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Determinants, self-management strategies and interventions for hope in people with mental disorders: Systematic search and narrative review

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ABSTRACT

Developing a recovery focus in mental health services is a policy goal internationally, and hope is a central component of recovery. Yet determinants of hope of people with mental disorders are not well known, nor are strategies and interventions that increase hope. This study aims to systematically summarise the available evidence to fill four relevant knowledge gaps: (1) hope scales used in psychiatric research, (2) determinants of hope, (2) hope-fostering self-management strategies, and (3) interventions to increase hope for people with mental disorders. We conducted a systematic literature search in April 2011 and a narrative synthesis of publications including qualitative and quantitative studies. Results for the first time provide a comprehensive overview of existing evidence and identify important scientific knowledge gaps: (1) Hope scales used do slightly vary in focus but are overall comparable. (2) Most published research used cross-sectional designs resulting in a high number of potential determinants of hope. No studies prospectively investigated the influence of these determinants. (3) Hope fostering selfmanagement strategies of people with mental disorders were described in qualitative studies only with experimental studies completely missing. (4) While some recovery oriented interventions were shown to increase hope as a secondary outcome, there are no successful interventions specifically aimed at increasing hope. This review provides the basis for both practical and research recommendations: The five most promising candidate interventions to improve hope in people with mental disorders are (i) collaborative strategies for illness management, (ii) fostering relationships, (iii) peer support, (iv) helping clients to assume control and to formulate and pursue realistic goals, and (v) specific interventions to support multiple positive factors such as self-esteem, self-efficacy, spirituality and well-being. These may serve to directly improve care and to develop theory-based models and testable interventions to improve hope in mental health as well as in allied fields.

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Background

Hope has been a relevant topic in mythology, philosophy and religion for centuries. However, it was only in the 1950s when Menninger (1959) identified it as integral to the profession of psychiatry, important for initiating therapeutic change, willingness to learn and personal well-being. Since then, a wealth of research has been conducted investigating hope in various medical fields and different settings (Castañeda, Carrion, Kline, & Martinez Tyson, 2010; Lalor, Begley, & Galavan, 2009; Rhodes, Bernays, & Terzic, 2009), but particularly in oncology and internal medicine (Olson,

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2011; Rhodes et al., 2009). Recently, hope has also become a focus for mental health practice and research (Schrank, Stanghellini, & Slade, 2008). Hope is considered central to the concept of personal recovery from mental disorders, both as a trigger and as a maintaining factor, since it helps people to find the courage to start their recovery journey and the motivation to keep working on recovery despite potential obstacles (Bonney & Stickley, 2008). Hope is also essential for resilience (Ong, Edwards, & Bergeman, 2006), and consistently identified by both patients and therapists in various settings as a key factor in psychotherapy (Schrank et al., 2008).

Hope has been variously defined in the literature and different instruments have been proposed for its measurement. Also, hope may have different meanings in different cultures and among different population groups. However, with few exceptions crosscultural research on hope is scarce (Eggerman & Panter-Brick,



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2010; Castaneda, 2010). A systematic literature review integrating all available definitions and measurement tools for hope has revealed a number of key components of the concept. These are summarized in a definition of hope as a primarily future orientated expectation (potentially informed by negative experiences such as mental disorder) of attaining personally valued goals which will give meaning, are subjectively considered possible and depend on personal activity or characteristics (e.g. resilience and courage) and/ or external factors (e.g. resource availability) (Schrank et al., 2008). The new and evolving field of positive psychology may offer a framework within which to accommodate and unify the varying approaches to hope research. Despite ongoing debate about the exact remits and boundaries of positive psychology (Cowen & Kilmer, 2002), the essence of this 'movement' is clear, i.e. focussing on positive characteristics and strengths instead of exclusively amending deficiencies and treating symptoms (Csikszentmihalyi, 2009). It potentially provides an umbrella structure to accommodate and strengthen hitherto fragmented positively oriented research from areas such as humanistic psychology, prevention, resilience research, and social work (Becker & Marecek, 2008; Cowen & Kilmer, 2002).

As regards the measurement of hope, only a few of the available scales have been commonly used in quantitative research. These comprise multi-dimensional scales which include different sub-scales (*e.g.* spirituality) and Snyder's Hope Scale (1991) which takes a more narrow definition of hope as a mainly motivational concept of perceived goal orientation and goal striving (Schrank et al., 2008). One aim of the current study is to characterise the main scales used in empirical research, both as a resource for future hope research and in order to judge whether scales are sufficiently similar to allow meaningful comparison.

In contemporary mental health practice recovery orientation is evolving as the new service paradigm, for which hope is central (Slade & Hayward, 2007). This review applies systematic review techniques and a narrative synthesis approach in order to answer four questions in relation to people with mental disorders: (1) What are the main hope measures used in mental health research? (2) What predicts hope (*i.e.* determinants of hope)? (3) What can people do to increase their own hope (*i.e.* self-management of hope)? (4) What can mental health services do to enhance hope (*i.e.* interventions for hope)?

Methods

Data sources

We searched twelve bibliographic databases from inception (bracketed): AMED (1985); British Nursing Index (1985); EMBASE (1947); MEDLINE (1946); PsycINFO (1806); Social Science Policy (1890); CINAHL (1981); International Bibliography of Social Science (1951); British Humanities Index (1962); Sociological abstracts (1952); and Social Services abstracts (1979). The reference lists of all included studies, relevant reviews and opinion papers were hand searched for additional relevant papers. References of all included studies were entered in a Web of Science Cited Reference Search to identify all quoting articles. Four experts with a high research profile in the field were asked to identify research on determinants of hope.

