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Integrating Behavioral Health Services with Primary Care for Depression Management

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An Independent Study

Submitted to the Graduate Faculty of the University of North Dakota

in partial fulfillment of the requirements for the degree

of Master of Science

Grand Forks, North Dakota

December 2018

PERMISSION

Integrating Behavioral Health Services with Primary Care for Depression Management
Department of Nursing
Degree Master of Science

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Abstract

Depression is chronic mental health disorder that affects many people who only receive health care through a primary care provider. Often times, people with behavioral health issues go overlooked or are inadequately treated in a primary care setting. This paper reviews literature regarding integrating behavioral health care into primary care clinics. Articles reviewed are range from 2011 to 2018. The goal of this paper is to find evidence on the impact of integrated services on patients that suffer from mental illness, mainly depression. The other goal is to explore what roles the Psychiatric Advance Practice Nurse Practitioner has in the integrated model of care.

Introduction

Depression is a common mental health disorder. According to World Health Organization (WHO, 2017), over 300 million people suffer from depression worldwide. A majority of people will first seek treatment with their primary care provider (PCP) because care is established with their PCP and trusting relationships have been formed. Most people are comfortable discussing physical issues with their primary care doctors, but if someone is suffering with depression are they going to talk about it? Do primary care clinics have the knowledge and tools to identify depression symptoms? Is this the best way to manage depression? Depression can be a complex condition to manage. Even when medications have been prescribed only 25% of patients show improvement (Bauer, Chan, Huang, Vannoy, & Unutzer, 2013). Primary care clinics are considered “the gatekeepers” of managing physical and mental health concerns. Integrating behavioral health into primary care offers to increase access to behavioral health care, decrease emergency department visits and inpatient admissions, and improve patient outcomes.

Purpose

This literature review will present interventions to integrating behavioral health care into a primary care setting. The purpose of this paper is to gather evidence and show that integrating behavioral health services into primary clinic would benefit the care that adults with depression receive in primary care. One objective of this paper is to determine if having a Psychiatric Advanced Practice Nurse on site will better manage depression symptoms and decrease PHQ-9 scores. Another objective is to determine if the Psychiatric Advanced Practice Nurse can assist the PCP to recognize risk factors and symptoms of depression for early treatment and follow up. The goal of this review is to point out the benefits of integrating behavioral health into primary

care with the main benefits being, improving access to behavioral health services, managing depression symptoms, and improving patients' quality of life.

Significance

The significance of integrating behavioral health services to nursing is important, as advanced practice nurses working in primary care often have adult patients with depression and adult patients who have risk factors for depression. Working in primary care, Psychiatric Advanced Practice Nurses can assess patients for mental illness, manage psychotropic medications, educate patients, and consult with PCPs. At times, the advanced practice nurse may see a patient for acute depression symptoms allowing them to intervene before symptoms worsen or the patient is in crisis. This project will propose an intervention to address this issue.

Theoretical Framework

The theoretical framework utilized for this project is Betty Neuman's Systems Model theory. This model focuses on the patient as a whole or client system. When integrating behavioral health into primary care this type of model is needed to treat the patient as a whole. It takes into consideration all the variables in the client system and how stressors affect the system. The variables include: physiological, psychological, sociocultural, developmental, and spiritual (Alligood & Tomey, 2006, p.320). The client system has protective factors that keep the system stable. These are the flexible line of defense, the normal line of defense, and lines of resistance. When this system is exposed to a stressor, these lines are broken, and it affects the client system. To fix these lines the patient along with their providers' will take steps to treat and manage the patient's depression along with their physical issue. The first step is primary prevention. This is when the provider tries to reduce the encounters with the stressor and strengthen the flexible line of defense. The second step is secondary prevention. This is the treatment of symptoms. This

could be with medication and/or psychotherapy. The third step is tertiary prevention. This step is when the patient readapts, is reeducated to prevent future stressor encounters, and maintains stability.

When integrating behavioral health into primary care, this model represents the steps that are taken to see the patient as a whole. Using a collaborative approach with a PCP and psychiatric nurse practitioner will better treat and manage our patients' physical and mental health. Patients may receive insufficient care when all their variables are not being addressed. When treating a patient in a single setting, signs and symptoms of a physical or mental health condition could be overlooked. This type of care can weaken or break our patient's lines of defense. The goal is to manage a patient's depression as well as their physical issues in one setting. Utilizing both a PCP and psychiatric nurse practitioner to deliver care will benefit the patient's overall health outcome. The providers will be able to collaborate and work as a team to manage the patient's physical and mental health. This model will benefit the whole patient by using the expertise of the provider's involved.

