



An exploration of organizational climate in community-based opiate prescribing services; a mixed methods study

Peter Kelly, PhD^{a,*}, Adam Searby, PhD^b, John Goodwin, PhD^c

^a School of Nursing and Midwifery, Trinity College Dublin, Ireland

^b School of Medicine Nursing and Health Sciences, Monash University, Melbourne, Australia

^c School of Nursing and Midwifery, University College Cork, Ireland

ARTICLE INFO

Keywords:

Treatment process outcomes
Substance use
Organizational functioning
Organizational readiness
Drug policy

ABSTRACT

Introduction: Assessing the internal dynamics of organizations has been shown to provide information that can help planners and policymakers improve service delivery. A good organizational climate, which in this study incorporates mission clarity, team cohesion, staff autonomy, communication, levels of stress, and openness to change has been shown to be of particular importance. Still, there is a dearth of evidence in this area, and while relationships between organizational factors have been identified, little is known about the mechanisms that might underpin these relationships, and there is little understanding of how to address deficits once they are identified. The objective of this study was to identify relationships between program factors that influence organizational climate and to explore which mechanisms might underpin these relationships.

Methods: This paper reports on a cross-sectional, concurrent, mixed-methods study design, across twelve discrete community-based prescribing service providers (organizations) in Ireland. Data was obtained using a staff survey [$n = 132$] which utilized measurements of organizational readiness to change and one-to-one interviews [$n = 12$]. Quantitative data was analyzed using multivariate linear regression modeling which assessed relationships between variables, while interviews were analyzed using an abductive approach, both types of data were synthesized at the interpretation stage.

Results: A range of interdependent factors were considered to affect the climate of organizations. Surveys identified that specific types of resources, such as physical infrastructure, training, and staffing resources were important for supporting a good organizational climate, while programs with greater needs had a poorer climate. Opportunities for professional growth, the skill sets of staff, and having access to e-communication were also significant. Interviewees reported that rigid organizational hierarchies and bureaucracy, philosophical views of addiction, stress, and staff turnover were influenced by the provision of fewer resources. Interdependent factors such as leadership, supervision, staff relationships, and collective training, also thought to be influenced by resources, were considered to positively influence programs. Resources were not the only challenge identified, and practices within programs and how existing resources are used were also thought to contribute both positively and negatively to the internal dynamics of services.

Conclusion: Key findings in this study identified that the organization of effective services is influenced by a range of specific factors, some of which can be addressed without additional resources. Overall, staff views of organizations can provide us with valuable information to support service improvement. Using a mixed methods approach can not only identify where relationships between organizational variables exist but can also help us to understand the mechanisms that underpin these relationships and, importantly, how to address deficits once they are identified. In order to improve how substance misuse services work, the need for a long-term systemic approach to program development, which incorporates some of the findings from this study, is required.

* Corresponding author.

E-mail address: kellyp37@tcd.ie (P. Kelly).

<https://doi.org/10.1016/j.josat.2024.209362>

Received 8 August 2023; Received in revised form 29 February 2024; Accepted 7 April 2024

Available online 16 April 2024

2949-8759/© 2024 The Authors. Published by Elsevier Inc. This is an open access article under the CC BY license (<http://creativecommons.org/licenses/by/4.0/>).

1. Introduction

The harms that result from drug use are not limited to the effects of drug use alone but are also impacted by the social context in which they are used. Drug policy and its implementation, including the provision of treatment, and *how* treatment is provided, also impact on drug-related harms (Babor et al., 2010). People who use opiates not only have a disproportionate health and economic impact but are also at greater risk of harm to themselves (EMCDDA, 2019). It is well established that the provision of community-based programs that provide opiate substitution therapy [OST] and psychosocial support help to reduce a wide range of harms to people who use opiates and have economic benefits for societies in which they operate (Comiskey et al., 2009; Farrell & Barry, 2010). We also know that some treatment programs can accomplish better outcomes, such as reduced drug use and psychosocial engagement, than others (Holdsworth et al., 2014; Simpson, 2009). Overall, not enough is known about why this is the case (Van de Ven et al., 2020). This knowledge deficit may have occurred due to a traditional approach to research, which has focused on categorical factors, interventions, or disease states and not on organizations or their internal processes (Bauer et al., 2015). In order to address this deficit, and identify ways to improve how programs work, a greater understanding of how treatment programs operate and their internal dynamics are required (Kelly et al., 2018).

Within substance misuse treatment programs, studies that have focused on the concept of 'Organisational Readiness to Change' [ORC] a psychological construct shared between staff relating to how collectively *able* and *willing* staff are to respond to change (Weiner, 2009), have shown some promise in identifying organizational factors which may influence how effectively programs can change to adopt new innovations into practice and meet program user needs (Crits-Christoph et al., 2011; Kelly et al., 2023). Two recent systematic reviews that focused on this concept (Kelly et al., 2017; Kelly et al., 2018) identified 22 research papers that utilized an ORC measurement tool developed by Lehman et al. (2002). This tool is part of a wider range of process measurement tools developed for substance misuse treatment programs at The Texas Christian University (see <http://ibr.tcu.edu/forms/organizational-staff-assessments/>). Conceptually, ORC is the subject of ongoing discussion, and it is operationalized in different ways (Attieh et al., 2013; Gagnon et al., 2014). The ORC assessment tool, developed by Lehman et al. (2002) operationalizes ORC as having four key domains, which include 18 subscales: (i) Motivation for change (needs/pressures): program needs, training needs, and pressures for change. (ii) Resources: Offices, staffing, training, equipment, internet. (iii) Staff Attributes: Growth, efficacy, influence, adaptability. (iv) Organizational Climate: Mission clarity, cohesion, autonomy, communication, stress, openness for change. Of these four domains, organizational climate and all of its sub-domains, have shown itself have been most frequently associated with a program's ability to adapt to change and aspects of program delivery that are related to better client outcomes (Kelly et al., 2017; Kelly et al., 2018). A recent qualitative study of OST programs which was underpinned by an organizational readiness framework demonstrated that a positive program culture, supported by good governance, supervision, and leadership enhanced worker readiness to support program change and meet client needs (Kelly, Hegarty, R & O Donovan, 2022). An absence of these factors, among others, causes frustrations among staff relating to a reluctance to change.

Organizational climate is also a concept about which there is no uniform consensus, and where studies operationalize it in a different way (Madhukar & Sharma, 2017). In general terms, it has been referred to as a function of a person and their interaction with the organizational environment (Lewin, 1958). It has been found to be a strong predictor of dissemination of evidence-based guidelines, in routine practice In a survey of 1794 drug workers in a Swedish national study it was associated with the successful implementation of evidence-based practices and good practice guidelines (Billsten et al., 2018). Where

organizational climate has been operationalized using Lehman's ORC tool (2002) higher staff ratings of areas such as staff autonomy, mission clarity, team cohesion, openness to change, and lower ratings of stress have been associated with more successful innovation adoption or better relationships and engagement with program users (Crits-Christoph et al., 2011; Guerrero et al., 2020; Kelly, Hegarty, Dyer, & Donovan, 2023; Kelly, Hegarty, R & O Donovan, 2022).

Still, little is known about what organizational factors contribute to a good organizational climate within substance use treatment programs, particularly outside of the US, and the mechanisms that underpin identified factors have not been explored adequately using qualitative inquiry (Kelly et al., 2017; Kelly, Hegarty, R & O Donovan, 2022). Consequently, there is a dearth of empirical knowledge on how to address organizational deficits in substance misuse programs, once they are identified. Therefore, the aim of this exploratory study was to identify relationships between organizational factors in 3 ORC domains; resources, staff attributes, and pressures for change [see Fig. 1 for sub-domains], as independent variables, that influence organizational climate; mission clarity, cohesion, autonomy, communication, stress, openness for change as dependent variables, and concurrently through qualitative inquiry to explore which mechanisms might underpin these relationships to develop a more in-depth understanding of how deficits might be addressed.

