

REVIEW

# What is good mental health? A scoping review



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<https://doi.org/10.1016/j.euroneuro.2019.12.105>

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Received 5 October 2019; received in revised form 24 November 2019; accepted 8 December 2019

## KEYWORDS

Good mental health;  
Health promotion;  
Public health;  
Interventions;  
Evidence-based  
medicine;  
Prevention

## ABSTRACT

Promotion of good mental health in young people with and without mental disorders has received little empirical research attention and interventions for improving mental health in young people are not well established. This situation could be explained among other reasons due to the difficulties to define and operationalise what good mental health is. The current manuscript, produced by the European College of Neuropsychopharmacology Thematic Working Group on the Prevention of Mental Disorders and Mental Health Promotion (ECNP TWG PMD-MHP), presents a critical review of the available operationalizations for good mental health. A pragmatic conceptual operationalisation of good mental health is a much-needed step towards more standardised research in this field.

Good mental health can be defined as a state of well-being that allows individuals to cope with the normal stresses of life and function productively. Universal and selective interventions are suitable to promote mental health. Core domains that define good mental health encompass: (i) mental health literacy, (ii) attitude towards mental disorders, (iii) self-perceptions and values, (iv) cognitive skills, (v) academic/ occupational performance, (vi) emotions, (vii) behaviours, (viii) self-management strategies, (ix) social skills, (x) family and significant relationships (xi) physical health, (xii) sexual health, (xiii) meaning of life, (xiv) and quality of life. These domains should be widely traceable in the literature and can be used to conduct further empirical research in the field of good mental health. Such data can lead to more robust evidence to identify and establish the pathways to follow in order to improve mental health.

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## 1. Introduction

Prevention of mental disorders has become an important cornerstone of modern clinical psychiatry. The most successful example is Clinical High Risk paradigm for Psychosis (hereafter CHR-P) (Fusar-Poli, 2017a; Fusar-Poli et al., 2013a; Fusar-Poli et al., 2016b). Young individuals with attenuated symptoms (Fusar-Poli et al., 2017b), help-seeking behaviour (Falkenberg et al., 2015) and functional impairments (Fusar-Poli et al., 2015b) are assessed through psychometric interviews (Fusar-Poli et al., 2015a) in specialized clinics (Fusar-Poli et al., 2013b (Davies et al., 2018a; Davies et al., 2018b)). These individuals accumulate risk factors for psychosis (Fusar-Poli et al., 2017d; Oliver et al., 2019) and have a 20% risk of developing a psychotic disorder during 2-year follow-up (Fusar-Poli et al., 2016a). The knowledge gained by the CHR-P paradigm has impacted clinical practice to the point that several clinical guidelines recommend detection, prognostic assessment and treatment of young people at risk for psychosis (Nice, 2014). In parallel the clinical at-risk paradigm expands to other domains such as bipolar disorders (Faedda et al., 2019).

The successful implementation of these preventive approaches has somewhat obscured a parallel area of knowledge, which pertains to the promotion of good mental health. Indeed, strengthening of good mental health has received much less empirical research than the prevention of poor mental health and mental disorders. The reasons for

this gap of knowledge are not completely clear, however, it is possible that this is due to the medical, disease- and deficit-centred approach that has dominated clinical psychiatry over the past decades (Arango et al., 2018). Another reason is that good mental health is culturally sensitive (Snodgrass et al., 2017) and, as such, research attempts in this field have been sporadic and idiosyncratic. Furthermore, no overall conceptual framework for promoting good mental health has been validated yet. The resulting picture is fragmented and lacking a coherent view. On a pragmatic level, there is no consensus of what exactly good mental health is. This situation is particularly problematic because it impedes comparative research. For example, although there is wide consensus that it is important to achieve good mental health, especially in young people, currently it is not clear what core domains are to be targeted. On the one hand, there are no validated assessment tools that can be used to measure how good the mental health is in young people. On the other hand, current youth mental health services are not engineered to target good mental health (Fusar-Poli, 2019). The lack of broader conceptual operationalisations of good mental health leads to a lack of effective strategies for improving good mental health. This is particularly problematic in young populations, as these are those most vulnerable to the impact of emerging mental health issues (Fusar-Poli, 2019). The current manuscript was produced by the European College of Neuropsychopharmacology Thematic Working Group on the Prevention of Mental Disorders and Mental Health Promotion

(ECNP TWG PMD-MHP) (ECNP, 2019) to tackle this lack of knowledge, with a specific focus on young people's mental health. 1) We first conducted a critical narrative review of the overall definitions of good mental health and mental health promotion, and of the different categories of mental health promotion. 2) We then summarized core specific operationalizations for good mental health. 3) Finally, we integrated these findings discussing how these interventions could be tested using the suggested operationalisations of good mental health and provided an overview of the future research agenda in this area.

