



Alan J. Flisher Centre for
Public Mental Health



Poverty, Inequalities and Mental Health, with special reference to low and middle-income countries (LMIC)

Socioeconomic crises and mental health: From research to action. Gulbenkian Forum on Mental Health,

Prof Crick Lund
Department of Psychiatry
and Mental Health
University of Cape Town



Alan J. Flisher Centre for
Public Mental Health

Outline

1. Poverty and mental health in LMIC
2. Inequality and mental health
3. Sustainable Development Goals:
relevance for mental health
4. Candidate interventions for mental
health and the SDGs
5. Who should fund and deliver?
6. Research Agenda
7. Conclusion



Alan J. Flisher Centre for
Public Mental Health

1. Poverty and mental health in LMIC: What do we know?



Inequality



Violence

Food insecurity



Poor housing



Unemployment

Inadequate water, sanitation

Migration

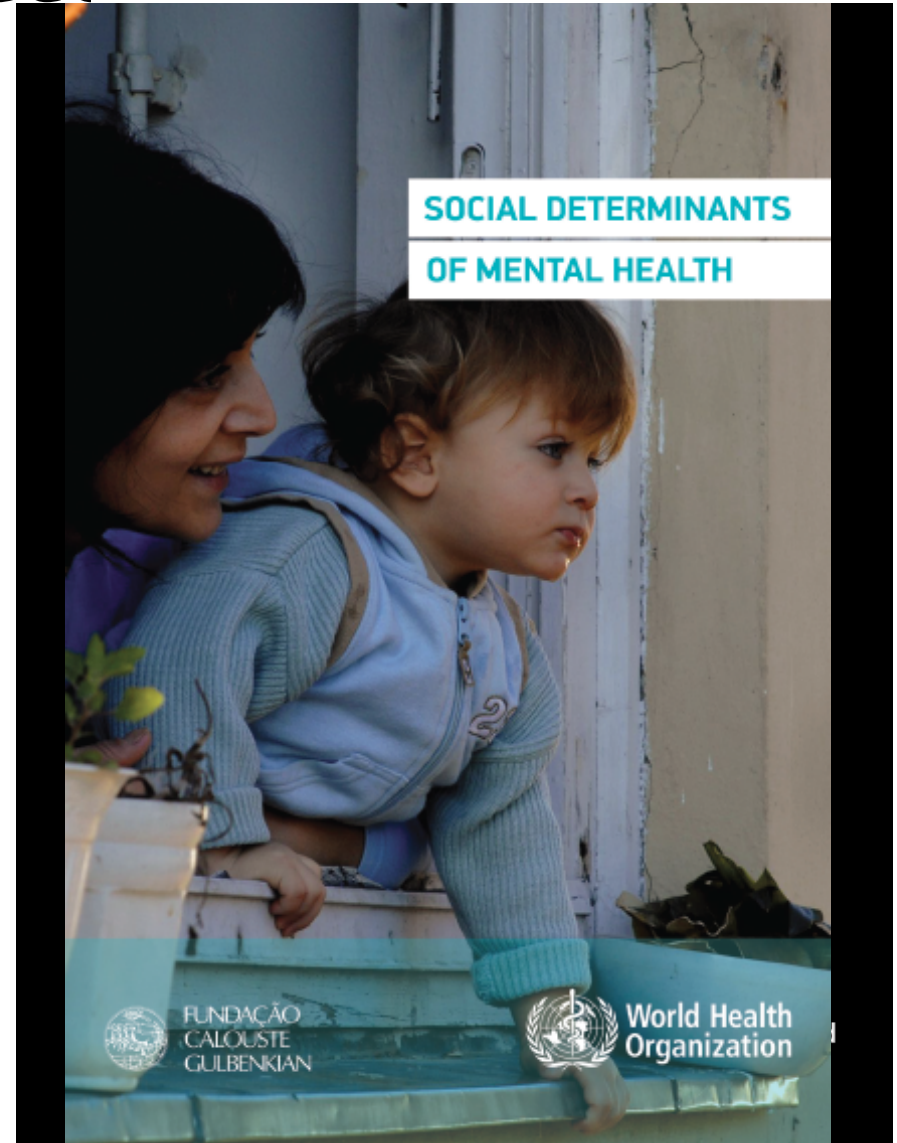




Poverty and mental health in LMIC: Increasing international recognition

Alan J. Flisher Centre for
Public Mental Health

- WHO Commission on Social Determinants of Health (2010)
- WHO Mental Health and Development Report (2010)
- UN General Assembly Declaration on Global Health and Foreign Policy:
 - “mental health problems have huge social and economic costs”(A/65/L.27, 2010)
- WHO/Gulbenkian Report on Social





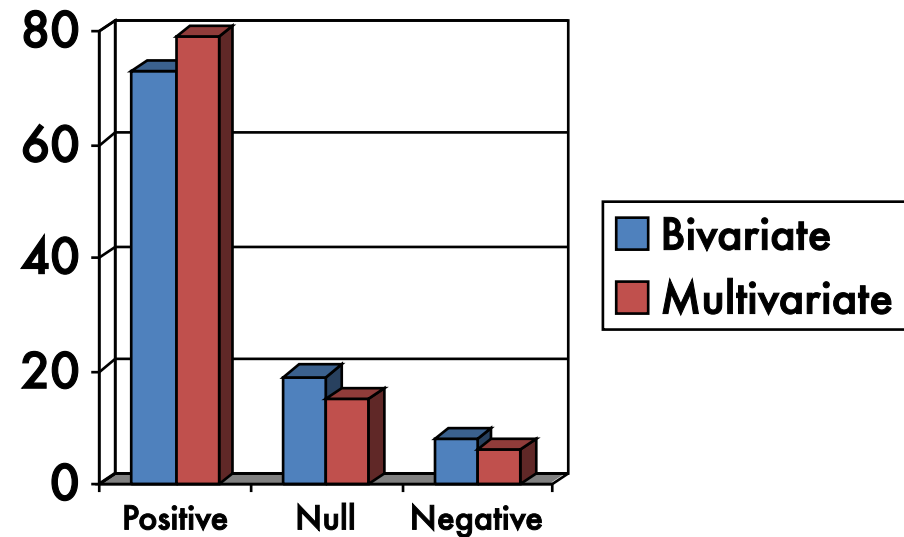
Alan J. Flisher Centre for
Public Mental Health

Poverty and Common Mental Disorders in Low and Middle-Income Countries

Is there an association
between Common Mental
Disorders and poverty?

- Most studies showed statistically significant association* between diverse measures of poverty and CMD
- Poverty strongly associated with higher rates of CMD across age ranges in rural and urban areas
- Poverty associated with:
 - Increased prevalence
 - Increased severity
 - Longer course and worse outcome

76 Community-based studies

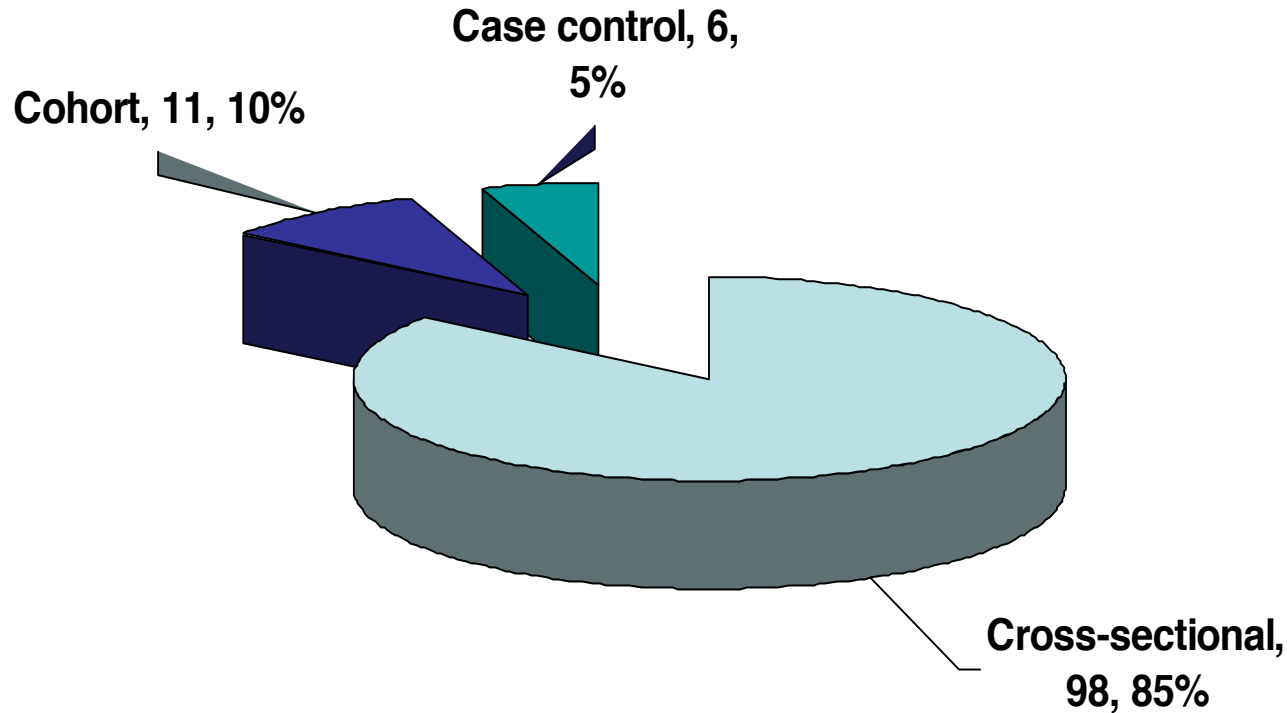


Lund et al 2010 Poverty and CMD in LMIC: A systematic review. *Social Science and Medicine* 71: 517-528



Alan J. Flisher Centre for
Public Mental Health

Study designs in review¹



1. Lund et al 2010 Poverty and CMD in LMIC: A systematic review. *Social Science and Medicine* 71:517–528.



Alan J. Flisher Centre for
Public Mental Health

Cycle of poverty and mental illness

Poverty

- Economic deprivation
- Indebtedness
- Low education
- Unemployment
- Lack of basic amenities
- Inadequate housing
- Overcrowding

Social causation:

- *Social exclusion*
- *High stressors*
- *Reduced access to social capital/safety net*
- *Malnutrition*
- *Obstetric risks*
- *Violence and trauma*

Mental Ill Health

- Higher prevalence
- Poor/lack of care
- More severe course

Social drift:

Increased health expenditure
Loss of employment
Reduced Productivity
Stigma



Alan J. Flisher Centre for
Public Mental Health

Prevailing view on social causation vs social selection/drift debate ^{1,2}

- Social causation -> depression
- Social selection/drift -> schizophrenia
- Does this lead to discounting of social drift/selection in depression (and social causation in schizophrenia)?
- Can we quantify the relative contribution of social causation and drift/selection in the poverty-depression relationship in LMIC?

1. Dohrenwend et al (1992) Socioeconomic status and psychiatric disorders: The causation-selection issue. *Science* 255 (5047): 946-952.
2. Saraceno et al (2005) The public mental health significance of research on socio-economic factors in schizophrenia and major depression. *World Psychiatry* 4:3.



