



***Trabajadora de Salud*, a care transitions intervention, for Latinas/os with brain injuries: three case examples**

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ABSTRACT

With implementation of Centers for Medicare and Medicaid's Hospital Readmissions Reduction Program, which lowers payments to hospitals with high 30-day readmission rates, hospitals have a financial incentive to improve hospital-to-home care transitions. Brain injury is a leading cause of 30-day hospital readmissions. Traditional discharge planning has not met the needs of brain injury survivors and caregivers especially Latinas/os whom experience worse rates of depression and caregiver burden. *Trabajadora de Salud*, a bilingual, bicultural, 90-day home visitation, family-focused, care transitions intervention, has demonstrated efficacy in improving outcomes among Latinas/os with brain injuries and their caregivers. This study described three case examples from the intervention to illustrate common needs among Latinas/os with brain injuries and methods of intervention.

KEYWORDS

Brain injury; care transitions; Latino; lay health worker; discharge planning; Hispanic

With implementation of Centers for Medicare and Medicaid's Hospital Readmissions Reduction Program, which lowers payments to hospitals with high 30-day readmission rates, hospitals have a financial incentive to improve hospital-to-home care transitions. Brain injury is a leading cause of 30-day hospital readmissions (Taylor, Bell, Breiding, & Xu, 2017). Brain injury includes those caused by an internal injury (i.e., stroke) or an external injury (i.e., fall). Latinas/os are the fastest growing minority population in the U.S. accounting for 18% of the country's population with an expected growth to 28% of the U.S. population by 2060 (U.S. Department of Commerce, 2017). Accounting for population growth, Latina/o brain-injury emergency room visit rates increased by 60.2% as compared to 42.7% among white non-Latina/o patients in a decade (Hsia et al., 2018). Thirty-day hospital readmissions, defined as any unplanned hospital admission since discharge, among brain injury survivors ranged from 17% to 18% for Latinas/os and 10% to 14% for non-Latinas/os (Gardener et al., 2018; Ottenbacher et al., 2001). Latina/o brain injury survivors had statistically significantly higher readmission rates than white non-Latinas/os controlling for age and sex (Qian et al., 2013).

Traditional discharge planning has not met the needs of brain injury survivors and caregivers; they desire support with healthcare system navigation, equipment and medication information, brain injury symptoms, and community resources (Linton, Ing, Vento, & Nakagawa, 2015; Torregosa, Sada, & Perez, 2018). Care transitions interventions have been produced in response to these hospital-to-home transition needs. Home visitation

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interventions designed to improve care coordination and empower survivor self-management education were feasible, acceptable, and replicable. They were also statistically significantly associated with reduced hospital readmission, depression, and caregiver burden among patients and their caregivers (Calvete, & Arroyabe, 2012; Linton & Kim, 2018).

There is an interdependence between survivors' and their caregivers' health that is rarely illustrated. Research shows statistically significant correlations between depression among patients and caregivers (Jacobs, 2017). Survivor and caregiver outcomes are typically reported in separate publications, which makes the correlation difficult to see. Out of 35 brain injury studies, *only four* studies reported survivor and caregiver dyad outcomes and *one* reported family unit outcomes (Thompson, 2009). The interdependence among Latina/o brain injury survivors and caregivers is stronger due to collectivistic culture and duty to care for one another in traditional Latina/o culture (Stevens et al., 2012).

Discharge planning starts in the hospital and ends once the patient and caregiver are stable at home. Current discharge planning models start and end when the patient is at the hospital. Traditional discharge planning for brain injury survivors has included handouts, pamphlets, and discharge instruction forms (Ojeda, Flores, Meza, & Morales, 2011). Our previous research demonstrates that brain injury survivors and their caregivers desire a stable relationship with the same professional to support them in navigating the healthcare system, and in learning about brain injury symptoms, insurance, medication, and community resources (Linton et al., 2015). Survivors and caregivers reported that they did not have anyone to call immediately if they had questions and had to wait until their next appointment with a physician, which is often weeks later (Ing, Vento, Nakagawa, & Linton, 2014).