Process

The process of this paper started with online searches. The online search that was first utilized was Google. Search terms used were: integrative behavioral health, primary care, depression. This was to gather basic information on the topic. An online literature search at UND Harley E. French Library of the Health Sciences and Chester Fritz Library was then conducted. Databases used: PubMed, CINAHL, and PsycInfo. Search terms used: integrative, behavioral health, primary care, and depression. Limitations for the search were articles from 2012 to present, written in English, and peer reviewed. Articles were dismissed if they were duplicated from different data bases. Articles were chosen with the intervention of integrating behavioral

health care into primary care and if a behavioral health professional was a part of facilitating the intervention. Using the keywords listed there was 351 articles to choose from. These articles were both research and non research articles that includes all aspects of subject. First, titles and abstracts of the topic were reviewed. Articles of interest were read entirely which reduced the list. From this reduced list, articles were chosen for this paper.

Review of Literature

Szymanski, Bohnert, Zivin, and McCarthy (2012) published *Integrated Care: Treatment Initiation Following Positive Depression Screens*. The study was an observational design and looked at whether the primary care mental health integration services that were present in many VA clinics in the United States were effective in terms of same day services and initiation of treatment upon a first time positive depression screen. The authors studied whether “patients receiving same day PC-MHI services were more likely to receive depression treatment within 12 weeks as compared to similar patients who did not receive same day primary care-mental health integrative (PC-MHI) services” (Szymanski, Bohnert, Zivin, & McCarthy, 2012, p. 347). The number of total patients was 36, 263 and was a random sample of 30% of primary care users. All of the patients needed to have no previous depression diagnosis, antidepressant use, or psychotherapy use in the last year. The authors do not note an attrition rate. Independent variables were same day services including initiation of antidepressants or psychotherapy and dependent variables were receipt of depression treatment after the first day of services. Measurements included PHQ-2 the International Classification of Diseases, Ninth Revision, Clinical Modification (ICD9-CM) and diagnosis codes. The authors explained the descriptive statistics, including means and frequencies, were used to describe the sample. Differences between the groups were calculated using the chi-square and T-tests (Szymanski, Bohnert, Zivin,

& McCarthy, 2012, p. 349). The authors reported on these statistics stating that “compared with patients seen in PC only, patients seen in PC-MHI had 8.16 (95% confidence interval: 6.54-10.17) times greater odds of receiving psychotherapy, 2.33 (95% CI:2.10-2.58) times greater odds of having an antidepressant fill and 6.60 (95% CI: 5.32-8.18) times greater odds of initiating either treatment” (Szymanski, Bohnert, Zivin, & McCarthy, 2012, p. 349).

Strengths of the study were the very large sample size, the variety of ages, genders, races, marital statuses, and prior mental health diagnoses, and the design was appropriate as the researchers would be unable to get a random sample based on expected first time depression screens. Limitations include not having random sample, having a lot of external variables that could affect the study, such as patients’ co-morbidities, willingness to engage in depression treatment regardless of positive screen, and reasons for not getting treatment regardless of same day services (stigma, finances, transportation, etc.). The fact that the study was done at a VA clinic minimizes the ability to generalize this study elsewhere. Risks of the study were minimal, since it was observational. This study could possibly be feasible in practice to note if patients who receive same day mental health care services are more likely to get treatment for depression. This would be helpful in knowing if collaboration with a mental health professional on site is more effective than a referral alone.

The authors Gouge, Polaha, Rogers, & Harden (2016) published Integrating Behavioral Health into Pediatric Primary Care: Implications for Provider Time and Cost. The purpose of this study was to utilize behavioral health professionals in primary care to improve assessment time with the providers and generate revenue for the clinic. This was an observational study that took place in a single clinic over a 6 month period. There were five PCP’s and two behavioral health consultants (BHC). The BHC’s were supervised doctoral students in psychology. During the six

months, there were ten observational days with a BHC present and ten observational days without a BHC. Patients would see a BHC after their PCP evaluated and assessed. Data that was collected from 668 office visits on observational days. Of the office visits, 88 visits were coded psychiatric which resulted in 63 BHC contacts. The BHC saw an average of six patients per day.

