



## Conference Proceeding

# Making an IMPACT: Behavioral Activation, Problem Solving and Stepped Depression Care for Persons Living with Type 2 Diabetes

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### Abstract

**Background:** This 2017 study examined an adaptation of the evidence-based **Improving Mood-Promoting Access to Collaborative Treatment (IMPACT)** Care Model, which included clinical social work/behavioral health care services in a primary care setting. **Aims:** The aims of this study included the description and examination of the lived experiences of the participants who were living with type 2 diabetes, depressive disorders, and psychosocial distress. Additionally, this study was to determine the usefulness and efficacy of the adapted IMPACT Care Model with the sample. **Participants:** The participants were a very small sample of two African Americans and one Latina, who were low-income, medically indigent adult outpatients (n=3), from the southern section of Dallas, Texas, USA, who are living with type 2 diabetes and depressive disorders. **Methods:** The methods included providing clinical counseling interviews/behavioral interventions, along with the self-administered psychometric depression screening tool – the nine-item Patient Health Questionnaire-9 [PHQ-9 ©], and the collection of demographic information. **Results:** The results indicated that these African American and Latina outpatients balanced multiple psychosocial stressors, which affected their mental/behavioral health and physical health. Furthermore, the mediating factors of religion, spirituality, resiliency, and survivorship, along with the moderating factors of having supportive family and friends, health care access, religious involvement and living in the southern geographic region, all were important parts for these outpatients, in addressing their mental and behavioral health, in enhancing their diabetes glycemic control and in improving their diabetes self-management. **Conclusion:** This study helped to fill the knowledge gaps by examining the narrative accounts of these adults who are living with type 2 diabetes, depressive disorders, and psychosocial distress, and also explored the utilization of clinical social work/behavioral health care services, specifically regarding depression severity, functional impairment, and depression related quality of life. **Recommendations:** Going forward, to successfully address type 2 diabetes and mental/behavioral health inequalities in communities of color, it is important to further develop innovative, evidence-based interventions. Having culturally competent health care professionals, along with professionals who reflect the patient/client population, e.g., community health workers and promotores de salud (Latinx health promoters) are potential strategies to improve the overall health outcomes of African American and Latinx persons who living with type 2 diabetes and depressive disorders, thereby giving voice to their biopsychosocial-cultural-spiritual aspects, along with their psychosocial-environmental determinants of health and socio-emotional suffering, that is, oppression, discrimination, poverty, social injustice.

**Keywords:** African Americans; Latina; Type 2 diabetes; Depressive symptoms; Clinical social work; IMPACT; Behavioral activation; Problem solving; Stepped depression care

### Introduction

Research regarding the blood glucose (blood sugar) dysregulating chronic disease of diabetes mellitus, also known as diabetes, indicates that more than 30.3 million people in the United States (U.S.) are living with diabetes, and one in four do not even know that they have diabetes [1,2]. Furthermore, more than 84.1 million adults in the U.S – one in three – have prediabetes, that is, they have higher than normal blood glucose levels, i.e., a hemoglobin A<sub>1c</sub> of 5.7% – 6.4%; and 90% of them do not even know they have prediabetes [1,2]. The CDC indicates that prediabetes is a risk factor for type 2 diabetes, the most frequently occurring type of diabetes, along with the other risk factors of being overweight and being physically inactive [2].

People with diabetes spend more on health care, have fewer productive years and miss more workdays compared to people who do not have diabetes [2]. In 2017, the total estimated annual cost of diagnosed diabetes was \$327 billion, including \$237 billion annually in diabetes related health care and \$90 billion annually in reduced productivity [2].

A person with prediabetes is at high risk of developing type 2 diabetes, heart disease, and stroke, clinically known as, cardiovascular accident/CVA. Diabetes also increases the risk of major cardiovascular disease and stroke. Type 2 diabetes can also lead to other serious complications, such as kidney failure, blindness, and nerve damage that can result to lower-limb amputations of a toe, foot, or leg [2]. Some people may be at higher risk of type 2 diabetes, due to being overweight or having obesity, being age 45 or older, having a parent,

sibling or other close blood relative with type 2 diabetes; being physically active less than 3 times a week; having a history of gestational diabetes, i.e., diabetes during pregnancy; or giving birth to a baby who weighed more than nine pounds, and/or are African American, Hispanic or Latinx, Native American, Alaskan Native, Pacific Islander or Asian American [2].

