Research topic:

**Acoustic characteristics of vowels in urdu and Kannada bilinguals:**

Urdu language has four vowels , /a/, i/, u/ and /e/ . /a/ is low back sound , /i/ is high front vowel , /u/ is the high back vowel, and /e/ is the mid vowel.

Acoustically vowels can be classified based on the formant pattern, spectrum and duration and acoustically vowels can be classified based on the formant pattern, shape of the vocal tract, spectrum and duration.

Formant frequency: Lower formant frequencies in the vocal tract are most affected by the changes in the mouth opening.F1 directly related to mouth opening and indirectly related to tongue height & F2 is directly related to tongue height and tongue advancement or position.(Fant, 1960)

Vowel duration: Vowels can differ in their durations.

Factors that influence vowel duration are : Tense-lax(long-short) feature of vowel,Vowel height, Syllable stress Speaking rate, Voicing ,Place of articulation, Syntactic or semantic factors such a word familiarity .

Very limited studies on the acoustic characteristics of vowels in native urdu speakers and also no comparisons are made across the languages. So it is needed to compare the acoustic characteristics of vowels in native urdu speakers and in urdu and kannada speakers by measuring the formant frequencies and vowel duration.

Name of journals:

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| **S. No.** | **Name of the Journal** | **Publisher** | **Volume No.** | **Issue No.** | **Year** |
| 1. | Journal of international phonetic alphabet | International Phonetic Association 2013 | 27 | 1-2 | 1997 |
| 2. | Applied acoustic | Elsevier | 114 | 240-243 | 2016 |
| 3. | Journal of Speech, Language, and Hearing Research. | ASHA | 2 | 173-183 | 2016 |
| 4. | ***American Journal of Speech-Language Pathology*** | ASHA | 25 | 335-354 | 2016 |
| 5. | Clinical linguistics and phonetics | Informa UK limited | 15 | 6 | 2009 |

List of books:

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| **S. No.** | **Name of the Book** | **Author** | **Year** | **Publisher** | **Accession No.** |
| 1 | Book of Clinical Speech Physiology. | Barlow, S. M. | (1999) | Hand San Diego, Singular Publishing Group. | 12020 |
| 2 | Speech Science Primer | Borden, G. J., & Harris, K. S. | (2003) | Philadelphia. Lippincott, William & Wilkins | 15598 |
| 3 | The Physiology of Speech & Hearing: An Introduction. | Daniloff. R. S., Gordon & Lawrence | (1980) | New Jersey,  Prentice-Hall Inc | 5927 |
| 4 | Preclinical Speech Sciences; Anatomy Physiology Acoustics Perception | Hixon, T. J. Weismer, G. & Hoit, J. D. | (2008) | San Diego, Plural Publishing. | 20172 |
| 5 | Preclinical Speech Sciences; Anatomy Physiology Acoustics Perception. | Hixon, T. J., Weismer, G., & Hoit, J. D. | (2014) | San Diego, Plural Publishing. | 16006 |
| 6 | The Production of Speech | Mac Neilage, P F. | (1983). | NY, Springer – Verlag | 7525 |
| 7 | Speech Science Primer | Raphael, L. J. | (2007) | Philadelphia, Lippincott Williams & Wilkins | 15598 |
| 8 | Anatomy & Physiology for Speech, Language and Hearing | Seikal, J. A., & King, D. W. | (2005) | Thompson – Delmar Learning. | 14361 |
| 9 | Speech Acoustics and Phonetics | Fant, G. | (2004) | Dordrecht, Kluwer Academic Publishers | 13702 |
| 10 | Techniques in Speech Acoustics | Harrington, J., & Cassidy, S. | (1999). | Dordrecht, Kluwer Academic Publishers. | 13421 |

List of PG dissertations:

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| --- | --- | --- | --- | --- | --- |
| **S. No.** | **Title** | **Author** | **Guide** | **Year** | **Accession No.** |
| 1 | **Acoustic analysis of speech in children** | **Kushalraj** | Nataraja ,NP | 1983 | 116 |
| 2 | **Acoustic analysis of speech in Normal adults** | Gopal | Nataraja ,NP | 1986 | 148 |
| 3 | **Acoustic analysis of vowels in Kashmiri Language** | Vineetha Tiku | Nataraja ,NP | 1994 | 296 |
| 4 | **Acoustic analysis of vowels in dialects of Kannada** | Kaplai S Nayaka | Savithri S | 2016 | 1097 |
| 5 | Acoustic change in tonal and non tonal languages | Suma Chatni | Sandeep M | 2011 | 815 |