The limitations of this study were having students as the BHC's. It would be interesting to see what kind of difference there would be with a "seasoned" clinician. Additional limitations were that the study took place in a single clinic that observational days were limited to one day/week and that service was offered during the summer and fall seasons. Strengths of the data showed providers spent two fewer minutes with patients and saw 42% more patients when the BHC's were available. Also, the clinic had an increase of revenue. An average of \$1142 more the days the BHC's were there.

McLeod and Simpson published a study: Exploring the Value of Mental Health Nurses Working in Primary Care in England: A Qualitative Study. This study showed the benefit of having a mental health provider in a primary care clinic since it was considered the first point of access to all healthcare (McLeod & Simpson, 2017). The study consisted of a team of 12 mental health nurses, an operational manager and a consultant psychiatrist that provided a service in primary care clinics. Forty-eight primary care providers and 33 therapists were approached by email to participate in the study. Seven primary care providers and three therapists responded. Each participant was interviewed one on one. The interviewer gathered information on expectations, patient experiences, and outcomes. The data collected identified five themes that would assist to incorporate the service in primary care. These themes included were integration, clinical effectiveness, patient-centered care, access and efficacy.

The strengths of this study show how integrating behavioral health services into primary care benefit patients with mental illness and a potential to fulfill a demand of unmet mental health needs. Limitations of the study are that it was small, referral criteria was not clear, and the cost effectiveness was not identified. Further research would benefit this study to show how these services increase patient care satisfaction and address patient mental health needs.

The authors Richards, Hill, Gask, Lovell, Chew-Graham, Bower, Barkham (2013) published The Collaborative Depression Trial (CADET). This was a multi-center randomized, controlled trial of collaborative care. The purpose of the study was to see if adults with depression being treated in primary care would benefit from receiving collaborative care with behavioral health in the form of a case manager who would coordinate care between primary care providers and mental health providers. The case manager would also provide diagnosis education to the patient, medication education, assisting in access to cognitive behavioral therapy, and acting as a liaison between clinicians and the patient. The author used two “clusters” of primary care practices consisting of groups of adults with depression. The experimental group received collaborative care. The control group received routine primary care management. Fifty-three different general practices participated with only two dropping out of the study. They started with 581 participants for the study and followed up with 505 at four months and 498 at twelve months. Participants were described as 56% with a moderate severe depression episode, 30% with severe depression, 14% with mild depression and 73% who had a past depression. Of the participants, 44% had full or part time employment, mean age was 44.8 years old, and 72% were women. 98% of the participants had anxiety, 64% has chronic illness, and 83% had been prescribed antidepressant from their PCP (Richards, et al., 2013). The independent variables were the sessions with their case manager and dependent variable was

depression. Scales used in this study were Patient Health Questionnaire 9 (PHQ-9), the Short Form 36 questionnaire (SF-36), the Generalized Anxiety Disorder 7 (GAD-7), and Client Satisfaction Questionnaire 8 (CSQ-8). At the four month follow up, the experimental group decreased their PHQ-9 scores by 1.33. This group also met criteria for recovery (Richards, et al., 2013). At the 12 month follow up, the experimental group's mean PHQ-9 score was 1.36 points lower and more participants showed meeting criteria for recovery (Richards, et al., 2013). These findings showed that the intervention made a positive difference in the outcome variable.

The studies strengths were that it was a randomized trial, that it had a large number of participants, and the length of time the study was conducted. Limitations included patients lost to follow up, possible bias in sample selection because it is a cluster trial, the human element of different case managers and practitioners providing care. The patients received a mean of 5.6 (Richards, et al., 2013) sessions with the case manager, and the fact that the majority of patients were already on antidepressants which could have been adjusted, changed, or discontinued during the trial. Risks associated with implementing this intervention are the effectiveness of the case manager. A case manager that is not a trained professional or is ineffective to the patient would leave the patient to suffer a decrease in depression management. Overall, there were minimal risks with implementing this intervention, since the patient would continue receiving care with their PCP. This intervention would benefit rural areas, where there is limited access to mental health services. It would also benefit patients with limited resources, finances, and transportation.