Latinas/os with brain injuries

There are differences in outcomes among Latina/o brain injury survivors and their caregivers. Seventy percent of brain injury survivors experience mild depression (Bombardier et al., 2016). Latina/o brain injury survivors and their caregivers are more likely to experience depression symptoms and caregiver burden than white non-Latinas/os (Fei et al., 2016; Sander et al., 2019). Latina/o survivors and their caregivers reported statistically significantly higher reports of depression over time (Fei et al.; Sander et al.). Fei et al. (2016) found that one in two Latinas/os and one in eight white non-Latinas/os experienced depression. One study found that Latino men (10%) had statistically significantly lower rates of hospital readmission than white non-Latino men (18%), while Latina and white non-Latina women's hospital readmission rates were the same (17%; Ottenbacher et al., 2001). Research also showed that Latinas/os who were less acculturated were statistically significantly less likely to use the emergency room than white non-Latinas/os (Allen & Cummings, 2016). These biological and sociodemographic variables have not been controlled for in some previous research assessing differences in brain injury survivors' ethnicity and hospital readmission (Fei et al., 2016; Goldmann, Roberts, Parikh, Lord, & Boden-Albala, 2016). For example, one study found that Latina/os were statistically significantly less likely to experience 30-day hospital readmissions than white non-Latinas/os *not* controlling for gender and age (Hsia et al., 2018). Biological and sociodemographic variables could have moderated the relationship

between ethnicity and hospital readmissions in these studies, but they were not controlled for.

Interventions aimed at improving brain injury outcomes among Latinas/os are scarce. The only published intervention solely designed for Latinas/os with brain injury included a 10-week group solution-focused brief therapy (SFBT) intervention that concentrated on locus of control, skill acquisition, and family participation (Armengol, 1999). Facilitators were bilingual and bicultural; language, acculturation, migratory stressors, attitudes and beliefs about disability and health care, and support networks were also discussed. Participants had statistically significant improvements on hopelessness ($t = 7.9, p < .005$), life purpose ($t = -6.7, p < .005$), and self-regulatory ability ($t = 5.6, p < .005$). Other SFBT psycho-educational interventions have demonstrated efficacy for improving brain injury knowledge and psychological adjustment for the general population of people with brain injury.^{9, 10} Based on this past research, a family-focused, bilingual and bicultural, home visitation intervention utilizing SFBT aimed at improving care transitions among Latinas/os with brain injuries, *trabajadora de salud*, was developed and evaluated (Linton & Kim, 2018). In order to understand the intervention and needs in this population, this paper will present three case summaries to illustrate common needs among people with brain injuries and their caregivers and common intervention strategies by *trabajadoras*.

Methods

The intervention: *Trabajadora de salud*

Trabajadora de salud included one in-hospital visit while the patient was hospitalized for a brain injury followed by an initial home visit within 48 h of discharge and bi-weekly home visits following that for 90 days. The *trabajadora* provided: (1) brain injury education, (2) referrals to community resources, (3) help applying for resources and scheduling medical appointments, (4) addressing basic needs, (5) goal setting, (6) assisting in health-care provider communication, and (7) medical reconciliation. *Trabajadoras*, who were bilingual and bicultural, were trained on brain injury and how to provide culturally grounded education and care transitions for patients. *Trabajadora de salud* addressed the needs of the survivor and their family members as an interdependent unit. Most hospital discharge planning and transitional care models focus on the patient. While interdependence is discussed in literature on patients and caregivers with different health conditions, it has rarely been discussed in brain injury research (Jacobs et al., 2017). *Trabajadora de salud* was a family-focused intervention that was tailored to meet the general interdependence among survivor and caregiver dyads and the *familismo* (strong orientation toward family connections) needs among Latina/o dyads.³² With consent of the survivor, *trabajadoras* involved any family members beyond the primary caregiver present at the time of home visits in the intervention to utilize family resources to address family needs. *Trabajadoras* included goal planning for the brain injury survivor and primary caregiver to ensure that the caregiver knew that their health was just as important as the survivor's recovery.

Participant recruitment

Patients were recruited from a level-II trauma hospital 228-bed facility in west United States. A trauma coordinator reviewed the medical charts daily to assess for Latina/o patients with brain injury and referred each patient to a local nonprofit that provided *trabajadora de salud*. Patient inclusion criteria was 18 years old or older, self-identification as Latina/o, and had been hospitalized for a brain injury. Caregivers had to be informal family or friends to the patient. Institutional Review Board approval was obtained from California State University, Channel Islands prior to recruitment.