## 2. Experimental procedures

For this scoping review, a literature search in PubMed was conducted up until July 31, 2019, using the search terms “mental health promotion” OR “good mental health” and the domains that define good mental health (see core empirical domains of good mental health). The articles included in this review were not selected on a systematic basis, and there is no assumption that the evidence reviewed is exhaustive. The articles were subsequently discussed through consensus across some ECNP TWG PMD-MHP members. The results were summarised with respect to the following mental health themes: (i) Overall definition of good mental health and mental health promotion, (ii) categories of mental health promotion, and (iii) core empirical domains of good mental health with prototypical examples to illustrate their meaning.

## 3. Results

### 3.1. Overall definition of good mental health and mental health promotion

A definition of good health encompassing the mental and social domains varies across systems, cultures or clinical practices that differ in values (Manwell et al., 2015). One of the most extensively used definitions for mental health is the one by the World Health Organization (WHO), which defines it as “a state of well-being in which the individual realizes his or her own abilities, can cope with the normal stresses of life, can work productively and fruitfully, and is able to make a contribution to his or her community” (World Health Organization, 2001, 2004a). This definition indicates that the absence of mental disorder is not sufficient to experience good mental health. As such, the prevention of mental disorders and mental health promotion strategies may well overlap but at the same time differ (World Health Organization, 2004b). Indicated prevention of mental disorders aims at reducing subthreshold symptoms in individuals at risk and ultimately decrease the appearance and the burden of mental disorders (Shatkin, 2019). A prototypical example is given above with the CHR-P state. However, prevention of mental disorders is not enough to improve good mental health, because these approaches do not usually target the whole population (Keyes et al., 2010). Mental health promotion attempts to face this challenge and reconceptualizes mental health in positive rather than negative terms (World Health Organization, 2004b).

The WHO defines health promotion as “the process of enabling people to increase control over, and to improve their health” (World Health Organization, 1986). Similarly, good

mental health promotion is defined as “the enhancement of the capacity of individuals, families, groups or communities to strengthen or support positive emotional, cognitive and related experiences” (Hodgson et al., 1996) (for other definitions of mental health promotion see table 1). It is thus essential to promote the value of mental health and improve the coping strategies of individuals, rather than just trying to achieve an amelioration of symptoms and deficits (World Health Organization, 2002). In fact, good mental health and lack of mental disorder, although interrelated, can be seen on a continuum where an individual can suffer from a mental disorder, but be outstanding in one or more of the domains of good mental health. For instance, individuals with autism-spectrum disorders may have outstanding cognitive skills as hypermnnesia, hyperlexia and hypercalculia (Etchepareborda et al., 2007). Also, some individuals with depression may be able to show very positive self-management strategies (van Grieken et al., 2018) or be very creative, for example Ludwig von Beethoven, Sylvia Plath, and Ernest Hemingway (Yalom, 1980). On the other hand, individuals who do not suffer any mental disorder do not necessarily have good mental health (see Fig. 1), and the performance in the different mental health domains is very variable. Moreover, a certain degree of mental discomfort (for instance mild anxiety or depression features) can be helpful for personal growth or the development of adaptive coping strategies, because, as noted by some authors, we must all face inevitable death, isolation and meaninglessness' (Yalom, 1980). Similarly, there are no net boundaries between psychological well-being in individuals with a well-compensated mental disorder and psychological well-being in healthy individuals who are in distress.

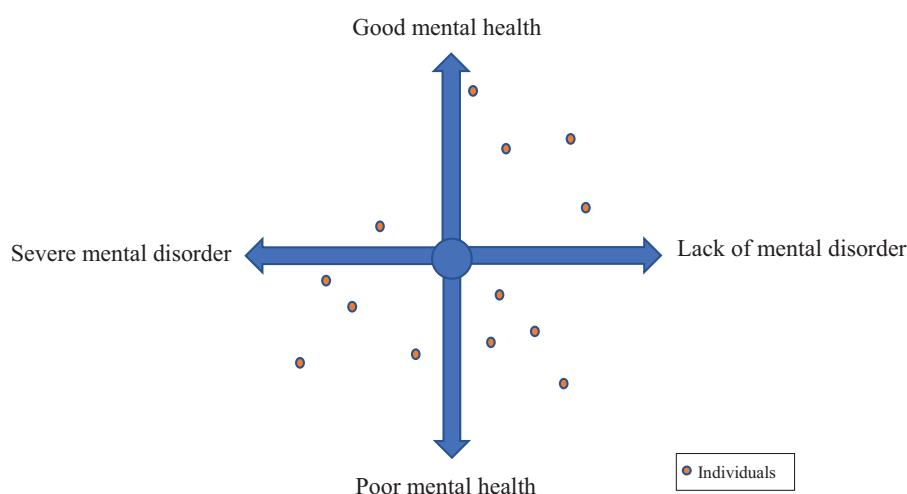
Good mental health and mental health promotion are usually used indistinctly (World Health Organization, 1986). However we propose to use good mental health to define positive domains or targets that mental health consists of, while promotion of good mental health could be reserved to the strategies that can be adopted to increase awareness, quality and control of good mental health. The overarching aim of mental health promotion is therefore to increase well-being, competence and resilience (World Health Organization, 2004a) across the life-span. Promotion of good mental health is intertwined with the enhancement of established protective factors for the development of mental disorders (World Health Organization, 2004a). Some individuals are at increased risk of developing a certain disorder as a consequence of an attribute, characteristic or exposure that increases their likelihood of developing a certain disease or injury (World Health Organization, 2006a). Although absence of these risk factors is important for good mental health, it is not a sufficient condition to define good mental health (see Fig. 1). For example, the absence of childhood maltreatment is important—as childhood trauma is likely a transdiagnostic risk factor for mental disorders (Bonoldi et al., 2013)—but not sufficient to define good mental health.