Alan J. Flisher Centre for
Public Mental Health

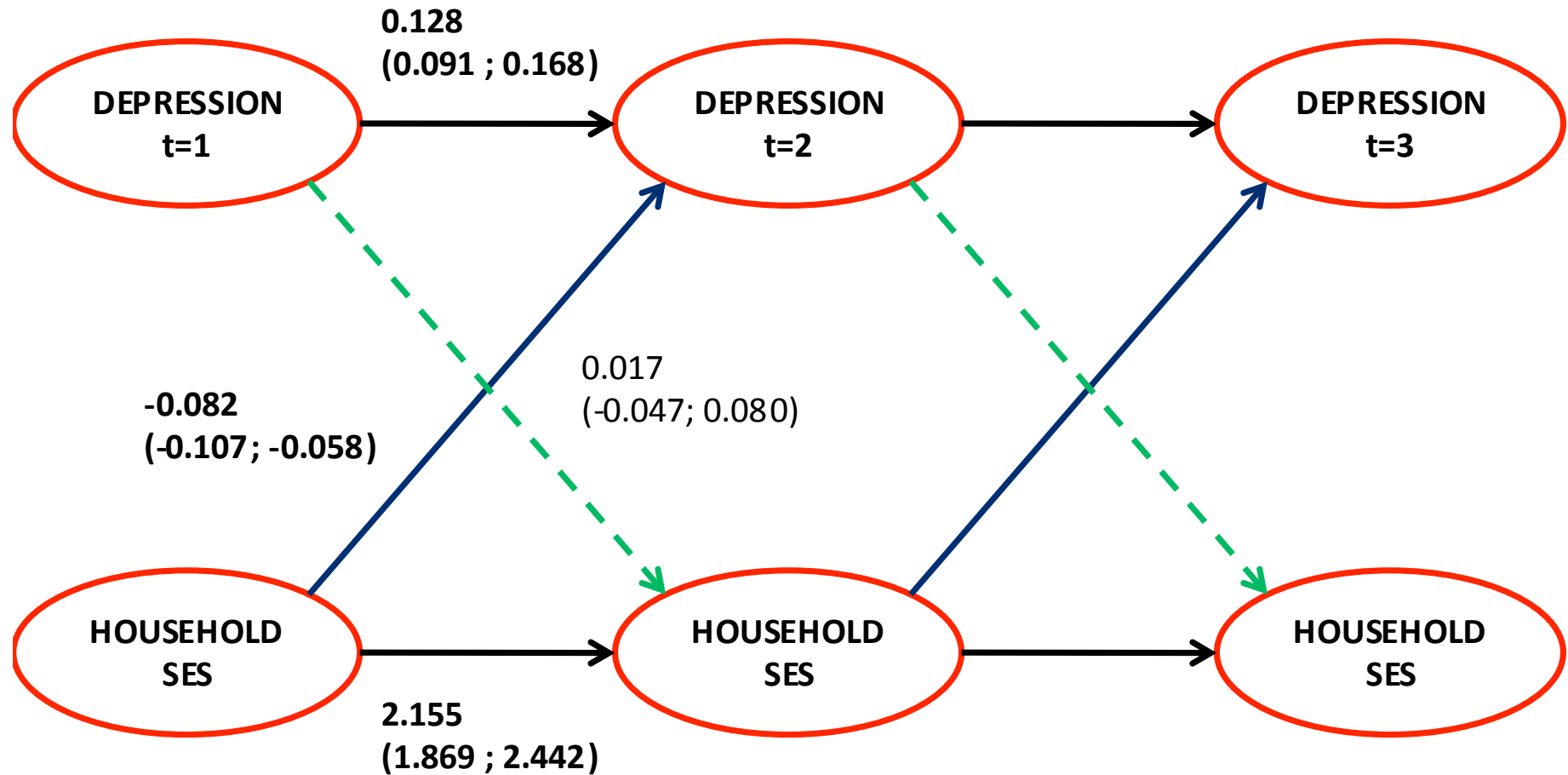
Social drift reconsidered: Longitudinal analysis of depression and poverty in the national Income Dynamics Study, South Africa¹

1. What is the longitudinal relationship between depression and poverty in South Africa?
2. Does the social causation or social drift pathway best explain the association between poverty and depression?
3. What is the role of depression severity on economic outcomes?

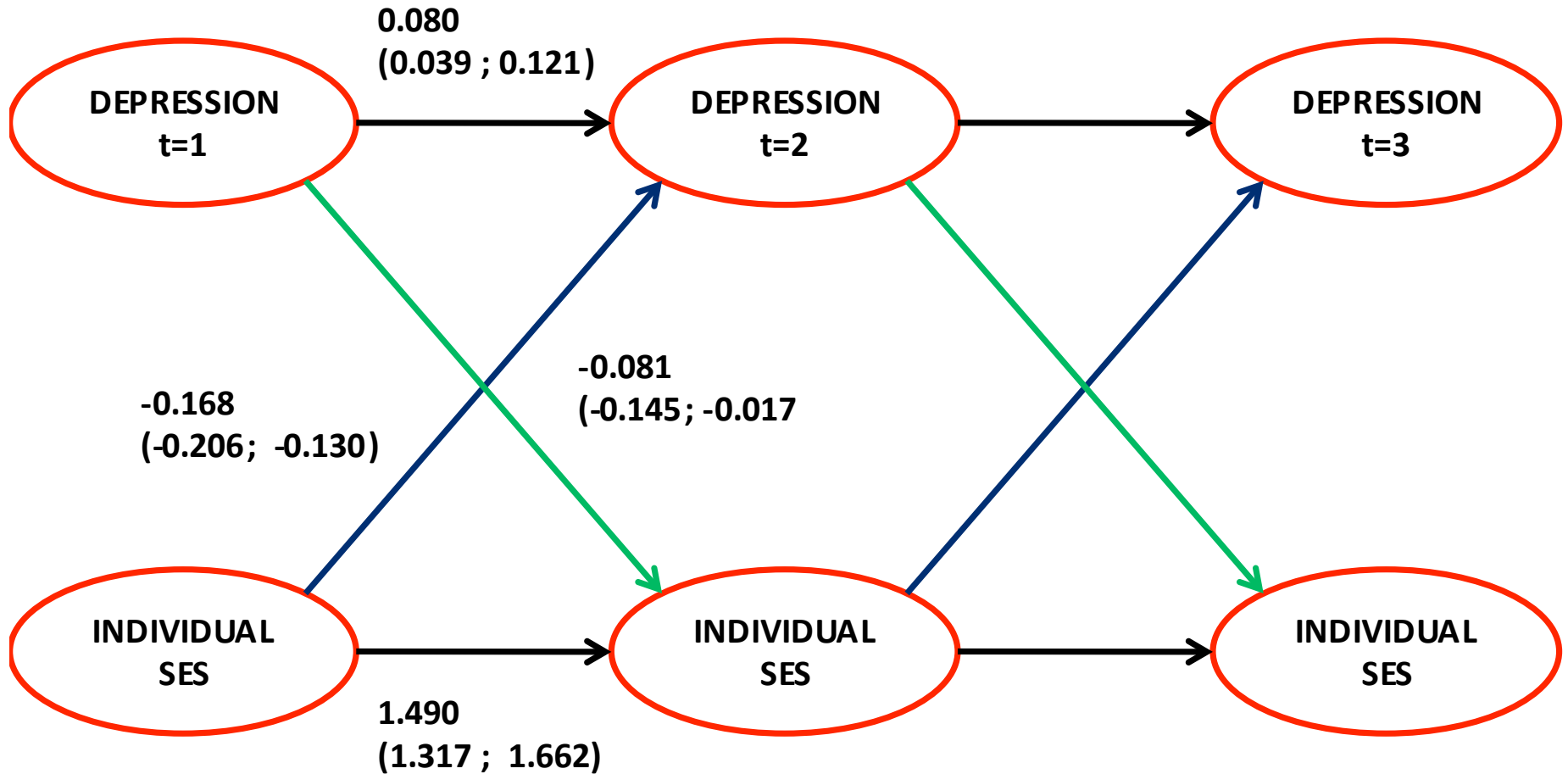


1. Lund C., and Cois, A. (Under review) Simultaneous social causation and social drift: Longitudinal analysis of depression and poverty in South Africa.

Preliminary findings: Relationship between household SES and depression over 4 years



Preliminary findings: Relationship between individual SES and depression over 4 years





Alan J. Flisher Centre for
Public Mental Health

Preliminary findings: National Income Dynamics Study, South Africa

- Household poverty in each wave is positively and significantly correlated with depression score in the following wave
- The reverse is not true, i.e. depression does not predict household poverty in the following waves

However:

- Individual poverty in each wave is negatively and significantly correlated with depression score in the following wave and the reverse is true

Conclusion: There is evidence of social causation and social drift in the poverty–depression relationship in South Africa



Alan J. Flisher Centre for
Public Mental Health



Emerald

Emerging mental health systems in low- and middle-income countries



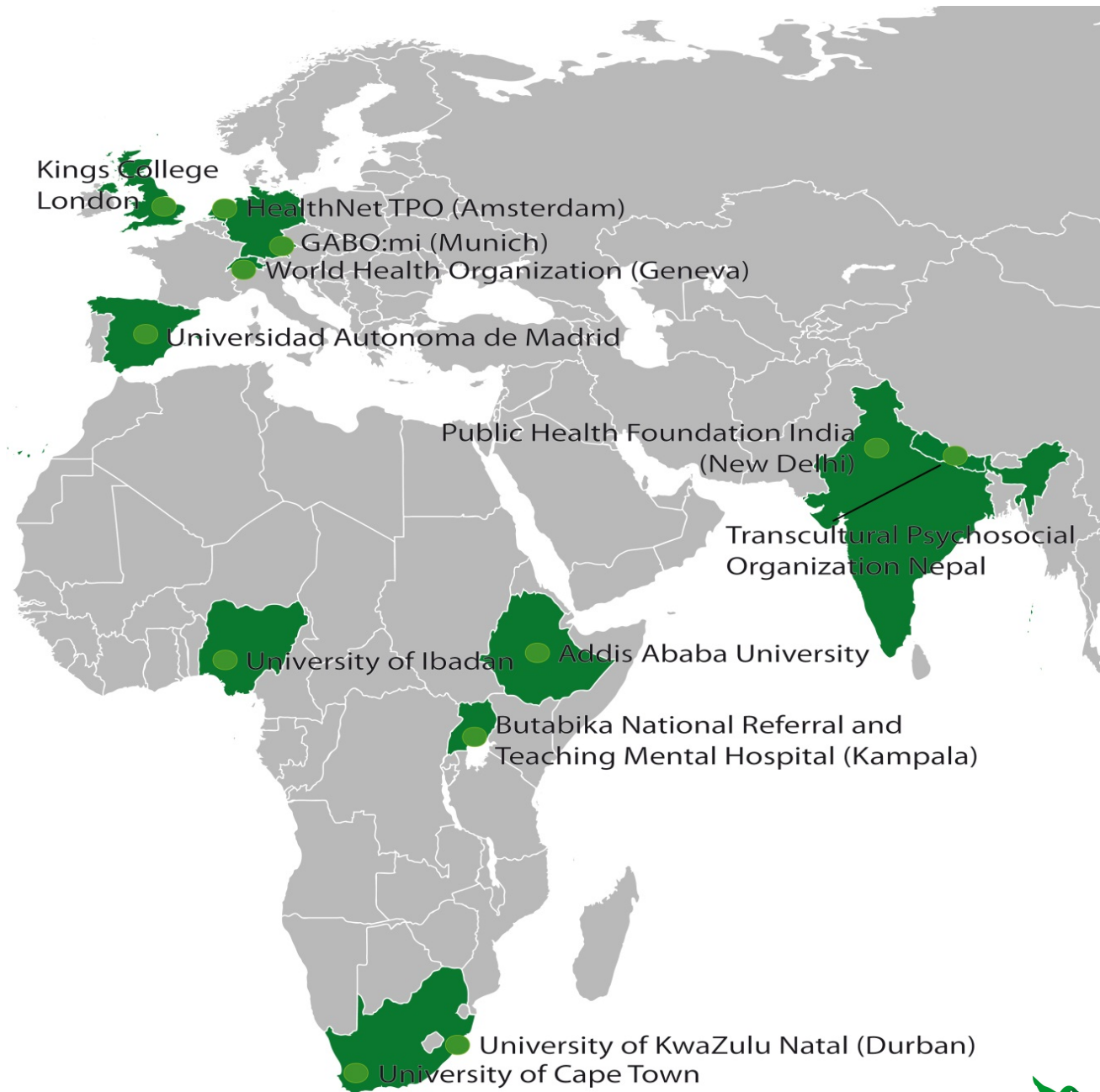
Alan J. Fisher Centre for
Public Mental Health

EMERALD – overview



- 5-year programme: 2012 to 2017
- An international consortium of colleagues in ten countries:
 - EMERALD country sites: Ethiopia (AAU), India (PHFI), Nepal (TPO Nepal), Nigeria (UI), South Africa (UCT & UKZN), Uganda (BNH)
 - Cross-cutting partners: Germany (GABO: mi), Netherlands (HealthNet TPO), Spain (UAM), Switzerland (WHO), UK (KCL)
 - PI: Prof Graham Thornicroft, KCL

