DNP Capstone for a Scalable, Evidence Based Practice for Healing Stigma Using Photovoice, Personal Storytelling of a Nurse in Recovery

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Using Photovoice, Personal Storytelling of a Nurse in Recovery

Introduction

This paper describes a capstone project seeking to answer the thesis question: Can nurses attending an EBP workshop reduce their stigma towards nurses living with a substance use disorder (SUD) after viewing a video recording of their personal story by a nurse in recovery? As a PICOT: *When nurses in recovery living with an SUD (P) videotape their personal story (I) for participants pre-tested for their perceptions of stigma towards people using drugs (C), is it effective reducing their stigma (O) over the course of an anti-stigma training workshop (T)?*

Importance of the Problem

In 2011, the West Virginia Board of Nursing (WVBON) adopted an alternative discipline program, WV Restore (WVR), for an estimated 5,000 nurses living with SUD (WV Restore, 2022). Nurses living with SUD, even those in an alternative to discipline program, face stigma getting into treatment and sustaining recovery (Barry, McGinty, Pescosolido & Goldman, 2014). Stigma often projects SUD as a moral failure and prevents people from getting into treatment for their chronic disease (Landry, 2012). Stigma is an obstacle for patients needing treatment for SUD, or making it into long term recovery (90+ days), and contributes to relapse (Smiley & Reneau, 2020). SAMHSA (2012) describes recovery as "A process of change through which individuals improve their health and wellness, live a self-directed life, and strive to reach their full potential" (p.3).

Nurses with SUD providing direct patient care is a patient safety issue. Stigma and the threat of criminal punishment risks safe patient care when nurses living with SUD delay, often more than a year, getting into treatment (National Council of State Boards of Nursing (NCSBN), 2018). This delay in treatment puts patients at risk when cared for by nurses living with SUD without adequate treatment for their disease. Nurses, as the evidenced-based practice (EBP) intervention for managing chronic illnesses (American Nurses Association (ANA), 2012) by managing patients' risks and reducing harm, could be leading WV's opioid recovery. Alternative to discipline monitoring programs work with nurses in

recovery to provide safe patient care (Smiley & Reneau, 2020); but cannot prevent stigma from destroying the hope they can return to their family, job or community without shame or relapse or death by overdose.

Background & Significance

Stigma is a complex psycho-sociological phenomenon that carries a coercive power capable of altering the social standing of its targets (National Academies of Sciences, 2016). The term "stigma" was borrowed from the Greeks' use of a stigma (*στίγμα*) to visibly mark a person's body as a warning of their moral depravity (Ben-Zeev, Young, & Corrigan, 2010). It was first applied by Goffman (1963) to mental health issues describing a collection of dimensions and risks that are associated with a "spoiled identity". In the 1970's, the front page of a WV newspaper featured a picture of two nurses handcuffed to the flagpole in front of a Charleston hospital until the state police arrived to arrest them for diverting controlled substances from their patients (R. Blevins, personal communication, November 17, 2017). The population of nurses in the United States (US) living with SUD is estimated to be between 6-10% (NCSBN, 2018). The WVBON now describes the rate of SUD among WV nurses as closer to 15% (WV Restore, 2022). Stigma is a complex, multi-factorial process requiring systemic, legal and long-term therapeutic remedies (National Academies of Science, Engineering & Medicine (NAS), 2016). It is encouraging that the EBP sought by the PICOT for a scalable, workshop of video, personal stories for stigma reduction is beginning to emerge.

Impact of the Project

The possibility of healing stigma with a scalable, EBP workshop using video to share their personal stories could reduce stigma and increase the number of nurses in meaningful recovery (the 12th Step of recovery; Alcoholics Anonymous, 2001); then growing exponentially to serve an estimated population in WV of 5,000 nurses living with SUD (WV Restore, 2022). Nurses are the EBP intervention for management of chronic disease (American Nurses Association, 2012). SUD, generally, and addiction specifically, is a chronic brain disease (NAS, 2016). WV became ground zero for the opioid epidemic (Center for Disease Control and Prevention, 2018). WVR nurses would be the EBP choice for leading

WV's opioid recovery network; but this also requires a visionary business plan (see the Sustainability Plan section, page 17) to expand WVR's market penetration from 10% (M. Brown, personal communication, November 17, 2017) to reach the estimated 5,000+ nurses (15% of 33,500 WV RNs) needing help getting into recovery from alcohol, opioids and stimulant SUD (WV Restore, 2022). A few hundred WVR nurses leading WV's opioid recovery could be the critical mass needed to build safety nets in every community and bring hope for healing to WV families.

The impact of healing stigma of nurses with SUD would not only keep great nurses in the nursing pool, by expanding the number of employers who hire Restore nurses, but also by opening the door for the other nurses living with SUD (12th Step of recovery). Most importantly, it would increase patient safety by reducing the number of nurses practicing impaired and lowering the barriers to treatment and recovery (Choflet, Davidson, Kelly, Lee, Ye, Barnes, Zisook, 2021). Personal storytelling is an EBP intervention for reducing stigma (Landry, 2012; Lentinello, 2014; Roussy, Thomarcos, Rudd, Crockett, 2013; Russinova, Rogers, Gange, Bloch, Drake, Mueser, 2014). If a video of a nurse in recovery telling their personal story could reduce participants' perceptions of stigma over the course of an workshop for healing stigma, then a scalable intervention can be provided capable of reaching the target population of 15% of nurses in WV and 526,510+ (National Council of State Boards of Nursing, 2022; 10% of RNs) nurses in the US.

If WV nurses are to take the lead in WV's opioid recovery, an estimated 2,000-5,000 nurses will need to arise as peer support counselors (1:50-100 families). There are now approximately 1,600+ peer recovery coaches for the 267,000+ West Virginian's with SUD (1:167 families); only a handful are nurses (J. Unger, personal communication, October 12, 2020). WVR nurses have a lived experience in SUD recovery; but only one nurse from the first two graduating classes arose to serve in the 12th Step of meaningful recovery (Alcoholics Anonymous, 2001). Healing stigma could move nurses in recovery to the 15% tipping point needed for effective market penetration (Peterson, 2022).