Balasubramanian, Cohen, Jetelina, Dickinson, Davis, Gunn, Gowen, deGruy, Miller & Green (2017), published a study: Outcomes of Integrated Behavioral Health with Primary Care. This study evaluated how integrating behavioral health clinicians into familiar settings and its

effects on depression severity (Balasubramanian et al., 2017). This is a quasi-experimental study with a convergent mixed-methods design. Participants in this study included 475 patients, three primary care practices, and two community mental health clinics (CMHC). Patient participants were selected by clinical data from their EHR and patient interviews. Patients were tracked by quantitative outcome changes in their baseline PHQ-9 scores. The patient sample was 69.3% women, 83.2% non-Hispanic white, 41.5% had private/commercial insurance (Balasubramanian et al., 2017). The mean age was 43.9 and hypertension and asthma were the most prevalent comorbidities. Over the 6-9 month range of the study, all practices showed a decrease in patients' PHQ-9 scores. Points were decreased by 3-6 points. Overall, patients had a positive experience with the integrated care.

Limitations of this study included lack of a control group to compare findings, patients lost due to not returning for follow up appointments, and there was no "before and after" data to compare PHQ-9 findings from a patient's usual care to compare to with the collaborative care (Balasubramanian et al., 2017). Strengths of this study were the sample size and the length of time the study took place. The results of this study provided effective ways to implement mental health services into primary care, which showed benefits to the patient.

McGough, Bauer, Collins, & Dugdale (2016) published the study "Integrating Behavioral Health into Primary Care." The study focused on implementing an approach to integrate behavioral health services into primary care to manage adults with anxiety and depression. This was a quasi-experimental study. The team was made up of the patient, PCP, medical social worker (MSW) or an RN, and a psychiatrist as a consultant. The MSW/RN would follow up with the patient regularly to assess symptoms and treatment response, provide care coordination, and facilitation of referrals. This provider would also consult with the psychiatrist weekly to discuss

patients (McGough, Bauer, Collins, & Dugdale, 2016). The PCP would get recommendations from the psychiatrist and implement them. Patient outcomes were monitored using the PHQ-9 and GAD-7. The model used for this study was The Behavioral Health Integration Program. The study took place at nine of the University of Washington Neighborhood Clinics and a total of 900 patients were involved. In the first year, 45% of the patients in this study had a decrease in depression and anxiety scores by 5 points. The group also showed a 50% improvement in symptoms of depression and anxiety after ten weeks of treatment. The study also showed a financial benefit. Over the 4 year period that this study took place, it is estimated that \$3363 was saved per patient (McGough, Bauer, Collins, & Dugdale 2016).

Limitations of this study were that no comparison data was available before the program was implemented. Another limitation was the data was limited in identifying what particular intervention improved a patient's symptoms. Data was also limited on costs because they were estimated on the literature. The strengths of this study were the duration of time it took place, the large sample size, and the positive results. This study is a stepping stone for other primary care clinics that are interested in collaborating model to better service their patients.

Miller-Matero, Dykuis, Albujoq, Martens, Fuller, Robinson, & Willens (2016) published the study, *Benefits of Integrated Behavioral Health Services: The Physician Perspective*. The purpose of this study was to evaluate physician satisfaction regarding integrative care. This was an observational study. The team involved was senior staff physicians, primary care residents, and a psychologist. The psychologist would complete a psychological history and screening assessments. The psychologist would share their results with the patient and physician. Sample participants were 17 senior staff physicians and 78 residents. Each participant completed a survey identifying their title and if they referred a patient to the primary care psychologist. They

also completed a checklist noting why the patients were referred to the primary care psychologist. Participants that did refer a patient to the psychologist filled an additional survey evaluating their satisfaction with the referral, if patient care was improved, if physician stress decreased, and overall satisfaction (Miller-Matero et al., 2016). Surveys were completed over a four month period. Results of the surveys and checklists showed an overall satisfaction having a behavioral health consultant in the primary care clinic. Results showed 93.8% of the participants agreed or strongly agreed that the integrated service improves patient care, 80.9% agreed or strongly agreed integrated services helps physicians improve patient care, 90.1% agreed or strongly agreed physician stress was decreased, and 90.3% physicians believe that this service is needed (Miller-Matero et al., 2016).

