The Society is grateful to the National Endowment of the Arts for its support of the Consulting Service, which strives to provide affordable assistance to organizations wishing to establish or advance the arts in healthcare.
Presenters

- Jill Sonke
  - Director, University of Florida, Center for the Arts in Healthcare; Asst. Director, Shands Arts in Medicine

- Upali Nanda
  - VP, Director of Research, American Art Resources
Road Map

• Section I
  – Building blocks of research
    • Design, method, IRB, protocol, etc.
  – Examples and resources

• Section II
  – Examples of research/State of the Field Report
  – Funding
SECTION I:
Building Blocks of Research

By
Upali Nanda, PhD, Assoc.AIA, EDAC
VP, Director of Research
American Art Resources
Pressing Concerns in Research

Research SIG Online survey
(35 responses):

Most Pressing Challenges for Research in Healthcare Arts Today:

1. Availability of funding sources
2. Availability of research training
   (specific to the healthcare arts)
Pressing Concerns in Research

Most Important Resources Needed to Conduct Research in the Healthcare Arts Today:

1. Information on funding sources
2. Online repository for research articles
3. A research primer with clear terminology, overview of methods, and case studies
Research Primer

Research on the Effect of the Arts on Health

Re·search – noun
Diligent and systematic inquiry or investigation into a subject in order to discover or revise facts, theories, applications, etc.

(www.dictionary.com)
Theory

- A *theory* is a system, model, or framework of statements that describes and explains natural or social phenomena, which is logically consistent and cohesive by itself. A theory is not directly observable by itself but should be able to predict or explain certain phenomena.

- *Hypotheses* are predictions that are logically derived from theories and can be tested in empirical research.
Theory

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- *Hypotheses* are predictions that are logically derived from theories and can be tested in empirical research.

Healing Arts

Therapeutic Environments

Listening to music can reduce anxiety.

Nature views reduce stress.
Early Decisions

Who: Population sample
Where: Research site
Why and how: Research design

Building Theory

Advancing Industry
Research Questions

- **Descriptive:** When a study is designed primarily to describe what is going on or what exists

- **Relational:** When a study is designed to look at the relationships between two or more variables

- **Causal:** When a study is designed to determine whether one or more variables (e.g., a program or treatment variable) causes or affects one or more outcome variables

Source: http://www.socialresearchmethods.net/kb/resques.php
Research Questions

Descriptive
- What kind of art do patients like?

Relational
- Do patients prefer art with specific visual elements?

Causal
- Does viewing a landscape image with a high depth of field reduce stress?
# The Two Approaches in Research

<table>
<thead>
<tr>
<th>Qualitative</th>
<th>Quantitative</th>
</tr>
</thead>
<tbody>
<tr>
<td>&quot;All research ultimately has a qualitative grounding&quot; - Donald Campbell</td>
<td>&quot;There's no such thing as qualitative data. Everything is either 1 or 0&quot; - Fred Kerlinger</td>
</tr>
<tr>
<td>The aim is a complete, detailed description.</td>
<td>The aim is to classify features, count them, and construct statistical models in an attempt to explain what is observed.</td>
</tr>
<tr>
<td>Researcher may only know roughly in advance what he/she is looking for.</td>
<td>Researcher knows clearly in advance what he/she is looking for.</td>
</tr>
<tr>
<td>Recommended during earlier phases of research projects.</td>
<td>Recommended during latter phases of research projects.</td>
</tr>
<tr>
<td>The design emerges as the study unfolds.</td>
<td>All aspects of the study are carefully designed before data is collected.</td>
</tr>
<tr>
<td>Researcher is the data gathering instrument.</td>
<td>Researcher uses tools, such as questionnaires or equipment to collect numerical data.</td>
</tr>
<tr>
<td>Data is in the form of words, pictures or objects.</td>
<td>Data is in the form of numbers and statistics.</td>
</tr>
<tr>
<td>Subjective - individuals’ interpretation of events is important, e.g., uses participant observation, in-depth interviews etc.</td>
<td>Objective – seeks precise measurement &amp; analysis of target concepts, e.g., uses surveys, questionnaires etc.</td>
</tr>
<tr>
<td>Qualitative data is more 'rich', time consuming, and less able to be generalized.</td>
<td>Quantitative data is more efficient, able to test hypotheses, but may miss contextual detail.</td>
</tr>
<tr>
<td>Researcher tends to become subjectively immersed in the subject matter.</td>
<td>Researcher tends to remain objectively separated from the subject matter.</td>
</tr>
</tbody>
</table>
The following table illustrates the different kinds of health outcomes and relevant research measures:

<table>
<thead>
<tr>
<th>Description</th>
<th>CLINICAL INDICATORS</th>
<th>PATIENT/STAFF/ FAMILY BASED OUTCOMES</th>
<th>ECONOMIC OUTCOMES</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Outcome Measure</strong></td>
<td>Observable signs and symptoms relating to the patients’ health conditions</td>
<td>Patient satisfaction with healthcare services and staff satisfaction with working conditions.</td>
<td>Such as cost of patient care, staff turnover, philanthropy to the hospital etc.</td>
</tr>
<tr>
<td></td>
<td>Length of hospital stay, blood pressure, intake of pain medication, Heart rate, Skin conductance etc.</td>
<td>Patient ratings of perceived pain and anxiety, Staff rating of working conditions and satisfaction etc.</td>
<td>Cost of patient care, Staff turnover, Philanthropy to the hospital etc., Patient Enrollment, Renovation Needs.</td>
</tr>
<tr>
<td><strong>Instrument</strong></td>
<td>Medical Equipment and personnel for collection of Data</td>
<td>Questionnaires, Surveys, Interviews.</td>
<td>Existing Hospital records Financial records by design firm</td>
</tr>
<tr>
<td></td>
<td>Statistical tools for analysis</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Example</strong></td>
<td>Patients with a view of nature requested significantly fewer doses of analgesics in the period between two and five days after surgery and spent a shorter time in the hospital than those with a view of a brick wall</td>
<td>Adult patients in a procedure room reported better pain control when exposed to a nature scene with nature sound in the ceiling</td>
<td>Patients with a view of nature spent a shorter time in the hospital than those with a view of a brick wall resulting in a $500 lower cost per case</td>
</tr>
</tbody>
</table>

Example: View from Window, Ulrich (1984)

- **Population:** Hospital patients
- **Sample:** Inpatients recovering from gallbladder surgery
- **Hypothesis:** View impacts recovery
- **Study design:** Retrospective
  Studying medical records of patients with similar medical conditions and medical care in identical units differing only in the “view” from the window
- **Analysis:** Statistical analysis correlating different parameters
- **Findings:** Nature view resulted in lower LOS, lesser analgesics, and more positive notes
Research Process

• Research idea
• Lit review, theoretical basis
• Developing a hypothesis
• Creating a research design
  – Target population
  – Scope
  – Survey instrument
• Drafting research protocol for IRB submission
• Collecting data
• Analyzing data
• Publishing and presenting

Partnering with hospital
Time Allocation

- RESEARCH DESIGN
- DATA COLLECTION
- ANALYSIS AND PUBLICATION
- PROCURING FUNDING AND OTHER RESOURCES
Setting Up a Collaborative Team

- ARTIST/FACILITATOR
- HOSPITAL ADMIN AND/OR RESEARCH STAFF
- RESEARCHER (IN-HOUSE/CONSULTANT/ACADEMIC PARTNER)

Flow: ARTIST/FACILITATOR → HOSPITAL ADMIN AND/OR RESEARCH STAFF → RESEARCHER (IN-HOUSE/CONSULTANT/ACADEMIC PARTNER) → RESEARCH DESIGN
The “research protocol” is a formal design for research involving human subjects or research animals that an investigator submits to an Institutional Review Board (IRB) or an Institutional Animal Care and Use Committee (IACUC) for review. A protocol generally has an **objective**, **rationale**, **a design**, **eligibility requirements**, **a description of research and data analysis methods**. Protocols must conform to stringent federal regulations.

http://rac.berkeley.edu/compliancebook/introduction.html
INSTITUTIONAL REVIEW BOARD (IRB)

An institutional review board (IRB), also known as an independent ethics committee (IEC) or ethical review board (ERB), is a committee that has been formally designated to approve, monitor, and review biomedical and behavioral research involving humans with the alleged aim to protect the rights and welfare of the research subjects.

IRB Review

- Full
- Expedited Review
- IRB Exempt
Figuring out IRB Issues

http://www.hhs.gov/ohrp/humansubjects/guidance/decisioncharts.htm

- whether an activity **is research** that must be reviewed by an IRB
- whether the review may be performed by **expedited procedures**
- whether **informed consent** or its documentation may be waived
Chart 4: Does Exemption 45 CFR 46.101(b)(2) or (b)(3) (for Tests, Surveys, Interviews, Public Behavior Observation) Apply?

- **From Chart 2**
  - **Does the research involve only the use of educational tests, survey procedures, interview procedures, or observation of public behavior?**
    - **YES**
    - **Does the research involve children to whom 45 CFR part 46, subpart D applies?**
      - **YES**
      - **Is the information obtained recorded in such a manner that human subjects can be identified, directly or through identifiers linked to the subjects, and could any disclosure of the human subjects’ responses outside the research reasonably place the subjects at risk of criminal or civil liability or be damaging to the subjects’ financial standing, employability, or reputation?**
        - **YES**
        - Research is not exempt under 45 CFR 46.101(b)(2). However, the 45 CFR 46.101(b)(3) exemption might apply.
          - **YES**
          - Are the human subjects elected or appointed public officials or candidates for public office? (Applies to senior officials, such as mayor or school superintendent, rather than a police officer or teacher.)
            - **NO**
            - Research is not exempt under 45 CFR 46.101(b)(2) or (b)(3).
              - **NO**
              - **Go to Chart 8**
    - **NO**
      - Research is not exempt under 45 CFR 46.101(b)(2) or (b)(3).