### 3.2. Categories of mental health promotion

In the categorization of preventive approaches for mental disorders the classic public health classification is integrated with Gordon's classification of physical illness

**Table 1** Competing definitions of good mental health.

Area of Focus	Author	Mental Health Promotion Definition
Enhancement of capacities	(Hodgson et al., 1996)	Enhancement of the capacity of individuals, families, groups or communities to strengthen or support positive emotional, cognitive and related experiences.
Maximization of mental health	(Scanlon and Raphael, 2000)	Action to maximize mental health and well-being among populations and individuals.
Competence, resilience and well-being promotion	(World Health Organization, 2004a)	Promoting good mental health by increasing psychological well-being, competence and resilience, and by creating supporting living conditions and environments.
Competence enhancement	(Jané-Llopis et al., 2005)	Human qualities and life skills such as cognitive functioning, positive self-esteem, social and problem-solving skills, ability to manage major changes and stresses in life and to influence the social environment, the ability to work productively and fruitfully and to make contributions to the community, and a state of emotional, spiritual and mental well-being.
Sense of coherence	(Huber et al., 2011)	Subjective faculties enhancing the comprehensibility, manageability, and meaningfulness of a difficult situation. A strengthened capability to adapt and to manage yourself improves subjective wellbeing and may result in a positive interaction between mind and body
Wellbeing and prevention	(Anwar-McHenry and Donovan, 2013)	Preventing illness and increasing wellbeing.
Wellbeing	(Haro et al., 2014)	Mental health is not merely the absence of mental disorders, but a resource of importance for the well-being of individuals, families and societies.
Environment enhancement	(World Health Organization, 2016)	Actions to create living conditions and environments that support mental health and allow people to adopt and maintain healthy lifestyles.

**Fig. 1** Continuum between mental disorder and good mental health.

(Arango et al., 2018; Bechdolf et al., 2014; Berk et al., 2017; Correll et al., 2014; Fusar-Poli, 2017b; Fusar-Poli et al., 2013a; Fusar-Poli et al., 2013b; Fusar-Poli et al., 2018; Fusar-Poli et al., 2017a; Fusar-Poli et al., 2017c; Fusar-Poli et al., 2019; Gordon, 1983; Leopold et al., 2012; Loechner et al., 2018; Millan et al., 2016; Moreno-Peral et al., 2017; Morrell et al., 2016; Pfennig et al., 2014a; Pfennig et al., 2014b; Rachid, 2018; Radua et al., 2018; Salagre et al., 2019; Saxena et al., 2006; Scott et al., 2017; Sharma et al., 2017; Spada et al., 2016; World Health Organization, 2004a). Gordon's universal, selective and indi-

cated preventive interventions are included within primary prevention in the public health classification [(World Health Organization, 2004a), page 17]. These interventions vary regarding the individuals they target: either the public in general (World Health Organization, 2004a), regardless of the individual risk (Arango et al., 2018; Fenwick-Smith et al., 2018) -universal intervention-; subgroups of the population who have a higher risk of developing a mental illness because of biological, psychological or social risk factors (Arango et al., 2018; World Health Organization, 2004a) -selective intervention-; or individuals with subthreshold or



minimal signs or symptoms that indicate a predisposition for a particular mental disorder but who do not meet diagnostic criteria for that disorder (Haggerty and Mrazek, 1994) -indicated intervention-. The first two (universal and selective interventions) are the most suitable interventions to promote good mental health and mental wellbeing in the general population and in healthy individuals who carry risk factors, respectively (Arango et al., 2018).

### 3.3. Core empirical domains of good mental health

In the following section, we will propose core empirical domains that operationalise the main good mental health targets of universal and selective interventions, providing prototypical vignettes to illustrate their meaning. These core empirical domains, which have been selected based on the literature reviewed in this article and its representativeness, encompass essential operational elements that constitute good mental health in young people. The proposed definitions of these empirical domains are further summarised in Table 2:

#### 3.3.1. Mental health literacy

Health literacy is the ability to understand the health status of an individual and the factors that intervene in it. It is a social health determinant, which can lead not only to improvements in health factors, but also to patient empowerment and reduction in inequalities (Fernández-Gutiérrez et al., 2018). Mental health literacy supposes being able to apply the obtained skills to understand the rights related to health care and to understand how to advocate for health improvements (Kutcher et al., 2016). This domain involves knowledge of the mental health resources that one can access in one's community (Public Health England, 2015).

