Sampling the self

Impact paragraph

The aim of this thesis was to investigate and target self-esteem in daily life within individuals with mental health problems. This paragraph reflects on how the obtained knowledge from this thesis is valuable for (future) scientific, clinical and societal use.

Key findings

The burden of having mental disorders is high. In order to reduce the impact of mental disorders on the individual and society, it is crucial to target modifiable psychological mechanisms that underlie these disorders in prevention and early intervention strategies. This might possibly even prevent the development of mental disorders later in life.

One of the aims of this thesis was to investigate whether self-esteem in daily life, i.e., momentary self-esteem, might be one of these psychological mechanisms that underlie mental disorders, such as psychosis, as a potential target by early interventions. We found that lower levels of momentary self-esteem and greater variability in self-esteem were associated with an increased intensity of psychotic experiences and paranoia in patients with psychotic disorder, first-degree relatives of patients with psychotic disorder, and controls. In patients and relatives, lower levels of self-esteem were also associated with increased intensity of negative affect. The magnitudes of these associations were greater in patients and first-degree relatives compared to controls. Moreover, we found that the association between lower levels of momentary self-esteem and an increased intensity of psychotic experiences in daily life was modified by prior exposure to high vs. low levels of several types of childhood trauma, i.e. physical (in relatives) and sexual (in relatives and controls) abuse, and physical neglect (in patients). Additionally, we found that the effects of momentary self-esteem on psychotic experiences, and vice versa, were mediated by positive and negative effect.

These results demonstrate that self-esteem might be an important underlying psychological mechanism through which childhood trauma may impact on the intensity of psychotic experiences in daily life in individuals across the psychosis continuum. Individuals with familial liability to psychosis (patients and their first-degree relatives), but also from the general population, might benefit from targeting momentary self-esteem and variability in self-

esteem to decrease the intensity of psychotic experiences, paranoia and negative affect in daily life.

As there is accumulating evidence that symptoms of psychopathology are transdiagnostic in the early stages (1), and might result in a wide range of mental disorder later in life (2), early interventions in youth mental health have become of great importance. Recently, the focus has been shifting from specific interventions for specific disorders, to early interventions across the full diagnostic spectrum (3).

Psychological help is difficult to access and accept for youth, which calls for novel, youth-friendly approaches (4). Mobile Health (mHealth) and, most prominently, ecological momentary interventions (EMIs) provide a unique opportunity to deliver youth-friendly, personalized, real-time, guided self-help interventions. We therefore developed an accessible, transdiagnostic ecological momentary intervention for improving self-esteem ('SELFIE') in youth with prior exposure to childhood adversity, for which the protocol is described in this thesis.

Last, we validated several self-esteem measurement instruments in youth exposed to childhood adversity, which provided implications for future research and for clinical use.

Relevance

Mental disorders, such as depression, anxiety disorders, and psychosis, affect more than a billion people worldwide, account for about 7 percent of all global disease burden (5), and are responsible for about 20 percent of all years lived with disability (5). About half of the general population will develop at least one mental health disorder across their lifespan (6). Moreover, mental disorders are associated with unemployment, absence due to sickness, and loss of productivity, which leads to an high economic burden (7). Additionally, mental disorders are not only disabling for patients themselves, but can also take a tremendous toll on family members.

Prevention and treatment in mental health care are crucial in order to reduce the burden of mental disorders. Chapters 2, 3 and 4 have demonstrated that momentary self-esteem may be an important underlying mechanism that may impact on the intensity of mental health problems such as negative affect and psychotic experiences, and that associations of momentary self-esteem and more intense psychotic experiences were modified by exposure to high vs. low levels of several types of childhood trauma. The SELFIE intervention, which we

have developed, is currently being evaluated (Chapter 6). The SELFIE study is a large randomized controlled trial, in which 174 individuals aged between 12 and 26 years with prior exposure to childhood adversity and low self-esteem are allocated to the experimental condition (SELFIE in addition to treatment as usual) or the control condition (treatment as usual). SELFIE is a guided self-help intervention administered through a smartphone-based App to allow for interactive, personalized, real-time and real-world transfer of intervention components in individuals' daily lives. The digital intervention is blended with three training sessions delivered by trained mental health professionals over a 6-week period. If this trial provides evidence on the efficacy of SELFIE, it has significant potential to contribute to minimizing the deleterious impact of childhood adversity in youth and, thereby, preventing the development of mental disorder later in life.

Additionally, in chapter 5 we investigated psychometric properties of different types of self-esteem measurement instruments, and their predictive value of mental health outcomes in youth exposed to childhood adversity. This knowledge is of high relevance from both a clinical as a scientific point of view, as we could make recommendations on which research instruments showed good and poor psychometric properties, and might or might not be appropriate to use for this particular target group. We also investigated to what extent these questionnaires can predict mental health outcomes, such as negative affect and psychotic experiences, which make the results both clinically and scientifically highly relevant.

