

**CENTRE OF SOCIAL MEDICINE AND COMMUNITY HEALTH
SCHOOL OF SOCIAL SCIENCE
JAWAHARLAL NEHRU UNIVERSITY**

Monsoon Semester 2017

Course No.	: SM 621
Course Title	: Operational Research and Systems Analysis in Community Health Research
Credits	: 2
Method of Instruction	: Lectures, Group Discussions and Seminars
Method of Evaluation	: 1.5 credit Written Assignment + 0.5 credit Viva-voce
Course Incharge	: Prof. Ritu Priya Mehrotra and Dr. Prachin Ghodajkar

Course Outline

The course aims at strengthening the students' understanding of the systems approach to analysis of health systems and familiarising them to the use of operational research for health services. It traces the evolution of Systems Analysis and Operations Research and their use in public health as tools for planning, service strengthening and evaluation. The course consolidates the theoretical and methodological perspectives that have been introduced over the previous two semesters and provides an approach to operationalise them in practice. Realist and holistic theoretical approaches are proposed as those that are suitable for developing a contextually rooted and comprehensive public health.

Introduction

- Systems Analysis and Operational Research: An Introduction
- Theoretical Approaches: Positivist, Realist, Holist

Conceptualising Health Systems

- Health Systems as a Complexity
- Ecosystems and Social Systems
- Meaning Systems and Political Economy
- Health Care Systems and Health Service Systems

Application of Systems Analysis and Operational Research to Health Services

- Systems Analysis and Operational Research as Applied to Health Systems
- The Principles of Health Management and Information Systems
- Use of Mathematical Models
- Qualitative Methods, Health Perception Studies and Mixed Method Research

Examples of Health Systems Research and Its Application for Planning and Evaluation

- Application of Systems Analysis and Operations Research to National Health Programmes
- Evaluation of Complex Systems: the NRHM and NHM
- Issues of Quality in Health Service Systems

Politics of Health Systems Research and Planning

- The Politics of Health Systems Research and Health Services Research
- The Politics of Health Data Sets
- Applying the Systems Approach to Analysis of Health Policy and Planning.

Reading List

Introduction

1. Ackoff, R.L. (1971): "Towards a System of Systems Concepts", *Management Science* Vol. 17, No. 3 pp.661-671. **(SM-621/F-11)**
2. Ramo Simon (1970): "The System Approach" in **Century of Mismatch**, Mackay Company. **(SM-621/F-2)**
3. Miser, Hugh J. April 1980. Operations Research and Systems Analysis. Professional Papers, International Institute for Applied Systems analysis, Luxemburg, Austria. **(SM-621/F-27)**
4. Jackson, M.C. and Keys, P. (1984): Towards a System of Systems Methodologies", **Journal of Operational Research Society**, Vol. 35, No.6, pp. 473-486. **(SM-621/F-3)**

Conceptualising Health Systems

1. Charron, Dominique F. (2012): Ecohealth: Origins and Approach, ch. 1 in Charron D.F. (ed) *Ecohealth Research in Practice: Innovative Applications of an Ecosystem Approach to Health*. IDRC & Springer. **(SM-621/F-30)**
2. Raphael Dennis (2006). Social Determinant of Health; Present Status, Unanswered Questions, and Future Directions. *International Journal of Health Services*, Volume 36, Number 4, Pages 651–677. **(SM-621/621/F-29)**
3. Baer, Hans A., Singer Merrill & Ida Susser (2003): "Medical Anthropology and the World System," 2nd ed. Praeger Publisher, Westport, Connecticut London, pp: 3-15, 31-54. **(SM-621/F-5)**
4. WHO (2007): A Safer Future: Global Public Health Security in the 21st Century, WHO, Geneva. **(Soft Copy)**
5. Sathyamala, C. et al (1986): "Taking Sides: the choices before the health worker", ANITRA, Asian Network for Innovative Training Trust, Madras, pp: 114-120. **(SM-621/F-4)**
6. Shakerishvili G. (2009): Building on health systems frameworks for developing a common approach to health systems strengthening, DRAFT FOR DISCUSSION prepared for the World Bank, the Global Fund and the GAVI Alliance, Technical Workshop on Health Systems Strengthening, Washington, DC, June, 25-27, 2009. **(SM-621/F-46)**
7. Beijing 2012: Statement of Symposium on Health Policy and Systems Research. **(SM-621/F-49)**