Search strategy for electronic databases

All databases were searched in April 2011 using the following terms identified from the title, abstract, key words or medical subject headings: ('hope' OR 'hopeful\$' OR 'hopeless\$')' AND ('mental health' OR 'mental illness\$' OR 'mental disorder' OR

'mental problem\$' OR psychol\$ OR psychiat\$) AND ('instil\$', OR 'maintain\$', OR 'foster\$', OR 'promot\$', OR 'increas\$' OR 'keep\$' OR 'support' OR 'improv\$' OR 'encourag\$' OR 'lose' OR 'loss' OR 'diminish\$' OR 'develop\$' OR 'intervention\$' OR 'practice' OR 'therap\$' OR 'strateg\$'). The search was adapted for the individual databases and interfaces as needed.

Eligibility criteria

We included articles published in peer-reviewed and non peerreviewed journals available in full-text in English or German.

In terms of studies design we included intervention studies investigating hope as a primary or secondary outcome; repeated measures studies investigating predictors for hope; cross-sectional studies investigating the correlation of hope with other variables; and qualitative studies using established qualitative research methodology with at least three participants.

Qualitative studies were eligible when investigating determinants, self-management strategies or interventions for hope in the research question. Quantitative studies had to use a service user rated measurement tool for hope or with hope as a separately described and quantified sub-scale. Observational studies measuring change in hope over time without investigating potential determinants of change were excluded, as were programme descriptions without empirical data, dissertations, book chapters, conference presentations and other not publicly available sources.

As regards study participants we included studies on adults of working age with a past or present diagnosis of mental disorder, based on ICD or DSM (Andrews, Slade, & Peters, 1999), who use or have used mental health services. Data on users of forensic services were not included. Qualitative data from professional and informal carers were included if they dealt with potential determinants of hope in service users from others' perspective. Data on hope of providers or carers were excluded.

Data collection and analysis

All references were downloaded to Reference Manager (Miller, 1994), and duplicates were removed. The titles of all identified publications were read to identify those potentially eligible. From these, the abstracts were reviewed, and where they appeared to meet the inclusion criteria, the full publication was obtained and a decision made about inclusion. Articles for which no abstract was available and which could not be excluded by title were retrieved in full-text to establish their fit to the inclusion criteria.

The first 100 studies were independently rated for inclusion by two reviewers (BS, VB), achieving a concordance rate of 0.96. Disagreement was resolved by consensus. The remaining studies were appraised by one review author (BS or VB). Online Data Supplement 1 shows the excluded studies and reasons for exclusion. Online Data Supplement 2 lists the included articles indicating their research design, sample size, participants and hope measure used.

Data extraction and synthesis followed the Guidance on the Conduct of Narrative Synthesis in Systematic Reviews by Popay et al. (2006). This procedure allows for the synthesis of studies that include a wide range of research designs which are insufficiently similar to permit a specialist synthesis approach. Qualitative data were split according to their source (*i.e.* service users and nonservice users) and inductively clustered into groups representing determinants, self-management strategies and interventions for hope. Where the original study distinguished between data obtained from users and staff it was adopted for our analysis. Where this was not possible we report the data as service user

perspectives. Further sub-clusters were generated as fitting the study aims and comparison with quantitative results. Results are presented together with those from quantitative studies using quotes or tables as appropriate.

For Aim 2 (determinants) we sub-divided quantitative studies according to the nature of their results using the three criteria for establishing causality proposed by Bollen (Bollen & Lennox, 1991): (i) association (temporal contiguity between putative cause and effect); (ii) isolation (the effects of a cause are isolated from competing causes); and (iii) direction (cause temporally precedes effect). Association involves showing a correlation and isolation involves showing the correlation remains after accounting for the impact of other variables. Both can be investigated using either cross-sectional or longitudinal (two time point) data. Direction involves showing change in one variable precedes change in another, and its investigation requires a repeated measures design with at least three rounds (Slade, Leese, Cahill, Thornicroft, & Kuipers, 2005). The study results were tabulated for crosssectional association data and isolation data, clustered according to the samples and the hope scales they used. For Aim 3 (selfmanagement strategies) only qualitative data were available. For Aim 4 (interventions), controlled trials were described according to the type of treatment, measurement tools, follow-up times and changes in hope scores.

Results

Study selection is shown in Fig. 1.

Characteristics of the 57 included studies are shown in Online Data Supplement 2. Eight were qualitative, and were used in all Aims. Of the 49 quantitative studies, 35 used cross-sectional designs (reported within review Aim 2) and 16 were prospective (9 fitting review Aim 2 and 8 review Aim 4). The 149 relevant review and opinion papers were used for hand search only and are summarised in Online Data Supplement 2.



Fig. 1. Flow diagram of studies included in the review.

Aim 1: hope measures in mental health research

The most frequently used hope scales were the Snyder Hope Scale (n = 19), the Herth Hope Index and Scale (N = 12) and the Miller Hope Scale (N = 6). All other hope scales were used far less frequently. Table 2 shows coverage of essential domains of the concept of hope (Schrank et al., 2008).

The identified hope scales show broad overlap in the key dimensions of hope, with the exception of the Snyder Hope Scale and the factor on hope in the Recovery Assessment Scale (RAS) which cover a similar and smaller section of the concept.

Aim 2: determinants of hope

Association

38 studies reported cross-sectional associations between hope and various variables. Table 2 displays cross-sectional correlations, organised according to diagnostic groups, the used hope scales, and the nature of the associated variables.