* The MIT Encyclopedia of Communication Disorders (MITECD) is a comprehensive volume that presents essential information on communication sciences and disorders.
* Disorders include, which affects the speech production and perception, language expression, language comprehension, voice, and hearing.
* Potential readers include clinical practitioners, students, and research specialists. Relatively few comprehensive books of similar design and purpose exist, so MITECD stands nearly alone as a resource for anyone interested in the broad field of communication disorders.
* MITECD is organized into the four broad categories of :
* Voice
* Speech
* Language and
* Hearing.
* These categories represent the spectrum of topics that usually fall under the rubric of communication disorders (also known as speech-language pathology and audiology, among other names).
* The use of these four categories achieves a major categorization of knowledge but avoids a narrow fragmentation of the field at large.
* It is to be expected that the Encyclopedia would include cross-referencing within and across these four major categories. After all, they are integrated in the definitively human behavior of language, and disorders of communication frequently have wide-ranging effects on communication in its essential social, educational, and vocational roles.
* In designing the content and structure of MITECD, it was decided that each of these major categories should be further subdivided into Basic Science, Disorders (nature and assessment), and Clinical Management (intervention issues).
* These categories are defined as follows:
* **Basic Science** entries pertain to matters such as normal anatomy and physiology, physics, psychology and psychophysics, and linguistics. These topics are the foundation for clinical description and interpretation, covering basic principles and terminology pertaining to the communication sciences. Care was taken to avoid substantive overlap with previous MIT publications, especially the MIT Encyclopedia of the Cognitive Sciences (MITECS).
* The **Disorders** entries offer information on issues such as syndrome delineation, definition and characterization of specific disorders, and methods for the identification and assessment of disorders. As such, these chapters reflect contemporary nosology and nomenclature, as well as guidelines for clinical assessment and diagnosis.
* **The Clinical Management** entries discuss various interventions including behavioral, pharmacological, surgical, and prosthetic (mechanical and electronic). There is a general, but not necessarily one-to-one, correspondence between chapters in the Disorders and Clinical Management categories. For example, it is possible that several types of disorder are related to one general chapter on clinical management. It is certainly the case that different management strategies are preferred by different clinicians. The chapters avoid dogmatic statements regarding interventions of choice.
* The approach to communicative disorders can be quite different for children and adults, a further division was made such that for many topics separate chapters for children and adults are included.
* But there are some disorders that are first diagnosed in childhood may persist in some form throughout adulthood (e.g., stuttering, specific language impairment, and hearing loss).
* Recent advanced options for benefiting population with hearing impairment such as cochlear implantation for children and adults , Alaryngeal voice for laryngectomees, computer based approaches information is provided. Therefore, this book could be considered as bible for the students and professional in the field of speech and language pathology and audiology which provides the overall view in each and every specific disorder.

**b.Status of Disability in India, 2012** :

* Publication by the Rehabilitation council of India (department of disability affairs under ministry of social justice & empowerment ,govt. of India).
* Last edition of status of disability was in 2007 and the recent documentation was in 2012 in which information about the overview on cross disability namely hearing impairment ,visual impairment, locomotor disability, mental retardation, autism, cerebral palsy, deaf-blindness, multiple disabilities, mental illness and spinal cord injuries in the country are discussed.
* Definition, cause, associated problems, early intervention, modes of therapeutic approaches, regional service deliveries and current census and research related information is described.
* Introductory chapter covers the historical, philosophical and sociological perspectives and introduction to various disability policies, legislation, magnitude of the disability in the country are discussed. Agencies, institutions and issues concerning the person with disabilities, current trends and developments including research in the area of disabilities ,technology impacts and how to use such technology for enhancing better life for the person with the disability in the country.
* It also gives insight into the areas of early intervention, education, vocational training, employment, human resource development technology, research and development.it provide clear details about the policies and legislation. UNCRPD united nations convention on rights of person with disabilities highlighting needs and human rights for the disabled. right for education, sarvashikshaabhiyan ,inclusive education and legislations such as PWD,RCI,NTA MHA are certain legislation bodies striving for the enhancing quality of life for the disabled population.
* This document is very useful for the students ,professionals ,researchers and clinicians, working agencies for the disabled population under the governmental and non-governmental to know and further improve the modes and methods of service delivery, to put forward the issues and implementation of government schemes and policies for the better and happier life for disabled population.

