Title: **Post-traumatic growth following a first episode of psychosis: A scoping review**

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Abstract

Aim: A first episode psychosis (FEP) is a traumatic experience that can often result in great suffering. However, in addition to suffering, persons affected by FEP may also experience post traumatic growth (PTG), or the perception that good has followed psychosis. While much is known concerning the negative outcomes following FEP, little attention has been given to the state of scientific knowledge on PTG following FEP. To determine the state of knowledge concerning PTG following FEP to help set the stage for a full systematic review. **Methods**: A scoping review was conducted following six steps: identifying the research question and relevant studies; selecting studies; charting the data; coding and summarizing results; and consulting with relevant stakeholders regarding the findings. **Results**: Post traumatic growth following FEP was described mostly as following the process of recovery, and primarily in qualitative articles. Themes related to PTG included developing positive character traits; making positive lifestyle changes; developing stronger connections with others; integrating the FEP with the self; experiencing greater religiosity; and appreciating life more. **Conclusions**: In addition to the negative aftermath of FEP, PTG may also occur. Evidence of PTG following FEP will be examined in a systematic review focused on the recovery and qualitative literature.

Key Words: First episode psychosis; positive change; post traumatic growth; scoping review; thrive

Introduction

A first episode psychosis (FEP) is often a traumatizing, disruptive experience that leaves young people and their families confused, demoralized and distressed. Not only is the experience of FEP highly traumatic and stressful, but FEP's aftereffects may yield personal, psychological and social impacts which last for long after the initial episode. For instance, young people who have experienced FEP have described feeling a loss of self, a sense of alienation from the world and from who they were before the episode. Family life and friendships may also be disrupted, as young people have reported drifting away from previous social circles for reasons that include stigma, depression, anxiety, and the presence of negative symptoms. Upon resolution of the acute phase of illness, some young people may experience residual symptoms—especially negative symptoms—which continue to impair their daily lives (1-3). However, while suffering may be part of the experience of FEP, many individuals recover; in addition, some who have recovered or are in the processes of recovering may feel that they have experienced positive outcomes as a result of FEP.

The experience of positive outcomes following traumatizing events or illnesses (e.g., war, the death of a child, cancer etc.) and their associated negative mental health outcomes—such as depression, anxiety and post-traumatic stress disorder—have been well-documented in multiple systematic reviews and meta-analyses (4-9). These reviews have synthesized findings on the positive outcomes following illnesses using the rubric of posttraumatic growth (PTG), incorporating in this rubric the positive changes which have resulted from experiencing illness, trauma and tragedy (6, 7, 10). A defining feature of PTG is that it constitutes *permanent* and actual, or *veridical* positive change in people experiencing trauma, tragedy or illness; changes which constitute PTG are pervasive, stable, and seen to be wholly transformative. Facets of PTG

include reappraising life and personal priorities (e.g., acquiring new values, developing a new appreciation for life, giving up control, etc.); developing personal strengths of character (e.g., increasing empathy, developing a survivor identity, gaining wisdom, etc.); engaging in existential re-evaluation (e.g., increasing spirituality, gaining awareness of the shortness of life, establishing a legacy, etc.); and developing a new awareness of the body (e.g., improving ones diet, exercising more, finding ways to reduce stress, etc.) (8).

Similarly, stress-related growth also comprises positive changes in response to stress in one or more areas, typically with respect to lifestyle and behavior; however, such changes may be less transformative than the changes constituting PTG; *may* or *may* not be permanent; and may be linked to stressful, but not necessarily traumatic, experiences. Aspects of stress-related growth include broadening perspectives, developing new coping strategies, and developing personal and social resources. In contrast, benefit finding refers to the *perception* that positive changes have occurred in response to adverse life events. These perceptions may reflect veridical changes, or a person's attempt to cope with distress, or illusions of growth. There remain significant disagreements on whether or not positive outcomes reported following any type of adversity reflect reality and there are disagreements concerning the conceptual boundaries (and similarities) separating PTG, stress-related growth, and benefit finding. Even in the face of attempts to achieve consensus around these conceptual boundaries, the majority of published studies exploring positive outcomes following negative experiences—be they trauma or stress—have measured PTG (11-14).

Despite the extensive state of knowledge on PTG following many negative experiences, the state of knowledge concerning PTG following a FEP is less clear. The apparent paucity in the literature on PTG following FEP is problematic since FEP usually occurs at a critical juncture in

a young person's life when important vocational, social and educational trajectories are being formed (15). Knowledge users—including youth who have experienced FEP, families of youth who have experienced FEP, and service providers—may benefit from the positive message contained in narratives of those who have experienced PTG following FEP in as much as such narratives may instill hope in those who suffer, thereby positively influencing those important trajectories. Without a clear picture of PTG following FEP, knowledge translation of this kind may be difficult, further highlighting the need for synthesized information on this subject.

