Need-Adapted and Open-Dialogue Treatments: Empirically Supported Psychosocial Interventions for Schizophrenia and Other Psychotic Disorders

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Purpose: People experiencing acute or severe psychosis in the United States do not typically have access to alternatives to standard practice. To provide people with psychotic symptoms meaningful choices in treatment, alternative approaches should be evaluated for potential integration into the mental health service system. The need-adapted and open-dialogue approaches are psychotherapeutically focused interventions for psychosis that were developed in Finland. If these treatments are found to be effective, they could potentially be used in the United States. Method: This narrative review uses systematic and transparent methods to locate and synthesize findings from treatment, quasi-treatment, and pretreatment outcome studies of the need-adapted and open-dialogue approaches. Results: One hundred twelve potentially relevant studies were identified for this review using electronic searches and reference harvesting. Of those, 7 met the review's inclusion criteria. These studies revealed that the open-dialogue and need-adapted treatments had outcomes that were equivalent or superior to those of standard care. Discussion: More research is needed on these promising modalities before they are routinely incorporated into U.S. practice.

Keywords: open-dialogue; need-adapted; schizophrenia; systematic review

The need-adapted (NA) and open-dialogue (OD) treatments for psychosis both originated in Finland during the 1980s when the government was putting money and effort into developing alternatives to psychiatric hospitalization. Both modalities focus on the clients' social networks, have a primarily psychotherapeutic focus, include the client as an equal partner in care, and stress that only the minimum necessary amount of neuroleptic medication be administered. The OD approach can be considered a type of NA treatment that has more of an emphasis on immediate care and crisis intervention (Alanen, 2009; Seikkula, 2002).

These treatment paradigms differ vastly from standard practice in the United States, which is primarily focused on medication rather than psychotherapy. People experiencing acute or severe psychosis in the United States do not typically have access to alternatives to standard practice (Curtis & Diamond, 1997). NA and OD are well-established treatment approaches in Finland (Pylkkänen, 1994). If these treatments are found to be effective, they could potentially be used in the United States to provide clients experiencing psychosis with a meaningful choice about their mental health care. Furthermore, the integration

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of effective alternate therapies into the U.S. mental health system could help to reduce the great impact schizophrenia has on individuals and society. For these reasons, it is important to evaluate promising interventions such as NA and OD. With that in mind, this narrative review will use transparent and systematic methods to present and compile research on the outcomes of these modalities.

This review is specifically concerned with the outcomes of NA and OD for people with schizophrenia and other psychotic disorders. These disorders can cause major life disruption and disability through symptoms such as hallucinations, delusions, and disorganized thoughts (American Psychiatric Association, 2000). Many people suffering with psychotic disorders become unable to participate in their normal social and vocational roles. This has had a massive economic impact on society. In 2002, the overall cost of schizophrenia exceeded 60 billion dollars (Wu et al., 2005).

The *Diagnostic and Statistical Manual of Mental Disorders* (4th ed., text rev.; *DSM-IV-TR*) groups psychotic disorders together because they all include psychotic experiences as a salient aspect of their presentation (American Psychiatric Association, 2000). For most of the disorders that will be included in this review (i.e., schizophrenia, schizophreniform disorder, schizoaffective disorder, delusional disorder, brief psychotic disorder, shared psychotic disorder, and psychotic disorder not otherwise specified), the term *psychotic* refers to the presence of delusions, disorganized speech, disorganized behavior, hallucinations, or catatonic behavior (American Psychiatric Association, 2000).

Outcome studies of two interventions, the NA treatment and the OD approach, will be considered in this review. These interventions share a common lineage and have extremely similar core treatment components. NA preceded and led to the development of OD, so NA will be described first.

The NA treatment approach, sometimes called the need-specific approach, was first used in Finland during the early 1980s (Alanen, Lehtinen, Räkköläinen, & Aaltonen, 1991). NA is focused on the clients' social networks and aims to reduce the impact of symptoms, build understanding, promote personal agency, and promote reintegration into social roles. At all stages of NA, active participation is sought from the clients' social network. When following this approach, therapeutic activities are flexible and tailored to the individual so that they meet the actual needs of the clients, which often change during the course of treatment. Treatment should also be responsive to the needs of family members or friends involved in care. In addition, treatment is viewed as a continuing process, and continuity (or follow-up) is considered essential. Furthermore, clients are full participants in all treatment decisions. Finally, NA has a primarily psychotherapeutic orientation and is what could be called a minimal medication approach (Alanen, 2009). More detailed descriptions of the theory and practice of NA can be found elsewhere (e.g., Alanen, 1997, 2009).