The type 2 diabetes risk factors of age and family history cannot be modified. However, some risk factors can be modified, such as having prediabetes, being overweight with a body mass index [BMI] of 25.0 to 29.9 kg/m<sup>2</sup> [kilograms per meter squared]; obesity with a body mass index [BMI] of greater than 30.0 kg/m<sup>2</sup>; eating unhealthy food, such as, high carbohydrate, high sugar, high fat foods; physical inactivity; high blood pressure of greater than 140/90 mmHg [millimeters of mercury]; high cholesterol levels with a non-HDL [high density lipoprotein] level of greater than 130 mg/dl [milligrams per deciliter]; and tobacco smoking [2]. The Centers for Disease Control and Prevention continue to work to help people reduce those modifiable risk factors, i.e., the ABCs: A1c, Blood Pressure and Cholesterol, in order to, prevent or delay the development of type 2 diabetes and prediabetes and also to improve overall public health (Table 1 for modifiable and non-modifiable risk factors for chronic diseases).

The Division of Diabetes Translation of the Centers for Disease Control and Prevention is at the leading edge of the national effort to end the devastation of diabetes, by working with federal agencies, state health departments, health care providers, community based and faith based organizations and others, in order to, identify people with prediabetes, prevent type 2 diabetes, prevent diabetes complications and disability, and reduce diabetes-related disparities, which are health differences across different geographic, racial, ethnic, and socioeconomic groups, along with improving the health of all people with diabetes. Collectively, these efforts have helped millions of Americans to reduce their risk of prediabetes, type 2 diabetes and prevent or delay serious diabetes complications [2].

Chronic Diseases	Chronic Diseases
Modifiable Risk Factors	Non-Modifiable Risk Factors
Poor eating habits	Age
Lack of physical activity	Family history
Tobacco use	Racial/ethnic predisposition
Excessive alcohol use	
Environmental factors	
Socioeconomic status	

Sources: Center for Disease Control and Prevention, 2020  
World Health Organization, 2011, 2020.

**Table 1:** Common risk factors for chronic diseases.

## Diabetes, Depression and the Intersectionality of Race/Ethnicity

### Co-Existing Conditions: Diabetes and Depression

The presence of the blood glucose dysregulating, insulin resistant condition of type 2 diabetes and the brain chemical

imbalance condition of depression, as evidenced by its cognitive, behavioral and mood manifestations are significant health concerns. Depression and its' symptoms related to profound sadness are a common comorbidity in persons living with diabetes [3]. Furthermore, for people living with diabetes, the co-existing presence of major depressive disorder (MDD) is a debilitating chronic condition that may affect every aspect of life, and may lead to poorer health outcomes, uncontrolled blood glucose levels, diabetes complications, and higher mortality rates [4,5].

### Depressive disorders

The American Psychiatric Association's [6] Diagnostic and Statistical Manual of Mental Disorders® (5<sup>th</sup> ed.; DSM-5®), indicates that depressive disorders include major depressive disorders (including major depressive episode), disruptive mood dysregulation disorders, persistent depressive disorder (chronic dysthymia of at least 2 years in adults), premenstrual dysphoric disorder, substance/medication induced depressive disorder, depressive disorder due to another medical condition, other specified depressive disorder, and unspecified depressive disorder [6] [(Table 2) for mental/behavioral health conditions and risk factors)]. The common feature of all of these disorders is the presence of a sad, empty, or irritable mood, accompanied by cognitive, affective, neurovegetative functions and somatic changes that significantly affect the individual's capacity to function; given the distinguishing features of timing, duration (of at least 2 weeks), or presumed etiology. Cognizant that the risk of suicidal behavior may exist during major depressive episodes, suicide risk assessments must occur. Recovery from depressive disorders may be facilitated by psychotherapy and/or antidepressant medication treatment [6].

Bereavement typically does not induce an episode of a major depressive disorder but may induce great suffering. However, when bereavement and major depressive disorder occur together, the prognosis is worse and the functional impairment symptoms tend to be more severe [6].

Mental/Behavioral Health Conditions
Risk Factors
Family History
Stressful life conditions
Having a chronic disease
Traumatic experiences
Substance use disorders
Childhood abuse or neglect
Lack of social support

Mayo Clinic, 2012, 2015.

