

# CHANGING THE CULTURE OF UNDERGRADUATE RESEARCH

Carole A. McKenzie, PhD, RN, CNM  
Professor and Chair, Division of Nursing  
Northwestern Oklahoma State University  
[camckenzie@nwsu.edu](mailto:camckenzie@nwsu.edu)

Paul Bucky  
Executive Director, International Foundation of Bio-Magnetics, Tucson,  
Arizona

[www.justtouch.com](http://www.justtouch.com)

# WHERE WE STARTED

- Six years ago the Division of Nursing was in difficulty with the Board of Nursing
  - Problems with NCLEX test scores
  - Interpersonal issues with faculty and students
  - Dissatisfaction with program and its outcomes
  - Outdated curriculum
  - No emphasis on conceptual threads or student learning outcomes
  - Courses were outdated and research course was a methods focused course with the outcome being a research proposal

# OBJECTIVES TO BE ACHIEVED

- ⦿ Improve outcome performance
- ⦿ Improve inter-personal relationships
- ⦿ Revise curriculum, including the addition of a conceptual framework and student learning outcomes
- ⦿ Improve community perception and overall satisfaction with the program with internal and external customers

# IMMEDIATE STEPS

- ◉ Changes in faculty
- ◉ Changes in admission standards
- ◉ Inclusion of remediation, NCLEX preparation work and an emphasis on student success
- ◉ Establish a curriculum task force and receive approval for a new curriculum
- ◉ Conduct focus groups with internal and external customers and act on feedback
- ◉ Establish an open communication structure, insist on a new faculty commitment and provide immediate feedback to faculty and students
- ◉ Change research process to focus on research utilization and evidence based practice

# IMMEDIATE OUTCOMES

- ◉ Conditional approval removed within 5 months and re-approval received two years later
- ◉ Changes in faculty
- ◉ Curriculum revised and approved with the addition of concepts that are in line with current nursing practice—complementary therapies, evidence based practice, leadership,
- ◉ Feedback from focus groups acted on immediately
- ◉ NCLEX results—above national average within two years, 100% pass for three years
- ◉ Customer satisfaction with graduates and their outcomes
- ◉ Successful NLNAC accreditation visit

# CONCEPTUAL FRAMEWORK



# STRESS IN THE WORKPLACE

- ◉ Occupational stress is listed as a “global epidemic”
- ◉ Physical and economic consequences
- ◉ Over \$200 billion dollars a year lost in productivity due to absenteeism, less productivity when at work, staff turnover, workers’ compensation, medical insurances and other stress related expenses.
- ◉ Holmes-Rahe Life Stress Scale—work related stresses rank high along with the usual life stresses

- It can stimulate productivity and creativity if at a manageable level and is not overwhelming and constant
  - Occupational stress from three factors
    - Life situations
    - Work
    - Self
- Balance between stress causes and available support systems

# COPING WITH STRESS

- ◉ Support systems
- ◉ Things that will offset stress
- ◉ Anything that assists with relaxation—Bio-Touch

# COMPLEMENTARY

## THERAPY/HOLISTIC CARE THREAD

- ◉ Since the majority of illnesses have their etiology in the client's stress level
- ◉ Stress manifests itself in somative symptoms, such as headaches, anxiety, elevated blood pressure, elevated pulse, gastro-intestinal complaints, sleep disorders, etc
- ◉ Conservative medical therapy does not always work
- ◉ Complementary therapies can enhance the regular medical regime
- ◉ Illness and stress lead to lost work time and decreased productivity
- ◉ Anything that can enhance quality of life is a win for the client and their family

# EVIDENCE BASED PRACTICE THREAD

- ◉ Began introducing students to PICOT -”burning” clinical questions—in first nursing courses.
- ◉ Revised focus of research course to research utilization and evidence based practice
- ◉ Had Dr. Fineout-Overholt come to keynote a research day for faculty, students and service
- ◉ Integrated Bio-Touch certification into a research project completed on the last day of advanced certification training.
- ◉ Data collected from a convenience sample who were on campus in the Student Center on data collection day

## EBP (CONTINUED)

- ◉ In the beginning, the research course faculty developed the proposal with Bio-Touch administration and submitted it for IRB approval.
- ◉ After the first year with a small sample and less enthusiasm from the students, we moved to the main campus which has more subject availability on the data collection day.
- ◉ We required the students to present the findings at our annual honor society research day. Assignments were made by the faculty as to what students would present.,

## EBP (CONTINUED)

- After two years, as the study subject pool grew, students were involved in developing the proposal; presenting it; and chose to send an abstract for this conference.
- Have presented the data 11 times since last November to diverse groups such as an international business educators' group, focusing on Bio-Touch to improve productivity to Kiwanis and the Farm Bureau Women's groups.
- Student recommendations have been included in the continued study in August, 2012:

## EBP (CONTINUED)

- A Bio-Touch research coordinator was named from the junior class and she has worked with me to get the IRB proposal in and approved.
- Vital stations will be set up to take measurements before and after Bio-Touch
- Additional subject recruitment strategies have been developed
- The project now is a % of the research grade for the Fall course and the presentation at Research Day in November is required.