The OD approach to treatment evolved as part of the NA paradigm (Seikkula et al., 2003). Like NA, OD also aims to build understanding among participants, reintegrate the client into their various roles, promote agency, and reduce symptoms.

OD was developed in the mid-1980s and emphasizes the provision of treatment with the involvement and integration of the clients' own personal support systems (Seikkula et al., 2003). In practice, this involves joint meetings including the client, mobile crisis intervention teams, and members of the clients' social networks. This is similar to the emphasis of NA. However, the actual process and content of these meetings stem from a specific philosophy, which is discussed elsewhere (e.g., Seikkula, Alakare, & Aaltonen, 2001a; Seikkula et al., 2003; Seikkula & Olson, 2003).

OD has primarily been recommended for first-episode psychosis and stresses immediate care. Specifically, this means that a meeting should be held within 24 hr of initial contact with the client. As in NA treatment, the client is a full participant in the process (Seikkula & Olson, 2003). In OD, treatment decisions are always made with the client present. The mental health professionals do not meet separately at any time. Another quality of this approach is that the introduction of medication, should the client and treatment team deem it appropriate, is done slowly and after much discussion. Like NA, this could be considered a minimal medication approach. Another similarity is that OD also focuses on the treatment process (Seikkula & Olson, 2003).

Mental health professionals are obligated to uphold the dignity and autonomy of the people they serve. Currently, people with debilitating psychotic symptoms in the United States have extremely limited treatment options (Monahan et al., 2001). Furthermore, people with psychotic symptoms may not have a choice about receiving treatment at all, even if they are not committed to involuntary treatment. Often, housing and other vital services available to people disabled by mental illness are contingent upon receipt of psychiatric treatment, including adherence with a medication regimen (Kertesz, Crouch, Milby, Cusimano, & Schmacher, 2009; Monahan et al., 2001). The centerpiece of standard care for acute psychosis is medication, often coupled with implicitly or explicitly coercive techniques to promote adherence to that medication (Angell, Mahoney, & Martinez, 2006; Curtis & Diamond, 1997).

The study of psychotherapeutically oriented interventions for schizophrenia and other psychotic disorders is likely controversial in the United States because of the emphasis on treatment with medications and beliefs concerning the etiology of schizophrenia (Alanen, 2009). Overemphasis on the medical model of mental illness in the United States may be perpetuated by the influence of the pharmaceutical industry on psychiatry and its related professions. To make a conciliatory point, it is true that there are promising but heterogeneous findings concerning genetic contributors to psychosis (Allen et al., 2008). However, no biological marker has been identified that satisfactorily explains the symptoms and onset of schizophrenia (Allen et al., 2008; Andreasen, 1997). In addition, there is a large body of literature suggesting that adverse or traumatic experiences are associated with subsequent psychosis. This literature has been recently summarized in a meta-analysis, which found that childhood adversity is strongly associated with psychotic experiences in adulthood (Varese et al., 2012).

Again, the study of psychosocial interventions for psychosis that may postpone or eliminate the use of pharmaceuticals is controversial because of the predominance of the medical model of mental illness in the United States. However, there is an abundance of research that suggests that the postponement or elimination of medication in the treatment of psychosis is not harmful. For example, a recent multisite randomized controlled trial of cognitive therapy for people considered at risk for psychosis found that the rates of transition to psychosis are lower than previously believed and that a high potential for recovery exists in this population even without treatment (Morrison et al., 2012). Furthermore, Bola's (2006) meta-analytic review revealed no evidence of long-term harm from short-term medication postponement in early episode schizophrenia, suggesting that research concerning treatment modalities that deemphasize or delay the use of antipsychotics is ethically feasible. Therefore, if psychotherapeutically oriented treatments such as NA and OD prove promising, further research in the United States could be carried out.

If people with psychotic symptoms were offered viable alternatives to standard care, they would gain more choice and agency in their quest for recovery. In contrast to standard

treatment, the centerpiece of NA and OD is psychotherapy provided in the context of individuals' social environments (Alanen, 2009; Seikkula, 2002). If these approaches were effective and could be made available in addition to standard care, they would represent the presence of a choice in treatment modality. This choice is something urgently needed in the treatment of severe mental illness. This review will assess the outcomes of these two alternative approaches based on the available literature. This review can be seen as part of an effort to identify effective treatments for psychotic symptoms that are distinct from the limited options currently available to people with psychosis in the United States.

The primary objective of this review was to use systematic and transparent methods to complete a narrative review of treatment, quasi-treatment, and pretreatment studies of NA and OD treatments for people with psychotic symptoms.

The secondary objective was to synthesize the results of these studies to assess the clinical outcomes for people with psychotic symptoms who receive NA and OD.