**Table 2:** Mental/Behavioral health conditions and risk factors.

## The Intersectionality of Diabetes, Depression and Race/Ethnicity

Health care researchers have indicated that "discrimination is associated with poor mental health for African Americans and Latinos [7], who experience twice the prevalence of diabetes (10% - 11%), than non-Latino whites

(NLWs, 5%)”, along with “worse glycemic control, and higher diabetes mortality rates” [7].

## Conceptual framework

### Behavioral Analytics and Expectancy Value Theory (EVT)

In 1973, C. B. Ferster proposed a behavioral analytic theory of depression, providing an alternative to the psychoanalytic theory which was prominent at that time [8]. According to Magidson et al., considerable evidence-based research suggests that the personality traits that are most linked to health problems can be modified with interventions. This developing body of research suggests that behavioral intervention, using a theoretically-driven bottom-up approach, i.e., by targeting core behaviors that underlie personality traits with the goal of engendering new, healthier behavior patterns that become automatized and manifest in changes in personality traits and this approach may also alter problematic personality traits. The clinical application of this “bottom-up model” necessitates a clear set of guiding principles and a theory-driven modification of targeted personality traits, specifically focusing on targeting the trait of conscientiousness using a Behavioral Activation (BA) approach, a relevant behavioral intervention. Within the motivational framework of Expectancy Value Theory (EVT), Behavioral Activation (BA) is situated [9].

### Expectancy Value Theory (EVT)

Given its’ perceived self-efficacy to enact behavior, Eccles’ Expectancy-Value Theory (EVT), focuses on motives, values, goals, and their context-specific nature, and incorporates both a consideration of personal motives and personality disposition to demonstrate how identity shapes values, goals and subsequent behaviors and decisions [9-11]. Herein, the three main components are: 1) a value component – including the individual and collective group; 2) a content component – encompassing one’s own identity; and 3) the efficacy or expectancy component – regarding self-beliefs to enact behaviors. Thus, the selection of behaviors that individuals are self-motivated to practice increases the likelihood of behavior change over time [9].

### Behavioral Activation (BA)

Peter Lewinsohn and colleagues at the University of Oregon were the first to develop Behavioral Activation (BA) as a treatment for depression and developed the treatment to increase pleasant activities for depressed individuals [8,12,13].

Behavioral Activation is a treatment for depression that holds that context, rather than internal factors such as cognitions, is a more efficient explanation for depression, and a more efficacious realm in which to intervene [8]. Evidence-based research has indicated that behavioral activation is as efficacious as antidepressant medication, i.e., selective serotonin reuptake inhibitors/SSRIs, cognitive behavioral, behavioral, and cognitive psychotherapy in the treatment of moderate to severe depression [8,14]. Behavioral Activation

seeks to help people understand environmental sources of depression and seeks to target behaviors that might maintain or worsen the depression. The BA model proposes that life events, which can include specific trauma or loss, biological predispositions to depression, or the daily hassles of life, can lead to individuals to have low levels of positive reinforcement in their lives and more negative reinforcements. Consequently, targeted, and focused BA intervention sessions target inertia and behavioral avoidance and is considered as an effective treatment to alleviate depression [14].

### IMPACT: Improving Mood-Promoting Access to Collaborative Treatment

According to the Advancing Integrated Mental Health Solutions Center (the AIMS Center) at the University of Washington, Psychiatry and Behavioral Sciences, Division of Population Health, the terms “IMPACT Care” or “IMPACT Model” are legacy terms that are largely associated with interprofessional, collaborative health care. The acronym IMPACT stands for Improving Mood-Promoting Access to Collaborative Treatment [15].

These terms originate from the first large randomly controlled research study trial of treatment for depression, called the IMPACT study. The IMPACT Care Model demonstrated that interprofessional, collaborative health care more than doubled the effectiveness of depression treatment for older adults (n=1,801) from 18 diverse primary care clinics across the United States over a period of two years. The treatment effectiveness of the IMPACT Care Model with depression is now recognized as effective with a wide range of behavioral health disorders, such as anxiety and trauma disorders, chronic pain, substance use disorders (including alcohol and opioid use), and attention deficit hyperactivity disorders [15].

The study utilized the IMPACT Health Care Model and adapted it into the IMPACT Behavioral Health Care Model, which included: Step 1: Behavioral Activation – focusing on physical activities or pleasurable events and six to eight psychotherapy sessions; Step 2: Problem Solving – up to four additional psychotherapy sessions; and Step 3: Stepped Care – bimonthly or monthly follow up phone calls for twelve months (adapted from the University of Washington).

