

# Ch. 15: New directions

1937

Psychology 402 - Fall 2024 - Dr. Michael Diehr

Copyright © 2024 Michael Diehr  
All Rights Reserved  
For use only by students enrolled  
in my sections of Psyc 402  
through the end of the semester.  
May not be posted, shared or uploaded  
online without permission.

1938

Psychology 402 - Fall 2024 - Dr. Michael Diehr

## New directions

- New Theory
  - Cognitive-behavioral
- New Computerized Test & Tools
  - Psychophysiology
  - Traditional Test administration
    - Computer-Aided Interview
    - Computer-Administered test
  - Test scoring
  - Internet/web-based tools

1945

Psychology 402 - Fall 2024 - Dr. Michael Diehr

## Clinical Example

- 7 year old boy presents with weight loss secondary to reluctance to eat other than a few foods (cereal, PB&J, plain spaghetti)
- At age 4 he had illness for 25 days during which he could not swallow solid food
- Parents are desperate “Isn’t there some test you can give him to determine what’s wrong?”
- IQ test - high average
- Interview & projective tests suggest eating disorder is related to trauma re: illness

1946

Psychology 402 - Fall 2024 - Dr. Michael Diehr

## Clinical Example 2

- Medical model:
  - reluctance to eat is a symptom of deeper problem
  - find the cause and treat it, and the symptom(s) will get better
- Cognitive-behavioral model:
  - the original causes (if any) are in the past and can’t be changed.
  - the eating behavior itself is the problem, and the focus of treatment.
  - the symptom IS the disorder

1947

Psychology 402 - Fall 2024 - Dr. Michael Diehr

## Clinical Example 3

- CBT set up a treatment regimen:
  - mother would monitor eating behavior
  - point system
  - rewards (toys, etc.) given for points
- Results:
  - problems greatly reduced in a few weeks.
  - treatment stopped but new (proper) eating behavior persisted

1949

Psychology 402 - Fall 2024 - Dr. Michael Diehr

## Traditional vs. CBT

- Traditional assessment & testing are focused on finding patterns of psychopathology with a goal of diagnosis -- finding the cause of the illness.
- Diagnosis may lead to treatment, which may lead to cure, but this is indirect.
- In CBT, the test is a measure of the problem and also is a measure of the treatment.

1950

Psychology 402 - Fall 2024 - Dr. Michael Dohr

## Psychophysiology

- Under CBT, physical measures are considered to be more “objective” or “observable”
- Examples:
  - GSR (galvanic skin response) -- sweating
  - heart rate (pulse)
  - blood pressure
  - sexual response / arousal
  - pupil dilation
- These measures can be correlated with various cognitive & emotional processes

1951

Psychology 402 - Fall 2024 - Dr. Michael Dohr

## State of the art?

- Clinical Psychology has lagged in embracing computerized tests and assessment
- In 2020, many major tests are still widely given using paper & pencil versions with hand-calculated scoring
- Few standards exist for sharing clinical / research data.
- Most psychological tests are based on theories that pre-date the cognitive revolution (1960s)
- Why the slow adoption?

1952

Psychology 402 - Fall 2024 - Dr. Michael Dohr

## Aided- or Administered-

- Computer-aided tests are traditional tests given by a clinician with the computer helping sequence items and phrase questions.
- Computer-administered tests are traditional tests given entirely by computer.
- Both generally show reliability & validity equal to that of the paper & pencil tests they are based on.
- Computer-administered tests often show reduced defensiveness -- people are more willing to admit embarrassing symptoms.

1954

Psychology 402 - Fall 2024 - Dr. Michael Dohr

## New computer tests

- New theories being applied:
  - cognitive / neuroscience
  - non-human animal research
  - computer science / cognitive science / AI
- New methods being used:
  - fast presentation of stimuli
  - accurate measurement of responses
  - scoring
  - adaptive tests

1955

Psychology 402 - Fall 2024 - Dr. Michael Dohr

## Tools & Techniques

- Brain Imaging
  - Structural
    - CAT, MRI
  - Functional
    - PET, fMRI, MEG
- Electrophysiology
  - EEG
  - ERP

1958

Psychology 402 - Fall 2024 - Dr. Michael Dohr

## Modern Trends

- Computerized Standards for Assessment
  - NIH Toolbox
- 'mHealth' products
  - personal / mobile hardware & software
  - Rx Apps
- Machine Learning (ML), Large Language Models (LLM) and Artificial Intelligence (AI)
- ChatGPT

1969

Psychology 402 - Fall 2024 - Dr. Michael Dohr

## NIH Toolbox

- Attempt to make worldwide standard for neuropsychological assessment

1970

Psychology 402 - Fall 2024 - Dr. Michael Dohr

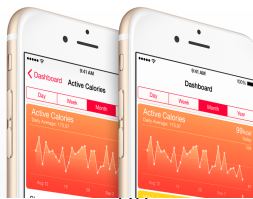
## mHealth (mobile health)

- Handheld technology
- on-site rather than in hospital
- personal vs. professional



Health.  
An entirely new way to use you  
health and fitness information.

The new Health app gives you an easy-to-read dashboard of your health & fitness data. And we've created a new tool for developers called HealthKit which allows all the incredible health and fitness apps to work together, a work harder, for you. It just might be the beginning of a health revolution.



Psychology 402 - Fall 2024 - Dr. Michael Dohr

## Apple Heart Study

- Using digital watch to look for heart rhythm irregularities

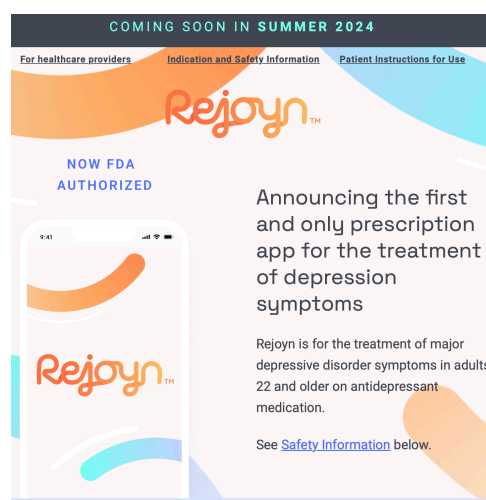


1973

Psychology 402 - Fall 2024 - Dr. Michael Dohr

## Prescription Apps

FDA Approved  
apps for  
various  
psychological  
conditions



1975

Psychology 402 - Fall 2024 - Dr. Michael Dohr

## Chat GPT

- Large Language Model (LLM) trained on much of the writing on the internet
- Issues of "hallucinations", harmful recommendations, and bias

1976

Psychology 402 - Fall 2024 - Dr. Michael Dohr