

Adolescent Depression: Integrating Behavioral Healthcare in a Pediatric Primary Care Setting

Tori Danae Huftalin, BSN, RN, CPN

Mentor: Diana Jacobson, PhD, RN, PPCNP-BC, PMHS, FAANP

Arizona State University

Abstract

KEY WORDS: Adolescent depression, behavioral health, primary care, guideline implementation

INTRODUCTION: Despite depression affecting one of every ten adolescents, primary care providers struggle to detect depression in affected individuals. Unmanaged early onset adolescent mood disorders have an increased potential to result in suicide, the second leading cause of death in adolescents. Referring all patients with a positive depression screen to a mental health specialist creates treatment delay and burdens already limited community resources.

OBJECTIVE: The objective of this primary care practice transformation was to improve pediatric primary care provider confidence and behavior to support and deliver evidence-based behavioral healthcare for adolescents with mild to moderate depression.

METHODS: An evidence-based adolescent depression education program was delivered to pediatric primary care providers in a small community setting. The program's components included measures to identify and manage mild to moderate depression. Outcome measures included: 1) provider knowledge, beliefs, and confidence measured pre- and post-intervention; and 2) electronic health record documentation of provider adherence to guideline recommendations one, two, and three months post-intervention.

RESULTS: Four providers participated in the intervention. The mean total score for the provider beliefs and knowledge from a 5-point Likert scale demonstrated a positive increase after the intervention (14.75 vs. 23.25, $p = .068$). The mean total provider confidence score achieved near significance as well (12.25 vs. 21.75, $p = .066$). Resultant behavior change in the providers did not reach statistical significance when the electronic health records of all adolescent well visits over a three-month period were assessed. Screening for depression at adolescent well visits

increased from 0% to 84-90% post-intervention. Setting treatment goals upon detection of depression increased from 0% to 41% ($p = .089$). Providers appropriately administered active support 67% of the time when a patient was identified with mild depressive symptomology post-intervention. Providers complied with guideline recommendations with identified cases of moderate and severe depression ($n = 2$).

CONCLUSIONS: Pediatric primary care providers demonstrated some positive behavioral changes towards integrating behavioral healthcare into their practice after an educational session on the guidelines for adolescent depression.

Adolescent Depression: Integrating Behavioral Healthcare in a Pediatric Primary Care Setting

Adolescent mental health care is a challenge for many pediatric primary care providers (PCPs). PCPs struggle to detect and diagnose adolescent depression (AD), leaving as many as 50-66% of these individuals without diagnosis or management. Of those diagnosed, only about 50% are appropriately treated (Wren, Foy, & Ibeziako, 2012; Zuckerbrot, Cheung, Jensen, Stein, & Laraque, 2007). Resources are limited, and only 63% of counties in the United States (US) have one or more mental health facilities that provide outpatient mental health treatment for children and adolescents (Cummings, Wen, Druss, 2013). Even in commercially insured adolescents with a positive depression screening, as few as 18% of those referred to a mental health professional may attain a face-to-face appointment within 180 days (Hacker et al., 2014).

Background and Significance

A major depressive episode (MDE) affects approximately 11% of adolescents between the ages of 12-17 (National Institute of Mental Health [NIMH], 2014; Substance Abuse and Mental Health Administration [SAMHA], 2015). The twelve-month prevalence rate of major depression is estimated to be 2.8 million adolescents in the US (NIMH, 2014). Approximately three times as many females report depressive symptomology at rates of 12-16% versus 4-5% for males (SAMHA, 2015). The rates of AD are highest between the ages of 15-17 years, which corresponds to rates of 13.2-13.8% of the total adolescent population (NIMH, 2014). Major depressive disorder (MDD) is characterized by a significant impairment in functioning for at least two weeks with a depressed mood or loss of interest in pleasure in life activities (American Psychiatric Association [APA], 2013). Adolescents with mental health disorders are more likely to engage in early sexual activity and drug and alcohol use (Burnett-Zeiglar et al., 2012). Additionally, they report poorer grades in school and poorer self-rated health status with

