Single-Case Design (SCD)

I. Use of SCD in SW

II. Requirements for SCD

1. Target problem (DV)
2. Quantification of data
3. Obtaining baseline
4. Graphic display of data

III. Designs(AB, ABAB. ABC/ABCD)

I. Use of Single Case Design in SW

- Logic of time-series design
- Single-subject/single-system design, N=1 studies
- Most relevant research topics for practitioners
- Major limitation:

II. Requirements for SCD

1. Target problem(s)

- Decide desired outcome (=DV) to be measured
- Positive or negative indicator?
- Should occur frequently enough

❖ *Triangulation*

II. Requirements for SCD

1. Target problem(s)

- Who will measure it? (1) self-monitoring, (2) practitioner, (3) significant others
- Sources of data: (1) self-report scale, (2) direct observation, (3) available records

❖ *Triangulation*

II. Requirements for SCD

2. Quantification of data

a) Frequency

b) Duration

c) Magnitude

II. Requirements for SCD

3. Obtaining baseline phase

- Repeated measures before the intervention

  (=control phase)

- Attributes of good baseline:
  1) Minimum of 5-10 measurements
  2) Stable
  3) Problem is not nearing resolution before the intervention

II. Requirements for SCD

3. Obtaining baseline phase

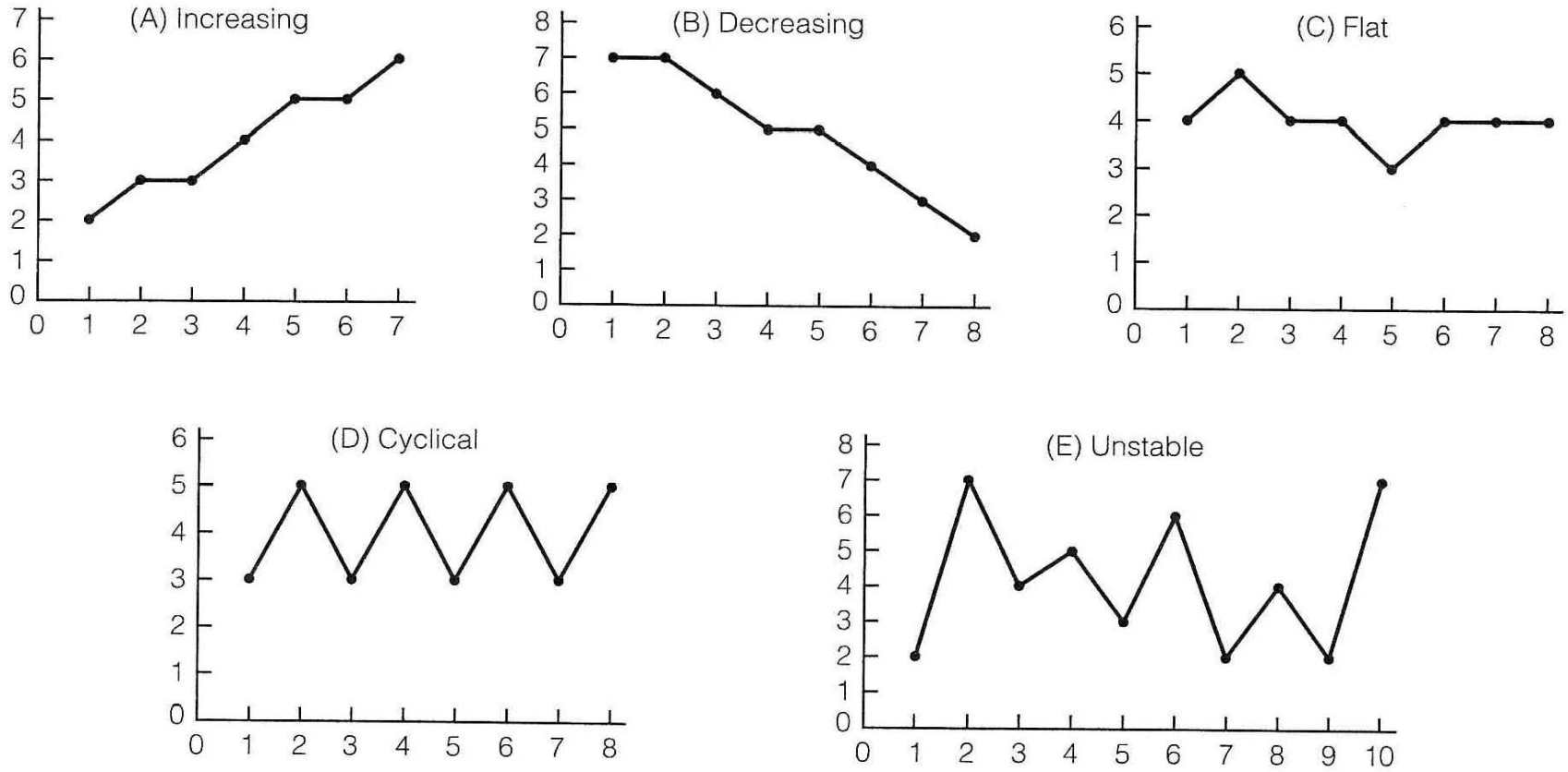

Figure 14-4 Alternative Baseline Trends

II. Requirements for SCD

3. Obtaining baseline phase

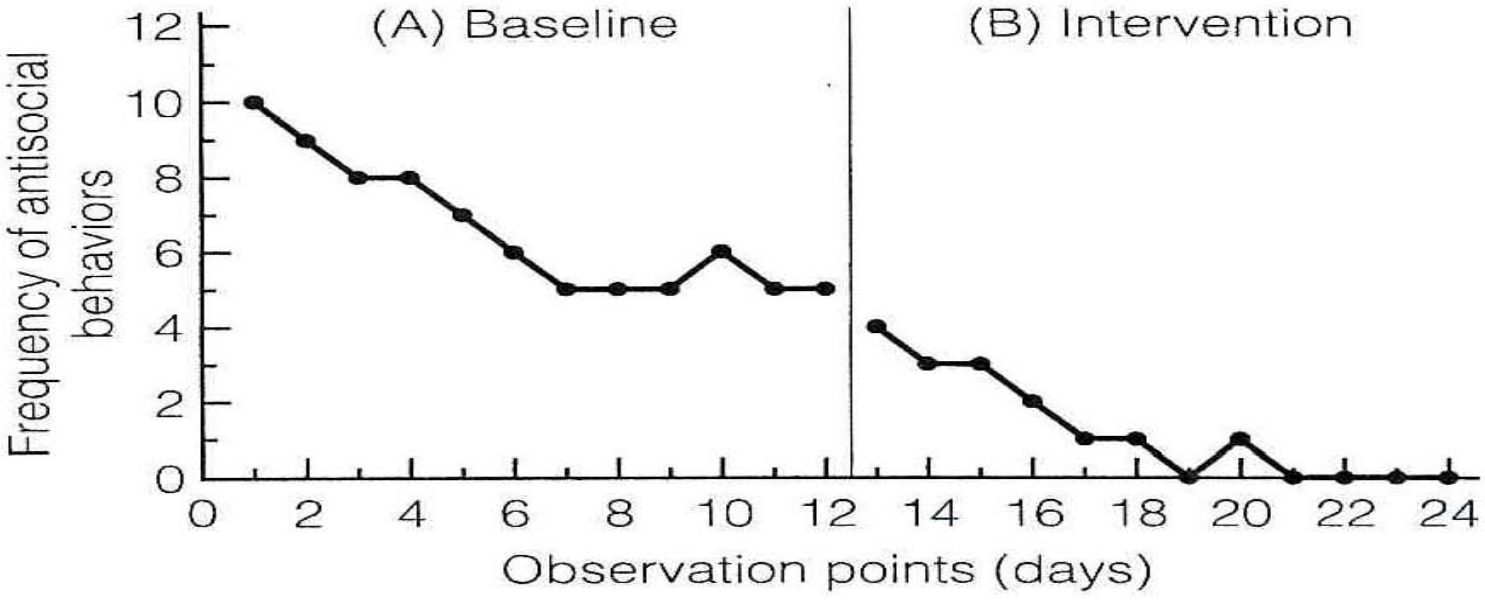

Figure 14-5 Graph of Hypothetical Outcome after Extending a Baseline with an Improving Trend (AB Design)

II. Requirements for SCD

3. Obtaining baseline phase

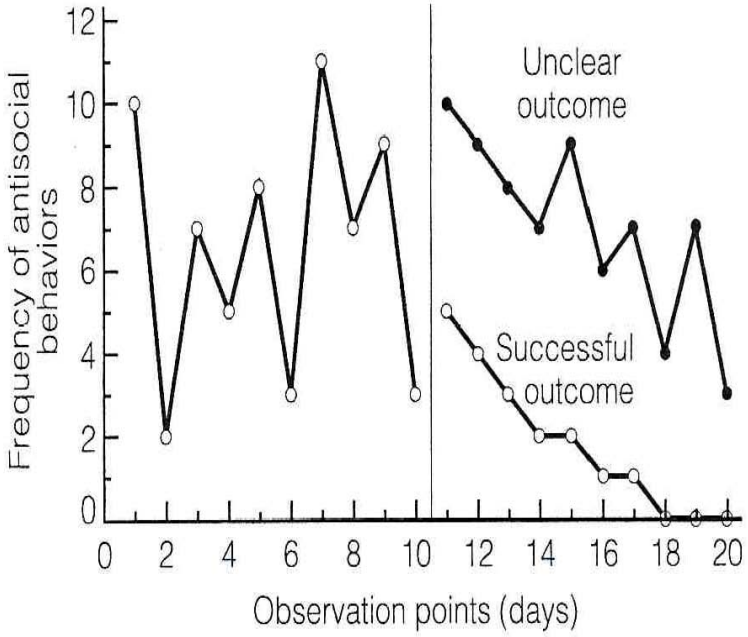

Figure 14-6 Graph of Two Hypothetical Outcomes with an Unstable Baseline (AB Design)

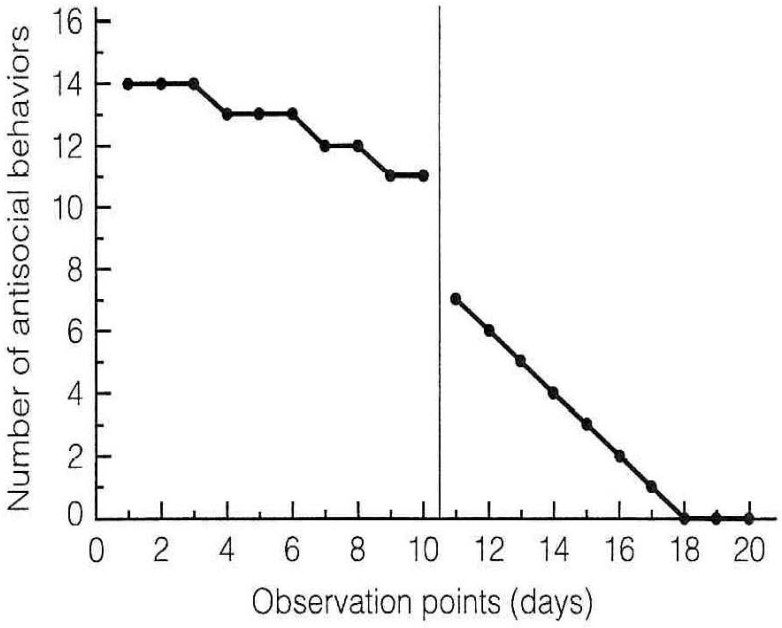

Figure 14-7 Graph of a Hypothetical Outcome Supporting Intervention Efficacy with an Improving Baseline (AB Design)

