Bridging the Gap: Psychiatric Medication Education for Therapy Providers

Sarah J. Bortz

Edson College of Nursing and Health Innovation, Arizona State University

Author Note

Sarah J. Bortz is a graduate student in the Edson College of Nursing and Health Innovation at Arizona State University.

I have no known conflict of interest to disclose.

Correspondence concerning this article should be addressed to Sarah J. Bortz, Edson College of Nursing and Health Innovation, Arizona State University, 550 N. 3rd Street, Phoenix, AZ 85004

Email: smfusco@asu.edu

Abstract

Foster children have increased needs related to abuse or neglect they received and the removal from their home. This trauma often leads to disruption in mood and behavior, therefore requiring psychiatric medication. These children frequently move, and their care is disjointed, causing gaps in care, the potential for overmedication, and increased side effects. Those in foster care are four times more likely to be prescribed psychiatric medication compared to their peers (AHCCCS, 2016; Bertram & Mckarny, 2022). Those providing psychiatric counseling, including social workers, psychologists, and counselors, do not have psychiatric medication education despite being involved in their psychiatric care and having a more negative opinion about medications. To address this discrepancy, a presentation was created about psychiatric medications and presented to therapists at a non-profit outpatient organization. This project aimed to assess if educating those providing therapy would change their beliefs about medications. After obtaining informed consent, the Belief About Medine Questionnaire (BMQ) was administered pre- and post-in-person education to the six participants. Psychiatric medication discussed was specific to those in foster children, including antipsychotics, antidepressants, mood stabilizers, and medications for attention deficit hyperactivity disorder (ADHD). The two-tailed Wilcoxon signed rank test results indicated a trend and were not definitive, $p = .059$, noting the importance of future studies. By increasing medication education, those providing therapy will have a greater understanding, providing patient benefit. The hope is that the fractured care for those in foster care will be more connected.

Keywords: Foster children, psychiatric medication, psychotropics, education, social worker

Psychiatric Medication Education for Non-Medical Staff in a Therapeutic Setting

Mental health disorders are complex developed from both biological and developmental factors. Therefore, to successfully treat mental health disorders, one must have a strong understanding of both therapeutic techniques and common medications to treat these conditions. There is a significant need for psychotropic medication education for those who provide therapy to these patients, as this will increase providers' knowledge base and benefit their patients. Specifically, those who provide therapy for children in foster care will need in-depth medication education due to the complexity of foster children's traumatic history and compounding needs.

Problem Statement

There are over 200,000 children in the United States foster care system (Anne E. Casey Foundation, 2022). These children endure trauma through parental neglect or abuse, from the child's removal and the separation from friends and family (AHCCCS, 2016; Wu et al., 2018). Emotional and behavioral problems are common in those entering the foster care system. Children who have a history of sexual abuse trauma have an increased likelihood of requiring psychotropic medication (Munson et al., 2020). Compared to their peers, children in foster care are more likely to suffer from depression, anxiety, post-traumatic stress disorder (PTSD), and suicidal thoughts. Therefore, foster children are four times more likely to receive psychotropic medications than those not in foster care (AHCCCS, 2016; Bertram & Mckarny, 2022). Compounded by frequent moves and a poorly managed foster care system, foster children suffer from a lack of medical care and poor prescription management (Abel et al., 2019).

Poor prescription management includes the increase in prescribing inappropriate or excessive medications (Bertram & McKarny, 2022). Despite the high number of patients on psychotropic medications, those involved in their care are not always prepared or educated about

their medication. Specifically of concern is the long-term effects of medications on adolescents' physical and emotional development (Hughes et al., 2020). While medical providers prescribe psychotropic medications to treat patients, therapists, social workers, and psychologists often do not have formal training on psychotropic medications. Research indicates that training in psychotropic medication would benefit those who provide therapy because they can advocate, prepare patients for conversations with providers, and help teach patients (Aston et al., 2021).

Purpose and Rationale

Mental health conditions impair physical health by reducing the ability to care for oneself. Treating a patient's mental health condition will improve functionality with engagement with medical providers and treatment, leading to an enhanced quality of life. Developing coping skills can help patients build resiliency to adverse situations, helping them manage all aspects of their lives (Nibras et al., 2022), which is consistent with a Healthy People 2030 objective to increase the proportion of children and adolescents with trauma receiving treatment (Office of Disease Prevention and Health Promotion [ODPHP], n.d.). Treatment for those with psychiatric conditions is often therapeutic and medication-based. Therapy training is part of a medical provider's education; medication education is not part of a therapist's education (K. Tabet, personal communication, January 12, 2023). In one study, less than half of the social worker curriculum had medication education about psychotropics (Hughes et al., 2017). Therapists must have a strong understanding of common psychotropic medications, including side effects and when there is something wrong. Therapists may see patients longer than their psychiatric providers; therefore, education and awareness of medications are beneficial, specifically when a patient is experiencing negative symptoms or adverse side effects (Marvasti

et al., 2018). Children and adolescents, especially those suffering adverse childhood events, need monitoring and advocacy (Davis et al., 2021).

Background and Significance

Social workers, psychologists, and counselors providing therapy have unique perspectives and relationships with their patients. Therapists can help patients with their psychiatric medications by talking to them about their medications, discussing their feelings about them, monitoring medication compliance and side effects, and preparing patients to meet with the provider to discuss their medications (Hughes et al., 2017).

Therapists

The population of interest are therapists- primarily social workers at an Arizona non-profit organization that provides trauma care for children and adolescents to those in the state of Arizona Department of Child Safety (DCS). The therapists at this organization are fourteen female providers who provide trauma therapy, equine therapy, and therapy specific to those who were human trafficked. These therapists provide psychotherapy for children and adolescents who have suffered from adverse childhood events. They do not provide medications. The goal is to enhance the patient's well-being, help them work through their trauma, and increase their quality of life. These therapists work independently from the patients' psychiatric prescriber and report very little to any communication between them (K. Tabet, personal communication, January 12, 2023).

Medication Education

There can be multiple ways to provide medication to non-medical staff. In a study by Bertram and McKanry (2022), the authors provided two different employee medication training for those caring for foster children. Direct care staff received a two-hour face-to-face training

while leadership completed a three-month online curriculum. They used the ABC Medication Scale scores that measured staff knowledge, attitudes, and behaviors associated with medications used to treat mental health symptoms. There was a significant positive score change following training (Betram & McKarney, 2022).

Though the aim of the study by Prochnow et al. (2021) was medication education to patients and caregivers rather than an intervention based on teaching therapists, some techniques can be applied. Nurses implemented a teach-back medication education program for patients and their caregivers. After the patients and caregivers received the education, they reported an increased understanding of the education and increased satisfaction with their experience.

No Education

The lack of formal medication education furthers the divide between licensed prescribers and therapists. Hughes et al. (2017) shared the common belief that social workers attribute psychiatric conditions to psycho-social factors and assume that prescribers think psychiatric illness is caused biologically and treated with medication. This belief is overgeneralized and invalid for mental health providers or their curriculum (Sadock et al., 2015). With a lack of education, therapists do not understand the patients' medications and are uncomfortable talking about them (Aston et al., 2021; Hughes et al., 2017; Marvasti et al., 2018).

The Ideal Outcome

Many of Healthy People 2030's objectives concern the care of children and adolescents, increasing access to care, and reducing suicidality among those with trauma and mental health conditions (ODPHP, n.d.). This initiative to educate therapists will help reach that objective. The ideal outcome is that therapists have educational training that increases their understanding of common psychiatric medications. Expanding their knowledge will help the child or adolescent

they treat, improving their care. Therapists can be another advocate and educator to reinforce patient understanding and monitor for side effects and polypharmacy (Marvasti et al., 2018). Therapists have a close relationship with their patients and are trusted individuals, and decreasing the knowledge gap about medications will only benefit their patients.

