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Rabia Foreman

East Tennessee State University

Jamesa Ewing

East Tennessee State University

Olivia Hawley

University of Northern Iowa

Mariana de Cassia Macedo

University of Sao Paulo

Naiara Rodrigues Carlota do Nascimento

University of Sao Paulo

See next page for additional authors

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Citation Information

Foreman, Rabia; Ewing, Jamesa; Hawley, Olivia; de Cassia Macedo, Mariana; Rodrigues Carlota do Nascimento, Naiara; Louw, Brenda; and Maximino, Luciana. 2014. A Proposed Holistic Model of Assessment for Children with Cleft Palate within the ICF-CY Framework. Poster Presentation. *American Speech-Language-Hearing Association Annual Convention*, Orlando, Florida.

<http://submissions.mirasmart.com/ASHA2014/Itinerary/ItinerarySubmissionDetail.aspx?sbmID=923>

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A Proposed Holistic Model of Assessment for Children with Cleft Palate within the ICF-CY Framework

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Creator(s)

Rabia Foreman, Jamesa Ewing, Olivia Hawley, Mariana de Cassia Macedo, Naiara Rodrigues Carlota do Nascimento, Brenda Louw, and Luciana Maximino



A Proposed Holistic Model of Assessment for Children with Cleft Lip/Palate within the ICF-CY Framework



Jamesa Ewing, B.S.¹, Rabia Foreman, B.S.¹, Olivia Hawley, B.S.², Mariana Macedo³, Naiara Rodrigues³, Brenda Louw, PhD¹, and Luciana Maximino³

¹ Dept. of Audiology & Speech-Language Pathology, East Tennessee State University

² Dept. Audiology & Speech-Language Pathology, University of Northern Iowa

³ Dept. Audiology & Speech-Language Pathology, Universidade São Paulo, Bauru



ABSTRACT

The purpose of this project is to describe a proposed model for the assessment of children with cleft palate within the framework of the International Classification of Function, Disability and Health-Children and Youth Version (ICF-CY) (WHO, 2007). Suggestions for clinical application and cleft palate curricula are made, and future research needs are identified.

INTRODUCTION

The assessment of children with cleft lip and palate (CLP) has traditionally focused on structure and function. However, three recent developments necessitate Speech-Language Pathologists (SLPs) to reconsider clinical assessment protocols for children with CLP.

- The International Classification of Functioning, Disability, and Health for Children and Youth (ICF-CY) (WHO, 2007) provides an important framework for the holistic consideration of children with cleft lip and palate. The ICF-CY's interrelated components, facilitates understanding of the many factors that contribute to the impact of a cleft palate on the activity and participation of these children (Figure 1).
- Quality of life (QoL) research on individuals living with clefts emphasizes the importance of considering activity, participation, environment and individual factors (Hall, Gibson, James & Rodd, 2013). The ICF-CY (WHO, 2007) framework provides insight into the complex interaction between the health condition of a child with CLP and his/her speech-language disorder, personal and environmental factors, which reflect the conditions under which the child grows up (Neumann, 2013). This necessitates a broader and more holistic approach to assessment.

- Several clinical tools for the assessment of children have been developed within the ICF-CY framework. According to Neumann and Romonath (2012), we need to move beyond assessing only the child with a cleft palate, and adopt a more holistic approach by including the family, siblings, friends, etc. in order to address activity, participation, environmental and personal issue in both assessment and intervention.

The aim of the study is to propose an assessment model for children within the ICF-CY (WHO, 2007) framework based on a comprehensive narrative review of the application of the ICF-CY to children with cleft palate.