The unclear state of the literature on PTG following FEP may be due to a number of reasons. The first reason is that there is a general negative view of life post FEP and the focus in research has been on objectively defined symptoms, cognition or functional outcomes and less on more subjectively defined processes, such as PTG. A second reason is that PTG may be reported using differently worded and/or construed concepts, such as resilience, recovery, or self-actualization in addition to stress-related growth and benefit finding. A third reason may be that PTG has not been extensively studied in the domain of psychosis. Alternatively, PTG may have been studied, but not given great attention in research reports; with any mention of PTG only appearing spontaneously in results sections.

In order to clarify the state of knowledge on PTG following FEP, our objective was to conduct a scoping review of the scientific, peer-reviewed psychiatric and psychological literature to answer the following research question: what is the state of knowledge describing PTG following FEP? A second purpose of this review was to inform a full, mixed studies systematic review to be conducted at a later stage.

Methodology

A scoping review was undertaken following the guidelines proposed by Arksey and O'Malley (16) as a precursor to a fuller systematic review examining the research question. For

this scoping review, we sought to engage in literature mapping to discern the location and magnitude of the scientific peer-reviewed research addressing our research question. We also sought to identify gaps and parameters in the scientific literature to establish future research.

The review methodology was structured according to the six stages identified by Akrsey and O'Malley (16), namely, 1) identifying the research question; 2) identifying relevant studies; 3) selecting studies 4) charting of data; 5) collating, summarizing and reporting results; and 6) consultation with stakeholders.

Identifying the research question

The first step of the review was to clearly identify a research question that would make a significant contribution to the scientific knowledge around FEP. More importantly, we chose a question which we felt would be meaningful to service users in treatment for FEP.

Several meetings were held with international experts on FEP and youth mental health to develop the research question, which is "what is the state of knowledge describing PTG following FEP?" The research question was described to individuals with lived experience of dealing with psychosis to gain their feedback. The question was also presented to families of youth with psychosis, psychiatrists, case managers, psychologists, social workers, nurses, research assistants and students at the Prevention and Early Intervention Program for Psychosis (PEPP), Canada's leading specialized early intervention service located in Montreal, in order to validate the importance and utility of the questions and to generate ideas on key concepts related to the subject. Two meetings were held with different stakeholders, and feedback from all participants was taken into consideration.

Identifying relevant studies

Eligibility Criteria. Studies were included in the review if they were peer-reviewed journal articles published in scholarly journals between the years 1980 and 2013. This time criterion is consistent with the emergence of the FEP movement, which is approximately 20 years old. Personal narratives, conference abstracts, books, book chapters, dissertations, editorials and other grey literature were not considered (See Limitations under the Discussion section for some comments and reflections regarding this exclusion criterion). Quantitative, qualitative, and mixed methods studies were included, as were systematic reviews and meta-analyses. Studies with men and women of all ages who were experiencing a FEP associated with any diagnosis were eligible for inclusion. Studies of family members, friends and/or treatment providers of persons with FEP were also eligible. Only studies written in English were included.

Information Sources and Identification Process. A library scientist (AL) from McGill University was responsible for constructing search terms in collaboration with the first author (GJ) and applying them to relevant databases. The librarian scientist searched 85 key words (Table 1) both directly (for specificity) and indirectly (for breadth) relevant to PTG following FEP. The search strategy also included search terms related to stress-related growth and benefit finding to determine if these concepts, rather than PTG, would be more salient to uncover studies of positive outcomes following FEP. Because articles on FEP are usually indexed in PubMed, PsycINFO, and Embase, only these three databases were searched. The keywords and search terms were generated by the first author, in consultation with staff at the Prevention and Early Intervention Program for Psychosis, experts in the field of FEP and youth mental health, and the librarian scientist. The final list was produced and agreed upon through consensus by all study authors. A second librarian was consulted to validate the keywords and search strategies used. A complementary search using Google Scholar, PubMed, PsycINFO and Embase using the key

words “post traumatic growth” “thriving” “benefit-finding” and “positive change” in connection with “early or first episode psychosis” was performed to retrieve any additional articles. Twenty one additional researchers with internationally recognized expertise in FEP research were consulted to obtain any articles related to this topic that had not yet been published or had been missed. Articles were uploaded into EndNote version 10.

Study selection

Study Selection Process. Screening was independently conducted by two reviewers using EndNote version 10. The first screening was performed to ascertain whether titles and abstracts of articles explicitly mentioned key words related to PTG (e.g., post-traumatic growth, thriving, benefit-finding, etc.), or if they explicitly mentioned some form of positive change arising through an experience of FEP. The full-text content of all articles that were determined relevant in the first screening was subsequently screened. Specifically, all included articles were read in their entirety by two reviewers to determine whether or not they described PTG following FEP. Disagreement was resolved by consulting with a third author. Once a final list of articles was determined, articles were charted to aid summarizing the results and to identify a more precise direction for a full systematic review to eventually follow the scoping review.

