Latina/o Parent Activation in Children's Mental Health Treatment: The Role of Demographic and Psychological Factors

By: Gabriela L. Stein, Andrea L. Kulish, Christianna S. Williams, Yesenia C. Mejia, Juan I. Prandoni and Kathleen C. Thomas

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Abstract:

Patient activation has recently emerged as a critical component of effective health care (Hibbard & Greene, 2013), but Latina/o populations demonstrate lower levels of activation compared to non-Latina/o Whites (Cunningham, Hibbard, & Gibbons, 2011). The current study examined demographic and psychological factors associated with immigrant Latina/o parent activation in parents seeking mental health services for their children. Additionally, the study tested whether psychological factors (parental depressive symptoms, parenting stress, perceived severity of child psychopathology) were associated with the effectiveness of an activation intervention among immigrant Latina/o parents (MEPREPA—short for "me preparo"/I prepare [MEtas, PReguntar, Escuchar, Preguntar para Aclarar/goals, questioning, listening, questioning to clarify]). Results demonstrated that parenting stress and perceived severity of child psychopathology were associated with lower levels of parent activation. Additionally, although there was a treatment effect for all parents, stratified group analyses suggested that parents with higher depressive symptoms and greater parenting stress benefited more from the MEPREPA intervention compared to controls. Stratified analyses also showed that the intervention had a greater positive impact on parent activation in health care among parents whose children had more severe symptoms. Clinical and research implications are discussed.

Keywords: parent activation | Latina/o | parenting stress | parental depression

Article:

To understand how best to intervene therapeutically with Latina/o families, researchers need to consider how Latina/o families engage in mental health treatment. Without an actively engaged patient, our interventions may not realize their full potential, thereby limiting their impact on the mental health outcomes we seek to ameliorate. Mental health researchers need to understand what factors influence patient activation and how to target these in order to deliver more effective interventions. Increased focus on the role of patient activation may also provide a fruitful avenue to address known racial/ethnic disparities in mental health service utilization in Latina/o populations (Alegría et al., 2002). However, few studies have examined patient

activation in Latina/o populations (see Alegría et al., 2014, 2008 for exceptions), and no prior research has tested interventions aimed at increasing activation in Latina/o parents seeking mental health services for their children. This paper examines the role of demographic and psychological factors in their association with parental activation, and whether psychological factors influenced the effects of a group intervention aimed at increasing Latina/o parent activation.

Patient Activation

Patient activation is widely considered to be a core component of effective health care (Hibbard & Greene, 2013). However, patient activation has not always been clearly conceptualized in the literature, being used at times interchangeably with related constructs (e.g., patient engagement; Mittler, Martsolf, Telenko, & Scanlon, 2013). In their review of the health care literature, Mittler and colleagues (2013) provide some clarity surrounding these constructs by positing that patient engagement is a larger construct comprised of two primary dimensions: (a) patient activation and (b) engaged behaviors in treatment. Under this theory, patient activation indicates the degree to which individuals possess the capacity, knowledge, and willingness to manage their health care (Hibbard, Stockard, Mahoney, & Tusler, 2004), whereas "treatment engaged behaviors" are the behavioral manifestations of a patient's level of activation. As such, patient activation is theorized to be a critical component of effective health care due to its primacy in determining whether patients will enact health-promoting behaviors (Mittler et al., 2013; Hibbard & Greene, 2013).

Despite being originally developed within the general health care literature, patient activation has been used successfully to understand a patient's ability to manage their mental health care as well (e.g., Alegría et al., 2008; Chen, Mortensen, & Bloodworth, 2014; Lara-Cabrera et al., 2016). This literature has shown that patient activation can play a central role in improving mental health outcomes, including increased treatment satisfaction and participation (Lara-Cabrera et al., 2016), improved recovery attitudes and hope (Green et al., 2010; Kukla, Salyers, & Lysaker, 2013), and treatment response (Sacks, Greene, Hibbard, & Overton, 2014).

