

## The Great American Cookie Experiment



## Cookie Experiment



- First discussed in 1987 as a “teaching tool”
  - Revisited in 1995 and 2002
- Exercise to “desensitize research phobia”
- Evaluate quality and preference of 2 types of chocolate chip cookies
  - Identical except for 1 ingredient
- Used to teach nurses about research process
- Research committee developed insight in designing and completing a study

## Developing and Conducting the Research

- Determined the research procedure
- Submitted a budget to the nursing department
- Submitted a research proposal to the institutional review board.
- Developed a publicity strategy to attract as many nurse participants as possible.



## Determining the Research Procedure

- What type of cookies to use?
  - i.e. store bought vs. homemade appearance
- Where to obtain the cookies?
- How many cookies would be needed?
- How to reach the most staff?
  - Develop a schedule and assure numbers of cookies are available.
- Pricing of the cookies.



## What and How to Survey?



- What surveys are out there and proven?
  - Author got permission to use a tool from another study.
- Adapt or create a survey tool
  - 8 of 9 questions were retained
  - First 8 questions compared cookies texture, moistness, flavor and appearance.
  - Study used a 1 (very good) to 5(very bad) Likert scale
  - Participants were asked which cookie they liked the best and what was their favorite cookie
  - Demographic data was added

## The Planning Period



- How to get the experiment to the nursing units
  - OSHA restrictions
  - Unit lounges determined to be the best
- Decided to go to units in 2-member teams on the 2 scheduled survey days
  - Assigned 5-10 units
  - 2 different times each survey day
  - Teams would be on unit 30-60 minutes
  - Team members assigned areas of their clinical specialty
- Cookies transported in Bakery boxes
  - Labeled “Cookie A and Cookie B”.

## Budgetary Considerations



- Direct Costs
  - Cookies
  - Other supplies
  - Cost for data entry and analysis
  - Poster costs
- Indirect costs
  - Committee members work time.....
    - Duplicate surveys & consent forms
    - Package cookies
    - Conduct the research experiment

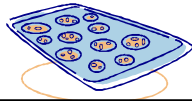
## IRB Submission



- Would qualify for exempt review
  - Validated by IRB chairman
- Although not required for this study....
  - Committee developed consent form
- The following was sent to IRB:
  - Letter
  - Copy of consent form
  - Copy of the survey
- Approval was received within one week

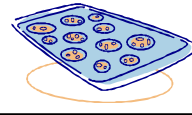
## Pre Survey Publicity

- Flyers encouraging staff to participate
- Publicized at council meetings
- Article in nursing newsletter
- One week before survey new flyers were posted...
  - With specific times for each unit



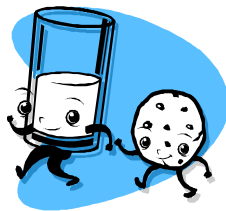
## Post Survey Results Publicity

- Article in hospital newsletter
  - Two weeks after survey- overview of experiment
  - Additional article- generalized overview of results
- Article for JONA
- Poster presentation at Magnet conference



## Overview of Results- Demographics

- Participants: 894 people
  - 90% women
  - 61% RN
  - 32% non identified specialty
  - 61% < 40 years of age
- Years at hospital
  - 35% 1-5 years
- Years of experience
  - 29% 1-5 years
  - 27% 15+ years



## Overview of Results



Table 1. Number/Percent of Participants Ranking Cookie A (Low Fat) and Cookie B (Regular) for Texture, Moistness, Flavor, and Appearance

Cookie Characteristics		Good to Very Good (%)	Okay (%)	Bad to Very Bad (%)
Texture	A	316 (35.6)	420 (47.2)	153 (17.2)
	B	768 (86.7)	101 (11.4)	17 (1.9)
Moistness	A	175 (19.7)	305 (34.3)	408 (46.0)
	B	797 (89.7)	70 (7.9)	22 (2.4)
Flavor	A	410 (46.3)	376 (42.5)	99 (11.2)
	B	660 (74.4)	179 (20.2)	48 (5.4)
Appearance	A	464 (52.7)	352 (40.0)	64 (7.3)
	B	768 (87.2)	106 (12.0)	7 (0.8)

## Overview of Results

- Open ended question asking for why cookie A or B was preferred
  - 85 different answers
  - 29% of participants did not answer
  - Other answers coded into 6 different categories
    - 59% rated described consistency
    - 39% described taste



## Overview of Results

- Open-ended question asking for participants favorite cookie
  - 127 different answers
  - Generalized into 11 categories
    - 42% listed some variation of chocolate chip
    - 16% listed oatmeal



## Lessons Learned

- Amount of time and follow-through it takes
- How choices during the design process have implications for data analysis
  - i.e. demographic questions not exhaustive list
    - Resulted in 262 staff listing their work location as "other"



## Limitations- *What may have influenced results?*

- Limiting the data collection tool to one page
  - Made some questions hard to see
  - 263 participants did not answer one question
- Recruiting as many participants as possible in a limited time
  - Completing tasting at same time lead to discussion about cookies between participants
- Cookies were not stored in airtight containers
  - One cookie became crisper as the day progressed
- One cookie looked paler, flatter, and less like the other type cookie on day 2 of the experiment

## Implications for Nursing Practice

- Staff learned research is not a mystical thing
- Cookies were popular
- Staff suggested studying brownies next year
- Staff could relate how they could participate in research in their practice
- Networking with the nursing research committee.

## References



- Hudson-Barr, D., Weeks, S., & Watters, C., (2002). Introducing the staff nurse to nursing research through the great american cookie experiment. *JONA*, 32(9): 440-43.
- Long C.M., Reider J.A., (1995). The cookie experiment revisited. *Nurse Educator*, 20(3): 13.
- Thiel C.A., (1987).The cookie experiment: a creative teaching strategy. *Nurse Educator*.;12(3):8-10.