Charting the data

A data-charting form was created in Excel (Table 2) and data were charted by two individuals through an iterative process whereby key items (e.g., title and author of article; journal where article appeared; time elapsed since FEP; methodological approach, etc.) were first listed, followed by a discussion and re-evaluation of which items should be kept and excluded, followed by further charting.

The results sections of identified papers were then coded and summarized into themes for easy depiction. We coded and thematically analyzed all qualitative data and summarized all

quantitative data. One individual coded each paper, and a second person was consulted to validate themes.

Collating, summarizing and reporting the results

Of 4,612 articles originally identified, 58 were included in the full-text review, and 14 were deemed after full-text review as being relevant to the research question of interest. Articles were excluded on the bases of not being directly related to PTG (n = 2279); being duplicates not properly excluded during the original duplicate deletion procedure (n = 74); being grey literature, conference abstracts, books/book chapters, dissertations or editorials (n = 1866); and not being published in English (n = 335). Of the final 14 articles, 5 were found through screening titles and abstracts, while 9 were found through a general internet search. (Figure 1).

Of the 21 additional experts consulted for articles relevant to PTG following psychosis, seven responded. None of the recommended articles was judged to be directly pertinent to the identified research focus of this scoping review.

Characteristics of Included studies. All included articles were published between 2000 and 2013. The majority of studies were published by research groups in Western countries, namely, England (n = 7), Canada (n = 3), Australia (n =1) and New Zealand (n = 1). The remaining articles were published in China (n = 1) and Brazil (n = 1). PTG was the key conceptual framework describing positive change following psychosis in only two articles (17, 18). In many of the remaining articles, PTG following FEP was described by the authors as a part of the recovery process (n = 7) (19-25). Both articles which used PTG as a key concept also drew on the recovery paradigm (17, 18). Other articles described PTG within the context of (a) the help-seeking process, such that participants identified unintended positive benefits of seeking help for FEP(26); (b) specialized early intervention services treating FEP, such that participants

described the early intervention treatment team as being instrumental in promoting a positive sense of self (27); and (c) through experiences of service engagement (24). Finally, two studies focused on the positive impact of FEP on friends (28) and families (29). None of the studies described benefit-finding or stress-related growth.

Methodologies of Included Studies. Qualitative methodologies were the most frequent approach used in articles (n = 11), followed by mixed methods (n = 1), which included one study featuring a combination of case studies with a quantitative approach (n = 1); and one study using a quantitative approach. Qualitative data were most commonly guided by a grounded theory approach (n = 5), followed by a qualitative descriptive approach (n = 2), phenomenological approach (n = 2), and narrative analysis (n = 1). The qualitative analysis framework for two studies was not clearly stated (Table 3). Among qualitative and mixed methods studies, semi-structured and unstructured interviews were the most common qualitative data collection technique (n = 11), with only one study employing focus groups (20).

Participant Characteristics of Included Studies. Among studies reporting on the clinical status of included FEP participants (n= 7), all participants were described as clinically stable during assessments. The duration of time between participants' FEP and the time of assessment in each study ranged from 6 months to several years. In studies where the gender and ethnicity of participants was described (n = 9), the majority were white males; in studies describing diagnosis of participants (n = 8), the majority had a diagnosis of a schizophrenia-spectrum disorder.

Themes of PTG found in Qualitative Studies. Taken together, a range of experiences related to PTG were reported by participants in the included qualitative studies. An important theme among service users was that their FEP motivated them to develop positive character traits such as greater empathy, maturity, and resilience (19-24, 30). This theme is reflected in the

words of one participant who noted, “If I hadn’t had this experience then I would have never learnt how to deal with stress” (24). A second theme which emerged related to individuals making positive lifestyle changes following FEP (19-21, 25), such as learning new skills, and increasing sleep and exercise. What follows is a quote illustrative of this theme: “I’ve grown from the whole thing and I’ve found…a new passion for this photography” (30). Other themes included developing a stronger connection with family and a wiser understanding of friendship (19, 26, 27). For instance, one participant reported, “I have a fortunate situation of having a pretty caring, loving family on all ends, immediate and external. So I’m sure it strengthened it in some sense…” (26), while another said “Now I know which ones [friends] I can sit down and talk with, which ones are just party friends” (20). An important theme pertained to the integration of the psychotic experience into the self in a meaningful and positive way, reflected by one participant who stated “If you’ve got a mental illness, deal with it, try and live with it … it’s not a setback, it’s like an ability, it’s part of you…” (24). Experiencing greater religiosity during a FEP was remarked upon by one participant who mentioned: “I think that, erm, I was being guided by God throughout this time. There was too many things that went right for me” (31). Finally, authors of three papers (1921) described many persons with FEP having developed a greater appreciation for life and for the value of helping others, as reflected in the following statement: “Through the illness experience, participants learned to appreciate life and to appreciate the value of helping others” (20). Of note, one qualitative study was framed by the concept of reflexive function, defined as the capacity to infer mental states and to use those states to interpret behaviour regarding early attachment relationships (22). In this study, participants with high reflexive function were more likely to show evidence of PTG following their

psychosis, such as acceptance and integration, self-compassion, creative self-expression, integration with older peers, and developing new peer groups.