3. List of AIISH subscribed journals:

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| --- | --- | --- | --- |
| **S. No.** | **Title of the Journal** | **Name of the publisher** | **Year** |
| 1. | Acta Oto-laryngologica | Taylor & Francis Online | 1918 |
| 2. | Advances in Autism | Emerald Publishing | 2016 |
| 3. | Aging, Neuropsychology and Cognition | Taylor & Francis Online | 1997 |
| 4. | American Annals of Deaf | Gallaudet University Press | 1980 |
| 5. | American Journal of Audiology | ASHA wire | 1991 |
| 6. | America Journal of Speech Language Pathology | ASHA wire | 1991 |
| 7. | Annals of Dyslexia | Springer Link | 1997 |
| 8. | Aphasiology | Taylor & Francis Online | 1997 |
| 9. | Applied Acoustics | Elsevier - Science Direct | 2017 |
| 10. | Applied Psycholinguistics | Cambridge Core University Press | 1999 |
| 11. | Archives of Otolaryngology Head and Neck Surgery | AMA Publications | 1998 |
| 12. | Audiology and Neuro-Otology | Karger AG Publishers | 1996 |
| 13. | Augmentative and Alternative Communication | Taylor & Francis Online | 1985 |
| 14. | Autism: The International Journal of Research and Practice | SAGE Publications | 1999 |
| 15. | Autism Research | John Wiley & Sons | 2010 |
| 16. | Bilingualism: Language and Cognition | Cambridge Core University Press | 1998 |
| 17. | Brain and Language | Elsevier - Science Direct | 1974 |
| 18. | Canadian Journal of Linguistics | Cambridge Core University Press | 2017 |
| 19. | Child Language Teaching and Therapy | SAGE Publications | 1997 |
| 20. | Cleft and Craniofacial Journal | American Cleft Palate – Craniofacial Association | 1990 |
| 21. | Clinical Linguistics and Phonetics | Taylor & Francis Online | 1987 |
| 22. | Cochlear Implants International | Taylor & Francis Online | 2000 |
| 23. | Communication Disorders Quarterly | SAGE Publications | 1998 |
| 24. | Cortex | Elsevier - Science Direct | 2007 |
| 25. | Deafness and Education | Taylor & Francis Online | 1999 |
| 26. | Dementia | SAGE Publications | 2002 |
| 27. | Dyslexia | John Wiley & Sons | 2010 |
| 28. | Dysphagia | Springer Link | 1997 |
| 29. | Ear and Hearing | Lippincott Williams & Wilkins, Ovid – Wolters Kluwer | 1980 |
| 30. | Evidence Based Communication Assessment and Intervention | Taylor & Francis Online | 2007 |
| 31. | Exceptional Children | SAGE Publications | 2001 |
| 32. | Focus on Autism and Other Developmental Disabilities | SAGE Publications | 1999 |
| 33. | Folia Phoniatrica | Karger AG Publishers | 1949 |
| 34. | Gesture | Ingenta Connect | 2011 |
| 35. | Hearing Balance and Communication (Audiological Medicine) | Taylor & Francis Online | 1997 |
| 36. | Hearing Journal | Lippincott Williams & Wilkins, Ovid – Wolters Kluwer | 1994 |
| 37. | Hearing Research | Elsevier - Science Direct | 2010 |
| 38. | International Journal of Applied Linguistics | John Wiley & Sons | 2016 |
| 39. | International Journal of Audiology | Taylor & Francis Online | 1962 |
| 40. | International Journal of Bilingual Education and Bilingualism | Taylor & Francis Online | 1998 |
| 41. | International Journal of Bilingualism | SAGE Publications | 1997 |
| 42. | International Journal of Language and Communication Disorders | John Wiley & Sons | 1997 |
| 43. | International Journal of Pediatric Otorhinolaryngology | Elsevier - Science Direct | 2007 |
| 44. | International Journal of Speech Language and the Law (formerly Forensic Linguistics) | Equinox Publishing Limited | 1998 |
| 45. | International Journal of Speech Language Pathology | Taylor & Francis Online | 1997 |
| 46. | International Journal of Speech Technology | Springer Link | 1989 |
| 47. | Journal of Applied Research in Intellectual Disabilities | John Wiley & Sons | 2010 |
| 48. | Journal of Autism and Developmental Disorders | Springer Link | 1997 |
| 49. | Journal of Child Language | Cambridge Core University Press | 1997 |
| 50. | Journal of Child Psychology and Psychiatry | John Wiley & Sons | 2010 |