Example I: Having adequate knowledge about the warning signs and symptoms to identify an emerging and established mental disorder (for example anxiety or depression) or about substance use (Degan et al., 2019).

Example II: Knowing how to proceed and where to go within the mental health system in case good mental health conditions to function appropriately are not satisfied.

Potential instruments: The Mental Health Literacy Scale (MHLS) (O'Connor and Casey, 2015), Depression Literacy questionnaire (D-Lit) (Darraj et al., 2016), Questionnaire for Assessment of Mental Health Literacy (QuALiSMental) (Dias et al., 2018).

#### 3.3.2. Attitude towards mental disorders

The attitude we have and how we react in front of someone with a mental disorder. Stigma is a negative attitude towards a person, which leads to negative action or discrimination (Haugen et al., 2017). Stigmatization of young people with mental health difficulties is widespread and starts from childhood (Kaushik et al., 2016) potentially appearing throughout life. Additionally, stigma and self-stigma are some of the most important barriers to mental health care (Gerlinger et al., 2013; Haugen et al., 2017).

Example I: Positive and non-stigmatising attitude towards mental disorders includes understanding, being compassionate and empathic with people with impaired mental health.

Example II: Not exercising self-stigma when facing a mental health challenge.

Potential instruments: Depression Stigma Scale (DSS) (Boerema et al., 2016), Generalised Anxiety Stigma Scale (GASS) (Griffiths et al., 2011), Stigma of Suicide Scale (SOSS) (Batterham et al., 2013).

#### 3.3.3. Self-perceptions and values

Subjective values and ideals or beliefs about what is good or bad for us. Self-perceptions refer to a collection of subjective beliefs about our own characteristics. This knowledge of the internal subjective state helps young people recognize self-worth (Jordan et al., 2015), as well as positive qualities and capabilities (Karasimopoulou et al., 2012). The awareness of personal capabilities can also help young people develop a positive self-esteem, with attitudes and beliefs about themselves that allow them to live a valued life.

Example I: Valuing and accepting personal psychological attributes and our self-worth and having a good self-esteem.

Example II: Understanding the value of cooperation, autonomy and justice.

Potential instruments: Rosenberg's Self-Esteem Scale (RSES) (Eklund et al., 2018), State Self Esteem Scale (SSES) (Heatherton and Polivy, 1991), Self-Perception Profile for Children (SPPC) (Ferro and Tang, 2017).

#### 3.3.4. Cognitive skills

Cognition is the ability of young people's brain to process and react to the information presented to them, both in the educational, academic and work field and in the diverse daily areas of their lives. Cognitive skills are latent factors, which are relevant to the field of cognition, learning and memory (Sala and Gobet, 2019). These skills allow young people to remember and organize information, whilst having a degree of cognitive flexibility and attention to enable reasoning, decision making and problem solving.

Example I: Good attention skills that allow young people to understand and process the information that is presented to them.

Example II: Executive functioning skills to plan, organize and complete pertinent tasks or memory to be able to use the information already processed.

Potential instruments: Cognitive Assessment Battery (CAB) (Nordlund et al., 2011), Trail Making Test (TMT) (Schott, 2015), Screen for Cognitive Impairment in Psychiatry (SCIP) (Guilera et al., 2009).

#### 3.3.5. Academic/ occupational performance

Academic performance includes objective knowledge (Santana et al., 2017), attendance and behaviour, information that can typically be obtained from school records (Bonhauser et al., 2005), but also, school adjustment and academic adaptation (Durlak, 1977). The way young students are taught and assessed (Fernandez et al., 2016) can impact their mental health and their development in an academic and educational environment. In a subsequent stage, occupational performance can affect mental health, just like mental health has an influence on performance at work.