- **NO**
  - **Does any Federal statute require without exception that the confidentiality of personally identifiable information will be maintained throughout the research and thereafter?**
    - **YES**
    - Research is exempt under 45 CFR 46.101(b)(2) from 45 CFR part 46 requirements.
      - **NO**
      - Research is exempt under 45 CFR 46.101(b)(3) from all 45 CFR part 46 requirements.

September 24, 2004
SOCIETY FOR THE ARTS IN HEALTHCARE
From Research to Evaluation

• The main difference between research and evaluation is that research is usually conducted with the intent to generalize the findings from a sample to a larger population. Evaluation, on the other hand, usually focuses on an internal situation, such as collecting data about specific programs, with no intent to generalize the results to other settings and situations. In other words, research generalizes, evaluation particularizes.

Available Resources

• Society website
  – **Journal**: *Arts & Health: An International Journal for Research, Policy and Practice*
  – **Research Directory**: View a current directory of arts in healthcare research. Members have the additional benefit of posting their research to this directory.
  – **Conference Proceedings**: View proceedings from recent Society for the Arts in Healthcare Annual Conferences.

• Online databases: For example, Google Scholar, Pubmed, and J-Stor

• Local libraries/university databases

• Listservs: For example, SAH Research Special Interest Group
SECTION II: Research Examples and Funding Opportunities

By
Jill Sonke, MA
Director, Center for the Arts in Healthcare, University of Florida
Assistant Director, Shands Arts in Medicine
State of the Field Report 2009

www.thesah.org
In today’s healthcare world, with approximately 30% of all healthcare spending going toward ineffective, redundant, or inappropriate care; capital resources scarce; the economy sagging; and the cost of healthcare becoming a hot political issue, healthcare decision-makers are demanding that decisions be based on evidence (Hayes, 2008).
State of the Field Report

Benefits of the Arts in Healthcare: A Sampling of Research Findings

- Methods used to measure benefits
- Music
- Visual arts
- Effects of images
- Design implications
- Dance
- Literature, creative writing, and storytelling
- Drama
- Health promotion and injury prevention
- Theory
- Economic benefits
Staricoff (2004)

- Reviewed 385 arts in healthcare studies published between 1990 and 2004
- Presents evidence defining the outcomes that have been achieved through the application of the arts in healthcare settings
- Concluded that the arts were found to contribute to
  - physiological and psychological changes in clinical outcomes;
  - reductions in drug consumption and length of hospital stays;
  - increases in job satisfaction among staff;
  - better doctor-patient relationships;
  - improved mental health;
  - development of health practitioners’ empathy across gender and cultural diversity.
Other useful meta-analyses

Bygren, Konlaan, and Johanssen (1996)

• conducted a nine-year study of 15,198 individuals to determine the health and life-extending implications of attending cultural events, such as performances and art exhibits;

• controlled for eight confounding variables: age, sex, education level, income, long term disease, social network, smoking, and physical exercise;

• found that people who regularly attend cultural events live longer.

This outcome was attributed not to better health among those with higher incomes but to the effect of engagement in the arts in stimulating the immune system.
Other useful meta-analyses

Bygren et al. (2001)

• study designed to assess how changes in the habit of attending cultural events might predict self-reported health

• sample of 3,793 adults over an eight-year period

• controlled for type of residence, geographical region of domicile, and socio-economic status (level of education)

• found a 65% increase in the risk of impaired perceived health among those who were not culturally active as compared with those who were culturally active
Other useful meta-analyses

Matarasso (1997)

• Meta-analysis of over 50 studies of the health impact of the arts showed significant benefits for both individual and societal health.

• Concluded that participation in the arts can
  • have a positive impact on how people feel;
  • be an effective means of health education;
  • contribute to a more relaxed atmosphere in health centers;
  • help improve the quality of life of people with poor health;
  • provide a unique and deep source of enjoyment.
Funding Opportunities: Federal (USA)

National Institutes of Health (NIH), including NIA:
http://grants.nih.gov/grants/guide/

List of federal agencies:
http://www.usa.gov/Agencies/Federal/All_Agencies/index.shtml
http://www.grants.gov/

US Department of Commerce
US Department of Defense
Funding Opportunities

Research and other foundations—look at foundations dedicated to your targeted patient population/subjects.

Society for the Arts in Healthcare Research Grant

(American Art Resources & Society for the Arts in Healthcare Environmental Arts Research Grant : $1000)
Thank you.

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