| 51. | Journal of Cleft Lip Palate and Craniofacial Anomalies | Wolters Kluwer - Medknow | 2016 |
| 52. | Journal of Cognition and Development | Taylor & Francis Online | 2000 |
| 53. | Journal of Cognitive Neuroscience | Massachusetts Institute of Technology Press | 1989 |
| 54. | Journal of Communication Disorders | Elsevier - Science Direct | 1967 |
| 55. | Journal of Early Intervention | SAGE Publications | 1999 |
| 56. | Journal of Fluency Disorders | Elsevier - Science Direct | 1974 |
| 57. | Journal of Indian Academy of Applied Psychology | Indian Academy of Applied Psychology | 2015 |
| 58. | Journal of Indian Speech and Hearing Association | Wolters Kluwer - Medknow | 2016 |
| 59. | Journal of Intellectual and Developmental Disability | Taylor & Francis Online | 1976 |
| 60. | Journal of Interactional Research in Communication Disorders | Equinox Publishing Limited | 2010 |
| 61. | Journal of Laryngology and Otology | Cambridge Core University Press | 1887 |
| 62. | Journal of Laryngology and Voice | Wolters Kluwer - Medknow | 2017 |
| 63. | Journal of Learning Disabilities | SAGE Publications | 1999 |
| 64. | Journal of Memory and Language | Elsevier - Science Direct | 2007 |
| 65. | Journal of Neurolinguistics | Elsevier - Science Direct | 1985 |
| 66. | Journal of Phonetics | Elsevier - Science Direct | 1995 |
| 67. | Journal of Pragmatics | Elsevier - Science Direct | 2007 |
| 68. | Journal of Psycholinguistic Research | Springer Link | 1997 |
| 69. | Journal of Special Education | SAGE Publications | 1999 |
| 70. | Journal of Speech Language and Hearing | ASHA wire | 1958 |
| 71. | Journal of the Acoustical Society of America | AIP Publishing LLC | 1930 |
| 72. | Journal of the American Academy of Audiology | Ingenta Connect | 2002 |
| 73. | Journal of the International Phonetic Association | Cambridge Core University Press | 2001 |
| 74. | Journal of Vestibular Research | Meta Press | 2000 |
| 75. | Journal of Voice | Elsevier - Science Direct | 1987 |
| 76. | Laboratory Phonology | De Gruyter Mouton | 2010 |
| 77. | Language Acquisition | Taylor & Francis Online | 2014 |
| 78. | Language and Cognition and Neuroscience (formerly Language and Cognitive Processes) | Taylor & Francis Online | 1997 |
| 79. | Language and Communication | Elsevier - Science Direct | 2007 |
| 80. | Language and Speech | SAGE Publications | 1999 |
| 81. | Language Learning | John Wiley & Sons | 2006 |
| 82. | Language Sciences | Elsevier - Science Direct | 2007 |
| 83. | Language Speech and Hearing Services in Schools | ASHA wire | 1970 |
| 84. | Laryngoscope | ASHA wire | 1997 |
| 85. | Learning Disability in Quarterly | SAGE Publications | 2010 |
| 86. | Learning Disabilities Research & Practice | John Wiley & Sons | 2000 |
| 87. | Logopedics Phoniatrics Vocology | Taylor & Francis Online | 1991 |
| 88. | Noise & Health | Wolters Kluwer - Medknow | 2015 |
| 89. | Otolaryngologic Clinics of North America | Elsevier - Science Direct | 1998 |
| 90. | Otology and Neurotology | Lippincott Williams & Wilkins, Ovid – Wolters Kluwer | 2001 |
| 91. | Perspectives of the ASHA Special Interest Groups | ASHA wire | 2016 |
| 92. | Phonology | Cambridge Core University Press | 1997 |
| 93. | Reading and Writing | Springer Link | 1997 |
| 94. | Research in Autism Spectrum Disorders | Elsevier - Science Direct | 2007 |
| 95. | Seminars in Hearing | Georg Thieme Verlag KG | 1980 |
| 96. | Seminars in Speech and Language | Georg Thieme Verlag KG | 1984 |
| 97. | Sign Language and Linguistics | Ingenta Connect | 2016 |
| 98. | Speech Communication | Elsevier - Science Direct | 1982 |
| 99. | Speech, Language and Hearing | Taylor & Francis Online | 1996 |
| 100. | The Analysis of Verbal Behavior | Springer Link | 2014 |
| 101. | Topics in Language Disorders | Lippincott Williams & Wilkins, Ovid – Wolters Kluwer | 2001 |
| 102. | Trends in Cognitive Sciences | Elsevier - Science Direct | 2016 |