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THE EFFECTIVENESS OF INPATIENT TREATMENT FOR SUBSTANCE USE DISORDER

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IMPACT OF THE PANDEMIC ON MENTAL HEALTH AND SUBSTANCE USE

Mental Health Concerns on the Rise

- Canadian adults experienced elevated rates of **anxiety, depression, and overall decreased levels of psychological functioning** since the beginning of the pandemic. (Dozios et al., 2021)
- In the US, 71% of college students had experienced **increased levels of stress** as a result of the COVID-19 pandemic. (Son et al., 2020)
- **Sleep patterns** are negatively affected by the COVID-19 pandemic (Giorgi et al., 2020), further exacerbating mental health issues.
- Importance of considering long-term and residual effects of the pandemic on mental health. Researchers recommend that clinicians aim to identify individuals that may be higher risk of experiencing **lasting adverse psychological effects**. (Moreno et al., 2020)

Exacerbating Substance Use Disorders

- Canadian adults more likely to turn to substances such as **alcohol and cannabis** to cope during the COVID-19 pandemic. (Dozios et al., 2021)
- The CDC cites a significant increase in the use of substances to cope with adverse mental health outcomes and an **increase in overdose deaths**. (Czeisler et al., 2020)
- Individuals with SUD are **more likely to contract COVID**. (Balaram et al., 2021)
- Individuals infected with COVID that have preexisting SUD have worse outcomes than those without preexisting SUD. Several studies suggest that SUD **increased risk of hospitalization, reliance on a ventilator, and mortality**. (Baillargeon et al., 2021; Wang et al., 2020; Dubey et al., 2020)

Effects of COVID-19 on Primary Care

- Increased demand for mental health support, particularly anxiety and depression. Reduction in visits for preventive care and chronic disease management. (Stephenson et al., 2021 and Donnelly et al., 2021)
- Increase in crisis, including suicide and overdose, related to substance use. Notable isolation, exhaustion, and fear. (Ashcroft et al., 2021)
- Transitioning to virtual care, understanding its benefits and limitations in certain situations and for certain patients. (Ashcroft et al., 2021)

VISION AND PURPOSE

How the Project was Implemented

- A network-wide outcomes measurement program
- Administered through our EMR, across all locations with program specific measures
- Outcomes monitoring across each stage of recovery (from inpatient admission to 1-year post treatment)
- EHN established as a leader in our field, regularly publishing research for public good

OQ45 Overview

Three subscales

A set of 45 questions that measure adult patient progress in therapy in 3 categories:

- Symptoms Distress
- Interpersonal Relationships
- Social Role

OQ45 Overview

Outcome Questionnaire (OQ®-45.2) **Name:**_____ **Date:**___/___/_____

Instructions:
Looking back over the last week, including today, help us understand how you have been feeling. Read each item carefully and fill the circle completely under the category which best describes your current situation. For this questionnaire, work is defined as employment, school, housework, volunteer work, and so forth.

	Never	Rarely	Sometimes	Frequently	Almost Always
1. I get along well with others	O	O	O	O	O
2. I tire quickly	O	O	O	O	O
3. I feel no interest in things	O	O	O	O	O
4. I feel stressed at work/school	O	O	O	O	O
5. I blame myself for things	O	O	O	O	O
6. I feel irritated	O	O	O	O	O
7. I feel unhappy in my marriage/significant relationship	O	O	O	O	O
8. I have thoughts of ending my life	O	O	O	O	O
9. I feel weak	O	O	O	O	O
10. I feel fearful	O	O	O	O	O
11. After heavy drinking, I need a drink the next morning to get going. (If you do not drink, mark "never")	O	O	O	O	O
12. I find my work/school satisfying	O	O	O	O	O
13. I am a happy person	O	O	O	O	O
14. I work/study too much	O	O	O	O	O
15. I feel worthless	O	O	O	O	O
16. I am concerned about family troubles	O	O	O	O	O
17. I have an unfulfilling sex life	O	O	O	O	O
18. I feel lonely	O	O	O	O	O
19. I have frequent arguments	O	O	O	O	O
20. I feel loved and wanted	O	O	O	O	O
21. I enjoy my spare time	O	O	O	O	O

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OQ45 Overview

Critical Items

- Examination of four critical items allows clinicians to screen for suicidal ideation, substance abuse, and anger and violence at work and school.