Application of Systems Analysis and Operations Research

1. World Health Organisation (1976): "Application of Systems Analysis to Health Management", Geneva, WHO. **(SM-621/F-6)**

2. Luck, G.M. et al (1971): Patients, Hospitals and Operational Research, London, Tavistock. **(SM-621/Book Shelf 15, Key No-79)**
3. Anderson, Stig. (1964): "Operations Research in Public Health", **Public Health Reports**, Vol. 79, No. 4, April. **(SM-621/F-7)**
4. Banerji, D. (1972): "Operational Research in the Field of Community Health", **Opsearch**, Vol. 9, Nos. 3-4, September-December, pp.135-142. **(SM-621/F-8)**
5. Navarro V. (1969): "A Systems Approach to Health Planning", Health Services Research, Summer, 1969, pp. 96-111. **(SM-621/F-44)**
6. Banerji, D. (1976): Research on Delivery of Health Care in the Countries of South East Asia Region, New Delhi, WHO SEARO. **(SM-621/F-9)**
7. World Health Organisation (1985): Uses of Health Systems Research, New Delhi, WHO SEARO. **(SM-621/F-10)**
8. Batu, Aung Than (1992): The Appraisal of Health Systems Research, New Delhi, NIHFWS, December 14-18, 1992. **(SM-621/F-47)**
9. Gibbs, R.J. (1978): "Use of Strategic Planning Model for Health and Personal Social Services", **Journal of Operational Research Society**, Vol. 29, No.9, pp.875-883. **(SM-621/F-12)**
10. Burton, Richard M. et al (1978): "A role of Operational Research in Health, Health Care Planning and Management Teams", **Journal of Operational Research Society**, Vol. 29, No.7, pp. 633-641. **(SM-621/F-13)**
11. Kazi, Mansoor A. F. (2003): Realist Evaluation in Practice: Health and Social Work, Sage Publication, New Delhi. **(SM-621/Book Shelf 15, Key No-79, XB-221;1)**
12. Bennett, Sara et al (2011): "Building the field of health policy and system research: an agenda for action", **PLoS Medicine**, August, Vol. 8, No. 8, p. 1-5. (open access) **(SM-621/F-41)**
13. Gilson, Lucy et al (2011): "Building the field of health policy and system research: social science matters", **PLoS Medicine**, August, Vol. 8, No. 8, p. 1-7. (open access) **(SM-621/F-42)**
14. Sheik, Kabir et al (2011): "Building the field of health policy and system research: framing the Questions, **PLoS Medicine**, August, Vol. 8, No. 8, p. 1-6. (open access) **(SM-621/F-43)**
15. Gilson, Lucy (ed.) (2012): "Health Policy and System Research: A Methodology Reader", WHO, Geneva. **(soft copy)**

Examples of Health Systems Research

1. Population, series J., Council (1986): "Operations Research! Lessons for Policy and Programmes", **Population Reports** No.31, May-June. **(SM-621/F-)**
2. Banerji, D. (1993): "A Social Science Approach to Strengthening India's National Tuberculosis Programme", **India J. Tub.**, Vol.40, pp. 61-82. **SM-621/F-14)/(Soft Copy)**
3. Qadeer I. (1985): "Social Dynamics of Health Care: The Community Health Volunteer Scheme in Sahadol District," **Socialist Health Review**, Vol.2, No.2, pp: 74-83. **(SM-604/606/F-55)**