2. Methods

This multi-site mixed-methods study utilizes both cross-sectional survey and semi-structured interview data which was collected concurrently from frontline staff working in community-based opiate treatment prescribing programs in Ireland. Using both qualitative and quantitative approaches is thought to be particularly suited for evaluating the complexity within healthcare organizations (Carayon et al., 2015; Creswell, 2013). The objective here was to obtain and assess different but complementary sets of data and integrate the two sets of data at the interpretation phase; it was hoped that this would demonstrate that relationships between variables exist and provide an understanding as to *why* they exist. This is more commonly known as a *partially mixed* study design which best describes studies where both the qualitative and quantitative phases are carried out independently, and mixing or *convergence* occurs laterally (Doyle et al., 2016). Two regional ethical committees in Ireland granted approval for this study [ref no: ECM4 [R] 07/11/17]. Ethical approval was granted on the basis that no organizations or participants could be identified through published data, which limited the opportunities for a more detailed cross-comparison of programs.

2.1. Sample, recruitment and eligibility

We recruited a convenience sample of 12 publicly funded community OST prescribing programs in the Republic of Ireland for inclusion in this study. OST programs were considered to be separate when they operated from different buildings and this number is thought to represent approximately a quarter of all such programs nationally. There is no standardized model for OST programs in Ireland, but the programs included in this project were publicly funded specialist community-based prescribing programs, all of which were designated as specialist OST prescribing programs on the national online database. These were typically staffed by multi-disciplinary teams that included project workers, general assistants, nurses, accredited therapists [addiction counsellors, psychologists, and psychotherapists], and medical staff that included prescribing GPs, psychiatrists or both. The majority of clients attending these services are male, dependent on heroin, and use a range of drugs such as cocaine, alcohol, benzodiazepines, and cannabis (Kelleher et al., 2022). Programs were selected for inclusion using a national database, and an attempt was made to select programs from as broad a geographical area as possible; first direct contact was made with

Indicative interview schedule

1. What is your overall view of this service?
2. What do you think works well here?
3. What aspects of this organization could be improved?
4. From the service user's perspective, what could be improved at this service?
5. How would you describe this services ability to adopt to change?
8. How do you think this treatment service can be improved?

Probing questions

Elaboration probe:

- Why exactly do you feel that way?
- Can you tell me more about.....
- Why is that important to you?

Detail orientated probe:

- When did that happen?
- Who else was involved?

Clarification Probe:

- You said that..... what do you mean by that?
- What impact do you think.....has on.....?

Silent Probe:

- Remain silent and wait for the participant to continue, perhaps nodding

Echo probe:

- use a simple reflection "you said that...." and ask "what happened next?"

Uh-huh probe:

Fig. 1. Indicative interview schedule.

program managers and in each case, the teams were directly emailed by the researcher prior to meeting the teams in person in order to provide information and answer questions about the study before data collection commenced. Staff who were over 18 years old and who worked or volunteered for over 2 days a week for a period of 30 days or more in each program were considered eligible. Participants were screened and recruited by one researcher in their workplace and completed a written questionnaire. Following the completion of the questionnaire, participants were approached to take part in an in-depth interview. Here, a purposive approach was used to recruit interviewees from as wide a cross-section of professional groups and geographical areas as possible, interviews were ceased when it was viewed by the research team that data saturation had been accomplished (Alder & Alder, 2012). Quantitative data was collected between June 2019 and February 2020.

2.2. Quantitative measures

We employed a version of the Organizational Readiness to Change [ORC] questionnaire developed by Lehman et al. (2002), which was subject to minor modifications [e.g. spelling adjusted from US to UK English] for use in the Irish context. We also included some demographic data about study participants. The ORC tool was developed specifically

for measuring organizational performance in substance misuse treatment programs and has a high reliability and internal consistency when compared to other similar instruments (Gagnon et al., 2014). Instruments were also reviewed by eight subject experts for face validity and a pilot study for staff ($n = 4$) was conducted (Hertzog, 2008). The ORC questionnaire includes four domains [See Fig. 2]; Motivation for Change [MFC; drivers of organizational change] Institutional Resources [IR], Staff Attributes [SA], and Organizational Climate [OC]. In total, this incorporates 18 sub-domains with a total of 103 items. Each item used Likert scale (1–5) responses (1 = disagree strongly, 2 = disagree, 3 = uncertain, 4 = agree, 5 = strongly agree). When computing sub-domain scores, items on the scale were multiplied by 10, giving a range of scores from 10 to 50. This process was followed when over half of the items in a sub-domain were completed or else the domain was excluded (Lehman et al., 2002). Higher scores in ORC sub-domains generally reflect positively on a program, however, high scores in *all* the MFC sub-domains reflect negatively on an organization as does the stress sub-domain in OC. The surveys were completed pseudo-anonymously with only a code to identify the centre and questionnaire number; therefore no written consent was required by the ethical committee. The survey took 20–25 min to complete and the surveys were returned to the researcher in a sealed envelope.

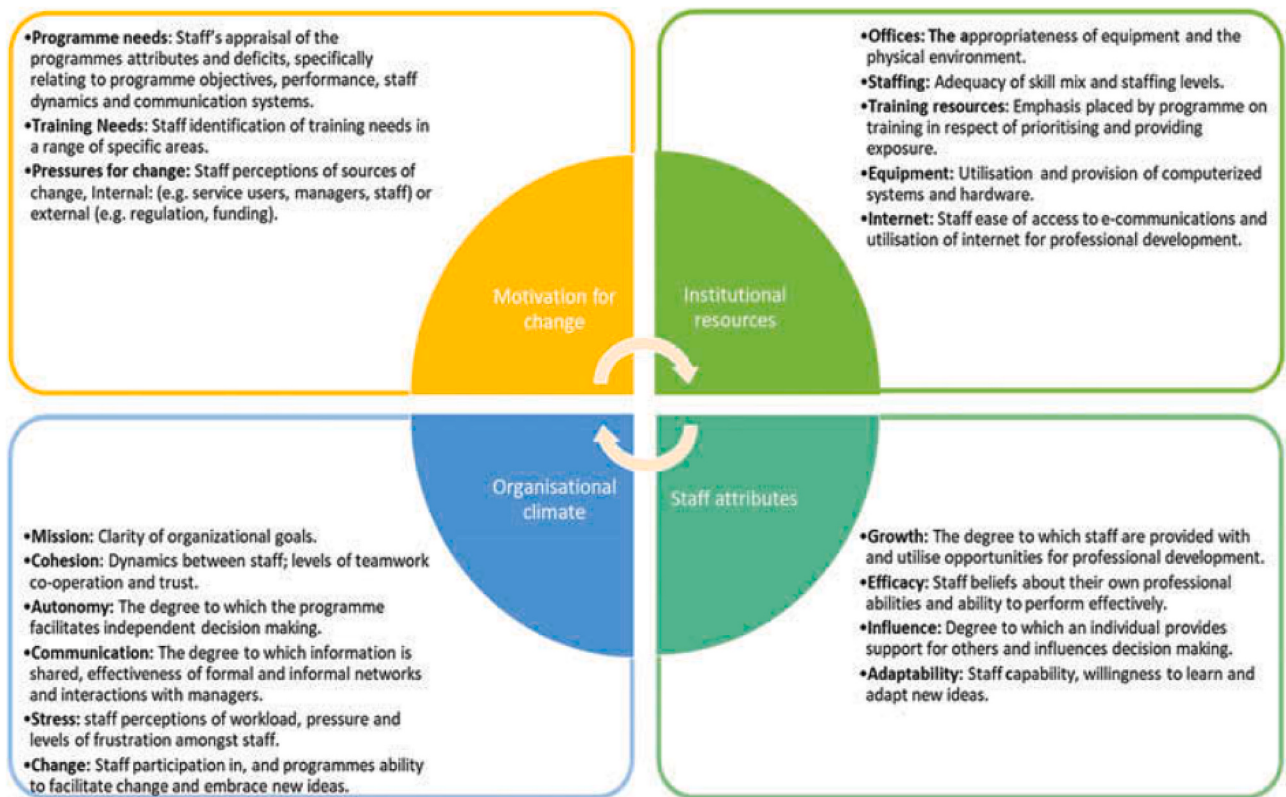


Fig. 2. ORC scales, subdomains and what they measure (Kelly et al., 2018).