Common Themes

Common themes in the literature include the increased prescribing of psychotropic medication to children in foster care—the importance of therapists in foster care and with mental health needs. Lastly, the common theme in the literature is the need for therapists to have an education on psychiatric medications, as there are multiple benefits for both the therapists and the patient.

Internal Data

The organization is a non-profit outpatient therapy center located in Glendale, Arizona. The organization comprises social workers and therapists serving Arizona's children and families. Their mission is to care for Arizona's children through unique and creative programs, serving at-risk youth, many of whom are in the foster care system. Besides one-to-one therapy, the organization provides trauma-informed care, equine therapy, and therapy specific to trafficking survivors. The staff consists primarily of social workers and other therapists.

During a meeting with stakeholders, they shared that medication education was not part of their formal education and felt a knowledge gap was missing. The stakeholders shared that almost all of their patients were on medications and said the common medications were antidepressants, antipsychotics, mood stabilizers, and medication for attention deficit hyperactivity disorder (ADHD). The benefits of medication education would be that the staff would be more confident and able to reinforce medication education to their patients, including

side effects and how long medications would take to be effective. Medication education is essential for patients to comply with their medication, and the organization's stakeholders identified that the patient and their families are not getting complete medication education.

PICOT Question

A review of the literature and the interviews with the stakeholders led to the clinically relevant PICOT question: In healthcare professionals at a non-profit organization treating foster children (P) how does comprehensive medication education (I) compared to no education (C) affect medication knowledge and comfort (O)?

Search Strategy

To find more information about the subject, an exhaustive electronic search of multiple nursing and mental health research databases to understand the depth of need for this topic. Specific data archives examined included APA Psych Net, PsycINFO, PubMed, and Cumulative Index of Nursing and Allied Health Literature (CINAHL). The wide range of databases allowed various articles to populate and address the difficulties in finding articles that would apply to the problem.

Keyword Selection

There were multiple keywords in a variety of combinations. The keywords included *therapist, psychologist, social worker, counselor, medications, psychotropics, psychiatric medications, knowledge, understanding, children, foster (children/youth/adolescence), and randomized control trial.*

Initial and Final Search Yields

The initial search of APA PsycNet using the terms *understanding, psychologist, and medication* yielded only eight results. The maximum number of results received within a search

was 200 articles when using different combinations of keywords. When using other databases, results varied. For CINAHL, the searches found between 6-160 articles. The final search results included terms such as *therapist, social worker, and psychologist* combined with a variance of *foster children and psychiatric medications*. The results were eight; therefore, the search expanded to include general terms such as foster care and mental health—abstracts reviewed for applicability. Grey literature was found on the ACCHSS website, the Anne E. Casey Foundation, and the Office of Disease Prevention and Promotion.

Limitations, Inclusion, and Exclusion Criteria

Studies included different perspectives on the relationship of psychotropic medications within the foster care system. Studies looked at the prescribing practices of psychiatric providers, the views of clinicians who provide therapy, and those who receive psychiatric medications. The search criteria were peer-reviewed articles within the last five years, were in English, and had full text available. To meet the inclusion criteria, the studies must have a higher level of evidence, being primary studies. The abstracts were read, followed by the full articles for applicability, appropriateness, and level of evidence. Ten studies were kept for an extensive review. These included four qualitative and six quantitative studies. Of these quantitative studies, two were mixed-method and randomized control studies, one was a mixed-method quasi-experimental study, one was a quasi-experimental natural study, and the last two were retrospective reviews. It was not easy to find relevant articles; therefore, one article was kept that was more than five years old was from Murphy et al. (2015).

Critical Appraisal and Synthesis of Evidence

Ten studies have been chosen for this literature review, using a rapid critical appraisal (RCA) for data analysis (Melnyk et al., 2019). Finding human perspectives on psychotropic

medication within the foster care system was essential, as they provided an in-depth view of personal feelings and experiences. Therefore, seven of ten articles had a qualitative interview as part of their research. Those participating in qualitative interviews had a smaller number of participants compared to the quantitative studies. The sample size ranged from as small as 11 to as large as 109 participants.

In comparison, the two retrospective reviews had thousands of participants. Common themes include over-prescribing medications compared to those not in the foster system. Many articles found that attitudes concerning medications are a prominent theme and that despite clinician involvement in medications, there was minimal formal medication training and a knowledge gap. (Bertram & Mckarney, 2020; Hughes et al., 2019). Valuable survey tools were noted that discussed knowledge, medications, and personal beliefs. The most common themes were education, teaching, and beliefs about medication (see Appendix A, Table 3). All authors suggest that this subject needs to be studied further, as there is a need. The researchers voiced little to no bias or expressed awareness of possible bias. Limitations included a smaller sample size, but a smaller sample size is appropriate to the transient nature of foster care and those working with foster children.

Discussion

What is known is that the disproportionately high use of psychotropic medications in foster care or among those facing trauma is a concern. The need for education on trauma and how it affects those children is a universal theme in literature. The knowledge gap in medication education of those who provide therapy represents the organization's request for the project, which will apply and mirror the internal evidence. The literature suggests that knowledge needs to be addressed and the attitudes of those in non-medical positions who care for these children.

Theoretical Framework Application

The theoretical framework of this project was guided by Imogene King's Theory of Goal Attainment (See appendix B, Figure 1). This theory is based on the interactions of two or more people meeting a specific goal within a specific amount of time (Ali et al., 2017). Per King (1981), the goal of attainment is based on the belief that the patient and their interaction with the environment are how health is defined. This theory has three main components: the individual(s), the interpersonal system, and a more extensive social system. King's theory for this project works exceptionally well because the need for education and lack of knowledge is based on the assumptions of the individual (or the first subsystem). The two systems (the nurse and the other) interact by challenging personal beliefs and judgments to create this common goal. These interpersonal interactions will be bridged between the one providing care or education and those receiving care. There is a realization that through the more extensive system of community, there is a breakdown between those foster children, those providing therapy for foster children, and those prescribing medications. Simplified, King's Theory of Goal Attainment can also discuss the relationship between the facilitator and the participants in the organization meeting to learn about psychiatric medication.

Implementation Framework

The Rosswum and Larrabee Model for Change is an evidence-based practice (EBP) model that is appropriate for implementing this change within the organization (see Appendix B, Figure 2) (Rosswurm & Larrabee, 1999). EBP models are a combination of clinical expertise and valid and reliable research. The Rosswurm and Larrabee model is a six-step change model created by two registered nurses, Mary Ann Rosswurm and June H. Larrabee. The authors created this Model while mentoring other nurses in EBP and, therefore, validated this tool's

usefulness. The six steps include assess, link, synthesize, design, implement, and evaluate. During the assessment step, the need for change was identified. The stakeholders at the organization identified that there was a lack of information and expressed the desire for education on psychotropic medications. The second step, link- acknowledges the possible outcomes. The third step is synthesizing all research, reviews, and analyses to discover best practices. The fourth step is design, in which change is defined, resources are identified, and an expected outcome is desired. The last two steps are implementing the change and evaluating the intervention's success. By following Roswurm and Larrabee's implementation framework, the proposed change in the organization was easy to follow and evaluate.

Methods

The methods section of this paper discusses the process of planning the intervention through the implementation of the project and the data collection. The method section is the intervention's core and sets the stage for the following results and discussion. This section also discusses Ethical Considerations and the process of receiving approval from Arizona State University Internal Review Board.