METHOD

Inclusion and Exclusion Criteria for Studies in This Review

Participants. Participants of studies eligible for this review included people of all ages and cultures with a primary Axis I diagnosis of a psychotic disorder or its equivalent. Studies of participants with prodromal symptoms were also included because OD emphasizes the treatment of first-episode schizophrenia and first-contact patients with psychotic symptoms.

This review excluded studies with participants who are diagnosed primarily with psychotic disorder because of a general medical condition or substance-induced psychotic disorder. The precise etiology of most psychotic disorders is unknown (Allen et al., 2008; Andreasen, 1997; Varese et al., 2012), but these excluded disorders are clearly attached to discrete events (illness or substance use) and may have a more predictable course than the included psychotic disorders (American Psychiatric Association, 2000).

Interventions. This review included studies that examine either the NA or OD treatment approach. These approaches share a similar lineage and both center on client's choice and the provision of psychotherapy in the clients' preexisting social contexts (Seikkula et al., 2003). For these reasons, NA and OD were considered together for this review.

Articles that focus on any other intervention were excluded from this review. Articles examining the effects of NA were eliminated from this review if the original authors were not cited within the work. The phrase "need-adapted" has been used to describe other modalities and procedures, so this extra step was taken to ensure that included studies examine the treatment approach developed by Alanen and colleagues (1991).

Research Design. Studies employing treatment, quasi-treatment, and pretreatment designs were included in this review. Qualitative studies were included in the literature review for purposes of discussion but were not used to provide evidence related to the outcomes of the treatment approaches.

Outcome Measures. The outcome measures of symptom severity and subsequent hospitalization were the primary focus of this review, but studies using measures of psychosocial functioning were also included.

Settings. This review did not exclude studies based on setting and included participants from all areas and nations. However, the review was limited to articles published in English, so it is possible that relevant studies from non-English speaking nations are underrepresented.

NA and OD can be used in inpatient or outpatient care. Therefore, studies of both or either of these settings were included for review.

Outlets. Only peer-reviewed journal articles were considered for this review.

Search Methods for Identification of Studies

Electronic Searches. Electronic searches were carried out to identify peer-reviewed journal articles published in English between January 1980 and February 2012. NA was developed during the 1980s, so references before 1980 should be irrelevant (Seikkula et al., 2003).

The searches included the following databases: Web of Knowledge (formerly Web of Science), PsycINFO, MEDLINE, Social Services Abstracts, CINAHL with full text, Cochrane Database of Systematic Reviews, and Science Citation Index Expanded.

Search terms used to identify studies for inclusion in this review were sometimes modified to meet the requirements of individual databases. The following search terms were used to find studies for inclusion in the review: "open dialogue" OR "need adapted" OR "need specific" OR "acute psychosis teams" AND schiz* OR psych*.

Reference Harvesting. Reference lists of all relevant articles were checked by the author for other potentially relevant articles. These potentially relevant articles were assessed for possible inclusion in the review. The potentially relevant articles yielded by these searches were retrieved and assessed for possible inclusion in the review.

Grey Literature. Any grey literature was excluded from the review, so this is not a true systematic review. Rather, it is a narrative review using transparent and systematic methods.

Data Collection

Study Selection. Each relevant study obtained through electronic searches and reference harvesting was screened by the author based on the previously outlined inclusion and exclusion criteria. When there was a question as to whether a study met criteria, a second reviewer was consulted.

Data Extraction. All articles that survived the screening process were analyzed and coded based on the intervention and comparison groups used, the sample characteristics, research designs, outcome measures, and results.

RESULTS

Study Selection

One hundred twelve studies were identified through electronic searches and reference harvesting. Of those, 79 had titles that indicated a lack of relevance to this review. Abstracts of the remaining 33 studies were retrieved and reviewed. Sixteen studies were discarded after their abstracts showed a lack of fit with the inclusion and exclusion criteria for this review. Three of those studies were excluded because they were in a language other than English. Four, including Seikkula (1991), were excluded because they were summaries