increased use of emergency services (Burnett-Zeiglar et al., 2012). MDD can have hindering long-term implications, as depression is considered the second leading cause of years lived with disability worldwide (Ferrari et al., 2013). Considering the economic burden of adults with MDD which is estimated to be \$210.5 billion in 2010 in the US (Greenberg, Fournier, Sisitsky, Pike, & Kessler, 2015), successful treatment outcomes of adolescent depression demonstrate significant value. Additionally, integrated behavioral and medical care alleviates some of the burden and expense of referrals to specialist care. Finally, depression places an adolescent at an increased risk of suicide, which is the third leading cause of death in young adults (Forman-Hoffman et al., 2016; Wren et al., 2012). Ultimately, early depression recognition and management may play a role in preventing the desperation that leads to suicide (Neves & Leanza, 2014).

Exhaustive Search Strategy

An exhaustive literature search was employed to answer the clinically relevant PICO question, “In adolescents ages 11-18 with a positive depression screening at a primary care visit, how does early treatment using integrated mental healthcare in the primary care setting compared to usual care affect their outcomes on a follow up depression screening?” The Cochrane Database of Systematic Reviews, PubMed, PyscINFO, and CINAHL databases were utilized for the search using the following similar search terms: *adolescent depression, primary care, youth depression, child depression, primary care management, early management, early intervention, early recognition, integrated behavioral-medical care, integrated care, collaborative care, active support, active monitoring, usual care, referral, selective serotonin reuptake inhibitor, and outcomes*. Limits were applied to include evidence from 2010 to present, peer reviewed articles, clinical trials, systematic reviews, and meta-analyses. The final numbers of reviewed evidence from each database are as follows: Cochrane Database of Systematic

Reviews (38), PubMed (37), PsycINFO (34), and CINAHL (74). Additionally, the National Guideline Clearinghouse was searched using the term *adolescent depression (AD)* with a yield of 99 results. Manual review produced one additional guideline for consideration.

Critical Appraisal and Synthesis

The ten studies included for evidence synthesis were selected based on critical evaluation for relevance and quality. The evidence synthesis included five systematic reviews (SRs) (Chueng et al., 2007; Dolle & Schulte-Körne, 2013; Foreman-Hoffman et al., 2016; McDermott et al., 2011; Zuckerbrot et al., 2007), three meta-analyses (MAs) (Cox et al., 2014; Ma et al., 2014; Richardson et al., 2014), one randomized control trial (RCT) (Asarnow et al., 2015), and one case-control cohort study (CCC) (Wells et al., 2012).

The results of the critical appraisal of the selected studies revealed that active support should be considered as first-line treatment for mild depression with follow-up at 1-2 week intervals (Chueng et al., 2007; Dolle & Schulte-Körne, 2013; Foreman-Hoffman et al., 2016; McDermott et al., 2011; Zuckerbrot et al., 2007). Cognitive Behavioral Therapy (CBT) should be first-line therapy for moderate MDD (Dolle & Schulte-Körne, 2013; McDermott et al., 2011); however, selective serotonin reuptake inhibitor (SSRI) or combination therapy of SSRI and psychotherapy also may be considered first-line therapy (Chueng et al., 2007; Foreman-Hoffman et al., 2016). While one MA, including 21 RCTs, considered Fluoxetine superior to CBT alone (Ma et al., 2014), another MA, including 11 RCTs, did not reach the same conclusion (Cox et al., 2014). However, both MAs concluded that combination treatment for best for efficacy and safety. A CCC, RCT, and MA all demonstrated both statistical and clinical significance to support the integration of mental health into PC through guideline-based care and collaboration (Asarnow et al., 2015; Richardson et al., 2014; Wells et al., 2012).

Purpose

The purpose of this Doctor of Nursing Practice (DNP) project was to positively impact pediatric primary care provider confidence and behavior to support the integration of guideline-based mental healthcare into their practice for adolescents with depressive symptomology who screen positive for depression in the primary care setting. This practice change supports earlier intervention and evidence-based care for patients who are identified with AD in PC.