Ethical Considerations

Three ethical principles guided this project: respect for person(s), beneficence, and justice. Respect for persons is the understanding that the person is an individual and has the right to self-determination and that the person who has diminished capacity is still protected (National Commission for the Protection of Human Subjects of Biomedical and Behavioral Research, 1979). The project adhered to this principle by letting each person participate with informed consent and of their own free will (National Commission for the Protection of Human Subjects of (Biomedical and Behavioral Research, 1979). Informed consent was obtained by

explaining what the project was, the purpose of the project, and the right to refuse to engage in the project at any time. Every participant was treated respectfully, and the BMQ-G was done anonymously, each receiving an assigned number.

Beneficence is the ethical principle to not only not do harm but to do good (National Commission for the Protection of Human Subjects of Biomedical and Behavioral Research, 1979). The project adhered to this principle by educating and providing tools to help them provide better care to their patients. The organization provides care for genuinely underserved people, often with minimal advocacy. This project helps the therapists serve them provide more support and a holistic understanding for their clients. Justice is the final principle and means fairness for all (National Commission for the Protection of Human Subjects of Biomedical and Behavioral Research, 1979). The project adhered to this principle by being fair to all participating. No group was favored over another, and all education provided was shared equally and without discrimination. The methodology was reviewed by the project's faculty mentors and the internal review board (IRB) at Arizona State University. IRB approval was obtained in September 2023.

Setting

The organization is a non-profit agency located in Glendale, Arizona. The organization is primarily comprised of social workers and licensed therapists who serve Arizona's children and families. Their mission is to care for Arizona's children through unique and creative programs. Many of these at-risk youth are in the foster care system. Besides one-to-one therapy, the organization provides trauma-informed care, equine therapy, and therapy specific to trafficking survivors.

During a meeting with stakeholders, they shared that medication education was not part of their formal education and felt a knowledge gap was missing. The stakeholders shared that most of the patients were on multiple psychiatric medications. It was reported that common medications were antidepressants, antipsychotics, mood stabilizers, and medication for attention deficit hyperactivity disorder (ADHD). The benefits of medication education include staff confidence, the ability to reinforce medication education to their patients, and the side effects and how long medications would take to be effective. Medication education is essential for patients to comply with their medication, and the organization's stakeholders identified that the patient and their families are not getting complete medication education.

Stakeholders

Several stakeholders' involvement was essential to the completion of this product. These stakeholders are found at Arizona State University (ASU) and within the organization where the project was completed. As described below, each stakeholder contributed to the project with their participation.

MM is a licensed professional counselor (LPC) and the director of clinical services at the organization. MM was the primary site champion. She was not only receptive to having an ASU doctoral student provide a project at the organization, but she was the one who recognized the need for the project and requested it specifically. She is passionate about the work at the organization, those in foster care that they provide care to, and those who work for her.

KT is a licensed clinical social worker (LCSW). She was the initial contact with the organization and is very helpful in connecting the ASU facilitator and MM. She was the second project site champion and participated in the initial presentation with the facilitator.

AG is a psychiatric mental health nurse practitioner (PMHNP) and professor at ASU. She was the facilitator's mentor and provided both guidance and advice. She supplied the initial connection between the facilitator and KT. AG was both a supporter of the facilitator and a resource.

Participants and Recruitment

Those participating in the project were all current employees that provide therapy at the organization to those in foster care. Employment and providing therapy as a profession is the only inclusion criterion, and the expectation was that 11 people, including licensed counselors and social workers, would attend the project. On the day of the intervention, the facilitator met with the individuals participating in the presentation and the questionnaire. During the consenting process, it was explained clearly that participation in the questionnaire or the presentation was voluntary, and participants did not have to complete any questionnaires if they were not comfortable doing so.

Planning the Intervention

The evaluation question used for the intervention was, "Did the intervention increase the understanding of psychiatric medications?" The Belief about Medicine Questionnaire- General (BMQ-G) was administered before and after the intervention to assess the participants' personal views. The proposed intervention was a 30-minute presentation of psychiatric medication education within the following subtypes: stimulants and non-stimulants for attention deficit hyperactivity disorder (ADHD), antidepressants, antipsychotics, and mood stabilizers. The onset of action, typical side effects, and need-to-know knowledge such as avoiding non-steroidal anti-inflammatory drugs (NSAIDs) with lithium, or that selective serotonin reuptake inhibitors (SSRIs) have a black box warning for increased risk of suicidal thoughts and behaviors for

children and teenagers. Evidence shows that those in foster care are over-prescribed medications, and medication education is lacking for those who provide therapy to these foster children.

Increased knowledge about psychotropic medications benefits the organization and the children receiving services. It was hoped, that this education may help increase staff confidence and help them recognize and understand common side effects and know how long it may take for a potential medication to be effective. This understanding could help the therapist provide support for their patients who are on psychotropic medications. The therapist would have the tools to understand, support, and advocate for these patients. The intervention was planned in phases using Rosswurm and Larrabee's change model.

Phase 1

The author's first step was to contact the stakeholders within the organization. The mentor, AG, established the initial connection to social worker KT via email, including the author. KT introduced the author to MM via email and set a time for the author to brainstorm ideas and assess the organization's needs. At this time, it was identified by the organization the high frequency of their patients on psychotropic medications, and it was requested at that time for the author to present a psychiatric medication education for that staff. During this phase, the background and significance of the problem were researched, and supporting evidence verified the need for this project. The Belief about Medicine Questionnaire (Horne et al. 1999) was discovered through research as a validated and reliable tool appropriate for the project, and permission was obtained from the authors.

Phase 2

The PowerPoint was finalized for the presentation, and a specific timeline for intervention was decided. The PowerPoint presentation was also offered in voice-over at the

organization's request for future use. During the second phase, the author collaborated with her mentor, and created a project proposal to be submitted to the Arizona State University IRB.

Phase 3

During the implementation period, the author arrived at the organization prepared to present the requested education. This date was determined by staff availability and at the request of MM. The author provided lunch to the participants and about 15 minutes for the staff to fill out demographic information, followed by the BMQ-G pretest. A 30-minute presentation or lunch and learn, followed by a 30-minute opportunity for the staff to ask questions and clarify the education provided. The BMQ-G posttest was provided to the staff and was finished by the staff post-presentation.

Phase 4

During the final phase, the facilitator collected the demographic, pre and post-survey data immediately after the presentation to prevent loss of attrition. The facilitator received anecdotal feedback that the participants felt that they "learned a lot, and the presentation was helpful". Analyzation of the data through descriptive statistics and the Two-Tailed Wilcoxon Signed Rank Test was then completed.

Data Collection/ Instrument

To educate those with a therapeutic background about psychiatric medications, one must first assess any beliefs or knowledge about those medications. Searching for a tool or a questionnaire that addressed medication beliefs or attitudes proved challenging to find and apply to this project. However, the Beliefs About Medication Questionnaire (BMQ) developed by Horne et al. (1999) to understand the patient's beliefs about medications. There are two significant parts: Belief About Medication-Specific (BMQ-S), which addresses one's individual

view of medications they take, and Belief About Medications-General (BMQ-G), which explores the individuals' overall beliefs about medications. Horne et al. (1999) attempted to understand why an intervention, such as medication that can help patients, is often not used as prescribed. The authors addressed specific themes, including the perceived need for medication, concerns about medications, the harm of medication, and the overuse in prescribing medications using a Likert scale with five options ranging from strongly agree to disagree strongly. Beck et al. (2012) noted that there is a correlation between individual medication adherence and beliefs about medication within the schizophrenic population, in that study they found the BMQ valid and reliable.

De la Cuevas et al. (2011) adapted the BMQ to psychiatric medications and applied the questionnaire to those in a community outpatient setting. The questions were changed to address psychiatric medications, changing from "Doctors place too much trust in medicines" to "Psychiatrist place too much trust in medicines". The BMQ-G questionnaire was applied to medical and psychology students to examine their beliefs about psychiatric medications. De la Cuevas et al. (2011) found that the questionnaire was adaptable to psychiatric medication and proved valid. Furthermore, it was noted that in this study, psychology students considered psychotropic medications more harmful and more overprescribed than their medical student counterparts. It possibly mirrored the attitudes of those at the project site.