Issues	03/02/2021 03:55 PM
Total Score	
	70
Critical Items	
44. * I feel angry enough at work/school to do something I might regret	2
32. * I have trouble at work/school because of drinking or drug use (If not applicable, mark "never")	2
11. * After heavy drinking, I need a drink the next morning to get going. (If you do not drink, mark "never")	2
8. * I have thoughts of ending my life	2
	8

PCL-5: Overview

The PCL-5 is a 20-item self-report measure that assesses the 20 *DSM-5* symptoms of PTSD

PCL-5 is used for the following purposes:

- Monitoring symptom change during and after treatment
- Screening individuals for PTSD
- Making a provisional PTSD diagnosis

PCL-5

In the past month, how much were you bothered by:	Not at all	A little bit	Moderately	Quite a bit	Extremely
1. Repeated, disturbing, and unwanted memories of the stressful experience?	0	1	2	3	4
2. Repeated, disturbing dreams of the stressful experience?	0	1	2	3	4
3. Suddenly feeling or acting as if the stressful experience were actually happening again (as if you were actually back there reliving it)?	0	1	2	3	4
4. Feeling very upset when something reminded you of the stressful experience?	0	1	2	3	4
5. Having strong physical reactions when something reminded you of the stressful experience (for example, heart pounding, trouble breathing, sweating)?	0	1	2	3	4
6. Avoiding memories, thoughts, or feelings related to the stressful experience?	0	1	2	3	4

GAD-7: Overview

The GAD-7 is a self-administered patient questionnaire used as a screening tool and severity measure for generalized anxiety disorder (GAD)

- Score is calculated by assigning scores of 0, 1, 2, and 3, to the response categories of 'not at all', 'several days', 'more than half the days', and 'nearly every day', respectively, and adding together the scores for the seven questions

GAD-7

GAD-7 Anxiety

Over the last two weeks, how often have you been bothered by the following problems?	Not at all	Several days	More than half the days	Nearly every day
1. Feeling nervous, anxious, or on edge	0	1	2	3
2. Not being able to stop or control worrying	0	1	2	3
3. Worrying too much about different things	0	1	2	3
4. Trouble relaxing	0	1	2	3
5. Being so restless that it is hard to sit still	0	1	2	3
6. Becoming easily annoyed or irritable	0	1	2	3
7. Feeling afraid, as if something awful might happen	0	1	2	3

Column totals _____ + _____ + _____ + _____ =

Total score _____

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PHQ-9: Overview

The PHQ-9 is a self-administered patient questionnaire used as a screening tool and severity measure for symptom severity and treatment response over time

- Score is calculated by assigning scores of 0, 1, 2, and 3, to the response categories of 'not at all', 'several days', 'more than half the days', and 'nearly every day', respectively, and adding together the scores for the nine questions

PHQ-9

Over the last 2 weeks, how often have you been bothered by any of the following problems?	Not at all	Several days	More than half the days	Nearly every day
1. Little interest or pleasure in doing things	0	1	2	3
2. Feeling down, depressed, or hopeless	0	1	2	3
3. Trouble falling or staying asleep, or sleeping too much	0	1	2	3
4. Feeling tired or having little energy	0	1	2	3
5. Poor appetite or overeating	0	1	2	3
6. Feeling bad about yourself – or that you are a failure or have let yourself or your family down	0	1	2	3
7. Trouble concentrating on things, such as reading the newspaper or watching television	0	1	2	3
8. Moving or speaking so slowly that other people could have noticed? Or the opposite – being so fidgety or restless that you have been moving around a lot more than usual	0	1	2	3
9. Thoughts that you would be better off dead or of hurting yourself in some way	0	1	2	3