However, Latina/o populations tend to report lower levels of patient activation in health and mental health care compared to non-Latina/o Whites (Hibbard & Cunningham, 2008; Cunningham, Hibbard, & Gibbons, 2011). In one study, only 24.8% of Latinas/os were at the highest level of patient activation, compared to African Americans (39.5%) and Whites (45.3%; Cunningham et al., 2011). Nevertheless, studies suggest that Latinas/os also benefit from higher levels of patient activation. Among Latinas/os, patient activation is associated with self-reported quality of care, better doctor–patient communication, and higher levels of attendance and treatment completion (Alegría, Sribney, Perez, Laderman, & Keefe, 2009; Kanter et al., 2015).

In attempting to explain the reasons driving lower levels of Latina/o patient activation, most research points to factors associated with the culture and experiences of Latinas/os living in the United States that make becoming activated in treatment more difficult (Falicov, 2014). Indeed, the behavioral model of care for vulnerable populations, which we use to frame our study, provides a model to understand the risk present in Latina/o populations (Gelberg, Andersen, & Leake, 2000). This model posits that individuals' motivations for seeking and engaging with

health care services are shaped by three primary factors: (a) predisposing factors, which include demographic factors (i.e., age, gender, health beliefs) and social structure characteristics (e.g., immigration status, ethnicity, education, family size); (b) enabling factors, including individual (e.g., personal and family resources, insurance status, income) and community resources (e.g., availability of providers, community support); and (c) need factors, including self-perceptions and objective evaluations of need for care. In the case of Latinas/os seeking mental health care for their children, many families will possess many of the aforementioned factors that make it difficult for them to become activated in their child's treatment. For example, low socioeconomic status (SES), low acculturation, and immigration status are considered predisposing and enabling characteristics that impede health service use (Gelberg et al., 2000), and have been associated with lower patient activation with Latina/o populations in the past (Alegría et al., 2009; Cunningham et al., 2011). Given these findings, understanding activation in Latina/o populations is critical. However, to our knowledge, previous literature has focused primarily on patient activation within Latina/o adult populations, such that the impact of these factors on Latina/o caregivers' ability to become activated in their children's mental health treatment has not been specifically addressed.

Parent Activation in Mental Health

The construct of activation has also been extended to parents managing their child's health care (DeCamp et al., 2016; Pennarola et al., 2012); yet, to our knowledge there is no past literature examining parental activation in mental health settings. A parent's sense of self-efficacy and competence in managing their child's mental health care will likely translate to more engaged interactions with mental health providers as activated parents will ask questions, provide feedback, and participate in therapeutic activities (Karver, Handelsman, Fields, & Bickman, 2005). Activated parents can be key to a successful mental health intervention (Bode et al., 2016). For example, one study in a primarily non-Latina/o White sample found that, for externalizing problems, family empowerment, a construct akin to activation, was more strongly related to children's mental health outcomes than hours of mental health services received (Taub, Tighe, & Burchard, 2001). Despite these findings and the theoretical importance of parent activation, no studies to our knowledge have specifically examined what predicts parent activation or parental empowerment in child/adolescent mental health care for Latina/o families. It is important to note that some studies have examined engagement (i.e., attendance) in Latina/o families in child mental health care (see Kapke & Gerdes, 2016 for a review), but not activation as defined above.

To fill this gap in the literature, the present study examines multiple predisposing and enabling characteristics previously suggested in the literature as being related to either Latina/o patient activation with adults or effective mental health treatment for children. We apply the behavioral care model described above to parent activation in parents seeking services for their child's mental health. We argue that similar predisposing and enabling characteristics for vulnerable populations that impede health service use in adult Latina/o populations will be relevant for Latina/o parents seeking services for their children (i.e., income, language acculturation, and education).

This paper seeks to understand not only how demographic predisposing and enabling factors like language use, income, and education predict parental activation in immigrant Latina/o parents, but also to understand the contribution of other predisposing factors like parental depressive symptoms and parenting stress, and need characteristics such as the severity of their child's psychopathology—factors that have been understudied in the current literature. Given that activation involves feelings of efficacy in managing a child's health, parental depressive symptoms, parenting stress, and perceptions of severe pathology may serve to hinder feelings of activation, as parents may feel overwhelmed and perceive that they lack the necessary emotional and instrumental resources to help their child. In the same vein, locus of control is central to the conceptualization of patient activation (Hibbard et al., 2004), suggesting that psychological resources limiting locus of control would be particularly damaging to activation. These factors may also interfere broadly with health service use as parents struggle to attend appointments and engage with providers (Andersen, 1995). This line of inquiry fits with the behavioral health model, discussed in detail below, as psychological functioning can be considered to be both a predisposing factor (Andersen, 1995; Gelberg et al., 2000) that may impede health service activation and a need factor that prompts treatment use.

