

Project description

PROCESSES THAT BUFFER AGAINST YOUTH MENTAL HEALTH PROBLEMS: A LONGITUDINAL-EXPERIMENTAL APPROACH

*(PROCESSER SOM KAN MOTVERKA ATT UNGDOMAR UTVECKLAR PSYKISKA PROBLEM: EN
LONGITUDINELL-EXPERIMENTAL DESIGN)*

Background

Despite decades of research on the development of youth mental health problems, systematic knowledge is lacking in two areas, and this prohibits us from developing effective interventions. One is the high comorbidity among different problems, which suggests that they might have the same root causes. The other is buffering effects, or factors that might offset problem development. Knowledge in these two areas would suggest how interventions could be best targeted to have the greatest effects. To build such knowledge, a new approach is needed.

Theoretical starting point: The transdiagnostic perspective

The transdiagnostic perspective on mental health problems is a relatively new approach that was developed to explain the high comorbidity of problems (Harvey et al., 2004). Comorbidity refers to the phenomenon that people diagnosed with one condition are likely to have other diagnoses, and comorbidity of problems is the rule rather than the exception. The main idea of the transdiagnostic perspective is that different mental health problems are maintained by similar cognitive and behavioral factors - for example self-focused attention, avoidant behavior, worry and rumination (Ehring et al., 2008; Harvey et al., 2004). In research to date, the transdiagnostic perspective has proven useful for understanding factors that maintain various internalizing and externalizing disorders.

Before problems can be maintained, they must develop, so the question is whether different problems share common developmental processes. In this research program, we extend the transdiagnostic reasoning from maintaining factors to initial causes. We define a “transdiagnostic risk factor” as any factor involved in the development or maintenance of multiple mental health problems.

What does the transdiagnostic perspective have to do with buffering processes? It suggests that if there are processes underlying the development of multiple (comorbid) mental health problems, then there should also be processes that can buffer against multiple problems.

If transdiagnostic buffering effects can be identified, they could be used as a basis for interventions that would prevent a variety of problems.

Challenges for understanding comorbidity and buffering processes

Understanding comorbid problem development and buffering processes presents several challenges that will be addressed in this program. One challenge is to use research designs that can show when problems emerge and when they lessen or disappear. Such designs must be longitudinal, because only longitudinal designs can show these kinds of changes over time. In addition, only longitudinal studies can show the timing of changes, thus allowing researchers to infer, for instance, that increases in alcohol drinking deepen depression rather than increased depression prompting more drinking. In short, because problem development and buffering processes take place over time, they can only be captured by studies that take place over time - longitudinal studies.

A second challenge for understanding comorbid problem development and buffering processes is to incorporate designs that show what causes changes in mental health. Longitudinal studies show what happened prior to improvements or worsening in mental health, and they have high ecological validity, but experimental designs give the strongest evidence that one process or event actually caused a change in mental health. Longitudinal studies combined with experimental interventions are therefore the strongest for generating conclusive findings.

A third challenge is to assess all the relevant contexts. Each day youths interact with peers and adults in different contexts, and these interactions are strongly linked to mental health problems. Typically, contexts are studied one at a time - family, school, or free time. Individual characteristics are typically studied independent of contexts, as for example in research on negative thinking patterns associated with anxiety and depression. Thus, much is known about risk or protective conditions in one context at a time or independent of contexts, but less is known about whether experiences in one context might buffer or accentuate the effects of those in another. Multiple contexts must therefore be studied to understand when problems emerge in different contexts and how they are related.

A fourth challenge is to understand the links between mental health and physical health. Physical lifestyle factors such as diet, exercise, sleep habits, and use of caffeine, nicotine, and medications can have implications for both physical and mental health, but they are seldom included in research on mental health. Thus, the challenge for research is to

account for physical lifestyle factors and physical health as possible buffers against mental health problems.

In short, there are a number of design features that must be incorporated into studies aimed at understanding risk and buffering processes in the development of youth mental health problems. To date, however, there are no studies that have met the challenge of incorporating all these features. The study design includes features that will allow us to meet the challenges mentioned above. It is longitudinal, so it can assess change. It incorporates experimental components. It includes assessment of processes in different contexts -family, peers, and free-time activities- and it includes physical health.

Specific Aims and Objectives

In this research program, the aim is to identify the contributing factors and buffers that are common to various mental health problems. The point of departure is that the comorbidity of problems provides a key to being able to intervene in ways that will have the maximum effects - providing buffering effects on multiple mental health problems at once, or transdiagnostic buffering effects. The focus is on *four risk factors* in adolescent experience for which research evidence suggests transdiagnostic effects, or links to multiple mental health problems - poor sleep, stress, harsh parenting, and peer harassment.

