Title: Open Dialogue: State of the Evidence Review

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Abstract

Objective: Emerging evidence for Open Dialogue (OD) has generated considerable interest. This evidence comes from a range of methodologies (case study, qualitative and naturalistic designs), which have not been synthesised as a whole. The objective of this review is to synthesise this literature.

Method: A systematic search of the databases PubMed, CINAHL, Scopus, Web of Science and PsychINFO included studies up until January 2018. In total 1777 articles were screened. Using a textual narrative synthesis, studies were scrutinized for relevance and quality.

Results. Twenty-three studies were included in the review; these include mixed methods, qualitative, quantitative designs, and case studies. Overall quantitative studies lack methodological rigor and present a high risk of bias which precludes any conclusions about the efficacy of OD among individuals with psychosis. Qualitative studies also present a high risk of bias and were of poor quality.

Conclusions: Variation in models of OD, heterogeneity of outcome measures and lack of consistency in implementation strategies means that, while initial findings have previously been interpreted as promising, no strong conclusions can be drawn about efficacy at present. Currently the evidence in support of OD is of a low quality, and Randomised Controlled Trials (RCTs) are required to draw further conclusions. It is vital that an extensive evaluation of its efficacy takes place as OD has already been taken up in many acute and community mental health services.

Introduction

Open Dialogue (OD) is both a therapeutic intervention, and a way of organising services. Several countries have embraced the OD approach, with established sites in the United States (US) and Europe. According to public information there are currently OD initiatives in the United States (US), several countries across Europe including the UK, Austria, Italy, Germany, Poland, Finland, Norway, Denmark, as well as in Australia. OD has a person and network centred approach to the treatment of mental illness and therefore fits with the aspirations of many mental health services (1). However, as the OD model has been implemented across the globe it has been adapted in order to fit the context of local health care services. Considering the recent focus on evidence-based practice (2), and the few empirical studies that have been conducted on OD-informed approaches, a review of the qualitative and quantitative evidence is timely.

Background and Development of OD

OD is an integrative approach that embodies systemic family therapy (3) and incorporates some psychodynamic principles. It embraces a network perspective, bringing together both social and professional networks, to provide continuity of psychological care across the boundaries of services. It encourages families to meet immediately and frequently following referral, to encourage open exploration of acute mental health crises. The approach aspires to create a space where decision-making is transparent and service users are able to find new words for their experiences. OD privileges community treatment over hospitalisation.

OD was developed during the 1980s in Western Lapland, Finland. It is informed by social constructionism and is an approach to service design and culture as well as clinical encounters. OD aims to address issues of power often associated with mental health care. It is recognised

that people with mental health problems often feel powerless and that the structure and setting of mental health services inadvertently amplifies these feelings. OD sets out to directly address this, flattening the hierarchy by being democratic and encouraging transparency and autonomy. Early versions of OD were influenced by the need-adapted approach (NAA) to treatment and revised later on. This method emphasises the exploration of the interactional history of a psychotic episode and collaboration of both a service user's social and professional network in the provision of care (4). Similarities to OD can be seen in family crisis therapy, which aims to shift the focus of acute care away from locating problems within individuals to an emphasis on a network-wide exploration of interactional aspects of the crisis (5).

There are seven key elements in the OD approach which are outlined in the fidelity criteria proposed by Olson, Seikkula and Ziedonis (6). These can be understood as related to both the organisation of services and a way of being with people. The service is required to be organised so that it facilitates immediate help, social network perspectives, flexibility and mobility, responsibility and psychological continuity. A way of being with people includes the elements of tolerating uncertainty and dialogism. Dialogism is defined as a focus on creating dialogue, where a new understanding is constructed with the team, while promoting a sense of agency and change for the service user and their family (7).

Adaptation and Implementation of OD

The OD approach has been implemented across mental health services globally. An example of this is the Parachute NYC Project in the US where OD principles have been incorporated into a pilot state-funded psychiatric service. Some services have set up new teams with the aim of delivering services that meet the seven principles of the fidelity criteria (6, 7), while others have taken elements of the approach and integrated OD into current practices. The diversity in

the application of OD may be indicative of the complexity of implementing both individual level changes and broad service level changes. A review on the emergence of OD in Scandinavia (excluding studies from the original OD project in Finland) highlighted the variety of ways the approach has been implemented. The review suggested that the variety of implementation strategies may be the result of limited standardized and prescriptive descriptions of OD methods and the selective implementation of elements of the approach according to the priorities of those delivering services (8). Of the 33 included studies, the majority were small scale, qualitative and cross-sectional, and published in the grey-literature. The review concluded that overall OD was welcomed by service users, their networks and staff. However, there was also evidence of resistance from practitioners and that some families found the format of the approach challenging and confusing.