METHODS

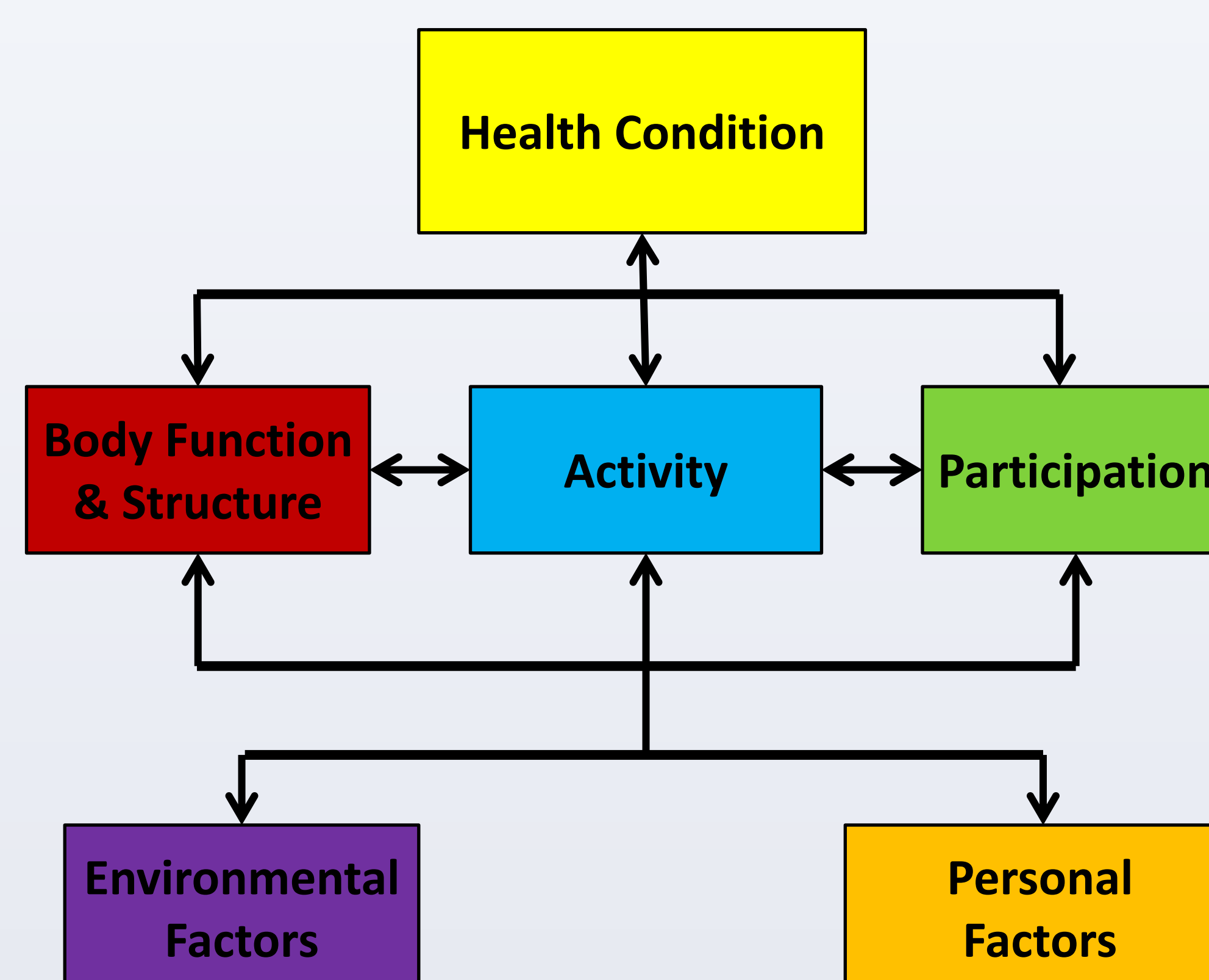


Figure 1: ICF-CY (WHO 2007)

- A systematic literature search was conducted by following a specific search strategy and a systematized selection of publications for review to limit researcher bias (Schiavetti, Metz, & Orlikoff, 2011).
- Computer searches of electronic databases (e.g. PubMed, CINAHL) as well as hand searches were conducted to identify publications and sources that addressed the key topics.
- Relevant codes were selected and charted based upon components of the ICF-CY (WHO 2007).
- Based on the charted codes, assessment methods/tools were matched to the ICF-CY (WHO, 2007) components for the holistic evaluation of a child with CLP.