We conducted an a priori power analysis for this study using IBM SPSS statistics (Version 26.0, IBM Corp, Armonk, NY). As this was a clustered study (staff are clustered within a program), we adjusted the sample size requirements to take into account the possible correlation among people within the same centre. However, estimates of the intra-cluster correlation coefficients (ICCs) were not available. For this reason, we initially presented the sample size requirements assuming: (1) there was no clustering effect ($ICC = 0$) and (2) assuming $ICC = 0.01$. The initial sample size requirements were as follows: A sample size of 118 was considered sufficient to detect a medium effect ($f^2 = 0.15$) in a multiple linear regression with up to 10 independent variables, with a power of 80 % a level of significance of 0.05. However, as staff from the same program may have been included in the study, we considered that this may reduce the statistical power. To account for this, we inflated the sample size to $n = 129$. This was based on a design effect of 1.09 (assuming an average cluster size of 10 and $ICC = 0.01$).

2.3. Qualitative interviews

Semi-structured one-to-one interviews were used to ensure consistency and provide a lucid description of the constructs under investigation so that these could be readily understood by policymakers and researchers (Sandelowski, 2000). This also enabled cross-comparison with quantitative data, while facilitating a more in-depth exploration of the constructs under examination. Staff were approached individually in their places of work and interviewed in a private space. We provided staff with an information leaflet at least a week in advance of interviews and staff were encouraged to ask questions about the study before we administered the consent form. Demographic data was pseudo-anonymised and collected to develop a sample overview and interviews commenced with a 'warm-up' question. Questions covered in the interview related to what was good and bad about the organization, what works well, what makes it work well, and what needs to change [appendix 1]. The objective here was to explore mechanisms that might

underpin relationships identified in the quantitative study but also to understand more broadly factors that might influence organizational functioning outside of those measured in the quantitative study. In this respect, a flexible approach was used in all the interviews to allow interviewees to identify important topics and talk openly (Silverman, 2013). This approach sought to maintain focus on the important aspects of working in programs. Interviews lasted between 1 h and 1 h 25 min. The researchers collected qualitative data between July 2019 and March 2020.

2.4. Statistical analysis

The researchers entered data generated from the survey directly into IBM SPSS statistics (Version 26.0, IBM Corp, Armonk, NY) and then exported into Stata (Version 15.1, StataCorp LP, College Station, TX) where we then performed statistical analysis. It is recommended that instruments are validated in each country where they are used (Lai, 2013). To accomplish this for the Irish setting, for the ORC scales, Cronbach's alpha coefficient and the mean inter-item correlation coefficient were used to evaluate the internal consistency of the subdomains. An alpha value of >0.7 (Bland & Altman, 1997) and a mean inter-item correlation between 0.15 and 0.50 (Clark & Watson, 2016) were considered acceptable. Mean and standard deviation (SD) describe continuous variables, and frequency and percentage describe categorical variables. Univariable and multivariable mixed-effects linear regression models investigate organizational factors associated with climate. Before performing the multivariable analysis, multicollinearity among the independent variables was tested using the variance inflation factor (VIF). There was clustering in the data (hierarchical data) where each participant (level 1 unit) is from a particular program (level 2 unit), hence, a participant's score may have depended on the program that they are in. Participants from the same program may have scores that are more similar to one another than participants from different programs. Including 'program' as a random effect in the model accounted

for this non-independence in the data. A backward elimination approach was used to arrive at the final multivariable model. This approach starts with a multivariable model that includes all independent variables with $p < 0.25$ in the univariable analyses, then the model selection starts removing the least significant independent variables one by one, until only statistically significant independent variables are included in the final multivariable model. Backward elimination and hence selection of the final multivariable model was performed using R. Due to missing data, only $n = 123$ of $n = 132$ questionnaires were included in the final analysis.

2.5. Qualitative analysis

We analyzed data using an abductive approach (Graneheim et al., 2017). JG coded data inductively, and then PK performed cross-checks. Once PK and JG reached an agreement and made refinements, JG grouped codes deductively under the six domains of the Organizational Readiness to Change's "climate" scale; which was then reviewed by PK. JG then wrote up themes (comprising these six domains) and participants' quotations enhance the credibility of the analysis (Lincoln & Guba, 1985).

3. Findings

3.1. Quantitative sample characteristics

An overview of the demographics of the quantitative sample is available in Table 1. The sample was experienced, well-educated, and professionally diverse, and was mainly white Irish.

3.2. Quantitative results

The results of multivariate analysis investigating organizational factors that are associated with organizational climate are presented in Tables 2 and 3. In programs where there were greater organizational needs, which reflects negatively on an organization, this was associated with; lower mission clarity [$p = 0.004$], poorer team cohesion [$p = 0.004$], less effective organization communication [$p = 0.016$], and greater stress [<0.001].

The relationship between different types of resources and organizational climate was also significant. In programs that were considered to have poorer office resources, ratings of mission [$p = 0.022$], team cohesion [$p = 0.001$] were lower while stress levels were significantly higher [$p = 0.045$]. Where participants rated their organizations as having fewer staff resources, ratings of; mission clarity [$p = 0.019$], team cohesion [$p = 0.001$], staff autonomy [$p < 0.001$], communication [$p < 0.001$] and organization openness to change [$p < 0.001$] were significantly lower while levels of stress were also significantly higher [$p < 0.001$]. Training resources, which relate to the emphasis placed on the provision of and exposure to training in each organization were also important. Programs with lower ratings for training resources were considered by staff to have poorer mission clarity [$p = 0.009$], lower worker autonomy [$p = 0.029$], poorer communication [$p = 0.003$], lower openness to change [$p < 0.001$] and higher levels of stress [$p < 0.001$]. Access to e-communication was a resource that was also related to an organization's ability to adapt to and facilitate change [$p = 0.004$].

Some staff attributes were also identified as being of significance. In programs where staff identified that there are better professional growth opportunities, these organizations also had greater mission clarity [$p < 0.001$], higher levels of staff autonomy [$p = 0.013$], and better levels of communication [$p < 0.001$]. In organizations where there were greater overall ratings of individual efficacy, which relates to staff's beliefs in their professional abilities, there was greater openness to change [$p < 0.001$] and higher ratings of personal autonomy [$p = 0.013$] also higher ratings for stress [$p = 0.001$]. Finally, an unexpected result was that in programs where there were lower overall ratings of individual

Table 1
Characteristics of program staff.

	n	(%)
Discipline/profession ($n = 131$)		
Project worker/general assistant	40	(30.5)
Counsellor/psychotherapist	26	(19.9)
Nursing	23	(17.6)
Medical	22	(16.8)
Administration	11	(8.4)
Professional other	9	(6.9)
Years experience working in substance misuse treatment ($n = 130$)		
Under 6 months	7	(5.4)
6–11 months	4	(3.1)
1 to 3 years	16	(12.3)
4 to 5 years	11	(8.5)
Over 5 years	92	(70.8)
Years in current job ($n = 128$)		
Under 6 months	8	(6.3)
6–11 months	6	(4.7)
1 to 3 years	25	(19.5)
4 to 5 years	13	(10.2)
Over 5 years	76	(59.4)
Number of program users working with directly ($n = 120$)		
1–10	7	(5.8)
11–20	20	(16.7)
21–30	13	(10.8)
31–39	9	(7.5)
40 or more	71	(59.2)
Works with ($n = 132$)		
Both drug and alcohol users	114	(86.4)
Drug users only	13	(9.8)
Alcohol users only	5	(3.8)
Age (years): mean (SD)	46.8	(11.0)
Gender ($n = 132$)		
Female	67	(50.8)
Male	64	(48.5)
Other	1	(0.8)
Ethnicity ($n = 131$)		
Irish	118	(90.1)
Any other white background	7	(5.3)
Any other Asian background	3	(2.3)
Black African	1	(0.8)
Asian Chinese	1	(0.8)
Other (including mixed background)	1	(0.8)
Highest level of education ($n = 129$)		
No school qualifications	2	(1.6)
Inter Cert/Junior Cert or equivalent (second-level mid-point state exams)	6	(4.7)
Leaving Cert/Senior Cert or equivalent (second-level final state exams)	11	(8.5)
Degree or equivalent	76	(58.9)
Masters	29	(22.5)

adaptability, or a willingness to learn and adapt new ideas, overall ratings of autonomy were significantly higher [$p = 0.005$].

