation

Abstract
Background: Physical therapists provide treatment for pain and other common complaints for women in the postpartum period, thereby contributing to the improvement of their functioning. However, before applying any interventions, physical therapists should assess their patients to identify the desired therapeutic goals. In this context, the International Classification of Functioning, Disability and Health (ICF) may be a useful tool for documenting functioning data and operationalizing collaborative goal setting.
Objective: To identify ICF categories and the respective domains that should be considered in the evaluation of women postpartum.
Methods: A consensus-building, three-round e-mail survey was conducted using the Delphi method. The sample included Brazilian physical therapists with expertise in women's health. Meaningful content was analyzed in accordance to the ICF linking rules. The kappa coefficient and content validity index (CVI) were calculated.
Results: The panel consisted of 45 participants with a median age of 33 years and more than 10 years of experience in women's health. A total of 1261 meaningful contents were identified from the responses in the first round. After consensus was achieved, a final list of 62 items was prepared, including 53 categories (11 were on structures; 15 on body functions; 12 on activities and participation; 15 on environmental factors) and nine personal factors (CVI = 0.89).

* Corresponding author at: Cidade Universitária, Avenida Jorn, Aníbal Fernandes, 173, CEP: 50740-560 Recife, PE, Brazil.
E-mail: diego.sdantas@ufpe.br (D.D. Dantas).

https://doi.org/10.1016/j.bjpt.2020.12.003

Conclusion: From the perception of physical therapists, an ICF-based postpartum assessment to describe functioning and disability must comprise 53 ICF categories and nine personal factors.

Introduction

According to the biomedical model, the postpartum period corresponds to the expulsion of the placenta until the return to the pre-gestational physiological condition, which can last up to 6 months.[1] In the biopsychosocial context, the postpartum period comprises a particularly delicate and variable stage of life in women.[2] Women in the postpartum period face several biological, psychological, and social modifications as a consequence of motherhood. The new routine, new family context, and social role may provoke physical exhaustion, mood disorders, stress, and depressive symptoms.[2–4] Thus, in addition to the intrinsic biological aspects, environmental and personal factors are determinants for maintaining or recovering health, functioning, and quality of life of puerperal women.[5,6]

The International Classification of Functioning, Disability, and Health (ICF) provides a useful framework for classifying patients' problems and describing them in a standardized language for professionals worldwide.[7] According to the ICF, functioning is a positive construct determined by the interaction between body functions and structures, activities, and participation components. Disability is a multidimensional issue resulting from the negative interaction between people or individuals and their physical and social environments.[7] The second part of the ICF covers contextual factors, including environmental, and personal issues. In the ICF, having a problem may mean an impairment, limitation, restriction, or barrier, depending on the component.[7]

The ICF use in physical therapy is promising, driven by development of ICF-based measurement and by efforts for using the ICF in clinical, research, and teaching.[8,9] In addition, the ICF can be useful as a clinical tool for: health needs assessment and matching treatments with specific conditions; as a statistical tool for comparing services; and as a research tool for measuring outcomes, environmental factors, or quality of life.[10–13] Despite its potential, the length and time required to use the ICF in the clinical context represent important obstacles, and the development of ICF-based instruments is encouraged.[14] To develop this instrument, one of the mandatory steps is to know health professionals' perspectives about problems faced by women postpartum and to link this information with ICF categories.[14–18]

Physical therapists play a relevant role in the treatment of frequent complaints such as pain, musculoskeletal changes, breastfeeding complications, urinary incontinence, and other impairments.[19–24] Previous evidence demonstrates the efficacy of kinesiotherapy, manual therapies, electrotherapy, and home guidance for the management of these complaints.[20–24]

Although the physical therapist is one of the professionals who are more familiarized with ICF,[25] a knowledge gap exists about disabilities and the use of the ICF for classifying the health status of puerperal women. The ICF could be useful in goal setting and recording functioning data, contributing to the management of postpartum complaints in a biopsychosocial model.[8,10,11,13]

Considering that functioning is a third health indicator and the international efforts to improve the global model in rehabilitation,[26,27] studies are needed to better understand the problems of puerperal women based on the ICF. Therefore, this study was aimed at identifying ICF categories and their respective components that are relevant to describing the functioning of women in the postpartum period from the perspective of physical therapists.