Research indicates the benefits of diabetes education strategies and general guidelines for providing interprofessional, collaborative primary health care with adults who have type 2 diabetes. However, there has been limited research evidence on how these adults with type 2 diabetes come to understand their psychosocial distress, and their mood dysregulating depressive disorders. Additionally, there is a lack of research on how clinical social work/behavioral health care services and depression care management are delivered with these outpatients and the effectiveness of these intervention strategies. This study helps to fill this gap by examining the retrospective accounts of these adults who are living with both type 2 diabetes, depressive disorders, and psychosocial distress to explore their utilization of clinical social work/behavioral health care services, specifically regarding depression severity, functional impairment, and depression related quality of life.

## Aims of Study

The research study of this author, a clinical social worker/behavioral health professional and the principal investigator, examined the experiences of one Latina and two African American low-income, medically indigent outpatients (n=3) who were living with type 2 diabetes and depressive symptoms, as exacerbated by psychosocial distress. First, the lived experiences of these participants who were living with type 2 diabetes, depressive symptoms, and psychosocial distress were described and examined.

Secondly, a version of the IMPACT Health Care Model was adapted for behavioral health and utilized, to determine the usefulness and efficacy with this sample. It was hypothesized that behavioral activation, problem solving and stepped care would make a positive difference in the lives of these participants who were living with type 2 diabetes, as evidenced by decreased depression screening scores, utilizing the nine question Patient Health Questionnaire (PHQ-9), and anticipating a lessening of depressive symptoms.

Thirdly, it was hypothesized that the behavioral part of depressive symptoms, according to behavioral activation theory, were the results of deficiencies in behavioral activation and problems solving skills. Therefore, behavioral activation, problems solving interventions and stepped care, as adapted from the IMPACT Model, would be evidenced by decreased PHQ-9 scores.

## Methodology

### Participants

This analysis utilized 2017 data from clinical social work/behavioral health care/depression care manager-delivered and adapted IMPACT Behavioral Health Care interventions. One Latina, one African American woman, and one African American man were part of a convenience sample from a primary care center in a predominantly African American neighborhood in Dallas, Texas, USA. Eligible participants were African Americans or Latinx with physician-diagnoses of type 2 diabetes, were at least 18 years old, had health insurance or received low cost or no cost primary and behavioral health care, and resided in the southern sector of Dallas. In both the African American and Latinx communities, there are lower socioeconomic rankings than other Dallas neighborhoods and there are high rates of type 2 diabetes [16]. Because severe physical and mental health complications would preclude full intervention participation, persons with significant diabetes-related complications, and complex mental health disorders were not eligible for this study. Herein, there were two African American participants and one Latina participant (See Table 3 for participant sociodemographic and health characteristics).

	Sample (n = 3)	African American (n = 2)	Latina (n = 1)	<i>p</i> observed <i>r</i> correlation coefficient
Demographics				
Female, n (%)	2	1	1	
Male, n (%)	1	1		
Mean age/years	37.7	42	29	
Marital status				
Married	1	1	0	
Single	1	1	0	
Separated	1	0	1	
Divorced	0	0	0	
Religion (Christian)	3 (100%)	2 (67%)	1 (33%)	
Unemployed	3 (100%)	2 (67%)	1 (33%)	
Depressive symptoms, PHQ-9 score range: 0 (lowest/none) to 27 (highest/ severe) (PHQ-9 mean baseline score)	Min. 10.00 – Max.15.00 (SD 2.88675)  11.6667			<i>p</i> = 0.020 <i>r</i> = 0.277
(PHQ-9 mean mid-care score)	Min. 10.00 – Max.19.00 (SD 4.58258) 14.000			<i>p</i> = 0.034 <i>r</i> = 0.839
(PHQ-9 mean post-care score)	Min. 10.00 – Max.17.00 (SD 4.04145) 12.3333			<i>p</i> = 0.034 <i>r</i> = 0.693
#Counseling sessions Mean number of Counseling sessions	Min. 4.00 – Max. 8.00 (SD 2.08167) 6.3333			<i>p</i> = 0.05
Type 2 diabetes	3	2	1	
Insulin	2	2	0	
Oral Meds	1	0	1	
Psychosocial distress (bereavement)	2	2	0	

**Table 3:** Participant sociodemographic and health characteristics (n= 3), 2017.

## Data collection

The data analysis came from the baseline clinical counseling interviews/behavioral interventions conducted in 2017, also included depression screening information, obtained before, during and post interventions, as compiled by this author, a licensed clinical social worker/behavioral health professional/depression care manager, and the principal investigator for this study. The self-administered psychometric depression screening tool, the nine-item Patient Health Questionnaire [PHQ-9©] ([17,18]; see Appendix for copy of Patient Health Questionnaire-9©), was utilized in the preferred language of these participants (English). The protocols of this study met the normally expectable standards for patient confidentiality prior to data collection.

