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The Australian Research Centre for Population Oral Health
(ARCPOH)

Psychosocial determinants of oral health inequalities

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International Centre for Oral Health Inequalities Research & Policy

Launch conference, London 21st May, 2015

adelaide.edu.au

seek LIGHT



Outline

- Concepts and definitions
- Current research
- Theoretical challenges
- Methodological challenges
- Promising approaches
- Final remarks

Definitions of 'psychosocial'

"pertaining to the influence of social factors on an individual's mind or behaviours and to the interrelation of behavioural and social factors"

Oxford English Dictionary

In the context of health research can be seen as

1. Mediating the effect of social structural factors on health outcomes
2. Conditioned and modified by the social structures and contexts in which they exist

Martikainen P, Bartley M, Lahelma E. Psychosocial determinants of health in social epidemiology. *Int J Epidemiol* 2002; 31:1091-93.

Psychosocial epidemiology

Health inequalities result from the experience of chronic and acute psychosocial stressors through two mechanisms

1. Alter host susceptibility or became directly pathogenic (individual level)
2. Induce health damaging behaviours (individual level)

Krieger N. A glossary for social epidemiology. *J Epidemiol Community Health* 2001; 55:693-700.

Current research in health

How has this term been used in the literature?

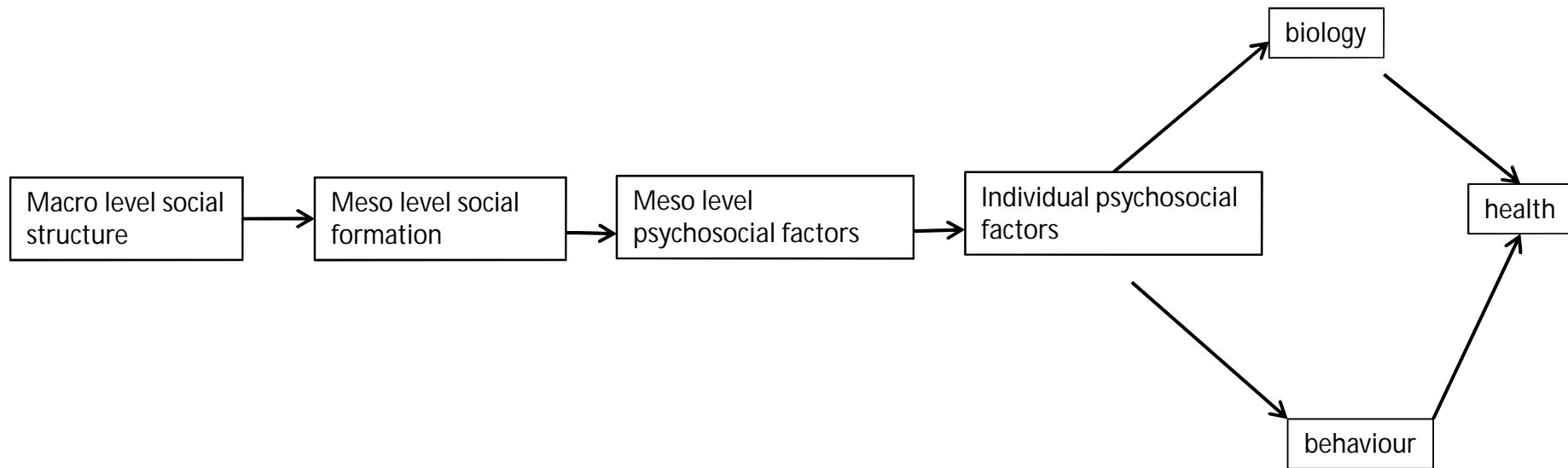
Psychosocial is used as an umbrella term

- ✓ Diverse research inquiries
- ✓ Without consideration on the pathways
- ✓ It refers to everything and nothing in particular

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Psychosocial pathways



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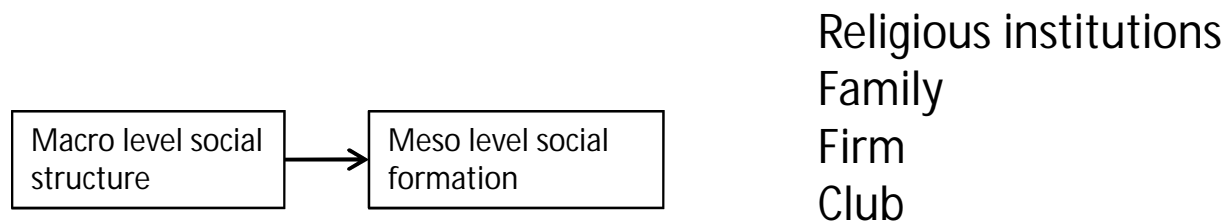
Psychosocial pathways

