

## REFERENCES

- ACPA: American Cleft Palate-Craniofacial Association. (2007). *Parameters for evaluation and treatment of patients with cleft lip/palate or other craniofacial anomalies*. <http://www.acpa-cpf.org>. (Date of access: 7 August 2007).
- ACPA: American Cleft Palate-Craniofacial Association. (n.d.). Genetic Screening Questionnaire. [http://www.acpa-cpf.org/educMeetings/educ\\_ScreeningTools.htm](http://www.acpa-cpf.org/educMeetings/educ_ScreeningTools.htm). (Date of access: 2 June 2009).
- ASHA: American Speech-Language and Hearing Association. (1993). *Definitions of Communication Disorders and Variations*. <http://www.asha.org/policy>. (Date of access: 28 August 2007).
- ASHA: American Speech-Language and Hearing Association. (2001). *Scope of practice in Speech-language Pathology* (Position Statement). <http://www.asha.org/members/deskref/default>. (Date of access: 11 April, 2007).
- ASHA: American Speech-Language and Hearing Association. (2004). Guidelines for the Audiologic Assessment of children from birth to 5 years of age. [http://www.asha.org/docs/pdf/GL\\_2004-00002.pdf](http://www.asha.org/docs/pdf/GL_2004-00002.pdf). (Date of access: 2 May 2007).
- ASHA: American Speech-Language and Hearing Association. (2005). *Evidence-Based Practice in Communication Disorders* (Position Statement). <http://www.asha.org/members/deskref/default>. (Date of access: 11 April 2007).

ASHA: American Speech-Language-Hearing Association. (2008). *Roles and responsibilities of speech-language pathologists in early intervention* (Position statement). <http://www.asha.org/policy>. (Date of access: 3 May 2008).

Amstalden-Mendes, L.G., Magna, L.A., & Lopes, V.L. (2006). Neonatal care of infants with cleft lip and/or palate: feeding, orientation and evolution of weight gain in a nonspecialized Brazilian hospital. *The Cleft Palate-Craniofacial Journal*, 44(3): 329-334.

Andrews, P.J., Chorbachi, R., Sirimanna, T., Sommerlad, B., & Hartley, B.E.J. (2004). Evaluation of hearing thresholds in 3 month old children with a cleft palate. *Clinical Otolaryngology*, 29: 10-17.

Arvedson, J.C., & Brodsky, L. (2002). *Paediatric swallowing and feeding: Assessment and management* (2<sup>nd</sup> ed.). Australia: Singular, Thomson Learning.

Babbie, E. (2001). *The practice of social research* (9<sup>th</sup> ed.). Belmont: Wadsworth.

Bale, J.R., Stoll, B.J., & Lucas, A.O. (2003). *Reducing birth defects: Meeting the challenges in the developing world*. Washington, D.C.: The National Academies Press.

Bagnato, S.J., Neisworth, J.T., & Munson, S.M. (1997). *Linking assessment and early intervention*. Baltimore: Paul H. Brookes.

Baker, P. (1972). *Kreol: a description of Mauritian Creole*. London: C. Hurst & Co.

- Bearn, D., Mildinhall, S., Murphy, T., Murray, J.J., Sell, D, Shaw, W.C., Williams, A.C., & Sandy, J.R. (2001). Cleft lip and palate care in the United Kingdom-the Clinical Standards Advisory Group (CSAG) Study Part 4- outcome comparisons, training and conclusions. *The Cleft Palate-Craniofacial Journal*, 38(1): 38-43.
- Bernthal, J.E., & Bankson, N.W. (1998). *Articulation and phonological disorders*. Boston: Allyn & Bacon.
- Billeaud, F.P. (2003). *Communication disorders in infants and toddlers: Assessment and intervention*. Boston: Butterworth-Heinemann.
- Blackman, J.A. (Ed.). (1995). *Identification and assessment in early intervention*. Maryland: Aspen.
- Blakeley, R.W., & Brockman, J.H. (1995). Normal speech and hearing by age 5 as a goal for children with cleft palate: a demonstration project. *American Journal of Speech Language Pathology*, 4: 25-32.
- Bloor, M., Frankland, J., Thomas, M., & Robson, K. (2001). *Focus groups in social research*. London: Sage.
- Broder, H.L., Richman, L.C., & Matheson, P.B. (1998). Learning disability, school achievement, and grade retention among children with cleft: a two center study. *The Cleft Palate-Craniofacial Journal*, 35(2): 127-131.
- Broen, P.A., Moller, K.T., Carlstrom, J., Doyle, S.S., Devers, M., & Keenah, K.M. (1996). Comparison of the hearing histories of children with and without cleft palate. *The Cleft Palate-Craniofacial Journal*, 33(2): 127-133.

- Broen, P.A., Devers, M.C., Doyle, S.S., Prouty, J.M., & Moller, K.T. (1998). Acquisition of cognitive and linguistic skills by children with cleft palate. *Journal of Speech Language and Hearing Research, 41*: 676-686.
- Brunnegard, K., & Lohmander-Agerskov, A. (2007). A cross-sectional study of speech in 10-year-old children with cleft palate: results and issues of rater reliability. *The Cleft Palate Craniofacial Journal, 44*(1): 33-44.
- Burkard, R.F., Don, M., & Eggermont J.J. (2007). *Auditory evoked potentials: basic principles and clinical applications*. London: Lippincott, Williams & Wilkins.
- Bzoch, K.R. (2004). *Communicative disorders related to cleft lip and palate* (5<sup>th</sup> ed.). Texas: Pro-ed.
- Carter, J.A., Lees, J.A., Murira, G.M., Gona, J., Neville, G.R., & Newton, J.C. (2005). Issues in the development of cross-cultural assessments of speech and language for children. *International Journal of Language and Communication Disorders, 40*(40): 385-401.
- Chapman, K.L., Hardin-Jones M.A., Schulte, J., & Halter, K.L., (2001). Vocal development of 9-month old babies with cleft palate. *Journal of Speech Language and Hearing Research, 44*: 1268-1283.
- Chapman, K.L., Hardin-Jones M.A., & Halter, K.L. (2003). The relationship between early speech and later speech and language performance for children with cleft lip and palate. *Clinical Linguistics and Phonetics, 17*(3): 173-197.
- Chapman, K.L., Hardin-Jones M.A., Goldstein, J.A., Halter, K.L., Havlik, R.J., & Schulte, J. (2008). Timing of palatal surgery and speech outcome. *The Cleft Palate- Craniofacial Journal, 45*(3): 297-308.

- Chatoor, I., Getson, P., Menvielle, E., Brasseaux, C., O'Donnell, R., Rivera, Y., & Mrazek, D.A. (1997). A feeding scale for research and clinical practice to assess mother-infant interactions in the first three years of life. *Infant Mental Health Journal*, 18(1): 76-91.
- Cole, E.B., & Flexer, C. (2007). Children with hearing loss: *Developing listening and talking*. San Diego: Plural Publishing Inc.
- Collett, B.R. & Speltz, M.L. (2006). Social-emotional development of infants and young children with orofacial clefts. *Infants & Young Children*, 19(4): 262-291.
- Coissard, E. (n.d.). *Troubles de l'articulation*. Equipe du centre d'orthophonie. Cedex: Clisson.
- Craniofacial Anomalies Network (CRANE). (2000). <http://www.perinatal.org.uk/crane>. (Date of access 12 December 2004).
- Creswell, J.W. (2003). *Research design: Qualitative, quantitative and mixed methods approaches* (2<sup>nd</sup> ed.). London: Sage.
- CSAG Report – Clinical Standards Advisory Group 1998, *Cleft lip and or palate*, London: HMSO.
- Damico, J.S., & Simmons-Mackie, N.N. (2003). Qualitative research and speech-language pathology: a tutorial for the clinical realm. *American Journal of Speech-Language Pathology*, 12: 131-143.
- D'Antonio, L. L., Scherer N.J., Miller, L.L., Kalbfleisch, J.H., & Bartley, M.D. (2001). Analysis of speech characteristics in children with Velocardiofacial Syndrome (VCFS) and children with phenotypic overlap without VCFS. *Cleft Palate- Craniofacial Journal*, 38(5): 455-467.

- D'Antonio, L. L. (2002). Role of the speech-language pathologist in interdisciplinary team care. Proceedings of the symposium and workshop on '*Speech disorders in individuals with cleft lip and palate-assessment, therapy and surgical management*' Supported by the Smile Train and Rehabilitation Council, India.
- D'Antonio, L.L. & Nagarajan, R. (2003). Use of a consensus building approach to plan speech services for children with cleft palate in India. *Folia Phoniatrica et Logopaedica*, 55(6): 306-313.
- Denzin, N.K., & Lincoln, Y.S. (Eds.). (2000). *Handbook of qualitative research* (2<sup>nd</sup> ed.). London: Sage Publication Inc.
- De Vos, A.S., Strydom, H., Fouche, C.B., & Delpont, C.S.L. (2005). *Research at grass roots*. (3rd ed.). Pretoria: Van Schaik Publishers.
- Dewart, H., & Summers, S. (1995). The Pragmatics Profile of everyday Communication Skills in Children. [http://wwwedit.wmin.ac.uk/psychology/pp/documents/Pragmatics\\_Profile\\_Children.pdf](http://wwwedit.wmin.ac.uk/psychology/pp/documents/Pragmatics_Profile_Children.pdf). (Date of access: 12 December 2004).
- Endriga, M.C., & Kapp-Simon, K.A. (1999). Psychosocial issues in craniofacial care: State of the art. *Cleft Palate- Craniofacial Journal*, 36(1): 3-11.
- Eurocran Speech Project. (2000). <http://www.eurocran.org/content>. (Date of access: 12 December 2004).
- Fenson, P., Dale, P.S., Reznick, J.S., Thal, D., Bates, E., Harung, J.P., Pethick, S., & Reilly, J.S. (1993). *MacArthur Communication Development Inventories*. San Diego: Singular Publishing Group.

- Friel-Patti, S., & Finitzo, T. (1990). Language learning in a prospective study of otitis media with effusion in the first two years of life. *Journal of Speech and Hearing Research*, 33: 188-194.
- Garcia, M., Pence, A., & Evans, J. L. (2007). *Africa's future, Africa's challenge: Early childhood care and development in Sub-Saharan Africa*. Washington D.C.: World Bank Publications.
- Gerber, S.E. (2001). *The handbook of genetic communicative disorders*. London: Academic Press.
- Golding-Kushner K.J. (2001). *Therapy techniques for cleft palate speech and related disorders*. Canada: Singular.
- Gooch, J.L., Hardin-Jones, M., Chapman, K.L., Trost-Cardamone, J.L., & Sussman, J. (2001). Reliability of listener transcriptions of compensatory articulations. *Cleft Palate- Craniofacial Journal*, 38(1): 59-67.
- Grames, L.M. (2008). Advancing into the 21st century: Care for individuals with cleft palate or craniofacial differences. ASHA leader online. <http://www.asha.org/about/publications/leader-online/archives/2008/080506/f080506a.html>. (Date of access: 9 June 2008).
- Grunwell, P. (Ed.). (1993). *Analysing cleft palate speech*. London: Whurr Publishers.
- Guralnick, M.J. (1997). *The effectiveness of early intervention*. Baltimore: Paul H. Brookes Publishing Co.
- Guralnick, M.J. (2005). *The development systems approach to early intervention*. Baltimore: Paul H. Brookes Publishing Co.

- Haapanen, M.L., & Rantala, S.L. (1992) Correlation between the age at repair and speech outcome in patients with isolated cleft palate. *Scandinavian Journal of Plastic and Reconstructive Surgery and Hand Surgery*, 26(1): 71-78.
- Hakim, C. (2000). *Research Design*. (2<sup>nd</sup> ed.). London: Routledge.
- Hammond, M., & Stassen, L. (1999). Do you care? A national register for cleft lip and palate patients. *British Journal of Orthodontics*, 26(2): 152-157.
- Harding, A., & Grunwell, P. (1998). Active versus passive cleft-type speech characteristics. *International Journal Language and Communication Disorders*, 33(3): 329-352.
- Hardin-Jones, M.A., Chapman, K.L., & Schulte, J. (2003). The impact of cleft type on early vocal development in babies with cleft palate. *The Cleft Palate-Craniofacial Journal*, 40(5): 453-459.
- Hardin-Jones, M.A., & Jones, D.L. (2004). Speech production of preschoolers with cleft palate. *The Cleft Palate-Craniofacial Journal*, 42(1): 7-13.
- Hardin-Jones, M., Chapman, K. & Scherer, N.J. (2006). Early intervention in children with cleft palate. *ASHA Leader*, 11: 8-11.
- Hardin-Jones, M., & Chapman, K.L. (2008). The impact of early intervention on speech and lexical development for toddlers with cleft palate: a retrospective look at outcome. *Language, Speech, and Hearing Services in Schools*, 39: 89–96.
- Hathorn, L.S., Atack, N.E., Butcher, G., Dickson, J., Durning, P., Hammond, M., Knight, H., Mitchell, N., Nixon, F., Shinn, D., & Sandy, J.R. (2006). Centralization of services: Standard setting and outcomes. *The Cleft Palate Craniofacial Journal*, 43(4): 401-405.



- Hauner, K.K.Y., Shriberg, L.D., Kwiatkowski, J., & Allen, C.T. (2005). A subtype of speech delay associated with psychosocial development. *Journal of Speech, Language and Hearing Research, 48*: 635-650.
- Hegde, M.N. (2003). *Clinical research in communicative disorders*. (3rd ed.). Texas: Pro-ed.
- Hegde, M.N. (2008). *Hegde's pocket guide to communication disorders*. New York: Thomson-Helmar Learning.
- Henningsson, G., Kuehn, D., Sell, D., Sweeney, T., Trost-Cardamone, J., & Whitehall, T. (2008). Universal parameters for reporting speech outcomes in individuals with cleft palate. *The Cleft Palate-Craniofacial Journal, 45*(1): 1-17.
- Hirschberg, J., & Van Denmark, D.R. (1997). A proposal for standardisation of speech and hearing evaluations to assess velopharyngeal function. *Folia Phoniatica et Logopaedica, 49*: 158-167.
- Hirschberg, J. (2001). Functional consequences of cleft palate and its management. <http://www.ncbi.nlm.gov/sites> (Date of access: 10 October 2007).
- Hocevar-Boltezar, I., Jarc, A., & Kozelj, V. (2006). Ear, nose and voice problems in children with orofacial clefts. *Journal of Laryngology Otology, 120*(4): 276-281.
- Hoff, E. (2005). *Language development*. (3<sup>rd</sup> ed.). Wadsworth: Thomson Learning.
- Horton, R. (2000). North and South: bridging the gap. *Lancet, 355*: 2231-2236.
- Hugo, R., Louw, B., Kritzinger, A., & Smit, G.J. (2000). Listening behaviour in children at risk for communication delay. *Infant-Toddler Intervention. The Transdisciplinary Journal, 10*(1): 47-53.