Most frequent and consistently positive associations were found with perceived recovery, self-efficacy, self-esteem, empowerment, spirituality, quality of life, and social support. Negative correlations with hope have been replicated for symptoms such as anxiety, depression, and general psychopathology as well as for family problems and barriers to employment.

Oualitative studies identified determinants of hope that correspond well with those identified in quantitative research. For example, issues around spirituality, religiousness and meaning emerged from qualitative studies, e.g. "Having a philosophy of life. sense of meaning (McCann, 2002); Spiritual beliefs, belief in science and the natural order of things (Kirkpatrick, Landeen, Woodside, & Byrne, 2001); Spiritual relationship with God (Noh, Choe, & Yang, 2008)", as did "Self-confidence, like pride or self-esteem (Noh et al., 2008)". The importance of social relationships was also evident in qualitative studies: e.g. "Supportive and reciprocal relationships containing mutuality, with friends and with professionals (Houghton, 2007)", and the relationship with mental health service staff was a central issue: e.g. "Trusting relationships with staff who is present, listens and values the patient (Kirkpatrick et al., 1995); Feeling validated and understood in the relationship with staff (Houghton, 2007)". Staff identified their own hopefulness as an important determinant of hope in service users (Darlington & Bland, 1999; Kirkpatrick et al., 1995).

Among the service variables reflected in qualitative studies was "Availability of adequate and appropriate community resources (McCann, 2002)". Service users also mentioned the importance of "Having work or some kind of occupation to prevent isolation and segregation from others (Perry, Taylor, & Shaw, 2007)" reflecting employment variables from quantitative studies.

Quantitative data showed a neutral or negative relation between hope and insight. By contrast, qualitative data identified insight to illness and treatment as a factor supporting hope because it gives people the tools to manage their symptoms.

Isolation

Eleven studies controlled for the effects of other variables. We included studies using hope as a criterion variable in its own right, and excluded those using hope as an independent variable or as a dependent variable within a composite measure. Table 3 summarises the results of multiple regression analyses. All covariates included in the respective calculations are shown in the columns for each study.

The negative correlation between hope and symptoms found in bivariate cross-sectional analyses (Table 2) remains, but becomes less consistent in regression analyses. The same is true for

Hope scales by	Ν	Future (time)	Goals	Personal control	Environment, circumstances	Relations	Spirituality	Personal characteristics
Snyder	19	x	x	х				x
Herth	12	х	х	х	х	х	х	х
Miller	6	х	х	х	х	х	х	х
Zimmerman	4	х	х	х		х		х
Nunn	1	х	х	х	х	х		х
Gottschalk	1	х	х	х	х	х	х	х
Obayuwana	1			х	х	х	х	х
Factor "hope" on RAS ^a	5	х	х	х				х

Comparison of hope scales used in the included studies and their coverage of the essential components of ho	nne
comparison of nope scales used in the included studies and then coverage of the essential components of ne	spc.

^a Recovery Assessment Scale.

psychological factors, for which replication studies are mostly missing. Results for demographics were inconclusive, particularly with regards to age, education and marital status.

Qualitative studies also reflect some of the quantitative findings on the isolation level. This includes illness management variables such as "Specific medication (Kirkpatrick et al., 2001)" and "Staff knowledge of mental disorder, technical know-how of treating and monitoring illness (Darlington & Bland, 1999)" as well as service variables, particularly the importance of peer support, e.g. "Knowledge of successful peers (Kirkpatrick et al., 2001) or "Relationship with peers and fellow patients (Noh et al., 2008)".

Direction

Table 1

No study investigated changes in a variable preceding (in time) changes in hope. Hence, no evidence was retrieved on the level of direction.

Aim 3: self-management strategies to manage hope

It is an important question what people with mental disorders can do to effectively manage their own hope. This question was investigated in five qualitative studies involving service user participants only. The strategies are shown in Table 4.

The suggested self-management strategies for hope give practical advice on topics central to the concept of recovery, including illness management, meaning, relationships, peer support, the notion of normality and the importance of success.

Aim 4: interventions to improve hope

The third aim addresses the question of what mental health services can do to increase hope in people with mental disorders. Eight controlled intervention studies, described in Table 5, were identified investigating hope as the primary or a secondary outcome.

Qualitative studies shed further light on potential interventions and strategies within mental health service provision which may improve hope. They are summarised in Table 6.

Both service staff and users suggested a number of practical strategies that could be used in mental health service provision to help foster hope in clients. Similar to the self-management strategies, these interventions reflect specific elements of recovery oriented practice that may directly affect hope.

Discussion

In this systematic review and narrative synthesis we bring together a wide range of quantitative and qualitative data on potential determinants of hope, self-management strategies and interventions that might serve to improve hope in people with mental disorders. Given the increasing theoretical importance of hope, particularly in positive approaches to mental health, research on this topic has substantially increased in recent years as reflected by the rising number of studies meeting our inclusion criteria in later years (see Online Data Supplement 2).

Scales

Given the variety of existing hope scales (Schrank et al., 2008) it may be problematic to compare research results derived from measures which may contain different variables and may be measuring very different things all called hope. In order to assess how far this may be the case in existing mental health research, we systematically examined the different ways hope is defined and measured (Table 1) by comparing the used scales' coverage of key domains of the concept of hope. Overall, the used hope scales show a high degree of similarity with two noteworthy exceptions: Snyder's (1991) Hope Scale mainly focuses on goals and perceived agency and pathways to achieve goals, which represents the most narrow view on the concept. We also included the sub-scale on hope contained in the Recovery Assessment Scale (Corrigan, Salzer, Ralph, Sangster, & Keck, 2004). This shows a coverage of hope domains similar to Snyder's scale but with a less pronounced focus on goals and more on personal characteristics and future orientation. Hence, the latter more closely resembles the other multi-dimensional hope scales used in mental health research.