Methods

A consensus-building, three-round study was conducted using the Delphi technique and an e-mail survey among Brazilian physical therapists with expertise in the area of women's health.[10,14–18] This study was submitted and approved by the Research Ethics Committee of Federal University of Rio Grande do Norte, Santa Cruz, RN (CAAE: 61951816.6.0000.5568).

Recruitment of participants

The search to select the panel of experts was performed using four strategies: (1) contact through the Brazilian Association of Physical Therapy in Women's Health (ABRAFISM); (2) active search for professors of women's health in the public pages of public and private undergraduate courses in physical therapy in the five regions of the country; (3) search for Brazilian professionals with publications in the area of physical therapy and postpartum through the Jane Biosemantics tool (Journal/Author Name Estimator, http://jane.biosemantics.org/index.php); and (4) personal contacts of researchers.

An invitation letter was sent by e-mail to the physical therapists identified in the search. The letter contained necessary information about the purposes, Delphi process, and timeline expected for this study. In the letter, it was explained that only Brazilian physical therapists with at least 1 year of professional experience in the area of women's health would be included in the study. Physical therapists who met these criteria needed to sign an electronic consent form to be included in the study. Professionals who self-rated their expertise as low were excluded.

Table 1 Delphi technique — assignments and steps.

Delphi technique	Researchers activities	Experts activities
First round	Sending e-mail with general information, instructions, a sociodemographic questionnaire and with the following open question: *''What are patient's problems, patient's resources and environmental aspects treated by physical therapists in patients in the puerperal period?''* Linking responses to ICF categories	Respond to the questionnaire with indication of concepts that would serve to create a list of patient problems, patient resources, and environmental aspects treated by physical therapists in women in the immediate and late postpartum
Second round	The experts receive an email with instructions and the questionnaire for the second round with the following question: *''Do you agree that these ICF categories represent patient problems, patient resources or environmental aspects treated by physical therapists in women in the puerperal period?''* Frequency calculation (% of answers ''yes'') Individual judgment feedback and group responses	Judgment (yes / no) whether the categories listed in the ICF reflect the treatment given by physical therapists to women in the puerperium period.
Third round	The experts receive an email with instructions and the questionnaire for the third round with the following question: *''Given the group's responses and your individual response in the second round, do you agree that these categories of ICF represent patient problems, patient resources or environmental aspects treated by physical therapists in postpartum patients?''* Frequency calculation (% of answers ''yes'') Final analysis for linking to the ICF	Trial (yes/no) if the categories listed in the ICF reflect the treatment given by physical therapists to puerperal women.

The Delphi process

The Delphi process was implemented, consisting of a structured communication process with anonymity, interaction with controlled feedback, the synthesis of group response, and informed input.[10,16,17] Table 1 shows the process and verbatim questions.

In the first round, the participants received a link to a specific form supported by Google Forms and were asked to answer questions on social and demographic characteristics (sex, age, and region of the country where they worked); and professional experience (specialization in women's health, professional experience, self-perception of expertise). Furthermore, the participants were asked to list all the problems and environmental aspects treated by physical therapists in the puerperal period and the resources and relevant environmental issues in the treatment of each component of the ICF model, namely body functions (b), body structures (s), activities and participation (d), environmental factors (e), and personal factors (pf).[10,16] Responses were linked with the ICF categories by two researchers with expertise in ICF linking, following the pre-specified standardized linking rules.[28–30]

In the second round, the specialists received a list of the ICF categories linked with the previous answers.[15–17] The list provided the ICF categories and defined each category according to the ICF. Next, the expert was asked item by item if they agreed that those categories were essential to classify the functioning of women in the postpartum period.

In the third round, the participants received the list of the ICF categories sent in the second round, plus value of the content validity index (CVI) for each category.[31] The participants had to decide to keep the category on the list or delete it. After this, the final list with the relevant ICF categories and respective components relevant to the evaluation of women in the postpartum period was defined.[16]

Linking process

The collected responses were analyzed to identify the meaningful content and subsequent linking with the ICF by the ICF linking rules.[28–30] According to this methodology, 10 main rules and five additional rules guide the researchers step-by-step to link health information with the ICF categories. Although personal factors are relevant for understanding a health state, they are not covered in the ICF.[10] Moreover, we used a list of 76 categories developed to avoid a lack of information and to enable linking the meaningful content and personal factors from the perspective of the ICF.[32]

Two independent raters with experience in this methodology identified the ICF categories. The researchers initially independently analyzed all the participant responses in the first round and extracted meaningful content units. A meaningful content unit or meaningful concept is a specific description that involves a common theme.[16,30] Next, this main content was linked with a specific ICF category one by one. In cases of disagreement between the researchers, a third researcher acted as a judge, deciding on the most appropriate category for the content in ques-

Table 2 Sociodemographic profile and professional experience of the panel of expert physical therapists in women's health (n = 45).