- Human Development Report. (2004). Published for UNDP (accessed at WHO office, Mauritius). (Date of access: 12 August 2008).
- Hunt, O., Burden, D., Hepper, P., & Johnston, C. (2005). The psychosocial effects of cleft lip and palate: A systematic review. *European Journal of Orthodontics*, 27: 274-285.
- Hutters, B., Bau, A., & Brondsted, K. (2001). A longitudinal group study of speech development in Danish children born with and without cleft palate. *International Journal of Language and Communication disorders*, 36(4): 447-470.
- Hutters, B., & Henningsson, G., (2004). Speech outcome following treatment in cross-linguistic cleft palate studies: methodological implications. *The Cleft Palate- Craniofacial Journal*, 41(5): 544-549.
- Jamilian, A., Nayeri, F., & Babayan, A. (2007). Incidence of cleft lip and palate in Tehran. *Journal of Indian Society of Pedodontics and Preventive Dentistry*, 25(4): 174-176.
- Jocelyn, L.J., Maureen, A. Penko, M. & Rode, H.L. (1996) Cognition, communication, and hearing in young children with cleft lip and palate and in control children: A longitudinal study. *Pediatrics*, 97(4): 529-535.
- John, A., Sell, D., Sweeney, T., Harding-Belle, A., & Williams, A. (2006). The cleft audit protocol for speech-augmented: A validated and reliable measure for auditing speech. *Cleft Palate-Craniofacial Journal*, 43(3): 272-288.
- Johnson, D. (1994). *Research methods in educational management*. Essex : Longman Group.
- Johnson, R.B., & Onwuegbuzie, A.J. (2004). Mixed research: A research paradigm whose time has come. *Educational Researcher*, 33(7): 14-26.

- Johnson, C.J. (2006). Getting started in evidence-based practice for childhood speech language disorders. *American Journal of Speech-Language Pathology, 15*: 20-35.
- Joint Committee on Infant Hearing (JCIH), (2007). Year 2007 position statement. Principles and guidelines for early hearing detection and intervention program. *Pediatrics, 120*: 898-921.
- Justice, L.M. (2006). *Clinical approaches to emergent literacy intervention*. San Diego: Plural Publishing Inc.
- Kaderavek, J.N., & Justice, L. (2000). Children with LD as emergent readers: Bridging the gap to conventional reading. *Intervention in School and Clinic, 36*(2): 82-93.
- Kapp-Simon, K.A., & Krueckeberg, S. (2000). Mental development in infants with cleft lip and/or palate. *The Cleft Palate-Craniofacial Journal, 37*(1): 65-70.
- Karling, J., Larson, J., & Henningsson, G. (1993). Oronasal fistulas in cleft palate patients and their influence on speech. *Scandinavian Journal of Plastic and Reconstructive Surgery and Hand Surgery, 27*(3): 193-201.
- Kemker, B.E., & Antonelli, P.J. (2004). Audiologic management of patients with cleft palate and related disorders. In K.R. Bzoch (Ed.). *Communicative disorders related to cleft lip and palate*. (5<sup>th</sup> ed.). Texas: Pro-ed.
- Kent R.D, Weismer G, Kent, J.F., Vorperian H.K., & Duffy J.R. (1999). Acoustic studies of dysarthric speech: methods, progress, and potential. *Journal of Communication Disorders, 32*: 141–180.
- Kernahan, D.A., Rosenstein, S.W., & Dado, D.V. (1990). *Cleft lip and palate a system of management*. Baltimore: Williams & Wilkins.

- Kirschner, R.E., Randall, P., Wang, P., Jawad, A. F., Duran, M., Huang, K., Solot, C., Cohen, M., & LaRossa, D. (2000). Cleft palate repair at 3 to 7 Months of Age. *Plastic and Reconstructive Surgery*, *105*(6): 2127-2132.
- Klein, M.D. & Briggs, M.H. (1987). Observation of communicative interaction. *Journal of Childhood Communication Disorders*, *10*(2): 95-106.
- Kritzinger, A., Louw, B., & Hugo, R. (1995). Communication skills of biologically at-risk neonates. *The South African Journal of Communication Disorders*, *42*: 7-17.
- Kritzinger, A., Louw, B., & Hugo, R. (1996). Early communication functioning of infants with cleft lip and palate. *The South African Journal of Communication Disorders*, *43*: 77-84.
- Kritzinger, A., & Louw, B. (1997). A description of joint book-reading practices of mothers and their young children, 0-2 years. *Clinica, Applications in Clinical Practice of Communication Pathology*. Monograph 2. Department of Communication Pathology. University of Pretoria.
- Kritzinger, A. (2000). Establishing a computer-based data system for early communication intervention in South Africa. Unpublished D.Phil. Thesis. Department of Communication Pathology, University of Pretoria.
- Kritzinger, A., & Louw, B. (2002). A comprehensive assessment protocol for infants and toddlers at risk for communication disorders. *Clinical Applications in Clinical Practice of Communication Pathology*. Monograph 6. University of Pretoria.
- Kritzinger, A., & Louw, B. (2005). Communication profile of infants and toddlers with cleft palate in an early intervention clinic. Presentation at the *10<sup>th</sup> International Congress on Cleft Palate and related Craniofacial Anomalies*: 105-106. Durban.
- Krueger, R.A., (2007). *Focus group interviewing*. [http://www.tc.umn.edu/~rkrueger/focus\\_moderating.html](http://www.tc.umn.edu/~rkrueger/focus_moderating.html). (Date of access: 28 January 2007).

- Kuehn, D.P., & Moller, K.T. (2000). Speech and language issues in the cleft palate population: The state of the art. *The Cleft Palate-Craniofacial Journal*, 37(4): 348-406.
- Kuehn, D.P., & Henne, L.J. (2003). Speech evaluation and treatment for patients with cleft Palate. *The American Journal of Speech-Language Pathology*, 12: 103-109.
- Kummer, A.W. (2008). *Cleft palate and craniofacial anomalies: Effects on Speech and Resonance* (2<sup>nd</sup> ed.). New York: Delmar learning Cengage.
- Labuschagne, C., & Louw B. (2005). Early intervention in cleft palate: parental experiences of the information sharing process. Presentation at the 10<sup>th</sup> *International Congress on Cleft Palate and related Craniofacial Anomalies: 117*. Durban.
- Leedy, P.D., & Ormrod J.E. (2005). *Practical research* (8<sup>th</sup> ed.). Merrill: Prentice Hall.
- Leech, N.L., & Onwuegbuzie, A.J. (2005). A typology of mixed methods research designs. Paper presented at *annual meeting of the American Educational Research Association*, Montreal, Canada.
- Lohmander-Agerskov, A., & Olsson, M. (2004). Methodology for perceptual assessment of speech in patients with cleft palate: a critical review of the literature. *The Cleft Palate-Craniofacial Journal*, 41(1): 64-70.
- Lohmander-Agerskov, A. (2008). Letter to the editor. *The Cleft Palate-Craniofacial Journal*, 45(4): 452.
- Louw, B., & Kritzinger, A. (1995). CHRIB Case History Form. Clinic for High Risk Babies, Centre for Early Intervention in Communication Pathology. Department of Communication Pathology, University of Pretoria.

- Louw, B., Shibambu, M., & Roemer, K. (2006). Facilitating cleft palate team participation of culturally diverse families in South Africa. *The Cleft Palate- Craniofacial Journal*, 43(1): 47-54.
- Maris, C.L., Endriga, M.C., Speltz, M.L., Jones, K., & DeKlyen, M. (2000). Are infants with orofacial clefts at risk for insecure mother-child attachments? *The Cleft Palate- Craniofacial Journal*, 37(3): 257-265.
- Mars, M., Sell, D., & Habel, A. (2008). Management of cleft lip and palate in the developing world. Sussex: John Wiley & Sons Ltd.
- Masarei, A., Wright, S., Hughes, J., & Lake, R. (2004). Infant feeding assessment for newborn infants with cleft lip and/or palate. North Thames Regional Cleft Team (unpublished).
- Masarei, A., Sell, D., Habel, A., Sommerlad, B.C., & Wade, A. (2007). The nature of feeding in infants with unrepaired cleft lip and/or palate compared with healthy noncleft infants. *The Cleft Palate-Craniofacial Journal*, 44(3): 321–328.
- Maxwell, D.L., & Satake, E. (2006). *Research and statistical methods in communication sciences and disorders*. Canada: Thomson Delmar Learning.
- McLean, M., Wolery, M., & Bailey, D.B. (2004). *Assessing infants and preschoolers with special needs* (3<sup>rd</sup> ed.). Ohio: Pearson Merrill Prentice Hall.
- McDonagh, S., Pinson, R., & Shaw, A. (2000). Provision of general dental care for children with cleft lip and palate-parental attitudes and experiences. *British Dental Journal*, 189(8): 432-435.
- Merrick, G.D., Kunjur, J., Watts, R., & Marcus, A.F. (2007). The effect of early insertion of grommets on the development of speech in children with cleft palate. *British Journal of Oral and Maxillofacial Surgery*, 45: 527-533.

- Mitchell, L.E., Beaty, T.H., Lindral, A.C., Munger, R.G., Murray, J.C., Saal, H.M., & Wyszynski, D.F. (2002). Guidelines for the design and analysis of studies in nonsyndromic cleft lip and palate in humans: Summary report from a workshop of the international consortium for oral clefts genetics. *The Cleft Palate-Craniofacial Journal*, 39(1): 93-100.
- Morgan, G.A., Glinner, J.A., & Harmon, R.J. (2006). *Understanding and evaluating research in applied and clinical settings*. New Jersey: Lawrence Erlbaum Associates.
- Morris, H., & Ozanne, A. (2003). Phonetic, phonological and language skills of children with a cleft palate. *The Cleft Palate- Craniofacial Journal*, 40(5): 460-470.
- Moss, A.L.H., & Fonseca, S. (2006). Audiological issues in children with cleft lip and palate in one area of the U.K. *The Cleft Palate Craniofacial Journal*, 43(4): 420-428.
- Mossey, P.A. (2005). Global involvement in craniofacial anomalies: 31. Presentation at the 10<sup>th</sup> *International Congress on Cleft Palate and related Craniofacial Anomalies*. Durban.
- Mouton, J. (2000). *Understanding social research*. Pretoria: Van Schaik.
- Mroz, M., & Hall, E., (2003). Not yet identified: The knowledge, skills, and training needs of early years professionals in relation to children's speech and language development. *Early Years an International Journal of Research and Development*, 23(2): 117-130.
- Nackashi, J.A, Dedlow, E.R., & Dixon Wood, V.L. (2004). The craniofacial team: Health supervision and coordination. In K.R. Bzoch (Ed.), *Communicative disorders related to cleft lip and palate*. (5<sup>th</sup> ed.). Texas: Pro-ed.
- Nathan, L., Stackhouse, J., Goulandris, N., & Snowling, M.J. (2004). The development of early literacy skills among children with speech difficulties: A test of the critical age hypothesis. *Journal of Speech, Language and Hearing Research*, 47: 377-391.

- Neiman, G.S., & Savage, H.E. (1997). Development of infants and toddlers with clefts from birth to three years of age. *The Cleft Palate-Craniofacial Journal*, 34(3): 218-225.
- Neuman, W.L. (2000). *Social research methods* (4<sup>th</sup> ed.). Boston: Allyn & Bacon.
- Northern, J.L., & Downs, M.P. (2002). *Hearing in children* (6<sup>th</sup> ed.). Baltimore: Williams & Wilkins.
- Oliver, R.G., & Jones, G. (1997). Neonatal feeding of infants born with cleft lip and/or palate: parental perceptions of their experience in South Wales. *The Cleft Palate Craniofacial Journal*, 34(6): 526-530.
- Oller, D.K., Eilers, R.E., Neil, A.R., & Schwartz, H.K. (1999). Precursors to speech in infancy: the prediction of speech and language disorders. *Journal of Communication Disorders*, 32(4): 223-245.
- Onwuegbuzie, A.J. & Johnson, B.R. (2006) The Validity Issue in Mixed Research. *Research in the Schools* 13 (1) 48-63.
- Owens, R.E. (2001). *Language development* (5<sup>th</sup> ed.). Boston: Allyn & Bacon.
- Paliobei, V., Psifidis, A., & Anagnostopoulos, D. (2005). Hearing and speech assessment of cleft palate patients after palatal closure: Long term results. *International Journal of Pediatric Otorhinolaryngology*, 69: 1373-1381.
- Pamplona, C., & Ysunza, A., (2000). Active participation of mothers during speech therapy: Improved language development of children with cleft palate. *Scandinavian Journal of Plastic and Reconstructive Surgery and Hand Surgery*, 34: 231-236.



- Pamplona, C., Ysunza, A., Gonzalez, M., Ramirez, E., & Patino, C. (2000). Linguistic development in cleft palate patients with and without compensatory articulation disorder. *International Journal of Pediatric Otorhinolaryngology*, 54: 81-91.
- Pamplona, C., Ysunza, A., & Ramírez, P. (2004). Naturalistic intervention in cleft palate children. *International Journal of Pediatric Otorhinolaryngology*, 68(1): 75-81.
- Papalia, D.E., Olds, S.W., & Feldman, R.D. (2002). *A child's world: Infancy through adolescence* (9<sup>th</sup> ed.). New York: McGraw-Hill Higher Education.
- Paradise, J.L., Elster, B.A., & Tan, L. (1994). Evidence in infants with cleft palate that breast milk protects against otitis media. *Pediatrics*, 6: 853-860.
- Patton, M.Q. (1990). *Qualitative research and evaluation methods* (2<sup>nd</sup> ed.). Newbury Park, CA: Sage.
- Paul, R. (2007). *Language disorders from infancy to adolescence: assessment and Intervention* (3<sup>rd</sup> ed.). St Louis: Mosby.
- Pence, K.L., & Justice, .M. (2008). *Language development from theory to practice*. New Jersey: Pearson Prentice Hall.
- Persson, C., Elander, A, Lohmander, A., & Soderpalm, E. (2002). Speech outcomes in isolated cleft palate: impact of cleft extent and additional malformations. *The Cleft Palate-Craniofacial Journal*, 39(4): 397-408.
- Persson, C., Lohmander, A., & Elander, A. (2006). Speech in children with isolated cleft: A longitudinal perspective. *The Cleft Palate Craniofacial Journal*, 43(3): 295-309.
- Peterson-Falzone, S.J., Hardin-Jones, M.A., & Karnell, M.P. (2010). *Cleft palate speech*, (4<sup>th</sup> ed.). St. Louis: Mosby, Elsevier.