**Table 2** Good mental health in young people: core empirical domains, definitions and instruments.

Promotion Domain	Proposed empirical definition	Potential instruments
(i) Mental health literacy	The ability to recognize and possess knowledge of a variety of different profiles of emerging and established mental disorders, factors and warning signs contributing to poor mental health as well as about the different mental health resources that can be accessed in case of need.	The Mental Health Literacy Scale (MHLS) (O'Connor and Casey, 2015) Depression Literacy questionnaire (D-Lit) (Darraj et al., 2016), Questionnaire for Assessment of Mental Health Literacy (QuALiSMental) (Dias et al., 2018).
(ii) Attitude towards mental disorder	The way we react in front of someone with a mental disorder; Positive attitudes include understanding, being compassionate and empathic whilst decreasing discrimination and social distance towards people with poor mental health or with emerging or established mental disorders. Stigma is a negative attitude towards a person, which leads to negative action or discrimination.	Depression Stigma Scale (DSS) (Boerema et al., 2016), Generalised Anxiety Stigma Scale (GASS) (Griffiths et al., 2011), Stigma of Suicide Scale (SOSS) (Batterham et al., 2013).
(iii) Self-perceptions and values	A collection of subjective beliefs, values and emotions about one's own internal and external characteristics, shaping one's attributional style, self-compassion and self-esteem, impacting awareness and acceptance leading to living a valued life.	Rosenberg's Self-Esteem Scale (RSES) (Eklund et al., 2018) The State Self Esteem Scale (SSES) (Heatherton and Polivy, 1991), Self-Perception Profile for Children (SPPC) (Ferro and Tang, 2017).
(iv) Cognitive skills	The ability to pay attention, remember and organize information, whilst having a degree of cognitive flexibility, attention to enable decision making and solve problems.	The Cognitive Assessment Battery (CAB) (Nordlund et al., 2011), Trail Making Test (TMT) (Schott, 2015), Screen for Cognitive Impairment in Psychiatry (SCIP) (Guilera et al., 2009).
(v) Academic/occupational performance	Objective learning and knowledge, study achievements, attendance and behaviour as well as school adjustment and academic adaptation.	Teacher Report Form (TRF) (Larsson and Drugli, 2011), Child Behavior Checklist (CBCL) (Albores-Gallo et al., 2007), formal school grades.
(vi) Emotions	Affective states with arousing or motivational properties that lead individuals to a certain response or behaviour.	Emotion Expression Scale for Children (EESC) (Penza-Clyve and Zeman, 2002), Emotional Intelligence Inventory (EII) (Tapia and Marsh, 2006), Emotion Regulation Questionnaire (ERQ) (Spaapen et al., 2014).
(vii) Behaviours	Behaviours are the conducts in which a person proceeds when a stimulus is presented to them.	Child Behavior Checklist (CBCL) (Albores-Gallo et al., 2007), Healthy Lifestyles Behavior Scale (HLBS) (Chan et al., 2017), The Drug Attitudes Scale (DAS) (Goodstadt et al., 1978).
(viii) Self-management strategies	Practical, everyday skills needed to effectively and independently take care of oneself and to function and meet the demands of the environment: coping skills to deal with stress, problem solving and decision making to face the adversities that may appear.	Brief Resilient Coping Scale (BRCS) (Kocalevent et al., 2017), Children's Coping Scale (CCS) (Yeo et al., 2014), Children's coping strategies checklist (CCSC) (Ayers et al., 1996).
(ix) Social skills	Social skills are abilities that allow young people to interact and communicate with each other in order to foster positive relations.	Social competence scale for adolescents (SCSA) (Shujja et al., 2015), Social Skills Rating System (SSRS) (Van der Oord et al., 2005), Social Skills Improvement System-Rating Scale (SSIS-RS-C) (Cheung et al., 2017).
(x) Family and significant relationships	The ability to establish meaningful relationships with other family members; healthy and positive relationships and connectedness with family members within a boundaried environment which facilitate positive communication and interaction.	Widowed Parenting Self-Efficacy Scale (WPSES) (Edwards et al., 2018), Inventory of Parents and Peer Attachment (IPPA) (Armsden and Greenberg, 1987), Child Adjustment and Parent Efficacy Scale (CAPES) (Guo et al., 2018)

(continued on next page)

**Table 2** (continued)

Promotion Domain	Proposed empirical definition	Potential instruments
(xi) Physical health	Physical variables, visible symptoms and measures related to a positive physical status and dimensions of health.	Physical Health Questionnaire (PHQ) (Schat et al., 2005), General Health Questionnaire (GHQ) (Goldberg and Hillier, 1979), International Physical Activity Questionnaire (IPAQ) (Macek et al., 2019).
(xii) Sexual health	A state of physical, emotional, mental and social well-being in relation to sexuality.	Sex Knowledge and Attitude Test (SKAT) (Miller and Lief, 1979), General Sexual Knowledge Questionnaire (QSKQ) (Talbot and Langdon, 2006), Sexual Health Questionnaire (SHQ) (Acharya et al., 2016).
(xiii) Meaning of life	Feeling that life has a purpose and a significance.	Meaning in Life Questionnaire (Steger et al., 2006), Purpose in Life test (Crumbaugh and Maholick, 1969), Existential Concerns Questionnaire (ECQ) (van Bruggen et al., 2017).
(xiv) Quality of life	The general well-being of a person, defined in terms of health, happiness and satisfaction life.	The Quality of Life Scale (QOLS) (Burckhardt and Anderson, 2003), The Satisfaction With Life Scale (SLS) (Diener et al., 1985), KIDSCREEN (Ravens-Sieberer et al., 2005), WHO Quality of Life (WHOQOL) (Cheung et al., 2019).

Example I: Study achievements as grades as a result of the work done.

Example II: Appropriate learning of competencies (for instance reading and writing in primary school) that allows to continue and keep up with the class.

Potential instruments: Teacher Report Form (TRF) (Larsson and Drugli, 2011), Child Behavior Checklist (CBCL) (Albores-Gallo et al., 2007), formal school grades.