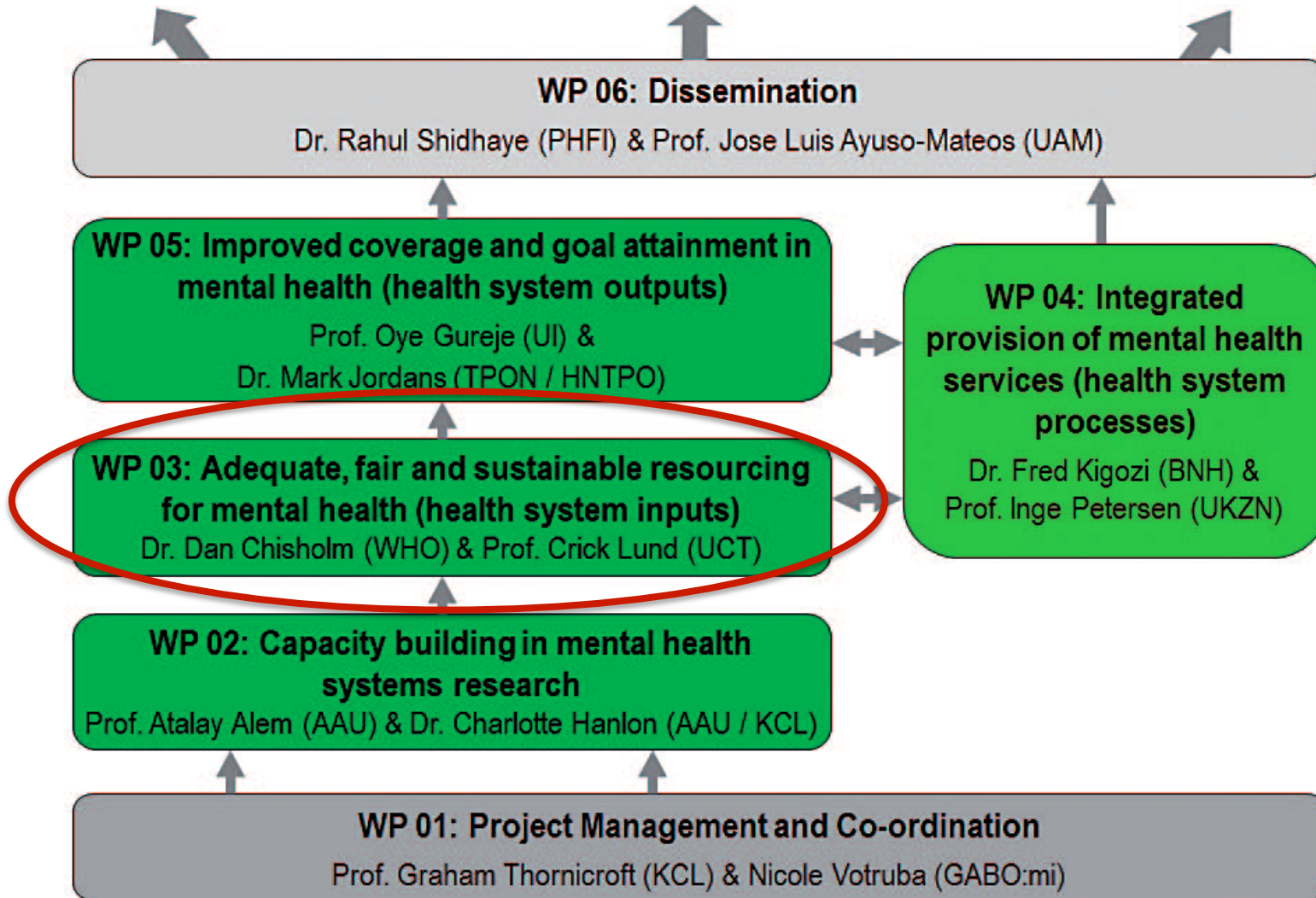
EMERALD partners and sites





Alan J. Flisher Centre for
Public Mental Health

EMERALD work packages



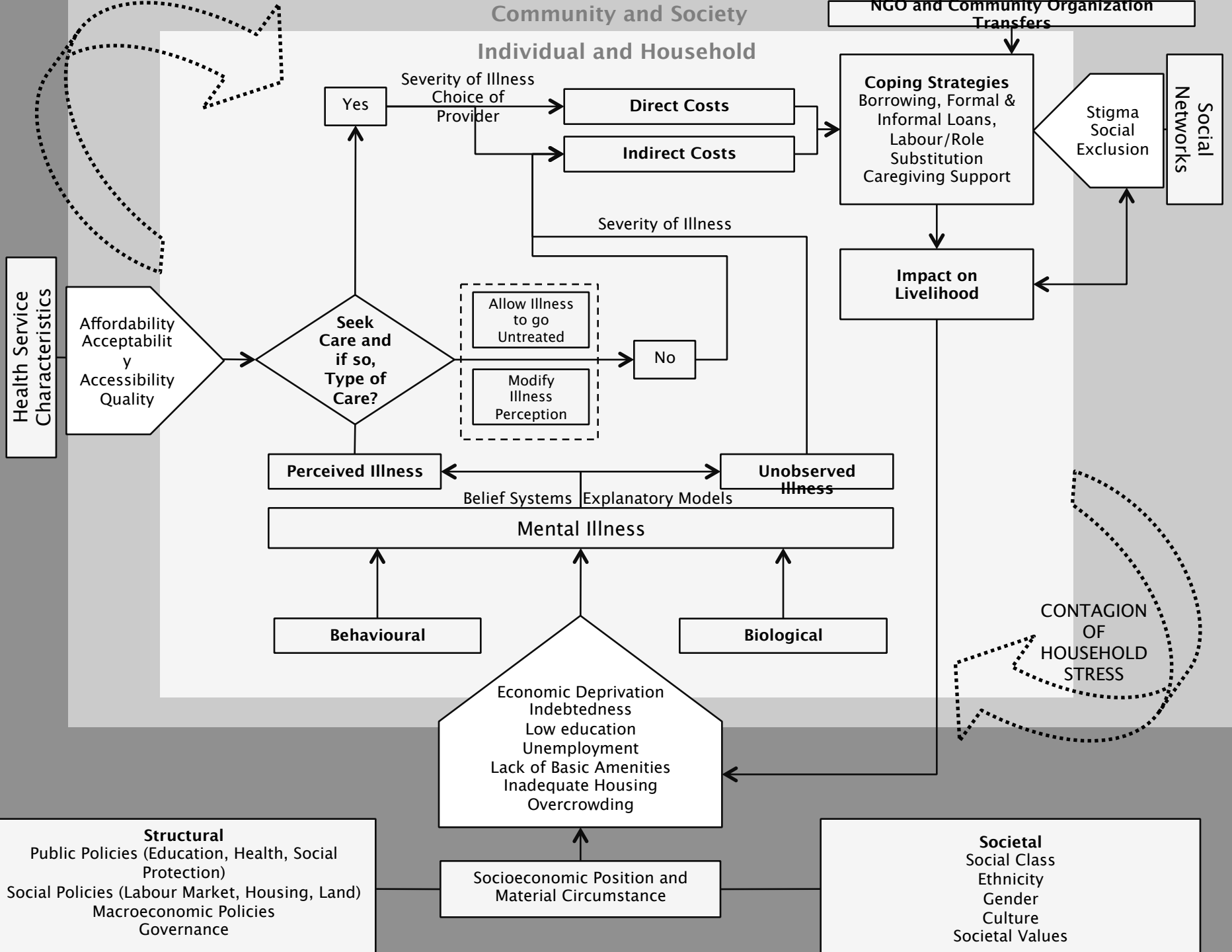


Alan J. Flisher Centre for
Public Mental Health

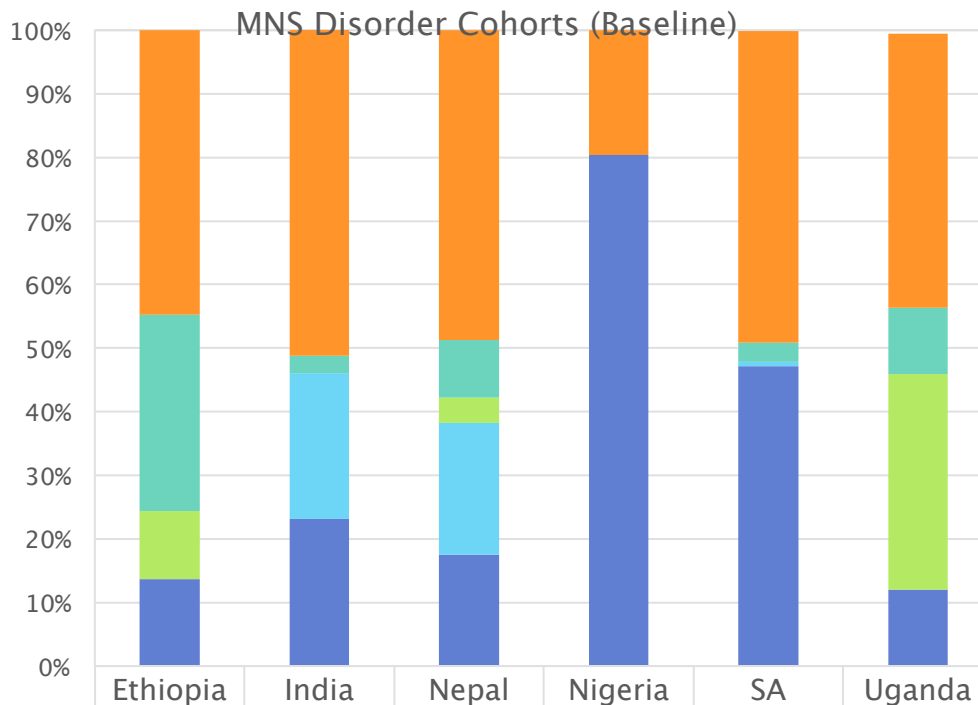
Work Package 3



- Baseline Household survey: what is the household economic impact of having a family member living with a mental illness in 6 diverse low and middle-income countries?



MNS Disorder Cohorts in baseline household survey: preliminary findings



Country Name	N
Ethiopia	937
India	1114
Nepal	908
Nigeria	326
South Africa	667
Uganda	442

AUD cohort, SA
n=4 (0.6% of local sample)

EPILEPSY cohort, NEPAL
n=36 (3.96% of local sample)

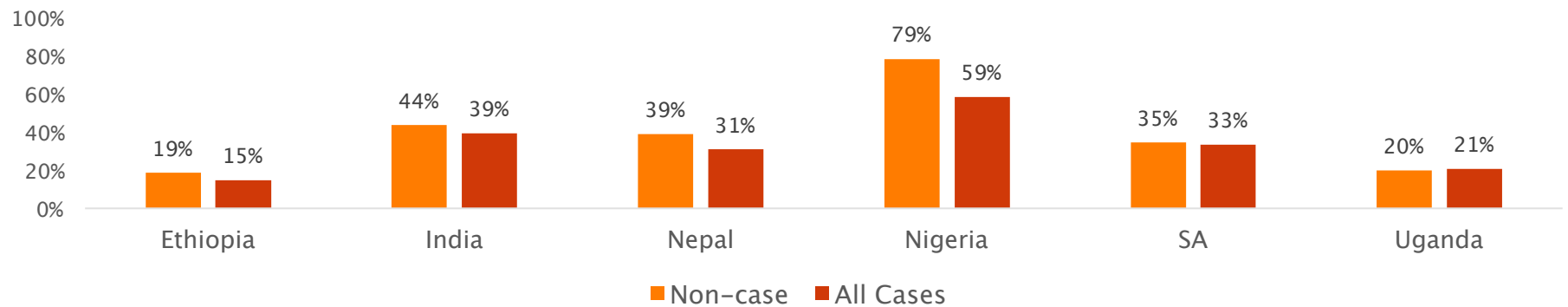
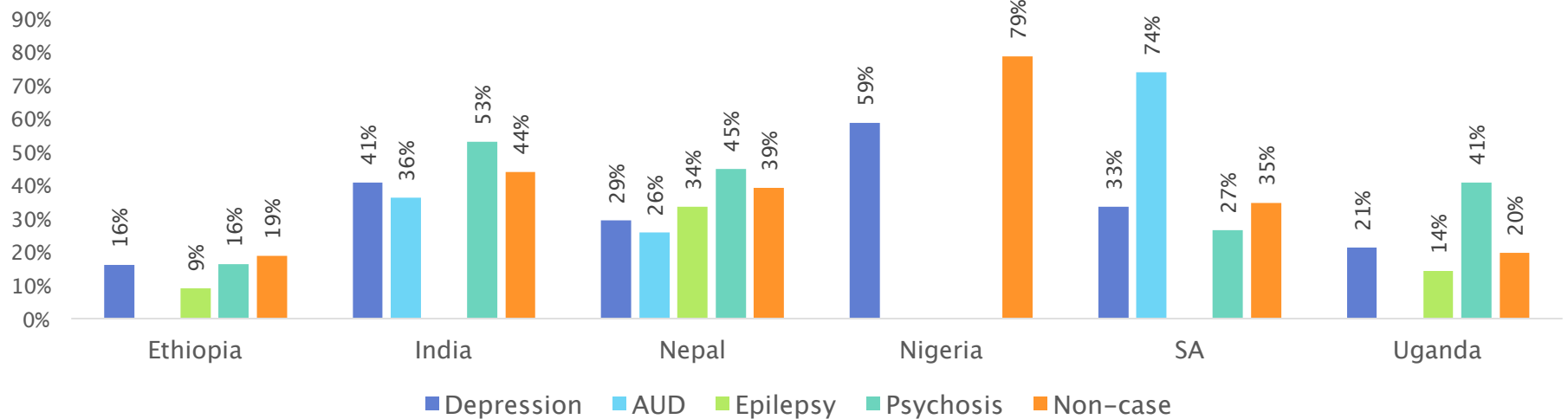
PSYCHOSIS cohort, SA
n=21 (3.15% of local sample)

PSYCHOSIS cohort, INDIA
n=31 (2.78% of local sample)