Limitations of this study included limited insight why the patient wanted or agreed to see the psychologist, physician stress level was not evaluated before and after integrative services were put in place, and the length of the study. Strengths of this study were a high participation rate and overall satisfaction scores. The positive results of this study will help other clinics implement these types of services into their own clinic.

Auxier, Runyan, Mullin, Mendenhall, Young, & Kessler (2012) published the study Behavioral Health Referrals and Treatment Initiation Rates in Integrated Primary Care: a Collaborative Research Network study. This study's objectives were to identify the patients referred for behavioral health services, reasons for referral and if the patients were treated for the referral, identifying differences between patients who saw a behavioral health provider and who did not, and assessing the types and how frequent behavioral health services were provided (Auxier et al., 2012). This was an observational study. This was a multisite card study by the Collaborative Care Research Network and American Academy of Family Physicians'. This study

took place in five primary care clinics across the United States. There were 127 providers that were a part of this study. They included PCP's, residents, internists, nurse practitioners, physician assistants, social workers, and Ph. D's. Data was collected at each site for 6 weeks. Two hundred patients were referred for behavioral health consults. Sixty-nine percent were women, 60% were white and 32% were Hispanic. Of the women, 80.4% attended a behavioral health visit and 80.7% of the men attended. If the behavioral health visit did not take place the same day as the medical visit, it was an average of 3-4 days after the medical visit. Behavioral health treatment initiations were different amongst the clinics from 54.5% to 90.6%. During the initial behavioral health visit, assessment, consultation, and intervention were the most common services (Auxier et al., 2012). This study showed that the most common reasons for a referral were depression and anxiety, 81% of patients did have initial contact, and there were lower rates of contact with behavioral health provider when the referral was for substance use or behavior change (Auxier et al., 2012).

Limitations of the study were that sample sites at each site were small which made it hard to evaluate comparisons between sites. There were differences in treatment initiations because of difference in patient populations and variations in integrated models (Auxier et al., 2012). Strengths of this study were the positive benefits on patient care when integrated care was initiated. Conducting studies like this gather more information to improve services to patients and improve access to behavioral health services.

Bauer, Chan, Huang, Vannoy, & Unutzer, (2013) published the study Characteristics, Management, and Depression Outcomes of Primary Care Patients Who Endorse Thoughts of Death or Suicide on the PHQ-9. The aim of this study was to see if the PHQ-9 score, especially item 9, "are associated with patient characteristics, management, and depression outcomes in a

primary care-based mental health program”, (Bauer, et al., 2013). This was an observational study. There were 11, 015 adults enrolled in the Mental Health Integration Program. Participants were 18 years of age or older. The study took place 125 clinics in Washington. The care team was made up of a PCP, case manager, and consulting psychiatrist. Out of all the participants, thoughts of death and suicidal ideation (SI) were reported by 45.2% at their initial assessment and most were middle-aged males (Bauer, et al., 2013). A majority of the participants with SI scored higher on the first two questions (90.1%) and first eight questions (94.6%) rather than the last question on the PHQ-9. Participants with SI and a PHQ-8 of less than 10, had a clinical diagnosis of depression and few had no psychiatric or substance disorder diagnosis. Of 112 participants with SI, these patients did not have an elevated PHQ-8 or a depression diagnosis. Patients that endorsed item 9 on the PHQ-9 were rated as having SI. Patients with SI and receiving behavioral health care showed a correlation with item 9 on the PHQ-9. Patients endorsing SI received sooner and more intensive behavioral health services. These services included meeting with a case manager, psychiatric consult and prescribed psychotropic medications. Patients endorsing SI received behavioral health services, on average, 9 days sooner than those that did not. Findings of the study support that the PHQ-9 can be a useful tool identifying patients with SI.

Limitations of this study were that registry data was not complete. The study did not have access to all medical records, such as previous medical diagnosis, outcomes, and hospitalizations for suicide attempts. Data collection from PCP’s and the patient’s were not distinguished from each other. Strengths of this study show that the PHQ-9 is valuable tool to use to identify depression and/or SI.