Data Analysis

The data received from the BMQ-G was analyzed using descriptive statistics. The ordinal data received from the Likert Scale was processed using the Two-tailed Wilcoxon signed rank test. This test differed from the original data analysis of the author Horne et al. (1999), an independent T-test. The small sample size and the absence of a null hypothesis can explain the

differences between the testing methods. Data was entered and verified on two different days to correct any mistakes or incongruence.

Budget and Funding Received

The budget was minimal for the project. The pack of pens bought at Walgreens was $2.99, and the meals for those in person were approximately $82.00. The facilitator provided the complete budget. The facilitator did not receive funding from outside sources.

Results

Outcomes

Seven people participated in person, and another four participated via Zoom at the organization's alternate location. Though the informed consents were explained to all and sent via email for the participants at the alternate location to sign, the author did not receive them back and their information was not used for the study. One person also did not sign the consent form who was in person, and their data was also not used. Therefore, only data from six of the eleven people who attended was applied to this study. All participants were female (n = 6, 100.00%) and many of the participants noted their ethnicity as white (n = 4, 66.67%). The most frequently observed role category was clinical therapist (n = 2, 33.33%). Most participants have three or less years of experience (n = 4, 66.67%). The most frequently observed category of Medication Education was no (n = 4, 66.67%) (See Appendix C, Table 1). The participants ranged in age from 26 to 45 and had an average age of 32 (See Appendix C, Table 2).

The data was entered into Intellectus statistics software. Adjustments had to be made so that the questions deemed "opposite" or asked about the benefit of a medication rather than the harm or overuse would be addressed so that when calculated using the Likert scale, it would be appropriate. The higher number indicated a more pessimistic view, so the observations for PRE

Medication Beliefs averaged 34.17 (*SD* = 5.15, Min = 28.00, Max = 42.00). The observations for POST Medication Beliefs averaged 32.67 (*SD* = 4.03, Min = 27.00, Max = 37.00) (See Appendix C, Table 3). Therefore, the intervention showed a small but notable decrease in the numbers for an average score of 1.5.

Statistical Significance

This project was like an exploratory pilot study to generate a hypothesis. For the purposes of this study, due to the importance of detecting minor to moderate differences with a small sample size of only six participants (p values >0.05 but <0.10 are referred to as trend), significance was tested at the p <0.10 (Fugate Woods Lentz et al., 1997). Though qualitative data was not taken, there were anecdotal responses to the author that the participants learned a lot and found the information presented helpful.

Impact of Project

It can be argued that the project could impact many aspects of the relationship between the therapist and the patient and between the patient and the medication prescriber. Giving therapists a base knowledge will help them confidently speak to their patients. The therapists will have the ability to recognize incidents like dangerous side effects such as tardive dyskinesia. Having a more positive belief about medications can help reduce any unconscious bias therapists may have had prior to the education. The therapist can understand and possibly participate in more meaningful discussions about medications with their patients.

Sustainability

When starting a change project, one must have a plan for maintaining the change. In discussions between the facilitator and MM, there was an agreement to leave the PowerPoint that the facilitator used and make it voice-over so that they can use it in the future education of

new employees, and this PowerPoint was implemented as part of a new employee orientation. The goal was for medication education to be part of standard education, as this organization aims to learn about the medications that affect most of their clients. With the continued support of MM and the PowerPoint left behind by the project's facilitator, the project change of psychiatric medication education will be sustained at the organization.

Discussion

The participants who attended the project presented differing results, two of which had no change to their pre and post-scores. One had the same numbers pre- and post-presentation, while the other's number changed. However, for every question, when the answer was lower in one area, it increased in another, providing the same total number. One participant had a drastic decrease of 6 points total. Overall, it was noted that the project benefited those who attended by decreasing their negative view by an average of 1.5 points. Therefore, the smaller the number of Post Medicine Questionnaires, the more improvement they showed after the intervention. It was noted that the most remarkable difference in any specific area was noted in the perceived benefits of medication (See Appendix C, tables 4, 5, 6).

Limitations

The first limitation noted is the small homogeneous sample. The all-female group was working for the same organization, so it could be expected that the group shares similar beliefs. A more diverse, larger population might have a different outcome. Another limitation noted was that the "need to know" education was inherently harmful, concentrating more on side effects and concerns and less on the benefits of the medication. The responses could be more positive if the intervention stressed equally the benefits and the risks of the medications discussed.

Relate Findings to Literature

Findings were like literature in multiple ways. First, all but one participant had not received any formal education about psychiatric medications, and overall, the participants had a knowledge gap about psychotropic medications (Bertram & Mckarney, 2020; Hughes et al., 2019). One article noted that the Belief about Medicine Questionnaire had a lower belief when comparing medical and psychology students. It would have been interesting to compare the prescribers of these medications to those in the organization and to see if baseline scores would have been different (De la Cuevas et al., 2011). Similarly to the literature, sample sizes were often small, with most authors including them in their recommendations for future research to redo the project on a larger scale.

Recommendation for Future Research

As this was a small study of a particular organization, it would be imperative to repeat the study with a larger, more diverse group of participants. It would also be essential to investigate the relationship between therapists and those working in a multidisciplinary setting with prescribers compared to those working separately as in this organization. The final recommendation would be to follow up with the participants for one year to see if the views of the participants had changed.

Conclusion

A disproportionate number of children in foster care who have trauma receive a concerning number of psychotropic medications. This paper discussed implementing a project to educate licensed counselors and social workers on psychotropic medications. The knowledge obtained by clinicians from this project benefits the organization by having clinicians who can provide holistic care to the patients. By increasing staff confidence and helping them recognize

and understand common side effects, the therapist will have the tools to understand, support, and advocate for these patients.

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Appendix A

Evaluation and Synthesis Tables

Table A1

Evaluation Table for Quantitative Studies

Citation	Theoretical/ Conceptual Framework	Design/ Method/ Purpose	Sample/Setting	Variables	Measurement/ Instrumentation	Data Analysis	Results/ Findings	Level of Evidence; Application to practice; Generalization
Abel et al., 2019, Pharmacists can improve medication management in the vulnerable population of foster care youth. **Country**: United Kingdom **Funding**: The Trent Doctorate in Clinical Psychology **Bias**: Authors report potential for self-selection bias but did attempt to minimize.	Role theory/ grounded theory.	**Design:** Mixed Method Design/ randomized control study **Purpose:** To understand the relationship between psychologists and psychotropic medications and what role the psychologist may have.	**N= 1**47 surveyed, 11 interviewed. **Demographics:** Does not specify. **Setting:** Online for the survey, and in Person for interview. **Exclusion:** Must be an English speaking, clinical psychologist, that is from the United Kingdom.	**IV1:** what kind of involvement with medications **DV1:** Did they make Recommendations to medications? **DV2:** Test for neuro testing/ testing related to medications. **DV3:** Involved in the decision-making process.	**Tools:** A survey was created by the author that followed previous research. **Validity/ Reliability:** Authors report the tool as viable, as it reported responses applicable to the research question.	**Statistical Tests Used:** DS, logistic regression, and thematic analysis	**98% reported some involvement with psychotropic medications.** **DV1:** Involvement included: reflections with client about their medications. **DV2:** Discussion of medications. **DV3:** Supporting the patient in speaking with their provider.	**LOE**: Level 1 **Strengths**: The authors share the mixed method approach was a strength, **Weakness**: New research tool, Lack of second coder **Feasibility**: The study appears practical and applicable. **Application**: This study represented the psychologists' views on medications and