1. Stress and 2. Sleep. The lifestyle of youth has changed dramatically over the past 25 years and has a suspected impact on sleeping patterns and exposure to stress. Major changes have been observed for physical activity, the use of electronic devices e.g. computers and phones and there is concern that modern technology is resulting in media overload and multitasking since they are available 24 hrs, seven days a week. These changes may directly influence sleep and stress. Both sleep (Harvey, 2008) and stress are transdiagnostic factors since they both impact on future health (Dahl & Gunnar, 2009). Furthermore, sleep and stress are related so that poor sleep is a stressor and the experience of stress is the main cause of sleep problems reported by poor sleepers (Jansson & Linton, 2006; MacDonald, 2011). Sleep and stress also share a basic link to emotion regulation and several personal and interpersonal factors at home, at school, and in the peer contexts (Dahl & Lewin, 2002). To investigate whether good sleep and stress buffer against mental health problems and are not simply a consequence of them, the longitudinal study design will enable us to determine the direction of factors over time. This study also integrates a number of contexts, including social development with peers, to better understand which factors work as buffers. The longitudinal

study will feature measures of mental and physical health as well as lifestyle factors, so the effects of physical health and lifestyle can be accounted for in the relationship between sleep or stress and mental health. The design will also allow us to evaluate the relationship between factors e.g. the relationship between stress and sleep in the development of good mental health. Because emotion regulation is a mechanism by which sleep may impact on mental health and which is associated with psychological problems, sensitive measures of emotion regulation will be included. By utilizing the information about peers, the interaction with social relationships will also be illuminated.

3. Harsh parenting. Using data from the longitudinal study, we will test a model in which harsh parenting results in increased emotion dysregulation, which leads to various types of externalizing and internalizing mental health problems (i.e., has transdiagnostic effects). In this work, we will consider potential buffering effects of supportive peer relationships; good relationships with adult relatives, teachers, or adults in organized activities; and mastery experiences in school and activities. Because the longitudinal data will contain comprehensive measures of parenting, adolescent adjustment, and peer relationships from both individuals' and peers' perspectives, we will be able to develop a thorough understanding of these processes.

4. Peer harassment. With the longitudinal data from this program, we will examine intolerance as a precipitating factor for peer harassment. We will also examine peer influence on youths' intolerance and harassment and test hypotheses about various buffering effects. In addition, we will examine the links between intolerance, peer harassment, and membership in specific youth organizations, and whether these behaviors seem to change when youths enter different associations. Finally, we will examine to what extent personal and ethnic peer harassment predict increased mental health problems over time.

The objectives in this program are:

- (a) to study these risk factors longitudinally, identifying possible buffering effects
- (b) to test ways of intervening to reduce problem development
- (c) to communicate the findings strategically into a wider societal context.

Program Description

Overview

This program uses a longitudinal-experimental approach, which is the most sophisticated design for these purposes (see Farrington, 2008). The longitudinal study, beginning with 7th and 8th graders (13 and 14 year olds), will run for five years (2014-2018), with yearly data collections involving multiple informants: youths, parents, and peers. During the second and third year (2015 and 2016), embedded experimental interventions will take place (targeting stress, and parenting). Experimental interventions targeting peer harassment and sleep that are not imbedded in the longitudinal design will complement the program.

Measures

The following measures and variables are included in the adolescent longitudinal study.

The Adolescent Sleep Hygiene Scale (ASHS); the Insomnia Severity Index (ISI); the School Sleep Habits Survey (SSHS); the Adolescent Stress Questionnaire (ASQ); the Perceived Stress Scale (PSS); the Health Behavior in School-Aged Children symptom checklist (HBSC); the Social Phobia Screening Questionnaire for Children (SPSQ-C); the Overall Anxiety Severity and Impairment Scale (OASIS); the Overall Anger Severity and Impairment Scale (A-OASIS); the Penn State Worry Questionnaire (PSWQ); the Children's Response Styles Scale (CRSS-rumination subscale); the Co-Rumination Questionnaire (short version); the Emotion Regulation Questionnaire for children and adolescents (ERQ suppression subscale); the Cognitive-Behavioral Avoidance Scale (CBAS, social avoidance subscale); Rosenberg Self Esteem Scale (wave 1 only); Youth Psychopathic traits Inventory (YPI); Epidemiological Studies Depression Scale for Children (CES-DC); the Short-Personal Experiences Checklist (PECK); the Inventory of Parent and Peer Attachment-revised (IPPA-R); Dependency Oriented and Achievement Oriented Psychological Control scale (DAPCS dependency oriented subscale); Alabama Parenting Questionnaire (APA-inconsistent discipline subscale); questions on different sociodemographic features of the youths and their families, media habits, physical activity, delinquency/normbreaking, drinking, loitering, intercourse, skipping school, failure expectations, friendship nominations, friendship quality, class climate, bullying, experience of violence (victim and perpetrator perspective), tolerance, impulsivity/urgency, self-harm, anger dysregulation, parents' attempted understanding (wave 1 only), parental warmth (wave 1 only), parental attachment/connectedness (wave 1 only), parents bad reactions to disclosure, coldness/rejection (wave 1 only).