- Peterson-Falzone, S.J., Trost-Cardamone, J.E., Karnell M.P., & Hardin-Jones, M.A. (2006). *The clinician's guide to treating cleft palate speech*. St Louis: Mosby, Elsevier.
- Phillips, B.J. (2004). Collaborative clinical research and the craniofacial outcomes registry. In K. R. Bzoch (Ed.). *Communicative disorders related to cleft lip and palate*. (5<sup>th</sup> ed.). Texas: Pro-ed.
- Pickering, M., & McAllister, L. (2000). A conceptual framework for linking and guiding domestic cross-cultural and international practice in speech-language pathology. *International Journal of Speech-Language Pathology*, 2(2): 93-106.
- Pope, A.W., Tillman, K., & Snyder, H.T. (2005). Parenting stress in infancy and psychosocial adjustment in toddlerhood: A longitudinal study of children with craniofacial anomalies. *The Cleft Palate Craniofacial Journal*, 42(5): 556-559.
- Popich, E., Louw, B., & Eloff, I. (2007). Caregiver education as a prevention strategy for communication disorders in South Africa. *Infants and Young Children*, 20(1): 64-81.
- Prahl, C., & Prahl-Andersen, B. (2007). Craniofacial anomalies and quality of life. *Seminars in Orthodontics*, 13(2): 116-121.
- Prathanee, B., Dechongkit, S., & Maniochiopinig, S. (2006). Development of community-based speech therapy model: for children with cleft/palate in northeast Thailand: *Journal of Medical Association of Thailand*, 89(4): 500-508.
- Prizant, B.M., & Wetherby, A.M. (1995). *Communication and language assessment for young children*. In Blackman, J.A. (Ed.). *Identification and assessment in early intervention*. Maryland: Aspen publications.
- Pudaruth, B.L. (1972). *Le Creole Mauricien*. Unpublished doctoral dissertation. University Paul Valery of Montpellier, France.

- Reeve, M. E., Groce, N. E., Persing, J.A., & Magge, S.N. (2004). An international surgical exchange program for children with cleft lip/cleft palate in Manaus, Brazil: Patient and family expectations of outcome. *The Journal of Craniofacial Surgery*, 15(1): 170-174.
- Reid, J. (2004). A review of feeding interventions for infants with cleft palate. *The Cleft Palate Craniofacial Journal*, 41(3): 268-278.
- Reid, J., Kilpatrick, N., & Reilly, S. (2006). A prospective, longitudinal study of feeding skills in a cohort of babies with cleft conditions. *The Cleft Palate Craniofacial Journal*, 43(6): 702-709.
- Reilly, S. (2004). The challenges in making speech pathology practice evidence based. *Advances in Speech-Language Pathology*, 6(2): 113-124.
- Reilly, S., Douglas, J., & Oates, J. (2004). *Evidence-based practice in speech pathology*. London: Whurr publishers.
- Restrepo, M.A., & Towle-Harmon, M. (2008). Addressing emergent literacy skills in English-language learners. *The ASHA Leader*, 13(13): 10-13.
- Richman, L.C., & Ryan, S.M. (2003). Do the reading disabilities of children with cleft fit into the current models of developmental dyslexia? *The Cleft Palate Craniofacial Journal*, 40(2): 154-157.
- Rossetti, L.M. (1990). *The Rossetti infant-toddler language scale*. Illinois: LinguiSystems Inc.
- Rossetti, L.M. (2001). *Communication intervention. Birth to Three* (2<sup>nd</sup> ed.). Australia: Singular Thomson Learning.
- Roth, F.R., & Worthington, C.K. (2005). *Treatment Resource Manual for Speech-Language Pathology* (3<sup>rd</sup> ed.). UK: Thomson Delmar Learning.

- Savage, H.E., Neiman, G.S., & Reuter, J.M. (1994). A developmental perspective on assessment of infants with clefts and related disorders. *Infant-Toddler Intervention: The Transdisciplinary Journal*, 4(3): 221-234.
- Scherer, N.J., & D'Antonio, L.L. (1995). Parent questionnaire for screening early language in children with cleft palate. *The Cleft Palate-Craniofacial Journal*, 32(1): 7-12.
- Scherer, N.J. (1999). The speech and language status of toddlers with cleft lip and/or palate following early vocabulary intervention. *American Journal of Speech-Language Pathology*, 8:81-93.
- Scherer, N. J., D'Antonio, L. L., & Kalbfleisch, J. H. (1999). Early speech and language development in children with velocardiofacial syndrome. *American Journal of Medical Genetics*, 88: 714-723.
- Scherer, N.J., Chapman, K., Hardin-Jones, M., & D'Antonio, L.L. (2005). Early assessment and intervention for children with cleft palate. *American Speech-Language Hearing Convention*. San Diego.
- Scherer, N.J., & Kaiser, A.P. (2007). Early intervention for children with cleft palate. *Infants & Young Children*, 20(4): 355-366
- Scherer, N.J., D'Antonio, L.L., & McGahey, H. (2008). Early intervention for speech impairment in children with cleft palate. *The Cleft Palate-Craniofacial Journal*, 45(1): 18-31.
- Schonweiler, R., Lisson, J.A., Schonweiler, B., Eckardt, A., Ptok, M., Trankmann, J., & Hausamen, J.E. (1999). A retrospective study of hearing, speech and language function in children with clefts following palatoplasty and veloplasty procedures at 18-24 months of age. *International Journal of Paediatric Otorhinolaryngology*, 50: 205-217.
- Sell, D., Grunwell, P., & Mars, M. (1994). A methodology for the evaluation of severely disordered cleft palate speech. *Clinical Linguistics & Phonetics*, 8(3): 219-233.

- Sell, D., Hardin, M.A., & Grunwell, P. (1998). A training video of speech characteristics- Speech Assessment GOS.SP.ASS '98', CLAPA The Speech and Language Therapy Department at Great Ormond Street Hospital NHS Trust, London.
- Sell, D., Harding, A., & Grunwell, P. (1999). GOS.SP.ASS. 98: an assessment for speech disorders associated with cleft palate and/or velopharyngeal dysfunction. *International Journal Language & Communication Disorders*, 34(1): 17-33.
- Sell, D., Grunwell, P., Mildinhal, S., Murphy, T., Cornish, T.A., Bearn D, Shaw W.C., Murray, J.J. Williams, A.C., & Sandy, J.R. (2001). Cleft lip and palate care in the United Kingdom. The clinical standards advisory group (CSAG) study, Part 3: Speech outcomes. *The Cleft Palate-Craniofacial Journal*, 38(1): 30-37.
- Sell, D. (2005). Issues in perceptual speech analysis in cleft palate and related disorders: a review. *International Journal Language Communication Disorders*, 40(2): 103-121.
- Sell, D. (2007). Part 1. Cleft lip and palate in the developing world: speech pathology issues. In Perspectives on speech science and orofacial disorders. *American Speech-Language-Hearing Association Division 5 Newsletter*, 17(1): 13-18.
- Sell, D. (2007). Part 2. Cleft lip and palate in the developing world: speech pathology issues. In Perspectives on speech science and orofacial disorders. *American Speech-Language-Hearing Association Division 5 Newsletter*, 14(2): 16-20.
- Sevanandee, V. (2004). A study of the incidence of cleft palate in neonates in Mauritius and its possible causes. B.Sc. Medical Sciences dissertation, University of Mauritius, accessed at the University of Mauritius.
- Shaw, W.C., Bannister, R.P., & Roberts, C.T. (1999). Assisted feeding is more reliable for infants with clefts-a randomized trial. *The Cleft Palate-Craniofacial Journal*, 36(3): 262-268.

- Shaw, W.C., Semb, G., Nelson, P., Brattstrom, V., Molsted, K., Andersen, B. & Gundlach, K.K.H. (2001). The Eurocleft Project 1996-2000: Overview. <http://www.idealibrary.com>. (Date of access: 28 August 2007).
- Shaw, W.C. (2004). Global strategies to reduce the health care burden of craniofacial anomalies: Report of WHO meetings on international collaborative research on craniofacial anomalies. *The Cleft Palate-Craniofacial Journal*, 41(3): 238-243.
- Shaw, W.C., Dahl, E., Brattstrom, V., Molsted, K., Prah-Andersen, B., Roberts, C., & Semb, G. (2005). The Eurocleft study: Inter-center study of treatment outcome in patients with complete cleft lip and palate: Part 5: Discussion and conclusions. *The Cleft Palate-Craniofacial Journal*, 42(1): 93-98.
- Shipley, K.G., & McAfee, J.G. (2004). *Assessment in Speech-Language Pathology: A Resource Manual* (4<sup>th</sup> ed.). San Diego: Singular publishing.
- Shonkoff, J.P., & Meisels, S.J. (2000). *Handbook of early childhood intervention*. (2<sup>nd</sup> ed.). England: Cambridge University Press.
- Shprintzen, R.J., & Bardach, J. (1995). *Cleft palate speech management: A multidisciplinary approach*. St. Louis: Mosby Inc.
- Shprintzen, R.J. (1997). *Genetics, Syndromes and Communication Disorders*. London: Singular.
- Shprintzen, R.J. (2004). Nasopharyngoscopy. In K. R. Bzoch (Ed.). *Communicative disorders related to cleft lip and palate*. (5<sup>th</sup> ed.). Texas: Pro-ed.
- Shriberg, L.D., McSweeney, J.L., Anderson, B.E., Campbell, T.L., Chial, M.R., Green, J.R., Hauner, K.K., Moore, C.A., Rusiewicz, H.L., & Wilson, D.L. (2005). Transitioning from analogue to digital audio recording in childhood speech sound disorders. *Clinical Linguistics & Phonetics*, 19(4): 335-359.

- Smedegaard, L., Marxen, D., Moes, J., Glassou E.N., & Sciantsan, C., (2008). Hospitalization, breast-milk feeding, and growth in infants with cleft palate and cleft lip and palate born in Denmark. *The Cleft Palate and Craniofacial Journal*, 45(6): 628-632.
- Snow, C.E., Burns, M.S., & Griffin, P. (1998). Preventing reading difficulties in young children. <http://www.nap.edu/catalog/6023.html>. (Date of access: 06.02.2009).
- Speltz, M.L., Morton, K., Goodell, E.W., & Clarren, S.K. (1993). Psychological functioning of children with craniofacial anomalies and their mothers: Follow-up from late infancy to school entry. *The Cleft Palate-Craniofacial Journal*, 30(5): 482-489.
- Stewart, D.W., & Shamdasani, P.N. (1990). *Focus groups: Theory and practice*. London: Sage.
- Strauss, R.P. (2001). Only skin deep: health, resilience, and craniofacial care. *The Cleft Palate-Craniofacial Journal*, 38(3): 226-230.
- Strauss, R.P. (2004). Social and psychological perspectives on cleft lip and palate. In K. R. Bzoch (Ed.). *Communicative disorders related to cleft lip and palate*. (5<sup>th</sup> ed.). Texas: Pro-ed.
- Streicher, D. (2005). Preliminary speech assessment protocol for pre-school Sepedi speaking children with cleft palate. Unpublished undergraduate research report, Department of Communication Pathology, University of Pretoria.
- Sunkur, J., Akaloo, N., & Ameerberg, S.A.G. (2002). Executive Summary of the Contraceptive Prevalence Survey. *Report from Evaluation Unit: Ministry of Health & Quality of Life, Mauritius*.

- Swanenburg de Veye, H.F.N., Beemer, F.A., Mellenberg, G. J., Wolters, W.H.G., & Heineman-de Boer, J.A. (2003). An investigation of the relationship between associated congenital malformations and the mental and psychomotor development of children with clefts. *The Cleft Palate-Craniofacial Journal*, 40(3): 297-303.
- Sweeney T., & Whitehill, T. (2004) Evaluation. *Workshop on Universal Reporting for the Speech of Individuals with Cleft Palate*. April-May 2004: Washington D.C.
- Ter Poorten, L. & Louw, B. (2002) Mother's experiences when their infants were diagnosed with cleft lip and/or palates. *Health SA Gesondheid*, 7(2): 56-67.
- Tetnowski, J.A., & Franklin, T.C. (2003). Qualitative research: Implications for description and assessment. *American Journal of Speech-language Pathology*, 12: 155-164.
- Threats, T.T. (2006). Towards an international framework for communication disorders: Use of the ICF. *Journal of Communication Disorders*, 39: 251–265.
- Trindade, I.E.K. (2006). Scientific research in Latin America: Experiences of collaborative projects on craniofacial anomalies. *The Cleft Palate-Craniofacial Journal*, 43(6): 722-725.
- Trost Cardamone, J.E. (2004). Diagnosis of specific cleft palate speech error patterns for planning therapy or physical management needs. In K.R. Bzoch (Ed.). *Communicative disorders related to cleft lip and palate*. (5<sup>th</sup> ed.). Texas: Pro-ed.
- Vallino-Napoli, L.D., Riley, M.M., & Halliday, J. (2004). An epidemiological study of isolated cleft lip, palate or both in Victoria, Australia from 1983 to 2000. *The Cleft Palate-Craniofacial Journal*, 41(2): 185-194.
- Vallino-Napoli, L.D., Lass, N.J., Bunnell, T., & Pannbacker, M. (2008). Academic and clinical training in cleft palate for speech-language pathologists. *The Cleft Palate-Craniofacial Journal*, 45(4): 371-379.



- Van Heerden, C., & Kritzinger, A. (2008). Parental perceptions and practices of emergent literacy development in young children with Down syndrome: The development of intervention guidelines. *South African Journal of Communication Disorders*, 55: 37-48.
- Walley, J., Khan, M.A., Shah, S.A., Witter, S., & Wei, X. (2007). How to get research into practice: first get practice into research. *Bulletin of the WHO*, 85(6): 424-425.
- Watson, A.C.H., Sell, D.A., & Grunwell, P. (Eds.). (2001). *Management of Cleft Lip and Palate*, London: Whurr Publishers.
- Weitzner-Lin, B. (2004). *Communication Assessment and Intervention with infants and Toddlers*. St. Louis: Butterworth Heinemann.
- Welman, C., Kruger, F., & Mitchell, B. (2005). *Research methodology* (3<sup>rd</sup>.ed.). Southern Africa: Oxford Press.
- Williams, A.L. (2002). Perspectives in the assessment of children's speech. *American Journal of Speech-language Pathology*, 11: 211-212.
- Winder, A.E., Imagire, R., & Peterson-Falzone, S.J. (2004). Basic genetic concepts in craniofacial anomalies. In K. R. Bzoch (Ed.). *Communicative disorders related to cleft lip and palate*. (5<sup>th</sup> ed.). Texas: Pro-ed.
- Winterton, T. (1998). Providing appropriate training and skills in developing countries. *International Journal of Language and Communication Disorders*, 33: 108-113.

