Toward an Expansive Model of Public Health
Peer Support, Mental Health and Weltanschauungen
Cambridge Institute of Public Health – November 14, 2017

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Peer Support
– Bases
– Key Features and Advantages
– Extensions

Mental Health
– Deficiencies of DSM/ICD
– Alternatives Emphasizing Problematic Behavior Patterns
– Expanding the Scope of Interventions

Weltanschauungen
Fundamental Role of Social Connections and Support

Human beings are more effective and happier when they have someone
- they can talk to about personal matters
- who cares about them
- who can help them when they need help

The risk of death associated with social isolation is greater than the risk associated with cigarette smoking


Holt-Lunstad, Smith, & Layton PLOS Medicine, 2010, 7: July e1000316 www.plosmedicine.org

Peer Support Around the World

Peer support programs and organizations – from small-budget volunteer programs to official parts of health care systems – exist all around the world.

> FIND PEER SUPPORT PROGRAMS

peersforprogress.org
Peer Support in Anhui Province, China

- Older adults in well defined residential settings in cities
- Group meetings led by peer supporters and health center staff
  - Addressed self management and support
- Informal support and shared activities through neighborhoods: shopping, exercise, fishing, etc.
- Significant differences from controls on fasting glucose, 2 hr PPG, reported complications

Systematic Review of Evidence Among Publications on Peer Support

- 01/01/2000 – 5/31/2011: “peer support,” “coach,” “promotora” etc.

- 8 countries: Australia, Bangladesh, Brazil, Canada, Denmark, England, Ireland, Mozambique, New Zealand, Pakistan, Scotland, South Africa, Uganda, US

- 65 separate studies met criteria of:
  - Provided by nonprofessional
  - Support for multiple health behaviors over time (i.e., not isolated or single behaviors)
  - Not simply peer implementation of class

- Overall outcomes:
  - 54 of all 65 studies (83.1%) reported significant impacts of PS

Outcomes of Peer Support – Major Reviews

Peer Support: What is it and Does it Work?

**Benefits**
- Experience & Emotions
- Behavior and Health Outcomes
- Health Costs and Service Use

Nesta Health Lab and National Voices, 2015
https://www.nesta.org.uk/sites/default/files/peer_support_what_is_it_and Does_it_work.pdf

*"evidence available suggests that peer support is worth investing in, … more robust evaluations of the impacts and the reasons why peer support works better in some contexts and for some groups." (p. 23)*

Peer Support: What is it and Does it Work?

Table 14: Summary of expected benefits from various types of Peer Support
Nesta Health Lab and National Voices, 2015
https://www.nesta.org.uk/sites/default/files/peer_support_what_is_it_and_does_it_work.pdf

Results: Diabetes Management

- In 17 studies, 2000 – June 2014
- HbA1c mean
  - Pre: 8.63%
  - Post: 7.74%
  - p < 0.001


**Intervention vs Control: 0.16% (95% CI 0.25 to 0.007)**

2016 Meta-Analysis in Diabetes

<table>
<thead>
<tr>
<th>Intervention</th>
<th>HbA1c: Intervention vs Control</th>
</tr>
</thead>
<tbody>
<tr>
<td>Interventions (3 studies) – educate plans and help them identify difficulties and make plans to change behaviors</td>
<td>0.30%</td>
</tr>
<tr>
<td>Curriculum Combined Reinforcement</td>
<td>95% CI 0.53 to 0.07</td>
</tr>
<tr>
<td>Intervention (2) – regular courses with other interventions like telephone calls, postcards, face-to-face contact, support group meetings, home visits to reinforce the effect of curriculums</td>
<td>0.24%</td>
</tr>
<tr>
<td>Support Group Intervention (4) – sharing experiences, setting goals, making plans, sometimes combined with education at community setting</td>
<td>0.13%</td>
</tr>
<tr>
<td>Telephone Dominant (4) – sometimes combined with e.g. face-to-face</td>
<td>95% CI 0.29 to 0.04</td>
</tr>
<tr>
<td>Curriculum-Only Intervention (2) – peer support through regular courses at community setting</td>
<td>0.01%</td>
</tr>
<tr>
<td></td>
<td>95% CI 0.23 to 0.25</td>
</tr>
</tbody>
</table>

It Works!!

www.peersforprogress.org
Cost Effectiveness

CHWs for Diabetes Management along Mexico-US Border (Ryabov Public Health 2014 128: 636-642)
- Monthly home visits by CHWs over 1 year reduced HbA1c from 7.6 to 6.7% vs 7.7 to 7.4% in controls (p = 0.03)
- Incremental cost per QALY = $13,810