Parental depressive symptoms have been associated with a number of negative parenting behaviors that may make it more difficult for Latina/o parents to become activated in their children's treatment, including increased perceptions of parenting difficulties, increased hostile or disengaged parent–child interactions, and lower treatment-seeking behaviors (Corona, Lefkowitz, Sigman, & Romo, 2005; Lovejoy, Gaczyk, O'Hare, & Neuman, 2000). Similarly, severity of depressive symptoms is associated with lower levels of patient activation in adults (Hibbard, Mahoney, Stock, & Tusler, 2007; Magnezi, Glasser, Shalev, Sheiber, & Reuveni, 2014; Sacks et al., 2014). However, this work has not been extended to parents of children in mental health treatment. For parents, depressive symptoms, including feelings of hopelessness and low self-efficacy, may operate in a similar fashion, potentially acting as a predisposing characteristic that hampers feelings of efficacy in managing their child's mental health care.

Parenting stress may also serve as a unique psychological factor that is specific to the activation of parents with children seeking mental health treatment. Parenting stress is broadly defined as the stress resulting from the demands of being a parent (Deater-Deckard, 1998), and includes such aspects as role satisfaction, loss of flexibility, and demands on parental resources (Berry & Jones, 1995). Parenting stress is typically associated with greater child psychopathology (Deater-Deckard, 1998), and recent work points to a bidirectional relationship, where parenting stress both predicts and results from child psychopathology (Neece, Green, & Baker, 2012). Theoretically, parenting stress leads to poorer quality parenting and consequently greater child psychopathology (Deater-Deckard, 1998), and because of this relationship, mental health treatment researchers have examined its role in treatment outcomes (Bode et al., 2016). Moreover, parenting stress serves as a barrier to mental health treatment engagement (e.g., Kazdin & Wassell, 1999), supporting its potential impact on parent activation. Parenting stress likely leads to low feelings of self-efficacy that contribute to low parent activation. Parents may feel less capable of knowing how to help their child obtain the help that they need and less optimistic about being able to maintain behavioral changes in the home, both of which are factors that are central to being an activated parent. Parenting stress is indeed associated with

lower levels of perceived efficacy and comfort navigating health care systems (Bode et al., 2016).

In the behavioral health care model, child psychopathology is operationalized as a need characteristic prompting mental health service use for youth (Gelberg et al., 2000). However, the larger clinical psychology treatment literature documents that severity of child psychopathology may serve as a barrier to treatment (e.g., Nock & Ferriter, 2005). We will test the role of parental perception of child psychopathology in influencing parent activation, and we posit that perceived child psychopathology will actually function as a psychological predisposing factor hampering parental activation as suggested by some theorists (Gelberg et al., 2000). We argue that at more extreme levels it can also serve as a barrier to activation. Similar to parenting stress, parents who perceive that their child has significant psychopathology may feel overwhelmed by their child's symptoms, thereby decreasing parental self-efficacy. However, to our knowledge, no past study has examined the direct link between perceived child psychopathology and parent activation, but research suggests that severity of psychopathology can serve as a barrier to mental health treatment and similar arguments have been made that this is in part due to lowered feelings of efficacy (Nock & Ferriter, 2005).