- Wirt, A., Wyatt, R., Sell, D., Grunwell, P., & Mars, M. (1990). Training assistants in cleft palate speech therapy in the developing world: a report. *The Cleft Palate- Craniofacial Journal*, 27(2): 169-175.
- Whitehill, T.L. (2002). Assessing intelligibility in speakers with cleft palate: a critical review of the literature. *The Cleft Palate-Craniofacial Journal*, 39(1): 50-57.
- WHO. (2001a). International Classification of Functioning, Disability and Health (ICF) <http://www.who.int/classifications/icf/en>. (Date of access: Retrieved on 08 May 2008)
- WHO. (2001b). Global registry and database on Craniofacial anomalies. [http://www.who.int/genomics/anomalies/en/chapter\\_05.pdf](http://www.who.int/genomics/anomalies/en/chapter_05.pdf). (Date of access: Retrieved on 12 August 2004)
- WHO. (2002). Global strategies to reduce the health-care burden of craniofacial anomalies. <http://www.who.int/genomics/anomalies>. (Date of access: 12 August 2004).
- World Trade Organisation (2004). Developing country. [http://en.wikipedia.org/wiki/Developing\\_country](http://en.wikipedia.org/wiki/Developing_country). (Date of access: 15 August 2006).
- Wyatt, R., Sell, D., Russell, J., Harding, A., Harland, K., & Albery, E. (1996). Cleft palate speech dissected: a review of current knowledge analysis. *British Journal of Plastic Surgery*, 49: 143-149.
- Wyszynski, D.F. (Ed.). (2002). *Cleft Lip and Palate from Origin to Treatment*. London: Oxford Press.
- Yeow, V., Lee-Seng-Teik, T., Lambrecht, T.J., Barnett, J., Gorney, M., Hardjowasito, W., Lemperle, G., McComb, H., Natsume, N., Stranc, M., & Wilson, L. (2002). International task force on volunteer cleft missions. *Journal of Craniofacial Surgery*, 13: 18-25.

- Young, J.L., O’Riordan, M., Goldstein, J.A., & Robin, N.H. (2001). What information do parents of newborns with cleft lip, palate, or both want to know? *The Cleft Palate-Craniofacial Journal* 38(1): 55-58.
- Ysunza, A., Pamplona, C., Mendaza, M., Garcia-Velasco, M., Anguilar, P., & Guerrero, E. (1998). Speech outcome and maxillary growth in patients with unilateral complete cleft lip/palate operated on at 6 vs 12 months of age. *Plastic and Reconstructive Surgery*, 102(3): 675-679.
- Ysunza A., Pamplona, M.A., Molina, F., Drucker, M., Felemovicius, J., Ramírez, E., & Carmeluzza, P. (2004). Surgery for speech in cleft palate patients. *International Journal of Pediatric Otorhinolaryngology*, 68: 1499-1505.
- Zimmerman, I.L., Steiner, V.G., & Pond, R.E. (2002). *Preschool language scale*. London: The Psychological Corporation Limited.
- Zimmerman, I.L., & Castilleja, N.J. (2005). The role of a language scale for infant and preschool assessment. *Mental Retardation and Developmental Disabilities Research Reviews*, 11: 238-246.
- Zinkin, P., & McConachie, H. (1995). *Disabled children and developing countries*. Cambridge: Mac Keith Press.



## **APPENDIX I**

**PERMISSION FROM THE RESEARCH ETHICS COMMITTEE  
OF MINISTRY OF HEALTH AND QUALITY OF LIFE,  
MAURITIUS**



The National Ethics Committee

Decision

**Title of Research Proposal:** Development of a communication assessment protocol for young children with cleft palate in Mauritius

**Research Protocol No.:** MHS 458/27

**Submitted on:** 27 January, 2005

**Applicant:** Mrs R. Gopal

**Address of Applicant:** c/o Dr J.C. Mohith, Mauritius Institute of Health

National Ethics Committee Meeting held on Monday 28 February, 2005 has

awarded ethical clearance

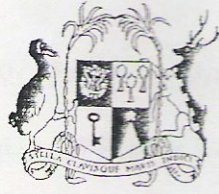
to the above project proposal.

The applicant during the research activity is required to:

- (a) Submit a Progress Report every month;
- (b) Notify the Ethical Committee of any amendment of recruitment of material or of consent form, or of information to be submitted to the research participant;
- (c) Report to the Ethical Committee any serious or unexpected unforeseen circumstances;
- (d) Report to the Ethical Committee termination of the study;
- (e) Provide relevant information to the Ethical Committee for ongoing review; and
- (f) Give a copy of the Final Summary or the Final Report to the Ethical Committee.

(Dr R.S. Sungkur)  
Chief Medical Officer  
for Permanent Secretar

01 March 2005



Ministry of Health &  
Mauritius

MHS 458/27

01 March 2005

Madam,

*Ethical Clearance*

I am directed to inform you that the Ethical Committee of the Ministry of Health and Quality of Life, has, at its meeting of 28 February 2005 considered the request made by you on **27 January 2005**.

2. The Committee has consequently awarded Ethical Clearance subject to the conditions laid down in the annex.

Yours faithfully,

(S.K. Sobee)  
for Permanent Secretary

Mrs R. Gopal  
c/o Dr J.C. Mohith  
Mauritius Institute of Health



**APPENDIX II**

**PERMISSION FROM THE RESEARCH PROPOSAL AND  
ETHICS COMMITTEE, FACULTY OF HUMANITIES,  
UNIVERSITY OF PRETORIA**

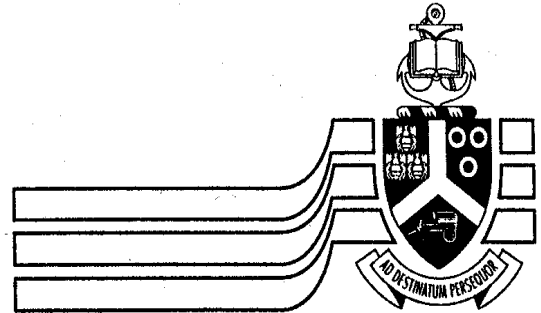
**Project:** *Development of a communication assessment protocol for young children with cleft lip and/or palate (CL/P) in Mauritius*

**Researcher:** R Gopal

**Supervisor:** Prof B Louw

**Department:** Communication Pathology

**Reference number:** 98023137



University of Pretoria

Thank you for the application you submitted to the Research Proposal and Ethics Committee, Faculty of Humanities.

I have pleasure in informing you that the Research Proposal and Ethics Committee formally approved the above study on an *ad hoc* basis. The approval is subject to the candidate abiding by the principles and parameters set out in her application and research proposal in the actual execution of the research.

The Committee requests you to convey this approval to Mrs Gopal.

We wish you success with the project.

Sincerely

CSL Delport

**Prof CSL Delport**  
**Vice Chair: Research Proposal and Ethics Committee**  
**Faculty of Humanities**  
**UNIVERSITY OF PRETORIA**





**APPENDIX III**

**LETTER OF INFORMATION AND INFORMED CONSENT**

**FOR PARENTS AS RESPONDENTS**



Date:

Information sheet for parents participating in the study.

Presented in English, but a verbal translation will be done in Creole or maternal language of the subject and the parents.

My name is Mrs. Rachna Gopal, I am the senior Speech-language therapist and Audiologist in M.O.H, Mauritius. I am currently registered as a doctoral student at the University of Pretoria. I shall be carrying out this project with the approval of Ministry of Health, Mauritius and the University of Pretoria. My supervisors are Prof. Brenda Louw and Dr. Alta Kritzinger.

The main aim of this project is to develop a communication assessment protocol for young children with cleft lip and or palate (CL/P). The speech language therapists and audiologists working with children with CL/P need an assessment tool that is appropriate and standardized for use in Mauritius.

You are requested to participate in this study, on a voluntary basis. If your child is able to give assent we will also request his/her permission to participate in this study.

You will be interviewed regarding background information relating to your family, child's birth history and your opinion regarding the feeding, speech and hearing of your child.

During the second part of the study the therapist, in the hospital where your child is currently following speech therapy will carry out speech and hearing assessment of your child. You will be required to bring the child for the assessment to the hospital and the test will last less than one hour. It will be arranged at a time convenient to you. The results will be recorded with an audio recorder and a video tape recorder.

All information that is gathered will be presented as a thesis and a scientific paper. Neither your name nor your child's name will be individually mentioned, in fact great care will be taken to keep your child's information confidential. Only those directly concerned with the care of your child in the hospital will be able to access this information. These recordings and data may also be used in the future, for research purposes.

You are requested to participate voluntarily and you may withdraw from the study if you wish to. This will not affect your follow-up appointments at the hospital in any way. I would like to add that neither you nor your child will receive any money or reimbursement for participating in this research.

Your kind cooperation will be greatly appreciated and you will be informed of the results of the study when it is complete. Should you have any further questions please do not hesitate to ask me.

Thank you for your cooperation. Kindly sign the attached letter.

**Project Title:** Development of a communication assessment protocol for young children with cleft lip and or palate in Mauritius.

1. I have read and the information relating to this project has been explained to me by Mrs. R. Gopal
2. I have had explained to me the purposes of this project and what will be required of me and my child, and any questions have been answered to my satisfaction, I agree to the arrangements described in the information sheet in so far as they relate to my child's participation in this project.
3. I understand that participation is entirely voluntary and that I have the right to withdraw at any time from the project, and that this will not affect any care or services I may be receiving in the future.
4. I understand that my child's full name will not be used and that details of my child's case history will be treated in confidence.
5. I have been informed that the completed forms and data will be stored in the child's hospital files and be available for future research.

Name:

Signed:

Date:

Principal Investigators: Mrs. Rachna Gopal. Email: [Rachna@intnet.mu](mailto:Rachna@intnet.mu) Tel: 6863854

Prof. Brenda Louw. Email: [Brenda.Louw@up.ac.za](mailto:Brenda.Louw@up.ac.za)



## **APPENDIX IV**

# **LETTER OF INFORMATION AND CONSENT FORM FOR THE SPEECH LANGUAGE THERAPISTS AND AUDIOLOGISTS**

**Department of Communication Pathology Speech,**

**Voice and Hearing Clinic**

Tel : +27 12 420 2355

Fax : +27 12 420 3517

Email : [brenda.louw@up.ac.za](mailto:brenda.louw@up.ac.za)

Date:

Information sheet for speech language therapists and audiologists participating in the study.

You are requested to participate in a research project: “Development of a Communication Assessment Protocol for Young Children with Cleft Lip and/or Palate in Mauritius”. I, Mrs. R. Gopal, Senior Speech-Language Therapist and Audiologist, am registered as a doctoral student at the University of Pretoria. I shall be carrying out this research project with the approval of Ministry of Health, Mauritius and the University of Pretoria. My supervisors are Prof. Brenda Louw and Dr. Alta Kritzinger.

The aim of this project is to develop a communication assessment protocol that will help improve service delivery to children with CL/P and their families, monitor their progress objectively and document the treatment outcomes. In addition, the Speech Language Therapists and Audiologists working with children with CL/P will have an assessment tool that is appropriate, uniform and standardized for use in Mauritius

You are requested to participate in this study, on a voluntary basis. This research study will be carried out in three phases. During Phase One of the study, you will be requested to complete a questionnaire survey form by interviewing parents to gather essential background information regarding the children with CL/P and their families.

In Phase Two of the study the compiled Communication Assessment Protocol, will be presented to you and you will answer a questionnaire regarding your perceptions of this communication assessment tool. Furthermore, you will be requested to participate in testing the clinical applicability of this protocol, on children with CL/P, who have been selected and their parents have voluntarily agreed to participate in this research project. Finally, in Phase Three you will be requested to attend the focus group session with other professionals and express your views

regarding the communic  
trustworthiness of the assessment protocol.



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participation will improve the

Should you have any further questions please do not hesitate to ask me. You are requested to participate voluntarily and you may withdraw from the study if you wish to without any repercussions. I would like to add that you will not receive any money or reimbursement for participating in this research. Your kind cooperation will be greatly appreciated and you will be informed of the results of the study when it is complete.

If you agree to participate please sign the letter of consent.

Thank you for your cooperation.

Contact Persons: Mrs. Rachna Gopal. Email: [Rachna@intnet.mu](mailto:Rachna@intnet.mu) Tel: 6863854

Prof. Brenda Louw. Email: [Brenda.Louw@up.ac.za](mailto:Brenda.Louw@up.ac.za)



**Project Title:** Development of a Communication Assessment Protocol for Young Children with Cleft lip and or Palate in Mauritius.

1. I have read and the information relating to this project has been explained to me by Mrs. R. Gopal
2. I have had explained to me the purposes of this project and what will be required of me. I agree to the arrangements described in the information sheet.
3. I understand that participation is entirely voluntary and that I have the right to withdraw at any time from the project.