Encourage Program in Alabama (C. Campbell, PhD Dissertation, University of Alabama-Birmingham, 2014)
- 59% probability of being cost-saving
- 55% to 93% probability of being cost-effective, depending on assumptions, inclusion/exclusion, e.g., higher probability for those with depression or poorer baseline clinical status

In FQHC in Denver (Whitley et al J Hlth Care Poor Underserved 2006 17: 6-15)
- Shifted costs from urgent care, inpatient care, and outpatient behavioral health care
- Increase utilization of primary and specialty care visits.
- ROI = 2.28:1.00.

- 3 of 4 projects in cost analysis emphasized peer supporters
- Cost per Quality Adjusted Life Year (QALY) = $39,563 (well below $50,000 criterion for good value)

- Three to four CHW home visits over 6 mos and liaison with care team
- ROI: $5.58 saved per dollar spent

- CHWs and nurse educator: home visits, self-mgmt education, individual counseling
- $10,995 to $33,319 per QALY
- Especially cost-effective among those with HbA1c > 9%

Preventing Rehospitalization in Schizophrenia, Depression, Bipolar Disorder (Sledge et al, Psychiatr. Serv. 2011 62:541--44 )
- Recovery Mentors provided individualized frequency, mode, content of support
- Over 9 mos: 0.89 vs 1.53 hospitalizations, 10.08 vs 19.08 days in hospital (p < 0.05)

- Education about psychological problems, ways of coping, and interpersonal therapy delivered by lay health counselors with primary care and psychiatric back-up
- 30% decrease in prevalence, 36% in suicide attempts, 4.43 fewer days no work/reduced work in previous 30 days.
- Lowered time costs resulted in Intervention being cost effective and cost saving

Strategic Benefits of Peer Support

1. Reaches populations, e.g., 85% of 3,787 low-income adults with diabetes in community clinic in Chicago

2. Reaches and benefits those too often hardly reached (Sokol et al, Eval Health Prof. 2015 38: 518-537; Am J Publ Hlth, 2016, 1541-0048)

3. Reduces psychological/Emotional distress, even when not designed to address these – implicit psychological support of the medium

Shanghai Integration Model

Community

Ongoing Diabetes Management

Specialty Care

Primary Care

Individual

Peer Supporter

www.peersforprogress.org
Peer Support Across the Prevention & Care Continuum

- Screening & Diagnosis
- Appropriate Treatment
- Treatment to Target
- Quality of Life
- Secondary Prevention
- Survivorship
- Primary Prevention
- Palliative & End-of-Life Care
Who is the real Peer Supporter?

Community Health Workers

Promotores de Salud

Lady Health Workers
(Pakistan)

Village Health Volunteers
(Thailand)

Health Coaches

Peer Navigators

Lay Health Advisors

Conceptual Transition??

- **Categorical** – Volunteer, Member of Community, Have/Share Problem at Issue
  “That’s not real peer support”
- Peer Support as a **Continuum**
  eHealth, PCMHs, clinical teams, self management programs, psychological interventions, DPP, etc. may incorporate varying degrees of peer support

Critique of DSM-5

1. Overlap and lack of specificity

Dysphoria

Anhedonia

Symptoms present most of the day, nearly every day for 2 weeks

Significant distress or decrease in functioning

Diagnosis of MDD

- Significant weight gain/loss or change in appetite
- Insomnia or hypersomnolence
- Psychomotor agitation or retardation
- Fatigue or loss of energy
- Feelings of worthlessness or excessive or inappropriate guilt
- Decreased concentration or indecisiveness
- Recurrent thoughts of death or suicidal ideation, plan, or attempt


www.peersforprogress.org
Lack of Specificity and Overlap

“… individuals with widely different characteristics can fall within a single diagnostic class.”


Overlap among disorders:

50% of those qualifying for one diagnosis meet criteria for an additional diagnosis.

