

What has WHO Health Behaviour in School-Aged Children (HBSC) Study contributed to understanding of biosocial determinants of adolescent mental health?

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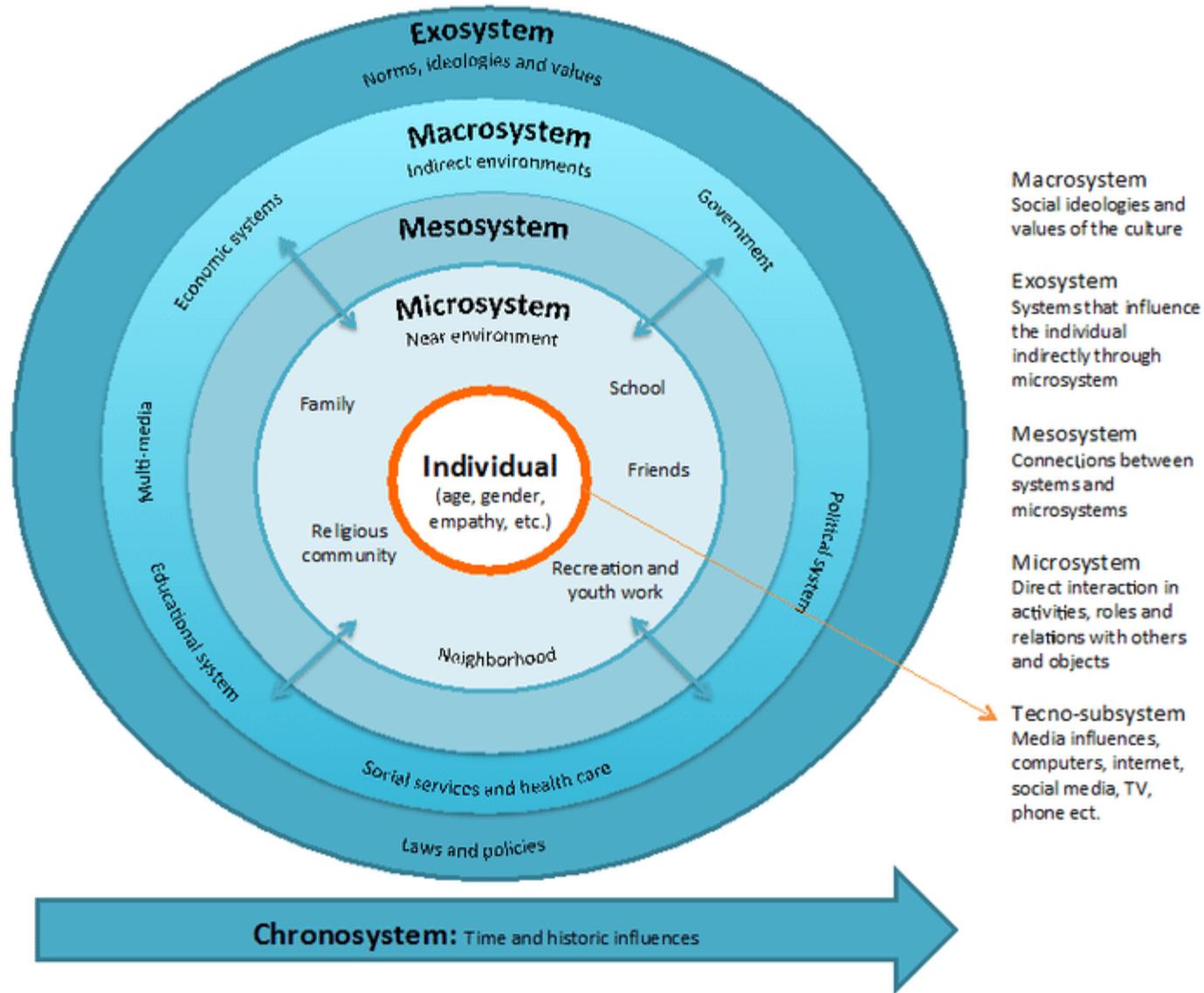
“YOUNG PEOPLE'S MENTAL HEALTH - A GLOBAL CHALLENGE”