## Measures

**Participant Characteristics:** The socio demographic information included race/ethnicity, gender, age, marital, employment status, and religion. The study participants were residents of the southern sector of Dallas, Texas, and had type 2 diabetes and depressive symptoms.

**Depressive Symptoms:** In this study, the convenience sample size was three outpatient participants ( $n=3$ ). The number of behavioral activation, problem solving counseling sessions, and stepped care interventions were the treatment variables. The baseline, during care and post care scores from the nine-item Patient Health Questionnaire (PHQ-9), a patient self-administered depression screening tool, assessed depressive symptoms (Cronbach's  $\alpha = 0.83$ ). Examples of PHQ-9 items include having little interest or pleasure in doing things and feeling down, depressed, or hopeless. The responses range from not at all (0) to nearly every day (3). The PHQ-9 scores ranged from 0 to 27, with higher scores indicating more depressive symptoms, and this was calculated by summing the items [17,18].

## Analysis

In the initial analysis, it was predicted that participants who had behavioral activation, problem solving counseling sessions and stepped care interventions would have lower mid-care and post care PHQ-9 depression screening scores. A non-directional hypothesis was tested because a result in either direction would be significant, i.e., the null hypothesis ( $H_0$ ) that treatment/behavioral activation, problem solving counseling sessions and stepped care interventions will not make a difference on the PHQ-9 scores indicating depressive symptoms; and the alternative hypothesis ( $H_1$ ) that treatment/behavioral activation, problem solving counseling sessions and stepped care interventions will make a difference on the PHQ-9 scores indicating depressive symptoms, as this data was analyzed with IBM SPSS (Version 21). The observed significance values ( $p$ ) for non-directional hypothesis were the baseline PHQ-9  $p$  value of 0.020, the mid-care PHQ-9  $p$  value of .034, and the final care PHQ-9  $p$  value of 0.034 and used a one sample  $t$ -test with  $\alpha = 0.05$

(probability of a Type I error) and 95% confidence intervals. The non-directional null was rejected, i.e., it failed to accept the hypothesis that treatment/behavioral activation and problem solving counseling sessions would make no difference on the PHQ-9 scores indicating depressive symptoms. Using Pearson's  $r$ , the correlation coefficients were indicative of associations/relationships between the independent variable (treatment interventions) and the dependent variable (depressive symptoms). This was found to be statistically significant and indicated by the baseline PHQ-9 of  $r=0.277$ , the mid-care PHQ-9  $r=0.839$ , and the post-care PHQ-9  $r=0.693$ . Simple bivariate linear regression indicated a proportion of variance was 77% of the dependent variable (PHQ-9 score indicating depressive symptoms) being accounted for by the independent variable (treatment/behavioral activation, problem solving counseling and stepped care interventions), [ $B=0.385$ ,  $r=0.277$ ,  $t(3) = 0.289$ ,  $p=0.05$ ]. The bottom line for this is that treatment interventions, i.e., behavioral activation, problem solving counseling and stepped care, works very well for persons with depressive symptoms, with medium-large to large effect size and statistical power, even though bereavement processes impacted two of these outpatient participants.

## Results

Sociodemographic characteristics between this very small group of African Americans and Latina, included race, ethnicity, age, gender, marital status, employment status, and religion. Of the two female participants, one was an African American single parent and the other was a Latina separated parent. The one male participant was an African American married parent (Table 3).