4. Dutta, P.K. (1980): A Study of Factors Responsible for the Setback of National Malaria Eradication Programme (NMEP) at the Unit Level in Gurgaon District, New Delhi, CSMCH/SSS, Ph. D. Thesis. **(TH-2)**
5. Rao, K.V. (1982): Study of Leprosy Control Programme in Rural Population in Chingleput District, New Delhi, CSMCH/SSS, Ph. D. Thesis. **(TH-4)**
6. Mishra, B.D. et al (1982): Organisation for Change: A Systems Analysis of Family Planning in Rural India, New Delhi, Radiant. **(Book Shelf-15/ Key No. 79,_CHG-1019;3)**
7. Banerji, D. (1992): "Combating AIDS as a Public Health Programme in India", New Delhi, VHAJ and Nucleus for Health Policies and Programmes. **(SM-621/F-19)**
8. Dutta, Amlan (1996): Some Aspects of the Public Health Services in Purulia District: A Systems Analysis, New Delhi, CSM&CH, SSS, Ph. D. Thesis. **(TH-21.5)/Thesis Collection**
9. Bajpai, Nirupam, Sach, Jeffrey D. & Dholakia Ravindra H. (2010): "Improving Access and Efficiency in Public Health Services: Mid-term Evaluation of India's National Rural Health Mission", The Earth Institute Columbia University, NY and Sage Publication, New Delhi. **(SM-621/F-)**
10. GOI (2011): "Evaluation Study of National Rural Health Mission (NRHM) In 7 States", Planning Commission, GOI, New Delhi. **(SM-621/Book Shelf-15, Key No-79, XB-297)**
11. Gulati et al (2011): "Evaluation Study of NRHM", by Institute of Economic Growth, University of Delhi, NHRM Publication, New Delhi. **(XR-303/SM-621/BS-15, KN-79) (Gifted by Prof. Ritu Priya)**
12. IIPS and MOHFW (2010): Concurrent Evaluation of the National Rural Health Mission, MHFW, GOI.
13. Ghodajkar Prachinkumar (2013): Locating 'Quality' in Health Care and Universal Health Care Mosaic, Social Change, Vol. 43, Issue 2, pp- 191-212. **(SM-621/F-48)**
14. Joint Monitoring Mission (2014). Draft Report, National Vector Borne Disease Control Program, 1-10 March 2014. GOI. **(Soft Copy)**

Politics of Health Systems Research and Planning

1. Commission on Health Research for Development (1990): "Health Research: Essential Link to Equity in Development", Delhi, Oxford University Press. **(SM-621/Book Shelf 15, Key No-79, XR-299;1)**
2. *Banerji, D. (1990): "Prescription without Diagnosis: Review of Report of Commission on Health Research Development", Economic and Political Weekly, December 29, pp. 2823-2825. (SM-621/F-16)*
3. Banerji, D. (1993): "Simplistic Approach to Health Policy Analysis: World Bank Team on Indian Health Sector", **Economic and Political Weekly**, June 12, pp. 1207-1210. **(SM-621/F-17)**
4. Government of India, Ministry of Health and Family Planning (1976): "Operations Research for Improved Delivery of Health Services", New Delhi, Ministry of Health and Family Planning. **(SM-621/Book Shelf 15, Key No-79, XR298;3)**

5. Planning Commission (2011): "High Level Expert Group Report on Universal Health Coverage for India", Planning Commission, New Delhi. **(SM-621/Book Shelf 15, Key No-79, XR 219;1/Faculty Publication)**
6. GOI (2012): Twelfth Five Year Plan (2012-2017), Social Sector, Vol-III- Chapter on "Health", pp: 1-46, Planning Commission, New Delhi. **(SM-621/F-)**
7. GOI (2017): National Health Policy-2017. Govt. of India. New Delhi. **(XR-308)**
8. Ritu Priya (2005): "Public Health Services in India: A Historical Perspective" in Gangolli, Leena V; Ravi Duggal and Abhaya Shukla (eds) **Review of Healthcare in India**, Cehat, Mumbai pp: 41-74. **(SM-601/F-10)& (Book Shelf-13, Key No-36, XR-295)**