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An unsurpassable data resource on international adolescent mental health

- ▶ Since 1985: 9 quadrennial surveys in a growing number of countries (in beginning with 5 and now almost 50)
- ▶ In total 298 national HBSC surveys conducted over 35 years
- ▶ More than 1.5 million 11, 13 and 15 year olds have been surveyed
- ▶ That is a lot of data! What have we found out about adolescent mental health?
- ▶ 1000 papers have been published from HBSC and of these 120 have a primary focus on mental health

Bronfenbrenner's Bioecological Model of Human Development



Bio-ecological conceptual model of adolescent mental health (Bronfenbrenner)

- ▶ Individual and developmental factors
- ▶ Health & health related behaviours

- ▶ Individual embedded in the context of social micro-systems
 - ▶ family, peers, school, community

- ▶ Individual and micro-system factors are embedded in meso-systems
 - ▶ Interacting micro-systems
- ▶ Macrosystems - societal level factors
- ▶ Exosystem - norms and values
- ▶ Chronosystem - trends over time

How has 'mental health' conceptualised and measured in HBSC?

- ▶ Multiple understandings of 'mental health' appear to co-exist;
- ▶ Same measures - self rated health, symptoms and life satisfaction are used but from quite different theoretical and terminological perspectives
- ▶ Term 'mental health' first seen in a paper title in 2004
- ▶ In last 10 years, there has been use of term 'mental well-being', also:
 - ▶ perceived well-being
 - ▶ emotional well-being
 - ▶ spiritual well-being
 - ▶ social well-being
 - ▶ subjective well-being.

How is 'mental health' conceptualised and measured in HBSC?

- ▶ Multiple understandings of 'mental health' appear to co-exist;
 - ▶ Subjective health/ subjective health complaints since 2000
 - ▶ Psychological complaints/ psychological symptoms appear in titles between 2009 and 2019.
 - ▶ Psychosomatic complaints/psychosomatic symptoms found in titles only in last ten years
 - ▶ Life satisfaction has appeared in titles of 22 papers since 2009
 - ▶ Only 6 papers on depression and anxiety

Organising the material on mental health produced by HBSC

- ▶ Notwithstanding complexity in how mental health is conceptualized all 120 abstracts were scanned
- ▶ Empirical evidence was organised according to bio-ecological model in order to synthesise key findings
- ▶ This was to evaluate:
 - ▶ where there were significant contributions to knowledge/ understanding of mental health
 - ▶ where this was limited
 - ▶ and where real gaps existed

Individual level

- ▶ **Age/ Developmental patterns in mental health**



- Age - mental health problems tend to be more prevalent with age and particularly among girls



- Pubertal development - NO PAPERS



- Associations between mental health and other aspects of health**



- Relationship with overweight - esp in girls and is getting stronger across surveys



- Relationships between indicators of mental health, social well-being and physical health - e.g. loneliness predicts health complaints and increases with age



- Sense of Coherence - has stress-preventive, stress-moderating and health-

Associations between mental health and other aspects of health

Associated with overweight - esp in girls and is getting stronger across surveys

- ▶ Relationships with other indicators of mental health, social well-being and physical health - e.g. loneliness predicts health complaints and increases with age
- ▶ Sense of Coherence - stress-preventive, stress-moderating and health-enhancing effects
- ▶ Spirituality associated with better self-rated health, fewer health complaints, and greater life satisfaction.
- ▶ Relationship with medicine use - strongly associated with the frequency of health complaints
- ▶ Disabilities - associated with more symptoms and lower health perception than their nondisabled peers.
- ▶ Having a chronic condition (CC)- less likely to rarely or never be 'sad/depressed', 'irritated/bad humour', 'nervous', 'fearful' or 'so sad that it seems I can't take it', compared with their healthy peers.