The diversity in the application of OD adds complexity to reviewing the state of the evidence. To date there is a dearth of good quality empirical publications evaluating OD (9-12). However, there are several initiatives underway to evaluate OD-informed interventions. A forthcoming Randomised Clinical Trial (RCT) ODDESSI is anticipated to start in the UK. Previous reviews of literature have focused either only on quantitative evidence (1, 13) or qualitative data regarding the implementation of the approach (8). It is important to consider the quantitative literature in the context of the qualitative findings to provide a more representative overview of the impact of OD. The heterogeneity in the OD literature means that the current mixed methods review is required to broaden the lens and synthesise qualitative, quantitative and non-experimental forms of evidence (14). The current review also builds on previous work by including additional quantitative studies which have not previously been reviewed (15-17).

Method

This review aimed to answer the overarching question, "What is the current state of the evidence for OD?" in relation to outcomes and implementation of OD. The search was completed in January 2018. Unpublished studies and studies in languages other than English were excluded (18). Also excluded were studies that did not self-identify OD as the intervention offered, which excluded results from the need adapted treatments reported in the TURKU and parachute projects (19-22). Two authors independently identified published papers by using the search term 'Open Dialogue' in the 'title,' 'keywords', or 'abstract' in the databases, PubMed, CINAHL, Scopus, Web of Science and PsychINFO (Hosted by Ovid).

The titles and abstracts of 1003 articles were searched by the first author and 96 articles were included for a full text search and screened for inclusion by VV and XX. In total 23 studies were included in the review (see a flowchart of the study selection process in the online supplement). Inclusion criteria stipulated that studies must assess OD's effectiveness or impact either using a case study, qualitative, quantitative or mixed methods design. An inclusive approach was taken to provide an overview of the state of the evidence for OD. This review aimed to include both qualitative and quantitative studies of a wide range of quality to gain greater insight into how the approach is delivered and experienced, and to avoid exclusion of relevant studies due to the limited research to date.

The methods for a textual narrative synthesis (23) were used over a systematic review due to the very low quality of evidence in the OD literature. Additionally, the mixed designs employed in studies evaluating OD are not amenable to risk of bias tools (e.g. Cochrane) which have primarily been designed to assess RCTs. Quality appraisal was used at the data synthesis stage. The data extracted included study characteristics, context, findings, and conclusions. The

heterogeneity of the studies meant that a single quality measure could not be used therefore key principles in quality assessment of qualitative studies as outlined by Pope and colleagues (24) and reporting of quantitative studies by the Strobe initiative (25) were taken into account. For example, qualitative studies were assessed for description of methods including analysis, triangulation, respondent validation, and quantitative studies for inclusion and exclusion criteria, drop outs, data analysis, blinding and quality of reporting.

Results

This review included 23 published studies; eight reported on quantitative data (7, 15-17, 26-29) and 16 analysed qualitative data (15, 27, 30-43). OD principals have been implemented in several regions internationally; here we report on data from sites in Finland, Norway, USA and Sweden. Due to the complexity and importance in the aetiology of OD, a detailed summary of the results and incidence rates reported in the publications from the original OD project in Western Lapland (7, 17, 26-29) is provided in the online supplement.

Overall qualitative and quantitative studies investigating the impact and implementation of OD have used an extremely wide range of designs and outcome measures. The majority of studies have not been consistent in their reporting of methodology, which has resulted in a high risk of bias due to lack of transparency (24, 25). Conclusions about the effectiveness of OD are hard to draw with any certainty. The literature is hindered by the low number of studies and, in general, a lack of methodological quality best typified in the quantitative studies by small sample sizes, variation of outcome measures, a lack of randomisation and inadequate comparison or control group. Most studies are conducted by or include the main investigator and OD project developer, potentially leading to bias arising from 'researcher allegiance,' a phenomenon where investigators tend to find positive results for the treatment that they favour

(44). Blinding was also lacking - raters of the outcome measures and diagnoses were often aware of the treatment under investigation.

Treatment Outcomes for OD

Much of the quantitative data were collected in a single, small geographic region of Finland between 11 and 25 years ago, by the same research group. These original studies, and subsequent follow-up studies have sample sizes which change from study to study although the same sample is used, and publications do not consistently report where data have been included or excluded, raising the risk of bias. The conclusions drawn seemed overly positive considering the type of study designs used. For example, authors conclude that OD "had been helpful – if not in actually preventing schizophrenia, at least in moving the commencement of treatment in a less chronic direction," (26). The remaining two quantitative studies on OD were not controlled, the first includes 16 participants (15) and the second narrows outcome measures to suicidal ideation (16).

Treatment Outcome Studies from the Original OD project in Western Lapland.