Cohen, Balasubramanian, Davis, Hall, Gunn, Strange, & Miller (2015) published the study, *Understanding Care Integration from the Ground Up: Five Organizing Constructs that Shape Integrated Practices*. This was an observational study. The purpose of this study was to provide behavioral health care in a primary care setting in order to meet the physical and behavioral health needs of patients. The study tried to create a model that other practices learn from and follow. The study compared two different models of integrating behavioral health into primary care. The first group included 11 primary care clinics and they were a part of the Advancing Care Together (ACT) program. The second group was a part of the Integration Workforce Study (IWS) and contained 8 primary care practices. The ACT study was a longitudinal study that was implemented over a 3 year period. The IWS was a cross-sectional study that ran for 9 months. Data collected for each study was done through documents, field observation, interviews, and surveys. The studies came up with “5 key organizing constructs”, (Cohen et al., 2015) that help establish integration. The 5 are: Integration REACH (the extent to which the integration program was delivered to the identified target population), establishment of continuum of care pathways, approach to patient transitions, location of the integration workforce, and shared integration mental model (Cohen et al., 2015). The 5 constructs act as a model for primary care to integrate behavioral health services in their everyday practice (Cohen et al., 2015).

Limitations of this study were the different practices. Some of the practices were motivated to integrate behavioral health services while others were not. Another limitation was that the observer could hold bias for one group over the other and the study does not provide integration outcome data from each practice (Cohen et al., 2015). Strengths of this study is

research that has already been completed on integrating behavioral health into primary care and other practice can follow 5 constructs that have been discovered in this study.

Borschuk, Crewe, Jones, & Parker (2015) published the study *Delivery of Behavioral Health Services in a Pediatric Primary Care Setting: A Case Illustration with Adolescent Depression*. This study was a case illustration. This case illustration pointed out how this population was underserved and limited resources for treating mental illness. The purpose of this study was to show the benefits integrating behavioral health into primary care and managing adolescents with depression. The study addresses challenges that make it hard for behavioral health to be a part of primary care. The first challenge was stigma. Stigma can come from the patient themselves or others around them. Adolescents are teased and bullied when they are different than others. Having services at a PCP could help with some of the stigma. A patient sitting in a PCP's waiting room could protect them from the stigma rather than sitting in a behavioral health waiting room. The second challenge was systemic barriers. Some of these barriers are limited space in clinics, provider turnover, and the billing and cost of services. The third challenge was physician ambivalence. Some providers have different feelings towards behavioral health providers (BHPs). This could lead to communication issues which could lead to poor patient care. The last challenge mentioned was culture, race, and socioeconomic status. Providers need to be able to treat people without judging and be culturally competent. The case presented in this study was of a 16 year old, African American, female. She was from a low income family and lived in an urban area. She was referred by her PCP for depressive symptoms. The BHP was a Masters-level psychologist located in the patient's PCP's clinic. The patient was seen for weekly for 6 weeks. Each week her PHQ-9 was reviewed and CBT skills were implemented. The final session included the patient's family and her demonstrating the CBT

skills she had learned. The patient and her family saw positive benefits from this service. The case illustrated how the behavioral health services benefited the patient and her family in a short amount of time.

The strengths of this case illustration give the reader a working scenario of how integrated behavioral health services are implemented in primary care clinics. The case gives examples of positive outcomes for the patient, how effective communication will benefit patient treatment and outcomes. The limitation of this study was that only one case was reviewed. This case takes place at one clinic and with one patient. Also, no previous medical or mental health data was given.

Gray, Haji Ali Afzali, Beilby, Holton, Banham, & Karnon (2014) published the study Practice nurse involvement in primary care depression management: an observational cost-effectiveness analysis. This study was an observational study in which primary care practices were observed based on their level of collaboration and data was collected over a three year period. Primary care practices were assigned to one of three models of care based on the already established level of involvement of a practical nurse assisting with the behavioral health portion of depression management, including patient education, assessment of treatment compliance, and monitoring progress of depression. Nine total practices and 208 patients participated. Patients were 18-75 years old, diagnosed with major depression, had at least three visits to the clinic in the last two years, were not pregnant, did not have a severe mental disorder or dementia, and were not living in residential care facilities (Gray, et al., 2014). Attrition rate was 54, as it was discovered these patients didn't fit the criteria for the study. Independent variables were the level of involvement of a practical nurse, and dependent variables were state of depression. For measurement, the authors developed a six point scale to categorize the state of the patient's

depression based on a “case note audit form” that they applied to medical records (Gray, et al., 2014). This measurement tool was created by the authors and had no reliability information. Statistics used were the total number of days spent in remission or a recovery state. They describe calculating this as such: “the proportion of depression-free days (pDFDs) was calculated as the total number of depression free days divided by the number of days the patient participated in the study”, (Gray, et al., 2014). P value and confidence interval were also used. The mean proportion of depression free days was 0.55 for the clinics that had low practical nurse involvement, and 0.51 for clinics that had high practical nurse involvement. The mean difference with a 95% confidence interval was -0.05 (-0.15 to 0.05) and p value of 0.31. The authors state that “adjusted analyses found no significant differences in pDFDs between the models of care”, (Gray, et al., 2014).