Associations between mental health and risk behaviours

- ▶ Smokers were more likely to report lower life satisfaction, higher rates of health complaints and poorer health than non smokers
- ▶ Alcohol use
 - ▶ stronger association was found between weekly alcohol use and problems among younger adolescents
 - ▶ ‘Risky single occasion drinkers’ (RSODs) had lower life satisfaction and generally more depressive moods; solitary RSODs even less satisfied and more depressive than social ones
- ▶ Cannabis use
 - ▶ not linked to internalising problems (withdrawn behaviour, somatic complaints and depression)
- ▶ Sexual behaviour
 - ▶ early age at sexual initiation was not related to symptoms among boys in any nation, but significantly positively related to symptoms among girls in Poland and the US.

Associations between mental health and anti-social behaviour

▶ Bullying

- ▶ over time, female (not male) victims reported less confidence and happiness and more psychological complaints than their non-bullied counterparts
- ▶ 'pure victims' and 'bully/ victims' more likely to rate their health as fair or poor, experience weekly health complaints, and report low life satisfaction.
- ▶ some but fewer problems for pure bullies

Associations between mental health and anti-social behaviour

▶ Cyber Bullying

- ▶ effect of cyberbullying on girls is different to boys with girls more likely to report emotional symptoms, especially fear and sadness, and boys more likely to externalise
- ▶ students experiencing cyberbullying had lower life satisfaction than those who were not bullied
- ▶ victims of cyberbullying was positively associated with students' psychological and somatic symptoms, after controlling for traditional bullying victimization and computer use.

Comment

- ▶ Compared to other topics there are a large number of HBSC papers on bullying
- ▶ There are no papers on prosocial behavior
- ▶ Acts of kindness - the opposite of bullying - are not measured in HBSC
- ▶ Recently a new measure has been developed - School Kindness Scale (Binfet et al., J.T.,2016) which potentially HBSC could adopt

Associations between mental health and physical activity/ being in nature

▶ Physical Activity

- ▶ Physical activity was associated with better mental health (life satisfaction and in particular self-esteem), especially in lower affluence families
- ▶ Protective effect of physical activity appeared to be stronger in small towns and villages than in big cities
- ▶ Even below recommended levels of physical activity appear to be associated with high levels of life satisfaction, self-rated health and an improved sense of body image



Associations between mental health and physical activity/ being in nature

- ▶ Being outdoors/ in nature
 - ▶ More time outdoors was associated with lower prevalence of high psychosomatic symptoms in girls
 - ▶ Perception of connection to nature as 'important' associated with reduction in prevalence of high psychosomatic symptoms for both sexes
 - ▶ Relationships between measures of natural space and positive emotional well-being were weak and lacked consistency overall, but modest protective effects were observed in small cities.

Associations betw mental health and diet and sleep

- ▶ Diet -NO PAPERS!

- ▶ Sleep

- ▶ A later chronotype associated with poorer mental health, independent of sleep duration and school start time
- ▶ Sleeping less than recommended and sleep initiation difficulties associated with increased complaints and greatest complaint load.
- ▶ School pressure and screen time positively associated with psychological symptoms, mediated by sleep duration and sleep onset difficulties.
- ▶ More frequent computer use associated with a higher frequency of psychological symptoms, and difficulty in getting to sleep partly mediated this association

- ▶

Microsystems: Family and School

Associations betw mental health and family

▶ Family relationships

- ▶ Frequency of family dinners negatively related to internalizing symptoms and positively related to emotional well-being and life satisfaction
- ▶ Parental encouragement for school has a specific positive effect on adolescent mental health, beyond effect of school environment and family communication



Family structure

- ▶ Living arrangements post-parental separation - few differences were observed and can be partially explained by socioeconomic disparities