In Finland, the original OD project based in Western Lapland was part of a trial called the Finnish National Acute Psychosis Integrated Treatment multicentre project (API project) and later the Open Dialogue in Acute Psychosis (ODAP) project. Publications from original OD sites (7, 17, 26-29) are defined by the authors as descriptive studies (see a Table of results in the online supplement). These publications include outcome data from a historical sample, consisting of service users treated as part of the API project, which took place between 1 April 1992 and 31 January 1993. The purpose of the API project was to investigate medication use within a comprehensive package of care. The Western Lapland region where OD was developed, was allocated to trial a change to antipsychotic medication treatment for first

episode psychosis. Treatment during this period is described as employing some of the principles of OD but the approach was not used routinely in practice (7). The two-year outcomes from the API project have also been published (19, 20). The system of OD treatment had been implemented during the API period however it was not until the Open Dialogue in Acute Psychosis (ODAP) project was launched in 1994 that the content of the psychotherapy was "transformed," although authors do not elaborate further on the details of this transformation (7).

There are two samples from this project: ODAP1 included service users that entered treatment from 1 January 1994 to 31 March 1997, and ODAP2 included service users from 1 February 2003 to 31 December 2005. There is substantial variation in the severity of the presentations included in each cohort which is not adequately accounted for in the interpretation of the findings. Additionally, Seikkula and colleagues note that although there were no categorical differences between the treatment approaches across the two treatment periods (API versus ODAP), treatment changes made in the API phase were taken forward in the ODAP phase in a more systematic way (28). Earlier studies report that rating of therapist adherence was conducted, yet no detailed information is provided about the extent to which the OD intervention delivered for each cohort met adherence or fidelity criteria (6).

Treatment Outcome Studies for OD outside of Western Lapland.

A Finnish site, as reported by Granö and colleagues (16) reports on OD-informed treatment for adolescents and data is quantitative. In the United States (US), Gordon and colleagues (15) report initial quantitative outcomes from a feasibility study the Collaborative Pathway, an OD-informed mobile crisis and outpatient team.

The studies above report outcomes for symptom reduction, use of antipsychotic medication, hospitalisation, and incidence rates. To date no RCTs have been conducted evaluating the effectiveness of OD compared to alternative treatments. Most studies are non-experimental designs, with only one study (7) including a control group (N=14). There are several methodological issues with these studies including small and diagnostically heterogeneous samples, unblinded assessment of outcomes, and retrospective diagnosis. Empirical support for the OD is therefore limited. Further details of the results and methodological limitations of these studies are listed in the online supplement.

Qualitative studies of the delivery of OD

Although there are important themes from the naturalistic or qualitative study data that will be useful to clinicians using or planning on implementing OD, there are several issues with the quality of the evidence. Qualitative data are drawn from a very small number of participants, and there is a high risk of sample bias. Sampling and recruitment bias are not explicitly addressed in the majority of qualitative studies included in this review, and therefore it is not clear whether sampling adequately targeted those with both positive and critical views of the intervention (see Table 2). Several case studies also suffer from a lack of transparency when reporting on the choice of analysis. A dearth of methodological information reported in many of the qualitative studies included in this review make it difficult to evaluate the credibility of data or potential bias. Most qualitative studies found include attributable quotes which increases the credibility of the research, yet few studies report sampling procedures or participation rates increasing the risk of bias. Case reports (7, 26, 28, 30-32) constitute single cases and there appears to be a lack of good quality multiple case study designs.

Rosen and Stoklosa (42) use qualitative data to evaluate a pilot study at the McLean Hospital where OD informed practice was adapted for use during inpatient ward rounds on the Schizophrenia and Bipolar Disorders Unit. In Norway, a series of qualitative studies report on the Dialogical Collaboration in Southern Norway project, an implementation of OD-informed practice to adolescent services (33-37). The focus in these Norway-based publications seems to be placed on the experience of network meetings and the meaning of dialogue. This means that questions about the extent to which service level practices of OD, which are central to the model, were implemented. Another Norway-based project called Project Joint Development Norway reports on a procedural intervention looking at both individual and service level changes based on the principles of OD (40, 41). Qualitative data are also reported from a project called the Health South Region Norway, a Crisis Resolution and Home Treatment (CRHT) service inspired by OD principles (43). Data are also reported from evaluations of an OD inspired service in Sweden, which included network meetings, and a service model which followed the principles of Need Adapted Treatment (38, 39).

Implementation of the Open Dialogue principles.