Adult Education: preliminary findings



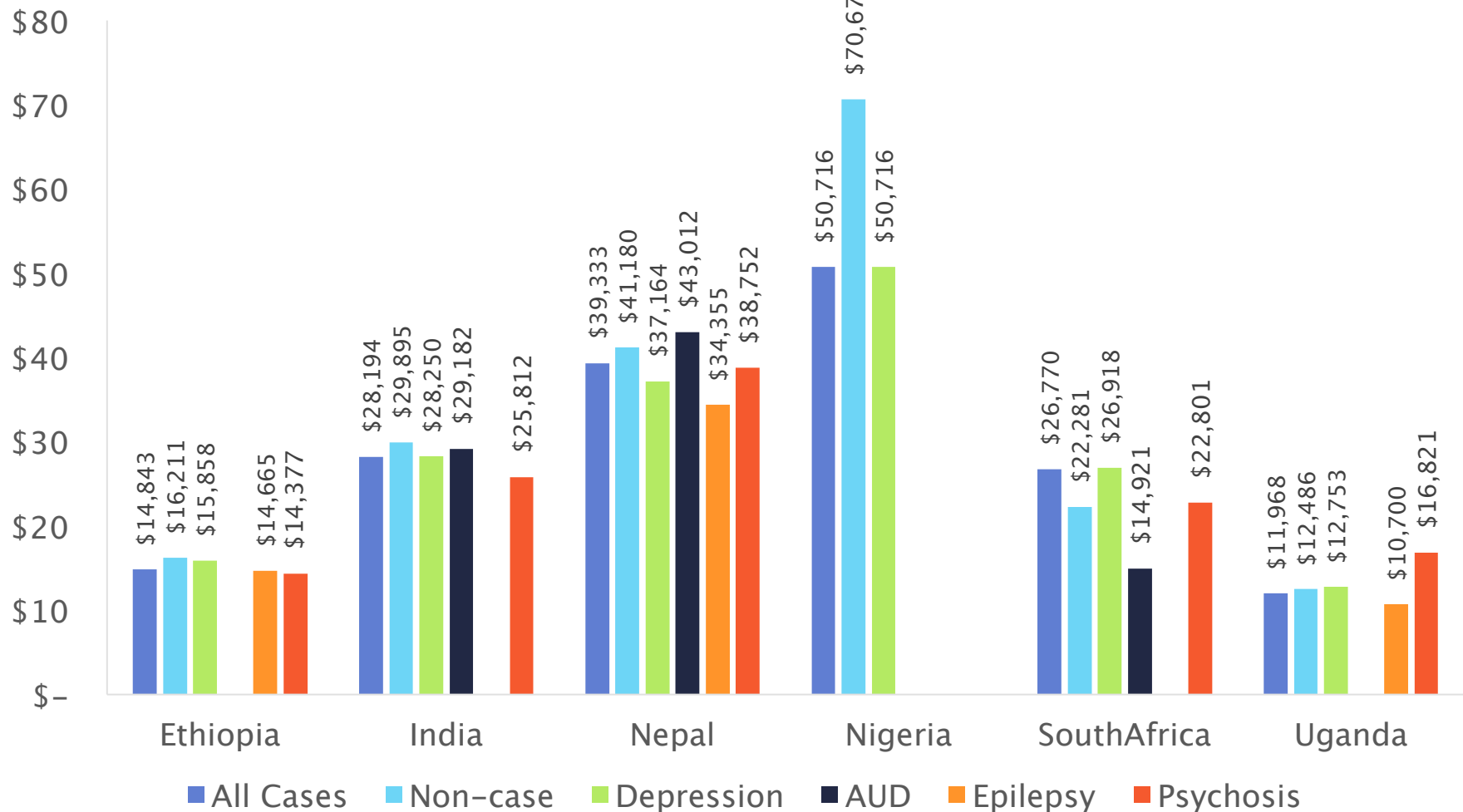
Proportion of Adult Household Members with more than a Primary School Education



Household Consumption: Preliminary findings



Median Household Consumption per Adult Equivalent (USD \$)



Use of Coping Strategies

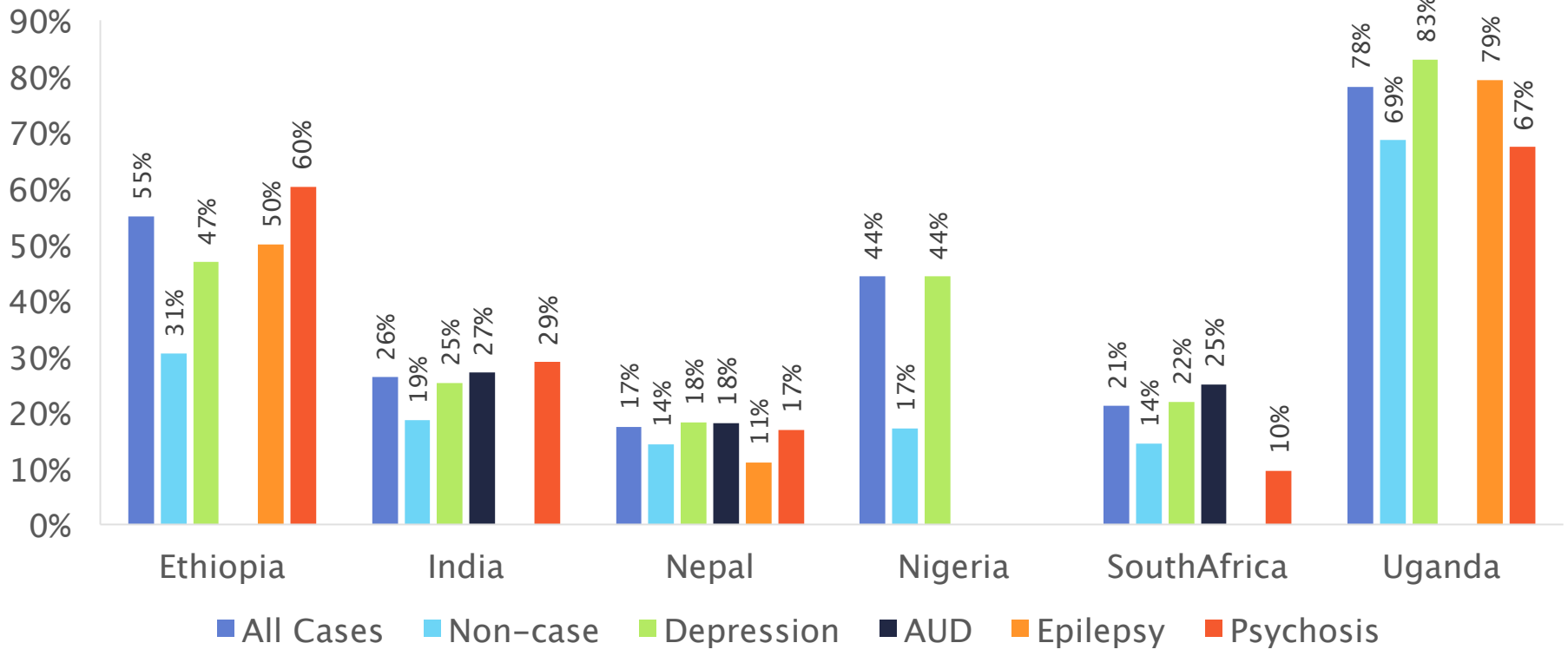


- Defining Cost Minimization Strategies: Restricting Food, Use of Healthcare or Withdrawing Children from School to Minimize Household Consumption and respond to Financial Hardship
- Defining Cost Management Strategies: Use savings, find extra work, take loans out at a bank, draw up accounts at shops, ask employers and other social networks for help to Manage Household Consumption and respond to Financial Hardship



Cost-Minimization Strategy: Current (preliminary findings)

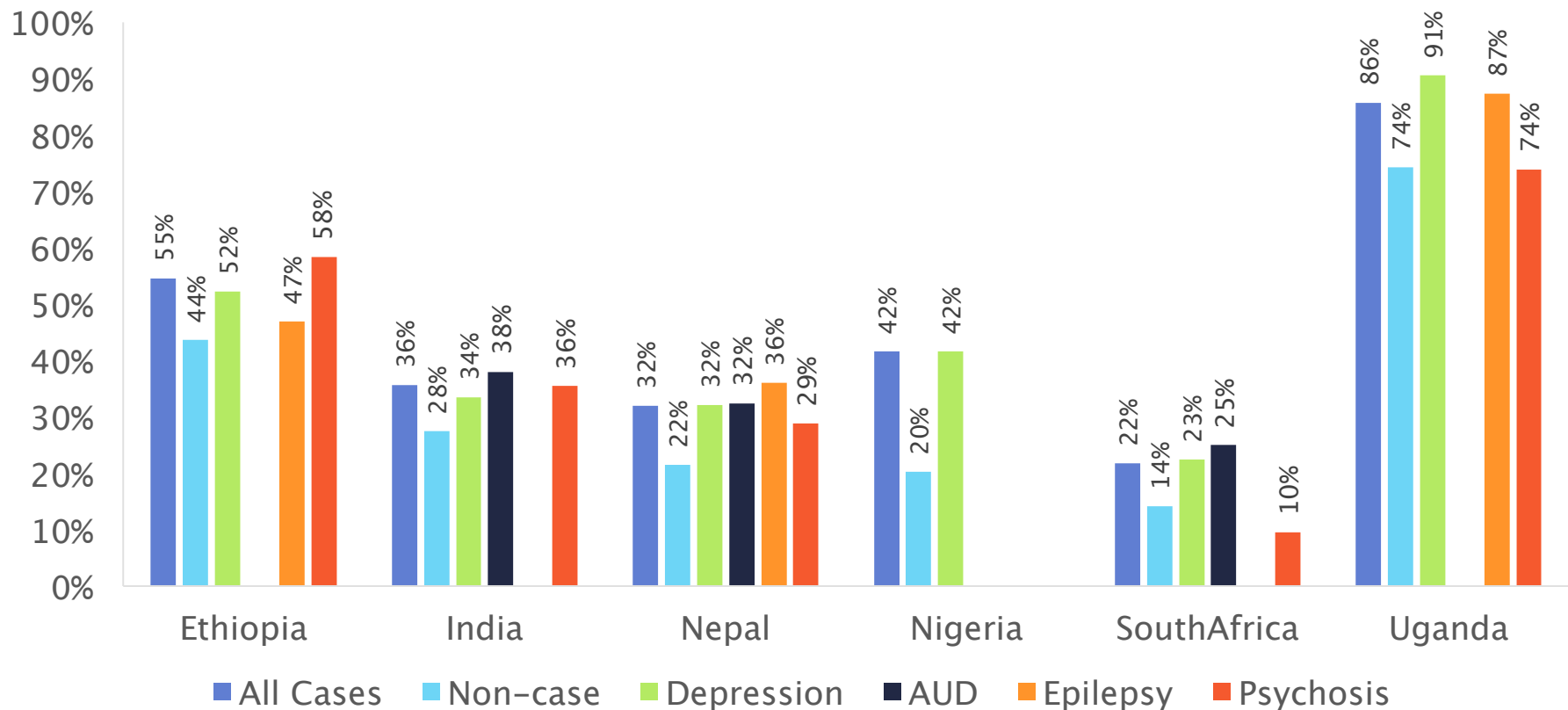
% of Households reporting use of at least one Cost-minimization strategy Currently



Cost-Minimization Strategy: Past 3 Years (preliminary findings)



% of Households reporting use of at least one Cost-minimization strategy over the past 3 years





Alan J. Flisher Centre for
Public Mental Health

2. Inequality and Mental Health



Alan J. Flisher Centre for
Public Mental Health

Relative Socio-economic status

- Increasing income inequality = increasing poor health (Wilkinson 1996)
- Higher-grade civil servants have lower rates of depression than lower grade (Whitehall study)
- Residents' assessment of their own standard of living compared to neighbours associated with CMD (Ellaway 2001)
- More unequal countries (Brazil, Chile), show stronger association between CMD and poverty than more equal countries (Nigeria, Ethiopia) (Lund et al 2010)