Name:

Signed:

Date:

Contact persons: Mrs. Rachna Gopal. Email: [Rachna@intnet.mu](mailto:Rachna@intnet.mu) Tel: 6863854

Prof. Brenda Louw. Email: [Brenda.Louw@up.ac.za](mailto:Brenda.Louw@up.ac.za)



**APPENDIX V**

**INTERVIEW SCHEDULE FOR RESPONDENTS PHASE ONE**

**OF THE STUDY**





**Cleft lip and or palate: Data collection instrument for research project ‘Development of a communication assessment protocol for young children with cleft lip and or palate in Mauritius’**

Please circle appropriate choices:

**SOURCE OF INFORMATION:**

For office use

Medical records at:  
Victoria Hospital 1

If other 2 Specify \_\_\_\_\_

**Interview of:**

Mother 1

Father 2

Both parents 3

If other 4 Specify \_\_\_\_\_

**Place of interview:**

Hospital 1

If other 2 Specify \_\_\_\_\_

**Questionnaire filled in by:**

Speech Therapist & Audiologist 1

Speech & Hearing Assistant 2

If other 3 Specify \_\_\_\_\_

Interview respondent/s' consent \_\_\_\_\_

DATE: \_\_\_\_\_

PLEASE FILL IN ALL SECTIONS OF THE QUESTIONNAIRE

- SECTION A BIOGRAPHICAL INFORMATION
- SECTION B FAMILY BACKGROUND
- SECTION C BIRTH HISTORY
- SECTION D TYPE OF CLEFT
- SECTION E SURGICAL HISTORY
- SECTION F FEEDING, SPEECH AND HEARING
- SECTION G PATHWAY OF CARE



**SECTION A: BIOGRAPHICAL INFORMATION**

A1 **UNIT NUMBER** \_\_\_\_\_ At Plastic Surgery Clinic Victoria hospital  
**SURNAME** \_\_\_\_\_ **NAME** \_\_\_\_\_

A2 **GENDER:** MALE **1** FEMALE **2**

A2	
----	--

A3 **DATE OF BIRTH** \_\_\_\_/\_\_\_\_/\_\_\_\_  
dd mm year

**AGE AT DATA COLLECTION (IN MONTHS)** \_\_\_\_\_ 

A3	
----	--

0-18 months **1** 19-36 months **2** 37-60 months **3**

A4 **ADDRESS** \_\_\_\_\_ **Tel:** \_\_\_\_\_  
Please indicate the hospital situated in child’s catchment area

**HEALTH REGION:**

DR JEETOO HOSPITAL	<b>1</b>
SSRN HOSPITAL	<b>2</b>
FLACQ HOSPITAL	<b>3</b>
VICTORIA HOSPITAL	<b>4</b>
J.N. HOSPITAL	<b>5</b>

A4	
----	--

**SECTION B FAMILY BACKGROUND**

B1 **MARITAL STATUS OF BIOLOGICAL PARENTS:**

MARRIED AND LIVING TOGETHER	<b>1</b>
SEPARATED/ DIVORCED	<b>2</b>
SINGLE PARENT	<b>3</b>
IF OTHER	<b>4</b> SPECIFY _____

B1	
----	--

B2 INFORMATION REGARDING BIOLOGICAL PARENTS

**MOTHER**

B2 a) **Mother’s AGE (IN YEARS)** \_\_\_\_\_

**Mother’s AGE GROUP** when this child was born.

Less than 20 years **1** 21-39 years **2** More than 40 years **3**

B2a	
-----	--

B2 b) **Mother’s EDUCATIONAL LEVEL:**

Primary **1** Secondary **2** Tertiary (University) **3**

B2b	
-----	--

B2 c) **IS THE MOTHER WORKING?**

YES **1** NO **2** PART TIME **3**

B2c	
-----	--



**FATHER**

B2 d) Father's AGE (IN YEARS) \_\_\_\_\_

B2 e) Father's EDUCATIONAL LEVEL

Primary **1**      Secondary **2**      Tertiary (University) **3**

B2e	
-----	--

B2 f) IS THE FATHER WORKING?

YES **1**      NO **2**      PART TIME **3**

B2f	
-----	--

B3 THE FAMILY UNIT IS COMPOSED OF? (NUMBER OF CHILDREN)

ONE **1**      TWO **2**      THREE **3**      MORE THAN THREE **4**

B3	
----	--

If more than one what is this child's position? \_\_\_\_\_

B4 ARE PARENTS BLOOD RELATIVES (CONSANGUINITY)?

YES **1**      NO **2**

B4	
----	--

If yes specify the relationship \_\_\_\_\_

B5 IS THERE ANY FAMILY HISTORY OF CLEFT LIP AND/OR PALATE?

YES **1**      NO **2**

B5	
----	--

If yes specify the relationship to the child \_\_\_\_\_

B 6 a) NUMBER OF **LANGUAGES** SPOKEN AT HOME BY THE HOUSEHOLD MEMBERS

ONE **1**      TWO **2**      MORE THAN TWO **3**

B6a	
-----	--

B6 b) Circle the Languages spoken at home (circle more than one if appropriate)

CREOLE **1**    FRENCH **2**    ENGLISH **3**    BHOJPURI **4**    HINDI/URDU **5**    IF OTHER **6** SPECIFY \_\_\_\_\_

B6b	
-----	--

B 6 c) CIRCLE THE MOST COMMONLY SPOKEN LANGUAGE AT HOME (**circle one only**)

CREOLE **1**    FRENCH **2**    ENGLISH **3**    BHOJPURI **4**    HINDI/URDU **5**    IF OTHER **6** SPECIFY \_\_\_\_\_

B6c	
-----	--

**SECTION C BIRTH HISTORY**

C1 ANY SPECIFIC MATERNAL ANTENATAL HISTORY

YES **1**      NO **2**

C1	
----	--

If yes specify the nature of problem \_\_\_\_\_

C2 PLACE OF DELIVERY: HOSPITAL **1**    PRIVATE CLINIC **2**    HOME **3**    OTHER **4**

C2	
----	--

C3 TYPE OF DELIVERY: NORMAL **1**    CAESAREAN **2**    BREACH **3**    FORCEPS **4**    OTHER **5**

C3	
----	--

C4 BIRTH WEIGHT OF CHILD \_\_\_\_\_ KGS.

C4	
----	--

WITHIN NORMAL RANGE **1**    LESS THAN NORMAL **2**    MORE THAN NORMAL **3**

C5 DOES THE CHILD HAVE AN  
YES 1



C5	
----	--

C5 a) If yes describe the syndrome\_\_\_\_\_

C 6 DOES THE CHILD HAVE ANY OTHER MALFORMATION/DISEASE  
YES 1 NO 2 NOT KNOWN 3

C6	
----	--

C6 a) If yes describe the malformation/disease\_\_\_\_\_

### SECTION D TYPE OF CLEFT

LIP ONLY 1  
PALATE ONLY 2  
LIP AND PALATE 3  
SUBMUCOUS CLEFT PALATE 4

D	
---	--

PLEASE SPECIFY UNILATERAL / BILATERAL  
COMPLETE / INCOMPLETE

For **Unilateral Cleft Lip** please specify RIGHT/LEFT

For **Cleft Palate** specify HARD / SOFT

### SECTION E SURGICAL HISTORY

E1 HOW MANY TIMES HAS THE CHILD BEEN OPERATED FOR CLEFT LIP AND OR PALATE?  
NONE 1 ONCE 2 TWICE 3 THREE TIMES 4 MORE THAN THREE TIMES 5

E1	
----	--

IF OPERATED:

E1a) SITE OF OPERATION

LIP REPAIR 1 PALATE REPAIR 2 SECONDARY REPAIR 3\_\_\_\_\_

E1a	
-----	--

E 1b) AGE AT THE TIME OF OPERATIONS (IN MONTHS)

E1c) ANY BREAKDOWN? YES 1 NO 2

E1c	
-----	--

E1 d) PLASTIC SURGEON:

AT VICTORIA HOSPITAL 1 IF OTHER 2 SPECIFY\_\_\_\_\_

E1d	
-----	--

E2 HAS THE CHILD UNDERGONE ANY OTHER OPERATIONS?  
YES 1 NO 2

E2	
----	--

E2a) IF YES, OPERATION INVOLVED:

EARS 1 CARDIAC 2 IF OTHER 3 SPECIFY\_\_\_\_\_

E2a	
-----	--



F1 a) WERE ANY **FEEDING DIFFICULTIES** EXPERIENCED JUST AFTER BIRTH?  
YES 1 NO 2

F1a	
-----	--

b) IF YES WHO ADVISED THE MOTHER ON HOW TO FEED?  
SPEECH THERAPIST 1 NURSE 2 DOCTOR 3 IF OTHER SPECIFY 4

F1b	
-----	--

c) TYPE OF FEEDING JUST AFTER BIRTH: (circle the most common frequent type)  
Breast 1 Bottle 2 Spoon 3 Cup 4 Nasogastric tube 5 If other 6 Specify \_\_\_\_\_

F1c	
-----	--

d) ARE THERE ANY FEEDING DIFFICULTIES AT PRESENT? YES 1 NO 2

F1d	
-----	--

If yes describe \_\_\_\_\_

F2 IN YOUR OPINION DOES YOUR CHILD HAVE ANY **SPEECH PROBLEM**?  
YES 1 NO 2

F2	
----	--

If yes describe \_\_\_\_\_

F2 a) DOES YOUR CHILD RECEIVE SPEECH THERAPY?  
YES 1 NO 2

F2a	
-----	--

F2 b) IF YES HOW FREQUENTLY?

Weekly 1 Fortnightly 2 Once in a month 3 Once in three months 4 If other 5 specify ...

F2b	
-----	--

F3 IN YOUR OPINION DOES YOUR CHILD HAVE ANY **HEARING DIFFICULTY**?  
YES 1 NO 2

F3	
----	--

F3 a) HAS THE HEARING EVALUATION BEEN DONE?  
YES 1 NO 2

F3a	
-----	--

F3 b) IF YES DOES YOUR CHILD HAVE A HEARING LOSS:  
YES 1 NO 2 DON'T KNOW 3

F3b	
-----	--

### SECTION G PATHWAY OF CARE

G1 WHO FIRST IDENTIFIED THE CLEFT?

DOCTOR 1 NURSE 2 PARENT 3 IF OTHER 4 SPECIFY \_\_\_\_\_

G1	
----	--

G1a) AT WHAT AGE WAS YOUR CHILD'S CLEFT FIRST IDENTIFIED?

Just born 1 Within three months 2 Four to twelve months 3 More than twelve months 4

G1a	
-----	--

G1 b) AT WHAT AGE WAS YOUR CHILD FIRST SEEN BY THE PLASTIC SURGEON?

Just born 1 Within three months 2 Four to twelve months 3 More than twelve months 4

G1b	
-----	--



G2 IS YOUR CHILD BEING FOLLOWED-UP BY THE FOLLOWING PROFESSIONALS?

Health care professional	YES	NO	If Yes, Hospital Unit no/ Private
G2a. Plastic Surgeon	1	2	
G2b. Paediatrician	1	2	
G2c. ENT Specialist	1	2	
G2d Speech Therapist & Audiologist	1	2	
G2eDentist	1	2	
G2f. Orthodontist	1	2	
G2g Social Worker	1	2	
G2h. Psychologist	1	2	
G2iNutritionist	1	2	
G2jOther	1	2	

G2a	
-----	--

G2b	
-----	--

G2c	
-----	--

G2d	
-----	--

G2e	
-----	--

G2f	
-----	--

G2g	
-----	--

G2h	
-----	--

G2i	
-----	--

G2i	
-----	--

G3 DO YOU SEE MORE THAN ONE OF THE ABOVE PROFESSIONALS AT THE SAME TIME PLACE? YES 1 NO 2

G3	
----	--

If yes specify\_\_\_\_\_

Principal Investigator: Mrs R. Gopal\_\_\_\_\_

Date:\_\_\_\_\_



## **APPENDIX VI**

### **THE COMMUNICATION ASSESSMENT PROTOCOL**



# COMMUNICATION ASSESSMENT PROTOCOL

FOR YOUNG CHILDREN

WITH

CLEFT LIP AND/OR PALATE (CL/P)

*Mrs. R. Gopal*  
*Senior Speech-Language Therapist & Audiologist*  
*ENT Hospital, Vacoas, Mauritius*

*University of Pretoria*

July 2006



***Please read carefully***

Below is a list of instructions you are requested to follow when carrying out the complete assessment of the child with cleft lip and/or palate (CL/P).

- (i) This Protocol contains **six sections**:
- Section A: Summary sheet**
  - Section B: Feeding**
  - Section C: Hearing Evaluation**
  - Section D: Orofacial Examination**
  - Section E: Communication, speech and language**
  - Section F: General development**
- (ii) Indicate your choice of response with 'X' in the appropriate box  and provide descriptions whenever required.
- (iii) The children participating in the study have been divided in two groups:  
Group 1: younger than 36 months (All **six sections** to be completed)  
Group 2: 36-72 months (**five sections** to be completed, omitting **section B: Feeding**)
- (iv) **Special considerations:**
- (a) For **Section C:** the Hearing evaluations to be carried out need to be age appropriate. Where not applicable write NA.  
**Question C8**, listening evaluation scale is to be completed as described: Situation 1 during communication evaluation  
Situation 2 with reference to hearing evaluation
  - (b) For **Section E:** Resonance, voice and speech assessment only for children who can express themselves in sentences.  
Kindly arrange with Mrs. R. Gopal when you need to make audio and video recordings of the speech of children 36-72 months.
- (v) After completing the assessment, please record a summary of the communication assessment on Page 1.
- (vi) Please enclose the essential background information of this child with CL/P (questionnaire A), whom you will be assessing.

Thank you very much for your cooperation.

**Mrs. R. Gopal**  
**ENT Hospital**  
**Tel: 6863854**



## FOR YOUNG CHILDREN WITH CLEFT LIP AND/OR PALATE IN MAURITIUS

**Tracking form to be completed by the speech-language therapist and audiologist**

**A. SUMMARY SHEET**

A1. Child's Name: .....

A2. File Number: .....

A3. D.O.B:

d	d		m	m		y	y

A4. Contact person's name and telephone number:..... (Office use only)

**A5. Type of cleft:**

A5

1. Lip only  2. Palate only  3. Lip and palate  4. Submucous cleft palate

Please specify Unilateral  Bilateral

Complete  Incomplete

For **Unilateral Cleft Lip** please specify Right  Left

For **Cleft Palate** please specify: Hard  Soft

A6. 1. Non-syndromic CL/P  2. Suspect syndrome  3. Syndrome present

A6

If syndrome is present, describe.....

Section: Area of Assessment	Dates of Assessment	SLT and/or Audiologist	Recommendations	Code
A: Questionnaire				
B: Feeding				
i) Pre-surgical				
ii) Post-surgical				
C: Hearing				
i) 0-36 months				
ii) 36-72 months				
D: Orofacial				
E: Communication				
Speech-Language				
i) 0-36 months				
ii) 36-72 months				
F: General Development				



**(1) pre-surgical feeding assessment**

**B1.** Child's Name: .....

**B2.** File number:.....

**B3.** D.O.B:

--	--	--	--	--	--

**B4.** Date of assessment:

d	d	m	m	y	y

**B5.** Age:.....days/months

**Birth history:**

**B6.** Birth weight: .....kg

**B7.** Gestational age weeks

**B8.** Delivery type: .....

**B9.** Any significant antenatal history .....

**Respiration:**

**B10.** Assisted ventilation after birth: 1. yes  2. no

**B11.** Infant still has respiratory problems: 1. yes  2. no

**Current feeding method:**

**B12.** Current feeding method: 1. full oral diet  2. nil by mouth   
3. oral feeds and supplementary  4. NGor OG tubes

**B13.** If full oral diet: 1. breast  2. bottle  3. cup   
4. spoon  5. syringe  6. other  if other describe.....

**B14.** Type of milk: 1. breast milk  2. formula milk

**B15.** If bottle-fed indicate:

(i) texture of teat: normal  soft  latex  silicone

(ii) hole of teat: small  medium  large  cross cut

(iii) bottle: standard  soft  other  if other describe..