This review found large variation in whether authors reported how OD was implemented (see Table 1 & 2). Each new implementation site appears to have slightly altered or adapted the OD approach to account for regional differences in mental health services. There was a dearth of information outlining how OD principles related to services organisation. This reduces the utility of the research for other services wishing to implement the approach. Very few used or mentioned the seven key principles of OD which form the fidelity criteria set out by Olson and colleagues (6). As each site may be delivering an adapted, and therefore different approach to OD practice, it is difficult to compare studies across sites. While this is reflected by some

qualitative studies, which note the challenges of implementing change at an organizational level, others focus only on the service users' experience of network meetings.

The developers of OD have published a number of case reports and some qualitative data to demonstrate these principles as a proposed mechanism of change for the approach, and it is assumed that the original OD project in Western Lapland adhered to the model closely (7, 26-29, 45). In some cases, case studies are presented alongside quantitative data to illustrate the application of OD principles at individual and service level and evaluate the impact of OD from a service user's perspective. This type of exploration is important considering the complexities of an intervention which includes both a way of being with service users and a way of organizing services.

Two case studies (32) illustrate the key elements of OD practice. The first case study and its commentary by Seikkula and Olson are a verbatim shortened extract from Seikkula and colleagues (31) paper which presents a longer case illustration of the key principles of OD under a different pseudonym and gender. The authors (32) conclude that these case studies demonstrate that shared emotional experience between participants is central to OD, and that the approach can be used in a variety of settings. Outside of the original OD project in Western Lapland information on adherence and fidelity is lacking. Gordon and colleagues (15) commented that training costs and clinician time were substantial, and that the relationship between costs covered by insurance and implementing the OD principles was extremely complex.

Two studies (40, 41) report on a series of qualitative interviews with professionals involved in an OD inspired service, taken over several years during the implementation period. Issues arose

where OD challenged traditional working roles, and professional hierarchies. Openness and authenticity were noted as important to the dialogical process. These two studies are of good quality, and account for possible sampling biases, reporting systematic procedures for each stage of the data collection phase and analysis. More research is urgently needed on the experiences and barriers to implementation as well as clear reporting on adherence to the model.

Key principles and their application in network meetings.

This review highlights that in some circumstances, the implementation of OD in services has focused on network meetings with less emphasis on service level changes. This mirrors a tendency within psychological therapies to focus on individual practices as opposed to broader systems. A series of qualitative transcripts (30) of therapeutic meetings with 20 service users show that 'good' outcomes were related to meetings that were more 'dialogical,' where dialogue was dominated by the service user and their network, as well as the use of symbolism. Two cases are presented for illustration, where poor outcomes were associated with limited responses from clinicians in meetings. Results were hampered by a lack of recognised qualitative analysis, which was common throughout the qualitative studies reviewed. A participatory action research study (43) identified themes from a focus group with six service users. Results suggested that the participants valued and learnt from the uncertainty that emerged in meetings by drawing on previous clinical experiences and remaining open minded.

A series of Norway-based studies (33-37) report results from a multi-perspective project, consisting of 28 qualitative interviews, which attempt to elucidate mechanisms of change by focusing on interpreting service user experiences of change through the lens of several theoretical influences of OD. Attention to the ethical and expression dimension of dialogue, as

well as meaning within meetings was found to be an important part of the change process (35). Two studies (36, 37) use a dialogical phenomenological approach to evaluate inner and outer dialogues of OD practice, highlighting the importance of inner dialogues in the development of significant moments of meaning during meetings. Overall the collection of studies reported the positive impact of OD and that reflecting, and an ethical space were important to this. A strength of this series of studies is that they included experts by experience as co-researchers. Each study provides in-depth and reflexive analysis of the data from multiple perspectives but there was a lack of clarity around how OD was implemented.

Overall this review found that more qualitative research is needed to gain a better understanding of how service users and staff experience network meetings, plus any similarities and differences between them. This research should use standardised qualitative analysis, apply rigorous evaluation tools and include larger participant numbers.

Service user acceptability and increasing trust in services.

Service user acceptability is an important outcome when viewed though the OD lens. The majority of the qualitative literature reviewed suggests that OD is acceptable to service users (see Table 2 for more details). Qualitative interviews (15) showed that participants, their networks, and clinicians indicated that families appreciated the openness and transparency of network meetings and felt that reflections promoted a collaborative atmosphere. Participants' experienced self-understanding and enhanced shared decision-making. Rosen and Stoklosa (42) found that overall service users trust in the care they received increased and suggested that observing the reflecting team fostered trust in the team. However, few conclusions can be drawn about the quality of the findings presented in these studies (15, 42) as they report little information regarding the data collection and analysis procedures, indicating a possible risk of

bias. The Sweden-based study (38) also discussed trust in their qualitative analysis and found that experiences of mistrust arose when professionals were perceived to dominate sessions.