Macro level social
structure

Ownership and control of the land and business
Legal and welfare structures
Distribution of income and other resources

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Psychosocial pathways



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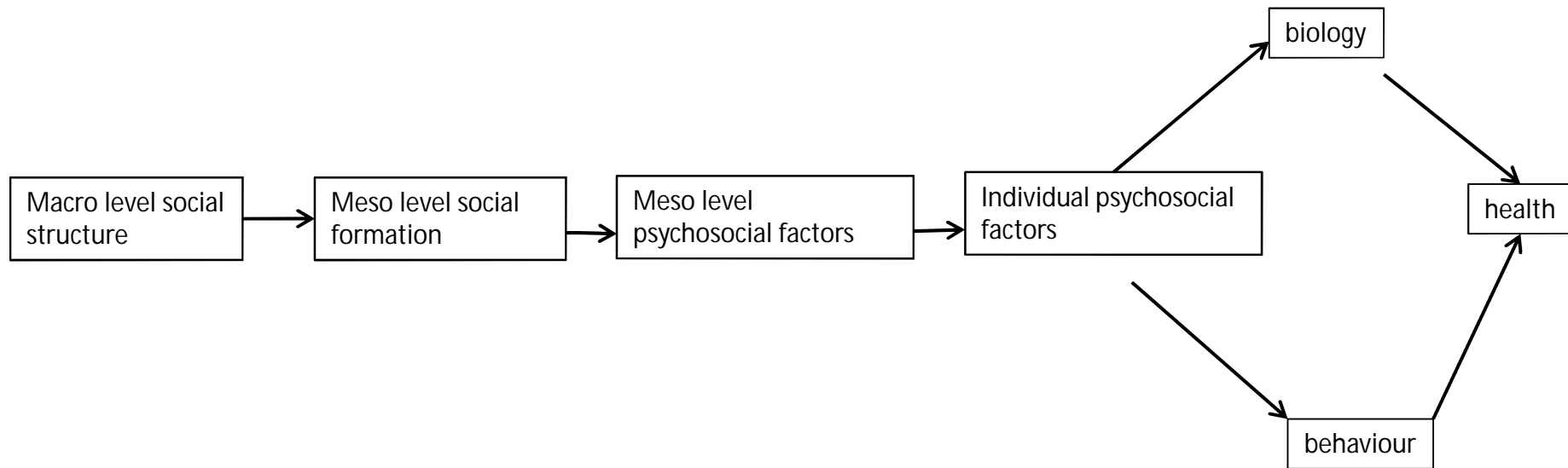
Psychosocial pathways



Social network and support
Work control
Effort/reward balance
Security and autonomy
Home control
Work-family conflict

