

Measures of Expressed Emotion & its Predictive Validity of Relapse in Schizophrenia among Chinese People

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Anti-psychotics started widely used in 1950's

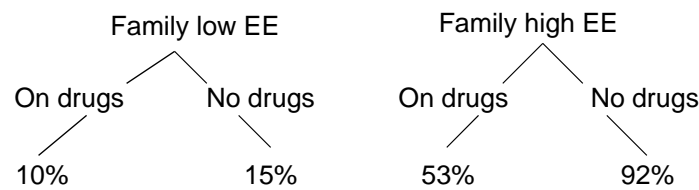
- “Asylums” → Discharging chronic mental patients home
- Relapse rate soon found to be HIGH!!
- Family “emotional climate” a risk factor (Brown, Carstairs & Topping, 1958; Brown & Rutter, 1966)
- “Expressed emotion” (EE)
 - *“Affective attitudes and behaviors of a significant other toward a psychiatric patient”*

High EE & relapse of schizophrenia

(Vaughn & Leff, 1976)

- Three components
 1. Criticism, and/or
 2. Hostility, and/or
 3. Emotional over-involvement (EOI)

9-month relapse rate



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Meta-analysis of high EE → relapse

(Butzlaff & Hooley, 1998)

- Identified 27 studies (all in Western countries)
- 24 studies (89%):
 - High EE significantly predicts
 - Higher relapse rate
 - More hospital readmission

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Intervention studies

(De Jesus Mari & Streiner, 1994; Dixon, Adams & Lucksted, 2000; Kuipers, 1992; Pharoach, Mari & Streiner, 1999)

- Family intervention programs aim to reduce high EE → Reduce relapse rate
- Rigorous RCT's still awaited
- Extremely labor intensive → practical?
- OR: Incorporate into psychoeducation programs for new onset patients & their family?

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Studies of EE in Chinese/ Eastern populations

- Not many studies
- Examining the construct (Healey, Tan & Chong, 2006; Lee & Arthur, 2005; Sun & Cheung, 1997)
- Multi-item scale development
 - Level of EE Scale (Chien & Chan, 2009)
- Predict relapse of schizophrenia? Inconsistent findings
 - Study in HK: Yes (Ng, Mui, Cheung & Leung, 2001)
 - Study in Singapore & Malaysia: not significant (Tan, 2005)

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Technical issues

- Measures of EE
 - Observing carer vs. perceptions of patients
 - Interview/coding vs. self-report questionnaire
- Cultural variations
 - Different criteria & cutoff?
 - Even basic face & content validity?
- Cause or outcome?
 - Confounding variables
 - e.g. work volition/habit, disturbing behaviors, drug compliance

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Camberwell Family Interview (CFI)

(Brown, 1958; Rutter & Brown, 1966)

- A semi-structured interview
- Administered with a significant other shortly after patient's admission
 - Illness history, symptomatology, irritability & quarrelling, quality of relationship, amount of contact between patient & relative
- Audio-taped for coding
 - Frequency counts: Critical comments, positive remarks
 - Likert Scale: Hostility (0-3), EOI, warmth (0-5)

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CFI

- High EE
 - Critical comments: 6 or more, and/or
 - Hostility: score 1-3, and/or
 - EOI: score 3-5

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CFI

- Still widely regarded as the best measure of EE
- But NOT widely used, because it
 - Takes time
 - Needs specially trained staff
 - Involves carer

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Other interview format measures

- Five Minute Speech Sample (FMSS) (Gottschalk & Gleser, 1969; Magana et al., 1985)
 - Interview with carer
 - Underestimate EE score on CFI ~20-30%
 - Weak evidence of predicting schizophrenic relapse
- Patient's Perception Interview (Mintz et al., 1995)
 - Interview with patient
 - Correlated with FMSS; No/little further info

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Questionnaires – by patients

- Level of Expressed Emotion Scale (Cole & Karzarian, 1988)
- Influential Relationships Questionnaire (Parker, Tupling & Brown, 1984)
- Perceived Criticism Scale (Hooley & Teasdale, 1989)
- Family Emotional Involvement and Criticism Scale (Shields et al., 1992)

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Questionnaire – by relatives

- Patient Rejection Scale (Kreisman et al., 1979)
- Questionnaire Assessment of Expressed Emotion (Docherty et al., 1990)
- Adjective Checklist (Friedmann & Goldstein, 1993)
- Family Attitude Scale (Cavanaugh et al., 1997)

By both patient & relative

- Family Environment Scale (Moos & Moss, 1981)

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LEE Scale (Cole & Karzarian, 1988)

- More widely used
- 60 items, 4 factors
- Other versions:
 - Dutch (Gerlsma et al., 1992)
 - 38 items, 3 factors
 - Chinese (Chien & Chan, 2009)
 - 52 items, 4 factors

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LEE Scale

- 4 factors: Conceptually determined; Not by EFA
 1. Intrusiveness
 2. Emotional response
 3. Negative attitude towards the illness
 4. Tolerance & expectations towards the patient
- 15 true-or-false questions for each factor
- Total 60 items:
 - 30 negatively worded & 30 positively worded

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LEE Scale

- psychometric properties

- Cutoff: median
- Cronbach's alpha: 0.84 - 0.89
- Test-retest reliability: 0.67 – 0.82
- Correlation with CFI: 0.4
- Predictive validity
 - Only total score & Intrusiveness subscore

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LEE Scale

– factor structure not robust

- The 4 factors were pre-determined conceptually
 - Couldn't survive factor analysis
 - The Chien's Chinese version
 - 60 items → 52 items; maintain the same 4-factor structure
 - But the factor loading matrix looks unstable: Many "significant loadings" are just marginally 0.40+
 - The Dutch version, thru EFA, produced a shortened, 3-factor version

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LEE Scale

- Positively worded items

- Half of the items (i.e. 30) are positively worded
 - Reverse coding → measure high EE
- A big assumption here:
 - Absence of positive → Presence of negative
- Cultural factors
 - Chinese cultures
 - More reserved in giving positive emotional responses
 - "Absence of positive" NOT necessarily implies "presence of negative"
 - Dutch version: Removed most negatively worded items

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Concise Chinese LEE Scale (Ng & Sun, 2011)

- Measure high EE directly by negatively worded items
 - Removed the 30 positively worded items
- N = 188 Chinese schizophrenic patients
- EFA provided a 12-item, 3-factor solution
- Good psychometric properties
 - Optimized factor loading pattern (0.6-0.8)
 - Good internal consistency & construct validity
- Conceptual coherence
 - 3 factors: Criticism, Hostility, EOI
 - Exactly matching the high EE structure

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12-item Concise Chinese LEE Scale

- Basic psychometric properties satisfactory
- Further validation underway:
 - CFA
 - Concurrent validity
 - Agreement with CFI
 - Predictive validity
 - Cutoff level with maximal differentiation power

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Further basic research also desirable

- Face & content validity
- Cross-cultural applicability

Intervention studies

- Inform design of intervention
- Evaluate outcome of intervention
- Types of intervention
 1. Specific to high EE
 2. Incorporated into psychoeducation program

The ultimate goal

*Change the course of illness
of
persons with schizophrenia!*

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THANKS

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