Model and Framework

In order to guide project execution, an evidence-implementation framework suitable for modest-sized practice was selected. The Promoting Action on Research Implementation in Health Services (PARIHS) framework includes elements of evidence, context, and facilitation (Rycroft-Malone, 2004). Best achievement of evidence-based practice occurs when those elements are functioning at the highest end of their spectrums. Implementation of this framework included appraised research, transformational leadership, empowerment of staff and families, adult learning approaches, and assignment of meaning to practice change.

In order to promote provider confidence and, ultimately, encourage practice change to incorporate depression screening and treatment into primary care, Bandura's Social Cognitive Theory (SCT) guided the project (Bandura, 1986). SCT posits that environment, personal, and behavioral factors interplay and impact future behavior; therefore, success is more likely if individuals are able to regulate their own motivation and behavior (Bandura, 1986). In order to support this project, alternative practice habits and decision support was built into the electronic health record (EHR), which assigned value to depression care in each healthcare provider's personal delivery of healthcare. This decision support was instituted in order to promote sustainable change.

Methods

Approval for the project was obtained from the Arizona State University Institutional Review Board. A small pediatric primary care office with five pediatric providers in a major metropolitan area in the Southwestern US was actively seeking improvement in their care for adolescents with depression and agreed to participate in the project. The project intervention included provider education as well as the development of a clinical decision-making support tool. Provider education encompassed screening, diagnosis, and initial management of mild to moderate AD. The education provided foundational knowledge concerning active support and monitoring, medication dosage/indications/side effects, and a process for direct referral for patients to receive services such as CBT from a mental health provider. An algorithm describing the interventions for patients who scored positively on the screening tool (Patient Health Questionnaire-9) was built into the EHR to provide decision support for the providers in the practice. The algorithm included information for all patients with depression symptoms as well as for each level of depression documented (i.e., mild, moderate, and severe). However, the providers were not obligated to use this tool and could easily choose to continue to document as they did pre-intervention.

Outcome Measures

Provider knowledge, beliefs, and confidence. One outcome measure for this project included provider knowledge, beliefs, and confidence, which was measured pre- and post-intervention. In order to assess provider knowledge, beliefs, and confidence, a 5-point Likert scale tool was created with the assistance of a field expert after an extensive review of the literature demonstrated no existing tool had been developed to capture this information. The assessment tool included seven questions each on both knowledge and confidence in relation to

guideline-based care for adolescent depression. This outcome was measured pre-intervention and one week post-intervention.

Behavior change. The second outcome assessed for behavior change following the intervention using electronic health record (EHR) documentation of provider adherence to guideline recommendations one, two, and three months post-intervention. To assess for the provider adherence to the guidelines over the course of three months post-intervention, all well child visits were assessed in the EHR from 9/1/2016 to 12/1/2016 to capture all screening attempts for AD. A tool was created with a field expert and included an assessment of the exact guideline recommendations for each level of depression. Data from the previous year regarding the well visits (9/1/2015 to 12/1/2015) was collected for comparative analysis.

Statistical Tests

In order to assess for a difference in the mean total score from the provider surveys, a Wilcoxon Signed-Rank Test was used. EHR data was analyzed using frequencies and cross-tabulation. When it was appropriate, a Fisher exact test was used to assess for statistically significant differences between the two independent samples in basic depression intervention for any level of depression pre-intervention and post-intervention.

Results

Provider Knowledge, Confidence, and Beliefs

A total of four providers participated in the intervention. Provider experience as a pediatric healthcare provider ranged from 2 to 24 years. The mean total score for the provider beliefs and knowledge demonstrated a positive increase after the intervention (14.75 vs. 23.25, $p = .068$). The mean total provider confidence score also improved, but did not attain statistical significance (12.25 vs. 21.75, $p = .066$). While statistical significance was not achieved with such

a small sample size, the positive change in the mean total scores reflects encouraging clinical significance.