Critique of DSM-5

1. Overlap and lack of specificity
2. Validity
Are there other things that are important and left out?

Depression “The Blues”

Are DSM5 criteria meaningful in specific culture?
Critique of DSM-5

1. Overlap and lack of specificity
2. Validity
3. Assumed underlying disorder
Major Depressive Disorder

Dysphoria

Anhedonia

Plus at least 3 of:
- Significant weight gain/loss or change in appetite
- Insomnia or hypersomnia
- Psychomotor agitation or retardation
- Fatigue or loss of energy
- Feelings of worthlessness or excessive or inappropriate guilt
- Decreased concentration or indecisiveness
- Recurrent thoughts of death or suicidal ideation, plan, or attempt

Plus at least 4 of:

Symptoms present most of the day, nearly every day for 2 weeks

Significant distress or decrease in functioning
A Visitor to Oxford

Shown:
  Bodleian Library
  New College
  Magdalen College
  St. Catherine’s College
  Ashmolean Museum
  High Street
  Punting on the River Cherwell

At end of day, asks: “Where is Oxford?”

Gilbert Ryle: Category Error
(The Concept of Mind. 1949. Routledge; 2009)
Major Depressive Disorder

- Symptoms present most of the day, nearly every day for 2 weeks
- Significant distress or decrease in functioning

Dysphoria

Anhedonia

- Significant weight gain/loss or change in appetite
- Insomnia or hypersomnia
- Psychomotor agitation or retardation
- Fatigue or loss of energy
- Feelings of worthlessness or excessive or inappropriate guilt
- Decreased concentration or indecisiveness
- Recurrent thoughts of death or suicidal ideation, plan, or attempt

Plus at least 3 of:

AND

OR

Plus at least 4 of:
Critique of DSM-5

1. Overlap and lack of specificity
2. Reliability
3. Validity
4. Assumed underlying disorder
5. Biological reductionism
Basic: The brain of *homo sapiens* may be among the most adaptive of all organs in all of biology.
A Hint from Pakistan: “Lady Health Workers” Reduce Post-Partum Depression

“Lady Health Workers”
Completed 2ndry education
Responsible for ≈ 100 households
Primarily general health education and preventive maternal and child care
Extending to TB and HIV detection and control
≈ 96,000 LHWs cover 80% of Pakistan rural population

Manual based intervention, “Thinking Healthy Programme”
• Promote change in thoughts likely to increase depression
• Practical problem solving
• Collaboration with family

Rahman et al
*Lancet* 2008 372: 902-909
Example from Rahman’s Lady Health Worker Intervention for Post-Partum Depression

“… case where poverty and the husband’s chronic unemployment were an underlying issue in the mother’s depression, the LHW used CBT techniques to motivate her to take a small loan from the government’s micro-credit scheme. The money was used to **purchase a buffalo** to sell its milk for profit (the LHW had personal experience of such a venture and was able to guide her). The woman was able to return the loan, gained tangibly from the intervention, both materially and in self-worth and confidence, and this led to marked improvement in her depressive symptoms”

Focus on Problems

Example: worldwide, 800,000 people a year commit suicide!

- UNAIDS: 1.1 million died of HIV in 2015
- WHO: 5 million people die each year from tobacco-related illness

We don’t treat depression or schizophrenia

We treat specific problems, e.g.:

- Inability to hold a job
- Conflictual interactions with family
- Decline in satisfying activities
## Focus on Problematic Behavior Patterns

### Problematic Behavior Patterns

<table>
<thead>
<tr>
<th>Behavior Pattern</th>
<th>Related Diagnostic Category</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Patterns Related to Anxiety</strong></td>
<td></td>
</tr>
<tr>
<td>Problematic “normal” fears (e.g., public speaking)</td>
<td>None or “Fear”</td>
</tr>
<tr>
<td>Focal fears (e.g., of spiders, snakes)</td>
<td>Phobias</td>
</tr>
<tr>
<td>Amorphous fears (e.g., agoraphobia, claustrophobia)</td>
<td>Agoraphobia</td>
</tr>
<tr>
<td>Fear of “losing it,” fear of decompensation</td>
<td>Agoraphobia</td>
</tr>
<tr>
<td>Traumatized behavior</td>
<td>PTSD</td>
</tr>
<tr>
<td><strong>Patterns Affecting Coherence of Behavior and its Contexts</strong></td>
<td></td>
</tr>
<tr>
<td>Difficulty in integrating contextual cues in guiding behavior</td>
<td>Schizophrenia, Autism</td>
</tr>
<tr>
<td>Disorganized Communication; Highly idiosyncratic verbal behavior minimally congruent with immediate/social environment</td>
<td>Schizophrenia, Psychosis</td>
</tr>
<tr>
<td>Hallucinations and other “positive” symptoms</td>
<td>Schizophrenia</td>
</tr>
<tr>
<td>Delusions</td>
<td>Schizophrenia, Paranoia</td>
</tr>
</tbody>
</table>
Focus on Problematic Behavior Patterns, cont.