Pilot study of *trabajadora de salud*

A total of eight Latina/o, adult, low-income patients (50% female) with mild or moderate brain injury and six of their caregivers (66.7% female) were randomized to receive *trabajadora de salud* or a telephone only control group in a pilot study. The study found that the functional, depression, and somatic symptoms of the patients as well as the somatic symptoms and caregiver burden of the caregivers improved more for participants in the intervention group than the control group (Linton & Kim, 2018).

Case examples

The three cases described below represent common patient and family needs as well as SFBT strategies used in *trabajadora de salud* among Latinas/os with brain injuries and their families. Common patient needs illustrated in these cases include goal setting, goal prioritizing, stable housing, skills on gaining independence, caregiver respite, motivation, and encouragement. Common SFBT strategies used by *trabajadoras* included: miracle question, homework, building rapport through hands-on creative activities such as art, and finding out what motivates clients. Fictitious names were assigned to participants to ensure confidentiality.

From temporary housing to college student

Case example 1

Monica was a 32-year-old, first-generation Mexican-American woman who spoke English at home. During the year prior to receiving *trabajadora de salud* services, Monica had suffered two traumatic brain injuries. One was due to a fall and a second was due to a violent attack, which included sexual assault. She went to the emergency room for both injuries but had not received any rehabilitation services. At the start of the intervention, Monica lived in temporary housing with her husband, who was a bilingual, second-generation Mexican American. Monica was a stay at home wife who previously attended college to be a social worker. Since experiencing her first brain injury, she had not returned to college. Monica's husband was released from agricultural employment after being hurt on the job during the past year. Workers compensation was still pending. The family income and resources included Social Security Disability Income, food stamps, and MediCal (California's Medicaid) health insurance. Unfortunately, due to the instability, Monica and her husband lost custody of their children during the past year.

During Monica's initial visit with the *trabajadora*, she described her recovery goals as "finishing school, finding permanent housing, and retaining custody of her children." The *trabajadora* also observed that Monica and her husband were living in a house without running water, furniture, or heat. Monica had five follow-up visits with her *trabajadora* over the course of 90 days. Monica's second visit including prioritizing goals, which included a primary goal of finding stable housing. The miracle question was used during the session to help Monica to prioritize her goals. She indicated that stable housing was her goal as it was necessary to obtaining custody of their children. The *trabajadora* worked with a local nonprofit to identify local housing resources. Within 1 month, they moved into permanent housing but still needed furniture. Scaling questions were used to have Monica scale where she believed she was related to her goals. While Monica expressed discouragement in getting custody of her children back, she had returned to school by the fifth meeting with the *trabajadora*. The *trabajadora* acknowledged the steps Monica had taken to accomplish her goals.

From Marijuana dependence to a step toward independence

Case example 2

Ricardo was a 28-year-old Argentinian American who spoke Spanish at home. Ricardo suffered a brain injury due to a car accident prior to receiving *trabajadora salud* services. Ricardo was hospitalized for his injury and received inpatient and outpatient physical therapy. However, there is only a limited number of therapy sessions approved by his MediCal insurance and this were completed within a few months after his injury. After this, his life was "complacent" as self-described by Ricardo. Previous to his injury, he was employed in construction but could not return due to intense anxiety. Ricardo received a social security disability income, which was less than \$1000/month. Ricardo's stepmom, whom he lived with and was his primary caregiver, expressed that he did not want to leave the house due to his anxiety. When he got very anxious, he would use medical marijuana. His caregiver expressed that without it, Ricardo can get agitated and physically aggressive.

During Ricardo's initial visit, he expressed that his goal was to "relax and be happy, get his own apartment, and possibly volunteer." Ricardo had eleven follow-up visits with his *trabajadora* over the course of 90 days. In the first few sessions, the *trabajadora* provided Ricardo with resources to local therapy centers, since it appeared that Ricardo still needed neuropsychological therapy for his brain injury as well as spent time continuing to get to know Ricardo and build rapport. The miracle question was used with Ricardo during these early sessions. At times, Ricardo would express that he did not want his life to change. Ricardo did not express interest in resources presented by the *trabajadora*. During the fifth session, Ricardo mentioned enjoying art activities. The *trabajadora* brought art supplies to the following session to engage the client. She asked him to draw what he wanted his life to look like in the future. In future sessions, the *trabajadora* learned that Ricardo enjoyed basketball. During one session, they met at a basketball court and shot some hoops. Ricardo's homework assignment was to go to the basketball courts at least once with his caregiver.