National income inequality and prevalence of mental illness: selected

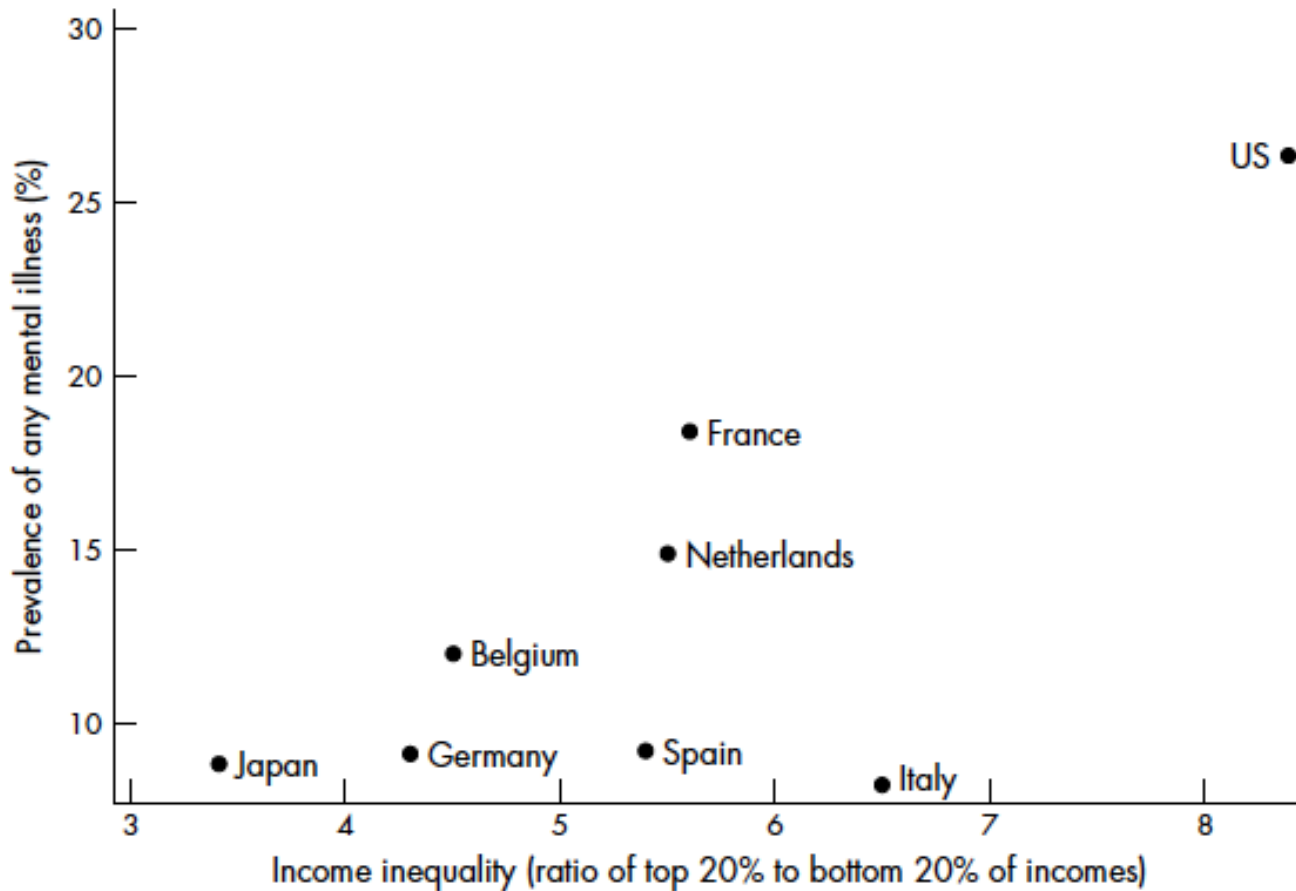


Figure 1 Relation between income inequality and prevalence of mental illness in eight developed countries.

(Pickett et al J. Epidemiol. Community Health 2006;60;646–647)



But...

- Risks of ecological fallacy:
 - Relationship between exposure and disease outcome is conducted at a population level, not individual level
 - Confounding factors, operating either within or between the groups under comparison may not be accounted for in the study design
- The above trends are for a selected group of high income countries



World Health Survey (2002–3): 53 countries¹

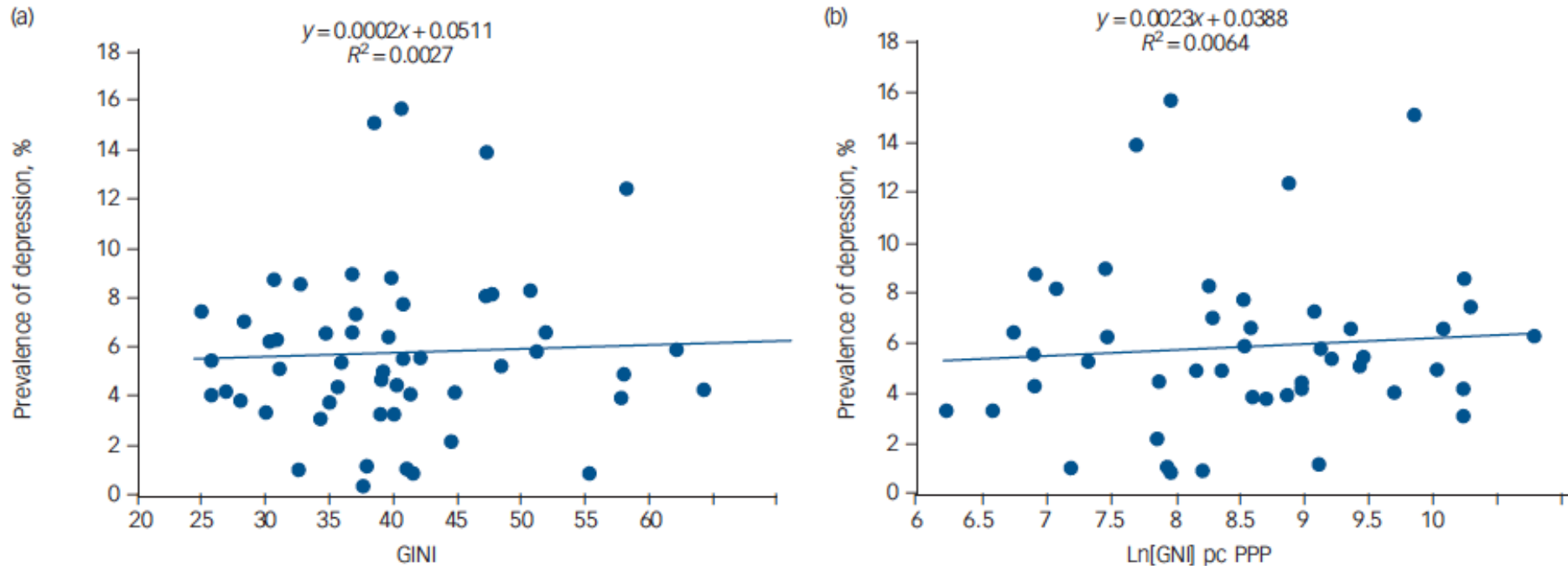


Fig. 3 The prevalence of depression by country-level measures of income inequalities and absolute income.

(a) Country-level income inequality and prevalence of depression; (b) country-level absolute income and prevalence of depression. GINI, GINI index; GNI, gross national income; PPP, purchasing power parity.

1. Rai et al (2013) Country and individual level socioeconomic determinants of depression: multilevel cross-national comparison *British Journal of Psychiatry* 202: 195–203.

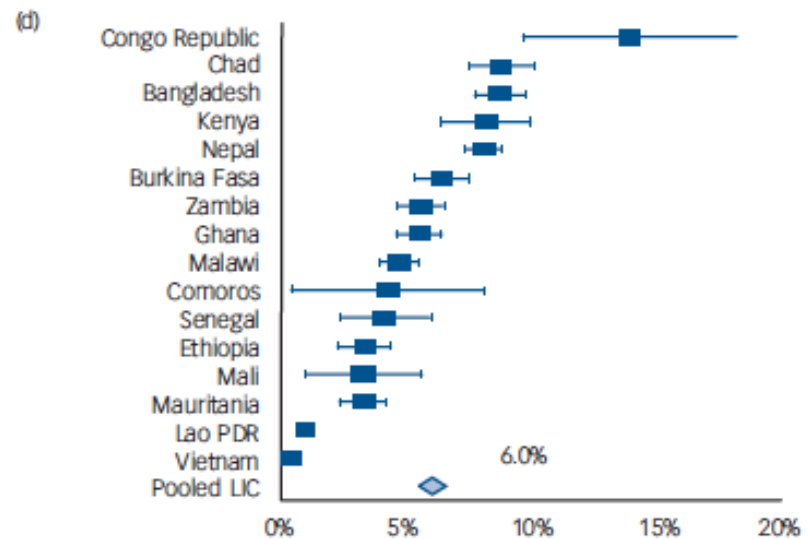
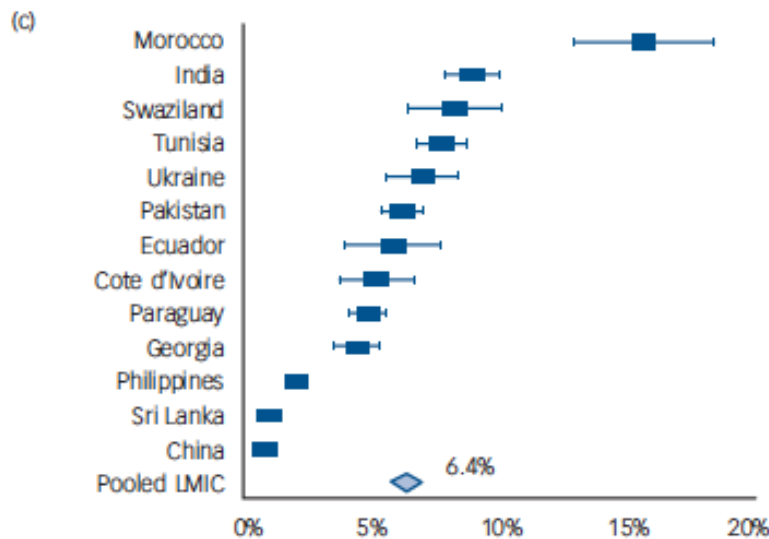
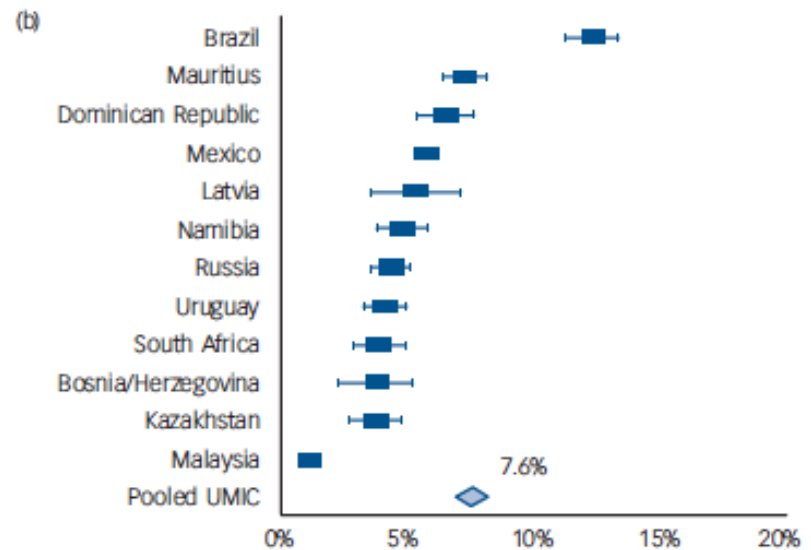
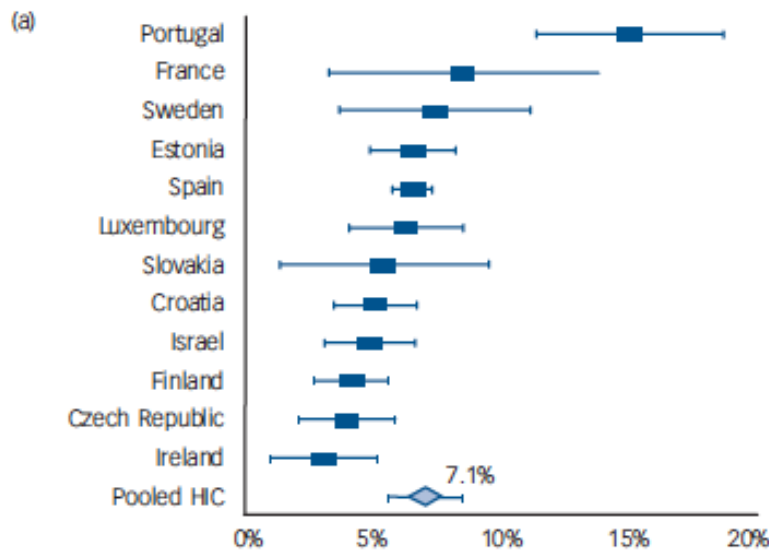


Fig. 1 Estimated country-level prevalence of depression grouped by economic development of countries (World Bank Criteria).

PDR, People's Democratic Republic.

(a) High-income countries (HIC); (b) Upper-middle-income countries (UMIC); (c) lower-middle-income countries (LMIC); (d) low-income countries (LIC).