Behavior Change in Providers

A total of 237 charts were reviewed to assess for depression screening and intervention at well visits. A total of 90 charts comprised the pre-intervention data collection while the remaining 147 charts reviewed comprised post-intervention data collection. In the pediatric primary care practice, screening for depression in the practice for adolescents 11 to 17 years of age increased significantly from 0% at pre-intervention to 88%, 90%, and 84% at one, two, and three months post-intervention, respectively. During the project, it was determined that adolescents attended well visits with decreasing frequency as they became older; 21.9% of the well visits were 11 year olds with a steady decline in percentage to 9.3% noted at 17 years of age. Of the EHR reviewed well visits, females composed a higher percentage of visits at 56.5%. In this patient population, adolescents were supported by private insurance 68.8% of the visits while 29.5% had Medicaid or public insurance.

In the pre-intervention data (n = 90 charts), depression was listed on the problem list of eight adolescents. Post-intervention (n = 147 charts) screening for adolescent depression using the PHQ-9 identified nine adolescents (6.1%) with mild depression, one adolescent (0.68%) with moderate depression, and one adolescent (0.68%) with severe depression. Three (2%) of the adolescents who screened positive post-intervention already had the diagnosis of depression listed on their problem list from a prior office visit. There were a total of twelve adolescents with documented depression in the post-intervention EHR chart review data collection. Screening did not seem to impact the level of depression detected in this patient population, as depression had

been identified in 8.8% of the individuals pre-intervention and 8.1% of the individuals post-intervention.

Application of basic AD guideline recommendations for all levels of depression did not demonstrate statistical significance in the analyses of the providers' documentation as noted on EHR data collection at one, two, or three months post-intervention. However, setting treatment goals with depressed adolescents neared statistical significance ($p = .089$). The results of a Fisher exact test indicate that providers discussed the limits of confidentiality more post-intervention ($n = 2$) versus pre-intervention ($n = 0$) ($p = .385$). Treatment goals were set at a higher rate post-intervention ($n = 5$) than pre-intervention ($n = 0$) ($p = .089$). Assessment of personal strengths occurred more often after the intervention (3 versus 0 occasions, $p = .237$). Review of some type of depressive symptomology occurred on seven occasions post-intervention and four times pre-intervention ($p = .590$). Discussion of thoughts of harm to self or others or creation of a safety plan occurred only six times post-intervention and four times pre-intervention ($p = .568$).

Nine adolescents were identified with mild depression in the post-intervention data. Of these nine adolescents, two received no guideline-based intervention for mild depression from the PCP. Active support was documented for 67% of the adolescents with mild depression ($n = 6$). Weekly or bi-weekly follow-up was recommended only 22% of the time ($n = 2$). Additionally, counseling was recommended for 22% of the adolescents with mild depression ($n = 2$). For the one adolescent identified as moderately depressed, the provider complied with the appropriate recommendations of setting treatment goals, reviewing depressive symptomology, creating a safety plan, and discussing and initiating an appropriate evidence-based interventions for moderate depression. For the adolescent identified as severely depressed, the provider

appropriately assessed for self-harm, created a safety plan, and immediately referred the patient to a mental health specialist in a proper timeframe.

Discussion

While the practice transformation DNP project did not have statistical significance on any measured outcome, many barriers and influencing factors in the design and delivery of the project were identified. One of the providers who participated in the intervention left the practice two weeks after the intervention was delivered. Two providers employed by the practice over the course of EHR data collection did not attend the intervention session due to illness or employment initiation after the intervention delivery. In consideration of the small sample size, no identifying measures were obtained on any provider in order to maintain participant confidentiality. This consideration impacts the chart review data as two providers did not receive the intervention yet are still included in the post-intervention chart review. Of those that the providers serve, privately insured children are a high percentage of the patient population. Additionally, well visits for adolescents 11-14 years of age composed 73% of the EHR data at this practice, while the national data demonstrates that the occurrence of AD is highest in individuals 15-17 years of age (NIMH, 2014). Adolescents who received well care during the data collection period of the project that could not be screened due to documented barriers (e.g., blindness, severe mental or behavioral issues) were included in the EHR data collection and analysis to remain compliant with the IRB-approved protocol. Finally, documentation of measures provided in a visit may not always be complete. Guideline recommendations that may have been followed may not be documented as instructed in the educational intervention. Based on the wording of the documentation in the chart reviews, it became apparent that some providers chose not to use the algorithm and documentation tool built into the EHR.