Associations betw mental health and school

- ▶ **School environment, school performance and teacher relationships**
 - ▶ Feeling under pressure from schoolwork and tired by schoolwork predicts psychosomatic complaints but extent varies by country.
 - ▶ Pupils with average/ low ‘perceived school performance’ (PSP) showed higher likelihoods of psychosomatic complaints and those who attend high PSP classes at more risk
 - ▶ Effects of school transitions on school connectedness and emotional symptoms vary betw countries eg Denmark and Australia - depending on support provided
 - ▶

Associations betw mental health and school

- ▶ School social capital and trust may reduce mental health problems and diminish socioeconomic inequalities in MH
- ▶ +ve School climate and peer support beneficial effects on psychosomatic complaints
- ▶ +ve association between MH and school achievement and enjoyment. Also where attending a 'health promoting school'
- ▶ +ve association between teacher connectedness & emotional well-being of adolescents
- ▶ Disciplinary climate in schools predict student health and wellbeing outcomes
- ▶

Mesosystem effects:

interactions betw school, family and peer relations

Mesosystem effects

- ▶ **Family, peer and school micro-systems interact to influence adolescent health**
 - ▶ Positive relationships with family and school staff were consistently associated with better outcomes
 - ▶ Support from friends was associated with better subjective wellbeing and mental health
 - ▶ Better relationships with school staff were most strongly associated with positive subjective wellbeing & fewer MH symptoms where pupils have less family support.



Mesosystem effects

▶ Peers and parents

- ▶ Adolescents with better communication in both social contexts show least psychological complaints
- ▶ However, good communication with peers does not improve their experience of psychological complaints if communication with parents is not good
- ▶

Socioeconomic inequality

Parental occupation

- ▶ Increasing odds for low positive MH with decreasing socioeconomic position, but no socioeconomic patterning of high positive MH

Parental unemployment

- ▶ Adolescents emotionally affected by father's unemployment but not mother's
- ▶ However, among older boys and girls, same-gender parent's unemployment had negative effect on their well-being
- ▶ Low SES girls with poor family satisfaction more likely to report negative emotional well-being related to parental unemployment



Socioeconomic inequality

- ▶ Family affluence
- ▶ In general higher FAS and higher perceived well-off associated with better MH outcomes
- ▶ **Relative deprivation and rank affluence across countries**
 - ▶ related more closely to symptoms than absolute affluence
 - ▶ related to symptoms after differences in absolute affluence were held constant
 - ▶ However, differences in family material assets, whether they are measured in absolute or relative terms, account for a significant variation in adolescent psychosomatic symptoms
- ▶

Gender inequality

▶ Gender

- ▶ Very robust pattern of increasing gender differences in MH across age, with 15-year-old girls as a group at increased risk for health complaints across all countries.
- ▶ Magnitude of gender differences varied across countries, some countries showing a consistently strong gender difference across age group and different health complaints, and other countries showing a consistently weak gender difference
- ▶ Gender difference in health complaints was stronger in countries with a low gender development index score

Further MH inequalities

- ▶ Migrant health - migrant v non-migrant; different migrant categories
- ▶ Adopted children
- ▶ Rural v urban

- ▶ Inter-sectional inequalities:
 - ▶ Socio-economic
 - ▶ Gender
 - ▶ Migrant

- ▶ Macro-level influences
 - ▶ Human development index
 - ▶ Gender development index
 - ▶ MIPEX - migrant integration index

Summing up

- ▶ Vast array of papers on adolescent mental health
- ▶ Strong focus on bullying, school, inequalities
- ▶ Lack of attention to role of friendship and prosocial behavior
- ▶ Apart from parents, role of family members including grandparents and siblings neglected
- ▶ Deeper investigation needed into behaviours that support positive MH
- ▶ Bio-ecological model helps to organize evidence to provide a picture of what HBSC has achieved and where gaps exist