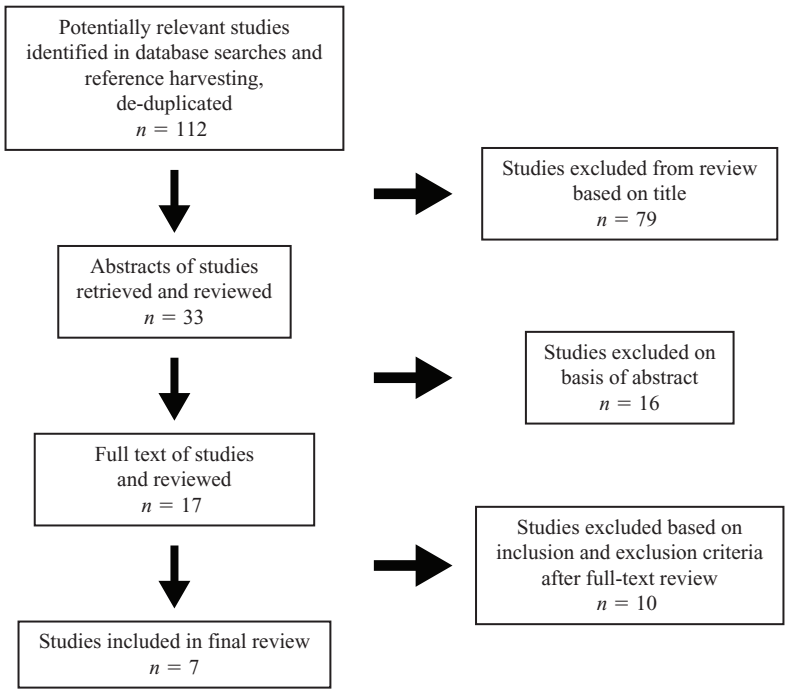

FIGURE 1. QUOROM flowchart.

or conference proceedings. The full texts of the remaining studies were reviewed. Ten of those articles were discarded because of lack of fit with the inclusion and exclusion criteria. A visual depiction of this study selection process can be found in Figure 1.

The most common reason for exclusion at the final stage was the use of an intervention that did not fit the NA or OD models. The second most common reason for discarding a study from the review was the use of exclusively qualitative outcome measures. One study (Lehtinen, Aaltonen, Koffert, & Räkköläinen, 1996) was excluded because the only outcomes reported in that article were the planned location of treatment for the initial sample ($n = 136$) of the Acute Psychosis Integrated Treatment (API) project and the planned neuroleptic treatment for the same sample. The outcomes were not based on events that had occurred but rather the treatment plans of participants. The API project was carried out in six different psychiatric catchment areas of Finland that adopted the NA model of care. The 2-year outcome study for this project is included in the formal review (Lehtinen, Aaltonen, Koffert, Räkköläinen, & Syvälahti, 2000).

Reviewed Studies and Associated Projects

There were seven articles selected for inclusion in the final review. These include Alanen et al. (1991) and Lehtinen (1993), which examined results of the Turku project at 2 years (Alanen et al., 1991) and at 5 years (Lehtinen, 1993). The purpose of the Turku project was to evaluate the outcomes of NA. This review also includes a 2-year follow-up study of the API project, which evaluated the use of NA in six different centers across Finland (Lehtinen et al., 2000).

This review also includes an outcome study from the Western Lapland project, which was associated with the API project (Aaltonen, Seikkula, & Lehtinen, 2011). The Western

Lapland province of Finland was one of the areas selected for the API project. This province used OD, which falls under the umbrella of NA treatment. The participants of API that were located in the Western Lapland area may have been used in the Western Lapland project (Aaltonen et al., 2011) and were definitely used for a segment of the project known as Open Dialogue in Acute Psychosis (ODAP). The 2-year (Seikkula et al., 2003) and 5-year (Seikkula et al., 2006) follow-up studies for this cohort, which will be referred to as the ODAP/API cohort, are included in this review. Finally, a study reporting 2-year outcomes for a continuation of ODAP with a new cohort of participants is included in the present review (Seikkula, Alakare, & Aaltonen, 2011).

Given that most of the studies reviewed here report results from the API and ODAP projects, it is worth noting that these projects were both part of the Finnish National Schizophrenia Project, which involved a government-sponsored paradigm shift for psychiatric services in Finland. This shift included the addition of NA treatment as a practice standard. A 10-year evaluation of the national project showed a 60% decrease in the nationwide number of new long-stay patients with psychiatric disorders, defined as newly admitted patients who remained in the hospital for 1 year or longer (Tuori, Lehtinen, & Hakkarainen, 1998). However, the findings from that national evaluation are too broad to include in this review. The addition of NA as a practice standard was only a part of the Finnish national program.

Summary of Reviewed Studies

The Turku Project. The Turku project evaluated the outcomes of a group of patients receiving NA in 2 years (Alanen et al., 1991) and in 5 years (Lehtinen, 1993). Because all patients with psychosis receiving mental health services in the Turku area received NA after 1982, a historical control group ($n = 54$) that received treatment-as-usual in the same service area from 1976 to 1977 was used as a comparison. The treatment-as-usual group received individually oriented and medically focused care. At the 2-year follow-up, participants in the group receiving NA stayed fewer days in the hospital, were less likely to be living on a disability pension, and were more likely to have an absence of psychotic symptoms. Significance levels for these differences were not reported for the 2-year mark.