Among the included qualitative studies, two focused on the social supports of persons with FEP and pertained to our research question of PTG following FEP. In one study focused on siblings of persons with FEP, (29) some siblings said they had found new meaning in life by helping others because of their loved one's FEP. Others had developed greater empathy towards people, as described by one participant: "It's kind of like made me very sort of like, personal experience, it's made me wanna help people really with it and help the whole, like put more, like get more research for it I guess". In a second study, friends identified (28) having a closer relationship with a friend who experienced FEP, and felt their friend was a stronger person as a result of their FEP. The following are pertinent quotes, "Well I think we're as close as anyone could ever be" and "He's a stronger person now, he's got a much better attitude".

Themes related to PTG in Quantitative Studies. The single quantitative study examined predictors of PTG following FEP. Predictors included the impact of the trauma induced by FEP (i.e., the degree of post-traumatic symptoms following the experience), the willingness to disclose trauma (i.e., the urge or reluctance to talk about a FEP), the actual disclosure of trauma (i.e., amount of time a participant spent talking about their FEP with people) and processes of recovery (i.e., intrapersonal and interpersonal tasks that facilitate recovery) (17). Their results revealed that PTSD symptoms, recovery and actual self-disclosure positively predicted PTG, while a reluctance to disclose negatively predicted PTG.

Themes related to PTG in the Mixed Methods Study. The mixed methods study (14) had a sample size of two, and presented no quantitative results relevant to positive outcomes experienced following FEP. In the qualitative arm of this study, participants described having

grown from FEP, such that they experienced greater appreciation of life, improved relations with others, new possibilities in life, and had developed strengths of character.

Consultation exercise

A consultation exercise was undertaken at the end of the review to obtain feedback from potential knowledge-users. Results from the scoping review were thus presented at a meeting which included psychiatrists, psychologists, nurses, social workers, occupational therapists, researchers, research assistants and trainees from three specialized early intervention services for FEP in Montreal. Those in attendance thought that a focus on positive outcomes following FEP as embodied in this scoping review could have a meaningful impact on the lives of service users with FEP. Clinicians expressed interest in learning how to integrate what had been presented into their clinical practice. Furthermore, feedback was provided on ways to build upon the scoping review and pursue additional directions in the subsequent, full systematic review. Main suggestions for the subsequent review were to include scholarly peer-reviewed articles published in French; to consult with specific groups such as the Hearing Voices Network; to consider first-person accounts and grey literature as sources of knowledge; and to more comprehensively include the FEP literature on key concepts such as recovery and resilience.

Discussion

The negative impacts of FEP on affected persons, friends, families and society are significant and should not be understated (32-34). However, in addition to suffering, the experience of psychosis may provide individuals with an opportunity for PTG. Although PTG following physical illness has been well described in the literature (6, 7, 9), the status of knowledge concerning PTG following FEP is unclear. As a first step to completing a full systematic review, we conducted a scoping review to determine the overall landscape of

scientific knowledge concerning PTG following FEP. Results from this review indicated a paucity of research directly describing positive outcomes, such as PTG, stress-related growth, and benefit-finding following FEP (17,18). Most research related to the topic of positive outcomes following psychosis was instead embedded within the recovery literature, and was investigated principally through qualitative approaches. With the exception of one study which explicitly examined positive outcomes, other mentions of positive outcomes were embedded within qualitative articles.

Because of the nature of the data reviewed, which included excerpts from larger parts of text (that, for qualitative studies, reflect the inductive and deductive processes of qualitative research) and second-order, author reflections about participants, determining if a study described PTG rather than stress-related growth or benefit finding (reflecting actual or perceived growth) was not possible. This task was made more difficult because none of the study authors (except one quantitative study) defined the positive outcomes experienced by participants as PTG, stress-related growth, or benefit finding . It was therefore impossible to determine if participants had *actually* experienced PTG, or if the positive outcomes they reported were illusory, or a coping mechanism. Rather than assume that the positive outcomes reported were illusory or a coping strategy, we inferred that reports of PTG reflected actual changes, rather than perceptions of change; and that based on the traumatic nature of FEP, positive outcomes could arguably be conceptualized as PTG, as opposed to stress-related growth. Meanwhile, we fully acknowledge that the first-episode of psychosis may not have been traumatic for some participants and the positive outcomes experienced by them could have been more in line with stress-related growth or even illusory. While such limitations are difficult to circumvent using any literature review methodology, future primary research investigating positive outcomes

following FEP should attempt to determine if participants have experienced PTG, stress related growth, or benefit finding.