**Observations during feeding:**

**B16.** Respiration: 1. steady/quiet  2. noisy  3. apnoeic  4. sternal retraction

**B17.** Predominant infant state during feeding: 1. alert and calm  2. alert and restless   
3. light sleep/drowsy  4. deep sleep   
5. irritated  6. crying

**B18.** Positioning for feeding:

1. appropriate   
2. inappropriate

(e.g. child's head position, caregiver position uncomfortable)



- B19. Lip seal:  3. absent
- B20. Nutritive sucking: 1.rhythmical  2. arrhythmical  3. no sucking
- B21. Coordination of sucking, swallowing and breathing 1. yes  2. no
- B22. Aspiration risk 1. yes  2. unsure  3. no   
(for example: coughing/choking during feeding/altered respiration)
- B23. Winding during and after feed: 1. yes  2. yes, but infrequent  3. no
- B24. Nasal regurgitation 1. yes  2. no
- B25. Presence of milk/formula in nostrils 1. yes  2. no
- B26. Excessive drooling and/or vomiting 1. yes  2. no

**Feeding schedule:**

- B27. Number of times the infant is fed in 24 hours .....
- B28. Duration of each feed: 1. less than 15 minutes  2. 15-30 minutes  3. more than 30 minutes
- B29. Do the parent/carer’s cope with infant’s feeding: 1. yes  2. no

If no, please describe the difficulties.....  
.....

- B30. Child’s weight /growth within normal limits 1. yes  2. no   
(according to health card of the infant)

**Transition phase (infants and/or toddlers on semi-solid) Please complete if child on semi-solid diet**

- B31. Smooth transition to semi solid diet 1. yes  2. no  If no, explain.....  
.....  
If yes biting, chewing and swallowing movements 1. normal  2. abnormal  If abnormal, describe.....

- B32. Excessive drooling and/or vomiting 1. yes  2. no
- B33. Nasal regurgitation 1. yes  2. no  3. occasional for liquids only
- B34. Child’s weight /growth within normal limits for age 1. yes  2. no   
(according to health card of the infant)

**B35. Guidelines to parent/care giver regarding:** i) feeding method  ii) equipment used   
iii) positioning  iv) feeding schedule  v) other  if other, describe.....  
.....

**B36. Feeding difficulties and high risk for poor weight gain:** 1. yes  2. unsure  3. no   
If unsure or no, recommendation, refer to: 1. paediatrician  2. nutritionist



**B37.** Child's Name: .....

**B38.** File number: ..... **B39.** D.O.B: 

d	d	m	m	y	y

**B40.** Date of assessment: 

d	d	m	m	y	y

**B41.** Age of infant: .....months

**B42.** Dates of surgery: 

d	d	m	m	y	y

 Type of repair:..... Surgeon.....  

d	d	m	m	y	y

 Type of repair:..... Surgeon.....

**Observations during feeding:**

**B43.** Lips: 1. unremarkable  2. restricted movements  3. open mouth posture   
4. drooling

**B44.** Tongue movements while feeding 1. normal  2. abnormal

If abnormal, describe.....

(For example, tongue thrust during swallowing, cannot use tongue to clean away food)

**B45.** Oronasal fistula 1. yes  2. no

If yes does the fistula interfere with feeding:.....

**B46.** Nasal regurgitation 1. yes  2. occasional for liquids only  3. no

**B47.** Biting, chewing and swallowing movements 1. normal  2. abnormal

If abnormal, describe .....

**B48.** Food aversion (to certain foods) 1. yes  2. no

**B49.** Oral hygiene 1. good  2.adequate  3. inadequate  4. poor

**B50.** *Frequent history of chest infections:* 1. yes  2. no

**B51.** Child's weight /growth within normal limits for age 1. yes  2. no   
(according to health card of the infant)

**B52. Feeding difficulties and high risk for poor weight gain:** 1. yes  2. unsure  3. no   
**If unsure or no, recommendation refer to:** 1. paediatrician  2. nutritionist   
**B53. Guidelines to parent/care giver regarding feeding.....**



C1. Child's Name: .....

C2. File number: ..... C3. D.O.B: 

d	d	m	m	y	y

C4. History of ear surgery: 1. yes  2.no   
If yes, please specify type and date of surgery.....

C5. Any history of ear infections and/or ear aches 1. yes  2. no

C6. External ear anomaly 1. yes  2. no   
If yes, describe (e.g. ear tags, atresia, malformation of the pinna).....

C7. Risk factors other than cleft palate associated with hearing loss 1. yes  2. no

If yes, check (X) the risk factor/factors:

- a. family history of childhood sensorineural hearing loss
- b. premature/ birth weight less than 1.5 kgs
- c. low APGAR scores
- d. high bilirubin levels
- e. bacterial meningitis
- f. maternal history of viral infections during pregnancy
- g. ototoxic medication
- h. presence of Pierre Robin sequence or a syndrome
- i. respiratory distress
- (known to include sensorineural hearing loss)
- j. prolonged mechanical ventilation for more than 10 days
- k. Any other risk factor for sensorineural hearing loss

Please specify.....

C8. Based on **Listening evaluation scale** (Hugo, Louw, Kritzinger & Smit 2000)

<b>Situation 1: During communication evaluation</b>			
Reaction to	Good (1)	(...2...)	Poor (3)
Environmental sounds			
Whispered speech			
Non-speech sounds (toys)			
Speech			
<b>Situation 2: During hearing evaluation</b>			
Responses	Clear (1)	(...2...)	Unclear (3)
Distractibility	Never (1)	(...2...)	Very/Hyper (3)



Age appropriate Hearing evaluations	Date of hearing evaluation	Age in months	Results: attach report/reports			
<b>C9.</b> Parental report regarding auditory behaviour <input type="checkbox"/>			Normal	<input type="checkbox"/>	Suspect hearing difficulties	<input type="checkbox"/>
<b>C10.</b> Listening evaluation scale (Hugo, Louw, Kritzinger & Smit 2000) <input type="checkbox"/>			Normal	<input type="checkbox"/>	Further investigations	<input type="checkbox"/>
<b>C11.</b> TEOAE (Screening) <input type="checkbox"/>			Pass	<input type="checkbox"/>	Further investigations	<input type="checkbox"/>
<b>C12.</b> BSERA: Diagnostic <input type="checkbox"/>			Normal	<input type="checkbox"/>	Hearing loss in either/both ears	<input type="checkbox"/>
<b>C13.</b> Behaviour Observation Audiometry <input type="checkbox"/>			Normal both ears	<input type="checkbox"/>	Suspect hearing pathology	<input type="checkbox"/>
<b>C14.</b> Tympanometry <input type="checkbox"/>			Normal both ears Tympanogram Type: Right Ear	<input type="checkbox"/>	Suspect hearing pathology	<input type="checkbox"/>
<b>C15.</b> Acoustic Reflexes <input type="checkbox"/>			Present	<input type="checkbox"/>	absent in either/both ears	<input type="checkbox"/>
<b>C16</b> Pure Tone Audiometry <input type="checkbox"/>			Normal hearing	<input type="checkbox"/>	Hearing loss in either/both ears	<input type="checkbox"/>

**C17.** If hearing loss is detected,

C17(i) Type: 1. conductive  2. sensorineural  3. mixed

C17(ii) Hearing loss in: 1. right ear  2. left ear  3. bilateral

C17(iii) Severity of hearing loss: 1. mild  (15-30 dB HL) 2. moderate  (30-50 dB HL) 3. severe  (50-70 dB HL) 4. profound  (>70 dB HL)

**C18. Recommendations refer to ENT specialist for follow-up** 1. yes  2. no

If yes name and file number for ENT specialist follow-up.....

**C19. Child will need referral for hearing aid/aids** 1. yes  2. unsure  3. no

**C20. Follow-up appointment with audiologist** 1. yes  2. no



**D1.** Child's Name: .....

**D2.** D.O.B: 

d	d	m	m	y	y

**D3.** Age:.....months

**D4.** Date of assessment: 

d	d	m	m	y	y

**D5.** Dates of surgery: 


 Type of repair:..... Surgeon:.....  


 Type of repair:..... Surgeon:.....  


 Type of repair:..... Surgeon:.....

**D6.** Face and facial profile: 1. unremarkable  2. asymmetrical  3. dysmorphic features

**D7.** Jaw: 1. normal  2. micrognathia  3. macrognathia

**D8.** Relationship between maxilla and mandible: 1. normal   
2. abnormal  if abnormal please describe.....

**D9.** Eyes: 1. appear normal   
2. appearance suggestive of syndrome/midfacial developmental problems   
(e.g. excessive epicanthal folds, abnormal spacing between the eyes)  
describe.....

**D10.** Ears: 1. appear normal  2. external ear deformity  describe.....  
3. appearance suggestive of syndrome (eg. low set ears)  describe.....

**D11(i)** Nose: 1. unremarkable  2. nasal bridge flat  3. deviated septum   
4. obstructed nasal airway

**D11(ii)** Nasal columella: 1. normal  2. appears abnormal (e.g. too short/absent/deviated)

**D12(i)** Dentition: 1. unremarkable  2. supernumerary teeth  3. teeth missing  4. other   
If other describe.....

**D12(ii)** Occlusion: 1. normal  2. overbite  3. under bite  4. crossbite teeth  5. open bite

**D12(iii)** Dental Hygiene: 1. good  2. adequate  3. poor

**D13** Lips: (i) appearance 1. unremarkable  2. scarring  3. open mouth posture





D13 (ii) speech task: 1. yes  2. no   
3. /p, t, k/: 1. yes  2. no   
4. /b, d, g, /m/: 1. yes  2. no

D14. Tongue: (i) appearance 1. unremarkable  2. suggestive of syndrome (e.g. size)   
3. abnormal posture  4. frenum abnormal

D14. (ii) speech tasks: 1.mobility for tongue tip sounds /t/ /d/ /n/ 1. yes  2. unsure  3.no   
2. mobility for velar sounds /k/ /g/ 1. yes  2. unsure  3.no

**Post palate repair:**

D15. Alveolar ridge: 1. normal  2. wide  3. collapsed  4. cleft

D16. Palatal fistula: 1. present  2. absent

D16(i) If fistula is present, location:

- 1. soft palate  2. junction soft/hard palate  3. hard palate-post sulcus
- 4. buccal sulcus  5. hard palate and buccal sulcus  6. if other

describe.....

D16(ii) Fistula size: 1. small  2. medium  3. large  4.complete breakdown of repaired palate

D16(iii) Is oronasal fistula interfering with speech sound production: 1. yes  2. no

D16(iv) Soft palate: 1. normal  2. apparently short velum  3. split uvula

D17. Palatal mobility 1. Marked  2. Moderate  3. Slight  4. None

D18. Nasopharynx: 1.appears normal  2. apparently deep pharynx   
3. tonsils appear enlarged  4. pharyngeal flap

D19. Any airway obstruction suspected: 1. yes  2. no   
(e.g. mouth breathing, parental report of child's loud snoring, strenuous breathing)

**D20. Contributing factors to speech production errors:**

- D20(i) Abnormal lip movements  D20(ii) Abnormal tongue movements
- D20(iii) Abnormal dentition  D20(iv) Palatal fistula
- D20(v) Suspected VPI  D20(vi) Suspected syndrome
- D20(vii) Any other etiology suspected  D20 (viii) None

**D21. Referral for dental follow-up** 1. yes  2. no

**D22. Referral for ENT specialist's opinion (tonsils)** 1. yes  2. no

**D23. Any other referral please specify..... (for e.g. genetic testing, paediatrician)**

**E1.** Child's Name: .....

**E2.** D.O.B:                    d d m m y y  

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**E3.** Age:.....months

**E4.** Date of assessment:    d d m m y y  

--	--	--	--	--	--	--

<b>E5.</b> Dates of surgery	<table border="1" style="width: 100%; border-collapse: collapse; text-align: center;"> <tr> <td style="width: 20px; height: 20px;"></td> <td style="width: 20px; height: 20px;"></td> <td style="width: 20px; height: 20px;"></td> <td style="width: 20px; height: 20px;"></td> <td style="width: 20px; height: 20px;"></td> <td style="width: 20px; height: 20px;"></td> </tr> <tr> <td style="width: 20px; height: 20px;"></td> <td style="width: 20px; height: 20px;"></td> <td style="width: 20px; height: 20px;"></td> <td style="width: 20px; height: 20px;"></td> <td style="width: 20px; height: 20px;"></td> <td style="width: 20px; height: 20px;"></td> </tr> <tr> <td style="width: 20px; height: 20px;"></td> <td style="width: 20px; height: 20px;"></td> <td style="width: 20px; height: 20px;"></td> <td style="width: 20px; height: 20px;"></td> <td style="width: 20px; height: 20px;"></td> <td style="width: 20px; height: 20px;"></td> </tr> </table>																			Type of repair:..... Surgeon..... Type of repair:..... Surgeon..... Type of repair:..... Surgeon.....
<b>E6.</b> Home language: 1. Creole <input type="checkbox"/> 2. French <input type="checkbox"/> 3. English <input type="checkbox"/> 4. Bilingual <input type="checkbox"/> 5. Other <input type="checkbox"/> .....																				