Variables		
Age (years)	33	27—39
Sex		
Female	42	93.3 %
Male	3	6.7%
Specialization in Women's Health		
	35	77.8%
Highest academic qualification		
University graduate	3	6.7%
Specialization	8	17.8%
Master	13	28.9%
Doctorate degree	21	46.6%
Clinical experience		
1–5 years	16	25.5%
6–10 years	11	24.4%
More than 10 years	18	40.0%
Self-perception of expertise		
Moderate	6	13.3%
High	39	86.7%
Region of Brazil		
Northeast	34	75.6%
North	1	2.2%
Midwest	2	4.4%
Southeast	3	6.7%
South	5	11.1%
Workplace		
Educational institution	21	46.7%
Hospital	4	8.9%
Clinic	3	6.7%
Other	1	2.2%
More than one option	16	35.6%

Data are n (%) except for age which is median and (25%, 75%) interquartile range.

tion. Content with no ICF representation was defined as ''not covered''.[28–30]

Data analysis

Statistical analysis was performed using the Bioestat 5.0 software program. The sociodemographic and professional experience variables of the participants were presented in the results by absolute (n) and relative (%) frequencies. The Kolmogorov–Smirnov test was used to assess the distribution of continuous variables, with those not normally distributed, presented as median and interquartile range.

The kappa coefficient tested the agreement between raters for the identification of ICF categories in the linking process.[33] Kappa coefficient values were interpreted as none to slight (0.01–0.20), fair (0.21–0.40), moderate (0.41–0.60), substantial (0.61–0.80), and almost perfect (0.81–1.00) agreement.[33]

The CVI assesses the extent to which each element of a measurement instrument is relevant and representative of a construct with a specific purpose for evaluation.[31] CVI values ≥80% are considered acceptable.[31] The CVI was calculated for each category and the overall list after the second and third rounds. The CVI for the category was determined based on the number of respondents who chose to include the category on the list divided by number of respondents. ICF categories with a CVI ≥ 80% were included in the final list.[15] The CVI for all the categories by round was determined as the number of categories with CVI values ≥80% divided by number of categories included in the list.[15]

Table 3 Comparison between the initial and final lists.

	Initial list Frequency of categories	Final list
Levels of ICF categories	(n = 65)	(n = 53)
First	4 (6%)	0
Second	50 (77%)	43 (81%)
Third	11 (17%)	10 (19%)
Fourth	0	0
Categories by domains	(n = 65)	(n = 53)
Body functions	17 (26%)	15 (28%)
Structures	11 (17%)	11 (21%)
Activities and participation	19 (29%)	12 (23%)
Environmental factors component	18 (28%)	15 (28%)
Personal factors	9	9
Number of items	74 (65 ICF categories + 9 personal factors)	62 (53 ICF categories + 9 personal factors)

Results

Panel of expert physical therapists

Data collection was performed between August and December 2018. In the first month, we identified the contact information of physical therapists with experience in women's health. The invitation letter was sent to 91 physical therapists. The process of identifying the ICF categories to classify puerperal functioning through the Delphi consensus method started in September 2018. A total of 47 professionals from the five regions of Brazil accepted the invitation to collaborate with the study through an electronic signature of consent, initially responding to the sociodemographic and professional experience questionnaire, followed by a response to the first step of the Delphi method. Two participants were excluded because they self-rated their expertise as low.

The social, demographic, and academic data of the 45 physical therapists are presented in Table 2. Most of the participants were women with specific training in the field of women's health and a doctoral degree, working in educational institutions, and with more than 10 years of experience in this field.

Table 4 ICF categories included in the first and final list of the Delphi process.