<table>
<thead>
<tr>
<th>Patterns Related to Mood</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Sleep disturbance</td>
<td>Insomnia, Depression</td>
</tr>
<tr>
<td>Depressed mood</td>
<td>Depression</td>
</tr>
<tr>
<td>Suicidal ideation</td>
<td>Depression, Bipolar Disorder</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Patterns Related to Problems in Development</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Heightened concern for order</td>
<td>Autism</td>
</tr>
<tr>
<td>Hyperactivity</td>
<td>ADHD</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Patterns Related to Impulse Control</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Steep discounting of delayed consequences</td>
<td>Substance use, Psychopathy</td>
</tr>
<tr>
<td>Difficulty learning conditioned responses associated with negative consequences of behavior</td>
<td>Psychopathy</td>
</tr>
<tr>
<td>Substance Addiction (alcohol, nicotine, cannabis, prescription Rx, illicit drugs)</td>
<td>Substance use</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Patterns Related to Problems in Relationships</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Attachment anxiety, fear of loss (Anxious attachment)</td>
<td>Borderline Personality Disorder, Depression</td>
</tr>
<tr>
<td>Emotional lability</td>
<td>Borderline Personality Disorder</td>
</tr>
<tr>
<td>Relationship lability</td>
<td>Borderline Personality Disorder</td>
</tr>
</tbody>
</table>
The Healthy Activity Program lay counsellor delivered treatment for severe depression in India: systematic development and randomised evaluation

Key Elements -- Behavioral activation as core psychological framework with added emphasis on problem-solving and activation of social networks

• Engagement – individual and family psychoeducation and treatment planning to educate and engage individuals and family members
• Activation – strategies for the delivery of tasks such as graded task assignment, activity scheduling, physical exercise
• Need-based strategies – addressing interpersonal triggers, problem-solving, relaxation, enlisting social support tailored to individuals’ needs
• Social integration to reintegrate individuals into the community
• 6-8 sessions

Results of pilot with 55 participants over 2 months

• Prevalence of Beck Depression Inventory II ≥ 19: 37.5% versus 61.3% in control arm (adjusted risk ratio = 0.55, p = 0.01)
• Remission (PHQ ≤ 5): 45.8% vs 29.0%, (p = 0.09)

Chowdhary et al. The British Journal of Psychiatry (2016) 208, 381–388
Netherlands Model – Community Oriented Primary Care

- Integration of psychiatry into community based primary care
- Focus on care rather than cure
- Care should be delivered by communities, primary care, and general health care; it is a responsibility for society as a whole
- Evidence based care, e.g., reimbursement for psychoanalysis ended in 2010
- Collaborative Care Model
  - Care manager, usually a nurse
  - Monitors progress
  - Problem solving treatment
  - Web based tracking
  - GP prescribes Rx
  - Consultation from psychiatrist
  - Treatment plan established with the patient
- Integration with and rehabilitation in work setting, other social services

Genetics
Obesity
Diabetes
Hyperglycemia
CVD
Blindness Amputation Etc.
Rx, Insulin, Diet
Immune System
Trauma
Sleep Stress
Genetics
Constitution
Obesity Phys Act
Org, N'hood
Obesigenic Environ

Diabetes
SBP
Lipids
Hyperglycemia
Insulin, Hyperinsul

Rx, Insulin, Diet, PA, Stress Mgmt, Self Mgmt

CVD
Blindness Amputation Etc.

SBP, Lipids, Hyperglycemia, Insulin, Hyperinsul, Diabetes, Rx, Insulin, Diet, PA, Stress Mgmt, Self Mgmt, CVD, Blindness Amputation Etc.
Schizophrenia

- Positive Symptoms
- Limited Soc/Voc Skills
- ↓ Family, Social Support
- Social Withdrawal

Prenatal Comp’s
- Trauma
- Genetics
- Constitution
- Developmental Challenges
- Organ’tion N’hood
- Socio-economic

Organiza’sation
- Hospitalization
- Community Living
- Work

Pt Ed and Counseling, Social/Voc Skills, Fam Cx, Rx
- Day Hospital, Early Detection, Comm Monitoring

