

# Connecting nursing to the environment through ecomapping

Jordan Ferris MSN, RN

Heidi Johnston DNP, RN CNE

Conflicts of Interest and Disclosures: Neither the planner(s) or presenter(s) indicate that they have any real or perceived vested interest that relate to this presentation.



# Objectives

By the end of this presentation you will be able to:

- ▶ Define and design an ecomap and;
- ▶ Apply ecomapping as an active learning strategy to your program/class/students

# What is an ecomap

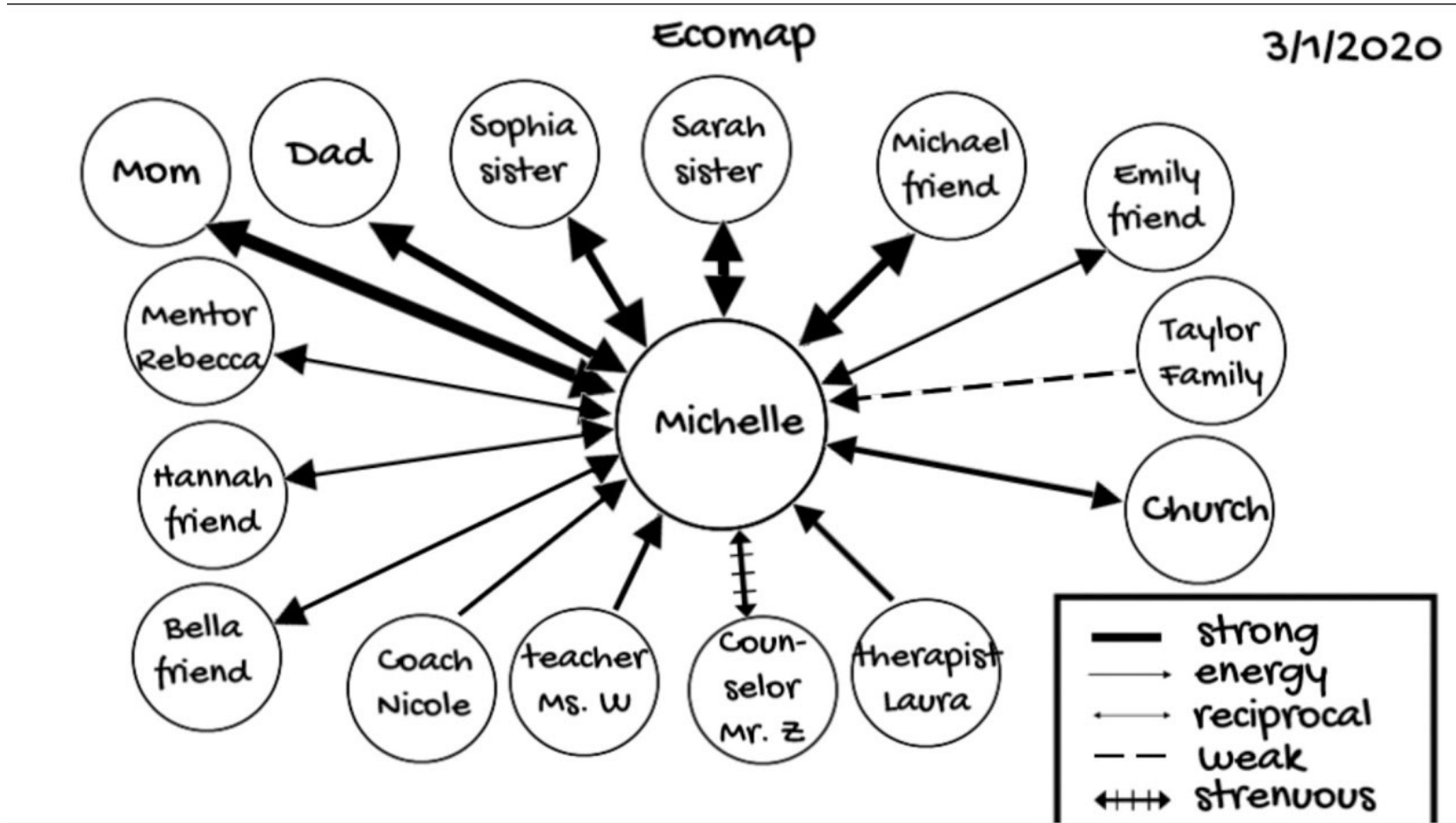
- ▶ Developed by Ann Hartman in 1975 to depict ecological system of families
- ▶ Traditionally an ecomap is used to show connections
- ▶ In nursing has been used to show relationships - ie the family ecomap
- ▶ Ecomaps are useful for understanding the relationships in a family, society, community, and others.