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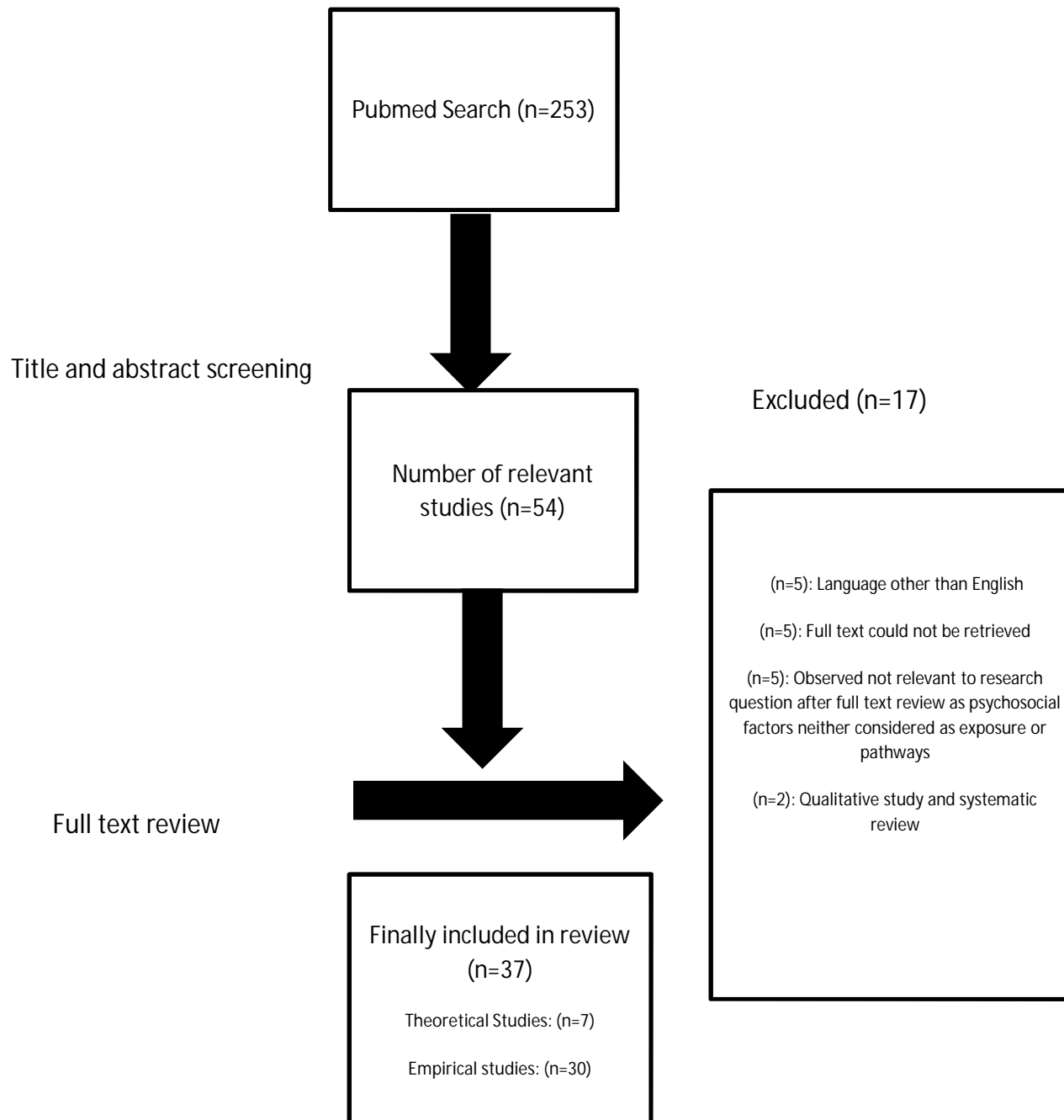
Psychosocial pathways



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Current level of evidence on psychosocial factors role in oral health inequalities

(((((Oral Health[TIAB] OR Tooth Loss* [TIAB] OR Decayed Missing and Filled Teeth[TIAB] OR DMF* [TIAB] OR Edent* [TIAB] OR Dental Status* [TIAB] OR Periodontitis [MH] OR Periodont* [TIAB] OR Caries [TIAB] OR Toothach* [TIAB] OR Dental pain [TIAB])) AND ((Inequalit* [TIAB] OR Disparit* [TIAB] OR Inequit* [TIAB] OR Difference* [TIAB] OR Discriminat* [TIAB] OR Depriv* [TIAB])) AND (Psychosocial Deprivation* [TIAB] OR Social Capital* [TIAB] OR Psychosocial [TIAB] OR Social Cohesi* [TIAB] OR Interpersonal Relations [MH])))



Theoretical papers

Atchison KA, Dubin LF: Understanding health behavior and perceptions. Dental clinics of North America 2003; 47(1):21-39.

Horowitz AM, Kleinman DV: Oral health literacy: a pathway to reducing oral health disparities in Maryland. Journal of public health dentistry 2012; 72 Suppl 1:S26-30.

Petersen PE, Ogawa H: The global burden of periodontal disease: towards integration with chronic disease prevention and control. Periodontology 2000 2012; 60(1):15-39.

Thomson WM, Sheiham A, Spencer AJ: Sociobehavioral aspects of periodontal disease. Periodontology 2000 2012; 60(1):54-63.

Watt RG: Emerging theories into the social determinants of health: implications for oral health promotion. Community Dentistry and Oral Epidemiology 2002; 30(4):241-247.

Watt RG: From victim blaming to upstream action: tackling the social determinants of oral health inequalities. Community Dentistry and Oral Epidemiology 2007; 35(1):1-11.

Watt RG, Petersen PE: Periodontal health through public health--the case for oral health promotion. Periodontology 2000 2012; 60(1):147-155.