A scalable, workshop for healing stigma can move the number of US nurses in meaningful recovery to a tipping point from which nurses in recovery can begin leading the healing of SUD in US

communities and provide EBP programs for the 120 million families in the nation needing healing, hope and recovery (NAS, 2016). WV employers face loosing 15% of their nursing staff who risk practicing impaired; healing stigma in their organization would retain nurses, usually after 6 months of rehabilitation, as WVR nurses and in long-term recovery. It is encouraging that quantitative evidence, sought by the PICOT on a scalable, EBP workshop of photovoice, personal stories for stigma reduction, is beginning to emerge (American Society of Addiction Nursing, 2022). WVR nurses, by connecting to a recovery community, can be the safety net for healing SUD, and continue practicing on their license in the profession they love.

Literature Review for Healing Stigma

Search Strategy for SUD Stigma

A search on November 4, 2022 of full text, peer reviewed literature in *CINAHL Complete* (*Medline, PubMed, Psychifo*) by EBSCO host for "substance use disorder AND stigma AND photovoice AND nurses" yielded no results. Refining the search for "substance use disorder AND stigma OR photovoice AND nurses AND recovery" yielded 41 results (see Appendix A); limiting then for peer reviewed, full text, research in English not limited by date, yielded 31 articles; then excluding articles on breastfeeding, perinatal care, parenting, adoption, acute mental health, integrative health, PTSD, somatoform disorder, and patient violence yielded 4 articles and one systematic review. Appendix A summarizes three quantitative, one qualitative study and the Cochrane database systematic review of randomized clinical trials (RCT).

Review of the Evidence for Reducing Stigma with Photovoice

Quantitative Systematic Review Level I, Population & Sample Size

The one Level I article is a systematic review of RCTs (Clement, et al., 2013) using mass media for stigma reduction (N=4490 of 22 RCT, 17 were studies of student populations) in the Cochrane database. Their combined populations were "very heterogeneous, statistically, in their

populations, interventions and outcomes" (Clement, et al., 2013; page 2) warranting two meta-analyses of two subgroups.

Reliability, Validity, and Data Collection.

Most of the studies included were either unclear or of high risk for bias except detection bias. Among the 22 studies were RCTs or interrupted time series studies of mass media interventions with mental health as a subject and five studies looked only at discrimination (treating people unfairly) and nineteen looked at prejudice (negative attitudes and emotions) as outcome measures.

Results and Discussion of Findings

The systematic review found mass media interventions may reduce prejudice (n=3176; confidence interval (CI) 95%) immediately (difference in median standardized mean difference (SMD) -0.38), from 1 week to 2 months (SMD -0.38), and 6 to 9 months (SMD -0.49); but has a mixed effect on discrimination measured as SMD (-0.25; n=394; CI 95% ranging from -0.85 to -0.17; n=1196; CI 95%) or as an odds ratio (1.19-1.30; CI 95%, range 0.53-3.19) towards people being stigmatized.

Recommendations and Implications from the Study

There may be an effect of mass media on decreasing prejudice towards mental health problems equivalent to the levels associated with schizophrenia and major depressions; but has a mixed effect on discrimination and may even increase its stigma. Mass media, especially newspapers, billboards, pamphlets, DVDs, television, radio, cinema, and the internet can reach large numbers of people without ever having face-to-face contact with people with mental health problems. Use of mass media can be expensive and it is still unknow which venue is most effective.

Quantitative Study Level II, Population & Sample Size

The Level II RCT (N=82, intervention n=40) of participants in a university based psychological rehabilitation program with a DSM-IV diagnosis of schizophrenia, bipolar or depressive disorder over 10 weeks, using peer-led 90 minute group sessions with photovoice methodology in 4 cohorts of from 2009-2011 (Russinova, Rogers, Gagne, Bloch, Drake, Mueser, 2014).

Reliability, Validity, and Data Collection.

An instrument was developed to assess intervention scores content (3.78) and process (3.64) fidelity on a 4-point scale ranging from low to high (4) fidelity. Six measures were used at baseline, post-intervention (92%) and 3 months post-intervention (95%) to determine the intervention's impact on participants' outcomes.

Results and Discussion of Findings

The RCT found a significant decrease in self-stigma (p=0.03; Effect size Cohen's d=0.55), stereotyping (p=0.05; d=0.55) and stigma resistance (p=0.01; d=0.67); and an increase in proactive coping (p=0.04; d=0.66), sense of community activism (p=0.02; d=0.68) and recovery (p=0.04; d=0.71). Results are limited in generalizability since participants were a fairly homogeneous convenience sample from a university (white 70%, bachelor's degree or higher 44%, never married 63%, and unemployed 84%). Data collected was all self-reported and may have benefited from other programs at the recovery center.

Recommendations and Implications from the Study

The photovoice program has promise as a peer-led intervention for reducing self-stigma and empowering people living with serious mental illnesses to "proactively confront public prejudice and discrimination" (Russinova, Rogers, Gagne, Bloch, Drake, Mueser, 2014; page 246). Naturally, the researchers suggest further testing with other clinical populations to

replicate and extend their finding.

Quantitative Study Level II protocol, Population & Sample Size

The most promising study exploring substance use and mental health stigma is a published protocol for a Level II, two year, mixed methods RCT being conducted in Toronto, Canada (Khenti, et al., 2017). Designed to test the effectiveness of a comprehensive intervention for primary care staff (est. N=490 staff +78 clients, 18 from each site), it is a multisite study involving, six community health centers (3 controls & 3 intervention sites) conducting four semi-structured interviews, over 2 years with an art program for stigma reduction.

Reliability, Validity, and Data Collection.

The recovery program used for the intervention is a contact-based education, mixed methods, action research process using a recovery-based art program, from which each intervention site is free to chose, lasting 10 weeks for 3 hours. Participants can choose not to participate in the 10 weeks program; pre-post data collection uses the Opening Minds Scale for Health Care Providers (OMS-HC); $r = 0.68$) surveys. Data for the four programs will have 18 months between cohorts. OMS-HC is a 20 item Canadian scale developed to measure stigma of health care providers towards people with mental illness (Kassam, Papish, Modgill, & Patten, 2012). Client experiences with stigma within the community health center (CHC) site providers will be measured by Perceived Devaluation-Discrimination Scale (internal consistency *alpha*=0.78) for people living with mental illness or addiction (Boyd, Otilingam, Deforge, 2014).

Results and Discussion of Findings

The project seeks evidence of the effectiveness of recovery-based, anti-stigma training to determine if clients report “less stigmatizing attitudes and behaviors by staff at their CHC” and determine “if staff have increased their knowledge of [mental health and substance use

problems] and if stigma has been reduced" (Khenti, et al., 2017, page 3).