Overall, the scales appear similar enough to legitimate the comparison of determinants, self-management strategies and interventions related to hope utilising different measures. This is further supported by Table 1 and Table 2 which allow a comparison of results according to the hope scales used and do not show any systematic difference. However, particularly with regards to interventions (Aim 4) the overlap between hope scales and overall scales of recovery needs to be taken into account since a high proportion of research investigated hope in recovery oriented settings.

Association in quantitative and qualitative studies

Cross-sectional analysis (Table 2) revealed a number of variables to be significantly correlated to hope with different rates of replication studies and partially contradicting findings. Overall, the correlates of hope found in quantitative studies correspond well with the findings of qualitative studies on determinants of hope in people with mental disorders. An exception is the negative association between hope and the awareness dimension of insight, which contrasts qualitative data identifying insight to illness and treatment as a factor supporting hope because it gives people the tools to manage their symptoms. This apparent discrepancy may be explained by different views on the concept of "insight to illness". High insight may be defined as holding a strictly clinical illness model which at least implicitly also includes the traditional view on

Table 2

Determinants of hope - results of studies investigating cross-sectional correlations (associations), N- 38.

20		Τ		0									nenta											Τ			ma a ressi		Τ		Mixe	d dia	gnos	ses	Τ	Subs	stan	ce
	Constitution (D. Africanster)	campre criar acteriations (Nerer ences) Severe mental illness (Van Gestel-Timmermans et al., 2010)	0		Schizophrenia (Andresen et al., 2006)	Schizophrenia (Hasson-Ohayon at al., 2009)	Psychotic disorder (Buckley-Walker et al., 2010)	<u> </u>		Serious mental illness (Rogers et al., 2010)	Schizophrenia, schizopaffective disorder (Revheim et al., 2010)	Severe mental illness (Corrigan et al., 2004)	~ /		Severe mental illness (Yanos et al., 2001)	Severe mental illness (Schneider et al., 2009)	Schizophrenia (Salerno, 2002)	Schizophrenia (Landeen et al., 2007)	Schizophrenia (Landeen et al., 2000)		0		0)							~ ~	SMI, CMI, no substance abuse (Cheavens et al., 2006)			Dual diagnosis (Tsai et al., 2010) Mill substance abuse (Secol at al. 2002)			~ /	
	Variables correlated with hope	SHS	SHS	SHS	SHS	SHS	SHS	H	HHS	HHS	HHS	HHS	SHH	SHH	HHS	Ŧ	MHS	MHS	MHS	RAS	RAS	RAS	SHN	ZHS	SHS	SHS	SHS	SHO	GHS	SHS	SHS	MHS	RAS	RAS	SHS	SHS	SHS	SHS
s	Depression, anxiety		-												_	_	_	_		_		_			-	_	-	_			-	_	_	_				
Symptoms	(Symptom) distress Overall psychiatric or PTSD severity	-	-	-					_						_	_	_	_			-	-	+	+	-	+	-	+	+	-	-	+	+	+	+	+	-	-
Sym	Present/past substance/alcohol abuse																					-	0									+					-	-
	Medical problems, fatigue Recovery overall, elements, themes	+	+	-				+	_		-	+									-	+	+	+	+	+	+	+	+		+	-	+	-	+	-	-	-
	Early recovery stages				-		+	+	+			+										+																
ness	Intermediate recovery stages	+	-	-	0				_							_				_	_	+	_	_	_	_	_	_	_	_	_	_	_	_	_	-	-	_
Course of illness and recovery	Advanced recovery stages Stage of substance abuse treatment,	+	+	+	+		-		-						-		_	-				+	+	+	+	+	+	+	+		+	+	+	+	+	0	+	+
ourse and re	longer time abstinent																																			+		
ŏ	Age at first diagnosis	+	+	-					_	_	_				_	_	-	_	_	_	_	_	_	_	_	_	_	_	+	_	_	+	_	_	+	-	-	-
	Age at first hospitalisation Number of hospitalisations	+	+	+					_		-				_	-	0	-			-	+	+	+	+	+	+	+	+	-	+	+	+	-	+	+	+	\vdash
	Empowerment, internal locus of control		+							+				_										÷											T			
	Self-efficacy	+	+	-					_	_					+	_	_	+	_	_	_	_	_	+	+	+	+	_	+	_	_	+	+	_	+	+	+	-
	Self-esteem Adaptive coping strategies	\pm	+	+			-		_		-			-	0	+	-	-	_	-	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
	spirituality, religiousness, meaning	ľ									+		+																		+							+
s	perception of self	+	+	-			+		_	_				_	_	_	+	_	_	_	_	_	_	_	_	_	_	_	-	_	_	+	_	_	+	_	-	-
iriable	global quality of life Insight: awareness dimension	+	+	+		+			-	-	-				-	-	-	-	+	-	+	+	+	+	+	+	+	+	+	-	+	+	+	+	+	+	+	+
Psychological variables	Insight: re-labelling dimension					0																																
ologi	Insight: compliance dimension	+	+	-		0			_							_		_	_	_	_	_	_	_	_	_	_	_	_		_	_	_	_	+	_	-	-
sych	Hopelessness Optimism	+	+	+					-	-	-				_	-	-	-			+	+	+	+	+	+	+	-	+	-	-	+	+	+	+	-	+	-
6	Positive mood																																					+
	Negative mood	_	_	-														_		_	_	_	_	_	_	_	_	_	_		_	_	_	_	_	_	_	-
	Vitality goal attainment	+	+	+					_		-				-	-	-	-	-		+	+	+	+	+	+	+	+	+	-	+	+	+	+	+	+	+	+
	Score on self anchoring scale																		+																			
	quitting drugs and remainign abstinent	+	-	-												_	_	_	_		_	_	_	4	_	_	_	_	4	_	_	_	_	_	╇	+	-	-
	Social functioning Social support	+	+	+					_	-					+	-	-				+	+	+	+		+	+	+	+	-	-	+	+	-	+	+		
les	social and family problems																																				-	-
variables	trauma severity source of most support	+	+	+	-				_	_	_			_	_	_	0	_	_	_	_	_	+	-	+	+	-	_	-	_	-	+	+	_	+	+-	-	+
Social v	size of social network	+	+	+													0				+	+	+		+	+	+	-			+	+	+	+	+	+		+
S	loneliness	-	·																																			
	seeking company motivation for intellectual leisure activities	+	-	+-					_		-			_	_	_	_	_	_	_	_	+	+	+	+	+	+	+	+	-	-	+	+	-	+		+	+
t.	Being in (any) employment													+		+					+														$^{+}$			
ymen	Job satisfaction		_	_					_					+		_	_	_			_	_	_	_	_	_	_	_	_	_		_	_	_	-	_		
Employment	Barriers to employment Income level	+	+	+					-	-	-			-	-	-	-	-	_	-	+	+	+	+	+	+	+	+	+	-	+	+	+	-	+	+	+	+
ш	Income loss since becoming ill															-																						
es se	Attendence of selh help agency / programme	$-\Gamma$	-	+											0		6				-	-	-	1	-	-	-	-	1		-	-	+		+	+	+	-
	Length of psychiatric rehabilitation Agency input	+	+	-		\vdash			_	-	-			-	_	0	0			-	-	+	+	+	+	+	+	+	+		+	+	+	-	+	-	+	+
S B	Therapeutic alliance															-																						
phice	Age																0					-		1	-	-	-		T		-		-	-	F			
Demographic	Gender Education	+	+	-					_	-	-		\vdash	-	_		0				-	+	+	+	+	+	+	+	+	-	+	+	+	-	+	-	+	-
Den	Type of housing, housing characteristics																-																	0				
		1	1		1					- T											1	1		~T				_	- T	_	1						1	1
Physical health	Physical functioning (role limitations) Immune markers	-	-	+	-		-	-	-	-	-				_	-				-	-	-	-	0	_	+	-	_	-	-	-	-	-	-	+	-	+	+