The 5-year follow-up study (Lehtinen, 1993) found that participants in the group receiving NA were less likely to be living on a disability pension (G^2 likelihood ratio $= 9$, $p < .005$), were more likely to have an absence of psychotic symptoms ($G^2 = 3.9$, $p < .05$), were more likely to sustain social relationships ($G^2 = 3.8$, $p < .05$), and spent fewer days in the hospital than participants receiving treatment-as-usual. For this study of NA, then, all investigated outcomes were better than or equivalent to the individually and medically oriented comparison treatment.

The Acute Psychosis Integrated Project. The API project was a part of the larger Finnish National Schizophrenia Project. The specific aims of API were to evaluate the outcomes of NA for people with psychotic symptoms in six different service areas and to compare outcomes for the three service areas using a minimal medication approach to treatment with outcomes from service areas using a standard medication approach. Again, all six service areas used NA in conjunction with either a minimal or a standard approach to medication.

Although the article reporting the 2-year follow-up study for this project (Lehtinen et al., 2000) stated that evaluating the effectiveness of NA was its main objective, only descriptive statistics were used to evaluate overall outcomes. The study found that 41.5% of participants spent less than 2 weeks in the hospital during the 2-year period. Other findings were that 51.9% of the participants were experiencing no symptoms at the 2-year

follow-up and that 32.1% of participants were employed at the 2-year mark. Unfortunately, comparisons to baseline were not given for these numbers.

Some differences were found in the API study between groups receiving NA with minimal medication and those receiving NA with standard medication. The minimal medication group members were more likely to have spent less than 2 weeks in the hospital ($p < .05$) and were more likely to have an absence of psychotic symptoms at the 2-year mark ($p = .08$). As readers may note, the difference in time spent in the hospital was significant, whereas the difference in symptoms was not quite significant.

The Western Lapland Project. This project was associated with the API project and its results are reported by Aaltonen et al. (2011). The Western Lapland project investigated outcomes of OD (which is considered by API and the Finnish National Schizophrenia Project to be an extension of NA). This project used a treatment group of 111 consecutively admitted patients to services in the Western Lapland area that had psychotic symptoms and no previous experience with psychiatric care. Because all such patients in Western Lapland received OD after 1990, a historical comparison group was used that consisted of 139 similar admits to the same facilities from the years 1985 to 1989—when standard, individually oriented psychiatric care was used. The treatment and comparison group did not have any significant differences at baseline.

The main hypothesis of the Western Lapland project was that the treatment group should have fewer diagnoses of schizophrenia and other psychotic disorders that include severe symptoms. OD was hypothesized to prevent psychiatric crises from developing into psychotic disorders. The findings from this study support that hypothesis because the treatment group had less schizophrenia ($\chi^2 = 13.75, p < .001$) and more brief psychotic reactions ($\chi^2 = 8.89$, $p < .01$) than the historical comparison group at the final data collection point.

The Open Dialogue in Acute Psychosis/Acute Psychosis Integrated Treatment Cohort. The Western Lapland province of Finland was selected for the API project. The Western Lapland province used OD, which falls under the umbrella of NA treatment but has an expanded philosophy and focuses more on crisis work. The participants of API that were located in the Western Lapland area were used for a segment of the project known as ODAP. The 2-year (Seikkula et al., 2003) and 5-year (Seikkula et al., 2006) follow-up studies for this ODAP/API cohort will be reported here.

The 2-year (Seikkula et al., 2003) follow-up study used a treatment group of 23 consecutively admitted patients to area mental health services between 1994 and 1997 who had psychotic symptoms and no prior record of psychiatric care. These participants received the most recent incarnation of OD. This group was compared with two other groups. One was a group of 14 consecutively admitted patients to services in a different area that used standard, individually focused psychiatric treatment. These participants also experienced psychotic symptoms and had no previous record of treatment. The second group was a historical comparison group comprising 22 patients that had also received OD but at a time when the approach was not as well-developed (1992–1993).

The treatment and comparison groups were assessed for days spent in the hospital during the 2-year period, psychotic symptoms as measured by the Brief Psychiatric Rating Scale (BPRS), symptoms as assessed by the Strauss-Carpenter Scale (see Strauss & Carpenter, 1972), the use of neuroleptics, the number of relapses (defined as new or intensified treatment contact), employment status, and the number of family meetings attended. The treatment group fared better than the treatment-as-usual comparison group on days spent in the hospital, BPRS scores,

number of relapses, and employment status. They also used less neuroleptic and had more family meetings. The treatment group fared better than the comparison group receiving the earlier form of OD on days spent in the hospital and BPRS scores. All other differences were nonsignificant. Please see Table 1 for statistics and significance levels for these differences.