Summary of empirical studies

Aida et al., 2008
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Aleksejuniene et al., 2000
Armfield et al., 2013
Borrell et al., 2007
Boyce et al., 2010
Bright et al., 2015
Broomhead et al., 2014
Castro et al., 2006
da Silva et al., 1996
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Dumitrescu et al., 2008
Dumitrescu et al., 2009
Finlayson et al., 2007
Finlayson et al., 2010
Page et al., 2013
Lida & Rozier, 2013
Jung et al., 2011
Locker, 2008
Machry et al., 2013
Mathur et al., 2014
Moss et al., 1994
O'Sullivan & Tinanoff, 1993
Pattussi et al., 2001
Pattussi et al., 2006
Renzaho & de Silva-Sanigorski, 2013
Sabbah et al., 2008
Siriphant & Drury, 2005
Solis et al., 2004
Thomson et al., 2012
Vazquex et al., 2015

- ✓ Recent
- ✓ 10 USA; 5 Brazil; 4 UK; 2 Australia; 2 Japan; 2 Romania; 1 Lithuania, NZ, Korea, Canada, and India
- ✓ Children, adolescents, adults, older people
- ✓ 4 Case control; 26 Cross sectional
- ✓ Social capital, social support, social cohesion ↑
mental well being, stress, anxiety, depression,
psychosocial stressors ↓
- ✓ 21 exposure, 6 pathway, 3 exposure and pathways

Summary of empirical studies

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Vazquex et al., 2015

- ✓ 8 contextual, 22 individual

- ✓ dental caries (11), SROH (9), perio (6), remaining teeth, plaque, toothache, bad breath, fracture, dental care utilisation (1 each)

- ✓ 22 regression modelling, 3 multilevel analysis, 4 descriptive statistics, 1 SEM

- ✓ 16 studies supporting that unfavorable psychosocial factors are associated with worse oral health

- ✓ 9 studies assessed mediation of SEP → oral health
 - ✓ 4 found not mediation
 - ✓ 5 found partial mediation

Theoretical challenges

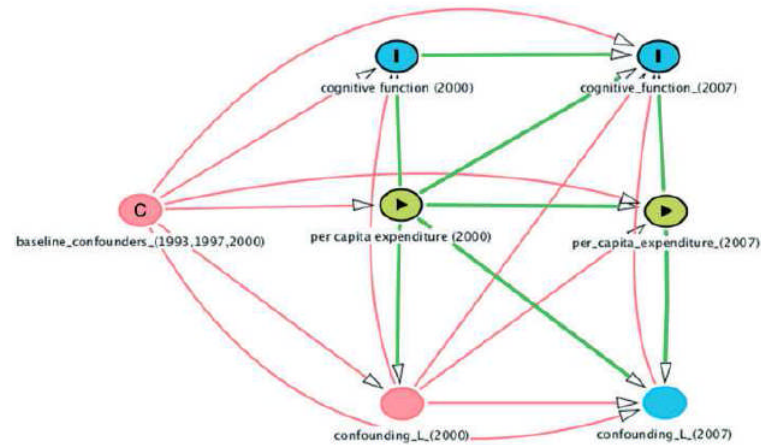
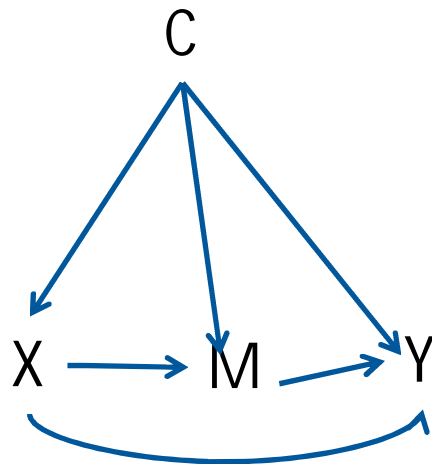
- ✓ Are they (psychosocial) independent causes of diseases? Or mediators of macro level social factors?
- ✓ If they are (partial) mediators then which other theoretical pathways should be considered and tested?
- ✓ Social capital or social network (construct or representational methodology)
- ✓ Social capital and social cohesion as population level psychosocial assets (Krieger 2001)

Methodological challenges

- ✓ Limitations of multilevel modelling with causal modelling
- ✓ Abstract definition leading difficulty of choice variables
- ✓ Definition of social structure and its measurement affecting the relative explanatory power of theoretical pathways
- ✓ Lack of longitudinal studies

Promising approaches

- ✓ Deeper understanding of the origins of the theoretical pathways
- ✓ Building consensus and agreements on terminologies and definitions – robust measurements
- ✓ Longitudinal studies and venture into causality – DAGs and counterfactual modelling, MSM



Maika et al. 2014

Final remarks (instead of conclusion)

- ✓ The need of specifying theoretical causal relationships
- ✓ Psychosocial approaches as a pathway – mediating the influences of social determinants on health
- ✓ Other approaches – life course, neo-materialist, Ecosocial
- ✓ Data analysis is fruitless in the absence of good theory

Acknowledgements

- PhD student Ankur Kumar Singh, ARCPOH
- Dr Jane Harford, ARCPOH
- Associate Professor Karen Peres, ARCPOH



Thank you!!!

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