The results of the project demonstrate that provider behavior change can be difficult to obtain when instituting new practice measures because providers need to adapt to a higher workload, increase their knowledge of depression and treatment, and develop new behavioral skills. Because there was no identifying provider data obtained, the results are impacted to an unknown extent secondary to two providers not receiving the educational intervention before implementation. However, it is important to note that both patients with moderate and severe levels of depression screened and identified post-intervention received appropriate guideline-based care. Although the project focus was to increase the rates of PC management of mild to moderate depression, the results of the DNP project indicated that many of the adolescents with mild depression did not receive full guideline-based recommended care post-implementation. Nevertheless, the initiation of active support in 67% of the cases of mild depression is a clinically significant advancement in integrating behavioral healthcare in this pediatric PC setting.

In this DNP project, screening identified additional adolescents with depression post-intervention that did not have previously documented depression in their medical history. The total percentage of adolescents identified with depression pre- to post-intervention remained the same (8% versus 8%). It is difficult to ascertain whether adolescents with a positive depression screening would have been identified in another way at some point regardless of the implementation of this practice change of routinely screening for depression.

Significance and Impact

The objective of the practice transformation was to support providers' knowledge and confidence to integrate higher levels of evidence-based mental healthcare into their practice. In one particular witnessed case during the course of the project, the knowledge of the guidelines

empowered a provider to successfully manage an adolescent who failed outside treatment through the use of medication and active support measures in the PC setting. After the intervention, PCPs had the tools they needed to practice to their fullest scope in screening and managing mild to moderate adolescent depression. Long term, this might help alleviate the burden of referrals to mental health specialists in the community and enable those adolescents struggling with more severe mental or behavioral issues to see the specialist sooner. The clinical decision support tool built into the EHR supports project sustainability and encourages PCPs at this practice to provide evidence-based behavioral healthcare for adolescents screening positive for depression. Ultimately, to some extent, this DNP project increased comprehensive care in the PC setting for adolescents.

Implications and Conclusion

Improving providers' knowledge, confidence and beliefs about their ability to assess and manage AD according to current guidelines can have a positive impact on practice and behavior change. In future practice transformations, it would be helpful to create a protocol to establish a follow-up office visit for a positive depression screen in addition to addressing the concern in the well visit. Additionally, future practice improvement projects should examine how a depression screening intervention for healthcare providers can simplify practice for providers, facilitating sustainability, supporting engagement, and incentivizing participation.

If practice change occurs through the integration of behavioral healthcare into primary care for adolescents with depression, there is potential for improved mental, physical, and social health with early depression recognition and management (Richardson et al., 2014). Adolescent behavioral healthcare suffers in light of the shortage of behavioral health specialist providers. This shortage can be buffered through the inclusion of trained PCPs to use evidence-based

treatment modalities to address depression (Cheung et al., 2007; Zuckerbrot et al., 2007). For the PCPs, following guideline recommendations can expand their scope of practice to address a diagnosis that is widely neglected, filling a significant gap in practice. For patients, the implication of proper recognition and management of their depressive symptoms could lead to improved physical health and school performance and decreased drug, alcohol, and early sexual activity (Burnett-Zeiglar et al., 2012).