For office coding: Total Score _____ = _____ + _____ + _____

Total Score _____

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LDQ: Overview

The Leeds Dependence Questionnaire (LDQ) is a 10-item, self completion questionnaire designed to measure dependence upon a variety of substances

- All items are scored 0-1-2-3 giving a maximum of 30
- Reliable change is considered a change greater or equal to 4

LDQ

		Never	Sometimes	Often	Nearly Always
1.	Do you find yourself thinking about when you will next be able to have another drink or take more drugs?	0	1	2	3
2.	Is drinking or taking drugs more important than anything else you might do during the day?	0	1	2	3
3.	Do you feel that your need for drink or drugs is too strong to control?	0	1	2	3
4.	Do you plan your days around getting and taking drink or drugs?	0	1	2	3
5.	Do you drink or take drugs in a particular way to increase the effect it gives you?	0	1	2	3
6.	Do you drink or take drugs morning, afternoon, and evening?	0	1	2	3
7.	Do you feel you have to carry on drinking or taking drugs once you have started?	0	1	2	3
8.	Is getting an effect more important than the particular drink or drug that you take?	0	1	2	3
9.	Do you want to take more drink or drugs when the effects start to wear off?	0	1	2	3
10.	Do you find it difficult to cope with life without drink or drugs?	0	1	2	3

Inpatient Measurement Schedule - CORE

Residential:

- Conducted every 22-24 days, during individual appointments with PC
- Week 1, Week 3/4, Week 7

Aftercare:

- Conducted every 90 days, by support counsellors or by email

7 Residential: CORE	
Week 1:	OQ45, LDQ
Week 3/4:	OQ45, LDQ
Week 7:	OQ45, LDQ
Aftercare:	
Month 1:	OQ45, LDQ
Month 3:	OQ45, LDQ
Month 6:	OQ45, LDQ
Month 9:	OQ45, LDQ
Month 10 (Final Month):	OQ45, LDQ

THE EFFECTIVENESS OF TREATMENT FOR SUBSTANCE USE DISORDERS

Study of 708 patients at a private inpatient facility for addiction and mental health in British Columbia

(Snaychuk & Basedow, 2021b)

Study Background

1. There is a notable absence of studies demonstrating the **effectiveness of inpatient treatment programs for addiction**. Additionally, there is a lack of mental health considerations despite high rates of comorbidity in addicted populations.
2. Addiction is a prevalent issue that has a number of adverse consequences on both the individual and societal level (Carra et al., 2014; Mental Health Commission of Canada, 2015). In 2012, it was reported that **rates of substance use disorder were nearly twice the rate of mood disorders in Canada**, with substance use affecting approximately 21% of the Canadian population at some point in their lifetime (Pearson et al. 2013).
3. Individuals with concurrent addiction and mental health are more vulnerable compared to those without symptoms of a mental disorder. Specifically, they are **more likely to be hospitalized, relapse, commit suicide, experience financial difficulties, homelessness, incarceration, and legal issues** (Carra et al., 2014; Peters, et al., 2012; Peters et al., 2015).

Purpose of Study

- The purpose of this research is to address the **lack of literature** concerning **inpatient treatment outcomes** in Canada.
- Additionally, this research seeks to understand the nuanced effect that **gender** may have on the nature of addiction, associated psychological sequelae, and treatment outcomes.

Methods (1)

- Participant data was collected at the time of admission to and discharge from inpatient treatment.
- Duration of residential treatment is 50 days (+/-2 days) for each participant.
- Private facility provides intensive treatment for substance use disorders, concurrent mental health issues (including PTSD) and process addictions.

Methods (2) – Features of Treatment

- Patients have access to medical care 24/7 with two psychiatrists, one general practitioner and full-time nursing staff; they are able to detox onsite and each patient receives a complete medical exam and initial/ongoing psychiatric evaluations as part of their care.
- Treatment utilizes a bio-psycho-social and spiritual model using evidence based best practice modalities. These include cognitive behavioral therapy (CBT), dialectical behavioral therapy (DBT), motivational interviewing (MI), rational emotive behavior therapy (REBT), EMDR, accelerated resolution therapy (ART), and 12-Step facilitation, with heavy reliance on both individual and group therapeutic practices.
- Each patients' treatment is individualized with personalized care and discharge planning upon completion.
- Patients have access to 12-Step support groups, SMART recovery groups, and Dharma groups as part of their additional programming.
- Patients are treated holistically taking into account their nutrition management, access to personal trainers for physical health and rehabilitative family programming as part of the treatment process.