This study examined an adaptation of the evidence based Improving Mood-Promoting Access to Collaborative Treatment (IMPACT) Care Model, which included clinical social work/behavioral health care in a primary care setting with a very small sample of low-income, medically indigent African American and Latinx adult outpatients ( $n=3$ ), from the southern section of Dallas, Texas, USA, who are living with type 2 diabetes and depressive disorders. Research indicated the benefits of diabetes education strategies and general guidelines for providing interprofessional, collaborative primary health care with adults who have type 2 diabetes. However, there had been limited research evidence on how these adults with type 2 diabetes come to understand their psychosocial distress, and their mood deregulating depressive disorders. Additionally, there was a lack of research on how clinical social work/behavioral health care services and depression care management are delivered with these outpatients and the effectiveness of these intervention strategies. This study helped to fill this gap by examining the retrospective accounts of these adults who are living with both type 2 diabetes, depression, and psychosocial distress to explore their utilization of clinical social work/behavioral health care services, specifically regarding depression severity, functional impairment, and depression related quality of life.

## Limitations

There are several limitations of this analysis. First, the very small sample size (n=3) and simple research design limited detection of significant associations. Secondly, this study did not include the association between depression, diabetes distress and diabetes self-management. The evidence suggested that increased depressive symptoms may be associated with adverse diabetes-related outcomes, but more research is needed on the mediating role of mental/behavioral health care in diabetes-self-management.

Consequently, future research conducted with larger samples is needed to determine this study's generalizability to the larger population of medically indigent African American and Latinx outpatients who have both type 2 diabetes and depressive disorders. For this population, psychosocial distress, and life crises, such as sudden deaths in the family, job loss, financial setbacks, domestic violence, etc., could happen at any time and necessitate that these patients restore their equilibrium quickly via their survivorship and resiliency. Additionally, the impacts on the patients' biometrics, i.e., blood glucose and A1<sub>c</sub> tests, blood pressure readings, cholesterol levels and body mass index were not included in this study but would make for interesting future research. Furthermore, this future research could also examine the complexities of community and neighborhood characteristics and health care providers, and their influential impacts on the depressive symptomatology for persons who are living with type 2 diabetes.

## Discussion

These findings suggested that these African American and Latina outpatients are balancing multiple psychosocial stressors, which affect their mental/behavioral health and physical health. This analysis indicated that the mediating factors of religion, spirituality, resiliency, and survivorship [19], along with the moderating factors of having supportive family and friends, health care access, religious involvement and living in the southern geographic region are important parts in addressing their mental/behavioral health, as this enhances their diabetes glycemic control and improves their diabetes self-management [20].

These findings also suggested that the adapted IMPACT Behavioral Health Care Program, as facilitated by this author and principal investigator, who is a licensed clinical social worker, behavioral care professional and depression care manager, was helpful in the lives of these African American and Latina outpatients who were living with type 2 diabetes, was properly delivered, and the outcomes revealed the effectiveness of these intervention strategies. This study helped to fill this research gap by examining the narrative accounts of these adults who are living with both type 2 diabetes, depressive disorders, and psychosocial distress, and by exploring their utilization of clinical social work/behavioral health care services, specifically regarding their depression severity, functional impairment, type 2 diabetes, and depression related quality of life.

Going forward, to successfully address diabetes and mental/behavioral health care inequalities in communities of

color, it is important to further develop innovative, evidence-based interventions. Culturally competent health care professionals, and professionals who reflect the patients' populations, e.g., the availability of community health workers and *promotores de salud* (Latinx health promoters), are potential strategies to address the holistic health and wellness of this patient population. Future studies may elucidate other strategies to improve the overall health outcomes of African Americans and Latinx persons who are living with type 2 diabetes and depressive disorders.

## Conclusion

This study examined an adaptation of the evidence-based Improving Mood-Promoting Access to Collaborative Treatment (IMPACT) Care Model, which included clinical social work/behavioral health care in a primary care setting with a very small sample of low-income, medically indigent African American and Latinx adult outpatients (n =3), from the southern section of Dallas, Texas, USA, who are living with type 2 diabetes and depressive disorders. Previous research indicated the benefits of diabetes education strategies and general guidelines for providing interprofessional, collaborative primary health care with adults who have type 2 diabetes. However, this study helped to fill the knowledge gap by examining the narrative accounts of these adults who are living with both type 2 diabetes, depressive disorders, and psychosocial distress to explore their utilization of clinical social work/behavioral health care services, specifically regarding depression severity, functional impairment, and depression related quality of life. This research is particularly important, given the complexities of community and neighborhood characteristics and health care providers, and their influential impacts on the depressive symptomatology for persons who are living with type 2 diabetes and depressive disorders.