Recommendations and Implications from the Study

This clinical trial has, thus far, only published qualitative studies (Murney, Sapag, Bobbili, Khenti, 2020).

Quantitative Study Level III RCT, Population & Sample Size

A Level III quantitative study of a convenience sample (N=27) with randomization of primary care providers (PCP) caring for patients with mental health or substance abuse problems were pre-post tested for their perceptions of stigma two weeks after the intervention group (*n*=14) attending 10 weeks of peer-led photovoice performances, storytelling and discussions (Flannagan, Buck, Gamble, Hunter, Sewell, Davidson, 2016).

Reliability, Validity, and Data Collection.

Fourteen PCPs were randomly assigned to attend 10 one-hour performances over three months and were pre-post tested with 5 surveys commonly used to measure Link, Phelan's and Corrigan's dimensions of stigma (Flannagan, et al., 2016). The control group was only tested once.

Results and Discussion of Findings

The intervention group had significantly lower scores on negative stereotypes (p=0.004), less perception of dangerousness (p=0.03), less fear toward people in recovery (p<0.001), more desire to help (p=0.02), less desire to coerce into treatment (p=0.02), less desire to socially isolate them (p=0.004), less desire to avoid them (p=0.005), and more hope for their recovery (p=0.002). The intervention found the personal testimony of a lived experience, multiple speakers and an "enthusiastic facilitator who models a person-centered approach… that help providers know what to say and do" demonstrated the competence of people living successfully with mental illness and increased positive attitudes of health care providers (Flannagan, et al.,

2016, page 568).

Recommendations and Implications from the Study

They concluded that storytelling and photovoice "reduced many aspects" of PCPs stigma and how difficult it was recruiting PCPs to participate. Some performances only had one provider present and best participation was from "a local federally qualified health center where a provider was on the board of the practice-based research network that funded the study" (Flannagan, et al., 2016, page 568). Thus, support at the institutional level ($100 for all participants, $50 for attending a performance) was essential; suggesting offering continuing medical credits as an alternative incentive and post-testing at a minimum of one month.

Qualitative Study of Photovoice, Population & Sample Size

Researchers surveyed participants (N=21) among a convenience sample who used photo/captions to communicate in seven workshops over 6 months of public exhibitions of their mental health narratives articulating an authentic voice of their lived experience and providing meaningful knowledge of mental health stigma in health care (Halvorsrud, et al., 2019).

Reliability, Validity, and Data Collection.

Participants were given disposable cameras and notebooks to take photos of "their realities of severe mental illness or its treatment" (Halvorsrud, et al., 2019, page 1). 2-3 weeks later participants gathered to select 3-5 photos for individual reflection with photo captions based on their notebook narratives for the 7 workshop/public exhibitions using *Post-it* notes to provide unstructured, anonymous feedback. Only 16 cameras were returned with photos and relied only on participants to "shape the process by representing their lived experiences and main priorities" and "concentrate on what mattered most to them" avoiding what researchers considered a fallacy of many research project who use "consultants merely to legitimate the researchers' findings"

(Halvorsrud, et al., 2019, page 2).

Results and Discussion of Findings

These researchers found storytelling and photovoice a useful experience and "well displayed to communicate their lived experience" (92%, responding "very strongly" or "strongly" on a 5 point Likert Scale). "Photovoice offered the opportunity to reflect on potential consequences and sources of illness or barriers to recovery" (Halvorsrud, et al., 2019, page 2). Researchers suggest four themes from the participant's responses: Creative and empowering method, Facilitating recovery, Communication and impact, Requests for further engagement.

Recommendations and Implications from the Study

This research suggests treatment options should include expressions of the values acquired by their lived experience working through stigma into treatment. Photovoice storytelling provided a valuable opportunity to share how participants living with severe mental health illnesses confront a seemingly "unalterable" illness; recommending PCP treatment options should value the skills sets they've "accumulated through lived experiences" (Halvorsrud, et al., 2019, page 2.). While the researchers acknowledge a potential for self-selection favored those participants living near the community center, "hosting workshops locally to participants was vital for increasing accessibility" (Halvorsrud, et al., 2019, page 3).

Strength of Evidence Using Photovoice to Impact Change

The single, systematic review in the Cochrane Database (Clement, et al., 2013) found some Level I evidence of the effect of media on reducing the prejudice and discrimination of stigma towards people with SUD. The only Level II evidence (Russinova, et al., 2014) found a benefit of photovoice for reducing stigma in a small, convenience sample from a university community lacking minority diversity. The results of a published, multi-site RCT protocol

(Khenti, et al., 2017; Lentinello, 2017) for a stigma reduction program have yet to be fully-published; having only generated a qualitative study of stigma and discrimination issues in primary care (Murney, Sapag, Bobbili, Khenti, 2020). Data about the number of nurses in meaningful recovery (12th Step of AA) after graduating from an alternative program, does not exist in the published literature; while higher rates of long-term recovery among nurses in alternative discipline programs has been studied (Smiley & Reneau, 2020). Appreciating stigma is a complex, multi-factorial process requiring systemic, legal and long-term therapeutic remedies (NAS, 2016), the EBP for healing stigma needs to move the mix of literature from tangential, proxy, exploratory qualitative studies to more focused mixed studies and RCT interventions. It is encouraging the use of videotaped personal stories for stigma reduction towards SUD in this project's PICOT for a scalable, EBP workshop of are beginning to emerge (Flanagan, Buck, Gamble, Hunter, Sewell, Davidson, 2016). Much of the literature on photovoice for reducing stigma focusses on mental health (Cabassa, Nicasio, Whitley, 2013; Fleming, Mahoney, Carlson, Engerbretson, 2009; Halvorsrud, et al., 2019; Han & Oliffe, 2016; Kohrt, et al., 2022; Jones & Wynn, 2020; Mizock, Russinova, Shani, 2014; Russinova, Mizock, Bloch, 2017), or HIV (Davtyan, Bartell, Lakon, 2020; LeMasters, Atkine, Oloonabadi, Munn, Eng, Lightfoot, 2021; Moletsane, de Lange, Mitchell, Stuart, Buthelezi, Taylor, 2007; Rhodes, Hergenrather, Wilkin, Jolly, 2008; Teti, Schulhoff, Koegler, Saffran, Bauerband, Schaffer, 2019).