Target Audience

The results of this thesis are relevant for several target groups. First, not only mental health care professionals, but also individuals who are at risk for, or currently dealing with, mental health problems, might benefit from the increased insight of the role of momentary self-esteem in the intensity of psychotic experiences (and negative affect) in individuals exposed to childhood trauma. As symptoms of psychopathology are transdiagnostic in the early stages, and youth is a critical period for self-esteem development (8), targeting self-esteem in mental health care in youth exposed to childhood trauma seems a logical inference. If the randomized controlled trial will prove the efficacy of the SELFIE intervention, we can provide a novel youth-friendly, easy accessible, ecological momentary intervention that is easy implementable within mental health care, but also in earlier stages, for example via schools or GP practices. By building a competing positive self-esteem, we might minimize the

deleterious impact of childhood adversity, which might reduce burden on the healthcare system by reducing waiting lists.

Second, the general public might benefit from the results of this thesis, as self-esteem is not only relevant for mental health, but also to well-being in general. High levels of self-esteem is related to greater life satisfaction, more happiness and positive affect, and to more subjective vitality (9). Our results showed that low levels of momentary self-esteem and greater variability in self-esteem were associated with more intense psychotic experiences and paranoia, not only in patients with psychotic disorder and their first degree relatives, but also in controls. As more than 45% of the children in Dutch elementary schools reported to have been exposed to an adverse childhood experience (10), it might be useful to raise more awareness in the general population about the role of self-esteem in mental health issues.

Third, the results might be of great interest to insurance companies and policy makers. Mental health problems are associated with great direct (e.g. medication, clinic visits, or hospitalization), and indirect (productivity loss, unemployment) costs (11). When policy makers involved in mental health care regulations invest in early prevention and intervention strategies focused on targeting self-esteem, for example, like the youth-friendly and easy accessible SELFIE intervention, this might possibly prevent the development of mental disorders later in life, and, thus, contribute to a decrease in direct and indirect costs that are associated with mental health problems, and to better mental health within the population. For the SELFIE intervention, this will be elaborated by conducting a cost-benefit analysis.

Last, the findings of this thesis have led to implications and recommendations for researchers. For example, we validated several self-esteem measures in youth exposed to childhood adversity. We examined psychometric properties, and provided information on the value of these questionnaires and showed that several measures are complementary to each other. Next to that, some of the chapters also raised new questions, which could be implemented as research questions in future research. Also some of our findings might be replicated and extended.

Activity

Although we already took some steps in involving and informing the target audience for our research, there are still plans for future dissemination of the achieved knowledge by this thesis.

Participants of the SELFIE study and involved mental health centres were and will be updated by annual newsletters, and by social media updates. Moreover, a Dutch role-model, known for her acting roles in youth television series, is an ambassador for the SELFIE study, resulting in her doing several podcasts on mental health and the SELFIE study, and regularly posting our research updates to her 27.5k social media followers. Items on SELFIE were published in local free available magazines, such as 'Hecht' (magazine for all employees of Maastricht University Medical Centre (MUMC)), 'Gezond Idee' (magazine from the MUMC that is delivered to all home addresses in South-Limburg), 'Observant' (independent university magazine of Maastricht University), and 'FOLIA' (independent medium of the University of Amsterdam).

Furthermore, we presented our work at collaborating mental health care institutions, and during centre specific symposia (for example 'Mondriaan Referaat' in 2019, and 'Koraal Onderzoekt' in 2020) throughout the Netherlands. We also presented our work, including a workshop on the SELFIE intervention, to mental health care professionals, experiential experts, and other professionals, at the annual conference for child- and adolescence psychiatry (Jaarcongres Kinder- en Jeugdpsychiatrie) in 2019, and the Spring conference (Voorjaarscongres) organized by the Nederlandse Vereniging voor Psychiatrie (NVvP) in 2020, which enabled us to have discussions with professionals on how to implement the results into clinical practice. Interdisciplinary collaborations, for example with mental health services, will also contribute to the circulation, and perhaps implementation of the achieved knowledge.

To reach the scientific research community, Chapters 2, 3, 4, 5, and 6 were or will be shared via (open access) scientific publications in peer-reviewed journals. Results of the thesis were (and will be) presented at several national and international scientific congresses and symposia (for example, at the International Association of Youth Mental Health (IAYMH) in 2019, Brisbane (Australia), the Society of Ambulatory Assessment (SAA) in 2019, Syracuse, New York (USA), the SAA in 2021, Zurich (Switzerland, online), and the European Society for child and Adolescent Psychiatry (ESCAP), Vienna (Austria)).

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