



Cristina Maria Teixeira Santana

**Ages & Stages Questionnaire-Brazil-2011:
Adjustments in ASQ-BR cross cultural
adaptation to public child daycare centers
and preschools in Rio de Janeiro**

DISSERTAÇÃO DE MESTRADO

Thesis presented to Programa de Pós-Graduação
em Psicologia Clínica, PUC-Rio, as partial
fulfillment of the requirements for the degree of
Mestre em Psicologia Clínica.

Advisor: Prof. Jesus Landeira Fernandez

Rio de Janeiro
April, 2014



Cristina Maria Teixeira Santana

**Ages & Stages Questionnaire-Brazil-2011:
Adjustments in ASQ-BR cross cultural
adaptation to public child daycare centers
and preschools in Rio de Janeiro**

Thesis presented to Programa de Pós-Graduação
em Psicologia, PUC-Rio, as partial fulfillment of the
requirements for the degree of Mestre em
Psicologia Clínica. Approved by Comission below:

Prof. Jesus Landeira Fernandez
Advisor
Departamento de Psicologia - PUC-Rio

Profa. Juliane Callegaro Borsa
Departamento de Psicologia - PUC-Rio

Profa. Luciana Mourão Cerqueira e Silva
UNIVERSO

Profa. Denise Beruezo Portinari
Coordinator of Postgraduation and Research of
Centro de Teologia e Ciências Humanas – PUC-Rio

Rio de Janeiro, April 3rd, 2014

All rights reserved.

Cristina Maria Teixeira Santana

Author graduated in Psychology at PUC-Rio. Received the CAPES Grant for Masters studies. Masters Degree started at 2011.

Bibliographic Data

Santana, Cristina Maria Teixeira

Ages & Stages Questionnaire-Brazil-2011: adjustments in ASQ-BR cross cultural adaptation to public child daycare centers and preschools in Rio de Janeiro / Cristina Maria Teixeira Santana ; orientador: Jesus Landeira Fernandez. – 2014.

128 f. ; 30 cm

Dissertação (mestrado)–Pontifícia Universidade Católica do Rio de Janeiro, Departamento de Psicologia, 2014.

Inclui bibliografia

1. Psicologia – Teses. 2. Desenvolvimento infantil. 3. Creches. 4. Pré-escolas. 5. Métodos de triagem. 6. ASQ. I. Fernandez, Jesus Landeira. II. Pontifícia Universidade Católica do Rio de Janeiro. Departamento de Psicologia. III. Título.

CDD: 150

Acknowledgements

I would like to express special thanks to my supervisor, J. Landeira-Fernandez, for all his support and shared knowledge;

I thank CAPES, whose financial aid made this research possible;

To my grandmother Soledade (*in memoriam*), for her and unconditional love, reassuring care and tender sweetness;

To my parents Graça and Aloísio and to my brother Marcelo, always dedicated to my happiness;

To my dear Chiquinho and Inácio Bento (*in memoriam*), Julieta, Clárinha, Bernardo Francisco and M. Patrício, constant and solidary companions, special friends earned along life;

My warmest thanks to my dear family and friends – Ana Paula, Andréa, Cris, Denize, Diva, Lenice, Letícia, Mary, Rosa and Teresa Andrade for having been beautifully present in fortunes and misfortunes of day to day. I especially thank Juliana and Helber for the kind and careful review of this dissertation;

To my husband Mark Andrew, for his love and support;

To little M^a. Luíza, Júlia, Cecília and Julinha for being so loving and cute!;

To my colleagues and friends in PUC and ASQ-BR-R work Alberto Filgueiras, Carolina Ballesteros, Elodie Bertrand, Emmy Uehara, Luís Filipe Aboim Tavares, Silvia Maisonette and professors Flávia Sollero de Campos and Carmen Hozanna who, among many others, generously shared knowledge, time and pleasant company.

My deepest gratitude to Father Paul Schweitzer, precious friend and true example of dedication to Christ;

Above all, to God, origin of all knowledge, wisdom and kindness.