Discussion

This review synthesised the quantitative and qualitative data from 23 studies and looked specifically at the outcomes of symptom reduction, use of antipsychotic medication, hospitalisation, implementation of OD principles, the application of principles in network meetings, service user acceptability and trust. Study numbers were low in both the qualitative and the quantitative OD literatures. Although the developers of OD suggest the approach may provide benefits for service users using a wide variety of outcomes, these conclusions are not supported by the data due to low methodological rigor and high risk of bias. Several qualitative studies attempted to elucidate the application of key OD principles and how this relates to service user experience of outcomes; six out of 16 were single case study designs and were hampered by unstandardized analyses. When considering the qualitative data across regions it seems that the concepts of authenticity and trust were important as well as the openness of the clinicians and service users. Despite this, we argue that no strong conclusions (based on high quality evidence) about the efficacy of OD can be drawn from the current available evidence, and results should be viewed as hypothesis generating for future research using more robust methods.

While much of the research has been qualitative and focused on application of OD key principles and what may help, it is perhaps important to refocus on to efficacy research because it is hard to elucidate mechanisms of change for a treatment which is yet to have demonstrated efficacy. It is also essential to note that it is to investigate interventions in naturalistic settings, as patient populations in RCTs are often less representative than in typical clinical practice.

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Within future robust RCTs it is crucial that OD is evaluated against a control group to determine whether it is superior to current practices.

Since the 1980's there have been several initiatives worldwide to provide early and timely interventions for psychosis which are community-based (46). For example, Early Intervention Services (EIS) provide a comprehensive package of care for psychosis under one team including; case management, psychotherapy, employment and education support, as well as support for families. A meta-analysis of 10 RCTs showed that EIS for early-phase psychosis were superior to treatment as usual on a wide range of outcomes including reduced hospitalisation days and symptom reduction (47). The analysis included studies from a range of international regions, including two US-based programs, the RAISE Early Treatment Program and STEP RCT. These programs share several service level similarities to the OD approach, by providing a comprehensive package of care, as well as support for families. The majority of the EIS programs included in this analysis offer cognitive behavioral-based approaches to individual therapy. This contrasts to OD where systemic, dialogical and psychodynamic principles are embedded in all components of the service (47) as well as informing the primary approach of the psychotherapy delivered. Therefore, it will be important for prospective studies to assess how OD can offer benefits additional to EIS for this population. One study which is currently recruiting in the US, OnTrackNY, looks to evaluate whether optional OD inspired social network meetings improve the effectiveness of an existing coordinated specialty care service for first episode psychosis (www.clinicaltrials.gov).

This review highlights the variation in the implementation and evaluation of OD initiatives. Few studies clearly reported information about adherence to fidelity criteria which further limits the interpretation of empirical findings. It is not clear whether different OD approaches

are comparable. For interventions to be appealing to commissioners, implementation issues need to be addressed. It is imperative that future developments report fidelity to the OD approach to clearly document the intervention delivered and address replication concerns. The OD approach will be assessed on its ability to be sustainable, scalable, and measurable as well as being able to enhance wellbeing and social connections. Researchers should hold this in mind by focusing on defining and outlining clear guidance on the implementation of OD, which includes fidelity criteria, guidance on implementation strategies and evaluation in the context of complex service related changes.

Conclusions

This review highlights the lack of high quality evidence supporting the efficacy of the OD approach and the urgent need for good quality research trials and service evaluation. The qualitative research on OD seems to have emphasised themes of authenticity and trust were relevant to the approach, however the majority of studies are highly biased of low quality. Further studies are needed to explore how and why OD works in a 'real world' setting. However, acceptability albeit a key part of implementation research, it is not sufficient to estimate the effectiveness of an intervention. To address scalability future research must determine how OD can be 'grown' to have the capacity to be delivered on a wider scale by services other than those in Scandinavia, whilst retaining effectiveness. One important issue is whether rigorous cost effectiveness studies will show the cost of service redesign, including intensive and costly training required in the OD approach, produces outcomes which offer value for money. It is important to note that as a way of organising services, very little evaluative research has focused on whether the service level and structural changes of the OD approach are in place and effective. This may require new measures and tools to be developed.

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Table 1. Summary of quantitative results.