Assumptions for Healing Stigma Using Photovoice, Personal Storytelling of Nurses in Recovery

For the purpose of this DNP project, the following assumptions are made:

1. Stigma is both a psychological state described as the shame and guilt, and includes social constructs that alienate or "others" people with a mental illness or SUD and results in the power to shun, alter, and deprive a person of their social standing (Pinto-Foltz & Logsdon, 2009). Although stigma has a

psychological dimension, the APA's DSM 5 (American Psychiatric Association, 2013) does not define or diagnose stigma; rather, the APA devotes considerable attention to the social cognition associated with stigma and mental health diagnoses; continuing another decade of efforts to make mental health a "disease like any other".

2. SUD is a complex, neurobiological, chronic disease that is assumed treatable (American Society of Addiction Nursing, 2022; NCSBN, 2011; WV Restore, 2022) and can progress into a state of remission called recovery (SAMHSA, 2012).

3. Personal storytelling is an EBP intervention (NAS, 2016; Russinova, Rogers, Gagne, Bloch, Drake, Mueser, 2014) for reducing stigma towards people living with stigma who share their lived experience in recovery.

4. Photovoice captures the personal story on video of nurses in recovery living with SUD. If personal storytelling demonstrates a reduction of stigma, the opportunity for a scalable workshop healing stigma is possible.

5. This project assumes the psychological states of stigma can be measured by reliable and valid psychometric tools (NAS, 2016). For the purpose of this project, the Drug Users Stigmatization Scale (DUSS; see Appendix B) is utilized for pre-post measuring the change in participant's attitudes toward nurses living with SUD since it measures stigma towards others; not their lived experience of stigma towards people living with SUD.

6. The nature of nursing working in direct, personal care of patient's psycho/social states makes double-blind, randomized clinical trials problematic. Researcher bias could be limited by having third parties conduct the participants' workshop. Reliable and valid psychometric instruments are used for measuring changes in participants' attitudes of stigma before and after viewing the videotaped, personal story of a nurse in recovery. Cross-contamination bias could be limited by physically separating the participants since three workshops were held to accommodate nurses' schedules.

Theory for a DNP Project Healing Stigma

Stigma is a complex psycho-sociological phenomenon that carries a coercive power capable of

altering the social standing of its targets. This project uses Sapolsky's (2018) neuro/biological roots of conflict being a "double edged sword" explaining both the deep psychology of stigma that "others" people living with SUD and the plasticity of the mind to reprogram stigma into "us" living together in recovery. Stigma begins within a social context that recognizes a person has broken social norms with a morally repugnant behavior. The complexity of SUD stigma as a multidimensional, psycho/social phenomenon with criminal penalties instead of a complex, chronic, neurobiological disease making it difficult to measure all the dimensions of patient outcomes. The consequences of stigma for health care providers are two-fold: for their patients living with SUD and for themselves. Stigma becomes a barrier to a therapeutic patient-caregiver relationship by "othering" the patient's morally repugnant disease. Caregivers who project stigma stand behind a wall making their patient invisible and inaccessible to their care; they see only their disease. Patients dealing with the self-stigma associated with a mental illness or from SUD may be inaccessible to caregivers entangled in public stigma and the patient's label avoidance. When the individual is both a nurse and a person living with SUD, the multidimensionality of stigma can present an intractable enigma of how to get help from providers who feel betrayed having to care for someone who has tarnished their friendship and profession.

Sapolsky's biology of conflict.

The human brain is wired to quickly recognize friend or foe; in fact, it is the speed of facial recognition within fractions of a second that is the basis for implicit bias tests (Sukhera, Wodzinski, Rehman, Gonzalez, 2019). The brain sorts racial recognition faster than gender (Marini, M., Waterman, P.D., Breedlove, E. *et al.* 2021). The neurobiology of addiction (Uhl, Koob, Cable, 2019) changes the neural networks of the brain from dopamine (pleasure seeking) to dynorphin (fight or flight) pathways in the cerebellum. Stigmatizing drug users as "others" compliments Sapolsky's (2018) biological roots of conflict theory that arose as an evolutionary survival mechanism. The social intelegence of the human brain (Goleman, 2006) not only seeks comfort in the safety of numbers but imprinting the brain's mirror neurons passes on cultural norms predisposing populations to an "Us and Them" recognition of others.

Sapolsky also recognizes that the brain's neuroplasticity allows "us and them" to be reprogramed through empathy. Sapolsky suggests the neuroplasticity of the brain, especially the amygdala, the emotional gatekeeper at the top of the brain stem, frees the body from crippling fear states in post-traumatic stress disorder by allowing empathy for "Them" to emerge in reconciliation and forgiveness and into the safety of "Us". "In other words, neuroplasticity is value-free, and new or newly strengthened synapses can be for better or worse" (Sapolsky, 2018, page 2). Healing stigma through personal storytelling connects people together with empathy. Many in recovery realize it is not abstinence alone that heals, but connecting with others (Pettersen, Landheim, Skeie, Biong, Brodahl, Oute, Davidson, 2019). Healing SUD rebuilds the dopamine pathways atrophied by active addiction, tapping the neuroplasticity of the brain and rebuilding the neural pathways that cuts into Sapolsky's biological conflict of "us and them" by connecting to recovery networks turning "others" into "us".

How Theory Informs the Project

Sapolsky's biological conflict theory of "us and them" informs how healing stigma allows treatment and harm reduction programs to move communities' negative attitudes towards SUD into working together building recovery networks. Since stigma is a complex, psycho-sociological phenomenon, quantitative measures of stigma measures psychological states of attitudes towards SUD. The dimensions of stigma incorporated into DUSS measure attitudes of other's drug use (see Appendix B). Communities addressing the push back against naloxone, needle exchange and recovery programs often begin by addressing stigma. Anti-stigma training programs have demonstrated the power to reduce stigma among health care providers after hearing person in recovery's story first-hand, up close and personal (Hungerford et al., 2014). Empathy seems to trigger the neuroplasticity of the brain by resolving Sapolsky's biological conflict theory and healing the stigma of "them" into the safety of "us" in community. DUSS (Palamar, Kiang, and Halkitis, 2011) measures the stigma of others; thus also giving a measure of Sapolsky's biology of conflict moving participant's perceptions of stigma into the safety of "us" in recovery.