+: significant positive correlation with hope -: significantly negative correlation with hope 0: no significant correlation with hope

SHS: Snyder Hope Scale HHS: Herth Hope Scale MHS: Miller Hope Scale RAS: Hope subscale on Recovery Assessment Scale

NHS: Hope Scale by Nunn OHS: Hope Scale by Obayuwana ZHS: Hope Scale by Zimmerman

Table 3

Comparison of regression analysis in cross-sectional studies, N = 11.

		scale Sample characteristics (References)	S SMI (Mowbray et al., 2009)	S SMI (Corrigan et al., 2003)	S Schizophrenia (Landeen et al., 2000)	S Schizophrenia (Landeen et al., 2007)	S Long-term users of SHA (Hodges et al., 2004)	S Mixed disorders (Karanci et al., 1986)	S Methadone treatement (Schiff and Levit, 2010)	S MH or substance abuse (Holdcraft and Williamson, 1991)	S Dual diagnosis (Tsai et al., 2010)	S PTSD (Crowson et al., 2001)	S PTSD (Kashdan et al., 2006)
		Sca	SHS	HHS	SHM	SHM	ZHS	SHH	SHS	SHM	RAS	SHS	SHS
	Depression, social anxiety				_	-							-
and	Diagnosis, PTSD diagnosis		Х										-
Symptoms, course of illness and recovery	Positive symptoms, negative symptoms				0								
Symptoms, se of illness recovery	General psychopathology	_	Х		0	-	-						
e of rec	Chemical dependency, substance abuse	_	Х							+			
Sours	Illness duration	_			0	0		-			_		
ŏ	(perceived) recovery	-		+				+					
<u> </u>	In combat vs. today ratings Stigma	\rightarrow	_	_							_	+	_
	Sigma Self-efficacy	-				-	+	_					
s	Spirituality / religion	-		+			- T						-
able	Personal or organisational empowerment	-		-			0	-					_
vari	Negative affect	-		-			-						-
Psychological variables	Global subjective QoL	-		+	+								_
logi	Illness attribution to "self-familial" domain							+					
cho	Illness attribution to "externalised blame" domain					_	-	0					
Psy	Illness attribution to "uncontrollable" domain						-	-					
	Compensation seeking											0	
	Social network size, social inclusion			+		+							
	Length of present or previous hospitalisation							0					
S	Age at illness onset		Х										
able	Number of services received		Х							-			
ice related variables	Frequency of treatment sessions, service intensity		Х						0				
ted	Therapeutic alliance								+				
rela	Program stressing mutual peer support						+						
ice	Member satisfaction with help from agency	_					0						
Serv	Programme environment factors	_					0						
	Type of programme (club house vs. drop-in centre)	\rightarrow	0										
<u> </u>	Welfare benefits, social welfare services received	\rightarrow	X		0								
	Age Conder heing female	\rightarrow	X		0		0	0		-			
	Gender, being female	+	X		0		0			Х			
S	Ethnicity Education	+	X X		0		0	-		+		-	
Demographics	Income	+	^		0		0	_		P.	0		
ogré	Employment status	+		-			5				5	+	
Jem	Marital status (being single)	+			0					+			
. 0		-+			5	-		-					
	Homelessness		1				+						
	Homelessness Type of housing , supervised living	+	Х			_	+				0		