3.3. Qualitative findings

The interviewees comprised seven men and four women, with an average age of 49. All had been in their posts for longer than 5 years with all participants educated to degree level or higher. Participants came from a range of backgrounds which included medical, nursing, psychology, social work and drug workers or general assistants. While the data was analyzed under the six sub-domains of climate, the interdependence of each sub-domain became clear, for example, areas such as communication impacted on mission clarity and team cohesion and the direction of these relationships was not always clear. Factors are discussed here under the themes in which they were considered to be the most dominant.

3.3.1. Mission; clarity of organizational goals

Almost all participants were clear that their program mission was

Table 2
Relationship between organizational factors and clarity of mission, team cohesion and levels of autonomy: multivariate analysis [$n = 123$].

	Mission				Cohesion				Autonomy			
	Coefficient	95 % Confidence Interval	p-Value	Semi-partial R^2	Coefficient	95 % Confidence Interval	p-Value	Semi-partial R^2	Coefficient	95 % Confidence Interval	p-Value	Semi-partial R^2
Organization-level variables												
Motivation for change												
Program needs*	−0.19	(−0.32 to −0.06)	0.004 ^b	0.030	−0.22	(−0.37 to −0.07)	0.004 ^b	0.047				
Training needs*												
Pressure for change												
Resources												
Office resources	0.18	(0.03 to 0.34)	0.022 ^a	0.020	0.32	(0.13 to 0.51)	0.001 ^c	0.048				
Staff resources	0.20	(0.03 to 0.37)	0.019 ^a	0.020	0.34	(0.14 to 0.53)	0.001 ^c	0.087	0.26	(0.12 to 0.41)	<0.001 ^c	0.059
Training resources	0.19	(0.05 to 0.33)	0.009 ^b	0.025					0.13	(0.01 to 0.25)	0.029 ^a	0.034
Computer access												
E-communication												
Staff attributes												
Growth	0.32	(0.17 to 0.47)	<0.001 ^c	0.062					0.17	(0.04 to 0.30)	0.013 ^a	0.031
Efficacy												
Influence												
Adaptability									−0.22	(−0.37 to −0.07)	0.005 ^b	0.021
Marginal R^2 for model	0.548				0.319				0.285			

^a $p < 0.05$.

^b $p < 0.01$.

^c $p < 0.001$.

* Higher scores in these sub-domains reflect *negatively* on an organization.

Table 3

Relationship between organizational characteristics and; communication, stress, openness to change: multivariate analysis [n = 123].

	Communication				Stress ^a				Change			
	Coefficient	95 % Confidence Interval	p-value	Semi-partial R ²	Coefficient	95 % Confidence Interval	p-value	Semi-partial R ²	Coefficient	95 % Confidence Interval	p-value	Semi-partial R ²
Organization-level variables												
Motivation for change												
Program needs ^a	−0.18	(−0.32 to −0.03)	0.016 ^a	0.052	0.30	(0.16 to 0.44)	<0.001 ^c	0.086				
Training needs ^a												
Pressure for change									0.14	(0.01 to 0.27)	0.032 ^a	0.000
Resources												
Office resources					−0.18	(−0.36 to 0.00)	0.045 ^a	0.017				
Staff resources	0.34	(0.16 to 0.51)	<0.001 ^c	0.057	−0.47	(−0.65 to −0.28)	<0.001 ^c	0.112	0.30	(0.16 to 0.45)	<0.001 ^c	0.157
Training resources	0.24	(0.08 to 0.39)	0.003 ^b	0.040	−0.33	(−0.65 to −0.28)	<0.001 ^c	0.044	0.34	(0.23 to 0.45)	<0.001 ^c	0.157
Computer access												
E-communication									0.18	(0.06 to 0.30)	0.004 ^b	0.027
Staff attributes												
Growth	0.44	(0.27 to 0.61)	<0.001 ^c	0.109								
Efficacy					0.37	(0.14 to 0.59)	0.001 ^c	0.033	0.28	(0.15 to 0.41)	<0.001 ^a	0.075
Influence												
Adaptability												
Marginal R ² for model	0.583				0.515				0.585			

^a p < 0.05.^b p < 0.01.^c p < 0.001.^{*} Higher scores in these sub-domains reflect *negatively* on an organization.

focused on meeting client needs. Building good relationships with clients was considered as both a part of this mission and vital to its execution. Specifically, their programs focused on preventing overdose, reducing in transmission of blood-borne viruses and addressing psychological and social needs. Most of the participants felt that the program mission aligned with their personal and professional values, something all participants considered to be important. Experience of significant changes in program ethos over the last 10 to 15 years, from a disease model approach towards what was described as 'compassionate pragmatism' facilitated participant's opportunity for comparison and helped to amplify current mission goals:

"From a psychological point of view as well, like when I first arrived, there was a big focus [on the disease model]. People with a particular psychological background, of a particular model, that had very, very kind of questionable evidence base and I think there's been a big move to look towards the motivational interviewing and the cognitive and behavioral approaches"

(6)

Implementation of program's mission was thought to be threatened by a high turnover of staff, existing staff working in professional 'silos' or a lack of training and staff resources. When conditions were apt, the provision of evidence-based training and education of all staff was thought to be vital to fulfilling mission goals and developing consensus among the team about what the program mission is supposed to be, through enhancing a shared understanding of client needs:

"So what we've done over the past eight, nine years is try to address a deficit in skillsets and competence [...] changing the nuance of how we deliver so that we were able to generate a consensus approach rather than a lot of individual approaches on a team. We have a consensus base, so that has been a very important change piece."

(5)

3.3.2. Cohesion; dynamics between staff; levels of teamwork, co-operation and trust

Reflective of the client experience, cohesion was also conceptualized by staff in terms of how programs operated internally, but also how effectively their program worked with other programs. Good interpersonal relationships were considered to be central to this, and between programs, these were often enhanced through joint training ventures or shared projects such as joint consent forms and standardized assessments. Inconsistencies in practices and in following protocols within programs were observed by several participants to impact on team cohesion. However, participants generally noted that there were good levels of informal emotional support and cross-disciplinary respect, and that team cohesion was also enhanced by being able to have open and supportive discussions about clients, which transcended disciplinary boundaries:

"People aren't like particularly sort of precious about their kind of roles and people aren't territorial. So, you may have a person with a kind of medical background making a suggestion about kind of a psychological factor. You may have a person from a psychological background making some sort of observation regarding kind of the opiate substitution, detox, the rate of detox. So there's a good sharing of ideas"

(6)

Informal conversations and support were considered important, and one participant noted that team cohesion had been diminished after a decision had been taken to move staff from an open-plan office to separate spaces. Leadership was considered an important aspect of cohesion, where team leaders put the mechanisms in place to facilitate communication, change and build team morale:

"Well, [manager] would take on our ideas, do you know. If we noticed a gap, any of us working here, any discipline, if we said, 'I don't think we're doing that well. I think there's a better way to do that'. And we'd bring it to a meeting and I think we all hash it out and we do adapt it then if the manager thinks it's a good idea, do you know"

(2)

Cohesion was adversely affected by rigid hierarchies within organizations, different philosophical views of addiction, often framed in terms of 'old' and 'new' where older staff demonstrated 'black and white' thinking which limited the potential for meaningful discussions and staff working in professional 'silos' with some not following clinical guidelines. This was noted to be a particular challenge for staff working with what seemed like a small but influential cohort of medical practitioners:

"It's probably more around prescribing practices and around I suppose that kind of understanding of teamwork. You know, sometimes it's very archaic. Some people can be a little bit archaic, so like I am the doctor, I am prescribing, I call the shots"

(1)

"Doctors are a rule unto themselves. You know, they always were, you know. [...] We're just so used to it. We've given up. You know, the fight has gone out of it for us, do you know, because there's never consistency with our doctors."