Context of the Project and Demographics

The project's context seeks to answer the thesis question: Can nurses attending an EBP workshop reduce their stigma of nurses living with a substance use disorder (SUD) after viewing a videotaped, personal story by a nurse in recovery? The population for this clinical intervention are nurses serving in a rural, WV hospital.

Description of Participants in a Clinical Intervention Project

After IRB approval, participants were drawn as a convenience sample from the nursing pool of a small, rural hospital incentivized by offering continuing education credits for a one hour workshop. Participants were not randomized into an intervention or control groups; they served as their own control by pre- and post-testing with DUSS, a valid and reliable instrument measuring their attitudes towards people living with SUD (Palamar, Kiang, & Halkitis, 2011).

Ethical Considerations

As participants in a clinical intervention, the workshop met IRB procotols and secured their consent for testing human subjects. Participant's demographic data and psychometric testing avoided any personal identifiers by using only alpha-numeric coding on their pre-post test questionnaire. All data was kept on a password protected, personal computer and encrypting file contents. While participants could not be blinded to the nurse sharing their personal story of recovery, that nurse consented to IRB protocols for anonymity and the right to refuse sharing their photovoice video.

Project Intervention and Measures

Adaptation of an EBP, anti-stigma workshop (see Appendix C; Landry, 2012) with IRB approval used DUSS for measuring stigma pre-post workshop for participants who viewed a nurse in long-term recovery telling their personal story by videotape for the photovoice intervention during the workshop.

Program Measures.

After presenting three workshops in March, 2023, this researcher compared the participant's pre-test control measured by the DUSS self-assessment questionnaire to their post-intervention DUSS scores. Standard statistical analysis by SPSS of the means of the DUSS scores of two data sets (participant's control/baseline pre-test vs. post-test intervention) using the *Paired Samples T-Test*. ANOVA also tested

the statistical difference of the means of the control and intervention pre-post testing of participants.

Project Evaluation

DUSS is one of three tools the National Academies of Sciences (2016) lists for measuring stigma. Evaluation of participant's attitudes towards people living with SUD was done by pre-post testing by the DUSS (Appendix B) using their pre-test as the control case. Since the groups are their own control and intervention group, bias was controlled by using the same person sharing their videotaped personal story and participants in the workshop having similar experiences working in the same hospital.

Participants were homogeneous (see Appendix E) in gender (93.3% female), race (100% white), ethnicity (93.3% West Virginian) and RNs by license (86.7%). Most participants were age 46+ (53.3%), were nurses 16+ years (46.7%), and were employed at the hospital less than 11 years (66.7%).

The results (see Appendix F) of the paired samples test and ANOVA found the difference of means between the control and intervention groups DUSS pre-test (19) and post-test (16.7) was greater than 0 ($t = -4.078$) and significantly different (One-tail < 0.001). The data shows that a videotaped personal story reduces stigma over the course of a one hour workshop. Another statistically significant finding showed marijuana use carries less stigma (Appendix F; DUSSMarj sub-score =16.3) compared to powdered cocaine, ectasy, amphetamines, and opiates. A significant finding by ANOVA (Appendix F) is that marijuana stigma contributed a strong effect to both the DUSS Pre-test ($F=3.883$, significance 0.101) and combined Pre-Post test DUSS score ($F=5.693$, significance 0.001).

Sustainability Plan

The workshop was designed with a recorded video, photovoice intervention of a nurse in recovery's personal story and found a statiscally significant ($p < 0.001$; Appendix F) paired samples test reduction of stigma over the course of the workshop. Thus, the workshop could be scalable with minimal marginal costs beyond the workshop facilitator's time and travel or negligible costs if offered as an online in-service for nurse's annual clinical competencies. However, healing stigma towards nurses living with SUD, reducing the barriers getting into alternative discipline, treatment and recovery would require a coordinated commitment of nurses, health care administrators, state boards of nursing and state

legislators. Most alternative discipline programs only reach 2.5% of their nurses with SUD (K.Lockner, personal communication, November 20, 2017).

This author has calculated (see Appendix D) the cost of accommodating a flood of 5000+ nurses over 5 years, instead of the trickle of 50-100 Restore nurses every year, would require WV invest $3,692,000 in a 5 year, strategic planned expansion for WV Restore to reach their target population of 4,525 WV nurses living with SUD; at a marginal cost of $47/licensed nurse in WV, which could be self-funded by nurses acting upon the ethical standards of their profession (American Nurses Association, 2015). These costs pale in light of the risks to patients being cared for by nurses in active addiction and the benefits to WV patients, their families, and the nurses living with SUD and their hopes for meaningful recovery.

Implications for Practice

The study's nurses' stigma towards marijuana use was significantly less on the DUSS scale than use of powdered cocaine, ectasy, amphetamines and opiates. A videotaped, nurse in recovery's personal story may also be found statistically significant in reducing stigma, if the capstone workshop can either be replicated for more diverse populations, or when offered to larger populations as an online, in-service for annual competencies training. The value of the workshop can continue being tested with participants' pre-post DUSS questionnaires or compared to an in-person workshop and online, asynchronous participants. It is unknown if there will be a decay of effect over time or if repeated dosing/exposure changes outcomes. Ultimately, the value of reducing stigma towards nurses living with SUD is getting them into treatment, alternative discipline and recovery; so that patients are not at risk receiving care from a nurse practicing impaired. In WV, that is 1:7 nurses (15%; WV Restore, 2022).

Links to DNP Essentials

I. Scientific Underpinnings for Practice

Besides using a valid and reliable instrument (DUSS) for measuring stigma towards people living with SUD (Palamar, Kiang, Halkitis, 2011), the project workshop was an EBP intervention for healing a chronic neurobiological disease of SUD; designed in the spirit of the American Psychological Association

and SAMHSA's decades long campaign for making SUD and mental health a "disease like any other" (NAS, 2016).

II. Organizational and Systems Leadership for Quality Improvement and Systems Thinking

While this project did not engage the hospital's QI team by offering a workshop for healing stigma to all their staff nurses, the context of the project has the possibility for a scalable, EBP intervention redesigned as a scalable, asynchronous, online in-service training reaching the population of an estimated 15% of WV nurses living with SUD (WV Restore, 2022) at risk for practicing impaired.