+: significant positive correlation with hope
-: significantly negative correlation with hope
0: no significantly correlation with hope
X: significant correlation with hope, direction not reported

MHS: Miller Hope Scale ZHS: Hope Scale by Zimmerman SHS: Snyder Hope ScaleMHS: Miller HopeHHS: Herth Hope ScaleZHS: Hope ScaleRAS: Hope subscale on Recovery Assessment Scale

Table 4

Aim 2: Hope fostering self-management strategies identified by service users.

Theme	Examples
Meaning	Use imagery to receive comfort (Kirkpatrick et al., 2001); Viewing nature as symbols of life and growth (Noh et al., 2008); Assume meaningful roles, <i>e.g.</i> mental health community educator (Houghton, 2007); Find a symbol of hope <i>e.g.</i> personally relevant picture (Miller & Happell, 2006)
Illness management	Gain insight to illness and find strategies to monitor and manage it (Houghton, 2007); Work to recognise early warning signs of decompensation and prevent relapse (Kirkpatrick et al., 2001); Actively change one's thoughts, think and talk about hope, see oneself as capable of making a change (Kirkpatrick et al., 2001)
Relationships	Develop networks and gain support from a partner, children, friends or professionals (Houghton, 2007); Maintain positive relationships to significant others (Kirkpatrick et al., 2001); Talk to people (Miller & Happell, 2006); Be with others rather than alone, develop a sense of belonging within social groups or networks (Perry et al., 2007)
Peers	Learn about successful peers (e.g. through first person accounts, inspirational lectures, prominent people coping with illness) (Kirkpatrick et al., 2001, Perry et al., 2007); Learn from people who face greater difficulties (Noh et al., 2008); Watch television programs about physically or mentally disabled (Noh et al., 2008)
Normality Experience success	Look to the future and achieve 'normality' (Houghton, 2007); Have a routine (Perry et al., 2007) Find specific objects of hope (Kirkpatrick et al., 2001); Set realistic goals (Kirkpatrick et al., 2001); Accomplish small daily tasks or change self- destructive behaviour (Kirkpatrick et al., 2001); Achieve goals in work (Kirkpatrick et al., 2001);

SMI as incurable and thus decrease hope. Such a medical explanatory style is reflected in the insight measure, the SAI-E (Kemp & David, 1996), used in the reviewed study. In a contemporary recovery oriented understanding, insight may be replaced by the concept of 'explanatory models' which includes a wide range of personal beliefs and expectations regarding the illness (Williams & Healy, 2001). In a recovery oriented sense, knowledge about the illness also includes knowledge about recovery. It allows for idiosyncratic ways to handle symptoms and reduces stigma (Livingston & Boyd, 2010), which may support hope, as reflected in the qualitative findings.

Isolation

On the level of isolation symptoms tend to remain negative statistical predictors of hope after controlling for various other variables in regression analyses (Table 3) while for most other variables the results of regression analyses are inconclusive or have not been replicated. Further inconclusive findings pertain to the association between various socio-demographic variables and hope. Inconsistencies may indicate that hope is relatively independent of dimensions such as age, gender or education, which appears plausible from a recovery perspective. The positive

Table 5

Interventions that increase hope - controlled trials investigating changes in hope, N = 8

Ref	Sample (n)	Intervention	Measure	Assessment points	Results
Cheavens 2006A	CMD & SMI (n=32)	Intervention: "Hope Therapy" (according to Snyder's theory [82] to increase hopeful thinking and enhance goal-pursuit activities Control: waiting list	Snyder Hope Scale	Before & after intervention (8 weeks)	Stronger increase of hope scores in the intervention group compared to waiting list control (not significant when rigorous statistical methods are applied)
Tollett and Thomas, 1995	Male veterans (n=33)	Intervention : group intervention to instil hope and other recovery related variables Control: TAU (interdisciplinary "homeless evaluation unit")	Miller Hope Scale	Before & after intervention (4 weeks)	Significantly greater increase of hope in the intervention group
McCay et al., 2007	First episode psychosis (n=47)	Intervention: group treatment to reduce engulfment and self- stigmatisation including as one distinct therapeutic goal the "developing a sense of future, hopes, and dreams" <i>Control</i> : unclear	Miller Hope Scale	Before & after intervention (12 weeks)	Significantly greater increase of hope in the intervention group
Fukui et al., 2001	SMI (n=114)	Intervention: Wellness and Recovery Action Planning Control: TAU	Snyder Hope Scale	Before & after intervention (8-12 weeks) + 6 moths	Significantly greater increase of hope in the intervention group
Barbic et al., 2009	SMI (n=33)	Intervention: Recovery Workbook training in addition to TAU Control: TAU (assertive community treatment)	Herth Hope Index	Before & after intervention (12 weeks)	Significantly greater increase of hope in the intervention group
Salyers et al., 2010	SMI (n=324)	Intervention: Illness Management and Recovery (IMR) programme (continuous open programme) Control: TAU (assertive community treatment)	Snyder Hope Scale	Before and at 12 and 24 months	No significant improvement in hope in any of the treatment conditions
Vreeland et al., 2010	SMI (n=34)	Intervention: "Solutions for Wellness" programme promoting a healthy lifestyle Control: TAU	Snyder Hope Scale	Before & after intervention (10 weeks)	No differential change in hope scores between intervention and control group
Segal, Hardiman, & Hodges, 2002	SMI (n=505)	Intervention: combined self-help agency (SHA) and community mental health agency (CMHA) <i>Control:</i> CMHA alone	Hope Scale (Zimmerman)	Before, at 3 months during & after intervention (8 months)	Significantly greater increase of hope in the intervention group

Table 6
Aim 3: Hope fostering interventions.