ICF category		Consensus-building		Included in the final list?
	Second round (n = 30) CVI %	Third round (n = 28) CVI %		
Body functions component				
b134	Sleep functions	96.7%	100%	Yes
b152	Emotional functions	93.3%	96.4%	Yes
b280	Sensation of pain	100%	100%	Yes
b415	Blood vessel functions	93.3%	92.9%	Yes
b440	Respiration functions	93.3%	96.4%	Yes
b515	Digestive functions	80%	82.1%	Yes
b525	Defecation functions	100%	100%	Yes
b620	Urinary functions	93.3%	96.4%	Yes
b6202	Urinary continence	100%	100%	Yes
b640	Sexual functions	100%	96.4%	Yes
b6603	Lactation	100%	100%	Yes
b730	Muscle power functions	96.7%	96.4%	Yes
b7305	Power of muscles of the trunk	90%	92.9%	Yes
b755	Involuntary movement reaction functions	66.7%	53.6%	No
b760	Control of voluntary movement functions	80%	85.7%	Yes
b810	Protective functions of the skin	73.3%	73.3%	No
b820	Repair functions of the skin	100%	100%	Yes
Body structures component				
s410	Structure of cardiovascular system	93.3%	100%	Yes
s430	Structure of respiratory system	100%	100%	Yes
s610	Structure of urinary system	100%	100%	Yes
s620	Structure of pelvic floor	93.3%	89.3%	Yes
s630	Structure of reproductive system	96.7%	92.9%	Yes
s6302	Breast and nipple	93.3%	96.4%	Yes
s730	Structure of upper extremity	93.3%	92.9%	Yes
s740	Structure of pelvic region	100%	100%	Yes
s750	Structure of lower extremity	96.7%	96.4%	Yes
s760	Structure of trunk	100%	96.4%	Yes
s7601	Muscles of trunk	93.3%	92.9%	Yes
Activities and participation component				
d230	Carrying out daily routine	96.7%	100%	Yes
d4	Mobility	96.7%	100%	No
d450	Walking	96.7%	100%	Yes
d570	Looking after one's health	100%	100%	Yes
d5700	Ensuring one's physical comfort	96.7%	96.4%	Yes
d640	Doing housework	100%	100%	Yes
d660	Assisting others	86.7%	78.6%	No
d6600	Assisting others with self-care	90%	96.4%	Yes
d730	Relating with strangers	63.3%	57.1%	No
d740	Formal relationships	66.7%	64.3%	No
d750	Informal social relationships	70%	75%	No
d760	Family relationships	83.3%	96.4%	Yes
d770	Intimate relationships	90%	89.3%	Yes
d7702	Sexual relationships	93.3%	100%	Yes
d850	Remunerative employment	86.7%	100%	Yes
d910	Community life	86.7%	78.6%	No
d9100	Informal associations	66.7%	57.1%	No
d920	Recreation and leisure	100%	96.4%	Yes
d9205	Socializing	96.7%	92.9%	Yes

Table 4 (*Continued*)

Environmental factors component				
e115	Products and technology for personal use in daily living	96.7%	96.4%	Yes
e120	Products and technology for personal indoor and outdoor mobility and transportation	93.3%	96.4%	Yes
e155	Design, construction, and building products and technology of buildings for private use	73.3%	85.7%	Yes
e3	Support and relationships	93.3%	100%	No
e310	Immediate family	100%	100%	Yes
e315	Extended family	93.3%	92.5%	Yes
e320	Friends	96.7%	96.4%	Yes
e325	Acquaintances, peers, colleagues, neighbors and community members	93.3%	89.3%	Yes
e355	Health professionals	100%	100%	Yes
e360	Other professionals	93.3%	92.9%	Yes
e4	Attitudes	96.7%	92.9%	No
e460	Societal attitudes	93.3%	96.4%	Yes
e5	Services, systems and policies	96.7%	92.9%	No
e540	Transportation services, systems, and policies	90%	89.3%	Yes
e575	General social support services, systems and policies	93.3%	96.4%	Yes
e580	Health services, systems, and policies	96.7%	100%	Yes
e5800	Health services	100%	96.4%	Yes
e590	Labour and employment services, systems and polices	86.7%	89.3%	Yes
Personal factors[22]				
i110	Age	100%	100%	Yes
i150	Educational background	100%	96.4%	Yes
i160	Occupational background	100%	100%	Yes
i170	Economical background	93.3%	92.9%	Yes
i210	Position in the family	93.3%	96.4%	Yes
i220	Position in partnership and marriage	96.7%	96.4%	Yes
i530	Personal attitudes	100%	92.9%	Yes
i74012	Habits	100%	96.4%	Yes
i74015	Lifestyle	100%	96.4%	Yes

CVI — content validity index. Categories included in the final list obtained a consensus of ≥80% in the third round.