References

- American Academy of Pediatrics & Bright Futures (2016). Recommendations for preventative pediatric health care (Periodicity schedule). Retrieved January 22, 2016, from https://www.aap.org/en-us/Documents/periodicity_schedule.pdf
- American Psychiatric Association (2013). *Diagnostic and Statistical Manual of Mental Disorders (DSM-5)*. 5th ed. Arlington, VA: American Psychiatric Association.
- Asarnow, J. R., Rozenman, M., Wiblin, J., & Zeltzer, L. (2015). Integrated medical-behavioral care compared with usual primary care for child and adolescent behavioral health. *Journal of the American Medical Association Pediatrics*, *169*(10), 929. doi:10.1001/jamapediatrics.2015.1141
- Bandura, A. (1986). *Social foundations of thought and action: A social cognitive theory*. Englewood Cliffs, N.J.: Prentice-Hall.
- Burnett-Zeigler, I., Walton, M. A., Ilgen, M., Barry, K. L., Chermack, S. T., Zucker, R. A., . . . Blow, F. C. (2012). Prevalence and correlates of mental health problems and treatment among adolescents seen in primary care. *Journal of Adolescent Health*, *50*(6), 559-564. doi:10.1016/j.jadohealth.2011.10.005
- Cheung, A. H., Zuckerbrot, R. A., Jensen, P. S., Ghalib, K., Laraque, D., & Stein, R. E. (2007). Guidelines for adolescent depression in primary care (GLAD-PC): II. Treatment and ongoing management. *Pediatrics*, *120*(5). e1313-e1326. doi:10.1542/peds.2006-1395
- Cheung, A. H., Kozloff, N., & Sacks, D. (2013). Pediatric depression: An evidence-based update on treatment interventions. *Current Psychiatry Reports*, *15*(8). 381. doi:10.1007/s11920-013-0381-4

- Cox, G. R., Callahan, P., Churchill, R., Hunot, V., Merry, S. N., Parker, A. G., & Hetrick, S. E. (2012). Psychological therapies versus antidepressant medication, alone and in combination for depression in children and adolescents. *Cochrane Database of Systematic Reviews*, (11)CD008324. doi:10.1002/14651858.CD008324.pub2
- Cummings, J. R., Wen, H., & Druss, B. G. (2013). Improving access to mental health services for youth in the United States. *Journal of the American Medical Association*, 309(6), 553-554. doi: 10.1001/jama.2013.437
- Dolle, K., & Schulte-Körne, G. (2013). The treatment of depressive disorders in children and adolescents. *Deutsches Aerzteblatt International*, 110(50), 854-860. doi:10.3238/arztebl.2013.0854
- Ferrari, A. J., Charlson, F. J., Norman, R. E., Patten, S. B., Freedman, G., Murray, C. J. L., . . . Whiteford, H. A. (2013). Burden of depressive disorders by country, sex, age, and year: Findings from the global burden of disease study 2010. *PLoS Medicine*, 10(11), e1001547. doi:10.1371/journal.pmed.1001547
- Forman-Hoffman, V., McClure, E., Mckeeman, J., Wood, C. T., Middleton, J. C., Skinner, A. C., . . . Viswanathan, M. (2016). Screening for major depressive disorder in children and adolescents: A systematic review for the U.S. preventive services task force. *Annals of Internal Medicine*, 164(5), doi:342.10.7326/m15-2259
- Foy, J. M. (2010). Enhancing pediatric mental health care: Algorithms for primary care. *Pediatrics*, 125(Supplement), S109-S125. doi:10.1542/peds.2010-0788F
- Foy, J. M., Kelleher, K. J., & Laraque, D. (2010). Enhancing pediatric mental health care: Strategies for preparing a primary care practice. *Pediatrics*, 125(Supplement), S87-S108. doi: 10.1542/peds.2010-0788E