III. Clinical Scholarship and Analytical Methods for Evidence-Based Practice

The project is based on an EBP intervention (Landry, 2012) for healing stigmatization of a chronic disease as a moral failing and subject to criminal prosecution in the case of diverting controlled substances from patients under the care of a nurse practicing impaired. The analytical methods for EBP includes both the systematic review of literature on SUD, nurses in recovery, use of photovoice for reducing stigma. The project's PICOT and EBP psychometric measures for the effectiveness of photovoice for reducing stigma are discussed in the sections above.

IV. Information Systems/Technology and Patient Care Technology for the Improvement and Transformation of Health Care

The project explored a scalable intervention for reducing stigma towards nurses living with SUD, appreciating the potential for utilizing IT for an online, asynchronous in-service for all nurses reaching the target population of nurses living with SUD practicing impaired who are putting their patient's care at risk. Moving nurses with SUD into alternative discipline programs serves not only to improve patient care, but also transforms them into the "safest" nurses in the hospital, now being drug tested every two weeks (WV Restore, 2022) and moving from treatment of their SUD into meaningful recovery (SAMHSA, 2012).

V. Health Care Policy for Advocacy in Health Care

Treating SUD as "a disease like any other" not only provides advocacy for nurses living with SUD, but also improves health care policy which often ignores a problem of nurses practicing impaired while keeping intact a pool of nurses capable of covering the staffing demands of a fluctuating patient census and acuity. Stigmatizing nurses with SUD increases the barriers for getting treatment and the risks to patients under their care. A health care system with a policy of not hiring nurses in recovery both ignores EBP and increases risks to patient safety if they are not randomly drug testing their staff, especially if their state board of nursing does not requiring annual drug testing for licensure renewal.

VI. Interprofessional Collaboration for Improving Patient and Population Health Outcomes

Because stigma is a complex, neurobiological, psycho/social chronic disease, its treatment and healing requires interprofessional collaboration. In fact, a cutting edge in primary care is a collaborative model involving a case manager (usually a nurse or social worker), a practitioner, and a behavioral health provider (Brandeis, 2020). This model has already shown to be effective at improving rates of long-term recovery for patients living with SUD and collateral improvement of their management of hypertension, diabetes, and mental health. Alternative discipline for nurses living with SUD is a EBP adopted by most states' boards of nursing and in 2011 by WVBON (WV Restore, 2022).

VII. Clinical Prevention and Population Health for Improving the Nation's Health

Given the effectiveness of nurses for managing chronic disease (Cleveland, Motter, Smith, 2019) and the critical need for nurses living with SUD to be leading the recovery of the nation's opioid epidemic, it is both essential and urgent to reduce stigma towards people living with SUD. Care for this population has been left in the hands of law enforcement who incarcerate 1:100 citizens; the highest incarceration rate of any country in the world, with 80% of prisoners and parolees having a mental health or SUD diagnosis (NAS, 2016).

VIII. Advanced Nursing Practice

Healing stigma towards nurses living with SUD is not only an essential EBP clinical and professional practice, but also an ethical responsibility for advanced practice nurses to address the health of populations. Without hope, there is no future.

Appendix A

Search Strategy

Date of Search (2022)	*Keyword Used*	*Database/Source Used (EPSCOhost, CINHAL, PubMed, PsychInfo)*	*# of Hits*		
			Listed	**Excluded***	**Used****
9/24	**Stigma**	**Cochrane Library (systematic reviews RCT)**	**11**	**10**	**1**
11/4	**substance/drug abuse/use/addiction AND stigma NOT photovoice and nurse(s,ing,'s)**	**CINHAL Complete**	**295**		
11/4	**substance/drug abuse/use/addiction AND stigma OR photovoice AND nurse(s,ing,'s)**	**EBSCOhost: *CINHAL, PubMed, PsychInfo***	**31**	**27**	**4**

* **exclusion criteria***: breastfeeding, perinatal care, parenting, adoption, acute mental health, integrative health, PTSD, somatoform disorder, patient violence*

** **inclusion criteria***: peer reviewed, full text, research in English not limited by data*

Review of Quantitative & Qualitative Studies

Author(s) Year	*Purpose/ Problem*	*Sample Size (Demographics)*	*Conceptual Framework*	*Concepts*	*Research Design*	*Title of Instrument*	*Pertinent Findings*	*Implications Conclusions*	*Comments: **LOE,** Limitations*
Clement, et al. (2013)	Assess effects of mass media interventions on reducing stigma effects (discrimination & prejudice) on people with mental health	N=4490 (17 of 22 studies among student populations)	Cochrane systematic review RCTs	Stigma, anti-stigma, discrimination, prejudice	Systematic review of RCTs, cluster RCTs, interrupted time series	Cochrane intervention review	Mass media interventions may reduce prejudice, mixed effect on discrimination	Anti-stigma campaigns using mass media can be expensive but can reach large populations without using face-to-face contact	Level I; quality of evidence about discrimination & prejudice is low; few studies in middle- & low-income countries
Flanagan, et al. (2016)	Photovoice intervention to reduce PCP stigma r/t mental health & addiction	N=22 PCPs (97% female; 88% white, 8% Asian, 8% black or Hispanic; 37% APRN, 19% MD, 29% PhD, DNP or PharmD)	Common humanity	Stigma, recovery, dignity, caring	Quantitative: 10 week peer-led photovoice performance, storytelling & discussion	Characteristics & Affective Reaction Scale, Social Distance Scale, Attribution Questionnaire, Recovery Knowledge Inventory, Competence Assessment Instrument	Storytelling & photovoice reduce mental health & SUD stigma, especially fear & avoidance in PCPs	Contact-based, personal testimony interventions are effective reducing stereotyping, negative emotions, coercion & segregation affects in PCPs	Level VI; convenience sample, majority from group funding study, pre-post test 2 weeks