QOL
## Two Weltanschauungen

<table>
<thead>
<tr>
<th>Illness as Micro, Biological, Discrete, Individual</th>
<th>Health as Macro, Complex, Behavioral, Social</th>
</tr>
</thead>
<tbody>
<tr>
<td>Illness – Focus on clinical indicators</td>
<td>Patterns of living – Focus on quality of life</td>
</tr>
<tr>
<td>Dr-Patient</td>
<td>Community-People</td>
</tr>
<tr>
<td>Medication, Surgery, Palliation</td>
<td>Diverse Channels, Sources, Modes of Intervention</td>
</tr>
<tr>
<td>Technical Challenges</td>
<td>Adaptive Challenges</td>
</tr>
<tr>
<td>Data on individual event, e.g., BP reading</td>
<td>Mass Data</td>
</tr>
<tr>
<td>Individual as isolated locus of disease and change</td>
<td>Individuals as social, situated</td>
</tr>
<tr>
<td>Micro effects</td>
<td>Molar effects and patterns</td>
</tr>
<tr>
<td>Main effects, Dominant effects of individual agents</td>
<td>Complexity, interactions among influences, “The World is Not Orthogonal”</td>
</tr>
<tr>
<td>Energy from the individual</td>
<td>Energy emerges from the community</td>
</tr>
</tbody>
</table>
## Two Weltanschauungen

<table>
<thead>
<tr>
<th>Health as Macro, Complex, Behavioral, Social</th>
<th>Peer Support</th>
</tr>
</thead>
<tbody>
<tr>
<td>Patterns of living – Focus on quality of life</td>
<td>Reflects and addresses individuals’ lives</td>
</tr>
<tr>
<td>Community-People</td>
<td>Reflects community, social networks</td>
</tr>
<tr>
<td>Diverse Channels, Sources, Modes of Intervention</td>
<td>Support from outside professional health care; community channels, digital health,</td>
</tr>
<tr>
<td>Adaptive Challenges</td>
<td>Changes in attitudes, problem solving,</td>
</tr>
</tbody>
</table>
| Mass Data  
  • Many events within individual over time  
  • Many events over many individuals | Contact extended over time |
| Individuals as social, situated “It takes a village” | Approaches individual within social context, addresses and recruits social context |
| Molar effects and patterns | Focus on diverse areas of life |
| Complexity, interactions among influences, “The World is Not Orthogonal” | Reflects and addresses complex influences |
| Energy emerges from the community | Recruits energy of community to individual |
Towards an Expansive Model of Public Health
Edwin B. Fisher
Professor and Global Director, Peers for Progress, Department of Health Behavior, Gillings School of Global Public Health, University of North Carolina – Chapel Hill

John Snow’s identification of the Broad Street pump as the “focus of infection” in an 1854 cholera outbreak in London provides a compelling, but, in the 21st century, misleading aspiration for public health. It would indeed be good if one or a few foci of causation were identifiable for diseases, but the causes of and threats to health and well being offer few of these. Several decades ago, genetics offered such hope of causal foci as in much talk of finding “the gene” for this, that, or another disorder in the early days of gene mapping. In the ensuing years, understanding of the role of genetics has expanded to include epigenetics, diverse gene X environment X behavior interactions, and the recognition that the contribution of genetics to etiology is generally through complex genetic profiles rather than one or a few polymorphisms. There is emerging a change in weltanschauung, an expansive world view about health, from illness as micro, discreet and individual, to health as macro, complex, behavioral and social, from valuing necessary, sufficient or focal causes to embracing complexity and interactions among determinants not as unfortunately messy but as the nature of things, from the hegemony of clinical care to Health in All Policies. Discussion will include two examples of this evolution, peer support in prevention and care, and changing views of mental illness and health.
Jennings, Missouri (Outside St. Louis)

Her adopted son threatening suicide, a desperate Charlene McCarroll summoned law enforcement the night of April 17, 2015.

St. Louis County police pulled up within minutes.

Three-and-a-half hours later, Thaddeus McCarroll was dead — fatally shot in the front yard of the corner ranch house he shared with his mother in the 9200 block of Riverwood Drive.

He was 23.

An autopsy found McCarroll died of 15 rounds fired by two members of the county police department’s tactical operations unit after he refused to drop a 7.-inch knife. He clutched the knife in his left hand when he emerged from the residence shortly before 1 a.m.

St. Louis Post Dispatch, 2/12/17
1. Key functions are global
2. *How* they are addressed needs to be worked out within each setting
Four Key Functions of Peer Support

1. Assistance in Daily Management
2. Social/Emotional Support
3. Linkage to Clinical and Community Resources
4. Ongoing Support
“Standardization by function, not content”


Four Key Functions

- Assistance in Daily Management
- Social/Emotional Support
- Linkage to Clinical and Community Resources
- Ongoing Support

Local, Regional, Cultural Influences

Diverse Implementation of Key Functions