RESULTS

Body Function	
Relevant Codes	Relevant Assessments
b1260, b1264, b1265 b1266, b1560, b1562 b1563, b2300, b2301 b2302, b2303, b2702 b3101, b4402, b5100 b5101, b5102, b5103 b5104, b5105, b7300 b7350, b7401, b7600 b7601, b7602	<ul style="list-style-type: none"> Perceptual assessment of speech and resonance <ul style="list-style-type: none"> *Intelligibility *Articulation *Resonance *Voice *Acceptability Formal tests <ul style="list-style-type: none"> * GFTA-2(Goldman & Fristoe, 2011) * Test of Phonological Awareness Feeding Assessment Language assessment Hearing assessment

Body Structure	
Relevant Codes	Relevant Assessments
s2500, s2501, s2502 S2600, s3100, s3101 S3102, s3200, s32000 S32001, s3201, s3202 S32020, s32021, s3204 s32040, s3205, s3200 S32000, s32001, s3201 s3202, s32020, s32021 S3204, s32040, s3205 S3400, s7100, s7100b S7101, s7104, s7105 s8100	<ul style="list-style-type: none"> Oral Mechanism Exam Craniofacial Screening Profile (Coston et al, 1992) Checklist for Genetic Screening (Kahn, 2000) Nasometry, Videofluoroscopy/ Nasopharyngoscopy

Activity	Participation
Relevant Codes	Relevant Assessment
d3600, d5501, d5601 d5602, d560b, d6602 d7104, d7105, d7200d 7600d, 7601	<ul style="list-style-type: none"> SPAA-C (McLeod, 2003) FOCUS (Thomas-Stonell et al., 2012) ICS (McLeod, Harrison, & McCormack, 2012a) Parent Report and Interview Observation of Child/Caregiver Interaction Communication and Symbolic Play Scales (Westby, 1980)

Environmental Factors	
Relevant Codes	Relevant Assessments
e310, e320, e355 e420, e460, e425 e580, e586	<ul style="list-style-type: none"> Ecomap and Genogram Parental Appraisal of Cleft Questionnaire (Shuttlewood et al, 2013) Social Norms/ Beliefs

Personal Factors

Relevant Codes	Relevant Assessments
Not coded within the ICF-CY due to wide variability	<ul style="list-style-type: none"> Ages and Stages Questionnaire :Social Emotional (Bricker & Squires, 1999) Child drawings (McLeod, 2009) Child interviews (Hall et al. 2013)

CONCLUSION

Applying the ICF-CY (WHO, 2007) framework in the assessment of children with CLP will enable clinicians to focus intervention on the ultimate goal of improvement of the child's ability to communicate in natural settings. Using this framework, potential environmental barriers (e.g. individual and societal attitudes, access to health and education services) as well as restrictions to activities and participation, can be identified and intervention goals can be established to address these. Incorporating the ICF-CY (WHO, 2007) in teaching curricula and using this framework for planning assessment and intervention will provide SLPs of the future a holistic perspective on children with cleft palate, introduce them to new assessment tools and extend their thinking about the impact of speech impairment associated with cleft palate. It will also facilitate collaborative interdisciplinary care of children with CLP. The narrative review and the proposed assessment model will serve as underpinnings for surveying speech-language pathologists in the USA and Brazil regarding their clinical assessment practices of children with cleft palate and their utilization of the ICF-CY (WHO, 2007) framework.

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Disclosure

The Cross-Linguistic Consortium is jointly funded by grants from the U.S. Department of Education Fund for the Improvement of Post-Secondary Education (FIPSE) P116M100014, and the Brazilian Ministry of Education Fundacao Coordenacao de Aperfeicoamento de Pessoal de Nivel Superior (CAPES; 094/10). Funding support was also received from the ETSU Research and Development Committee.