Author(s) Year	*Purpose/ Problem*	*Sample Size (Demographics)*	*ConceptualFramework*	*Concepts*	*Research Design*	*Title of Instrument*	*Pertinent Findings*	*Implications Conclusions*	*Comments:* ***LOE,*** *Limitations*
Halvorsrud, et al. (2019)	Photovoice engagement with minority's lived experience of severe mental illness & treatment	N=21; London & Manchester, mean age 47, 52% female, 52% black, 23.5% schizophrenia, 23.5 bipolar (service users, care providers, philanthropists, journalists, public servants)	Lived experience	Stigma, discrimination, exclusion, authentic, co-creating	Qualitative: 7 workshops over 6 months, photovoice 3-5 personal images, self-captioned for public exhibitions	anonymous post-it note feedback with 5 point Likert scale onto photovoice exhibit	overwhelming agreement photo/captions communicated mental health narrative	Empowered, authentic voice of lived experience, treatment options should include values acquired by lived experience	Level VI; funding inadequate to subsidize all requests to participate; self-selection bias among attendees due to accessibility of community center
Khenti, et al. (2017)	Contact-based intervention reducing PCP stigma towards people with mental health and SUD	est. N=490 staff + 78 clients from 6 community health centers (3 control & 3 intervention); age, gender, race/ethnicity, country of birth, education	Recovery-focused art, structural stigma	Stigma, awareness, recovery, contact-based education, rapport /trust, knowledge translation	Mixed-methods; RCT with semi-structured interviews, 4 surveys over 2 years & art program	Opening Minds Scale for HC Providers, Mental Illness: Clinicians Attitudes Scale; Modified Bogardus Social Distance Scale; Internalized Mental Illness Scale, Recovery Assessment Scale-Revised; audio-recording of interviews professionally transcribed, for qualitative analysis by NVivoPro 11 for themes & patterns	Preliminary data (Lentinello, 2017) reported baseline results	1st Canadian cluster RCT testing effectiveness of standardized intervention for reducing mental health and SUD stigma among staff working at community health centers	Level VI; authors have not responded to requests for final published data
Russinova, et al. (2014)	Effectiveness of peer-run photovoice anti-stigma reducing self- & public stigma and promoting coping with severe mental illness	N=82, 40 intervention; 68% >40 y/o, 68% female, 70% white, 63% never married, 84% unemployed, 44% college degrees, 34% schizophrenia, 33% bipolar, 26% depression	Peer-led recovery	Stigma, severe mental illness, disenfranchised, photovoice, proactive coping, community activism, recovery	RCT, 10 week workbook, peer-led 90 min group sessions with photovoice methodology; 4 waves 2009-2011	Approaches to Coping with Stigma, Internalized Stigma of Mental Illness Scale, Center for Epidem. Studies Depression Scale, Empowerment Scale, Generalized Perceived Self-Efficacy Scale, Personal Growth and Recovery Scale	Significant decrease in self-stigma, stereotyping & stigma resistance; increase in proactive coping, sense of community activism & recovery	Peer-led photovoice intervention enhances public health efforts to reduce self-stigma and empower individuals with severe mental illness	Level II; testing needed in minority & diverse communities with mild/moderate or SUD diagnoses

Appendix B

Drug Use Stigmatization Scale (DUSS)

Please state your level of agreement with the following 7 statements.
Please check off one answer for each drug.

Using _____ is morally wrong	Strongly Disagree	Disagree	Neither	Agree	Strongly Agree
Marijuana	_____	_____	_____	_____	_____
Powder Cocaine	_____	_____	_____	_____	_____
Ecstasy	_____	_____	_____	_____	_____
Amphetamine (illegally)	_____	_____	_____	_____	_____
Opiates (illegally)	_____	_____	_____	_____	_____

_____ users should go to prison	Strongly Disagree	Disagree	Neither	Agree	Strongly Agree
Marijuana	_____	_____	_____	_____	_____
Powder Cocaine	_____	_____	_____	_____	_____
Ecstasy	_____	_____	_____	_____	_____
Amphetamine (illegally)	_____	_____	_____	_____	_____
Opiates (illegally)	_____	_____	_____	_____	_____

_____ users are weak-minded	Strongly Disagree	Disagree	Neither	Agree	Strongly Agree
Marijuana	_____	_____	_____	_____	_____
Powder Cocaine	_____	_____	_____	_____	_____
Ecstasy	_____	_____	_____	_____	_____
Amphetamine (illegally)	_____	_____	_____	_____	_____
Opiates (illegally)	_____	_____	_____	_____	_____

_____ users have no future	Strongly Disagree	Disagree	Neither	Agree	Strongly Agree
Marijuana	_____	_____	_____	_____	_____
Powder Cocaine	_____	_____	_____	_____	_____
Ecstasy	_____	_____	_____	_____	_____
Amphetamine (illegally)	_____	_____	_____	_____	_____
Opiates (illegally)	_____	_____	_____	_____	_____

Palamar, J. J. (2011). Drug Use Stigmatization Scale [Database record]. Retrieved from PsycTESTS. doi: 10.1037/t15119-000

Most _____ users are not well educated	Strongly Disagree	Disagree	Neither	Agree	Strongly Agree
Marijuana	_____	_____	_____	_____	_____
Powder Cocaine	_____	_____	_____	_____	_____
Ecstasy	_____	_____	_____	_____	_____
Amphetamine (illegally)	_____	_____	_____	_____	_____
Opiates (illegally)	_____	_____	_____	_____	_____

_____ users are dishonest	Strongly Disagree	Disagree	Neither	Agree	Strongly Agree
Marijuana	_____	_____	_____	_____	_____
Powder Cocaine	_____	_____	_____	_____	_____
Ecstasy	_____	_____	_____	_____	_____
Amphetamine (illegally)	_____	_____	_____	_____	_____
Opiates (illegally)	_____	_____	_____	_____	_____

_____ users make me angry	Strongly Disagree	Disagree	Neither	Agree	Strongly Agree
Marijuana	_____	_____	_____	_____	_____
Powder Cocaine	_____	_____	_____	_____	_____
Ecstasy	_____	_____	_____	_____	_____
Amphetamine (illegally)	_____	_____	_____	_____	_____
Opiates (illegally)	_____	_____	_____	_____	_____

Appendix C

Healing Workshop Outline

I. Welcome, IRB consents for pre-post testing

II. DUSS pre-test

III. Neurobiology of addiction, SUD

IV. Stigma towards nurses living with SUD

V. WV Restore & alternative discipline programs for nurses

VI. Photovoice, videotaped nurse in recovery's personal story

VII. DUSS post-test

VIII. Farewell, Completion of surveys for CEUs

(adapted from the *Anti-Stigma toolkit*, Landis, 2012)