Study	Project Location	Design	N	Control group	Follow up	Outcome measures	Fidelity to OD principles (8)	Findings	Reported limitations
Seikkula, et al. (7)	Western Lapland, Finland	Cohort study	54	TAU	Baseline, 2-year	Antipsychotic medication use, hospitalization days, relapses, residual symptoms at baseline & 2-years, GAF, employment status, BPRS follow-up	Outlined and discussed principles however adherence and fidelity not reported	Two experimental groups ODAP1 and API corresponding to the slightly different OD treatment received. At least one relapse occurred in 24% - 31% of the experimental groups, lower than relapses in 71% of the comparison group. The ODAP1 patients had fewer residual psychotic symptoms compared to the control group. In the control group, 30% patients were studying, working or job-seeking compared to 83% the ODAP1 group	Small sample size, control group sample chosen over 21 months, developers of the approach involved in ratings of symptoms and diagnosis
Gordon et al. (15)	USA	Feasibility study, mixed methods design (case series and qualitative)	16	None	Baseline, 3 months, 6 months, 1-year	BPRS, BASIS-R, SCLFS, DSES, SDMQ, CSQ, Autonomy Preference Index, work or school hours, hospital days	No formal rating of fidelity reported. Did not provide inpatient care, but remained engaged with participants during hospitalizations	Significant improvements in the BPRS, BASIS-R and SCLFS; average work or school hours and hospital days. The change in DSES score approached significance and 9/14 participants were working or in school at one year	Small sample, diagnostic heterogeneity lack of a control group, missing data, and unblinded clinical ratings
Granö et al. (16)	Southern Finland	Case series	130	None	Baseline, 1-months	Item nine of the Finnish version of the BDI-II	No formal rating of fidelity reported. Reported to have included parts of family therapy and OD	A significant reduction in rates of suicidal ideation was found in around 50% of the sample was reported with an average treatment length of around nine months	History of suicide attempts were not controlled, no control group
Bergström et al. (17)	Western Lapland, Finland	Retrospective cohort study	116	None	Baseline, 1-year	Baseline diagnosis, GAF, antipsychotic medication use, hospitalization days	Principles outlined and discussed. Fidelity not formally rated but authors conclude that principles were generally followed	The majority of service users were treated with only one hospital admission, or with no hospital treatment (54%), and 95% spent less than a year as an inpatient over the entire period. Aggression at initial contact was associated with higher rates of hospital admissions	Comorbidity of diagnoses, and types and antipsychotic medication were not controlled, possibly not all psychotic episodes recorded, small sample size, attrition
Aaltonen et al. (26)	Western Lapland, Finland	Historical control design	111	Historical Sample	N/A	Incidence rates of new hospital patients and mean annual incidences of non-affective psychosis and prodromal states	Principles outlined and discussed however adherence and fidelity reported	The results of the historical analysis based on diagnosing clients based on treatment notes found that the number of new long-stay schizophrenic hospital patients fell to 0 in 1992, being much less to than the mean in Finland which was 3.50 per 100,000 inhabitants. No new long-stay schizophrenic hospital patients emerged prior to the publication	Changes in diagnostic habits, re-diagnosing retrospectively
Seikkula, et al. (27)	Western Lapland, Finland	Case series or Historical Comparison Study	75	None	Baseline, 2-year and 5-year	Antipsychotic medication use, ongoing, hospital days, number of relapse cases, residual symptoms at baseline,	Therapist adherence and fidelity to 7 principles rated on a 0-3 scale. Data only reported for two case	At the 5-year follow-up 82% of ODAP1 and 76% of the API group had no residual psychotic symptoms. 70% of the API and 76% of the ODAP1 group had returned to their work or studies. 27% of API patients and 14% of ODAP1 patients were living on a disability allowance	Small sample size, developers of the approach involved in ratings of symptoms and diagnosis.

						and 2-years, employment status, BPRS follow-up	studies but not the rest of the sample		
Seikkula, et al. (28)	Western Lapland, Finland	Case series	78	None	2-year	Antipsychotic medication started, hospitalization days, BPRS, GAF, occupation, disability allowance	Therapist adherence and fidelity to 7 principles rated on a 0-3 scale. Data only reported for two case studies but not the rest of the sample	Results categorized into a poor and a good outcome groups based on residual psychotic symptom level and employment status. 78% of patients were assessed as having a good outcome. Poor outcome group consisted of patients whose source of living was a disability allowance or with residual moderate or more severe psychotic symptoms. The good outcome group, consisted of patients who were working, studying or job-seeking with no more than mild residual psychotic symptoms	None reported
Seikkula, et al. (29)	Western Lapland, Finland	Case series Historical Comparison Study	93	None	Baseline, 2-year, 5-year	Antipsychotic medication use, hospital days, number of relapse cases, residual symptoms baseline & 2-years, GAF, employment status, BPRS follow-up	Principles outlined and discussed however adherence and fidelity not reported	ODAP2 patients found to be younger and less likely to have a diagnosis of schizophrenia than API, and ODAP2 cohorts. Authors attribute this to the effectiveness of OD practitioner making early contact with patients in crisis and that OD was related to "profound changes in the incidence of severe mental health problems."	Small province - potential changes in local culture cannot be standardized. Authors involved in ratings of symptoms and diagnosis.