Of the included studies, 12 captured experiences of PTG from the perspective of people with lived experience of FEP, while two centered on the experiences of friends and siblings. These studies revealed that following FEP, participants developed new, healthy personality traits; integrated their experience of FEP into a coherent continuous narrative of their selves; appreciated life more; developed stronger connections with friends and families; felt a stronger connection to God; and made positive lifestyle changes. Siblings and friends of people with lived experience of FEP also reported PTG in themselves and in their loved ones. Overall, these findings are similar to domains of growth observed following physical illness (8). Of note, the theme of integrating psychosis with the self is related to an integrative recovery style (i.e., an awareness of the continuity of mental activity and personality from before, during, and recovering from FEP), as opposed to a sealing over recovery style (i.e., an attempt to view the psychotic experience as an isolated, interruptive event that is best forgotten about) (17). Research on integration of psychosis following FEP may therefore be pertinent to PTG; the second phase of this review will therefore attempt to include studies on integrative recovery styles.

That the majority of articles describing PTG employed qualitative methods is noteworthy given the historical hierarchies of power subsumed in quantitative research. Such research has traditionally been regarded as using a deductive approach designed to disconfirm null hypotheses, and, in many circumstances, with little input from participants themselves. Conversely, qualitative research uses a more inductive approach, and allows for participants to generate new themes outside the expectations of the interviewer, creating knowledge grounded on experience (36). Since PTG was revealed by participants themselves in qualitative studies,

PTG may be important in the aftermath of FEP, and should be investigated further through a range of methodologies.

Since descriptions of PTG were found mostly in the recovery literature, one question that arises is whether PTG is indeed part of the recovery construct or a distinct experience. According to Carver (37), recovery implies to a return to a pre-existing level of functioning, with PTG occurring a step beyond recovery. However, multiple definitions of recovery exist within psychosis research. It has often been defined as being in symptomatic and functional remission according to standardized clinical measures (38), a definition that is somewhat consistent with Carver's conceptualization of recovery (37). However, other specific measures of recovery such as the Recovery Assessment Scale (39) capture additional, more nuanced aspects of the recovery process, such as feeling hope for the future. The increasingly dominant view, based on subjective perspectives of recovery captured through qualitative methods (40), is that the definition of recovery is inherently subjective. For some, positive outcomes as a result of psychosis may be key to recovery, while for others, returning back to a life which resembled a pre-illness existence may be key to recovery. Hence, whether or not PTG and recovery are distinct or similar may also vary depending on individual perceptions, and may need to be systematically investigated in the future.

The small number of studies related to PTG indicates that more research on the subject is needed, especially since it may be important to those with lived experience of FEP as demonstrated by its spontaneous emergence as a theme in the qualitative studies. Given that only two studies with quantitative data were found, and that PTG was not explored directly in qualitative articles, there is a need for a direct examination of PTG following FEP. Furthermore, additional research should address other positive outcomes associated with, and following FEP,

which have not traditionally been covered by the rubric of PTG (e.g., developing a positive relationship with auditory hallucinations, etc.).

Strengths and Limitations

Strengths of this scoping review include its focus on a meaningful and potentially clinically relevant research question; its involvement of multiple stakeholders operating within the framework of specialized early intervention for FEP. To our knowledge, no other review using any other methodology has been conducted examining PTG following FEP. Furthermore, few studies have focused on the potential positive aspects of FEP. Overall, results contribute to a more nuanced understanding of FEP and its aftermath, one that takes into consideration growth alongside suffering.

One limitation of this study was that it did not cover the breadth of most scoping reviews, and few publications were retained. Our choice of examining scientific peer reviewed journal articles to the omission of other sources of knowledge (e.g., personal narratives, grey literature, books, etc.) was guided by the rationale that benefits following FEP are a somewhat novel, unexplored and controversial concept. By exploring scientific writings, over more anecdotal work, we could potentially argue with some confidence that the scientific method has lent credibility and validity to the findings we synthesized, strengthening the validity of a positive aftermath following FEP. Reviewing the scientific literature is thus a more conservative approach. Still, this is the only study to synthesize evidence on the positive aftermath following FEP, and helps to dispel the generally negative outlook individuals have towards psychotic illness.

Future Directions

A comprehensive systematic review will be conducted, informed by the results from this scoping review and the recommendations that emerged during the consultation exercise when

results were presented to various pertinent stakeholders. A specific search strategy will be employed during the systematic review process to retrieve qualitative, quantitative and mixed methods studies on recovery, since this was shown to be an important key concept related to PTG. Due to the diversity of methodologies, a mixed methods studies review will be conducted using a qualitative convergent design so as to not lose the meaning ascribed to PTG by participants. In addition, the primary author is in the process of conducting a primary mixed methods study exploring PTG following FEP. We will attempt to address the various issues surrounding PTG, stress-related growth and benefit finding discussed within our mixed studies review and mixed methods study.