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			Attrition: There was no loss of participants.					involvement despite only half having formal education.
Bertram & Mckarny, 2022, Minding the complexities of psychotropic medication management for children and youth in the foster care system☆ Paper 1: The facilitators and barriers to learning about trauma-informed medication management. **Country**: United States **Funding**: No funding reported, though the University of Missouri provided support. –St. Louis, (UMSL) Research Board and ISPN Foundation Joyce Fitzpatrick Psychiatric Nursing Research Awards (2018) **Bias**:	self-determination theory, hierarchical constraint theory, and the psycho-social facets of resilience theory.	**Design:** Mixed Method Design/ Randomized Control **Purpose:** To identify the facilitators and barriers to learning about trauma-informed medication management for children and youth in state custody.	**N=** 144 care staff (social workers) 24 attended the interviews. **Demographics:** Worked at one private and one public child welfare agency. **Setting:** Online for the survey, and in person for interview **Exclusion:** All had bachelors in social worker or greater. **Attrition:** There was no loss of participants. However some went to training without participating in	**IV1: facilitators and barriers** A two-hour long face to face / and 3-month web based for leadership. **DV1:** awareness **DV2:** Beliefs **DV3:** communications	**Tools:** ABC Medication tool, using Likert scale. Measures **Validity/ Reliability:** ABC medication scale shows good reliability.	**Statistical Tests Used:** DS for the quantitative section	**Quantitative:** Statistically significant improvement of understanding medications. **Qualitative Themes** Ensure transparency in teaching. Create authentic learning experiences. Assure accessibility. Respect Diverse way of learning Promote passion in learning. Provide Recognition	**LOE**: Level 1 **Strengths**: It examined all of the difficulties. **Weakness**: Only researched those within the child welfare system, and not other services that care for children. **Feasibility**: The study appears practical and applicable **Application**: This study is a good application to my project as it provides both information and possible access to a tool.

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Authors report no bias.			the survey.					
Hughes et al., 2020, Experiences of child welfare workers regarding psychotropic medications: Results from a mixed-method evaluation of a critical medication curriculum **Country**: United States **Funding**: Department of children and families; University of California, Los Angeles, Luskin School. Colorado State University School of Social Work **Bias**: Denies bias or competing interest.	Role theory/	**Design:** Mixed Method Design/ quasi-experimental. Focus group to follow. **Purpose:** To understand the attitudes and beliefs of children and family staff of psychiatric medications.	**N=** 20 for intervention 46 for control. 13 for follow up qualitative study. **Demographics:** staff members were all staff members. **Setting:** Assessment was electronically sent and were done anonymously. Then use the Critical Thinking Rx Focus groups were in the agency lunchroom (with lunch provided).	**IV1:** Critical Thinking RX program.	**Tools:** Attitudes About PM Use with Youth Scale/ Medication Benefits subscale. **Validity/ Reliability:** Authors report the tool as being viable, as it reported responses applicable to research question.	**Statistical Tests Used:** DS, Analysis of covariance (ANCOVA), and thematic analysis	**There was an increase in provider awareness, more seeing it is as harm.** **Qualitative Themes are:** General attitudes towards medications Change in Practice Behaviors Perceived benefits and harms of medications The broader practice context Systemic reliance on medication Uncertain roles	**LOE**: Primary Level 1 **Strengths**: The authors share that this gives social workers insight to medications and improved understanding. **Weakness**: Small sample size. **Feasibility**: The study appears practical and applicable. **Application**: This study was a good representation of the social workers that are the most common therapist

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			Exclusion: All social workers with BSW or greater. **Attrition:** Low follow-up response rates of particpants. .				and lack of education Poor client education on medication Professional hierarchy Lack of time	
Raman et al., (2021), Psychopharmaceutical Prescription Monitoring for Children in the Child Welfare System **Country**: United States **Funding**: Was not disclosed, however the study was approved by Vanderbilt University Institutional Review Board and University of Chicago Institutional Review Board. **Bias**: Authors report no financial relationships with commercial	Survey Research/ correlational	**Design:** Retrospective Design **Purpose:** To quantify prescribing practices of psychotropic medications among providers in the child welfare population in a southern U.S. state.	**N=** Prescribers=506 Children: 4,093 **Demographics:** Children on child welfare, ages between 10-16 (average of 14) years. **Setting:** Public child welfare agency of a southern state in the U.S. **Exclusion:** Data analyzed only during 5/22/2016-9/17/2017. Prescribers with <10 prescriptions	**IV1:** Prescription of PM vs standardized prescribing. **DV1:** If the medication was issued to a child under the age of 5. **DV2:** If the patient received four or more psychiatric medications. **DV3:** If the patient received two medications within the same category (i.e., two antipsychotics or antidepressants).	**Tools:** Children and adolescent needs and strengths score, combined with provider numbers and patient numbers with socioeconomic status. **Validity/ Reliability:** Authors report the tool as valid, accounting for a significant proportion of outcome variance.	**Statistical Tests Used:** Hierarchical logistic regression model, results plotted on a funnel plot.	**22.8% of prescriptions were flagged.** **DV1:** 1,059 were given to someone less than 5 years old. **DV2:** 5,130 for four or more overlapping medications. **DV3:** 5,802-overlapping antidepressants. 1,804 for overlapping antipsychotics 1,092 for	**LOE**: Level 3/ Observational. **Strengths**: The authors share this is the first study that evaluates psychotropic studies to the child welfare studies. By monitoring red-flag prescriptions, it could help alert and make sure that a child was not prescribed unnecessary medications or medications for longer than necessary. **Weakness**: Did not account for

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interests.			were excluded. **Attrition:** There was no loss of attrition as the study was retrospective.	**DV4:** If the dosage was greater than the maximum dosage recommended. **Definitions:** *Red-Flag variables.* (Flagged as potentially inappropriate prescription) Standardized Prescribing Rate: red flags of the provider compared to the prescribing of the population.			overlapping stimulants. 747 for overlapping mood stabilizers. **DV4**: 1,687 prescriptions exceeded maximum recommended dosage.	all missing data, including child's diagnosis and medication indication. **Feasibility**: With access to all the study data, this would be feasible to repeat, however as a student I do not have access to that data. **Application**: This study provides a strong picture of prescribing practices for patients like the ones that are cared for at my project site.
Davis et al., (2021), High Level Psychotropic Polypharmacy: a Retrospective Comparison of Children in Foster Care to their Peers on Medicaid. **Country**: United States	Survey Research/ correlational	**Design:** Retrospective Design **Purpose:** To compare the prescribing to those in the foster care system compared to their peers and to see the differences in	**N=** Children in foster care: 417 Children in Medicaid, not in foster care: 1823 **Demographics:** Ages 6-17, in Kentucky, all on Medicaid on	**IV1:** Percentage of those in foster care prescribed PM on HLPP. **DV1:** Number of Children receiving medications compared to their peers.	**Tools:** Data set of diagnostics, pharmaceutical, and demographic information was used from Kentucky's Medicaid enrollment. Analysis and one using R	**Statistical Tests Used:** X^2 tests for proportions. T-tests for normally distributed data, and Man-Whitney tests for non-	**DV1:** Not many differences between the two populations. **DV2:** Metabolic screening was poor in both	**LOE**: Level 3/ Observational. **Strengths**: This study provides new information about the prescribing of psychotropic medications within foster children and