Strengths of the study were that it detailed the level of involvement of the practical nurse, the detailed measurement system the authors used to determine depression/remission, low cost, and that it observed the natural state of depression treatment in primary care clinics. Limitations were there was subject selection bias, the sample size was small, and it spanned for three years. There are minimal risks due to the study being observational and this would include the possibility of private health information being leaked. It could be used in practice to show that these nurses need to be more rigorously trained in mental health in order for the collaboration to be successful.

Ramanuj, Talley, Breslau, Wang, & Pincus (2018) published the article, Integrating Behavioral Health and Primary Care Services for People with Serious Mental Illness: A Qualitative Systems Analysis. This qualitative study assesses the efforts to integrate behavioral health and primary care services. The authors wanted to identify factors that would aid or

interfere with integrating behavioral health into primary care. The study took place in New York because it has “the largest publicly funded behavioral health system in America”, (Ramanuj, et al., 2018). There were 11 practices that took part in this study that have already established integrated services. The clinics gave the authors clinical and population characteristics. In 2015, the sites had 3000 to 70,000 visits. Patient ages ranged from 35-50 years of age and mostly female. Two of the sites served mostly a black and Hispanic population. A psychiatrist conducted interviews with clinicians, administrators, and frontline staff. This was a total of 52 people. Interviews lasted 45 to 90 minutes and they were professionally transcribed, analyzed, and the data was entered into software. This analysis identified common themes. The themes identified were team working, reimbursement, and service arrangements. The themes that were established were carried out by facilitators in the clinic. The facilitators assisted in the implementation of the integrated behavioral health services.

The limitations of this study were that it only took place New York City, making it dependent on the regulations of New York State. Another limitation was no feedback from patients receiving integrated services. The last limitation identified was that the study could not include all patients because of ethical parameters. The strengths of this study gave a better understanding to integrating behavioral health services from clinics that already provide this service. The study found that integration advances along a network that is influenced by internal and external components (Ramanuj, et al., 2018).

Serrano, Prince, Fondow, & Kushner (2018) published the study: Does the Primary Care Behavioral Health Model Reduce Emergency Departments? This was a retrospective, quasi-experimental, controlled, pre-post study design. The purpose of this study was to investigate how integrating behavioral health services using the Primary Care Behavioral Health (PCBH) Model

would impact emergency department visits (Serrano, Prince, Fondow, & Kushner 2018). The study took place in three medical homes in Madison, WI. The data was collected through electronic health record and collected from 2003 to 2011. Patients in the study were at least 18 years of age and had one PCP visit during the data collection time period. Utilization data that was collected was ED and PCP visit along with three local hospitals. Data was collected from a total number of PCP encounters of 288,068 from 10,150 patients (Serrano, Prince, Fondow, & Kushner, 2018). There were 67,025 emergency room visits from 8,304 of the patients. Data was compared to the clinics the implemented PCBH model and to the clinic that did not. Data was also compared the prior to and after the intervention. The two clinics that implemented the intervention showed a decrease of emergency department visit during the time period of the study. One clinic showed a 11.3% decrease in emergency department visits (Serrano, Prince, Fondow, & Kushner, 2018). The clinic that did not implement the PCBH model “leveled out” the number of emergency department visits (Serrano, Prince, Fondow, & Kushner, 2018).

Limitations of this study were insufficient information on how the PCBH model worked. Also, there patient and provider feedback were not collected. There was also a lack of information on patient demographics. Another limitation was that it took place in a limited area. Strengths of this study were the size and time that was researched. The study also showed evidence that integrating behavioral health in primary care can reduce emergency department visits.