Table 3 Individual-level socioeconomic correlates of depression: multilevel logistic regression analysis of pooled sample (level 1 individuals $n = 187\,496$, level 2 countries $n = 53$)

	Crude OR (95% CI)	Adjusted OR ^a (95% CI)
Age, years	1.02 (1.02–1.02)	1.01 (1.01–1.02)
Female (male reference)	1.88 (1.81–1.96)	1.64 (1.52–1.72)
Rural area type (urban reference)	1.07 (1.02–1.11)	0.95 (0.90–0.99)
Marital status		
Currently married or cohabiting	1.00 (–)	1.00 (–)
Separated or divorced	1.86 (1.73–2.00)	1.64 (1.52–1.77)
Never married	0.75 (0.71–0.79)	1.01 (0.95–1.08)
Widowed	2.52 (2.38–2.66)	1.42 (1.33–1.51)
Education		
More than 12 years	1.00 (–)	1.00 (–)
8–12 years	1.22 (1.13–1.32)	1.09 (1.01–1.19)
Less than 8 years	2.29 (2.14–2.45)	1.52 (1.40–1.64)
Material assets index	0.82 (0.80–0.84)	0.87 (0.85–0.89)
Spending		
Quintile 5 (lowest)	1.00 (–)	1.00 (–)
Quintile 4	0.99 (0.93–1.06)	1.02 (0.95–1.09)
Quintile 3	1.00 (0.94–1.07)	1.05 (0.98–1.12)
Quintile 2	1.05 (0.98–1.11)	1.14 (1.06–1.21)
Quintile 1 (highest)	1.03 (0.97–1.07)	1.24 (1.16–1.33)
Occupational class		
High professionals	1.00 (–)	1.00 (–)
Other non-manual and manual workers	1.39 (1.25–1.55)	1.11 (0.99–1.24)
Not working for pay	2.29 (2.06–2.55)	1.33 (1.18–1.49)

a. The adjusted OR model is mutually adjusted for all individual-level variables.

Rai et al (2013) Country and individual level socioeconomic determinants of depression: multilevel cross-national comparison *British Journal of Psychiatry* 202: 195–203.



Mental health and inequality

Implications

1. For national level data, findings are mixed:
 - For some high income countries there is a clear linear association: increased inequality is associated with increased mental illness
 - But for a larger group of low, middle and high income countries, the trend is less clear
 - Possible explanations: “Income inequality hypothesis” – beyond a certain level of income, inequality becomes more important in explaining mental health disparities ¹
 - More research is needed at national level to explore potential confounders and measurement issues
2. For individual level data, the picture is clear:
 - Inequality is associated with worse mental health for people in lower socio-economic positions



Alan J. Flisher Centre for
Public Mental Health

3. Sustainable Development goals: Relevance for mental health

**“We have a big,
bold agenda before
us – now we must
work to make it
real in people’s
lives.”**

*UN Secretary-General
Ban Ki-moon*



**UNITED NATIONS
SUSTAINABLE
DEVELOPMENT
SUMMIT 2015**
25-27 SEPTEMBER



#GLOBALGOALS

1 NO POVERTY



2 ZERO HUNGER



3 GOOD HEALTH AND WELL-BEING



4 QUALITY EDUCATION



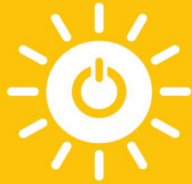
5 GENDER EQUALITY



6 CLEAN WATER AND SANITATION



7 AFFORDABLE AND CLEAN ENERGY



8 DECENT WORK AND ECONOMIC GROWTH



9 INDUSTRY, INNOVATION AND INFRASTRUCTURE



10 REDUCED INEQUALITIES



11 SUSTAINABLE CITIES AND COMMUNITIES



THE GLOBAL GOALS

For Sustainable Development

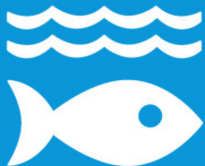
12 RESPONSIBLE CONSUMPTION AND PRODUCTION



13 CLIMATE ACTION



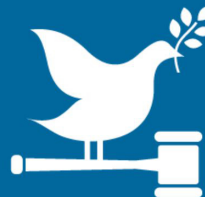
14 LIFE BELOW WATER



15 LIFE ON LAND



16 PEACE AND JUSTICE STRONG INSTITUTIONS



17 PARTNERSHIPS FOR THE GOALS



Mental health links to SDGs

SDG 3: Good Health and Wellbeing

- Target 3.4. “By 2030, reduce by one third premature mortality from non-communicable diseases through prevention and treatment and promote mental health and well-being”
- Target 3.5. “Strengthen the prevention and treatment of substance abuse, including narcotic drug abuse and harmful use of alcohol”

...Critical for Universal Health

Coverage to include Mental Health

See: Thornicroft and Vortrubá (2016). Does the United Nations care about mental health? *Lancet Psychiatry*.



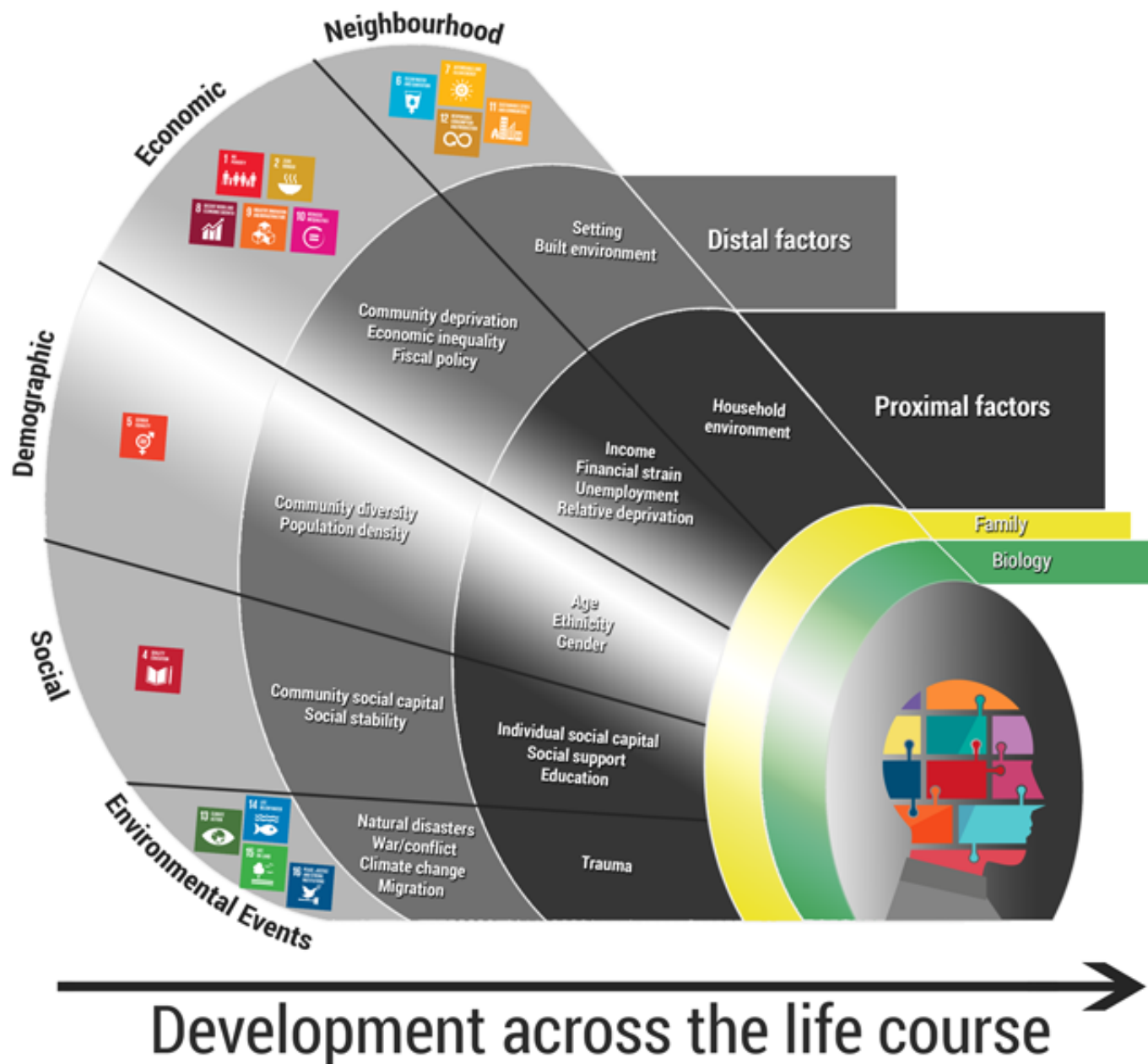


Alan J. Fisher Centre for
Public Mental Health

But what about the social determinants of mental health?



Social determinants of mental health and SDGs





Alan J. Flisher Centre for
Public Mental Health

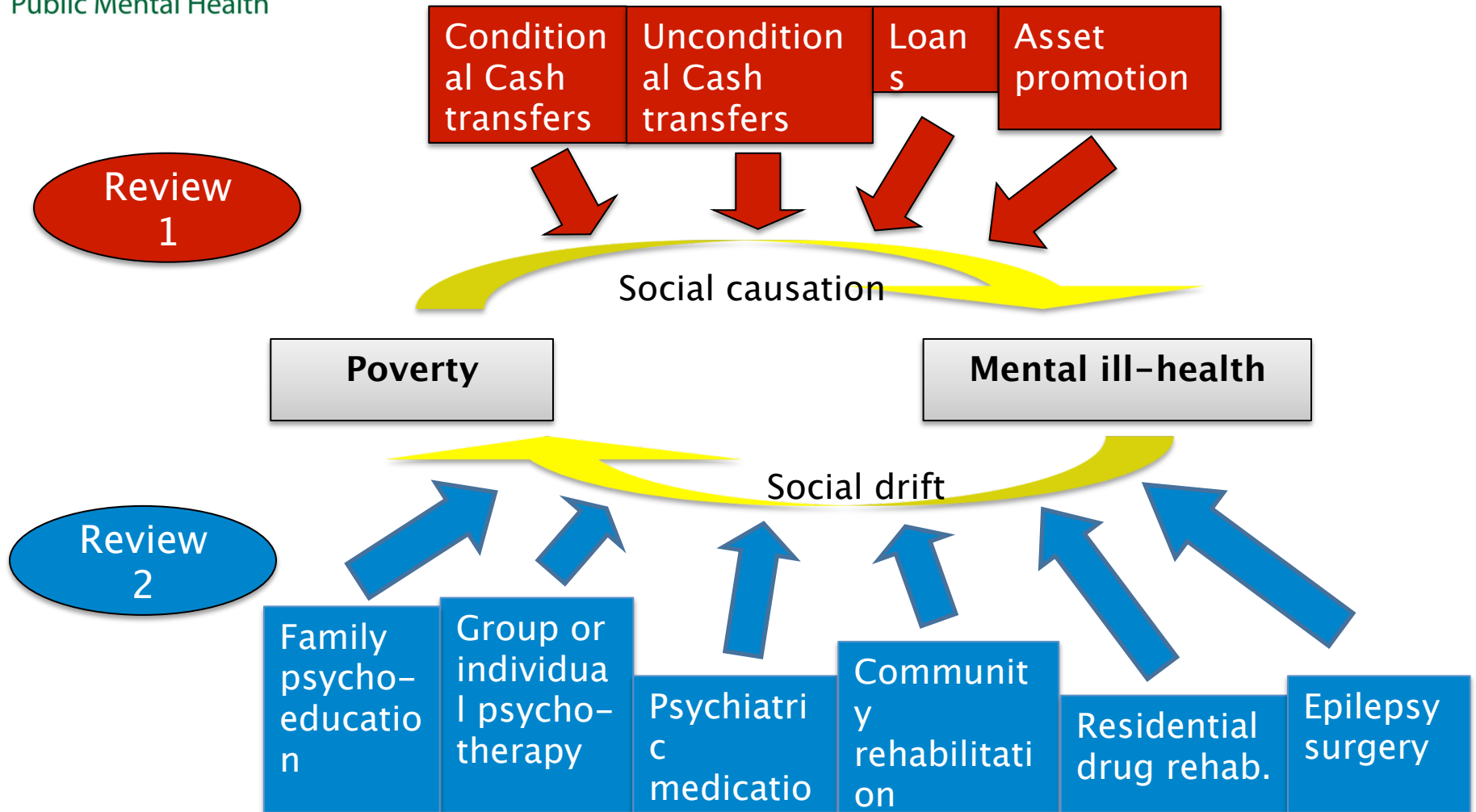
The SDG Challenge

- How do we demonstrate the link between attaining “upstream” SDGs and mental health benefits?
- Can we also show that providing mental health care yields economic and environmental benefits?
- Is mental health both a means and an end of development?



Alan J. Flisher Centre for
Public Mental Health

Breaking the cycle of poverty and mental illness: the evidence so far...



Lund, C. et al (2011). Poverty and mental disorders: Breaking the cycle in low and middle-income countries. *Lancet*, 378, 1502-1514.