Abstract

Santana, Cristina Maria Teixeira; Landeira-Fernandez, Jesus (Advisor). **Ages & Stages Questionnaire-Brazil-2011: adjustments in ASQ-BR cross-cultural adaptation to public child daycare centers and preschools in Rio de Janeiro.** Rio de Janeiro, 2014. 128p. Masters Dissertation - Departamento de Psicologia, Pontifícia Universidade Católica do Rio de Janeiro

Day-care centers and pre-schools highly benefit from precise and reliable screening measures. Ages & Stages Questionnaire was adapted to Brazilian Portuguese in 2010 (Filgueiras et al., 2013) and renamed ASQ-BR. Regardless of its good results, modifications in a few items were required to improve the instrument's measure. The objective of the present study is to modify such ASQ-BR's items and verify if the changes increase the reliability of the test. This study researched 67,522 children from 972 public day-care centers and pre-schools of Rio de Janeiro, Brazil. The data was collected in November and December, 2011. The changes in the items were made considering Cronbach's alpha and item-to-total correlations in ASQ-BR. Reliability, dimensionality and item to total correlations were calculated. Regarding dimensionality, 86.2% of the scales in ASQ-BR-2011 were unidimensional. Internal consistency showed improvement from 2010 to 2011, 53.8% of the scales increased the alpha statistics against 41.2% that decreased – 5.0% remained the same. Finally, 65.2% of the modified items showed improvement based on item-to-total correlations. Though the objective of the present study was partially achieved, a few scales presented results below the established criteria. In contrast, the instrument's measure improved in several aspects from 2010 to 2011, especially in the Personal/social domain.

Keywords

Early Development; Child Day-care Centers; Pre-schools; Screening Methods; ASQ.

Resumo

Santana, Cristina Maria Teixeira; Landeira-Fernandez, Jesus (Orientador). **Ages & Stages Questionnaire-Brazil-2011: ajustes à adaptação transcultural do ASQ-BR a creches e pré-escolas públicas do Rio de Janeiro.** Rio de Janeiro, 2014. 128p. Dissertação de Mestrado - Departamento de Psicologia, Pontifícia Universidade Católica do Rio de Janeiro

Creches e pré-escolas podem beneficiar-se profundamente de instrumentos de triagem precisos e confiáveis. O *Ages & Stages Questionnaire* foi adaptado para o português brasileiro em 2010 (Filgueiras et al., 2013) e renomeado ASQ-BR. Independentemente de seus bons resultados, foram necessárias modificações em alguns de seus itens para melhorar a medida do instrumento. O objetivo do presente estudo é o de modificar tais itens e verificar se as mudanças lograram aumentar a confiabilidade do teste. Este estudo pesquisou 67.522 crianças de 972 creches públicas e pré-escolas do Rio de Janeiro, Brasil. Os dados foram coletados em novembro e dezembro de 2011. As mudanças nos itens foram feitas considerando-se o alfa de Cronbach e a correlação item-total do ASQ-BR. Foram calculadas a confiabilidade, dimensionalidade e correlações item-total. Quanto à dimensionalidade, 86,2% das escalas do ASQ-BR-2011 foram unidimensionais. A consistência interna mostrou melhora de 2010 para 2011 com 53,8% das escalas tendo aumentado o alfa contra 41,2% tendo diminuído e 5,0% tendo permanecido com os mesmos valores. Finalmente, 65,2% dos itens modificados apresentaram melhora com base nas correlações item totais. Embora o objetivo do presente estudo tenha sido parcialmente alcançado, algumas escalas apresentaram resultados abaixo dos critérios estabelecidos. Por outro lado, as medidas do instrumento melhoraram em vários aspectos de 2010 para 2011, especialmente no domínio pessoal / social.

Palavras-Chave

Desenvolvimento infantil; Creches; Pré-escolas; Métodos de triagem; ASQ.

Summary

1 Introduction	08
2 Types of psychological tests, their validity, precision and standards	14
3 ASQ-3's theoretical developmental bases: Piaget & Gesell	19
3.1 Piaget's developmental theory for 2 to 66 month-old children	
3.2 Gesell's developmental theory for 2-66 month children	24
4 ASQ-3 and ASQ-BR	27
4.1 The importance of good transcultural adaptation	31
4.2 ASQ-3's transcultural adaptation into ASQ-BR	33
5 Objectives	36
5.1 General objectives	36
5.2 Specific objectives	36
6 Methodology	37
6.1 Criteria for item selection	38
6.2 Item modification	47
6.3 Subjects	53
6.4 Application procedures	54
6.5 Statistical analyses	56
7 Results	61
8 Discussion	70
8.1 Communication	71
8.2 Gross Motor Domain	73
8.3 Fine Motor Domain	75
8.4 Problem Solving Domain	76
8.5 Personal/Social Domain	78
8.6 Limitations of the study	79
9 Conclusion	80
10 References	81
Annex	90