Many of the sessions also focused on the needs of the caregiver who expressed almost as much anxiety as Ricardo did. The *trabajadora* provided the caregiver with referrals for respite services. She also discussed the need for caregiver respite with Ricardo to initiate

empathy and motivate Ricardo to obtain for independence. Ricardo responded very well to this and expressed interest in more independence to provide respite for his stepmom. The last few sessions included providing opportunities for Ricardo to participate in an activity that would increase his independence and provide respite for his caregiver, such as participating in art, basketball, and cooking.

From seizure and mental instability to stability

Juan was a first-generation Mexican-American immigrant. He had seizures as a result of a brain injury he got after a fall at work. Before he moved in with his sister Sofia, he regularly got admitted to the hospital due to injuries he suffered during his seizure episodes. When Sofia found out Juan was been admitted to the hospital so frequently, she decided to have him move into her home and become his caregiver. Upon arrival to a new home, Juan became agitated, aggressive, confused, and started to wander out of the home.

The first contact with Sofia was over the phone. It was evident Sofia was not getting enough sleep. During the first home visit, the *trabajadora* provided empathy and validation while paying close attention to Sofia's particular needs. During the following visits and phone calls the *trabajadora* reviewed resources they may qualify, such as respite care, social security disability, In-home support services, adult day care center, and mental health.

The first few meetings were with the caregiver only and slowly worked into meeting with Juan since he was very shy and kept to himself. By the fourth visit, Juan and the *trabajadora* were meeting to have a conversation. He expressed that he had been working in agriculture his entire adult life. He loved soccer, playing pool, and cards. To build rapport the *trabajadora* gave Juan homework to think of the games he was going to teach her to play during the next home visit.

Discussion

The three case examples represent common needs among Latina/o brain injury survivors and their caregivers that received *trabajadora de salud*. In each case, the *trabajadora* had to begin by developing rapport with the participants. While Ricardo appeared disinterested in changing his life, it was key that the *trabajadora* maintain regular contact in building rapport with Ricardo and finding out what motivated Ricardo (Gonzalez Suitt, Franklin, & Kim, 2016). Ricardo's progress toward independence was slow but steady in that the *trabajadora* observed less dependence on use of medical marijuana and more engagement in activities that he enjoyed, such as basketball, and those that will increase independence, such as cooking, over the course of the intervention. Ricardo's marijuana use may have been self-medication for mental health issues, such as depression, which are common among Latinas/os with brain injuries (Fei et al., 2016; Sander et al., 2019).

Familismo was common in each case example. It was also essential in Ricardo's case to not only support Ricardo but also equally support his primary caregiver as they both impacted each other as a family unit. Each case illustrated the patients' and caregivers' needs as an interdependent dyad reflecting previous research that has found that interdependence among Latinas/os is stronger due to their collectivistic culture (Stevens et al., 2012). By the 30-day mark of the *trabajadora's* visits, Sofia reported that Juan had not wandered out of the house and attended an adult day care center five times a week, which

served as a recreation for Juan and respite for Sofia. Sofia was being paid to be his caregiver and his application to receive disability benefits was pending. Juan also had a mental health assessment and Sofia was hopeful that he would receive mental health services. Caregiver respite was a common intervention technique used in *trabajadora de salud* to relieve caregiver burden.

Each case example demonstrates the need for stability whether it was related to housing, physical health, or mental health. Monica was in crisis during the *trabajadora de salud* intervention due to unstable housing, lack of income, and surviving two brain injury in the past year. While Monica had little control over her goal of obtaining custody of her children, the *trabajadora* focused on the accomplishments that Monica had control over. She utilized the miracle question (as described in Franklin, Bolton, & Guz, 2019) to help focus Monica's goal-orientation and utilized homework (Gonzalez Suitt et al., 2016), such as calling housing resources provided by the *trabajadora* to empower Monica. The *trabajadora* acted as a broker by connecting participants to community resources.

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