(12)

Despite this, staff generally reported that their teams were motivated for change, enthusiastic and committed to their organizations and clients. For many interviewees, a shared cognitive and affective state of 'readiness' was considered important for them in how they related to their teams:

"Yes, so I have very positive views because the staff that I'm working with are really motivated to see that the service is the best that it can be and they're quite flexible and they're quite adaptable"

(1)

"And having colleagues then who are in that consensus of that enthusiastic exploration and having structures and scaffolds around programmes that are informed by evidence allows for a very different practice, holding of attachments with clients that aren't just counsellor and client, but as client, counsellor and a whole team"

(5)

3.3.3. Autonomy; the degree to which the programme facilitates independent decision-making

While most participants spoke about being able to affect change, there was a general sense that organizational attributes constrained their ability to make independent decisions and act autonomously. Bureaucracy and too many layers of management - a structure imposed owing to a culture that feared litigation inhibited autonomy.

"People feeling controlled. You know, even if that's not your intention, that's going to be how it's, because you know, the system is set up that way."

(1)

Consequently, some staff reported that in spite of their expectations of a 'modern' organizational climate, they felt 'micro-managed' within the health service to the extent that new staff coming in from other parts of the health service expected a paternalistic style of management:

"I've seen people coming in and expecting to be micro-managed."

(7)

Personal autonomy was also considered to be curtailed by a lack of career progression, where educational levels, training and skills had often far exceeded that of their roles, where they were held for extended periods. Many participants noted that staff had reluctantly moved on to work in other areas of healthcare for this reason:

“No, they've moved into different fields, so you know, and not necessarily, you know, from the feedback I've had from when they moved is they miss the work. They love the work and they really wanted to stay within it, but there was just nowhere to go, you know, which is a shame.”

(1)

3.3.4. Communication; degree to which information is shared, effectiveness of formal and informal networks and interactions with managers

In general, there was evidence of safe and effective communication across programs, and this was identified as being important to team cohesion. Key personnel were typically informed about decisions concerning client care and program developments through regular handovers, staff meetings and transparent communication chains. In most programs, this also extended to communication with clients. In cases where staff were on annual leave, clear systems were in place to ensure that important issues were not overlooked:

“If the key worker is on holidays, on leave, whatever, the team have ownership and responsibility of the care, the attachment, the dynamics of what's happening with the client and it's all available.”

(5)

“We communicate clearly. Otherwise it [the service and team] wouldn't work. It wouldn't be safe.”

(10)

Formal facilitators of good communication were focused not just on regular staff meetings, but how leadership, a manager being ‘open to ideas’ influences the culture of meetings. Staff reported that good communication with other disciplines facilitated reflection on their own ‘way of working’ and in some cases, this provided motivation for expanding their own skillset. Informal communication was also considered important and considered positive. Two participants identified how physical space, i.e. having an open plan office, or having this changed, was influential in this regard:

“What works here is it's actually funny, having an open plan office, we're always chatting to each other, and we know each other's clients.”

[11]

Several barriers to good communication were identified and these included; not hosting multi-disciplinary meetings, excluding frontline workers from clinical meetings, inter-disciplinary tensions and arrangements of physical space:

“Say the clinic team were on the floor, the outreach are on the next floor, counsellors on the next floor, and we didn't see each other... and we drifted apart as a team.”

(10)

3.3.5. Stress; staff perceptions of workload, pressure and levels of frustration among staff

Participants identified that working with the client group can be emotionally challenging as progress can be slow and programs are not always equipped to address their needs:

“Because I suppose what was happening was sometimes, we were working with clients that we weren't equipped for and I suppose there's an ethical piece there as well, but yet these clients were being sent to us, so what do you do? Give them no service? There's a real obligation here that if people come and ask for a service, we do need to give it to them. So I suppose all those conversations were happening. Like what do we do with these clients?”

(11)

Several participants commented on the challenges of short-staffing, which they also felt contributed to burnout. Staff who left programs were often not replaced, meaning caseloads were unfeasibly large for current staff members. Participants felt that the complexity of program users' presenting issues could not be adequately addressed as a result of limited staff numbers and available skill-sets:

“And the caseload is a lot heavier. I suppose there's a lot more mental health, addiction, pregnancy. There's loads of problems and to try and manage that caseload is very difficult with just two nurses.”

(10)

“I mean we're not that well-resourced in terms of like there's only one psychologist and there's a small amount of counsellors, some of which are kind of part-time. You know, we could obviously do with more key workers and project workers.”

(5)

As a consequence of short staffing and the busy nature of substance misuse programs, staff reported feeling tired, stressed, and overburdened with work:

“I'm not happy because the workload that I do is more than I am, you know, and that has come from my manager, my other manager and clinical psychologist. I have loads of work.”

(9)

Only one participant felt that their program had appropriate staffing levels. Being sufficiently resourced in this manner eased stress levels and enhanced job satisfaction. In addition to adequate staffing, clinical supervision was in place in this program, which was considered to be beneficial for staff, alleviating burnout:

“I do think we've good staff numbers. [...] I think the stress levels are good here. I think we're good at self-care because we'd have to be in this job because I suppose the patients bring in heavy stuff to us, so you do have to mind yourself, but I think we're good at it [...] I think when you have supervision and someone to talk to, it kind of stops that burn-out”

[2]

Another significant source of stress was a perceived hierarchy. Some of the systems in place were considered archaic and not particularly staff-friendly. Participants felt that those considered to be higher up the hierarchy had an inflated sense of self-worth, and as such, were difficult to work with:

“I think it comes back to hierarchy. It kind of comes back a little bit to a bit of ego, you know, and a bit around fear and around, you know, anxiety for the individuals involved.”

(1)

3.3.6. Change; staff participation in and programmes ability to facilitate change and embrace new ideas

All participants accepted that change was a constant and inevitable phenomenon which was embraced by all participants. Societal demand, policy, client need and changes in other programs were all interdependent domains which drove organizational change.

"I'd say it's happening consistently. Yes, it's continuous change and you can still feel more changes are happening around policy development, around how we engage with other services like mental health, the different tiers, residential treatments. Yes, all those kind of processes are beginning to change."

(6)

Several factors were identified that motivated change. Participants acknowledged that change could benefit staff and that implementing changes could lead to enhanced collegiality and a workplace more conducive to positive wellbeing. Participants were eager to identify more efficient ways of working with people, or strategies to reduce workloads. Successfully implementing change in the past, including all staff, seeing how a change worked well in another program or during a pilot, and measuring change implementation through audit were all considered important. Assessing and supporting change implementation through audit and providing supervision support following exposure to information about new initiatives were also factors that increased openness to change:

"I found on the day when you go down and you do the lectures or whatever, it's good, but I really gained from the supervision that I had after [...] it just really helped me to understand it more and guide me [...] that actually was more valuable to me."

[2]

Participants also acknowledged that change is often resisted. Organizational hierarchy and risk aversion were thought to present a challenge but certain individuals or 'personalities' within programs were thought to be change-averse. Participants recounted several examples of large-scale support for changes among staff where strong personalities and people "protective of their roles" demonstrated resistance to these changes:

"...and then you'll see the people [certain staff] who absolutely are getting their bums out of the chair is so difficult and it's like they're being dragged through a thorny bush backwards."

(7)

In addition to professional protectionism, the ideological disposition of senior staff, particularly in relation to views of addiction, was thought to impede change. Conversely, bringing in new staff was thought to support change:

"I think new staff coming. There's constantly kind of new people coming with new ideas and then, you know, people just kind of go to conferences and will be constantly referencing themselves to external agencies."