### 3.3.6. Emotions

Emotions include affective states (e.g., happiness, sadness, surprise or anger) with arousing or motivational properties (Kozłowski et al., 2017), which can lead individuals to a certain response or behaviour. Young people's emotions and how they act as a consequence contribute to their mental health. Emotions also allow young people to explore their concerns, readiness for actions and intentions. Modulating emotion awareness and knowledge, enhancing emotion regulation and allowing a more effective emotion expression (Greenberg and Pascual-Leone, 2006) can enhance good mental health. Favouring positive emotions can lead to better social, intellectual, and physical personal resources (Kushnir et al., 2012), although negative emotions are an inherent part of life.

Example I: Feeling happy when something positive happens to young people or when they receive some good news.

Example II: Fear of the unknown or dangerous that leads young people away from potentially harmful stimuli or situations.

Potential instruments: Emotion Expression Scale for Children (EESC) (Penza-Clyve and Zeman, 2002), Emotional Intelligence Inventory (EII) (Tapia and Marsh, 2006), Emotion Regulation Questionnaire (ERQ) (Spaapen et al., 2014).

### 3.3.7. Behaviours

Mental health is linked to behaviour at all stages of life, but in particular in young populations (World Health Orga-

nization, 2004b). Behaviours are the conducts and actions that young people carry out when a stimulus is presented to them. Behaviours are healthy conducts that allow young people to function appropriately and reach their maximum potential. Facilitating appropriate and adaptive behaviours in young people is a way to promote good mental health and improve their well-being.

Example I: Run away or face a challenging situation that is presented to young people according to the assessment they make of it.

Example II: Using positive strategies or resisting external pressure (i.e., pressure from peers) in order to avoid taking drugs.

Potential instruments: Child Behavior Checklist (CBCL) (Albores-Gallo et al., 2007), Healthy Lifestyles Behavior Scale (HLBS) (Chan et al., 2017), Drug Attitudes Scale (DAS) (Goodstadt et al., 1978).

### 3.3.8. Self-management strategies

Contrary to self-perceptions and values, which focus on the ideals or beliefs about oneself, self-management strategies are practical, everyday skills to effectively and independently take care of oneself and to function and meet the demands of the environment. The strategic changes result as a consequence of the confidence in the capacity to engage in self-management (Bourbeau et al., 2015). Resilience, which is the capacity to cope with adversity (Fenwick-Smith et al., 2018; World Health Organization, 2004b) has an important influence in the acquisition and implementation of self-management strategies.

Example I: Positive coping skills to deal with stress and worries, such as listening to music or exercising instead of drinking alcohol or other substances.

Example II: Making a decision about how to face the adversities that appear following problem-solving strategies and establishing realistic goals.

Potential instruments: Brief Resilient Coping Scale (BRCS) (Kocalevent et al., 2017), Children's Coping Scale (CCS) (Yeo et al., 2014), Children's coping strategies checklist (CCSC) (Ayers et al., 1996).

### 3.3.9. Social skills

Social skills refer to a wide group of capabilities that allow young people to interact and communicate with each other (Soto-Icaza et al., 2015). Young people's relationships play an important role in their psychological and social development (Sawyer et al., 1997). In order to obtain and maintain successful relationships, knowledge about the different social rules and abilities to communicate and interact with others are needed (Van der Graaff et al., 2018). The acquisition of social skills leads to greater ability to initiate and maintain meaningful relationships. Social skills differ from behaviours in that they are oriented towards initiating and maintaining interpersonal relationships. Social skills differ from self-management because they refer to skills to establish good relationships with other people and not to coping with our own emotions and feelings of oneself.

Example I: Being flexible and open to other alternative solutions while establishing a cooperative environment.

Example II: Prosocial or voluntary behaviours intended to benefit others, such as listening skills and the ability to communicate with others.

Potential instruments: Social competence scale for adolescents (SCSA) (Shujja et al., 2015), Social Skills Rating System (SSRS) (Van der Oord et al., 2005), Social Skills Improvement System-Rating Scale (SSIS-RS-C) (Cheung et al., 2017).

### 3.3.10. Family and significant relationships

Another component of good mental health is the ability to establish meaningful relationships with family members and other important people in our life. Healthy positive relationships and connectedness with others within a close environment allow positive communication and interaction.

Example I: Positive parenting strategies, such as providing clear expectations and being consistent with the rules that they provide (for instance being at home at a certain time and making sure the previously established consequences of a certain behaviour occur).

Example II: Appropriate sibling involvement in day-to-day family dynamics.

Potential instruments: Widowed Parenting Self-Efficacy Scale (WPSES) (Edwards et al., 2018), Inventory of Parents and Peer Attachment (IPPA) (Armsden and Greenberg, 1987), Child Adjustment and Parent Efficacy Scale (CAPES) (Guo et al., 2018).

### 3.3.11. Physical health

WHO's definition of health includes mental and social well-being, but also physical well-being (World Health Organization, 2001), which interacts with the other areas. This empirical domain includes attitudes, affects and behaviours that involve physical health and health care, which are closely intertwined with mental health (Ohrnberger et al., 2017). Literacy about physical health in the general population may also be included (Wickstead and Furnham, 2017).

Example I: Being well-nourished and having good diet leading to endurance, fitness and balance.