Alan J. Flisher Centre for
Public Mental Health

4. Candidate interventions for mental health and the SDGs



Alan J. Flisher Centre for
Public Mental Health

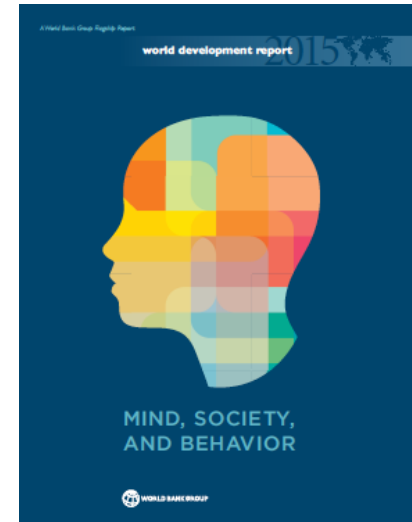
Candidate Intervention 1: Targeting the cognitive and affective mechanisms of poverty

Cognitive styles that are
associated with poverty:¹

- Future discounting
- Available resources affect purchasing decisions (executive function)
- External locus of control

Negative affective states
(stress)

Habitual behaviours: risk
aversion



1. Haushofer, J., and Fehr, E. (2014). On the Psychology of Poverty. *Science* 344, 862-867.



Alan J. Flisher Centre for
Public Mental Health

Candidate Intervention 1: Targeting the cognitive and affective mechanisms of poverty

Can brief task sharing psychological
interventions influence these
mechanisms?

- Problem Management Plus?¹

CBT?

PERSPECTIVE

Problem Management Plus (PM+): a WHO transdiagnostic psychological intervention for common mental health problems

**KATIE S. DAWSON¹, RICHARD A. BRYANT¹, MELISSA HARPER^{2,3}, ALVIN KUOWEI TAY^{1,4}, ATIF RAHMAN⁵,
ALISON SCHAFFER⁶, MARK VAN OMMEREN²**

¹University of New South Wales, Sydney, Australia; ²World Health Organization, Geneva, Switzerland; ³University of Geneva, Geneva, Switzerland; ⁴Psychiatry Research and Teaching Unit, Liverpool Hospital, Sydney, Australia; ⁵University of Liverpool, Liverpool, UK; ⁶World Vision Australia/International



Alan J. Flisher Centre for
Public Mental Health

Candidate Intervention 2: Cash Transfers

Journal of Adolescent Health xxx (2015) 1–7



ELSEVIER

JOURNAL OF
ADOLESCENT
HEALTH

www.jahonline.org

Original article

Effects of a Large-Scale Unconditional Cash Transfer Program on Mental Health Outcomes of Young People in Kenya

Kelly Kilburn, M.A.^{a,*}, Harsha Thirumurthy, Ph.D.^b, Carolyn Tucker Halpern, Ph.D.^c,
Audrey Pettifor, Ph.D.^d, and Sudhanshu Handa, Ph.D.^{a,e}

Results: The cash transfer reduced the odds of depressive symptoms by 24 percent among young persons living in households that received cash transfers. Further analysis by gender and age revealed that the effects were only significant for young men and were larger among men aged 20–24 years and orphans.



Alan J. Flisher Centre for
Public Mental Health

Candidate Intervention 2: Cash Transfers

Household Response to Income Changes: Evidence from an
Unconditional Cash Transfer Program in Kenya*

Johannes Haushofer[†], Jeremy Shapiro[‡]

November 15, 2013

- “Transfer recipients experience large increases in psychological well-being, and several types of transfers lead to reductions in levels of the stress hormone cortisol. Together, these results suggest that unconditional cash transfers have significant impacts on consumption and psychological



Alan J. Flisher Centre for
Public Mental Health

Candidate Intervention 3: Integrating mental health into primary care in low resource settings

The purpose of PRIME is to generate **high quality research** on the **implementation** and **scaling up** of **treatment programmes** for **priority mental disorders** in primary and maternal health care contexts in low resource settings.



Lund, C., et al. (2012). PRIME: A programme to reduce the treatment gap for mental disorders in five low and middle-income countries. *PLoS Med* 9(12): e1001359. doi: 10.1371/journal.pmed.1001359



Alan J. Flisher Centre for
Public Mental Health

PRIME Partners

- Centre for Public Mental Health, UCT
- WHO
- Centre for Global Mental Health, LSHTM and KCL
- BasicNeeds
- Perinatal Mental Health Project, UCT

- **Ethiopia**
 - Addis Ababa University, MoH
- **India**
 - Sangath, PHFI, MP State MoH
- **Nepal**
 - Healthnet TPO, MoH
- **South Africa**
 - UKZN, HSRC, UCT Lung Institute, DoH
- **Uganda**
 - Makerere University, MoH

“The most exciting thing about PRIME is the fact that Ministries of Health in 5 countries, and the WHO, have joined mental health research leaders as equal partners.”

**Prof. Vikram Patel, PRIME
Research Director**



1st PRIME Meeting, Cape Town, June 2011.
Photo: Amit Makan



Alan J. Flisher Centre for
Public Mental Health

Country sites



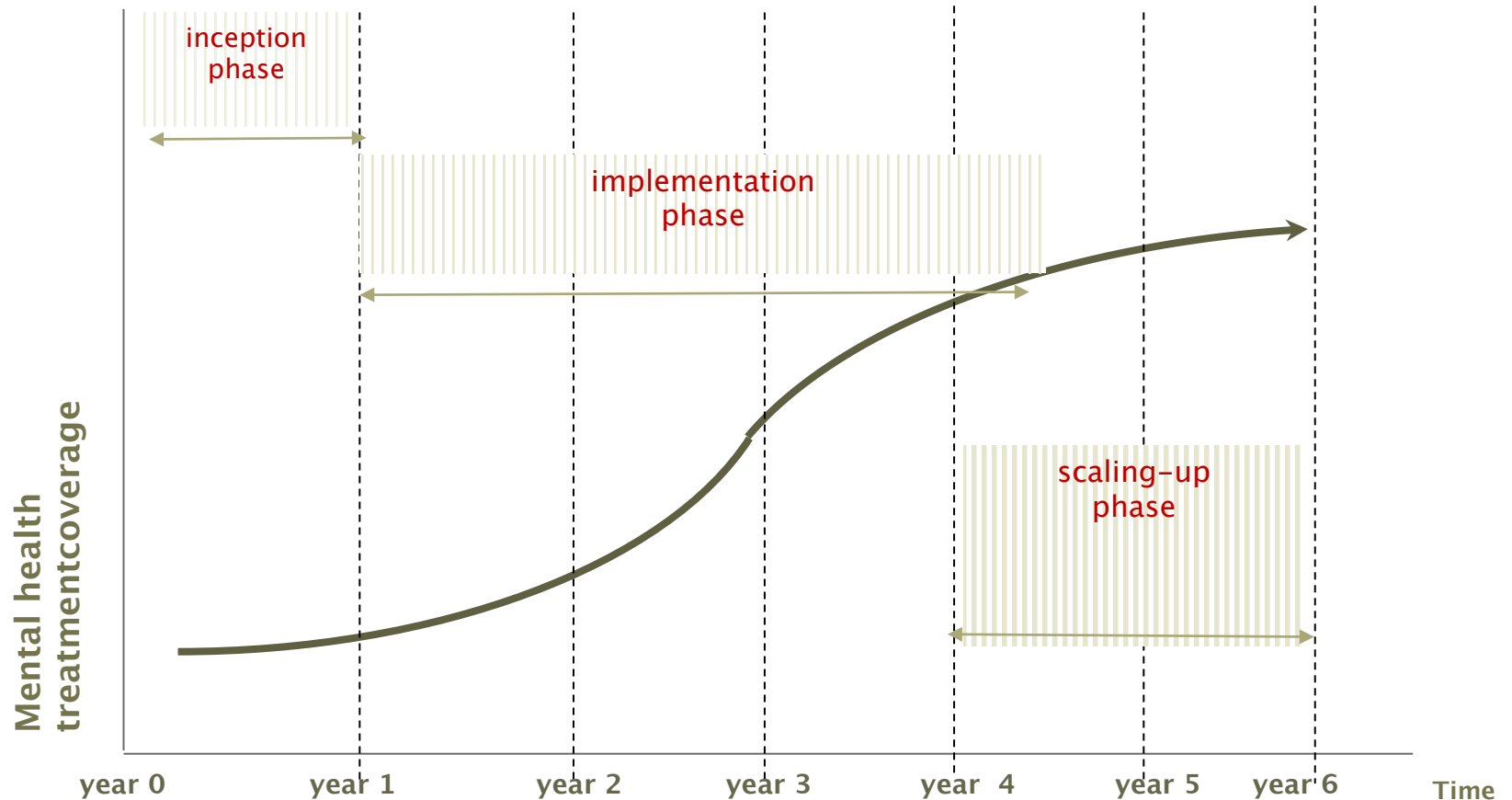
Country	District	Population	Number of PHCs	Socio-economic characteristics	Number of MH specialists
Ethiopia	Sodo	165,000	8	Literacy rate: 22%; 90% rural	None
India	Sehore (Madhya Pradesh state)	1,311,008	15	Literacy rate: 71% 81 % rural	1 part-time psychiatrist, 1 psychologist
Nepal	Chitwan	575,058	4	Literacy rate: 70% 73% rural	2 Psychiatrists
South Africa	Kenneth Kaunda (North West Province)	632,790	28	Literacy rate: 88% 14% rural	1 Psychiatrist, 1 Psychologist
Uganda	Kamuli	740,700	41	Literacy rate:	1 Psychiatric





Alan J. Flisher Centre for
Public Mental Health

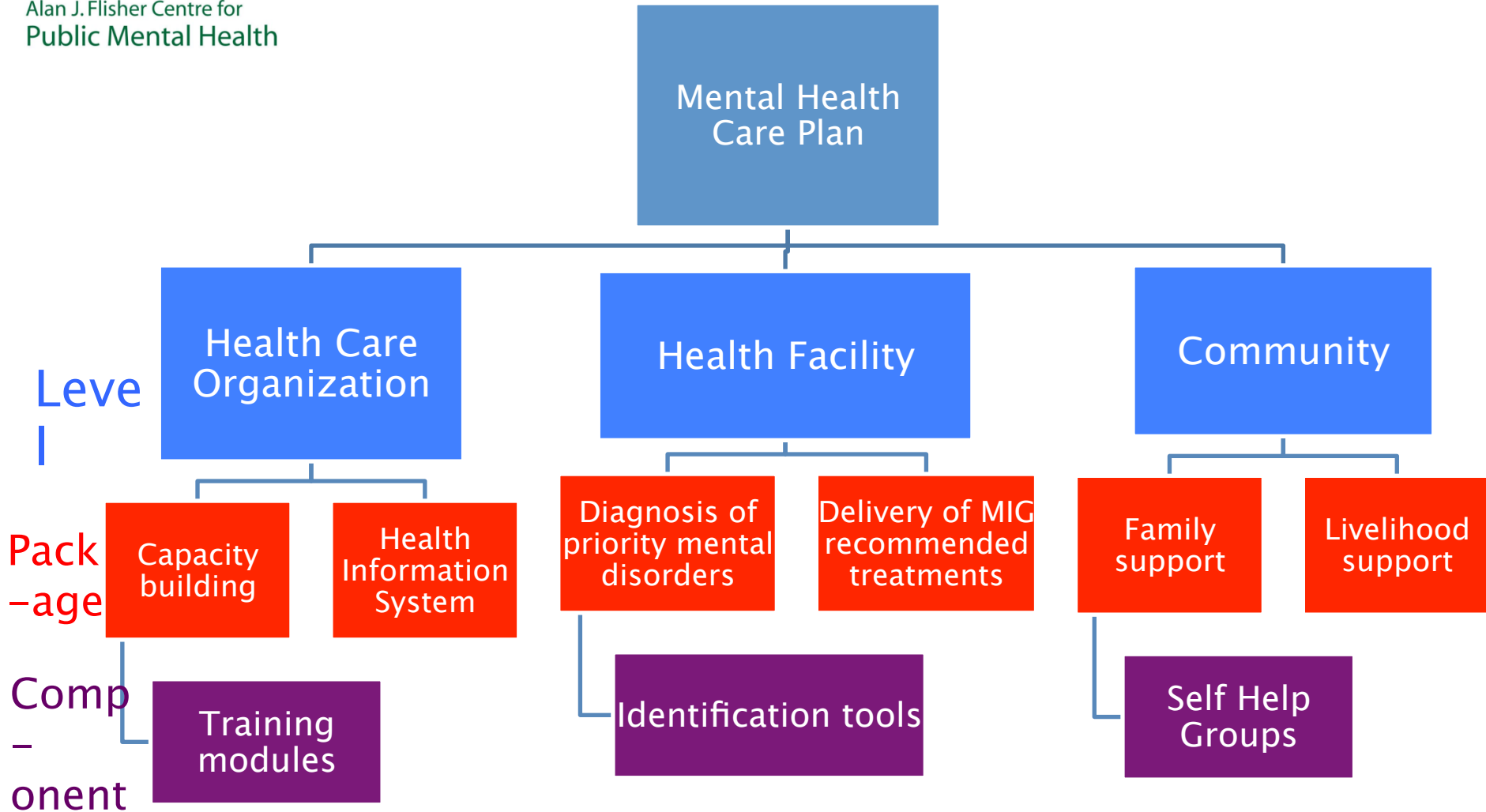
research phases (2011–2017)