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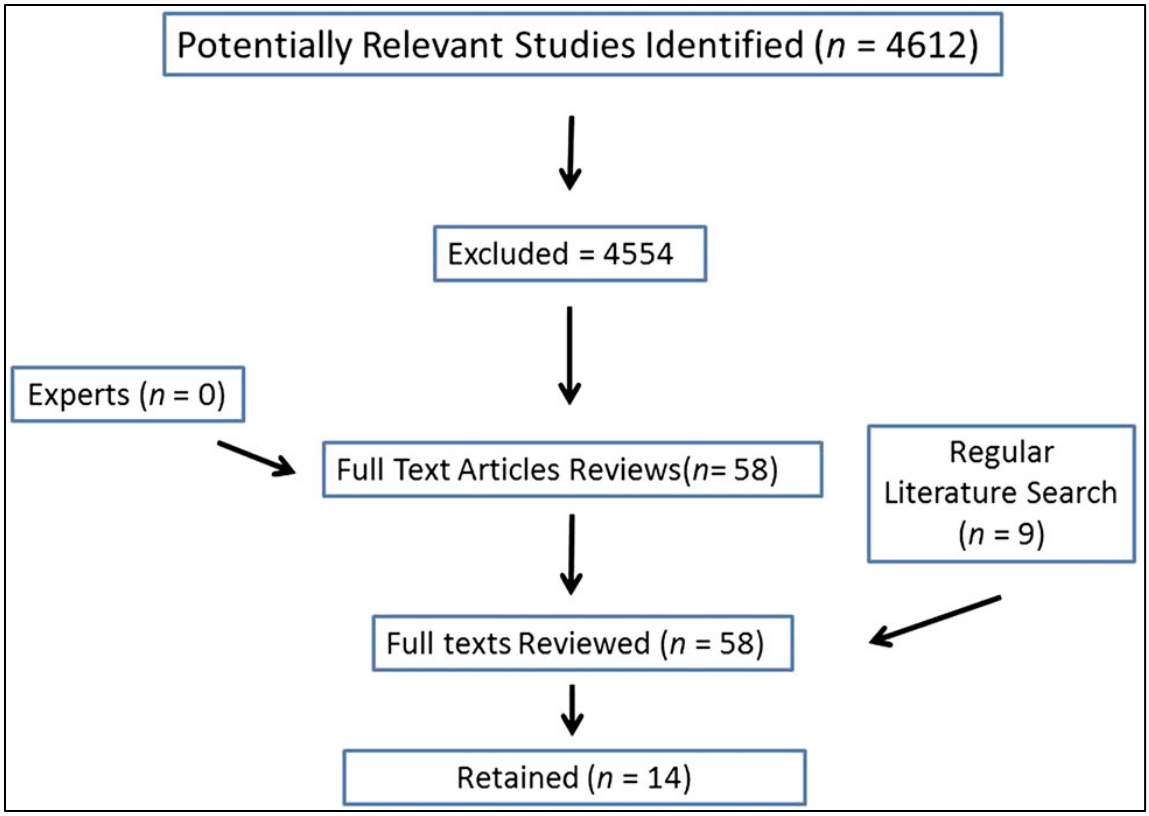

FIGURE 1. Study selection process.

TABLE 1. Keywords and search terms applied		
1. (first adj3 psychos*).mp.	36. pleasur*.mp.	71. awareness.mp.
2. (first adj3 psychotic).mp.	37. pleasing.mp.	72. greatness.mp.
3. (early adj3 psychos*).mp.	38. comfort*.mp.	73. self actuali*.mp.
4. (early adj3 psychotic).mp.	39. reassuran*.mp.	74. promotion.mp.
5. (initial adj3 psychos*).mp.	40. well being.mp.	75. creativ*.mp.
6. (initial adj3 psychotic).mp.	41. wellbeing.mp.	76. madness.mp.
7. or/1-6	42. content*.mp.	77. pride.mp.
8. Resilience, Psychological/	43. hearten*.mp.	78. proud.mp.
9. exp social environment/	44. benefi*.mp.	79. holistic*.mp.
10. exp Family/	45. useful.mp.	80. ((posttraumatic or stress) and growth).mp.
11. Mental Health/	46. value.mp.	81. thriv*.mp.
12. exp Adaptation, Psychological/	47. valuable.mp.	82. blessing*.mp.
13. quality of life/	48. helpful.mp.	83. transformation*.mp.
14. morale/	49. favorable.mp.	84. or/8-83
15. resilien*.mp.	50. favourable.mp.	85. 7 and 84
16. strong*.mp.	51. advantag*.mp.	
17. robust*.mp.	52. constructive.mp.	
18. resistant.mp.	53. benevolen*.mp.	
19. spirit*.mp.	54. caring.mp.	
20. tough.mp.	55. meaning.mp.	
21. endur*.mp.	56. significan*.mp.	
22. empower*.mp.	57. importan*.mp.	
23. enabling.mp.	58. consequen*.mp.	
24. embolden*.mp.	59. adjust*.mp.	
25. encouragement.mp.	60. adapt*.mp.	
26. inspiration.mp.	61. open to experience.mp.	
27. inspire.mp.	62. quality of life.mp.	
28. courage*.mp.	63. qol.mp.	
29. morale.mp.	64. life chang*.mp.	
30. strength.mp.	65. life experienc*.mp.	
31. happy.mp.	66. (positive and (product or adjustment or adaptation or psychology)).mp.	
32. happiness.mp.	67. recovery.mp.	
33. pleasant*.mp.	68. empath*.mp.	
34. enjoy*.mp.	69. neutral.mp.	
35. satisf*.mp.	70. harmless.mp.	