Sub-themes	Interventions identified by service users	Interventions identified by staff
Meaning		Uncover clients' philosophy of life; identify what gives meaning to their lives (McCann, 2002)
Knowledge	Staff helping clients to understand their illness (Kirkpatrick et al., 1995)	Educate clients and the community about illness and its context, management and recovery (Darlington & Bland, 1999)
Illness management		Establish good medication management and symptom control (Darlington & Bland, 1999)
Relationships with staff	Staff providing emotional support and genuinely listening (Kirkpatrick et al., 2001); Staff exhibiting a sense of caring and taking time to communicate the message that there is hope (Kirkpatrick et al., 2001); Staff working co-operatively with persons, within the circumstances of a trusting, mutual and supportive relationship that conveys a sense of purpose (McCann, 2002)	Persevere to establish a good relationship (Darlington & Bland, 1999); Understand the persons' perspective and accept them as the person they are (Darlington & Bland, 1999); Work with the person's frame of reference (Kirkpatrick et al., 1995); Focus on the person's strengths rather than deficits (Kirkpatrick et al., 1995)
with others		Find strategies to support persons in re-establishing social networks and friendships (McCann, 2002)
Staff qualities	Staff being genuine (relating to persons as human beings, being kind and caring) (Kirkpatrick et al., 1995); Staff holding on to hope when the person has none (Kirkpatrick et al., 1995)	Being human (genuine, honest, accepting people for who they are, understanding one's own hopes as staff, etc.) (Kirkpatrick et al., 1995)
Peers		Connect persons to successful role models (Darlington & Bland, 1999); Help to forge links with role models who have previously experienced illness-wellness transition. (McCann, 2002)
Facilitate success	Staff finding out what persons' hopes and dreams are and use these to support transition (McCann, 2002); Staff understanding the importance of achievement and encouraging people into activity (Kirkpatrick et al., 1995); Activity based interaction motivating persons to do something (Miller & Happell, 2006); Working together with staff and cooperatively formulating plans towards realising the clients' aspirations (McCann, 2002)	Assist persons to have a successful experience (i.e. setting and reaching goals) (Darlington & Bland, 1999); Actively involve persons to plan for the future and set their own realistic and achievable goals. (McCann, 2002); Acknowledge small gains (Kirkpatrick et al., 1995)
Encourage control	Staff encouraging clients to assume control of their lives (McCann, 2002); Never impose staff's goals onto clients (McCann, 2002); Staff drawing on clients' internal and various external resources (McCann, 2002); Involvement in activities such as social skills training and job rehabilitation programmes (Noh et al., 2008)	Make links to the past, e.g. how persons have coped previously and what might help to cope this time, understand that ups and downs are a normal part of life, etc. (Kirkpatrick et al., 1995)

association between homelessness and hope (Hodges, Hardiman, & Segal, 2004) as well as the missing association between hope and housing characteristics, such as type of housing or rent (Tsai, 2010) in regression analyses are more difficult to interpret. These findings may be explained by the fact that housing characteristics may be irrelevant in a sample of previously homeless people since any housing may represent an improvement (Tsai, 2010). A further possible explanation is the buffering effect of personal goals and meaning, support, relationships and/or symptom control in the respective samples. Most of these factors were not measured but may have been influential in the environment of recovery oriented self-help agencies (Hodges et al., 2004). This would be in line with findings in different populations that similar variables, such as income, do not contribute to happiness over and above the contribution of other - more personally relevant - variables (Layard, 2006).

Overall, there is cross-sectional evidence for many determinants of hope of people with mental disorders, but multivariate repeated measures and other longitudinal studies are needed to establish causality.

Self-management strategies

The suggested self-management strategies, *e.g.* imaginary techniques, cognitive reframing, seeking information and education, and building, maintaining and using social relations, are of particular practical relevance to mental health service provision. They are likely to be well received by service users and constitute particularly promising components for future interventions targeted at increasing hope. The self-management strategies, similar to qualitative findings on determinants, stress the importance of relationships, not only with family and peers, but also very

importantly with service staff. Positively oriented intervention techniques have been repeatedly introduced but marginalised in mental health care due to its dominant focus on symptoms and deficits (Becker & Marecek, 2008; Cowen & Kilmer, 2002). Such evidence based positive techniques are a focus of positive psychology. Their application in a mental health service context might be highly valuable in supporting and complementing the establishment of recovery orientation.