Appendix D

Projected budget for 5 year strategic expansion of WV Restore

5 year expansion (*marginal cost from FY2019*)		$3,692,000
• 6 Regional Directors & Regl.Admin.Asst	x12	960,000
• WVR/NFSG*	x180	648,000
• Nurse Case Managers	x10	1,350,000
• Exec. Administrative Assistants (Yr.4&5)	x2	150,000
• Advertising & travel		584,000
Break-even point (WVR marginal licensing fee) (2026 WVR budget $1.5 million/35,000 nurses)		$47/nurse

* nurse facilitated support group

(course assignment NURS740, 7/2021)

Appendix E

Demographic Data (N=15)

ITEM	*category*	*percentage*
Age:	18-25	27.7%
	26-35	6.7
	36-45	13.3
	46-55	46.7
	56-65	6.7
	66+	0
Gender:	female	93.3
	male	6.7
Race:	white	100
Ethnicity	Appalachian	6.7
	West Virginian	93.3
License	LPN	13.3
	RN	86.7
Years in nursing	1-5	20.0
	6-10	13.3
	11-15	20.0
	16-20	20.0
	21-25	6.7
	26+	20.0
Years employed*	1-5	46.7
	6-10	20.0
	11-15	6.7
	16-20	6.7
	21-25	6.7
	26+	13.3

** at hosting facility*

Appendix F

DUSS Pre-test Table

DUSS item	*Marijuana score*	*Powdered cocaine score*	*Ecstasy score*	*Amphetamine score*	*Opiate score*	*DUSS item mean score*
Using ____ is morally wrong	3.3	4.3	4.3	4.3	4.3	4.1 SD 0.770
____ users should go to prison	2.4	3.3	3.2	3.3	3.3	3.1 SD 1.178
____ users are weak-minded	2.3	2.5	2.5	2.5	2.5	2.5 SD 1.087
____ users have no future	1.9	2.0	2.0	2.0	2.0	2.0 SD 0.947
Most ____ users are not well-educated	1.9	1.9	1.9	1.9	1.9	1.9 SD 0.968
____ users are dishonest	2.4	2.9	2.9	2.9	2.9	2.8 SD 0.926
____ users make me angry	2.2	2.7	2.7	2.7	2.7	2.6 SD 1.193
TOTAL	16.3 SD 5.716	-	-	-	-	***19.0 SD 5.304***

DUSS Post-test Table

DUSS item	*Marijuana score*	*Powdered cocaine score*	*Ecstasy score*	*Amphetamine score*	*Opiate score*	*DUSS item score*
Using ____ is morally wrong	2.9	3.7	3.7	3.7	3.7	3.6 SD 1.032
____ users should go to prison	2.1	2.9	2.9	2.9	2.9	2.7 SD 1.170
____ users are weak-minded	1.8	2.0	2.0	2.0	2.0	2.0 SD 0.947
____ users have no future	1.6	1.6	1.6	1.6	1.6	1.6 SD 0.633
Most ____ users are not well-educated	1.7	1.7	1.7	1.7	1.7	1.7 SD 0.817
____ users are dishonest	2.4	2.5	2.5	2.5	2.5	2.5 SD 1.051
____ users make me angry	2.1	2.5	2.5	2.5	2.5	2.4 SD 1.139
TOTAL	14.6 SD 4.937	-	-	-	-	***16.4 SD 4.806***

Appendix F (continued)

Paired t-test:

Paired Samples Statistics

		Mean	N	Std. Deviation	Std. Error Mean
Pair 1	DUSSpre	19.013	15	5.3042	1.3695
	DUSSpost	16.440	15	4.8055	1.2408

Paired Samples Correlations

				Significance	
		N	Correlation	One-Sided p	Two-Sided p
Pair 1	DUSSpre & DUSSpost	15	.862	<.001	<.001

Paired Samples Effect Sizes

				95% Confidence Interval	
			Standardizer[a]	Point Estimate	Lower	Upper
Pair 1	DUSSpre - DUSSpost	Cohen's d	2.7012	.953	.326	1.556
		Hedges' correction	2.8575	.901	.308	1.471

a. The denominator used in estimating the effect sizes.
Cohen's d uses the sample standard deviation of the mean difference.
Hedges' correction uses the sample standard deviation of the mean difference, plus a correction factor.

ANOVA Pre-test DUSS[marijuana]:DUSSscore

ANOVA

COMPUTE DUSSscore=(UsingMorallyWrong+UsersGoPrison+UsersWeakMinded+Users

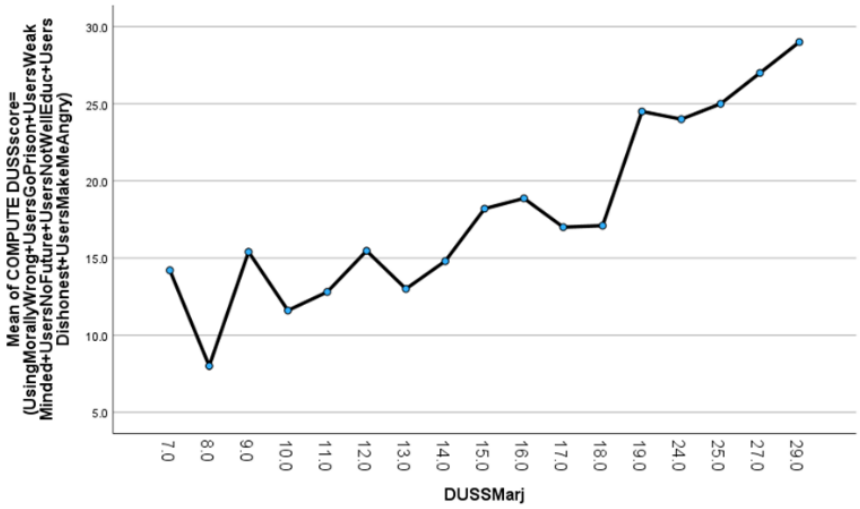
	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	360.144	11	32.740	3.882	.101
Within Groups	33.733	4	8.433		
Total	393.878	15			

DUSS[marijuana]:DUSSscore Pre/post-test

ANOVA

COMPUTE DUSSscore=(UsingMorallyWrong+UsersGoPrison+UsersWeakMinded+UsersNoFuture+UsersNotWellEd

			Sum of Squares	df	Mean Square	F	Sig.
Between Groups	(Combined)		671.065	16	41.942	5.693	.001
	Linear Term	Weighted	554.855	1	554.855	75.314	<.001
		Deviation	116.211	15	7.747	1.052	.468
Within Groups			95.773	13	7.367		
Total			766.839	29			



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