TABLE 2. Questions applied when charting the data
Study characteristics
What is the title of the publication?
Who are the authors of the publication?
Which year was the publication published in?
In which journal does the publication appear?
In what field was the article published in (e.g. psychology, psychiatry)?
What are the aims of the study?
What are the key concepts described in the study?
Participant characteristics
What is the mean age of participants included in the study?
How many men and women were included in the study?
What is the most frequent diagnosis reported in the study?
What is the most frequently reported ethnicity in the study?
Where participants in the study recruited from inpatient or outpatient services?
Which country were participants recruited from?
How much time has elapsed from the onset of the FEP to when data were collected?
Is the sample used described as clinically stable?
Methodology, data collection and results
Is the study qualitative, quantitative or mixed methods?
How were data collected?
How were data analysed?
What predictor variables were included in the study?
What outcome measures were included in the study?
What are the relevant results from the study?

Table 3: Charting of Data

ID	Title	Authors	Year	Journal
1	A qualitative analysis of influences on recovery following a first episode psychosis	Deborah Windell; Ross MG Norman	2012	International Journal of Social Psychiatry
2	A qualitative investigation of first-episode psychosis in adolescence	Eva Cadario; Josephine Stanton; Puti Nicholls; Sue Crengle; Trecia Wouldes; Matt Gillard; Sally Nicola Merry	2011	Clinical Child Psychology and Psychiatry
3	Experience of recovery from a first-episode psychosis	Paula Eisenstadt; Vera B Monteiro; Matheus JA Diniz; Ana C Chaves	2012	Early Intervention in Psychiatry
4	Recovering an emerging self: exploring reflective function in recovery from adolescent-onset psychosis	Christine Braehler; Matthias Schwannauer	2012	Psychology and Psychotherapy: Theory, Research and Practice
5	The process of recovery in women who experienced psychosis following childbirth	Laura McGrath; Sarah Peters; Angelika Wieck; Anja Wittkowski	2013	BMC Psychiatry
6	“There are too many steps before you get to where you need to be": help-seeking by patients with first-episode psychosis	Kelly K Anderson; Rebecca Fuhrer; Ashok K Malla	2013	Journal of Mental Health
7	Views of young people in early intervention services for first-episode psychosis in England	Helen Lester; Max Marshall; Peter Jones; David Fowler; Tim Amos; Nagina Khan; Max Birchwood	2011	Psychiatric Services
8	What does recovery from psychosis mean? Perceptions of young first episode patients	Mary ML Lam; Veronica Pearson; Roger MK Ng; Cindy PY Chiu; CW Law; Eric YH Chen	2010	International Journal of Social Psychiatry
9	“You’ve got to have a positive state of mind”: An interpretative phenomenological analysis of hope and first episode psychosis	Beth M Perry; Damian Taylor; Samantha K Shaw	2007	Journal of Mental Health
10	Reshaping an enduring sense of self: the process of recovery from a first episode of schizophrenia	Donna M Romano, Elizabeth McCay; Paula Goering; Katherine Boydell; Robert	2010	Early Intervention in Psychiatry

		Zipursky		
11	Posttraumatic growth and recovery in people with first episode psychosis: an investigation into the role of self-disclosure	Magdalena Pietruch; Laura Jobson	2011	Psychosis: Psychological, Social and Integrative Approaches
12	Understanding adaptation to first episode-psychosis: the relevance of trauma and posttraumatic growth	Jane E Dunkley; Glen W Bates	2007	The Australasian Journal of Disaster and Trauma Studies
13	A narrative analysis investigating the impact of first episode psychosis on siblings' identity	Sharon Newman; Laura M Simonds; Jo Billing	2011	Psychosis: Psychological, Social and Integrative Approaches
14	What is it like to be friends with a young person with psychosis? A qualitative study	Rachel M Brand; Chris Harrop; Lyn Ellett	2010	Psychosis: Psychological, Social and Integrative Approaches
ID	**Country of Research Group**	**Aim(s) of study**	**Conceptual Frameworks**	**Percent Male**
1	Canada	To examine factors that enhance or impede recovery from the perspective of individuals receiving specialized early intervention care following their first episode of psychosis	Recovery	76.7%
2	New Zealand	To provide a description of the meaning of the first psychotic episode for the adolescent and their primary caregiver, and the experience of accessing effective treatment	Phenomenology of FEP and experiences of service engagement	58%
3	Brazil	To understand the recovery experience of patients from a first episode psychosis programme in Sao Paulo Brazil	Recovery	75%
4	England	To investigate the processes involved in how young people	Recovery	50%