Delphi process and ICF category identification

A total of 1261 significant concepts were identified in the first round, which were linked to 258 categories of the ICF and personal factors. The agreement between the raters in the linking process was $\kappa = 0.88$.

The categories identified by at least 50% of the physical therapists were included in the first list, resulting in 74 items. This list was submitted to consensus in the second and third rounds. All physical therapists included in the first round received the electronic form for the 2 subsequent rounds, but only 30 and 28 participants answered the questions in the second and third rounds, respectively. Table 3 shows a quantitative perspective of the first and final lists, while Table 4 provides all details about the consensus process in the second and third rounds. The list of categories had a CVI value of 0.94 after the second round and 0.89 after the third round.

The first list had 74 items, including 65 ICF categories and nine personal factors. Most of the categories were related to activities and participation. The final list comprised all the ICF categories and ICF domains that should be included

in an ICF-based postpartum assessment. The final approved list (Appendix A) had 62 items, including 53 ICF codes and nine personal factors. The ICF categories are of the second and third levels, and are mostly related to body functions and environmental factors.

Discussion

This study sought to determine the categories that would be essential to classify the functioning and problems of women in the postpartum period from the perspective of physical therapists. The final list covers all four components of the ICF and 21 ICF domains, and includes issues related to personal factors that are not covered in the ICF. Thus, the final list covers the most important impairments, limitations and restrictions, and environmental aspects of this population, based on the related literature.[34–37] Personal factors were included because they can dramatically influence the outcome of physical therapy interventions. In addition, it is useful for identifying the best strategy to empower the patient to actively participate in their treatment plan.[10,32]

Mothers often have physical complaints such as problems of functions of sleep and pain sensation, urinary or fecal incontinence, sexual dysfunction, and pelvic organ prolapse.[34–36,38] These complaints varying according to biological factors, the dependence level of the baby for care, and the level of social support received.[6,37,39,40] Moreover, the impairment of pelvic floor muscle function is also widespread and occurs as a result of reduced tonus, an overload of pelvic region structures, multiparity, and traumas resulting from childbirth.[41,42]

Women in the immediate postpartum period usually have difficulties regarding their mobility and transfers.[36] Many mothers face difficulties in performing their daily routine and taking care of their health, which can generate stress, frustration, and mental illness.[6,39] These problems consequently lead to negative changes in performance of activities and participation.[37] According to the current perinatal health promotion model, the attitudes of family members, friends, and health professionals play an essential role as a support network for women and must be considered from a biopsychosocial perspective.[43]

The list of ICF categories may be useful in the clinical practice of physical therapists as a new tool to record the data about functioning. This tool should be integrated with other measurements and questionnaires commonly used to guide the therapeutic plan to the functioning of puerperal women.[10,11] Furthermore, the list shows an example of how to apply the ICF framework and operationalize the documentation about patient records from a biopsychosocial perspective of women's health.[11,12,44] Our findings can contribute to developing a culture among physical therapists that seeks to uncover ICF-based indicators of women's functioning in clinical practice.

Although the final list had the categories of all the ICF components, some aspects of self-care were not entirely covered. Women in postpartum often have difficulties related to washing themselves, caring for their own body, and eating.[45] These issues can be linked with categories of the self-care domain (d5) but have not previously been mentioned as relevant to the physical therapy professionals and care. Thus, future studies should investigate the relevance of these issues for the functioning of women in the postpartum period.

Lastly, the Delphi technique was appropriate, as it made possible the identification of relevant categories to develop an ICF-based postpartum assessment from the opinion and consensus of the participants. It is important to emphasize that this study involved the consensus among Brazilian physical therapists from five Brazilian regions. Experts were primarily from the northeast region of Brazil and, therefore were not fully representative of physical therapist experts in women's health. As a consequence, the results do not enable the assessment of differences in conceptual framework across countries. Although we used a robust method and carefully assessed the validated content of each category, the results of any consensus may differ by different groups of participants. Thus, further studies in different countries or Brazilian regions with different experts are essential to develop a more refined representative list of ICF categories relevant to classifying the functioning of women in the postpartum period.

Moreover, this study is one step toward the development and validation of an ICF-based postpartum assessment (ICF-postpartum). ICF-postpartum is an ICF-based questionnaire that will be useful to assess the functioning and disabilities of women in the postpartum period. For this reason, additional studies are necessary to learn about patients' perspectives, to define the best validated and reliable measure for each category, and to score them properly. The validity and reliability of the ICF-postpartum will also be determined.