Number of participants (N), Brief Psychiatric Ratings Scale (BPRS; 48); Global Assessment of Function Scale (GAF; 49), Revised Behavior and Symptom Identification Scale (BASIS-R; 50), Strauss-Carpenter Level of Function Scale (SCLFS; 51), Decision Self Efficacy Scale (DSES; 52), Shared Decision Making Questionnaire (SDMQ; 53), Autonomy Preference Index (54), and Client Satisfaction Questionnaire (CSQ; 55), Beck Depression Inventory-II (56).

Table 2. Summary of Case Studies and Qualitative Studies grouped by Site Location.

Publication	Project location	Setting	Design	N	Analysis	Aims	Triangulation	Fidelity to OD principles (8)	Key findings
Gordon et al. (15)	Collaborative Pathway USA	Mobile crisis and outpatient service	Mixed methods study including qualitative interviews	13; 6 SU and network members, 7 clinicians	Not stated	To explore clinician and SU experiences of OD informed working.	Not stated	Reference to the use of OD principles as an approach. Fidelity not reported. OD team did not deliver inpatient care	SU reported positive experience of openness and transparency, lack of time restraints and reduced focus on medication. Community care also positive. Clinicians reported positive experiences of delivering approach
Seikkula et al. (27)	API, ODAP Western Lapland, Finland	Adult Mental Health Service offering OD	Case Studies	2 SU	None stated	To demonstrate a good outcome and poor outcome as defined by the authors. Comparison of a single case from the API and ODAP1 groups respectively	Not Stated	Detailed description of OD principles. Case studies illustrate principles and possible differences between treatment periods. No formal rating of fidelity	Case illustrations provide participants experiences of OD. Home visits were a positive aspect of the approach. In-depth discussion of problems is emotionally challenging
Seikkula (30)	API, ODAP1 Western Lapland, Finland	Adult Mental Health Service offering OD	Two case studies.	N=20. SU; 10 'good' outcome, 10 'poor' outcome cases	Sequence analysis	To deepen analysis of dialogue occurring in treatment meetings. Analysis of in cases paired for good and poor outcome	Not stated	Detailed description of OD principles. Case study illustrate principles. No formal rating of fidelity	Good outcome related to service user and network dominating interaction, presence of symbolism in dialogue, and more 'dialogical.' Poor outcome related to lack of clinician response to the service users
Seikkula et al. (31)	API Western Lapland, Finland	Adult Mental Health Service offering OD	Case study	1 SU	None stated	To illustrate the process and key principles of OD	Not stated	Detailed description of OD principles. Case study illustrate principles. No formal rating of fidelity	Authors present a transcript of dialogue from network meetings with an SU which was also reported in Seikkula et al. (34), describing a positive outcome. A description of how the case illustrates key principles of OD
Seikkula et al. (32)	API Western Lapland, Finland	Adult Mental Health Service offering OD	Case studies.	2 SU	None stated	To illustrate the process and key principles of OD	Not stated	Detailed description of OD principles. Case studies illustrate principles. No formal rating of fidelity	Shared emotional experience between participants is central to the approach. OD can be used in a variety of settings. One case is a verbatim a shortened extract from Seikkula et al. (33)
Bøe et al. (33)	Dialogical Collaboration Southern Norway	Network-oriented mental health service for adolescents	Single case study	2 SU and network member	None stated.	Illustration the of process of change in dialogical practice	Co-researchers experts by experience	Reference to the use of OD principles as an approach, Fidelity not reported.	In depth analysis of a single case study exploration of the theoretical unpinning of change in OD. Change has its dynamics in dialogue as an ethical event. Positive experience of OD