Example II: Adequate levels of activity and exercise to maintain a good physical status and good levels of energy to function productively.

Potential instruments: Physical Health Questionnaire (PHQ) (Schat et al., 2005), General Health Questionnaire (GHQ) (Goldberg and Hillier, 1979), International Physical Activity Questionnaire (IPAQ) (Macek et al., 2019).

### 3.3.12. Sexual health

The WHO defines sexual health as a state of physical, emotional, mental and social well-being in relation to sexuality (World Health Organization, 2006b). Sexual health also involves attitudes and behaviours about health care. Sexuality has an intrinsic value as a part of physical and mental health and positive sexual relationships require good previous experiences (Hogben et al., 2015).

Example I: Awareness of the peculiarities and implications related to sexual relations and reproductive health to avoid negative outcomes as unwanted pregnancies.

Example II: Knowledge and implementation of strategies to avoid sexually transmitted infections.

Potential instruments: Sex Knowledge and Attitude Test (SKAT) (Miller and Lief, 1979), General Sexual Knowledge Questionnaire (QSKQ) (Talbot and Langdon, 2006), Sexual Health Questionnaire (SHQ) (Acharya et al., 2016).

### 3.3.13. Meaning of life

Meaning of life, including spirituality and religion, may be particularly important from a phenomenological perspective (Weber and Pargament, 2014), although this area is largely left out of psychiatric research (Nieman, 2018). Meaning of life is defined as the degree to which an individual comprehends and sees significance in his or her life, as well as the extent to which he/she feels that his/her life has a purpose (Heintzelman and King, 2015). Meaning of life is related not only to physical health but also very much to mental health, including well-being and life satisfaction (Miao and Gan, 2018). So far, meaning of life has been researched mostly in older patients with advanced diseases (Guerrero-Torrelles et al., 2017), but should also include young people.

Potential instruments: Meaning in Life Questionnaire (Steger et al., 2006), Purpose in Life test (Crumbaugh and Maholick, 1969), Existential Concerns Questionnaire (ECQ) (van Bruggen et al., 2017).

### 3.3.14 Quality of life

Quality of life, defined in terms of health, happiness, subjective fulfillment (Csikszentmihalyi, 1975) and satisfaction with life, entails the well-being of an individual (World Health Organization, 1996). In mental health, this includes not only lack of mental disorder or clinically relevant symptoms, but also satisfactory perceptions about life and functioning in multiple life domains, such as self-efficacy, social relationships, hobbies/leisure activities and education/work (Revicki et al., 2014).

Example I: Being satisfied with the different ambits of life, including social and family life.

Example II: Appropriate nourishment and living conditions that lead to maintaining good levels of comfort.

Potential instruments: The Quality of Life Scale (QOLS) (Burckhardt and Anderson, 2003), The Satisfaction With



Life Scale (SLS) (Diener et al., 1985), KIDSCREEN (Ravens-Sieberer et al., 2005), WHO Quality of Life (WHOQOL) (Cheung et al., 2019).

#### 4. Discussion

This is the first scoping review, which aimed at defining good mental health and its core domains in young people. According to the definition provided by the World Health Organization (WHO), mental health is a state of well-being in which the individual realizes his or her own abilities, can cope with the normal stresses of life, can work productively and fruitfully, and is able to make a contribution to his or her community. Core empirical domains that compose good mental health encompass: (i) Mental health literacy, (ii) attitude towards mental disorders, (iii) self-perceptions and values, (iv) cognitive skills, (v) academic/occupational performance, (vi) emotions, (vii) behaviours, (viii) self-management strategies (ix) social skills, (x) family and significant relationships (xi) physical health, (xii) sexual health, (xiii) meaning of life, and (xiv) quality of life.

These domains should serve as a starting platform to standardise future research in the field of good mental health. Other domains can be relevant, although some of them might have not been studied in great depth. Among them, feeling part of a community, society or group (Firth et al., 2019; Palis et al., 2018) can also have an influence on mental health. Furthermore, having socioeconomic stability is relevant for the mental status of young people, as poverty has been shown to have an adverse effect on mental, emotional, and behavioral health (Yoshikawa et al., 2012).

The proposed key priorities of this research agenda are summarised in the points below. First, since the review we provide was not systematic and it is qualitative rather than quantitative in its nature and presentation, the next step would be to conduct a systematic review complemented by a meta-analysis to validate these domains against the available evidence. The next systematic review should also clarify issues that were not addressed by the current scoping review. For example, although we focused on young people, we have not differentiated between specific age ranges; good mental health domains and needs can potentially be different in young adults compared to adolescents or young adolescents compared to older adolescents.

Second, the above empirical domains should be tested against new independent external validators. For example, neurobiological research in this area is very scarce, presumably because of the difficulty of identifying reliable operationalizations of good mental health in young people. Yet, neurobiological processes influence the core domains of good mental health. For instance, neurochemical, genetic, and epigenetic processes have been shown to explain an individual's self-management strategies and resiliency (Osório et al., 2017). Similarly, cognitive function depends on frontolimbic connections, linking the parietal cortex, amygdala, insula and cerebellum, among others (Hoche et al., 2016; Schmahmann, 2019). Future research should thus study the neurobiological mechanisms underlying the core determinants of good mental health in young people.