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Funding: No funding was received specific to the project. General funds were provided by Norton Children's Hospital. **Bias**: Authors declare no competing interests.		metabolic testing, emergency room visits, and inpatient/outpatient use.	at least one antipsychotic. **Setting:** Not specified. **Exclusion:** No seizure diagnosis. Children without any records of sex, race/ethnicity, or geography. **Attrition:** There was no loss of attrition as the study was retrospective.	**DV2:** Metabolic screens **DV3:** Emergency Room visits. **DV4:** Inpatient visits **DV5:** Outpatient visits. **Definitions:** *High Level Psychotropic Polypharmacy (HLPP):* The concurrent use of four or more classes of psychotropic medications for at least 30 days in the last calendar year.	statistical software version 4.4.0 (4/24/20). **Validity/ Reliability:** Authors report the tool as valid, accounting for a considerable proportion of outcome variance.	normally distributed data. Data sets were described using a negative binomial generalized linear model to assess risk factors associated with longer duration of HLPP	groups, but slightly better in foster children. **DV3:** Children in foster care had higher emergency room visits. **DV4**: Children in foster care had more inpatient hospital stays. **DV5:** Children in foster care had less outpatient visits.	their counterparts. **Weakness**: Authors' share limitations were based on administrative claims rather than actual prescribing. Details of diseases and diagnosis isn't always well represented. Also foster children could have outpatient services at their residence, and that is not included in the data. **Feasibility**: Like the previous study by Raman et al. (2021), with access to all the study data, this would be feasible to repeat, however as a student I do not have access to that data. **Application**: This article provides a connection to the

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								prescribing and practices for those that are both in foster care, and poor.
Wu et al., 2018, Psychotropic polypharmacy among youths with serious emotional and behavioral disorders receiving coordinated care services. **Country**: United States **Funding**: Provided by a grant from the Centers of Medicare and Medicaid Services, U.S. Department of Health, and Human Services. **Bias**: Authors report no financial relationships with commercial interest.	Relational Theory	**Design:** Quasi-Experimental Design/ Naturalistic **Purpose:** To study the association of psychotropic medication and coordinated care services for those with serious emotional and behavioral disturbances.	**N=** 814 =cohort group 2,439= control group **Demographics:** Receiving Medicaid services, Mental health services had a psychiatric diagnosis, on psychiatric medications. **Setting:** Not specified. Data was obtained from Medicaid, cohort entry and exit data, and juvenile justice service administrative records. **Exclusion:** For cohort, must attend for	**IV1:** Measurement of psychotropic polypharmacy **DV1:** polypharmacy	**Tools:** Bivariate chi-square analysis assessed statistically significant differences between cohort and non-cohort youths. Propensity score was then used to balance multiple cohorts. Difference-in Difference model assessed psychotropic polypharmacy. **Validity/ Reliability:** Authors report the tool as viable, as it reported responses applicable to the research question.	**Statistical Tests Used:** Poisson Regression Model	**DV1:** Polypharmacy was largest for the-pre=cohort study, over the non-cohort. But the smallest level was those that had been discharged from the cohort. ADHD meds and antidepressants were the most common individual medications.	**LOE**: Level 2 **Strengths**: The authors share believe that the post discharge medication cohort shows a reduction of medications, therefore proving the need for further study. **Weakness**: Propensity scores attempted to balance covariates, but some were still unbalanced. There was also one state that was analyzed. **Feasibility**: This study would not be feasible to repeat without having the same programming or access to that specific data.

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			at least 90 days, must have Medicaid services one-year pre and post study. **Attrition:** There was no loss of participants.					**Application**: This study represents an important intervention that could account for the benefit of including those that are high needs with a high needs case manager or such a program.

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Table A2

Evaluation Table for Qualitative Studies

Bowden et al.,2022 **Country:** United States **Funding:** Grant received from Patient Centered Outcomes Research Institute and Agency for Healthcare Research and Quality. **Bias:** All authors deny bias and deny any conflicts of interest financial or otherwise. However say within the limitations that they may have been bias about	**Framework:** Exploratory Neuman's system Model?	**Design:** Semi-structured one-on-one interviews. Face to face. **Method:** Semi structured individual and group interviews. **Purpose:** To study the relationship between psychotropic medications and trauma informed care for youth in foster care.	**Sample:** (four groups for a total n=109) 1. Alumni of the foster care system =31 2. Case workers =26 3. Prescribing Clinicians (MD/ Nursing) =32 4. Caregiver =20 **Demographics:** Majority women, and white (caregivers). 75% of clinicians were MDs, 25% nurses. More than half of case workers had 50% of children on psychotropic medications. 16/20 caregivers had children with mental health concerns. All alumni had	**Major Themes Studied.** 1.acknowledging trauma 2. role of psychotropic medications 3. psycho-social resources 4. additional support 5. training and resources. **Definitions** Psycho-social- a combination of psychological and social factors. Including mental illness, ACES, culture, socioeconomic factors.	**Data Collection:** Semi-structured telephone calls (30-60 minutes each). **Data Dependability:** Data appears to be dependable and accurate. Though it is qualitative and therefore can be up to interpretation.	**State type used.** Data was transcribed verbatim and analyzed using a direct content approach by four master's level researchers.	**Themes/ Findings** 1. Trauma awareness and treatment 2. Limited resources 3. System short falls. 4. Focus on Youth in foster care system	**Level of Evidence:** Level 2 **Strengths:** Direct experience from various stake holders provides diverse and complete view of a complex problem. **Weakness:** Because the research was done within two states, the authors share that each state varies on what it offers children in foster care. **Feasibility:** This study is practical and applicable. **Application:** This applies directly to my

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participants selected.			been on psychotropic medications at one point. **Setting:** Phone interviews. **Attrition:** One time interview so no patients were lost to attrition					project as I will be educating case workers/ social workers that work with children in the foster care system.
Murphy et al., 2015, A Qualitative Study of Antipsychotic Medication Experiences of Youth. **Country:** Canada **Funding:** Nova Scotia Health Research Foundation **Bias:** All authors deny bias and deny any conflicts or bias.	**Theory** Phenomenology/ Narrative Framework Gibbs reflective Model?	**Design:** Qualitative interview **Method:** Interpretive Phenomenology **Purpose:** To explore the lived experience of youth that are prescribed antipsychotics.	**Sample:** Purposeful recruitment, 18 youth ages 11-25 years old who were prescribed an antipsychotic within the previous two years. **Demographics:** 8 females, 10 males, ages 13-18 **Setting:** Not specified. **Attrition:** One time interview so no patients, however two	**Major Themes Studied** 1. the theme was to study the lived experience of participants and their views and understanding of psychotropic medications. **Definitions** Psychotropics – are psychiatric medications.	**Data Collection:** One individual completed the One-to-one phone calls, which were then recorded, transcribed, and analyzed. **Data Dependability:** Participant ability to review and iterative analysis helped with credibility, dependability, and validity.	**State type used.** Data was analyzed through a staged iterative and inductive analysis approach. Stage 1: transcripts were read individually. Stage 2: Summarized the transcripts and find themes. Stage 3: Continue with	**Findings** 1. Patients viewing antipsychotics as a "double edge sword." 2.Ambivalence about their medications. 3. Knowledge Gap/ Support Gap 4. Resulting in a call for patient centered care and patient consideration in decision making was a finding.	**Level of Evidence:** Level 2 **Strengths:** Patients were specific in having specific diagnosis and have been on antipsychotics. **Weakness:** No access to medical records, perspectives of patients who weren't always knowledgeable about own medications or situation. Unable to clarify if patient was attributing past experience