(6)

Finally, resources were thought to be a critical aspect of supporting organizational change. This extended to staff; skill mix, workloads, burnout and resourcing the change effectively through long-term engagement from management and resources for education, training and monitoring.

4. Discussion

The aim of this exploratory study was to identify relationships between organizational factors in 3 ORC domains; resources, staff attributes, and pressures for change which influence organizational climate, and concurrently through qualitative inquiry to explore which mechanisms might underpin these relationships to develop a more in-depth understanding of how deficits might be addressed. This study has identified a multitude of interdependent factors that are likely to contribute to a positive organizational climate. If utilized, specific findings here such as those on resources, leadership, supervision,

communication, team cohesion, and governance provide important information for planners and policymakers when designing and planning programs. Multivariate analysis indicates that there is a strong association between having a range of adequate resources; physical, staffing, and training, and many aspects of organizational climate. Qualitative inquiry explains at least *some* of the mechanisms that might underpin these relationships, such as leadership decisions, but also identifies those aspects of program delivery, such as program mission, have changed over time.

A range of factors that were associated with climate in this study have been shown to be important for optimal organizational functioning. For example, job autonomy and stress are known to be intrinsically linked with overall worker well-being and job performance (Havermans et al., 2017), while mission clarity, communication, and openness to change have been strongly associated with an organization's ability to adapt new treatments into practice (Lundgren et al., 2012). Consistent with relationships found in the quantitative study, interview participants supported the view that resources such as staffing, training, and those which facilitated retention of staff and career progression were important to fulfilling the overall program mission, but this was not the only perceived benefit of extra resources. Some participants supported the idea that investment in training and the implementation process had allowed their organization to form a 'consensus' view of addiction which had helped to break down professional barriers, increase team cohesion, and clarify their overall program mission. The important role of training as a component that supports wider organizational change is something that concurs with wider implementation literature (Carlsson & Wadensten, 2018). Greater program needs, something that relates closely to the overall levels of governance in programs, also had a significant association with four of the six sub-domains of climate.

Leadership decisions have an important impact on team cohesion. For example; factors such as office layout, which have been shown to influence team dynamics, require more attention from substance misuse program managers (Sailer et al., 2021). Irish substance misuse programs have been criticized for being hierarchical and dominated by an overly medical approach (Healy et al., 2022; Mayock & Butler, 2021). While attention to recruitment and skill mix will undoubtedly have an impact on this, truly collaborative multi-disciplinary meetings can serve to share responsibility and risk, flatten hierarchies, and increase team cohesion, this is something that should be addressed further (Smart et al., 2018). In this study, team cohesion was also influenced by resources, but reflective of the client journey, participants spoke about cohesion as an internal and external phenomenon. A client is likely to be engaged with a multitude of inter-connected agencies, for example, housing, criminal justice or social welfare. In this context, further consideration of how planners conceptualize an organization may be required. To create more person-centric programs, policymakers and planners would be better at conceptualizing organizations not as entirely separate entities, but as a collection of *loosely coupled systems* (Hollenbeck & Spitzmuller, 2012; Orton & Weick, 1990).

Job autonomy, sometimes referred to as *discretionary power* was a factor that was linked to positive ratings in the climate domain is important and has been shown to increase job satisfaction and role clarity while lowering exposure to burnout (Madathil et al., 2014; Pron, 2013). It is also closely linked to the concept of employee empowerment which is determined by access to information, opportunities, resources, and support (Woodward, 2020). These factors are likely to influence an employee's opportunities for professional growth and development and employee retention, something that a hierarchical system is likely to inhibit (Choi et al., 2016). If substance misuse treatment organizations wish programs to be successful in implementing policies, closer consideration of what organizational structures and resources are needed is required, particularly structures that can negate destructive hierarchies and increase staff autonomy. It was not clear why adaptability and autonomy were negatively related and there was no

indication from the qualitative data which explains why this relationship existed.

Effective communication is vital in a healthcare setting (Ratna, 2019). The identified relationship between increased training and staff resources, opportunities for professional growth, and good communication is also something that is consistent with literature from other areas of healthcare (Foronda et al., 2016). In this study, the factors that influenced team cohesion and autonomy; physical space, leadership style, and multi-disciplinary team culture were considered important. Poorer resources also contributed to higher stress levels, where qualitative inquiry indicated that this stress was aggravated by a discrepancy between available resources, and the value that staff placed on delivering a good standard of care (Swavely et al., 2022). Quantitative inquiry indicated that the burden of stress is a greater challenge for staff who rate themselves as having greater job efficacy. While a strong sense of job [or professional] efficacy may not reduce stress, it is known to be a factor which mediates the effects of stress and helps to reduce burnout (Ventura et al., 2015). While the study did not explore associations between professional groupings and stress, this finding indicates that there may be an uneven distribution of workloads across programs. However, like job efficacy, organizational factors such as good teamwork and effective supervision can help to mediate against the detrimental effects of high workloads (Diehl et al., 2021).

Greater pressure for change reflects negatively on an organization in that a wider range of groups, funders, and clients would like to see more change in an organization. However, the statistically significant association with this and openness to change signifies that staff in these programs were motivated to improve their organizations, something which was generally consistent with qualitative data, where staff identified and expressed desire across several areas for improvement. In programs where staff had greater access to e-communication, there was great openness to change. Participating in online learning was discussed by participants, but the mechanism which underpins this relationship was not made clear. This result is consistent with many other studies and one explanation for this is that greater access to e-communication increases training variability and opportunities (Lehman et al., 2012; Sinclair et al., 2016). Consistent with other domains, hierarchy, professional protectionism, and resources, were also thought to influence openness to change. Supervision resources, which were not available to all staff, were not only considered important for supporting change but also for emotional support, two areas that have been related to successful change adoption and better client outcomes (King et al., 2021).

Consideration of a range of areas such as organizational hierarchy, leadership style, the format of staff meetings, and how physical space is utilized may not require extra resources but would clearly improve dynamics in a range of domains relevant to organizational climate and also improve overall worker wellbeing (Skinner & Roche, 2021; Van Dorssen-Boog et al., 2020). As a start, organizations should consider assessing their levels of functioning and the ORC tool provides a good basis for baseline and outcome measurement. ORC measures can be used as part of a feedback mechanism for staff in order to measure and improve overall organizational functioning, something that has been shown to maintain a good working environment and improving client outcomes (Courtney et al., 2007; Crits-Christoph et al., 2011).

5. Strengths & limitations

Although cross-sectional studies do not typically identify causal relationships and are considered low in terms of evidential hierarchy, they are still considered a suitable method for evaluating programs, and a strength of this study is its mixed methods design (Cottrell et al., 2012). Aggregating the quantitative data from each program does not allow assessment of differences between individuals but mixing both types of data reduces the risk of providing an inaccurate description of programs. A range of other variables that were not measured in the quantitative aspect of this study, such as staff levels of education, tenure, program

size, and skill mix are also likely to contribute to organizational dynamics (Aiken et al., 2014; Kelly et al., 2017). Power calculations estimated that $n = 129$ participants would have been sufficient however, due to missing data, only $n = 123$ of $n = 132$ questionnaires were included. Although the survey was conducted anonymously, social desirability bias, where participants provide answers that they believe are expected of them, as opposed to reflecting what they truly believe, may have been a factor in the qualitative interviews (Bergen & Labonté, 2020). The influence of other sources of bias on this study, such as response bias or selection bias cannot be ruled out (Polit & Beck, 2013). Ethical approval was granted on the basis that program anonymity would be maintained, thus it was not possible to describe or cross-compare specific program attributes in detail, but nor was this the objective of the study.