Interpretation/Outcome

All of these studies gathered evidence to see if integration of behavioral health services in primary care was beneficial in the management of mental illnesses, focusing on depression. Interventions used in the studies had both similarities and differences. The Richards, et al.,

(2013), and Bauer et al., (2016), studies all utilized a case manager as their main intervention for integration of services. This person would act as the liaison between the PCP and the behavioral health provider. Their other duties included follow up care, patient education, medication compliance, and coordination of services. The Szymanski, et al., (2012), defined having integrated care as having the behavioral health provider either on site, visiting the patient's home, or an office attached the primary care clinic. The Gray, et al., (2014) study looked at having a practical nurse take on that worked in the primary care clinic and acted as a case manager. The Gray, et al., (2014) study's strength was the three randomized trials, which provided a varied sample; however, the 3 trials were cluster trials which could increase bias. These were confirmatory studies, meaning they are designed to "test the relationship statistically while minimizing bias" (Houser, 2015, p. 135). The Szymanski, et al., (2012), and Gray, et al., (2014) were observational designs which allowed for a large sample size and "natural variation of care" (Houser, 2015, p.145), although it did not have the usual strength of being able to be generalized as it took place in a VA clinic. There were limitations of minimal control and possible selection bias and measurement error (Houser, 2015, p. 145), because the patients were already screened for depression and being treated the same day. The studies by Auxier, et al., (2012), Miller-Matero et al.,(2016), McLeod and Simpson (2017), and Ramanuj et al., (2018), collected data from the providers involved in the studies. It was beneficial to have feedback from the patients but having feedback from providers could also improve the model to make integration of care easier.

None of the studies used an identifiable theoretical framework, and several of them did not report attrition rate, and if they did, they did not answer the question why. The authors of the studies did not always report on the reliability of the scales used. These studies are important for

psychiatric APRNs that are interested in providing services in a primary care clinic. It is important for provider's to research the evidence to see what works and what does not. They can then utilize models that are already established and build off of them to suit the needs of their practice. The research does show that key factors are needed to integrated care. A few of those factors are: understanding of roles, good communication, competent providers, and motivation. Through true collaboration of the PCP and behavioral health provider, they will be able to deliver the best possible care to a patient suffering with a physical diagnosis along with depression.

Implications of nursing

Integrating behavioral health services into primary care can be a challenge. This type of challenge fits within the role of the nursing profession. Whether it be a Registered Nurse or an Advanced Practice Nurse, the diversity of the profession allows nurses to play a key role in integrative services. Providing behavioral health education to student nurses, promoting the psychiatric ARPN in primary care settings, and incorporating knowledge and skills across graduate studies coursework could improve the care to our patients and create a smoother transition to integrative services.

Registered Nurses roles in integrative services can be the bridge between the PCP and BHP. From the research studies, there were great benefits to having a liaison between providers. The RN would carry out tasks of communication between providers, provide education to patient that would include but not limited to: diagnosis, medication support, additional resources/services, etc., and coordination of care.

The Psychiatric Advanced Practice Nurse's role in integrative services can be to provide assessment, medication management, education, referrals if needed, and overall depression care.

The APRN can consult with a psychiatrist and PCP as needed. The APRN could provide education to PCPs on recognizing signs of depression and act as a consult to PCPs for patients they believe are at risk for depression. Patients referred for behavioral health services can be given a PHQ-9 prior to first visit and at each following visit allowing the APRN to compare scores. The patient could be asked to participate in a survey to assess their satisfaction with the intervention. Internal factors that need to be assessed are the location of the clinic and taking into consideration the culture and environment. Also, staffing has to be looked at. Are there enough staff to implement these services and have they been educated to care for this population? External factors are state and federal laws, and regulations and standards. Constraints that would affect the implementation of integrative services are staffing issues, lack of resources in rural areas, billing, and transportation.

In the future, it will be beneficial to conduct research in rural areas to improve access to behavioral healthcare services and to identify barriers that prevent this model of care from working.

Summary

The population of people that suffer with depression is underserved. Access and resources are limited for people with depression. This is a common disorder that can be easily managed with the right care and treatment. Collaborating care with BHP and PCP in a primary care clinic has demonstrated it is a more successful way to treat depression. The articles used in this literature review showed potential models that clinics may utilize when integrating services and the benefits of these services. Depression symptoms have shown to improve with thorough treatment and follow up by a BHP. The integrated approach treats patients as a whole and improves patient care.

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