The 5-year (Seikkula et al., 2006) follow-up study for this cohort used the same treatment group, but it appears that the researchers also included some participants who did not have severe enough psychotic symptoms to meet inclusion criteria for the 2-year follow-up because 42 participants were included in the treatment group at the 5-year follow-up. The comparison group using an earlier form of OD was also the same (consecutively admitted patients between 1992 and 1993), but again, the sample size was larger ($n = 33$), potentially indicating less stringent inclusion criteria. The 5-year follow-up study did not compare the treatment group to a comparison group that received standard care. Results of the 5-year follow-up compare a more contemporary form of OD to an earlier version of itself. There were no significant differences between the groups on days hospitalized, BPRS scores, Strauss-Carpenter Scale scores, use of neuroleptics, number of relapses, or employment status. The treatment group did have significantly more family meetings, however ($t = 16.32$, $p < .001$).

The Second Open Dialogue in Acute Psychosis Cohort. Two-year outcomes of a second cohort of patients receiving OD in Western Lapland were compared to those of the ODAP/API cohort that received OD from 1994 to 1997 and also to the cohort receiving OD from 1992 to 1993 (Seikkula et al., 2011). In other words, this study compared a more developed version of OD to two less developed versions of OD. The treatment group consisted of 18 consecutively admitted patients to Western Lapland mental health services between 2003 and 2005 who had psychotic symptoms and no prior psychiatric treatment. The first historical comparison group comprises 33 consecutively admitted patients who received OD between 1992 and 1993. The second historical comparison group was the ODAP/API cohort ($n = 42$). There were no significant differences at baseline on outcome measures among these groups.

The treatment and comparison groups were assessed for residual psychotic symptoms using the Strauss-Carpenter Scale, BPRS scores, days spent in the hospital, use of neuroleptic medication, number of relapses, number of family meetings, employment status, and diagnosis. At the 2-year mark, the treatment group had less psychotic symptoms than the first comparison group (1992–1993) as measured by the Strauss-Carpenter Scale ($t = 10.1$, $p < .001$). The treatment group had fewer schizophrenia diagnoses than the ODAP/API cohort ($p < .05$) and had less psychotic symptoms than the ODAP/API group as measured by the BPRS ($t = 22.6$, $p < .001$). The treatment group also had fewer hospitalization days than the comparison group from 1992 to 1993 ($t = 0.96$, $p < .001$).

A summary of findings from this study and all studies included in this review can be found in Table 1.

Relevant Findings From Studies Excluded From the Review

Some studies that did not meet inclusion criteria for this review did report outcomes that should be mentioned for purposes of discussion. For example, the report compiled by Seikkula, Alakare, and Aaltonen (2001b) was excluded because it focused on finding predictors of outcome quality in OD treatment rather than on evaluating the outcomes of this approach. The authors had a sample size of 78 and divided participants into good and poor outcome cases based on symptom severity and employment status. It is noteworthy that

TABLE 1. Summary of Reviewed Studies

Study	Intervention & Research Projects	Sample Characteristics	Design	Measures	Results
Alanen et al., 1991	Need-adapted (NA) approach Turku 2-year follow-up	Treatment group: $n = 29$; consecutive admits from 1982 to 1984 with a psychotic disorder Historical comparison group: $n = 54$; consecutive admits from 1976 to 1977with psychotic disorders to same facilities in Turku	O X O O Y O	Not living on disability pension Absence of symptoms (Strauss-Carpenter Scale) Hospital days	Comparison group: 62% Treatment group: 77%[a] Comparison group: 41% Treatment group: 68%[a] Comparison group: M = 36 Treatment group: M = 9[a]
Lehtinen, 1993	NA approach Turku 5-year follow-up	Treatment group: $n = 28$; consecutive admits from 1982 to 1984 with a psychotic disorder Historical comparison group: $n = 54$; consecutive admits from 1976 to 1977 with psychotic disorders to same facilities in Turku	O X O O O Y O O 2 years 5 years	Not living on disability pension Absence of symptoms (Strauss-Carpenter Scale) Social functioning Hospital days	Treatment group were less likely to live on pension ($G^2 = 9$, $p < .005$). Treatment group were more likely to have no symptoms ($G^2 = 3.9$, $p < .05$) Better in the treatment group ($G^2 = 3.8$, $p < .05$) Comparison group: M = 56 Treatment group: M = 27[b]
Lehtinen et al., 2000	NA approach API 2-year follow-up Stated objectives of API: 1. To evaluate the Finnish (NA) model	A group of consecutive admits ($n = 106$) from three sites using NA treatment and a minimal medication approach was compared to a group of three sites using NA treatment and a standard medication approach. This review is concerned only with the general outcomes of NA treatment, so this study will be treated as an O X O design and will report 2-year outcomes for all six sites.	O X O	Time in hospital Psychotic symptoms (BPRS, Strauss-Carpenter Scale) Employment Medication	41.5% spent less than 2 weeks in the hospital over the 2-year period. 51.9% had no psychotic symptoms at 2-year point.[c] 32.1% employed at 2-year point.[c] Minimal medication group is more likely to have spent less than 2 weeks in hospital ($p < .05$).