6. Conclusion

Key findings in this study identified that staff views of organizations are important and can provide us with valuable information to support the evaluation and design of programs, policy development, resource allocation, and future research. Using a mixed methods approach can not only identify where relationships between organizational variables exist but can also help us to understand the mechanisms that underpin these relationships and, importantly, how to address deficits once they are identified. The interdependence of a wide range of factors both inside and outside the organization is clear and between organizational domains, there is no indication of a 'hierarchy' of importance. Resources are important but are not the only influential factor. To improve how substance misuse programs work, the need for a systemic or 'joined-up' approach is required. This approach should not only consider a person's recovery as progressing within a treatment 'eco-system', but also something which must be developed over time, and consider the well-being of staff who work in it.

CRedit authorship contribution statement

Peter Kelly: Writing – review & editing, Writing – original draft, Project administration, Methodology, Investigation, Formal analysis, Conceptualization, Data curation. **Adam Searby:** Writing – review & editing, Writing – original draft, Validation. **Johnny Goodwin:** Data curation, Formal analysis, Methodology, Writing – original draft, Writing – review & editing.

Declaration of competing interest

The authors declare the following financial interests/personal relationships which may be considered as potential competing interests: Peter Kelly reports article publishing charges was provided by The University of Dublin Trinity College. Peter Kelly reports a relationship with The University of Dublin Trinity College that includes: employment. Peter Kelly has patent pending to Peter Kelly. There are no conflicts of interest to declare if there are other authors, they declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

Appendix A. Supplementary data

Supplementary data to this article can be found online at <https://doi.org/10.1016/j.josat.2024.209362>.

References

- Aiken, L. H., Sloane, D. M., Bruyneel, L., Van den Heede, K., Griffiths, P., Busse, R., ... Lesaffre, E. (2014). Nurse staffing and education and hospital mortality in nine European countries: A retrospective observational study. *The Lancet*, 383(9931), 1824–1830.