Methods (4)

Study 1 Measures (Pre-COVID)

- GAINSS (didn't use for publication purposes)
- DERS-18*
- GAD-7*
- PHQ-9*
- CEQ-S*

***Used in both studies so we have some combined data (N= 708)**

Study 2 Measures (During COVID)

- DERS-18*
- GAD-7*
- PHQ-9*
- CEQ-S*
- LEC
- PCL-C
- LDQ
- RC
- OPOC
- OQ-45

Results (1)

Greater levels of psychological dysfunction in patients admitted to treatment during COVID compared to pre-COVID (anxiety, depression, emotion regulation).

	Study 1 (n = 310)		Study 2 (n = 398)				
Variable	M	SD	M	SD	t	df	p
Anxiety	11.27	6.42	18.14	5.93	-14.50	688	.000
Depression	14.77	7.48	22.33	6.80	-13.83	686	.000
Emotion Dysregulation	30.90	14.83	51.72	15.14	-17.81	675	.000

Note: *N* = 708

Results (2)

Inpatient treatment resulted in significant reduction in addiction symptoms and improvements in psychological well-being in both study groups.

	Admission		Discharge				
Variable	M	SD	M	SD	t	df	p
Anxiety	15.18	7.02	8.46	5.39	25.57	472	.000
Depression	19.05	8.03	10.17	6.41	28.99	475	.000
Emotion Dysregulation	42.95	18.19	13.91	8.43	47.80	463	.000
Cravings	101.0	66.14	30.22	41.68	22.66	456	.000

Note: *N* = 708

Results (3)

Marked improvements in mental health and addiction symptoms from admission to discharge

- Patient's average levels of anxiety were significantly reduced when leaving treatment
- Patient's average levels of depression were significantly reduced when leaving treatment
- Patient's average levels of emotion dysregulation were significantly reduced when leaving treatment
- Patient's substance cravings were significantly reduced when leaving treatment

Results (4)

Effects of Gender

- Females came into treatment with higher levels of addiction and psychological dysfunction compared to males
- Females experienced greater reduction in addiction symptoms (LDQ) and greater improvements in emotion regulation (DERS) compared to males
- No differences in score changed by marital status
- No differences in score changes by employment status
- Prior trauma upon admission into treatment was actually associated with greater improvements in psychological functioning and decreases in addiction symptoms

DETERMINANTS OF SUCCESS IN RECOVERY

Recovery Capital

Human and Physical Factors

- Housing
- Employment
- Nutrition
- Education
- Personal Resources
- Mental, Spiritual, and Emotional Health
- Knowledge
- Coping
- Wellbeing
- Mindfulness
- Physical Fitness
- Financial Responsibility

Social and Cultural Factors

- Community attitudes and social supports
- Policymaker knowledge and policies and resources related to recovery
- Active efforts to reduce stigma
- Diverse recovery role models
- Accessible recovery supports, peer resources, and early intervention
- Beliefs, sense of personal choice, and social integration
- Connection to purpose
- Availability of multiple pathways to recovery

Recovery Capital and Outcomes

- Shift in focus from the pathology of addiction to a focus on the assets required to initiate and sustain long-term recovery. (White and Cloud, 2008)
- Studies show that a greater degree of recovery capital is associated with better outcomes in addicted populations. (Evans et al., 2014; Laudet et al., 2008; Sachez et al., 2020)
- The inpatient treatment outcomes study discussed today is also showing:
  - Significant negative relationship between recovery capital and all dimensions of psychological functioning and addiction.
  - Greater symptom reduction associated with an increase in recovery capital.

QUESTIONS?

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