**E7.** Parental concerns regarding communication.....  
 .....  
 .....

**E8.** Communication skills (based on Communication Assessment Protocol Facial Deformities Clinic University of Pretoria)

- E8(i)** Non-verbal communication  
 (e.g. eye contact, social smile, facial expressions)                    1. yes                     2. unsure                     3. no
- E8(ii)** Behaviour regulation  
 (e.g. requests objects, requests action, protests)                    1. yes                     2. unsure                     3. no
- E8(iii)** Social interaction  
 (e.g. requests attention, calls a person)                    1. yes                     2. unsure                     3. no
- E8(iv)** Shared attention  
 (e.g. comments, requests information, explanations)                    1. yes                     2. unsure                     3. no
- E8(v)** Discourse structure  
 (e.g. turn taking, imitation, responds)                    1. yes                     2. unsure                     3. no
- E8(vi)** Mode of communication  
 (e.g. gestures, vocal, gestures and verbal)                    1. yes                     2. unsure                     3. no



E9. Therapist's observations: Major milestones of language acquisition (Shipley, 2004 p.233)

Age Range Typical Language Behaviours

0-1 mos.	Startle response to sound; quieted by human voice
2-3 mos.	Cooing; production of some vowel sounds; response to speech; babbling
4-6 mos.	Babbling strings of syllables; imitation of sounds; variations in pitch and loudness
7-9 mos.	Comprehension of some words and simple requests; increased imitation of speech sounds; may say or imitate 'mama'
10-12 mos.	Understanding of 'No'; response to requests; response to own name; production of one or more words
13-15 mos.	Production of five to ten words, mostly nouns; appropriate pointing responses
16-18 mos.	Following simple directions; production of two-word phrases; production of I or mine
24-30 mos.	Response to some yes/no questions; naming of everyday objects; production of phrases and incomplete sentences; production of the present progressive, prepositions, regular plurals, and negation 'no' and don't

**E9. Language development:** 1.no concerns  2. suspect  3. delayed/disordered   
(Receptive and expressive)

E10. Consonant Inventory

	NASAL	PLOSIVE	FRICATIVE	APPROXIMANT
LABIAL	m	p b		w
LABIO DENTAL			f v	
ALVEOLAR	n	t d	s z	l
POST ALVEOLAR			ʃ ʒ	
VELAR	ŋ	k g		
GLOTTAL		ʔ		

Heard by therapist

Reported by parents

\* phoneme /r/ is not expected before 36 months. Some other phonemes for eg. /t/ and /ø/ are absent in Creole.

**E10. Consonant repertoire (based on consonant production inventory):**

1. age appropriate  2. limited  3. no identifiable consonants



**E11. Emergent literacy skills:**

- E11(i) Parents have introduced the child to books: 1. yes  2. no
- E11(ii) Child responds to being read to: 1. yes  2. no
- E11(iii) Child shows an interest in books: 1. yes  2. no
- E11(iv) Child pretends to read books: 1. yes  2. no

- |                                                                           |                          |
|---------------------------------------------------------------------------|--------------------------|
| <b>E12.</b> Recommendations for further in depth communication assessment | <input type="checkbox"/> |
| <b>E13.</b> Parental guidance regarding consonant production by the child | <input type="checkbox"/> |
| <b>E14.</b> Parental guidance regarding emergent reading skills           | <input type="checkbox"/> |



E15. Child's Name: .....

d d m m y y

E16. D.O.B: [ ][ ][ ][ ][ ][ ]

E17. Age:..... months

d d m m v v

E18. Date of assessment: [ ][ ][ ][ ][ ][ ]

E19. Dates of surgery: [ ][ ][ ][ ][ ][ ] Type of repair:..... Surgeon.....

Dates of surgery: [ ][ ][ ][ ][ ][ ] Type of repair:..... Surgeon.....

Dates of surgery: [ ][ ][ ][ ][ ][ ] Type of repair:..... Surgeon.....

E20. Home language: 1. Creole  2. French  3. English  4. Bilingual  5. Other .....

E21. Is child exposed to any other languages (for e.g. at school) please specify.....

E22. The child usually expresses himself/herself in:

- 1. sentences
- 2. short phrases
- 3. single words
- 4. gestures

E23. Parental concerns regarding communication.....  
.....  
.....

E24. Therapist's observations: Major milestones of language acquisition (Shiple, 2004 p.233)

Age Range Typical Language Behaviours

3:0 -3:6 yrs. Production of three- to four-word sentences; production of the possessive morpheme, several forms of questions, negatives 'can't' and 'don't'; comprehension of 'why', 'who', 'whose' and 'how many' and initial production of most grammatical morphemes.

3:6- 6 yrs Greater mastery of articles, different tense forms, copula, auxiliary, third person singular, and other grammatical morphemes; production of grammatically complete sentences.

E24. Language expressive 1.no concerns  2. suspect  3. delayed/disordered

E25. **Emergent literacy skills:**

E25(i) Shows an interest in books and reading 1. yes  2. no

E25(ii) Listens attentively to parent/teacher reading 1. yes  2. no

E25(iii) Is sensitive to some sequences of events in a story: 1. yes  2. no

E25(iv) Correctly answers questions about stories read aloud 1. yes  2. no

E25(v) Displays attempts at reading: 1. yes  2. no

E25(vi) Recognises and can name a few letters 1. yes  2. no



If child is expressing himself/herself with the auditory-perceptual assessment for resonance, voice and speech (GOS.SP.ASS. '98)

Stimulus: Counting 1-5 (10). Picture description 1 minute (standard sea side scene)

Conversation 2 minutes (standard questions to elicit spontaneous continuous speech)

Audio recording reference number..... Video recording reference number.....

Rating scale for E26, E27, E28 as per GOS.Sp.ASS '98.

E26. Resonance

E26(i) Hypernasal

1. yes

2. no

- Normal tone 0
- Hypernasal voice perceived on vowels and approximants 1
- Hypernasal tone of vowels, weakened consonants and nasalisation of voiced consonants 2
- All the above and substitution of /b, d, g/ by /m, n, ŋ/ 3

E26(ii) Hyponasal

1. yes

2. no

- Normal tone 0
- Moderate hyponasality where nasal consonants are slightly denasal 1
- Nasal consonants are perceived as plosives 2

E26(iii) Mixed Nasality

1. yes

2. no

(hyper and hyponasality co-occur)

E27 Nasal Emission/Turbulence 1. yes

2. no

- Nasal emission/turbulence absent 0
- Slight nasal emission/slight nasal turbulence 1
- Marked nasal emission/distracting nasal turbulence 2

Mirror Test

	R	L
papa pipi		
kaka kiki		
sssss		

E28. Grimace

1. yes

2. no

- No grimace 0
- Nasal flare 1
- Nasal grimace involving the nostrils and upper lip 2
- Facial grimace which includes the mid and upper face 3

E29. Voice

1. normal

2. dysphonia

E29(i) If child has dysphonia then request the child to phonate vowels /a/ /o/ and /i/ and describe:

a. voice quality (for e.g. hoarse, breathy).....



b. pitch (for e.g. inappr

c. Intensity (for e.g. re

E29(ii) Parental report of vocal abuse: 1. yes  2. no

**E30. Speech**

**Consonant Production** (repetition of words and sentences; from speech elicitation material included with instructions to participants)

Please indicate (+) if sound is correctly articulated, (-) if error in sound articulation.

Analyse the consonants that were indicated as (-) and in E29 note the type of errors

	Labial			Labiodental			Alveolar					Post-alveolar		Velar		
	m	p	b	f	v	n	t	d	l	s	z	ʃ	ʒ	ŋ	k	g
SIWI																
SFWF																
Sentences																

**E31. Cleft Speech Characteristics:** 1. yes  2. unsure  3. no

If yes type of errors:

E31(i) Anterior oral CTCs e.g. ....

E31(ii) Posterior oral CTCs e.g.....

E31(iii) Non oral CTCs e.g.....

E31(iv) Passive CTCs e.g.....

**E32. Developmental errors:** 1. yes  2. unsure  3. no

If yes e.g.....

**E33. Visual appearance of speech**

1. unremarkable  2. asymmetry of facial movement

3. tight upper lip  4. tongue tip appearing

**E34** Identifiable etiology of communication, speech and language impairment in conjunction with C] hearing evaluations and D] orofacial examination

E34(i) Hearing loss  E34(ii) Developmental delay

E34(iii) Oral fistula  E34(iv) Dentition abnormal

E34(v) Syndrome  E34(vi) Other specify.....

**E35 Recommendation: Regular Speech-language therapy** 1. yes  2. no



**F. General Development**

**F1.** Child's Name: .....

**F2.** File number: ..... **F3.** D.O.B: 

d	d	m	m	y	y

**F4.** Date of assessment: 

d	d	m	m	y	y

**F5.** Age:.....months

**F6.** Speech-language therapist's opinion regarding motor development (based on developmental milestones for example:sitting, walking..)

1. normal                       2. delayed

**F7.** Parental report/observations of the child playing with toys (for eg. imitation, symbolic play, exploratory play)

1. age appropriate                       2. need for further in depth assessment

**F8.** Social interactions as reported by parents (e.g. interactive, shy, aggressive, uncooperative)

- .....  
.....  
1. normal                       2. need for further in depth assessment

**F9.** Educational history:

i)Is the child attending a school:      1. yes                       2. no

If yes, is the child in:

- 1.day care center     2.pre-primary school       3.primary school     4. special school

ii) Is the child coping academically/preacademically 1. yes       2. unsure       3. no

(based on parental and/or school report)

**F10.** Does the parent have any concerns regarding child's development      1. yes       2. no

If yes, describe parental concerns regarding general development of the child

.....  
.....

**F11.** Provide any additional information that might be helpful in this assessment

.....  
.....

**F12. Recommendations: refer for in-depth assessment by:**

- Paediatrician                       Occupational Therapist   
Clinical Psychologist                       Other  please specify.....

.....



The Communication Assessment Protocol has been compiled by Mrs. R. Gopal based on literature review and the following main sources:

**Section B:** Feeding assessment is based on:

Masarei, A., Wright, S., Hughes, J., & Lake, R., 2004 “Initial feeding assessment for Newborn Infants with cleft lip and or palate”: North Thames Regional Cleft Team, UK.

**Section C:** Hearing evaluations are based on:

ASHA ‘*Joint Committee on Infant Hearing Year 2000 Position statement*’  
<http://www/jcih.org> accessed: Jan. 2006

Hugo, R., Louw, B., Kritzinger, A., Smit, G.J., 2000, ‘Listening behaviour in children at risk for communication delay’ *Infant-Toddler Intervention. The transdisciplinary Journal*, vol. 10, No 1, pp 47-53

**Section D:** Orofacial examination is based on:

Shprintzen, R.J., & Bardach, J., 1995, ‘Cleft palate speech management: A Multidisciplinary approach’, St. Louis, Mosby Inc (pp 212-215)

Watson, A.C.H., Sell, D.A., & Grunwell, P. 2001, *Management of Cleft Lip and Palate*, London and Philadelphia, Whurr Publishers (pp 232-233).

**Section E:** Communication, speech-language assessment is based on:

Communication Assessment Protocol Facial Deformities Clinic, University of Pretoria

Consonant Inventory as devised by the Thameside community health care NHS trust

GOS.SP.ASS 98 in Watson, A.C.H., Sell, D.A., & Grunwell, P. 2001, *Management of Cleft Lip and Palate*, London and Philadelphia, Whurr Publishers (pp 232-233)

Shipley, K.G., McAfee, J.G., 2004, *Assessment in Speech-Language Pathology: A Resource Manual 4<sup>th</sup> ed.*, San Diego, Singular publishing grp. (p. 233).

Snow C.E., Burns, M.S., Griffin, P., 1998, *Preventing Reading Difficulties in Young Children* Washington, National Academy Press

**Section F:** General Development is based on case history form for children in:

Shipley, K.G., McAfee, J.G., 1998, *Assessment in Speech-Language Pathology: A Resource Manual 2<sup>nd</sup> ed.*, San Diego, Singular publishing grp



## **APPENDIX VII**

### **SPEECH MATERIAL FOR ELICITING SPEECH**



## Creole, French and English words and sentences for eliciting a speech sample

Following is the list of words and sentences that have been prepared in Creole based on Eurocran speech project guidelines (<http://www.eurocran.org/content>) for speech elicitation materials that are standard cross-linguistically. The French translations are provided in *italics*.

### **Creole and French (*in italics*) word list**

#### **Initial**

[m] marto (*marteau*)

[p] poul (*poule*), poupet (*poupée*)

[b] bol (*bol*), boul (*boule*)

[f] fey (*feuille*)

[v] ver (*verre*)

[n] nene (*nez*), navir (*navire*)

[t] tapi (*tapis*), torti (*tortue*)

[d] desin (*dessin*), dokter (*docteur*)

[l] lili (*lit*), lapin, loto

[s] soley (*soleil*), seve (*cheveux*)

[z] zako (*singe*), zero, zoli

[k] kado (*cadeau*), koki (*coquille*)

[g] gato (*gâteau*)

[gn] \* No [gn] in word initial position

#### **Final**

lagom (*gomme*), lasam (*chambre*)

lasoup (*soupe*), lalamp (*la lampe*)

rob (*robe*), latab (*table*)

bef (*boeuf*), dizef (*oeuf*)

mov (*mauve*), lalev (*lèvre*)

ravann (*ravane*), laline (*lune*)

latet (*tête*), savat (*savate*)

lapoud (*poudre*), koud (*coude*)

lekol (*école*), disel (*sel*)

labous (*bouche*), tas (*tasse*)

rouz (*rouge*), zimaz (*image*), lagorz

sak (*sac*), labek (*bec*)

bag (*bague*), lareg (*règle*)

pagne

## Creole sentences



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YUNIBESITHI YA PRETORIA

- /m/ Mo mami pe dormi dan lasame
- /p/ Popo faire pipi dans pot
- /b/ Bebe so biberon lor latab
- /f/ Fifi pe ferme lafnet / Fifi pe frire dizef
- /v/ Dev ek Vina viv dan vilaz
- /n/ Nelly donne li ene ti banane
- /t/ Toto pe gratte so latet
- /d/ Dadi pe dodo endans
- /l/ Soley levé la-haut dan leciel
- /s/ Soonil pe lapesse poisson dan bassin
- /z/ Enn ti zwazo dan lakaz pe bate lezel
- /dj/ Jenny ena so badge lor so jean
- /k/ Karina kas koko zet so lakok
- /g/ Maggy goute gateau la



**French sentences** (compiled from: Trouble de l'articulation, Equipe du Centre d'Orthophonie, Etienne Coissrd, by Mrs. R. Gopal)

- /m/ *Maman mange à midi*
- /p/ *Apporte un petit pot*
- /b/ *Bébé a une belle robe*
- /f/ *Fifi fera du café*
- /v/ *Tu vas vite*
- /n/ *Bonne année!*
- /l/ *Il est malade depuis lundi*
- /t/ *Ta tortue est toute petite*
- /d/ *Didier a une idée*
- /s/ *C'est assez salé*
- /z/ *Les oiseaux gazouillent dans les arbres*
- /ʃ/ *Le chocolat est chaud*
- /j/ *J'ai bien joué dans la neige*
- /k/ *Quel beau bouquet*
- /g/ *Apporte un légume pour le ragout*



- /m/ Mum came home early.
- /p/ The puppy is playing with the rope
- /b/ Bob is a baby boy
- /f/ The phone fell off the shelf
- /v/ Dave is driving a van
- /n/ Neil saw a robin in the nest
- /l/ A ball is like a balloon
- /t/ Tim is putting on a hat
- /d/ Daddy mended a door
- /s/ I saw Sam sitting on a bus
- /z/ The zebra was at the zoo
- /j/ John's got a magic badge
- /k/ Karen is making a cake
- /g/ Gary's got a bag of lego



/m/



/marto/



/lagom/

/p/



/poul/

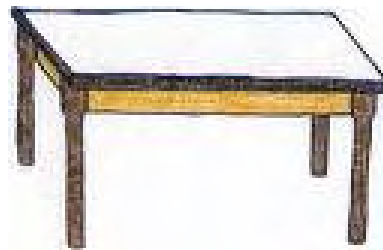


/lalamp/

/b/



/boul/



/latab/



**APPENDIX VIII**

**QUESTIONNAIRE FOR SPEECH LANGUAGE THERAPISTS**

**AND AUDIOLOGISTS**



## **Development of a Communication Assessment Protocol for Young Children with Cleft Lip and/or Palate in Mauritius**

**Aim of this research project:** To develop a Communication Assessment Protocol for Young Children (0-6 years) with Cleft Lip and/or Palate in Mauritius. This will help improve service delivery to children with CL/P and their families, monitor their progress objectively and document the treatment outcomes. In addition, Speech- Language Therapists and Audiologists working with children with CL/P will have an assessment tool that is appropriate, standardized and uniform.