II. Requirements for SCD

4. Graphic display of data

- X axis:
- Y axis:
- (dashed) Vertical line
- Data points
- Labels: Baseline/A phase, Intervention phase/B phase

III. Designs

1. AB design

- One baseline phase & one intervention phase
- Advantage(s):
- Disadvantage(s):
- Retrospective baseline

III. Designs

2. ABAB design

- Withdrawal/reversal design
- Advantage(s):
- Disadvantage(s):

III. Designs

2. ABAB design

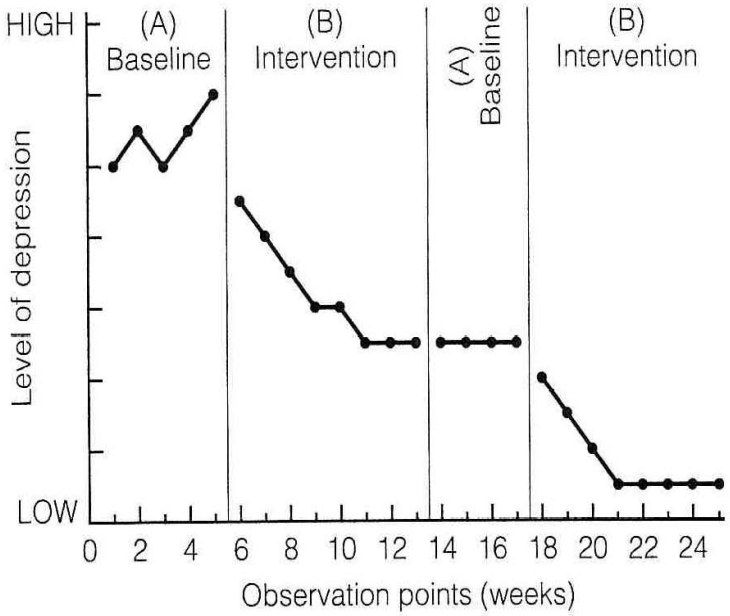

Figure 14-8 Graph of Hypothetical Outcome of ABAB Design Supporting Intervention Efficacy Despite Failure to Obtain a Reversal during Second Baseline