Components of the Program

The longitudinal study.

The core of the program is a five-year longitudinal study conducted in three communities (Örebro, Karlskoga and Köping). All 7th and 8th graders (13- and 14-year-olds) in these communities were targeted ($N \approx 3,200$). Adolescents are recruited in schools and assessed yearly, in class, using the above-mentioned measures. In addition, primary caregivers to the adolescents participating in the longitudinal study will be assessed with a questionnaire (sent to the home address) 2015 and 2016. Parent assessment are used as a complement to adolescent reports as well as to identify participants for the parenting intervention.

Experimental components embedded in the longitudinal study.

Harsh parenting. Harsh parenting is a potential transdiagnostic risk factor, because it has been linked to internalizing problems, such as poor self-esteem, depression, and self-harm, and externalizing problems such as bullying and aggression against peers, childhood conduct problems, and adolescent delinquency. It has also been linked to emotion regulation, which suggests that harsh parenting might interfere with regulation of negative affect such as anger and anxiety, which in turn, opens the door to both internalizing and externalizing problems (see Shields & Cicchetti, 1998). There is empirical support for this mediation process when it comes to aggression toward peers. However, research also shows that youths who experience harsh parenting are also *victims* of bullying and aggression and it may be their poor emotion regulation that makes them targets for peers' aggression (Sheilds & Cicchetti, 2001). This model, however, has not been tested for mental health problems more broadly.

The parenting intervention. This trial will investigate the Parent Management Training program 'iComet' (Enebrink, Högström, Forster & Ghaderi, 2012) is beneficial for decreasing parenting problems and for decreasing the risk for adolescent mental health problems. The program is based on the principles of cognitive behavioral therapy and is administered via the internet. By giving parents tools to build and strengthening the relationship to their adolescent, this intervention will try to influence parenting problems, as well as influence adolescent trajectories in the development of mental health problems. The intervention will be offered to randomly selected participants that have self-reported problems in their role as parent. Those with self-reported problems in the role as a parent who are not randomly selected to the intervention group are followed longitudinally as a silent control group.

Parents in the municipalities Karlskoga and Köping will be part of this project. The Parent Management Training program intervention will take place in the beginning of 2016.

Stress. Although stress has not traditionally been classified as a transdiagnostic factor for mental health, there is evidence that it should be. Various stressors may result in deterioration in internalizing problems, e.g. stressors during childhood are risk factors for depression (Tennant, 2002). Further, exposure to stressful events may increase vulnerability to externalizing problems e.g. substance addiction in adults (Uhart & Wand, 2009), and the chronic activation of the human stress system has been closely linked to the development of physical ill-health (Juster, McEwen, & Lupien, 2010). Thus, preventive programs that impact on stress may result in health benefits.

Stress: A indicated prevention trial. This trial will investigate whether a stress prevention program is beneficial for mental health in youth. Our hypothesis, based on findings on adults (Richardson et al., 2008), is that the stress management program, relative to a control group, will result in a larger reduction in perceived stress but also in larger decreases in mental health problems as well as a preventative effect on mental health problems. Using an experimental design we will compare an preventive training program to decrease stress and worry with a passive control group. The training program is an internet based indicated prevention program developed by researchers from England and the Netherlands (Ehring, Topper, Emmelkamp & Watkins). The program is based on CBT and aims to identify excessive worry/anxiety when in stress and to replace this with other strategies such as problem-solving, relaxation, concrete thinking etc. The prevention program was tested in adolescents (15-19) and was shown to reduce depressive symptoms and anxiety at post measurement and follow-up (Ehring, Topper, Emmelkamp & Watkins). We plan to perform this study in 9th graders and in 1st grade gymnasium students in schools in Örebro municipality that have been randomly selected for the intervention, during the fall of 2015 and the spring of 2016.