# How have ecomaps traditionally been used

- ▶ Started in social work to show relationships within families
- ▶ Centers the individual/family/member of society
- ▶ Shows supports - formal, informal, immediate and delayed
- ▶ Ultimately a way to show Systems Theory
  - ▶ Study of "systems" - cohesive groups of interrelated, independent components that can be natural or man made
  - ▶ Who's the Systems Theorist in nursing??
    - ▶ Betty Neuman

# How are we using it in nursing education?



# Why an ecomap?

- ▶ As a way to model connections between concepts
- ▶ Promotes dialogue between/within autonomous areas of study
- ▶ Stimulates creative thinking "outside the box"
- ▶ Enhances research skills and immersion in current evidence-based literature
- ▶ Gets students to look beyond nursing literature - cross disciplinary assignment
- ▶ Active learning
  - ▶ Independent v group work
  - ▶ In class v homework
  - ▶ Small v large assignment




# Our programs

- ▶ Small liberal arts college with separate nursing school
- ▶ Programs
  - ▶ Traditional BSN
  - ▶ Accelerated BSN
  - ▶ Master's Entry into Professional Nursing
- ▶ Has been used in the ABSN with plans to use in MEPN and TBSN
- ▶ Completely scalable assignment





# The assignment

- ▶ Choose a nursing population/community
  - ▶ Choose an ecological issue
  - ▶ Connect the two through evidence-based literature search
  - ▶ That's it
  - ▶ You can make it as big or as small, as narrow or wide as you want
  - ▶ Can do for a single population class (Mental Health, OB/Families)
  - ▶ Can assign topics - start/end points - or allow students to do so
  - ▶ Can limit number of “stops” or not
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# Eco topic

- ▶ Deforestation
- ▶ Sea level rise
- ▶ Reef die off
- ▶ Fracking
- ▶ Homelessness
- ▶ Climate change
- ▶ Oceanic warming
- ▶ Biodiversity loss
- ▶ Plastic pollution
- ▶ Air pollution

# Nursing interest/ patient population

Peds/Adolescent/Adult/Gero

- ▶ Substance use
- ▶ Obesity
- ▶ Heart disease
- ▶ Diabetes
- ▶ Dementia
- ▶ Premature infants
- ▶ Oncology
- ▶ Mental health
- ▶ Chronic illness

# Let's do an ecomap together

- ▶ Substance use and sea level rise
- ▶ Maternal mental health and fracking
- ▶ Honeybee die off and childhood obesity



# Elephant in the room

## ► ChapGPT

- Can be a very effective tool if you are open to it
- Students still have to do the lit review work
- ChatGPT can be used to help connect harder topics

# Substance use and sea level rise

Climate Change and Vulnerability

Displacement and Migration

Social Disruptions

Mental Health and Coping Mechanisms

Substance Use as a Coping Mechanism

Feedback Loop

# The literature

## ► Climate change and vulnerability

- Birkmann, Jamshed, A., McMillan, J. M., Feldmeyer, D., Totin, E., Solecki, W., Ibrahim, Z. Z., Roberts, D., Kerr, R. B., Poertner, H.-O., Pelling, M., Djalante, R., Garschagen, M., Leal Filho, W., Guha-Sapir, D., & Alegría, A. (2022). Understanding human vulnerability to climate change: A global perspective on index validation for adaptation planning. *The Science of the Total Environment*, 803, 150065–150065. <https://doi.org/10.1016/j.scitotenv.2021.150065>

## ► Displacement and migration

- Duijndam, Botzen, W. J. W., Hagedoorn, L. C., Bubeck, P., Haer, T., Pham, M., & Aerts, J. C. J. . (2023). Drivers of migration intentions in coastal Vietnam under increased flood risk from sea level rise. *Climatic Change*, 176(2), 1–22. <https://doi.org/10.1007/s10584-022-03479-9>

## ► Social disruption

- Lyu, Huang, H., Hu, L., & Yang, L. (2023). Residential Mobility, Social Leisure Activity, and Depressive Symptoms among Chinese Middle-Aged and Older Adults: A Longitudinal Analysis. *Leisure Sciences*, 45(1), 92–113. <https://doi.org/10.1080/01490400.2020.1786753>

## ► Mental health and coping

- Terrell, Stanton, B. R., Hamadi, H. Y., Merten, J. W., & Quinn, N. (2022). Exploring life stressors, depression, and coping strategies in college students. *Journal of American College Health*, ahead-of-print(ahead-of-print), 1–10. <https://doi.org/10.1080/07448481.2022.2061311>

## ► Substance use as coping mechanism

# Maternal mental health and fracking

Fracking and environmental concerns



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graph TD; A[Fracking and environmental concerns] --> B[Community disruption]; B --> C[Community concerns and anxiety]; C --> D[Prenatal stress and maternal mental health];
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The diagram is a vertical flowchart with four rectangular boxes, each containing text. The boxes are arranged in a descending staircase pattern from top-left to bottom-right. The first box is dark green, the second is medium green, the third is light green, and the fourth is yellow. Each box is connected to the one below it by a downward-pointing arrow. The arrows are light green for the first two steps and yellow for the last two steps.

Community disruption

Community concerns and anxiety

Prenatal stress and maternal mental health



# Honeybee die off and childhood obesity

Pesticides and pollinator decline



Impact on food supply



Reduced access to healthy foods



Substitution with processed foods