**Aim of this questionnaire:** This questionnaire has two sections each with its own aim.

The aim of section I of the questionnaire is to determine perceptions of speech-language therapists and audiologists regarding the compiled assessment tracking form.

Section II, the aim is to gather feedback regarding the clinical applicability of this protocol from the speech-language therapists and audiologists after they have conducted the communication assessment protocol on children with CL/P.

**Instructions:** Please complete your biographical information. The questionnaire has two sections. Please indicate your choice or choices with an X, and provide descriptions. You should only complete Section II of this questionnaire after you have clinically assessed children with CL/P participating in this study.

Your opinions and input are very important, as they will influence the development of the protocol. In addition, testing the clinical applicability of the communication assessment protocol for children with CL/P will help improve the trustworthiness thereof.

Thank you very much for your co-operation.

Rachna Gopal  
Senior Speech-Language Therapist and Audiologist  
Ministry of Health, Mauritius



**Biographical information of speech-language therapist and audiologist completing the questionnaire**

Name:.....

Designation:..... Hospital:.....

Your qualifications in Speech-Language Therapy & Audiology:

Bachelor's degree       Master's degree       Doctorate       Other  specify.....

Years of experience as a Speech-Language Therapist & Audiologist.....

Total number of children (0-72 months) currently receiving SLT services from you.....

Number of children with CL/P currently receiving SLT services from you.....

Your prior experience in CL/P:

Extensive       Average       Limited       None

**SECTION I**

**Preliminary evaluation of the Communication Assessment Protocol for children with CL/P**

**1. Did you complete the survey questionnaire Section A] part 1, of this study (April to August 2005) during which the essential background information of children with CL/P participating in this study was gathered?**

Yes       No  If no why not.....

If yes, in your opinion did the design of the questionnaire allow for accurate and essential capturing of the background information of children with CL/P and their families?

Yes       No  If no, which other information would you like to include?

**2. After reviewing the proposed Communication Assessment Protocol for Young Children with CL/P Sections B to F please answer the following questions:**

2.1 Do you find the Communication Assessment Protocol?

Clear       Unclear       Unsure



2.2 In your opinion, do all the [hearing, orofacial examination, communication, speech-language and general development need to be assessed?

Yes                       Unsure                       No

If no, which section would you like to exclude and why?

.....  
.....  
.....

Would you like to include any other area of assessment?

Yes                       No

If yes, list the area/areas of assessment you would like to include.....

.....  
.....

2.3 Do you feel competent to assess the child with CL/P in all of these areas?

Yes       Yes but with additional training       Unsure       No

If you would like additional training, please indicate in which of the following areas of assessment you would like training:

Section B] Feeding                       Section C] Hearing                       Section D] Orofacial examination   
Section E] Communication, speech and language                       Section F] General development

If you answered unsure or no please explain

.....  
.....

**3. Please refer to Section E] communication, speech, language assessment of the Communication Assessment Protocol and answer the following questions:**

3.1 Do you feel that the content of this protocol is sufficient to provide an accurate perceptual assessment of speech characteristics of children with CL/P?

Yes                       Unsure                       No

If answered unsure or no, please explain.....

.....  
.....



3.2 Do you think that the rating (0- 3: E.26 to E.28 of the form) will be helpful in your perceptual judgments of nasality

Yes       Unsure       No

If answered unsure or no please explain.....  
.....  
.....  
.....

3.3 Do you think that the descriptions of the cleft palate speech characteristics (anterior, posterior, non oral passive cleft type characteristics, developmental errors:E30 to E33 are:

Necessary    Yes                       Unsure                       No   
Clear            Yes                       Unsure                       No   
Accurate        Yes                       Unsure                       No

3.4 The Communication Assessment Protocol requires that for group II children with CL/P (36-72 months) you make audio and video recordings of their speech. Would it be practical for you to carry out the recordings in your hospital context?

Yes                       No  If no, please explain.....

.....  
.....

3.5 Please, review Appendix 1 of the Communication Assessment Protocol. A list of Creole, French and English words and sentences are proposed as stimulus for eliciting speech responses from children with cleft lip and/or palate in group 2 (36-72 months). In your opinion, are these words and sentences appropriate?

Yes                       Unsure                       No

If answered unsure or no, please indicate the words and/or sentences that you would like change and explain why.....

.....  
.....  
.....



**4. Do you feel that the length of the communication assessment protocol is appropriate for use in your hospital context?**

Yes

Unsure

No

Any comments please add.....

.....  
.....

**5. Do you have any further comments regarding the Communication Assessment Protocol for Young Children with CL/P?**

.....  
.....  
.....  
.....  
.....  
.....  
.....  
.....  
.....

Thank you very much for your input regarding the communication assessment protocol

Date .....



**SECTION II**

**Clinical Applicability of the Communication Assessment Protocol for Young Children with Cleft Lip and/or Palate in Mauritius**

**1. Did you complete the communication assessment protocol on children with CL/P from both age groups: group 1 younger than 36 months and group 2, 36-72 months?**

Yes

No

If no, please provide the reasons .....

If yes, please complete this table:

Number of children younger than 36 months	
Number of children 36-72 months	
Total number of children	

**2. Did you find that administrating the communication assessment protocol was:**

2.1 Suitable for use in the hospital context: Yes       Unsure       No

Please explain your answer.....

2.2 Detailed enough in the areas (sections B-F) that you assessed:

Yes       Unsure       No

Please explain your answer.....



2.3 You could assess the children with CL/P:

With ease

With some difficulty

With difficulty

If some difficulty was experienced please indicate in which of the following area/areas:

- Section B Feeding
- Section C Hearing
- Section D Orofacial
- Section E Communication speech and language
- Section F General development

Please explain the nature of difficulty you experienced

.....

.....

.....

.....

**3. With reference to Section E] ii) auditory perceptual assessment of resonance and speech please answer the following:**

3.1 Could you assess the resonance in terms of the rating scales?

With ease

With some difficulty

With difficulty

Please explain your answer.....

.....

.....

Could you describe the cleft type speech characteristics:

With ease

With some difficulty

With difficulty

Please explain your answer.....

.....



**4. Were any of the children non-compliant during assessment?**

Yes

No

If yes, indicate in which area/areas of assessment.....

Please specify age group of the child/children.....

In your opinion what were the contributing factor/factors for non-compliance?.....

**5. Do you feel that the results of the protocol could provide you with the intervention guidelines?**

Yes

Unsure

No

Please explain your answer.....

**6. Do you think that you will use this protocol in the future?**

Yes

Unsure

No

Please explain your answer.....







TOPICS	DESCRIPTION <b>Excerpts of representative quotes of the participants</b>
<p><b>TOPIC ONE</b></p> <p><b>Overview of the Communication Assessment Protocol</b></p>	<p><b>The participants agreed that the communication assessment protocol is a complete and useful tool.</b></p> <ul style="list-style-type: none"> <li>• ‘The protocol is complete...it includes various areas of assessment example feeding, hearing, general development in addition to the speech-language assessment’</li> <li>• ‘You can follow a child from the time he is born to the time all the operations are complete....I liked this longitudinal aspect’</li> <li>• ‘It has all the aspects needed for longitudinal assessment ....it helps to really focus on each area’</li> <li>• ‘The protocol is easy to use, simple and the checklist format renders the protocol user friendly’</li> <li>• ‘The layout of the form was very nice, simple, accessible and very well organised that is what helped me use the tool’</li> <li>• ‘I found that the participation of the parents formed an important part of the assessment’</li> </ul> <p><b>The constraints/problems that concerned the participants were; lack of apparatus at the various regional hospitals and unavailability of an assistant to help with the recordings.</b></p> <ul style="list-style-type: none"> <li>• ‘I am based at Jeetoo Hospital and I do not have the audiology facility nor the video recording equipment ..... I think we should make it a centre based assessment where the equipment and assistant are available’</li> <li>• ‘Some parents may have a problem to move to one centre’ ‘Maybe we could plan in the future to have the equipment in our own clinic ...’</li> </ul>
<p><b>TOPIC TWO</b></p> <p><b>Clinical applicability</b></p> <p><b>Specific aspects</b></p> <p><b>i) Training</b></p>	<p><b>The participants discussed their experiences when conducting the assessments</b></p> <p><b>i) The participants found the training adequate</b></p> <ul style="list-style-type: none"> <li>• ‘The video training was helpful, as we needed fine tuning into listening to the speech characteristics of children with CL/P’</li> <li>• ‘Initially it was scary as I am not used to analysing speech. Training, observing how the principal investigator conducts the assessments and later analysing the speech was helpful’</li> <li>• ‘We are speech-language therapists....and assess regularly, observing the principal investigator doing the assessment, analysing speech helped a lot’</li> </ul>



<p>ii) <b>Communication Assessment tracking form and the speech elicitation material</b></p>	<p><b>The participants regarding the materials, namely the tracking form and the speech elicitation materials.</b></p> <ul style="list-style-type: none"> <li>• ‘The checklist made it easier to tick the appropriate observations’</li> <li>• ‘Personally I like the checklist it is a time saver’</li> <li>• ‘From the aesthetic point of view the protocol had different colours to differentiate each section.....this is very appealing ... we do not have to scan through the whole form’</li> <li>• ‘The most beautiful part was the speech material that was provided, particularly the French words list’</li> <li>• ‘The pictures were very helpful in eliciting responses from shy children and made them eager to repeat the words’</li> </ul> <p><b>The quality of recordings was good and video recordings were useful in speech analysis.</b></p>
<p>iii) <b>Apparatus</b></p>	<ul style="list-style-type: none"> <li>• ‘I could go back to the tape and listen whatever we missed out so that way easy access for accurate assessment was there...’</li> <li>• ‘I personally preferred the video recordings...’</li> <li>• ‘For communication assessment body language is important therefore the video recordings were very helpful.... You can see the facial expression, and if they have tight lip’</li> </ul>
<p>iv) <b>Areas of assessment</b></p>	<p><b>The protocol was described as complete because all the areas of communication were assessed.</b></p> <ul style="list-style-type: none"> <li>• ‘The <b>hearing screening</b> is very important for children with cleft palate’</li> <li>• ‘ I think the <b>feeding aspect</b> as well, we could counsel the parents or make proper referrals’</li> <li>• ‘It was easy to do the <b>articulation test</b> first ... because the parents were there... the child was fresh..’</li> <li>• ‘Initially I did not see the utility of adding <b>emergent reading skills</b> but then this helped a lot in guiding the parents afterwards..’</li> <li>• ‘We see the <b>child as a whole</b> every aspect of development is looked into’</li> </ul> <p><b>Completing the assessment in one session was sometimes not possible.</b></p> <ul style="list-style-type: none"> <li>• ‘Initially the protocol appeared long but then with practice it became easier to conduct the assessment’</li> <li>• ‘I think an assessment should go ½ hr. and sometimes it took me 40 minutes that is long for a child’</li> </ul>



## APPENDIX IX

### FOCUS GROUP DISCUSSION



<p>v) <b>Intervention</b></p>	<ul style="list-style-type: none"> <li>• ‘I <del>we are going to assess the child over a long time</del> clinical applicability as</li> <li>• ‘I found it takes time to test the baby’s hearing.... Sometimes they don’t respond... rapport has to be built... some children are difficult to condition for hearing evaluation</li> <li>• ‘I think the therapist who was working with the child should test the child....and of course parents are present as comforters’</li> </ul> <p><b>The protocol was found to be useful in management of the children with CL/P</b></p> <ul style="list-style-type: none"> <li>• ‘Feeding assessment made it easier to refer to dietician as we had concrete data’</li> <li>• ‘At the end of the assessment we can be sure we need to make this referral....even ...referrals to the <b>dentist</b>’</li> <li>• ‘The protocol had an impact on management ... before this protocol we would not have thought of asking parents whether the child is reading/looking at picture books’</li> <li>• ‘It is a good tool to evaluate as therapy is ongoing’</li> <li>• ‘It helps us to establish long term and short term goals’</li> </ul> <p><b>Most of the children could be assessed with ease but some of the children were difficult to assess</b></p> <ul style="list-style-type: none"> <li>• ‘The parents were there as comforters....and helped the therapist’</li> <li>• ‘Some children were shy and did not want to repeat the words’</li> <li>• ‘ Some children were hyperactive and did not repeat the words’</li> <li>• ‘Babies could not be conditioned for hearing testing in one session’</li> <li>• ‘Rapport with the child is very important... the therapist who provides therapy should assess and re-assess the child</li> </ul>
<p><b>TOPIC THREE</b> <b>Clinical Acceptability</b></p>	<p><b>The participants unanimously affirmed that they would use the protocol in the future for assessments.</b></p> <ul style="list-style-type: none"> <li>• ‘I think I will use this tool a lot in the future’</li> <li>• ‘It is clinically applicable in the hospital context’</li> <li>• ‘It saves time’</li> <li>• ‘No formalised tools exist this is a formal test we now have. It is based on previous (international) research’</li> <li>• ‘It is a good tool to evaluate progress in therapy’</li> <li>• ‘We have a common base as all therapists will use this tool’</li> </ul>



**Potential** **assessment protocol**  
**was discussed for example:**

- 'It can be used beyond 72 months'
- 'I will use the articulation part for other articulation cases'
- 'I could use the feeding assessment for children with feeding difficulties.'