## Relevance and Significance for Clinical Social Work

Cognizant that mental/behavioral health professionals are a part of the diabetes and depression interprofessional care team, professionals may be a licensed clinical social workers or licensed independent social workers (LCSW or LISW), licensed clinical psychologists (PhD), or psychiatrists (MD or DO). These mental/behavioral health professionals can help a patient/client process their thoughts and feelings, in order to, deal with the daily challenges of living more effectively with diabetes, concomitant with interventions on related emotional issues. These mental/behavioral health professionals must understand diabetes, the medications, and the insulin, and how this affects one's blood glucose [21].

## Licensed Clinical Social Work (LCSW) Professional Practice in Texas

According to the Texas State Board of Social Worker Examiners (TSBSWE), the scope of licensed clinical social work (LCSW) professional practice "requires applying social work theory, knowledge, methods, ethics, and the professional use of self to restore or enhance social, psychosocial, or bio-

psychosocial functioning of individuals, couples, families, groups and/or persons who are adversely affected by social or psychosocial stress or health impairment". Furthermore, "the practice of clinical social work requires applying specialized clinical knowledge and advanced clinical skills in assessment, diagnosis, and treatment of mental, emotional, and behavioral disorders, conditions and addictions, including severe mental illness and serious disturbances in adults, adolescents and children" [22]. The clinical social worker may engage in case management and counseling, but is also an autonomous, independently practicing mental/behavioral health professional. "Clinical treatment methods (of the clinical social worker) may include, but are not limited to providing individual, marital, couple, family, and group therapy, mediation, counseling, supportive counseling, direct practice, and psychotherapy". "Clinical social workers are qualified and authorized to use the Diagnostic and Statistical Manual of Mental Disorders (DSM), the International Classification of Diseases (ICD), Current Procedural Terminology (CPT) Codes, and other diagnostic classification systems in assessment, diagnosis, and treatment and other practice activities". Lastly, "an LCSW may provide any clinical or non-clinical social work service or supervision in either an employment or independent practice setting. An LCSW may work under contract, bill directly for services, and bill third parties for service reimbursements" [22].

Given the aforementioned implications and significance for clinical social work practice, education and research, this author, a clinical social worker (LCSW), behavior health professional, depression care manager and principal investigator of this study, worked in a primary health care setting, from 2010 -2017, in the southern section of Dallas, Texas, USA, as a licensed clinical social worker (LCSW) and diabetes educator (non-certified).

On a personal note, this author, a licensed clinical social worker, and the principal investigator of this research study, was diagnosed with prediabetes in 2019, due to the non-modifiable risk factor of age. Consequently, there is an even deeper, personal understanding of the relevance of important topic of "Making an IMPACT: Behavioral Activation and Depression Care for Persons Living with Type 2 Diabetes", vis-à-vis, continued social work research, practice, and education, given the comprehensive attributes of the profession of social work.

### **The Profession of Social Work**

According to the revised preamble of the National Association of Social Workers (NASW) Code of Ethics, the primary mission of the profession of social work is to help meet the basic human needs of all people and to enhance human well-being, with particular attention to the needs and empowerment of people who are oppressed, vulnerable and living in poverty. The historical and defining features of professional social work have been situated within the context of the individual and the well-being of society. Attention to the environmental factors that create, contribute to, and address problems in daily living is also fundamental to social work. Cognizant that social workers promote social change and social justice with and on behalf of individuals, families,

groups, organizations, and communities, the role of the professional social worker is certainly important in our contemporary societies. Moreover, sensitivity to cultural and ethnic diversity, along with striving to end oppression, discrimination, poverty, and other forms of social injustice are essential elements of professional social work [23]. Given the aforementioned ethical principles of social work, the foci of this clinical social worker/principal investigator's research study was on giving voice to the biopsychosocial-cultural-spiritual aspects, along with the psychosocial-environmental determinants of health and socio-emotional suffering, that is, oppression, discrimination, poverty, social injustice among these resilient low-income, medically indigent African Americans and Latinx outpatients who living with diabetes, depression and psychosocial distress, in the southern sector of Dallas, Texas, USA.

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### Appendix

Nine Question Patient Health Questionnaire [PHQ-9 ©] [17], Self-Administered Psychometric Depression Screening Tool

#### Nine-symptom Checklist

Name \_\_\_\_\_ Date \_\_\_\_\_

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

If you checked off *any* problems, how *difficult* have these problems made it for you to do your work, take care of things at home, or get along with other people?

Not difficult at all	Somewhat difficult	Very difficult	Extremely difficult
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

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