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			patients' interviews were not used as they were on antidepressants only.			independent analysis. Stage 4: South to examine relational themes.		of antipsychotics or just any psychotropic medication. **Feasibility:** Easy to be replicate, practical. **Application:** This applies directly to my product. As majority of my patients have had significant ACES and are on psychotropics, and understanding where gaps of knowledge and patient views will help
Lohr et al., 2019, Addressing the mental healthcare needs of foster children: perspectives of stakeholders from the child welfare system.	**Theory** Phenomenology/ Narrative Framework	**Design:** Qualitative interview **Method:** Interpretive Phenomenology **Purpose:** To explore the mental health needs of foster children in	**Sample:** Administrators provided potential participants. Then purposefully sampling 35 participants which represented different views within the target	**Theme** 1. the theme was finding factors that influence PM use: 1. Access to health records 2. Access to mental health services 3.Consent and	**Data Collection:** Led by study personnel with training in conducting qualitative interviews. Data was transcribed by study personnel or a professional transcription	**State type used.** Data was analyzed using the software tool Atlas.ti 7.5. Deductive/ Inductive codes were added.	**Findings** 1. Difficulty gaining information about medical history. 2.Access to care is high, especially in rural areas. 3. Discomfort	**Level of Evidence:2** **Strengths:** Stakeholders were ale to identify policy changes and other interventions that could improve health treatment and

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Country: United States **Funding:** The funding was provided by Kentucky Cabinet for Health and Family Services, Norton Healthcare, and the University of Louisville. **Bias:** It does not discuss bias within the article.		Kentucky, specifically to reduce the amount of unsafe or avoidable PMs.	population. **Demographics:** 35 Employees selected. **Setting:** Face to face within the community of the participant. **Attrition:** Three were lost due to scheduling conflicts or illness.	decision making about PM use. 4. Training related to psychotropic medication use. **Definitions** Psychotropics – are psychiatric medications.	service. **Data Dependability:** Another investigator helped clarify and enhance study validity.	All transcriptions were coded by one investigator. Once coded, three team members met to refine the codebook. Single investigator then reviewed for accuracy and clarity, and to enhance study validity.	of staff who did not want to be responsible with decision making responsibilities. 4. Staff could be educated and therefore provide better care.	decrease inappropriate PM use. **Weakness:** One team member coded all the interviews. Study was done in one state. Only reports one stakeholder perspective. **Feasibility:** Easy to be replicate, practical. **Application:** This applies to my project because it is a different perspective and looks at the problem from a state or community level.
Barnett et al., 2019, Patient-centered psychiatric care for youth in foster care: a systematic and critical review.	**Theory** Phenomenology/ Narrative Framework	**Design:** Systematic review **Method:** Systematic Review was conducted with the preferred	**Sample:** After duplications and eligibility were assessed, there were 11. **Demographics:** Not specified. -	**Theme** 1. Lack of knowledge about medications and effectiveness. 2. Feelings of disempowerment and coercion.	**Data Collection:** Three authors reviewed abstracts, then the researchers all reviewed 119 articles in groups of two.	**State type used.** Data was analyzed using Critical Appraisal Skills Program, and the Center	**Findings** 1 Patients were often unaware not just of medications, but of their diagnosis as well.	**Level of Evidence:** Level 1 **Strengths:** It was able to identify youths' perspectives and gaps in care.

Key: DV-Dependent Variable; **IV-**Independent Variable; **PM-** Psychotropic Medications; **PCC**- Patient Centered Care; **DS-** Descriptive Statistics; **LOE**- Level of Evidence

Country: United States **Funding:** The funding was provided by U.S. Department of Health and Human Services, Administration for Children and Families. **Bias:** Attempt for no bias, but there were authors noted to be in this study, and also the articles that were included in the review.		reporting items for systematic review and Meta-analysis protocols. **Purpose:** To identify perspectives of youth, currently or formerly in foster care, caregivers, and direct services providers regarding how care does, or does not align with PCC. And to identify any review interventions that were effective in improving PCC.	however almost be in English language, published by1990, not a review, policy brief or opinion papers, drawn from youth or those connected to foster care, and aims of study must align with the goals of this study. **Setting:** Not specified **Attrition:** Three were excluded related to lack of quality.	3.Pereception of being invisible and overmedicated. 4. Weak therapeutic relationships. **Definitions** Patient centered care- patient as person.	**Data Dependability:** The authors decided which variables would be extracted from the papers to create a database to log the variables.	for Evidence-Based Management quality appraisal programs.	2.Lack of ability or time to discuss medications, feeling forced. 3.Medication was used to keep them quiet and submissive. 4. Youth often felt unheard and were distrusting of their providers.	**Weakness:** There were not several studies to provide other stakeholders perspectives or a generalization of other findings. This systemic review also did not find any interventions to the identified problems. **Feasibility:** A comprehensive systematic review and critique would be difficult and time consuming to do, however, is like the research paper that we are currently doing. **Application:** This applies to my project in both giving good information about youth that my organization helps, but also

Key: DV-Dependent Variable; **IV-**Independent Variable; **PM-** Psychotropic Medications; **PCC**- Patient Centered Care; **DS-** Descriptive Statistics; **LOE**- Level of Evidence

								articles and further resources.

Key: DV-Dependent Variable; **IV-**Independent Variable; **PM-** Psychotropic Medications; **PCC**- Patient Centered Care; **DS-** Descriptive Statistics; **LOE**- Level of Evidence

Table A3

Synthesis Table

Study (Author, year)	Abel et al., 2019	Barnett et al., 2019	Bertram & Mckarny, 2022	Bowden et al., 2022	Davis et al., 2021	Hughes et al., 2020	Lohr et al., 2019	Murphy et al., 2015	Raman et al., 2021	Wu et al., 2018
Design LOE	MMS/1	SR/1	MMS/1	QI/2	RR/3	MMS/ QE/1	QI/2	QI/2	RR/3	QE/ 2
Sample										
n subjects	147 S/11 I	11 Studies	144 S/ 24 I	109	3253 S	66 S/ 13 I	35 S	18S	4599 S	3253 S
M-Age	NS	NA	NS	NS	Ages 6-17	NS	NS	11-25	Mean age: 14	Youth (NS)
Psychologists/ Social Worker/ Clinician/ Direct Care Worker	X		X	X		X	X			
Setting										
Online	X		X			X				
In person	X		X			X	X		X	
Intervention/Themes										
Knowledge Deficit	X	X	X	X		X	X	X		
PP of FC vs others					X				X	X
Need for Psycho-Social Resources	X	X		X			X			
Measures Attitudes and Beliefs about PM	X	X	X	X			X			
PM Safety					X				X	
Acknowledging Trauma			X	X	X		X			
Patient Views of PM		X						X		
Outcome/ Theme										

Key: LOE- Level of Evidence; **NS**- Not Specified; **MMS**- Mixed Method Study; **SR**- Systematic Review; **QI**- Qualitative Interview; **QE**- Quasi Experimental; **RR**-Retrospective Review; **S/I** Surveyed/ Interviewed; **PMs**- Psychotropic Medications; **PP**- Psychiatric Polypharmacy; **FC**- Foster Children; **X**- Present; ↑-Increased, ↓- Decreased; ≈- No Change or Minimal Change.