Alan J. Flisher Centre for
Public Mental Health

PRIME: Building blocks of a District mental healthcare plan

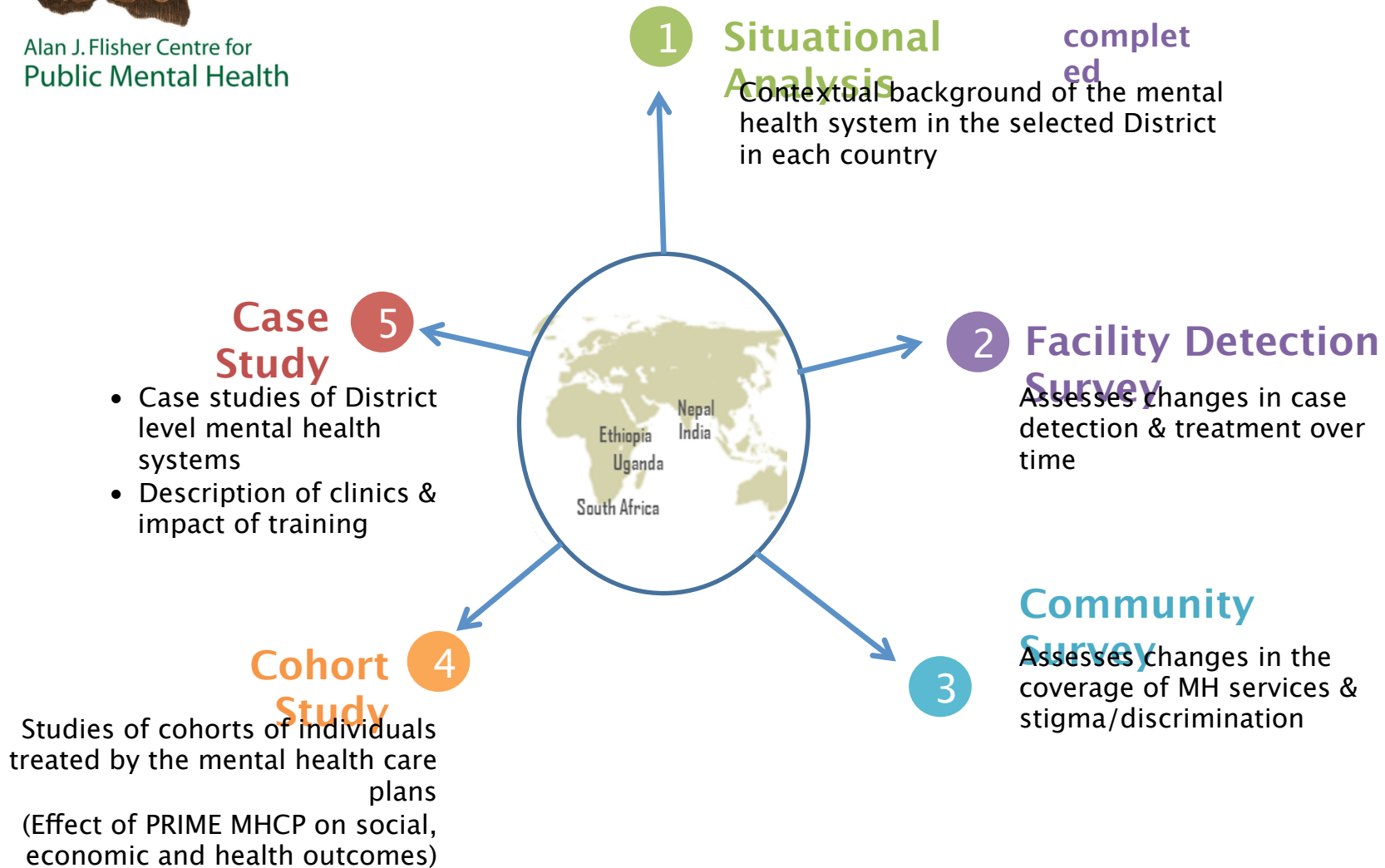


Lund, C., Tomlinson, M. & Patel, V. (2016). Integration of mental health into primary care in low- and middle-income countries: The PRIME mental healthcare plans. *British Journal of Psychiatry* (Editorial). 208(s56):



Alan J. Flisher Centre for
Public Mental Health

PRIME Research Methods across countries



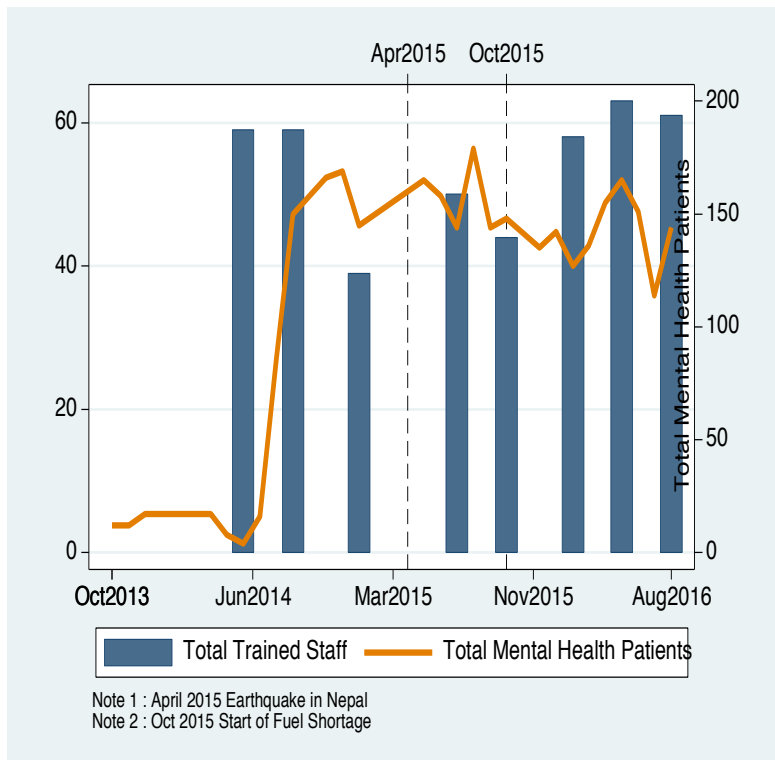
De Silva, et al (2016). Evaluation of district mental healthcare plans: the PRIME consortium methodology. *British Journal of Psychiatry*. 208(s56): s63 – s70 doi: 10.1192/bjp.bp.114.153858.



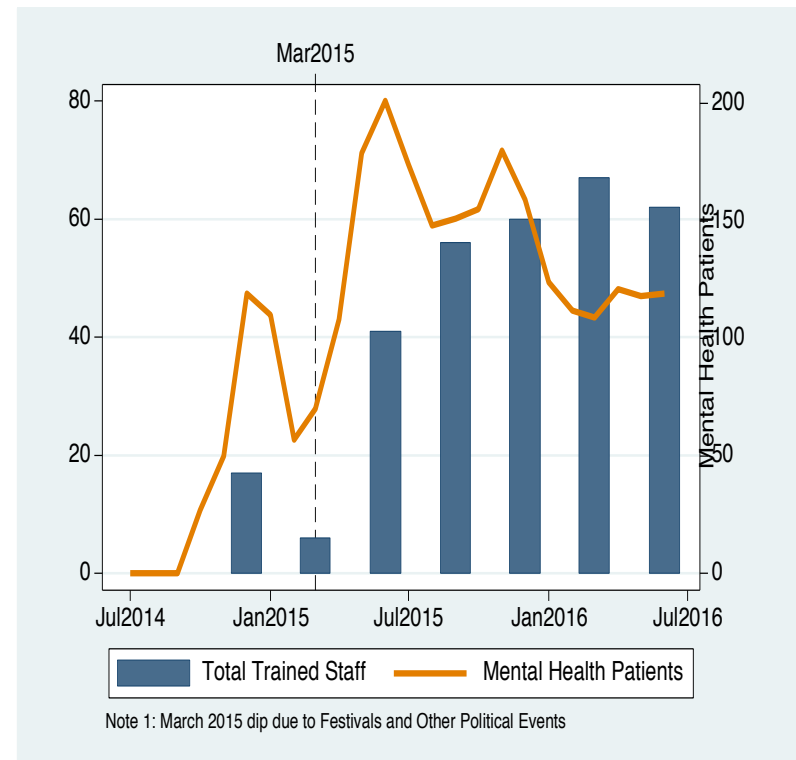
Alan J. Flisher Centre for
Public Mental Health

Number of Mental Health Patients & Trained Staff (preliminary findings)

Nepal



India



THE TIMES OF INDIA

CITY

Home City ▾ Bhopal Crime Civic Issues Politics Schools & Colleges Events

News Home » City » Bhopal

Mental care: Now, doctors in all districts

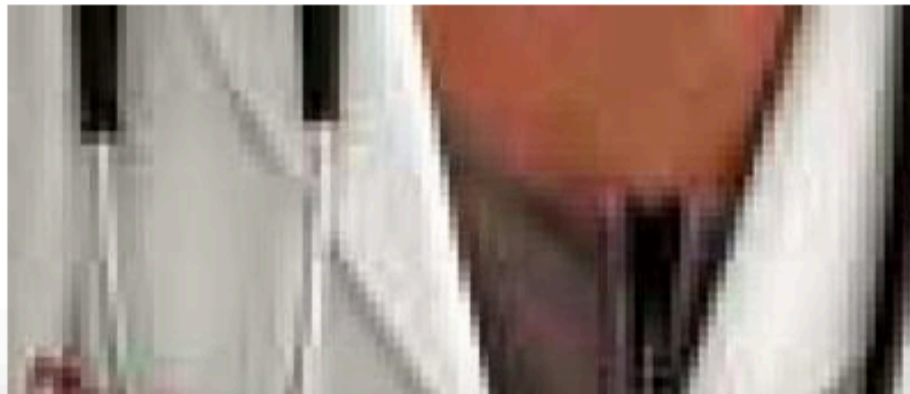
TNN | Updated: Sep 19, 2016, 08.01 AM IST



Ad

Council (Hiring)

Earn £10-£20 per hour. No Experience Required.



BHOPAL: With cases of mental health problems on the rise in the state, the government has decided to appoint a trained doctor and a nurse in each of the district hospitals.



Alan J. Flisher Centre for
Public Mental Health

5. Research Agenda



Alan J. Flisher Centre for
Public Mental Health

Research agenda

- Longitudinal epidemiological studies in LMIC, especially in Africa:
 - Mechanisms of poverty and mental health over time
 - Intergenerational poverty and mental health transmission
 - Gender, poverty and mental health
 - Linking genetic, biological and socio-economic risk factors
- Intervention studies:
 - RCTs targeting specific mechanisms:
 - Cash transfers combined with Psychological interventions
 - Violence prevention
 - RCTs targeting distal mechanisms:
 - Environment
 - Climate change
 - Migration
- ...linking cognitive neuroscience and behavioural economics



Alan J. Flisher Centre for
Public Mental Health

Research agenda

- “Piggy back” opportunities:
 - Include mental health outcomes in poverty alleviation and violence prevention trials (JPaL)
 - Include economic outcomes in mental health trials
- New initiative: EconIPV–MH (2017–2018)
 - Systematic reviews of the economic and IPV impact of mental health trials
 - Working with mental health trials in the



Alan J. Flisher Centre for
Public Mental Health

6. Who should fund and deliver?



Alan J. Flisher Centre for
Public Mental Health

Who should fund?

- Mental health is a public good: the means and end of development
- Return on investment case is clear: \$1 invested yields \$4 return (2015–2030)¹
- World Bank/WHO have committed themselves (April 2016)
- The answer is clear:
 - Governments, via public health insurance and taxation
 - International development agencies
 - Employers



1.
Chisholm
et al (2016)
*Lancet
Psychiatry.*



Alan J. Flisher Centre for
Public Mental Health

Who should deliver?

- All of us!
 - Psychiatrists
 - Psychologists
 - Development practitioners
 - People living with mental disabilities
 - Family members
- ...using a broad based approach that addresses both social causation and social drift



Alan J. Flisher Centre for
Public Mental Health

7. Conclusion



Alan J. Flisher Centre for
Public Mental Health

Conclusions

- Social and economic factors are powerful determinants of population mental health
- Further research is required:
 - To identify pathways, especially in relation to inequality
 - To evaluate interventions that address both social causation and social drift
- For policy makers: There is sufficient evidence to invest and scale up broad-based multisectoral interventions that address the causes and consequences of mental illness



Alan J. Flisher Centre for
Public Mental Health

Acknowledgements

- Annibale Cois, Vikram Patel, Johannes Haushofer, Sumaiyah Docrat, Dan Chisholm
- Programme for Improving Mental health care (PRIME: www.prime.uct.ac.za)
- Africa Focus on Intervention Research for Mental health (AFFIRM: www.affirm.uct.ac.za)
- Emerging Mental health systems in low and middle-income countries



Alan J. Fisher Centre for
Public Mental Health

Funding acknowledg

-



UKaid

from the Department for
International Development

wellcometrust



NIMH

National Institute
of Mental Health