		with adolescent onset psychosis adapt to psychosis and how processes of reflective function influence the adaptation process		
5	England	To develop a theoretical understanding of recovery from psychosis following childbirth	Recovery	0
6	Canada	To describe the experiences of patients with first episode psychosis on their pathway to care and to identify factors that help or hinder help seeking efforts	Pathways to care	75%
7	England	To describe the views over time of young people referred to early intervention services, particularly as they relate to the importance of their relationships	Value of specialized early intervention services	66%
8	China	To explore the experience of first episode psychosis from the patients' perspective and the meaning they attach to the illness and their recovery	Recovery	50%
9	England	To investigate the personal experiences of participants following a recent first episode of psychosis, and explore influences on feelings of hope	Unclear, possibly hope or recovery	100%
10	Canada	To investigate the ways in which individuals with first episode schizophrenia describe their process of recovery and how	Recovery	50%

		identified individuals describe their perceptions of and roles in the participant's process of recovery		
11	England	To explore the relationship of trauma, disclosure, and recovery on post traumatic growth following psychosis	Post-traumatic growth; recovery	65%
12	Australia	To explore the utility of a trauma framework/perspective in understanding recovery from FEP, and to see whether constructs pertinent to trauma and posttraumatic growth emerged in people's accounts of recovery	Post-traumatic growth; recovery	50%
13	England	The aim was to explore the impact of having a sibling with psychosis on siblings' sense of self and their identity development and the tools they adopt within the families	Impact of psychosis on siblings of service-users	50%
14	England	To understand the social impact of psychosis from the perspective of friends of people with psychosis	Impact of psychosis on friends of service-users	42%

ID	**Mean age of participants**	**Ethnicity (Mode)**	**Diagnosis (Mode)**	**Time since episode/treatment onset**
1	25.87	Not Mentioned	Schizophrenia	3-5 years
2	Between 15 and 18	European	Schizophrenia	"Months to years"
3	23	Not mentioned	Schizophrenia	6 months -2 years
4	18.6	Not Mentioned	50% Schizophrenia	2.5 (Median) since first episode

5	30-54	White British, living in England or Wales	Puerperal Psychosis	Participants recruited at different stages of recovery
6	22.5	Majority born in Canada	Not Mentioned	5.5 years (Median) since onset of treatment
7	22	Majority White, British	Not Mentioned	First interview conducted within 6 months of treatment onset; second interview was 12 months later
8	25.18	Cantonese-speaking Chinese	Schizophrenia	Not mentioned
9	21.8	White British	Not mentioned	7.2 months (Mean) since onset of FEP
10	23.5	Caribbean and Caucasian	Schizophrenia	1-3 years since treatment onset
11	25.67	Not mentioned	Not mentioned	9.8 Months since FEP
12	23.5	Not Mentioned	Bipolar disorder with psychotic features	Up to 8 months since FEP
13	20.75	White British	Non-clinical Sample of siblings	Siblings of service-users were unwell for 1-3 years
14	21	White British	Non-clinical Sample of Friends	Friends of service-users were unwell for 14.4 months (Mean)
ID	**Clinically Stable?**	**Methodology**	**Data Collection**	**Data Analysis**
1	Not mentioned	Unspecified qualitative method	Semi-structured interviews	Thematic analyses
2	Yes	Unspecified qualitative methods	Combination of unstructured and semi-structured interviews	General inductive approach
3	Participants were stable with respect to type and dose of medication for at least 6 months	Phenomenological approach	In-depth and semi-structured interviews	Phenomenological analysis

4	Yes	Grounded theory approach; Cross-sectional survey approach	Open Interviews; Adult Attachment Interview; Reflective Functioning Scale	Constant comparative method
5	Not mentioned	Constructivist grounded theory	Semi-structured interviews	Constant comparative method
6	Yes	Qualitative descriptive approach	Unstructured and semi-structured in depth interviews	Content analysis
7	Not mentioned	Constructivist grounded theory	Semi-structured interviews	Constant comparative method
8	Not mentioned	Qualitative descriptive approach	Focus groups	Thematic analyses
9	yes	Interpretive phenomenological Approach	Semi-structured interviews	An “idiographic approach”
10	Yes (they identified as recovering)	Constructivist grounded theory approach	Semi-structured interviews	Constant comparison method
11	Yes	Cross-sectional survey design	Impact of Events Scale—Revised; Disclosure of Trauma Questionnaire; Actual Self-Disclosure Measure; Process	Multiple regression

			of Recovery Questionnaire; Post-Traumatic Growth Inventory	
12	Not clear	Cross -sectional survey design; Case study design	Recovery Style Questionnaire; The Positive and Negative Syndrome Scale; Semi Structured Interviews	Not clear for quantitative arm; case study analysis for qualitative arm
13	Not relevant	Narrative methodology	Semi-structured interview	Various narrative analyses
14	Not relevant	Constructivist grounded theory	Semi-structured interviews	Constant comparative method