Conclusion

The Delphi technique provided evidence for a suitable biopsychosocial approach and allowed us to identify the ICF categories related to the functioning of women in the postpartum period. The final list includes 62 items, of which 53 are ICF categories, and nine additional items are related to personal factors. The 53 ICF codes comprised 15, 12, 11, and 15 items of body function components, structures, activities and participation, and environmental factors, respectively. The final list of ICF categories can be used as a set of topics or guide in the assessment for classifying the functioning of women in the postpartum period based on the biopsychosocial model.

Conflict of interest

The author declares no conflicts of interest.

Acknowledgements

This research did not receive any specific grant from funding agencies in the public, commercial, or not-for-profit sectors.

Appendix A. Final list

ICF-based postpartum assessment (ICF-postpartum) — version after Brazilian consensus

Date:
Name:

Personal factors	Comment
i110 Age	
i150 Educational background	
i160 Occupational background	
i170 Economical background	
i210 Position in the family	
i220 Position in partnership and marriage	
i530 Personal attitudes	
i74012 Habits	
i74015 Lifestyle	

ICF category		No problem	Mild problem	Moderate problem	Severe problem	Complete problem
b134	Sleep functions					
b152	Emotional functions					
b280	Sensation of pain					
b415	Blood vessel functions					
b440	Respiration functions					
b515	Digestive functions					
b525	Defecation functions					
b620	Urinary functions					
b6202	Urinary continence					
b640	Sexual functions					
b6603	Lactation					
b730	Muscle power functions					
b7305	Power of muscles of the trunk					
b760	Control of voluntary movement functions					
b820	Repair functions of the skin					
s410	Structure of cardiovascular system					
s430	Structure of respiratory system					
s610	Structure of urinary system					
s620	Structure of pelvic floor					
s630	Structure of reproductive system					
s6302	Breast and nipple					
s730	Structure of upper extremity					
s740	Structure of pelvic region					
s750	Structure of lower extremity					
s760	Structure of trunk					
s7601	Muscles of trunk					
d230	Carrying out daily routine					
d450	Walking					
d570	Looking after one’s health					
d5700	Ensuring one’s physical comfort					
d640	Doing housework					
d6600	Assisting others with self-care					
d760	Family relationships					
d770	Intimate relationships					
d7702	Sexual relationships					
d850	Remunerative employment					
d920	Recreation and leisure					
d9205	Socializing					

Environmental factors		Barriers	No barrier/no facilitator	Facilitators
e115	Products and technology for personal use in daily living			
e120	Products and technology for personal indoor and outdoor mobility and transportation			
e155	Design, construction, and building products and technology of buildings for private use			
e310	Immediate family			
e315	Extended family			
e320	Friends			
e325	Acquaintances, peers, colleagues, neighbors and community members			
e355	Health professionals			
e360	Other professionals			
e460	Societal attitudes			
e540	Transportation services, systems, and policies			
e575	General social support services, systems and policies			
e580	Health services, systems, and policies			
e5800	Health services			
e590	Labour and employment services, systems and polices			