- Alder, P., & Alder, P. (2012). The epistemology of numbers. In S. Baker, & R. Edwards (Eds.), *How many qualitative interviews is enough?* UK: National Centre for Research Methods.
- Attieh, R., Gagnon, M.-P., Estabrooks, C. A., Légaré, F., Ouimet, M., Roch, G., ... Grimshaw, J. (2013). Organizational readiness for knowledge translation in chronic care: A review of theoretical components [article]. *Implementation Science*, 8(1), 1–19. <https://doi.org/10.1186/1748-5908-8-138>
- Babor, T., Caulkins, J., Edwards, G., Fischer, B., Foxcroft, D., Humphreys, K., ... Strang, J. (2010). *Drug policy and the public good*. Oxford University Press.
- Bauer, M. S., Damschroder, L., Hagedorn, H., Smith, J., & Kilbourne, A. M. (2015). An introduction to implementation science for the non-specialist. *BMC Psychology*, 3(1), 1–12.
- Bergen, N., & Labonté, R. (2020). "Everything is perfect, and we have no problems": Detecting and limiting social desirability bias in qualitative research. *Qualitative Health Research*, 30(5), 783–792.
- Bland, J. M., & Altman, D. G. (1997). Statistics notes: Cronbach's alpha. *Bmj*, 314(7080), 572.
- Billsten, J., Fridell, M., Holmberg, R., & Ivarsson, A. (2018). Organizational Readiness for Change (ORC) test used in the implementation of assessment instruments and treatment methods in a Swedish National study. *Journal of Substance Abuse Treatment*, 84, 9–16. <https://doi.org/10.1016/j.jsat.2017.10.004>
- Carayon, P., Kianfar, S., Li, Y., Xie, A., Alyousef, B., & Wooldridge, A. (2015). A systematic review of mixed methods research on human factors and ergonomics in health care. *Applied Ergonomics*, 51, 291–321.
- Carlsson, Ö. U., & Wadensten, B. (2018). Professional practice-related training and organizational readiness for change facilitate implementation of projects on the national core value system in care of older people. *Nursing Open*, 5(4), 593–600. <https://doi.org/10.1002/nop2.185>
- Choi, S. L., Goh, C. F., Adam, M. B. H., & Tan, O. K. (2016). Transformational leadership, empowerment, and job satisfaction: The mediating role of employee empowerment. *Human Resources for Health*, 14(1), 1–14.
- Clark, L. A., & Watson, D. (2016). Constructing validity: Basic issues in objective scale development. In A. E. Kazdin (Ed.), *Constructing validity: Basic issues in objective scale development*. In, Methodological issues and strategies in clinical research (pp. 187–203). <https://doi.org/10.1037/14805-012>.
- Comiskey, C., Kelly, P., Leckey, Y., McCulloch, L., O'Duill, B., Stapleton, R., & White, E. (2009). The ROSIE study: drug treatment outcomes in Ireland. T. S. Office.
- Cottrell, E., McMillan, K., & Chambers, R. (2012). A cross-sectional survey and service evaluation of simple telehealth in primary care: What do patients think? *BMJ Open*, 2(6).
- Courtney, K. O., Joe, G. W., Rowan-Szal, G. A., & Simpson, D. D. (2007). Using organizational assessment as a tool for program change. *Journal of Substance Abuse Treatment*, 33(2), 131–137. <https://doi.org/10.1016/j.jsat.2006.12.024>
- Creswell, J. W. (2013). *Research design: Qualitative, quantitative, and mixed methods approaches*. Sage publications.
- Crits-Christoph, P., Hamilton, J. L., Ring-Kurtz, S., Gallop, R., McClure, B., Kulaga, A., & Rotrosen, J. (2011). Program, counselor, and patient variability in the alliance: A multilevel study of the alliance in relation to substance use outcomes. *Journal of Substance Abuse Treatment*, 40(4), 405–413. <https://doi.org/10.1016/j.jsat.2011.01.003>
- Diehl, E., Rieger, S., Letzel, S., Schablon, A., Nienhaus, A., Escobar Pinzon, L. C., & Dietz, P. (2021). The relationship between workload and burnout among nurses: The buffering role of personal, social and organisational resources. *PLoS One*, 16(1), Article e0245798.
- Doyle, L., Brady, A.-M., & Byrne, G. (2016). An overview of mixed methods research-revisited. *Journal of Research in Nursing*, 21(8), 623–635.
- EMCDDA. (2019). Drug-related deaths and mortality in Europe. <http://www.emcdda.europa.eu/publications/rapid-communications/drug-related-deaths-in-europe-2018>.
- Farrell, M., & Barry, J. (2010). *The introduction of the opioid treatment protocol*. Dublin: Health Service Executive.
- Foronda, C., MacWilliams, B., & McArthur, E. (2016). Interprofessional communication in healthcare: An integrative review. *Nurse Education in Practice*, 19, 36–40.
- Gagnon, M.-P., Attieh, R., Ghandour, E. K., Légaré, F., Ouimet, M., Estabrooks, C. A., & Grimshaw, J. (2014). A systematic review of instruments to assess organizational readiness for knowledge translation in health care [article]. *PLoS One*, 9(12), 1–32. <https://doi.org/10.1371/journal.pone.0114338>
- Graneheim, U. H., Lindgren, B.-M., & Lundman, B. (2017). Methodological challenges in qualitative content analysis: A discussion paper. *Nurse Education Today*, 56, 29–34.
- Guerrero, E., Ober, A. J., Howard, D. L., Khachikian, T., Kong, Y., van Deen, W. K., ... Menchine, M. (2020). Organizational factors associated with practitioners' support for treatment of opioid use disorder in the emergency department. *Addictive Behaviors*, 102, Article 106197. <https://doi.org/10.1016/j.addbeh.2019.106197>
- Havermans, B. M., Boot, C. R., Houtman, I. L., Brouwers, E. P., Anema, J. R., & Van Der Beek, A. J. (2017). The role of autonomy and social support in the relation between psychosocial safety climate and stress in health care workers. *BMC Public Health*, 17(1), 1–7.
- Healy, R., Goodwin, J., & Kelly, P. (2022). 'As for dignity and respect... me bollix': A human rights-based exploration of service user narratives in Irish methadone maintenance treatment. *International Journal of Drug Policy*, 110, Article 103901.
- Hertzog, M. A. (2008). Considerations in determining sample size for pilot studies. *Research in Nursing & Health*, 31(2), 180–191.
- Holdsworth, E., Bowen, E., Brown, S., & Howat, D. (2014). Client engagement in psychotherapeutic treatment and associations with client characteristics, therapist characteristics, and treatment factors. *Clinical Psychology Review*, 34(5), 428–450. <https://doi.org/10.1016/j.cpr.2014.06.004>
- Hollenbeck, J., & Spitzmuller, M. (2012). Team structure: Tight versus loose coupling in task-orientated groups. In, Vol. 2. *The Oxford handbook of organisational psychology*. Oxford University Press.
- Kelleher, C., Condron, I., & Lyons, S. (2022). 2015–2021 HRB bulletin, national drug treatment reporting system, drug treatment data. Dublin: Health Research Board.
- Kelly, P., Hegarty, J., Barry, J., Dyer, K. R., & Horgan, A. (2017). A systematic review of the relationship between staff perceptions of organizational readiness to change and the process of innovation adoption in substance misuse treatment programs. *Journal of Substance Abuse Treatment*, 80, 6–25.
- Kelly, P., Hegarty, J., Barry, J., Dyer, K. R., & Horgan, A. (2018). The relationship between staff perceptions of organisational readiness to change and client outcomes in substance misuse treatment programmes: A systematic review. *Journal of Substance Use*, 23(3), 223–239. <https://doi.org/10.1080/14659891.2017.1394385>
- Kelly, P., Hegarty, J., Dyer, K. R., & Donovan, A. O. (2023). An exploration of organizational characteristics and training adoption in Irish community drug treatment services. *Journal of Addictions Nursing*, 34(3), E84–E107.
- Kelly, P., Hegarty, J., R. D. K., & O Donovan, A. (2022). 'They don't actually join the dots': An exploration of organizational change in Irish opiate community treatment services. *Journal of Substance Abuse Treatment*, 135, Article 108557. <https://doi.org/10.1016/j.jsat.2021.108557>
- King, R., Taylor, B., Talpur, A., Jackson, C., Manley, K., Ashby, N., ... Senek, M. (2021). Factors that optimise the impact of continuing professional development in nursing: A rapid evidence review. *Nurse Education Today*, 98, Article 104652.
- Lai, P. S. M. (2013). Validating instruments of measure: Is it really necessary? *Malaysian Family Physician: The Official Journal of the Academy of Family Physicians of Malaysia*, 8(1), 2.
- Lehman, W. E., Becan, J. E., Joe, G. W., Knight, D. K., & Flynn, P. M. (2012). Resources and training in outpatient substance abuse treatment facilities. *Journal of Substance Abuse Treatment*, 42(2), 169–178. <https://doi.org/10.1016/j.jsat.2011.10.018> (Organizational Dynamics Within Substance Abuse Treatment).
- Lehman, W. E., Greener, J. M., & Simpson, D. D. (2002). Assessing organizational readiness for change. *Journal of Substance Abuse Treatment*, 22(4), 197–209. http://ac.els-cdn.com/S0740547202002337/1-s2.0-S0740547202002337-main.pdf?_tid=9f9a42c2-6051-11e5-8582-00000a0b0f27&acdnat=1442834119.16ccdfiff71747b80ed17dceb3b4fbf0
- Lewin, K. (1958). *Field theory in social science*. Harper and Row.
- Lincoln, Y. S., & Guba, E. G. (1985). *Naturalistic inquiry*. Sage Publications.
- Lundgren, L., Chassler, D., Amodeo, M., D'Ippolito, M., & Sullivan, L. (2012). Barriers to implementation of evidence-based addiction treatment: A national study. *Journal of Substance Abuse Treatment*, 42(3), 231–238. <https://doi.org/10.1016/j.jsat.2011.08.003>
- Madathil, R., Heck, N. C., & Schulderberg, D. (2014). Burnout in psychiatric nursing: Examining the interplay of autonomy, leadership style, and depressive symptoms. *Archives of Psychiatric Nursing*, 28(3), 160–166.
- Madhukar, V., & Sharma, S. (2017). Organisational climate: A conceptual perspective. *International Journal of Management, IT and Engineering*, 7(8), 276–293.
- Mayock, P., & Butler, S. (2021). Pathways to 'recovery' and social reintegration: The experiences of long-term clients of methadone maintenance treatment in an Irish drug treatment setting. *International Journal of Drug Policy*, 90, Article 103092.
- Orton, J. D., & Weick, K. E. (1990). Loosely coupled systems: A reconceptualization. *Academy of management. The Academy of Management Review*, 15(2), 203. <http://search.proquest.com/docview/210958966?accountid=14504>
- Polit, D. F., & Beck, C. T. (2013). *Essentials of nursing research: Appraising evidence for nursing practice*. Publisher: Lippincott Williams & Wilkins.
- Pron, A. L. (2013). Job satisfaction and perceived autonomy for nurse practitioners working in nurse-managed health centers. *Journal of the American Academy of Nurse Practitioners*, 25(4), 213–221.
- Ratna, H. (2019). The importance of effective communication in healthcare practice. *Harvard Public Health Review*, 23, 1–6.
- Sailer, K., Koutsolampros, P., & Pachilova, R. (2021). Differential perceptions of teamwork, focused work and perceived productivity as an effect of desk characteristics within a workplace layout. *PLoS One*, 16(4), Article e0250058.
- Sandelowski, M. (2000). Combining qualitative and quantitative sampling, data collection, and analysis techniques in mixed-method studies. *Research in Nursing & Health*, 23(3), 246–255.
- Silverman, D. (2013). *Doing qualitative research: A practical handbook*. SAGE Publications Limited.
- Simpson, D. (2009). Organizational readiness for stage-based dynamics of innovation implementation [article]. *Research on Social Work Practice*, 19(5), 541–551. <http://0-search.ebscohost.com.library.ucc.ie/login.aspx?direct=true&db=sih&AN=44046892&site=ehost-live>
- Sinclair, P. M., Kable, A., Levett-Jones, T., & Booth, D. (2016). The effectiveness of Internet-based e-learning on clinician behaviour and patient outcomes: A systematic review. *International Journal of Nursing Studies*, 57, 70–81.
- Skinner, N., & Roche, A. M. (2021). 'Very demanding. Extremely rewarding': Exploring the co-occurrence of burnout and engagement in alcohol and other drug workers. *Drug and Alcohol Review*, 1–9.
- Smart, C., Pollock, C., Aikman, L., & Willoughby, E. (2018). Power struggles in MDT meetings: Using different orders of interaction to understand the interplay of hierarchy, knowledge and accountability. In *Interprofessional care and mental health: A discursive exploration of team meeting practices*.
- Swavely, D., Romig, B., Weissinger, G., Holtz, H., Alderfer, M., Lynn, L., ... Rushton, C. H. (2022). The impact of traumatic stress, resilience, and threats to core values on nurses during a pandemic. *The Journal of Nursing Administration*, 52(10), 525.
- Van de Ven, K., Ritter, A., & Roche, A. (2020). Alcohol and other drug (AOD) staffing and their workplace: Examining the relationship between clinician and organisational

- workforce characteristics and treatment outcomes in the AOD field. *Drugs: Education, Prevention and Policy*, 27(1), 1–14.
- Van Dorssen-Boog, P., de Jong, J., Veld, M., & Van Vuuren, T. (2020). Self-leadership among healthcare workers: A mediator for the effects of job autonomy on work engagement and health. *Frontiers in Psychology*, 11.
- Ventura, M., Salanova, M., & Llorens, S. (2015). Professional self-efficacy as a predictor of burnout and engagement: The role of challenge and hindrance demands. *The Journal of Psychology*, 149(3), 277–302.
- Weiner, B. (2009). A theory of organisational readiness to change. *Implementation Science*, 4(67), 1–9.
- Woodward, K. F. (2020). *Individual nurse empowerment: A concept analysis*. Nursing forum.