Study (Author, year)	Abel et al., 2019	Barnett et al., 2019	Bertram & Mckarny, 2022	Bowden et al., 2022	Davis et al., 2021	Hughes et al., 2020	Lohr et al., 2019	Murphy et al., 2015	Raman et al., 2021	Wu et al., 2018
Knowledge after intervention	↑		↑	↑		↑				
Medication Usage of FC					≈				↑	↑
Beliefs about PM		↓				↓		≈		
System Shortfalls/ Limits				X	X	X	X		X	
Concerning Prescribing Practices			X						X	X
Need for Patient Medication Education		↑		↑				↑		
Need for Non-Prescriber Medication Education	↑		↑			↑				

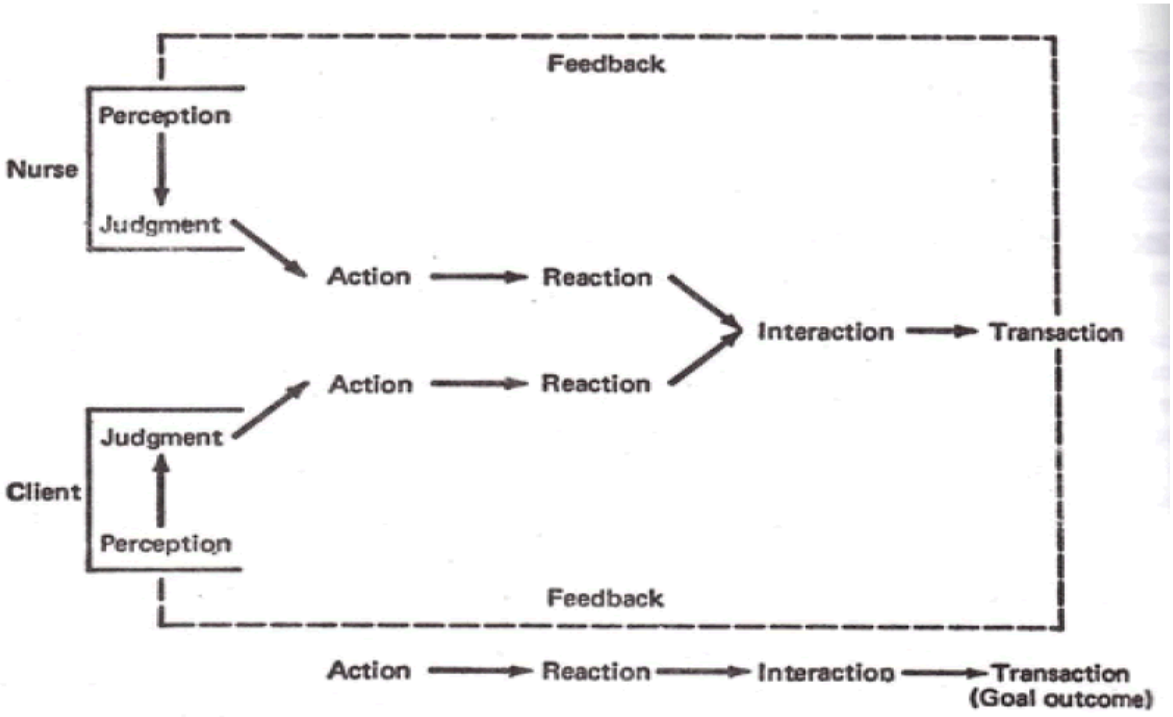
Key: LOE- Level of Evidence; **NS**- Not Specified; **MMS**- Mixed Method Study; **SR**- Systematic Review; **QI**- Qualitative Interview; **QE**- Quasi Experimental; **RR**-Retrospective Review; **S/I** Surveyed/ Interviewed; **PMs**- Psychotropic Medications; **PP**- Psychiatric Polypharmacy; **FC**- Foster Children; **X**- Present; ↑-Increased, ↓- Decreased; ≈- No Change or Minimal Change.

Appendix B

Models and Frameworks

Figure B1

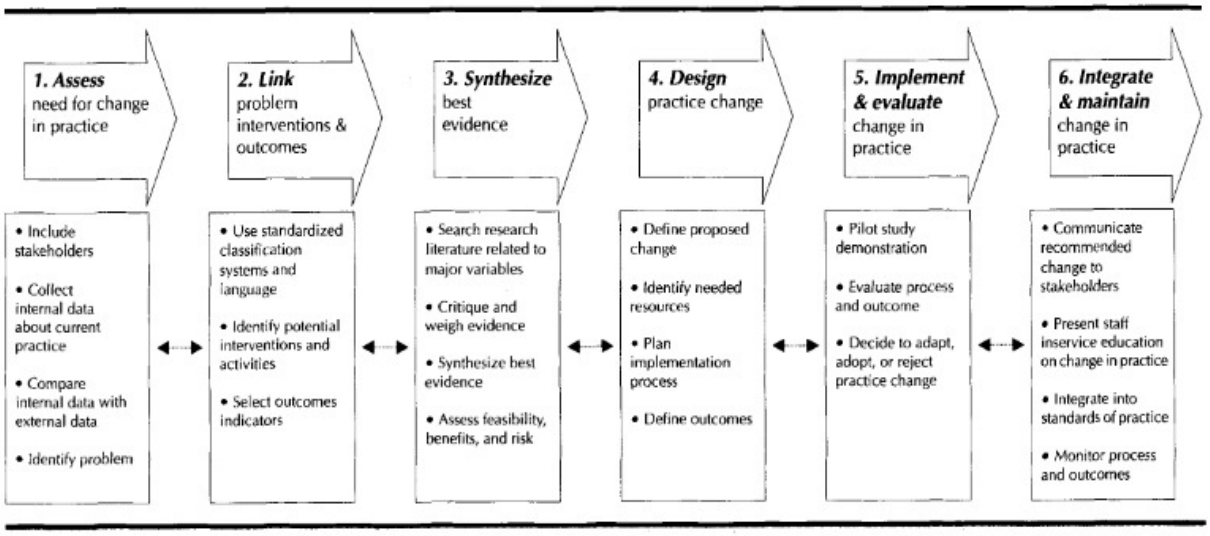
Theory of Goal Attainment



(Ali et al, 2017)

Figure B2

Rosswurm & Larrabee a Model for Change



(Rosswurm & Larrabee, 1999)

Appendix C

Data and Differential Statistics

Table 1
Frequency Table for Nominal and Ordinal Variables

Variable	*n*	*%*
Gender		
female	6	100.00
Missing	0	0.00
Ethnicity		
white	4	66.67
black	1	16.67
hispanic	1	16.67
Missing	0	0.00
Role		
social worker	1	16.67
clinical interventionalist	1	16.67
clinical therapist	2	33.33
social worker/ supervisor	1	16.67
behavioral health tech	1	16.67
Missing	0	0.00
Years_of_Experience		
1.75	1	16.67
3	1	16.67
10	1	16.67
1.5	1	16.67
<1	1	16.67
Missing	1	16.67
Medication_Education		
no	4	66.67
yes	1	16.67
Missing	1	16.67

Note. Due to rounding errors, percentages may not equal 100%.

Table 2

Summary Statistics Table for Interval and Ratio Variables

Variable	*M*	*SD*	*n*	Min	Max
Age	32.00	6.78	6	26.00	45.00

Note. '-' indicates the statistic is undefined due to constant data or an insufficient sample size.

Table 3

Summary Statistics Table for Interval and Ratio Variables

Variable	*M*	*SD*	*n*	Min	Max
PRE..Medication.Beliefs	34.17	5.15	6	28.00	42.00
POST.Medication.Beliefs	32.67	4.03	6	27.00	37.00

Note. '-' indicates the statistic is undefined due to constant data or an insufficient sample size.

Table 4

Summary Statistics Table for Interval and Ratio Variables

Variable	*M*	*SD*	*n*	Min	Max
PRE.OVERUSE	14.33	1.63	6	12.00	16.00
POST.Overuse	13.83	1.60	6	12.00	16.00

Note. '-' indicates the statistic is undefined due to constant data or an insufficient sample size.

Table 5

Summary Statistics Table for Interval and Ratio Variables

Variable	*M*	*SD*	*n*	Min	Max
PRE...Harm	10.17	1.72	6	8.00	12.00
Post.Harm	9.83	1.72	6	8.00	12.00

Note. '-' indicates the statistic is undefined due to constant data or an insufficient sample size.

Table 6

Summary Statistics Table for Interval and Ratio Variables

Variable	*M*	*SD*	*n*	Min	Max
Pre.Benefit	9.67	2.42	6	7.00	14.00
Post.Benefit	9.00	1.41	6	7.00	11.00

Note. '-' indicates the statistic is undefined due to constant data or an insufficient sample size.