References

1. Romano M, Cacciatore A, Giordano R, La Rosa B. Postpartum period: three distinct but continuous phases. *J Prenat Med*. 2010;4(2):22–25.
2. Ramakrishna S, Cooklin AR, Leach LS. Comorbid anxiety and depression: a community-based study examining symptomology and correlates during the postpartum period. *J Reprod Infant Psychol*. 2019;37(5):468–479.
3. Keag OE, Norman JE, Stock SJ, J.E. Myers ed. Long-term risks and benefits associated with cesarean delivery for mother, baby, and subsequent pregnancies: systematic review and meta-analysis. *PLoS Med*. 2018;15(1):e1002494.
4. Okun ML, Mancuso RA, Hobel CJ, Schetter CD, Coussons-Read M. Poor sleep quality increases symptoms of depression and anxiety in postpartum women. *J Behav Med*. 2018;41(5):703–710.
5. Alkema L, Chou D, Hogan D, et al. Global, regional, and national levels and trends in maternal mortality between 1990 and 2015, with scenario-based projections to 2030: a systematic analysis by the UN Maternal Mortality Estimation Inter-Agency Group. *Lancet*. 2016;387(10017):462–474.
6. Leahy-Warren P, McCarthy G, Corcoran P. First-time mothers: social support, maternal parental self-efficacy and postnatal depression. *J Clin Nurs*. 2012;21(3–4):388–397.
7. World Health Organization. *International Classification of Functioning, Disability And Health (ICF)*. WHO; 2001 https://apps.who.int/iris/bitstream/handle/10665/42407/9241545429.pdf.
8. Escorpizo R, Bemis-dougherty A. Introduction to special issue: a review of the international classification of functioning, disability and health and physical therapy over the years. *Physiother Res Int*. 2015;20:200–209.
9. Davenport TE. Clinical case reporting in the peer-reviewed physical therapy literature: time to move toward functioning. *Physiother Res Int*. 2015;20:220–230.
10. Finger ME, Cieza A, Stoll J, Stucki G, Huber EO. Identification of intervention categories for physical therapy, based on the international classification of functioning, disability and health: a Delphi exercise. *Phys Ther*. 2006;86(9):1203–1220.
11. Constand MK, Macdermid JC. Applications of the international classification of functioning, disability and health in goal-setting practices in healthcare. *Disabil Rehabil*. 2014;36(15):1305–1314.
12. Dantas D de S, Correa AP, Buchalla CM, Castro SS de, Castaneda L. Biopsychosocial model in health care: reflections in the production of functioning and disability data. *Fisioter em Mov*. 2020;33:1–9.
13. Atkinson H, Nixon-Cave K. A tool for clinical reasoning and reflection using the International Classification of Functioning, Disability and Health (ICF) framework and patient management model. *Phys Ther*. 2011;91(3):416–430.
14. Stucki G, Prodinger B, Bickenbach J. Four steps to follow when documenting functioning with the International Classification of Functioning, Disability and Health. *Eur J Phys Rehabil Med*. 2017;53(1):144–149.
15. Castaneda L, Bergmann A, Castro S, Koifman R. Functioning in women with cervical cancer in Brazil: the perspective of experts. *Rev Bras Ginecol Obstet*. 2018;40(5):260–265.
16. Glaessel A, Kirchberger I, Stucki G, Cieza A. Does the Comprehensive International Classification of Functioning, Disability and Health (ICF) core set for breast cancer capture the problems in functioning treated by physiotherapists in women with breast cancer? *Physiotherapy*. 2011;97(1):33–46.
17. Paschoal LN, De Souza PN, Buchalla CM, De Brito CMM, Battistella LR. Identification of relevant categories for inpatient physical therapy care using the International Classification of Functioning, Disability and Health: a Brazilian survey. *Braz J Phys Ther*. 2019;23(3):212–220.
18. König I, Kuhn M, Radlinger L, Koehler B. Development and validation of the ICF-Incontinence Assessment Form (ICF-IAF) to identify problems and resources for planning and evaluation of interventions using the Classification of Functioning, Disability and Health of the World Health Organization: P. *Neurourol Urodyn*. 2019;38(4):1053–1066.
19. Oguntibeju O, Ilesanmi, Fawole, Odunaiya. Attitude and practices of obstetricians and gynecologists towards involvement of physiotherapists in management of obstetric and gynecologic conditions. *Int J Womens Health*. 2013;5(1):109.
20. Santos Santana L, Barreto Silva Gallo R, Cristina Marcolin A, Homsi Jorge Ferreira C, Maria Quintana S. Use of physical therapeutical resources in the puerperium: a literature review. *Femina*. 2011;39(5):245–250.
21. Pitangui ACR, de Sousa L, Gomes FA, Ferreira CHJ, Nakano AMS. High-frequency TENS in post-episiotomy pain relief in primiparous puerpere: a randomized, controlled trial. *J Obstet Gynaecol Res*. 2012;38(7):980–987.