(continued)

TABLE 1. Summary of Reviewed Studies (*continued*)

Study	Intervention & Research Projects	Sample Characteristics	Design	Measures	Results
	2. To see if differences exist in outcomes for sites using a minimal (rather than standard) medication approach				
Aaltonen et al., 2011	Open-dialogue approach (ODA) Western Lapland Main hypothesis: That fewer psychotic crises will develop into schizophrenia when ODA was used	Treatment group: $n = 111$; all consecutive admits to Western Lapland mental health services between 1990 and 1994 (when ODA was introduced) that had no previous psychiatric care and had psychotic symptoms Historical comparison group: $n = 139$; similar admits to Western Lapland mental health services between 1985 and 1989 (before ODA was introduced)	O X O O Y O	Annual incidence of diagnoses: Schizophrenia Brief psychotic reactions Other nonaffective psychoses Prodromal states Long Stay Hospitalizations	 Treatment group had less ($\chi^2 = 13.75$, $p < .001$). Treatment group had more ($\chi^2 = 8.89$, $p < .01$). *ns* *ns* Number of new long-stay hospital patients fell to zero in 1992.
Seikkula et al., 2003	ODA ODAP/API cohort 2-year follow-up	Treatment group: $n = 23$; consecutively admitted first-contact patients with psychotic symptoms who received a well-developed version of ODA (in 1994–1997) Comparison group 1: $n = 14$; consecutively admitted first-contact patients with psychosis from a center receiving treatment-as-usual (TAU)	O X O O Y O O Z O	Hospitalization days BPRS (symptoms) Strauss-Carpenter Scale (symptoms) Use of neuroleptics	Treatment group/ODAP: Treatment group had less ($t = 11.51$, $p < .001$). Experimental group/TAU: Treatment group had less ($t = 3.29$, $p < .01$). Experimental group/ODAP: Treatment group had less ($t = 23.17$, $p < .001$)

		Comparison group 2 (historical comparison—earlier ODAP cohort): $n = 22$; these were consecutively admitted first-contact patients (between 1992 and 1993) with psychotic symptoms who received a less fully developed version of ODA Excluded "milder forms of psychosis"		Number of relapses (new or intensified contact) Number of family meetings Employment	Treatment group/TAU: Treatment group had less ($p < .001$) Treatment group/ODAP: *ns* Treatment group/TAU: *ns* Treatment group/TAU: Treatment group had less ($p < .01$) Treatment group/ODAP: *ns* Treatment group/TAU: $\chi^2 = 4.21$, $p < .05$ Treatment group/ODAP: *ns* Treatment group/TAU: Treatment group had more ($t = 4.29$, $p < .001$) Treatment group/ODAP: *ns* Treatment group/TAU: Treatment group is more often employed ($\chi^2 = 4.43$, $p < .05$)
Seikkula et al., 2006	ODA ODAP/API cohort 5-year follow-up This study compared ODA to an earlier version of itself	Treatment group: $n = 42$; consecutively admitted first-contact patients with psychotic symptoms who received a well-developed version of ODA (in 1994–1997) Historical comparison group (earlier ODAP cohort): $n = 33$; these were consecutively admitted first-contact patients (between 1992 and 1993) who received a less developed version of ODA	O X O O O Y O O 2 years 5 years	Hospitalization days BPRS (symptoms) Strauss-Carpenter Scale (symptoms) Use of neuroleptics Number of relapses (new or intensified contact) Number of family meetings Employment	*ns* *ns* *ns* *ns* *ns* Treatment group had more ($t = 16.32$, $p < .001$) *ns*

(continued)

TABLE 1. Summary of Reviewed Studies (*continued*)