Bøe et al. (34)	Dialogical Collaboration Southern Norway	Network-oriented mental health service for adolescents	Multistage qualitative interviews.	22; 8 SU, 8 network members and clinicians	Dialogical hermeneutical analysis.	To explore the social dynamics of change related to people in psychosocial crisis from the perspective of lived experience	Co-researchers experts by experience	Reference to the use of OD principles as an approach, Fidelity not reported	Change is the event of becoming through movement in ethical time and space
Bøe et al. (35)	Dialogical Collaboration Southern Norway	Network-oriented mental health service for adolescents	Video recorded qualitative interviews	22; 8 SU, 8 network members and clinicians	Dialogical hermeneutical analysis	To explore change from the perspective of lived experience and its relationship to network meetings within dialogical practices in mental health.	Not stated.	Reference to the use of OD principles as an approach to service delivery Fidelity not reported	Change is related to reflections on the present, but also past and future experiences. The attentive nature of clinicians was found to be particularly important in opening up the dialogue to facilitate change
Lidbom et al. (36)	Dialogical Collaboration Southern Norway	Network-oriented mental health service for adolescents.	Single case study selected from a larger sample.	4; 1 SU, 1 network member and 2 clinicians .	Dialogical hermeneutical analysis.	To explore the interplay between inner and outer dialogues, and the development of meaning moments in therapy.	Not stated.	Reference to the use of OD principles as an approach used in network meetings. Fidelity not reported	In depth analysis of the theoretical unpinning of the approach. The interplay between inner and outer dialogues of service users and clinicians has a role in the creation of significant and meaningful moments in therapy
Lidbom et al. (37)	Dialogical Collaboration Southern Norway	Network-oriented mental health service for adolescents	Multi-perspective methodology	6 SU, network members and clinicians	Dialogical phenomenological approach	Interpretation of interplay of inner dialogue and the dynamics of outer dialogues	Not stated	Reference to the use of OD principles as an approach used in network meetings. Fidelity not reported	Inner dialogues included reflections on time and position and were essential in the development of significant moments during therapeutic meetings
Piippo & Aaltonen (38)	Integrated Network and Family Oriented Model Sweden	Adult mental health service	Qualitative semi-structured interviews	22 SU	Qualitative thematic analysis	To explore trust-mistrust, and honesty concepts in previous experiences of traditional care and the new model of care	Not stated	Reference to OD network meetings and NAA models. No clear indication of fidelity to OD principles	Trust was related to a reciprocal process involving honesty and openness. Experiences of mistrust arose when professionals were perceived to dominate sessions, SU felt excluded from sessions or reduced autonomy
Piippo & Aaltonen (39)	Integrated Network and Family Oriented Model Sweden	Adult mental health service	Qualitative semi-structured interviews	22 SU	Qualitative thematic analysis	To discover how SU experience INFM and outline the approach	Not stated	Reference to OD network meetings and NAA models. No clear indication of fidelity to OD principles	Approach offers multiple perspectives, SU able to open up, important people included in the process. Unclear if helpful for relatives or whether approach can be integrated to the wider system. Negative perception of professionals overwhelming enthusiasm for the approach, abstract nature of discussions
Holmesland et al. (41)	Project Joint Development Norway	Adult drug abuse and psychiatry	Qualitative interviews of	12 clinicians .	Content analysis	To explore staff experiences of their professional role and	Key themes reflected back during interviews	Reference to the use of OD principles as an	Professional role: some members reconsolidated their roles, while others found this

Author	Project	Service	Method	Sample	Analysis	Aim	Credibility	OD approach/Fidelity	Outcomes
		department within a medical hospital	two focus groups			teamwork in an OD context	to provide credibility checks	approach. Fidelity not reported	aspect of the work challenging reverting to traditional professional roles. HCP and SEG had different experiences of team work, SEGs did not feel accepted. Issues of power and hierarchy
Holmesland et al. (40)	Project Joint Development Norway	Adult drug abuse and psychiatry department within a medical hospital	Qualitative interviews of two focus groups	12 clinicians	Content analysis	To explore staff experiences of what impedes or promotes dialogue in interagency working and how this relates to professional context	Key themes reflected back during interviews to provide credibility checks	Reference to the use of OD principles as an approach, Fidelity not reported	Professions reported promotion of dialogue is related to specific factors of listening and attending to others in meetings and being able to be open and authentic, particularly when sharing perspectives and emotion. The Diversity of sample may be related to outcomes of study
Rosen & Stoklosa (42)	McLean Hospital USA	Adult mental health inpatient service	Mixed methods study	50; 30 SU, 20 clinicians.	Questionnaires and qualitative analysis method not stated	To explore staff and service user perspectives of OD informed working in an inpatient setting	Not stated	OD informed practice adapted for use during ward rounds. Reference to the use of OD principles as an approach. Fidelity not reported	SU reported improved trust in care provided. Clinicians reported improvements in efficiency, and reduced follow-up. Clinicians reported positive outcomes, increased voluntary admission over involuntary admission, reduced use of restraint, increased acceptance of medication and treatment plan changes
Ness et al. (43)	Health South Region Norway	Crisis Resolution and Home Treatment team	Multistage focus group interviews	25; 6 SU, 7 family members, 12 clinicians.	Qualitative thematic analysis	To develop knowledge of new forms of community-based practice for people experiencing mental health crisis	Summarised notes from the first focus group were discussed with SU at second focus group	OD principals reported at individual level, not clear whether OD practiced at service level OD used in the research process.	Two major themes were reported: learning to tolerate uncertainty by remaining open-minded and valuing uncertainty by accepting opposing interpretations as viable ones. Valuing and tolerating uncertainty lea to mutually acceptable solutions

Aim verbatim if possible, fidelity criteria considered in reference to Olsen et al. (6), Service User (SU), Integrated and Family Network Model (INFM), Health Care Professional (HCP), Social Educational Group (SEG)