- Gabel, S. (2010). The integration of mental health into pediatric practice: Pediatricians and child and adolescent psychiatrists working together in new models of care. *Journal of Pediatrics*, *157*(5), 848-851. doi:10.1016/j.jpeds.2010.06.007
- Greenberg, P. E., Fournier, A., Sisitsky, T., Pike, C. T., & Kessler, R. C. (2015). The economic burden of adults with major depressive disorder in the United States (2005 and 2010). *The Journal of Clinical Psychiatry*, *76*(2), 155-162. doi:10.4088/jcp.14m09298
- Hacker, K., Arsenault, L., Franco, I., Shaligram, D., Sidor, M., Olfson, M., & Goldstein, J. (2014). Referral and follow-up after mental health screening in commercially insured adolescents. *Journal of Adolescent Health*, *55*(1), 17-23. doi:10.1016/j.jadohealth.2013.12.012
- Kitson, A. L., Rycroft-Malone, J., Harvey, G., McCormack, B., Seers, K., & Titchen, A. (2008). The PARiHS diagnostic and evaluative grid. Retrieved March 31, 2016, from <http://implementationscience.biomedcentral.com/articles/10.1186/1748-5908-3-1>
- Lewandowski, R. E., Acri, M. C., Hoagwood, K. E., Olfson, M., Clarke, G., Gardner, W., . . . Horwitz, S. M. (2013). Evidence for the management of adolescent depression. *Pediatrics*, *132*(4), e996-1009. doi:10.1542/peds.2013-0600
- Ma, D., Zhang, Z., Zhang, X., & Li, L. (2014). Comparative efficacy, acceptability, and safety of medicinal, cognitive-behavioral therapy, and placebo treatments for acute major depressive disorder in children and adolescents: A multiple-treatments meta-analysis. *Current Medical Research & Opinion*, *30*(6), 971-995. doi:10.1185/03007995.2013.860020
- McDermott, B., Balgen, M., Chanen, A., Fraser, L., Graetz, B., Hayman, N., . . . Spence, S. (2011). *Clinical practice guidelines: Depression in adolescents and young adults*. Melbourne:

- beyondblue. Retrieved from
<http://resources.beyondblue.org.au/prism/file?token=BL/0890>
- National Institute of Mental Health (2014). Major depression among adolescents. Retrieved February 7, 2016, from <http://www.nimh.nih.gov/health/statistics/prevalence/major-depression-among-adolescents.shtml>
- Neves, M. G. & Leanza, F. (2014). Mood disorders in adolescents: Diagnosis, treatment, and suicide assessment in primary care setting. *Primary Care, 41*(3), 587-606. doi: 10.1016/j.pop.2014.05.008
- Phipps, M., Ozanne, L. K., Luchs, M. G., Subrahmanyam, S., Kapitan, S., Catlin, J. R. . . Weaver, T. (2013). Understanding the inherent complexity of sustainable consumption: A social cognitive framework. *Journal of Business Research, 66*(8), 1227-1234.
doi:10.1016/j.jbusres.2012.08.016
- Richardson, L. P., Ludman, E., Mccauley, E., Lindenbaum, J., Larison, C., Zhou, C., . . . Katon, W. (2014). Collaborative care for adolescents with depression in primary care. *Journal of the American Medical Association, 312*(8), 809-816. doi: 10.1001/jama.2014.9259
- Richardson, L. P., Mccauley, E., Grossman, D. C., Mccarty, C. A., Richards, J., Russo, J. E., . . . Katon, W. (2010). Evaluation of the Patient Health Questionnaire-9 item for detecting major depression among adolescents. *Pediatrics, 126*(6), 1117-1123.
doi:10.1542/peds.2010-0852
- Rycroft-Malone, J. (2004). The PARIHS framework--A framework for guiding the implementation of evidence-based practice. *Journal of Nursing Care Quality, 19*(4), 297-304. doi:10.1097/00001786-200410000-00002

Substance Abuse and Mental Health Administration (2015). America's children: Key indicators of childhood well-being, 2015. Retrieved January 19, 2016, from

<http://www.childstats.gov/americaschildren/health4.asp>

Wells, K. B., Tang, L., Carlson, G. A., & Asarnow, J. R. (2012). Treatment of youth depression in primary care under usual practice conditions: Observational findings from youth partners in care. *Journal of Child and Adolescent Psychopharmacology*, 22(1), 80-90.

doi:10.1089/cap.2011.0074

Wren, F. J., Foy, J. M., & Ibeziako, P. I. (2012). Primary care management of child & adolescent depressive disorders. *Child and Adolescent Psychiatric Clinics of North America*, 21(2),

401-419. doi:10.1016/j.chc.2012.01.008

Zuckerbrot, R. A., Cheung, A. H., Jensen, P. S., Stein, R. E., & Laraque, D. (2007). Guidelines for adolescent depression in primary care (GLAD-PC): I. Identification, assessment, and

initial management. *Pediatrics*, 120(5), e1299-e1312. doi:10.1542/peds.2007-1144