Study	Intervention & Research Projects	Sample Characteristics	Design	Measures	Results
Seikkula et al., 2011	Second ODAP cohort 2-year follow-up This study compared ODA to two earlier, less developed versions of itself	Treatment group: $n = 18$; consecutively admitted first-contact patients with psychotic symptoms who received a well-developed version of ODA (in 2003–2005) Historical comparison group 1: $n = 33$; consecutively admitted first-contact patients (between 1992 and 1993) with psychotic symptoms. Received less developed versiv on of ODA. Historical comparison group 2: $n = 42$; consecutively admitted first-contact patients with psychotic symptoms who received a less developed version of ODA (in 1994–1997)	O X O O Y O O Z O	Residual psychotic symptoms (Strauss-Carpenter Scale) Diagnosis (schizophrenia vs. other) BPRS (symptoms) Hospitalization days Use of neuroleptics Number of relapses (new or intensified contact) Number of family meetings Employment	Treatment group had less than comparison group 1 ($t = 10.1$, $p < .01$). Treatment group had less schizophrenia than comparison group 2 ($p < .05$) Treatment group had less than comparison group 2 ($t = 22.6$, $p < .001$) Treatment group had less than comparison group 1 ($t = .96$, $p < .001$). *ns* *ns* *ns* *ns*

Note. API = Acute Psychosis Integrated Treatment project; ODAP = Open Dialogue in Acute Psychosis project; BPRS = Brief Psychiatric Rating Scale; *ns* = not statistically significant.

[a]Likelihood ratios and significance levels not given, so these results assumed *ns*;

[b]Significance level for mean difference in hospital stays not given, so these results assumed *ns*;

[c]Comparisons of symptoms and employment status at baseline not given.

only 22% ($n = 17$) of these cases qualified as having poor outcomes. Specifically, participants with poor outcomes were those who experienced more than mild symptoms as rated on the Strauss-Carpenter Scale and who were not working, studying, or seeking employment. The authors note that some predictors of poor outcomes in OD are an impoverished social network, unstable premorbid employment status, and inability or unwillingness to engage in the dialogical process.

DISCUSSION

The findings regarding the NA approach from the two studies with comparison groups all indicate outcomes that are equivalent to or better than the outcomes of standard, medically focused treatment for people with psychotic disorders (Alanen et al., 1991; Lehtinen, 1993). Specifically, NA was associated with fewer participants living on disability pension, fewer hospital days, and fewer symptoms. Unfortunately, meaningful comparisons were not reported for the baseline and posttest data collection points of the API study, which examined NA without a comparison group (Lehtinen et al., 2000). However, findings from that study seemed generally positive, with more than half of participants experiencing total remission from psychotic symptoms at the 2-year follow-up. In addition, findings from that study suggest that NA yields better outcomes when used with a minimal medication approach.

The findings regarding the OD approach from the studies comparing it to standard care all indicate outcomes that are statistically equal or superior to those of treatment-as-usual for people experiencing psychotic symptoms for the first time (Aaltonen et al., 2011; Seikkula et al., 2003). OD was associated with better social functioning, more employment, fewer hospital days, and fewer symptoms for people with first-episode psychosis.

The findings from studies comparing the outcomes for more recent incarnations of OD to less developed forms of OD also indicate outcomes that are equal or superior to the older versions of the OD approach for people with first-episode psychosis (Seikkula et al., 2006; Seikkula et al., 2011; Seikkula et al., 2003). Specifically, newer versions of OD seem to be associated with fewer days spent in the hospital. This lends some evidence that OD is evolving and showing more positive outcomes as time goes on and its practice is refined.

When reviewing the findings of this study, it is important to note that this review was limited to peer-reviewed journal articles published in English. Because these approaches are Finnish, it is possible that some relevant articles were excluded because of language. In addition, most of the research included in this review was part of a larger government initiative. It is likely that government reports on this research were compiled but were not included in this review because of the exclusion criteria. Finally, the findings regarding time in the hospital should be considered tentative because the number of hospital beds decreased dramatically in Finland in the 1990s and the comparison groups used in the reviewed studies were mostly historical comparison groups whose data were collected before that time.

Limitations aside, it is easy to conclude from this review that the OD and NA approaches do no harm. It is also reasonable to conclude that these approaches are at least equivalent to standard care, which is individually and pharmacologically oriented. In addition, the small amount of research reviewed shows that OD and NA yielded better outcomes in many cases for patients than did standard care.

It was noted previously that people with psychotic symptoms have few treatment modalities to choose from in the United States. The OD and NA approaches, both studied in

Finland, could provide a meaningful choice to people seeking treatment for psychosis. In contrast to standard care, the focus of these approaches is psychotherapeutic and focused on the individual's social context. These approaches are different enough from standard care to represent an actual choice to people seeking services. If people with psychotic symptoms were offered viable alternatives to standard care, they would gain more personal agency in their quest for recovery. This review indicates that these approaches could be viable. The approaches are well established in Finland (Tuori et al., 1998) but require further study to determine their use in the United States. This review indicates that OD and NA have shown promising results and could, with further study, be incorporated into community mental health services in the United States. This would represent a major step in providing treatment options to people with psychosis.

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