# BIO-TOUCH

- ◉ Why chosen?
- ◉ Type of therapy
- ◉ What it is
- ◉ Students are required to be certified in this complementary therapy because
  - It is easy to learn and do
  - Can be easily taught to lay persons, such as family, employers, children, etc.
  - Has no negative side effects
  - Requires no special equipment or mindset
  - Can be done anywhere
  - Evidence suggests that it works

# PROCESS AT NWOSU

- Students began being certified
- Divisional requirement for both faculty and students, including adjunct faculty
  - Great deal of skepticism at first
  - Other invited. Little response
  - IFBM sent consultant to teach the therapy
    - Juniors had a two day training
    - Seniors received three day advanced training
    - Faculty received both

# PROCESS (CONTINUED)

- ◉ Training held at the campus where the majority of students were located—not main campus
- ◉ Began research there on a Friday—few subjects available
- ◉ Students still expressing mixed feelings about the class and the need

# PROCESS (CONTINUED)

- Two years ago made the decision to move the class and the research to the main campus and collect data in the student center
- 2011; N=193
- 2012; N=247
- Now have repeat customers, asking when we are having the Bio-Touch day
  - Administrators, community members, faculty, students and staff participating
  - Classes and sports teams are given credit for attending
  - Community members and other schools asking about it when students use it at health fairs and during the research

# CULTURAL CHANGE FOR UNIVERSITY COMMUNITY

- ◉ Now have subjects asking when the Bio-Touch day will occur.
- ◉ Faculty are giving participation points if students attend.
- ◉ Construction workers, families, children and community members are now attending along with university faculty, staff and students.
- ◉ Students utilize Bio-Touch in patient care and have stations set up at health fairs. Teach families to do Bio-Touch.
- ◉ Clients call asking for Bio-Touch and students do Bio-Touch on their respective campuses.
- ◉ A local dental office is sending staff to be trained as is the ADN program and the massage therapy program in the region.
- ◉ Presented to statewide ADN and BSN Deans and Directors in February, 2012 and a great deal of interest was expressed.
- ◉ Bio-Touch is not only a part of our nursing program holistic thread, it is part of our regional community.

# CULTURAL CHANGE AND TRANSFORMATION

- Keys: (Senzon, 2011)
  - Harnessing Wisdom and Passion
  - Optimizing Structures
  - Developing the Evidence Base
  - Timely Self-Transformation
    - Social and Cultural Changes
    - Self-Identity and Development
  - An Integral Map

# RESEARCH CLASS RESULTS

- ◉ Made an extra credit assignment in research two years ago
- ◉ In 2011, made an integral part of the research course with the presentation at the annual research day part of the grade
- ◉ For 2012, the participation and presentation of the research is worth 20% of the grade. Only the evidence based project at 35% is worth more.
- ◉ Grades in the research course and understanding of the process increased 22%; evaluated through mid-term essay exams
- ◉ Only 1 C this semester; rest A's and B's
- ◉ Student evaluations indicated a clearer understanding of research
- ◉ Faculty Evaluation scores increased 5% or 49 points from 2010-2011.
- ◉ Presenting at local, regional, state, national and international conferences

# PLANS FOR UPCOMING RESEARCH

- ◉ Continue to integrate into research course with a percentage of the grade going to the Bio-Touch research participation—20% this coming term
- ◉ Continue presenting results at annual research day and other appropriate venues; Bio-Touch at health fairs and integrated into clinical experiences
- ◉ Add vital signs and include student recommendations in the changes related to methodology—already implemented for this next academic term
- ◉ IRB already approved study for August, 2012
- ◉ Continue quantitative comparisons of results from year to year of study data

# BIG TAKEAWAYS FOR OUR PROGRAM

- ◉ Students are utilizing research effectively and have an appreciation for the research process
- ◉ Bio-Touch is standard care practice for our program and is integrated into our university and regional communities
- ◉ Students understand the research process by having done it—no surprise there.
- ◉ They write PICOT questions spontaneously in clinical situations and use the library resources to review evidence effectively

# CONTACT INFORMATION:

- ◎ Dr. Carole A. McKenzie, RN, CNM
- ◎ [camckenzie@nwosu.edu](mailto:camckenzie@nwosu.edu)
- ◎ Bio-Touch information
- ◎ [www.justtouch.com](http://www.justtouch.com)