22. Carter T, Bastounis A, Guo B, Jane Morrell C. The effectiveness of exercise-based interventions for preventing or treating postpartum depression: a systematic review and meta-analysis. *Arch Womens Ment Health*. 2019;22(1):37–53.
23. Franke H, Franke J-D, Belz S, Fryer G. Osteopathic manipulative treatment for low back and pelvic girdle pain during and after pregnancy: a systematic review and meta-analysis. *J Bodyw Mov Ther*. 2017;21(4):752–762.
24. Hadizadeh-Talasaz Z, Sadeghi R, Khadivzadeh T. Effect of pelvic floor muscle training on postpartum sexual function and quality of life: a systematic review and meta-analysis of clinical trials. *Taiwan J Obstet Gynecol*. 2019;58(6):737–747.
25. Andrade LEL de, Oliveira NPD de, Ruaro JA, Barbosa IR, Dantas D de S. Avaliação do nível de conhecimento e aplicabilidade da Classificação Internacional de Funcionalidade, Incapacidade e Saúde. *Saúde Debate*. 2017;41(114):812–823.
26. Stucki G, Bickenbach J. Functioning: the third health indicator in the health system and the key indicator for rehabilitation. *Eur J Phys Rehabil Med*. 2017;53(1):134–138.
27. Heinemann AW, Feuerstein M, Frontera WR, et al. Rehabilitation is a global health priority. *Arch Phys Med Rehabil*. 2020;101(4):728–729.
28. Cieza A, Geyh S, Chatterji S, Kostanjsek N, Üstün B, Stucki G. ICF linking rules: an update based on lessons learned. *J Rehabil Med*. 2005;37(4):212–218.
29. Cieza A, Brockow T, Ewert T, et al. Linking health-status measurements to the international classification of functioning, disability and health. *J Rehabil Med*. 2002;34(5):205–210.
30. Cieza A, Fayed N, Bickenbach J, Prodinger B. Refinements of the ICF linking rules to strengthen their potential for establishing comparability of health information. *Disabil Rehabil*. 2016;8288(March):1–10.
31. Alexandre NMC, Coluci MZO. Validade de conteúdo nos processos de construção e adaptação de instrumentos de medidas. *Cienc e Saude Coletiva*. 2011;16(7):3061–3068.
32. Geyh S, Schwegler U, Peter C, Müller R. Representing and organizing information to describe the lived experience of health from a personal factors perspective in the light of the International Classification of Functioning, Disability and Health (ICF): a discussion paper. *Disabil Rehabil*. 2019;41(14):1727–1738.
33. McHugh ML. Interrater reliability: the kappa statistic. *Biochem Med*. 2012;22(3):276–282.
34. Norhayati MN, Nik Hazlina NH, Asrenee AR, Wan Emilin WMA. Magnitude and risk factors for postpartum symptoms: a literature review. *J Affect Disord*. 2015;175:34–52.
35. Prick BW, Bijlenga D, Jansen AJG, et al. Determinants of health-related quality of life in the postpartum period after obstetric complications. *Eur J Obstet Gynecol Reprod Biol*. 2015;185:88–95.
36. Van Der Woude DAA, Pijnenborg JMA, De Vries J. Health status and quality of life in postpartum women: a systematic review of associated factors. *Eur J Obstet Gynecol Reprod Biol*. 2015;185:45–52.
37. Finlayson K, Crossland N, Bonet M, Downe S, C.E. East, ed. What matters to women in the postnatal period: a meta-synthesis of qualitative studies. *PLoS One*. 2020;15(4):e0231415.
38. Woodley SJ, Lawrenson P, Boyle R, et al. Pelvic floor muscle training for preventing and treating urinary and faecal incontinence in antenatal and postnatal women. *Cochrane Database Syst Rev*. 2020;2020(5).
39. McBean AL, Kinsey SG, Montgomery-Downs HE. Effects of a single night of postpartum sleep on childless women's daytime functioning. *Physiol Behav*. 2016;156:137–147.
40. Adachi Y, Sawa R, Ueda M, Shimai S. The relationship between sleep and subjective mental health at one month postpartum in Japanese women. *Hokenfu Zasshi*. 2018;65(11):646–654.
41. Fonti Y, Giordano R, Cacciatore A, Romano M, La Rosa B. Post partum pelvic floor changes. *J Prenat Med*. 2009;3(4):57–59.
42. Juliato CRT. Impact of vaginal delivery on pelvic floor. *Rev Bras Ginecol Obstet*. 2020;42(02):065–066.
43. Fahey JO, Shenassa E. Understanding and meeting the needs of women in the postpartum period: the perinatal maternal health promotion model. *J Midwifery Womens Health*. 2013;58(6):613–621.
44. Stucki G, Rubinelli S, Bickenbach J. We need an operationalisation, not a definition of health. *Disabil Rehabil*. 2020;42(3):442–444.
45. ACOSTA, Ferreira Daniele, GOMES, et al. The effects, beliefs and practices of puerperal women's self-care. *Rev da Esc Enferm*. 2012;46(6):1328–1334.