Third, another area of future research is the cross-validation of the above empirical domains of good mental health across different cultures and contexts, as this might yield different perspectives. For instance, modern western societies hardly acknowledge the fact that suffering is inherent to living. Although some studies on good mental health have been carried out in non-western countries (Dayalan et al., 2010; Mak et al., 2015), the majority of the evidence has been published based on data from western societies. Transcultural research on good mental health is needed in order to validate the generalisability of these domains and test the extent to which these domains can be applied to different populations. To facilitate this goal, it will be essential to empower young people in the research on good mental health. Empowerment itself has shown to mediate the relationship between psychological processes and mental health, well-being, and recovery in young people (Grealish et al., 2017). Young people's involvement would be essential to promote participatory research as well as to involve healthy young people to refine these domains and to define their needs regarding good mental health (Tambuyzer and Van Audenhove, 2015).

Fourth, future research on good mental health in young people should leverage emerging e-Health approaches. Because of the rapid growth in the use of new technologies among young people (Clarke et al., 2015), and the great opportunity to increase access to evidence-based mental health resources, including information and care (Conley et al., 2016), capitalising on media, online resources and different e-health approaches that can be used to measure and promote good mental health in young people could be impactful (Torok et al., 2017). Interest in 'e-mental health' is broadly increasing in psychiatric research (Firth et al., 2016), as e-health approaches offer a novel, accessible and self-paced approach to modern care that is cost-efficient and scalable (Sin et al., 2018). For example, ecological momentary assessment methods could be employed to track the dynamic course of the above domains of good mental health (as well as physical health) over time in young people (Dubad et al., 2018). Eventually, these conjoint efforts could result in a new assessment tool to evaluate and, possibly, enhance good mental health in young people that can be ideally implemented on easy-to-administered e-health devices, to support more uniform European research in this area.

Fifth, the above efforts for future research should be paralleled by a comprehensive evidence synthesis of the available interventional options to impact these empirical domains and improve good mental health. In fact, knowledge about available and potential interventions to improve mental health is currently patchy and uneven. Furthermore, the most effective interventions for each of the core determinants of good mental health is mostly unknown. Another further area of research would be to clarify the best setting for delivering these interventions (Enns et al., 2016).

#### Conclusions

In conclusion, good mental health is a state of well-being that allows individuals to cope with the normal stresses of life and function productively. Good mental health also

provides people with skills and resilience to face and most productively deal with abnormal and potentially destructive stressors. The promotion of good mental health leads to increasing well-being, competence and resilience and makes individuals improve their mental health and increase their control over it. There are at least 14 core domains that define good mental health. High quality systematic reviews and meta-analyses are now needed to test the effectiveness of interventions to improve each of these dimensions and thus increase good mental health in young people and those of all ages.

## Role of funding source

The study was supported by the European College of Neuropsychopharmacology Network Taskforce. Dr. Salazar de Pablo is supported by the Alicia Koplowitz Foundation.

## Author contributions

PFP designed the study. PFP and GSP drafted the manuscript. DN, CUC, LVK, AP, AB, SB, CA and TVA revised the manuscript and provided a substantial conceptual contribution. All authors proofread and approved the final draft of the manuscript.

## Conflict of interest

The authors declare that there are no conflicts of interest in relation to the subject of this study.

## Acknowledgment

Dr. Fusar-Poli has been a consultant to or has received honoraria or grants from Lundbeck, Menarini, Boehringer Ingelheim. Dr. Correll has been a consultant and/or advisor to or has received honoraria from: Alkermes, Allergan, Angelini, Boehringer-Ingelheim, Gedeon Richter, Gerson Lehrman Group, Indivior, IntraCellular Therapies, Janssen/J&J, LB Pharma, Lundbeck, MedAvante-ProPhase, Medscape, Merck, Neurocrine, Noven, Otsuka, Pfizer, Recordati, Rovi, Servier, Sumitomo Dainippon, Sunovion, Supernus, Takeda, and Teva. He has provided expert testimony for Bristol-Myers Squibb, Janssen, and Otsuka. He served on a Data Safety Monitoring Board for Boehringer-Ingelheim, Lundbeck, Rovi, Supernus, and Teva. He received royalties from UpToDate and grant support from Janssen and Takeda. He is also a shareholder of LB Pharma. Dr. Kessing has been a consultant to or has received honoraria or grants from Lundbeck. Dr. Arango has been a consultant to or has received honoraria or grants from Acadia, Angelini, Gedeon Richter, Janssen Cilag, Lundbeck, Otsuka, Roche, Sage, Servier, Shire, Schering Plough, Sumitomo Dainippon Pharma, Sunovion and Takeda. Dr. Bechdolf has been a consultant and/or advisor to or has received honoraria or grants from: Janssen/J&J, LB Pharma, Lundbeck, Otsuka, Pfizer and Recordati.

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