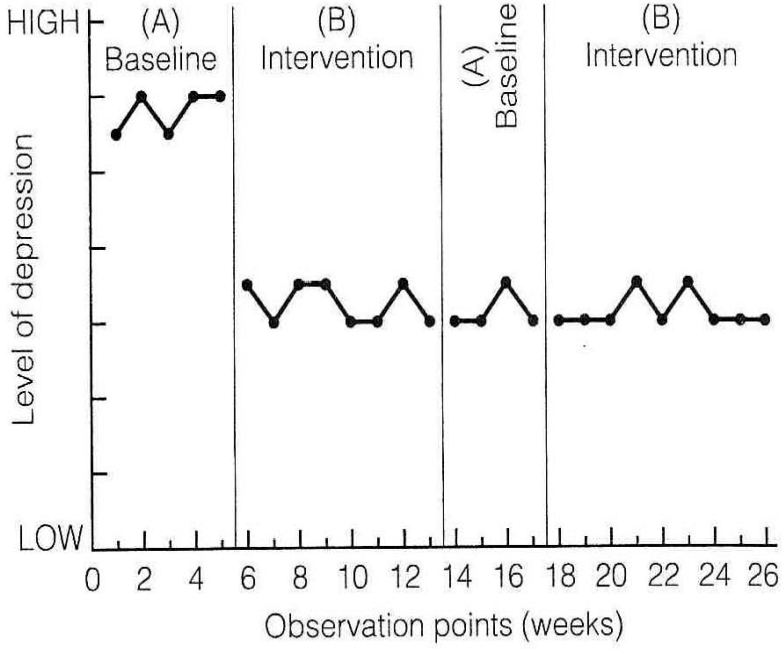

Figure 14-9 Graph of Hypothetical Outcome of ABAB Design with Unclear Results

III. Designs

3. Multiple-component designs (ABC, ABCD)

- Add a third type of intervention

- Caution: carryover effect, order effect, irreversibility effect, history

III. Designs

3. Multiple-component designs (ABC, ABCD)

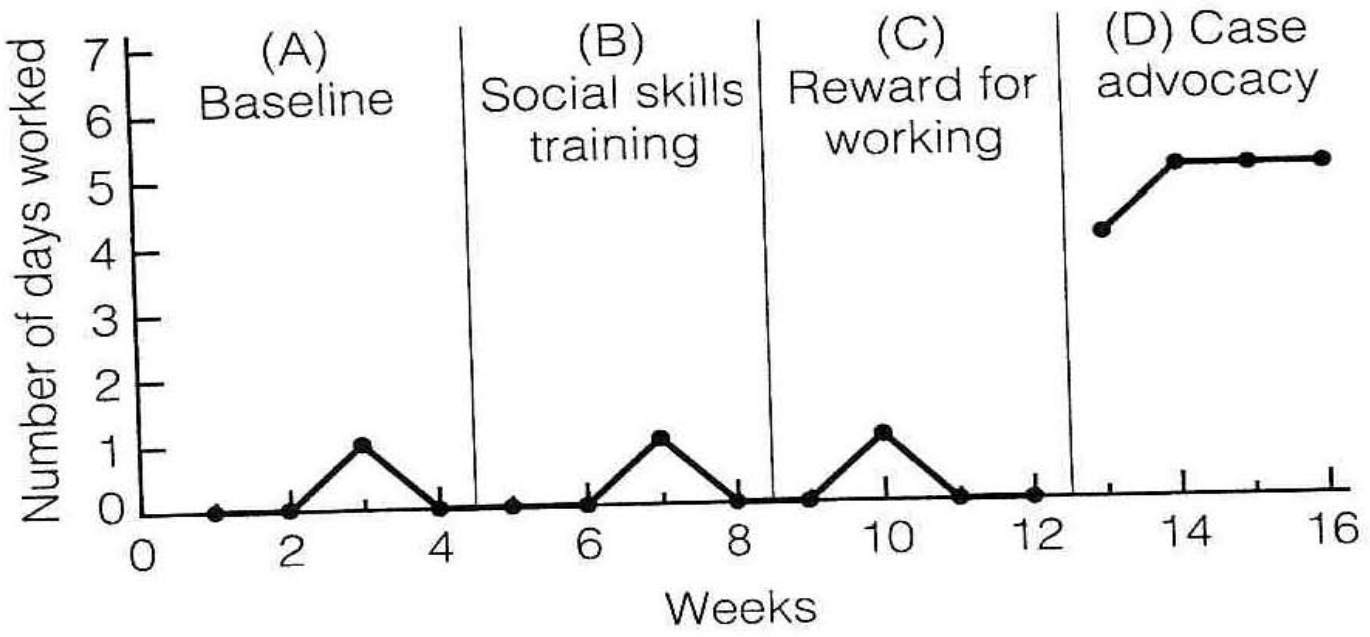

Figure 14-14 Graph of Hypothetical Outcome of Multiple-Component (ABCD) Design, with Unclear Results

III. Designs

- *Replication* can enhance both internal and external validity.

Be prepared for practical obstacles

NEXT

Week 13: Qualitative research & Research group meetings

Week 14: Research Group Meetings

Week 15: Exam 2 & Research group meetings

Week 16: Oral presentations

Finals week: Assignment # 2 is due by 5 pm, May 16