Suggested Readings

1. Blumstain, Alfred et al (ed.) (1970): "The Role of Systems Analysis for Social Problems in **Systems Analysis for Social Problems**, Operations Research Council, Washington. **(SM-621/F-1)**
2. Ackoff, R.L. (1960): "Systems, Organisations and Interdisciplinary Research", **General Systems of Year Books**, Vol. 5, pp.1-8. **(SM-621/F-11)**
3. *David Waltner-Toews* An ecosystem approach to health and its applications to tropical and emerging diseases. *Cad. Saúde Pública*, Rio de Janeiro, 17(Suplemento):7-36, 2001. **(SM-621/F-31)**
4. Pierce Jessica & Jameton Andrew (2004): "The Challenge of Environmental Responsibility" in **The Ethics of Environmentally Responsible Health Care**, Oxford University Press, New York. **(N/A)**
5. Campbell, Bruce Benner (1997): *Health Management Information Systems in Lower Income Countries, An Analysis of System Design, Implementation and Utilisation in Ghana and Nepal*, New York, Geboren Te Niagara Falls. **(SM-621/Book Shelf 15, Key No-79; GR820;1)**
6. World Health Organisation (1995): *Applying Planned Market Logic to Developing Countries, Health Systems: An Initial Exploration*, Geneva, WHO (WHO/SHS/NHP/95.7). **(SM-621/F-18)**
7. Mills, Anne (ed.) (1990): *Health System Decentralisation: Concepts, Issues and Country Experience*, Geneva, WHO. **(362.1 M624 He-2, Doc. Unit)/C.L Science Section (610.68 M624 He-1)**
8. Priya, Ritu & Shweta Anand (2010): "Status and Role of AYUSH Services and Use of Local Health Traditions under the NRHM: A Health Systems Study across 18 States", National Health Systems Resource Centre (NHSRC), New Delhi. **(Faculty Publication Almirah)**
9. Priya, Ritu (2011): "UAHC with 'Community Participation' OR 'People Centre-stage'? Implications for Governance, Provisioning and Financing". **MFC Bull.** Nos. 345-347, Feb-July, 2011, pp. 9-15. **(SM-621/F-21)**
10. Priya, Ritu (2011): "Conceptualising UAHC 'Bottom Up': Implications for Provisioning and Financing". **MFC Bull.**, Nos. 345-347, Feb-July, 2011, pp. 15-25. **(SM-621/F-21)**

11. WHO (2004): “World Report on Knowledge for Better Health: Strengthening Health Systems”, Summary, WHO, Geneva. **(Soft Copy)**
12. Rayner Geof & Lang Tim (2012): “Ecological Public Health: Reshaping the conditions for good health”, Routledge, London, pp: 3-66. **(SM-621/F-22)**
13. Issel, L. Michele (2004): “Health Program Development and Evaluation”, in **Health Program Planning and Evaluation: A Practical, Systematic Approach for Community Health**, Jones and Bartlett Publishers, Boston, pp: 3-35. **(SM-602/F-37)**
14. Rowitz, Louis (2009): “A Systems and Complexity Perspective” in **Public Health Leadership: Putting Principles into Practice, 2nd edition**, Jones and Bartlett Publishers, Boston, pp: 65-87. **(SM-621/F-23)**
15. A Collection of **Lancet papers** to inform debate at the Ministerial Summit on Health Research and Global Forum for Health Research, November 1—20, Mexico City, Mexico, **The Lancet (2004): Vol. 364, September- October, pp: 1-22.**
16. Tangcharoensathien Viroj et al. (2004): “Knowledge-based changes to health systems: the Thai experience in policy development”, **Bulletin of the World Health Organization**, October, 2004 Vol. 82, No.10, pp: 750-763. **(SM-621/F-24)**
17. The bitterest pill of all: the collapse of Africa’s health systems. **(SM-621/F-25)**
18. Q. Meng... et al. “(2004): “Health policy and systems research in China”, Special Programme for Research and Training in Tropical Diseases (TDR), UNICEF/UNDP/World Bank/WHO, 2004. **(Soft Copy)**
19. Thunhurst, Colin (2012): Public health systems analysis—the transfer of Learning between developed and developing countries, *Health Care Management Science*, 15, pp: 283-291. **(SM-621/F-26)**
20. Gray, Muir (2012): “Value: Operations Research and the new health care paradigm”, **Operations Research for Health Care**, Vol. 1, pp: 20-21. **(SM-621/F-45)**
21. WHO (2010): “Monitoring the Building Blocks of Health systems: A Handbook of Indicators and Their Measurement Strategies”, WHO, Geneva. **(soft copy)**