Intervention studies

Intervention studies predominantly investigated the effect of recovery oriented interventions on hope, mainly as a secondary outcome. Usually these interventions included an improvement in hope as one of their therapeutic goals and most of them succeeded in increasing hope significantly more than the comparison condition (mainly treatment as usual). Of those that did not do better than the control group, one intervention focussed on promoting a physically healthy lifestyle with no specific focus on hope (Vreeland et al., 2010), and one was an "Illness Management and Recovery Programme" (Salvers et al., 2010) which aimed to help consumers set and achieve personal recovery goals and acquire the knowledge and skills to manage their illnesses independently. Setting and achieving goals broadly reflects the definition of hope according to Snyder's hope theory (Snyder et al., 1991) and the respective study used Snyder's scale to measure hope. Reasons for the insignificant study results may have been the high quality comparison condition or the very long follow-up time of 2 years after which immediate effects of the intervention may have diminished again.

Most noteworthy is the fact that the only intervention that specifically aimed to increase hope (Cheavens, Feldman, Gum, Michael, & Snyder, 2006) failed to clearly significantly affect hope (2-tailed alpha was not significant, 1-tailed alpha was). One reason for the success of recovery interventions in contrast to the failure of a specific hope intervention in increasing hopemay be that the latter was framed in too narrow a fashion by only concentrating on goal setting and achievement. As also reflected in cross-sectional and qualitative studies, hope may depend on a greater variety of dimensions — including psychological, social, illness and service related variables — that are more fully covered by recovery interventions. Overall, intervention studies measuring hope with Snyder's scale tend not to find significant results as opposed to those measuring hope with multi-dimensional scales (Table 5). This supports the use of multi-dimensional hope concepts but also points to the potential overlap between the concept of hope and that of recovery itself.

Diagnostic groups

One important caveat is the specificity of hope in the management of different disorders. Due to the paucity of existing research and lack of replication studies, no clear differences between diagnostic groups can be inferred from cross-sectional research. Qualitative studies and intervention studies have mainly been conducted with participants with SMI as opposed to emotional disorders (depression, anxiety, PTSD) or substance abuse. It is unclear whether specific mechanisms influence hope in those affected by different disorders. While coping with trauma, affective disturbances and substance abuse may be important tasks for finding hope in any mental disorder, the importance of specific mechanisms may differ. Further research is needed to more clearly establish specific indicators, determinants and intervention strategies for managing hope in different diagnostic groups.

Limitations

The review did not include books, conference presentations, or grey literature. We excluded studies that investigated overlapping concepts such as optimism or positive outcome expectancy, and did not consider hope at the social or societal level. The high number of publications which were identified in the cited reference search but had not been retrieved in the initial electronic search (Fig. 1) points to the difficulty of reliably reviewing a generic term such as "hope" using scientific databases.

We only included studies involving mental health service users with a diagnosis according to ICD or DSM, which means that studies involving people in distress, potentially diagnosable with a mental disorder were excluded, *e.g.* those seeking counselling (Marmarosh, Holtz, & Schottenbauer, 2005), or traumatised or abused people at accident and emergency departments after suicide attempts or para-suicidal behaviour (Kaslow et al., 2002).

Conclusions

Clinical implications

The results of this review suggest at least five promising elements that may be included in future interventions specifically designed to enhance hope of people with mental disorders: (i) collaborative strategies for illness management, including medication, (ii) a focus on fostering relationships both with staff and people outside the mental health system, (iii) facilitating connections with peers, particularly peer support, (iv) helping clients to assume control and to formulate and pursue realistic goals, and (v) specific interventions to support multiple positive factors such as self-esteem, self-efficacy, spirituality and well-being. Particularly the last element is one that appears to be neglected in clinical practice (Slade, 2010).

Given the general importance of hope in the wider field of health care, these suggestions may also be applicable in an interdisciplinary context for both patients and relatives when it comes to severe, chronic and burdensome disorders such as cancer, HIV or pregnancy complications (Lalor et al., 2009; Olson, 2011; Rhodes et al., 2009).

Research implications

Although the volume of research on hope in mental health increased in recent years, study designs mainly remain cross-sectional. The lack of multivariate repeated measures studies is a key knowledge gap identified in this review. Hence, in to order establish direction from the multitude of determinants of hope suggested on a cross-sectional level and to identify important confounders, carefully designed repeated measures studies are urgently needed. This design can both identify causal influences on hope and investigate whether there is a trade-off between different desirable clinical outcomes (Slade & Hayward, 2007).

A second approach involves the development of theory-based models to improve hope. According to the MRC framework for developing and evaluating complex interventions (Craig et al., 2008), this review may serve as the first step towards the development of an evidence based intervention to improve hope. The review identified useful practical strategies for fostering hope and a number of potential determinants of hope while confirming the lack of any existing specific intervention for increasing hope in people with mental health problems. To fully satisfy the necessary steps for developing a complex intervention as proposed by the MRC, further evidence may have to be synthesised from fields other than psychiatry to inform the development of an analogous intervention for mental health (e.g. Lalor et al., 2009; Olson, 2011; Rhodes et al., 2009). The next steps will then be modelling and testing the intervention with people with mental disorders as has been successfully done for other complex interventions in the field (Slade, 2002; Slade et al., 2006).

Future evaluative research may focus on some existing promising interventions to improve hope in people with mental disorders. On the basis of this review components of recovery oriented programmes that focus on important aspects of hope, *e.g.* in relation to relationships, goal attainment, and autonomy, can be identified as candidate interventions. Finally, the adaptation and investigation of positive psychology approaches for people with SMI appears to be a promising target for further research. Such interventions with a specific focus on hope have been devised and successfully applied in healthy and mildly ill persons (Snyder, Rand, & Sigmon, 2005). They appear to provide promising components to be included in hope fostering interventions for severely mentally ill persons.

Appendix. Supplementary material

Supplementary material associated with this article can be found, in the online version, at doi:10.1016/j.socscimed.2011.11.008.

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