Experimental components not embedded in the longitudinal study.

Poor sleep. Sleep is a key transdiagnostic factor in maintaining mental and physical health (Harvey, 2008). While good sleep is associated with health, poor sleep is linked to a variety of problems in youth (Dahl & Lewin, 2002) and even small amounts of sleep deprivation result in problematic emotion regulation (Talbot, McGlinchey, Kaplan, Dahl, & Harvey, 2010), which might also interfere with school performance. It is also related to

several aspects of physical ill- health e.g. obesity (Must & Parisi, 2009). Social interactions e.g. with peers might be central factors in poor sleep at the same time as poor sleep may be socially disruptive (Dahl & Gunnar, 2009). Together this suggests that good sleep may have a powerful buffering effect against a variety of problems as well as promoting school achievement.

Sleep: A primary prevention trial. The aim of this primary intervention trial is to test a new intervention to improve sleep hygiene. The idea of the intervention is to create new standards of sleep and to influence how adolescents use social media, a major interferent will sleep. We are planning to intervene on a classroom level where we will discuss and problem solve different areas that affect adolescents evening and night habits. We also have the ambition to integrate adolescent use of technology. The population in focus for this intervention are youths in schools within the municipality of Örebro, that are in 7th and 8th grade in 2016. A pilot for this project will be conducted during the fall of 2015.

Peer harassment. Peer harassment may also be a transdiagnostic risk factor. Personal harassment from peers has been shown to be strongly associated with a range of mental health problems in adolescence (e.g., Bukowski & Kramer, 1986; Newcomb & Bukowski, 1999). Ethnic harassment, or repeated negative and threatening behaviors towards ethnic minorities, is even more strongly associated with several mental health problems, irrespective of personal harassment (Strohmeier, Kärnä, & Salmivalli, 2010). Both forms of peer harassment revolve around perpetrators being intolerant about personal and ethnic differences. Perpetrators of personal and ethnic bullying have been shown to hold strong and stable intolerant beliefs about victims, with the core idea being that victims are unequal to them in social status (see Ttofi & Farrington, 2011 for a review). Thus, personal or ethnic peer harassment, which seems to be rooted in intolerance, can be seen as a transdiagnostic risk factor in adolescence. It is, therefore, reasonable to believe that reducing intolerance among those who might harass others could have buffering effects on mental health problems for youth in the immediate social environment. Intolerance is thought to be maintained by negative stereotypes of people with certain characteristics (personal characteristics or ethnicity). Negative stereotypes are applied to all individuals with certain characteristics through faulty inductive reasoning, and those people become targets for harassment. Youth associations have been claimed to reduce intolerance because they foster close cooperation and equality, thus undermining negative stereotyping (Putnam, 2000). This idea has been

behind the generous governmental support of various youth organizations in Sweden. However, recent findings complicate this picture, suggesting that different associations have different effects on intolerance, with some apparently decreasing it but others increasing it (Cote & Erickson, 2009).

Intervening with individuals, the 'Kungälv project'. This intervention aims to reduce personal and ethnic peer harassment by reducing the intolerance that underlies them. Previous interventions aimed at changing negative stereotypes have had iatrogenic effects, strengthening rather than weakening negative stereotypes (see Paluck & Green, 2009 for a review of 965 experimental studies). Therefore, we test a completely new approach to reducing intolerance. The central idea is that adolescents need to be trained in tolerant reasoning, which is defined as understanding abstract equality principles and applying them to individuals through deductive reasoning. Deductive reasoning is inconsistent with the inductive reasoning that supports intolerance beliefs and as such cannot coexist with intolerant reasoning. Thus, the novel proposition is that teaching youth to apply abstract equality principles to individuals in their everyday lives (deductive reasoning) will result in more tolerant attitudes toward others. The intervention was implemented in a school setting, and passed, in regular education teacher for a full school year. The first measurement was done in August 2013 (pretest), a week before the start of the intervention. The intervention was carried out in Kungälv municipality. In total there were 51 youths with extremist views that interventions was specifically directed to (selected based on reports from teachers, parents and police). Data was also gathered from a matched control group, consisting of a total of 709 7th and 8th graders in the same municipality. The intervention lasted for one year and the first follow-up was conducted in the fall of 2014 (posttest 1) . A third survey is planned in autumn 2015 (post test 2).

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