An Intervention for Latina/o Parent Activation

Our interest in these psychological factors extended beyond their effects on parent activation as we also sought to understand their role in how parents learn to be more active participants in their child's well-being. Thus, our study also attempted to understand whether greater risk in terms of their psychological functioning (i.e., parental depressive symptoms and stress) and perceptions about the severity of child psychopathology predicted the degree of effectiveness of a group intervention aimed at increasing parent activation in immigrant Latina/o parents. The intervention (MEPREPA—short for "me preparo"/I prepare [MEtas, PReguntar, Escuchar, Preguntar para Aclarar/goals, questioning, listening, questioning to clarify]) is a four-session psychoeducational group designed to teach activation skills to parents whose children are seeking mental health treatment. In a randomized controlled trial, the intervention led to increased parent activation in health and education compared to a social support group (Thomas et al., 2017), especially for those parents who had lower activation at the start of treatment and those whose children were new to the clinic. However, we were interested in examining whether parental depressive symptoms, parenting stress, or severity of child psychopathology was associated with the degree of effectiveness of treatment outcome.

There is a limited literature examining interventions aimed at improving parental mental health engagement (see Ingoldsby, 2010 and Lindsey et al., 2014 for reviews). These interventions have focused almost exclusively on improving treatment attendance, and a recent analysis supported targeting parental problem-solving and coping to impact engagement (Lindsey et al., 2014). In line with this finding, our intervention uses a public health model to target the attitudinal component of activation by helping parents learn effective communication strategies and empowering parents within a culturally grounded approach that targets critical barriers relevant to Latina/o immigrants (i.e., language barriers, stigma). Given the theory and literature discussed above detailing the role of parental psychological and child need factors as impacting parental

activation, we sought to understand whether these risk factors played a role in the effectiveness of our intervention.

These questions emerged from past studies that have found that parental or child mental health severity impacts the effectiveness of child mental health treatment, as there is no past work to our knowledge examining these questions for an activation intervention for parents. For example, in the Multimodal Treatment Study of Children with ADHD (MTA), children displaying greater ADHD symptomatology showed poorer response to treatment than children with less severe ADHD symptoms, and children with parents who had at least mild depressive symptomatology had poorer treatment response than did children with parents without depressive symptoms (Hinshaw, 2007). Likewise, in a study of children 7 to 13 years of age with antisocial and aggressive behavior, children with greater symptoms had poorer treatment outcomes than children with fewer symptoms (Kazdin & Crowley, 1997), highlighting the relevance of child mental health severity in intervention effectiveness. Parental self-efficacy also moderated treatment response to parenting training for youth with ADHD (van den Hoofdakker et al., 2010). On the whole, the literature supports the claim that parental psychological functioning may impact the effectiveness of child mental health treatment (i.e., Maliken & Katz, 2013), and this research would suggest that these predisposing factors and need characteristics would hinder the effectiveness of our intervention.

Current Study

Question 1: The current study sought to understand how demographic predisposing and enabling factors (i.e., language acculturation, low income, low levels of education) and psychological factors (i.e., parental depressive symptoms, parental stress), and need characteristics (i.e., perceived severity of child's psychopathology) are associated with Latina/o parent activation at the start of treatment. Based on past literature and theory, we hypothesized that risk in these factors would be related to lower levels of activation.

Question 2: We also examined whether the psychological factors and need characteristics were associated with the effectiveness of a parent activation intervention. Given past literature demonstrating that greater severity and parental depressive symptoms may reduce intervention effectiveness, we hypothesized that these factors would attenuate the effects of the intervention.

Method

Participants

One hundred and 81 Latina/o parents consented to participate in a randomized controlled trial examining the effectiveness of a group parental activation intervention compared to a social support group (see Thomas et al., 2017). Latina/o parents were invited to participate in the study if they were either receiving or seeking mental health treatment for their child (22 years old or younger) at a Spanish-language mental health clinic in North Carolina. Exclusion criteria included focal child not living with parent or active suicidal ideation in parent participant. All participants self-identified as Latina/o, and participated in Spanish-language groups.

The majority of the participants were biological mothers (94.2%) with a few fathers (2.9%) and other caregivers (2.9%). The mean age of the parent sample was 35.8 (SD = 6.6). Consistent with immigrant samples, the majority had not completed high school (69.8%), with a smaller portion graduating from high school (26.7%), and few completing college (3.5%). Parents reported an average monthly income of $1,446. Our final sample included 172 parents that completed baseline interviews (5% parents were lost between consent and baseline interview; see Thomas et al., 2017).

In terms of child characteristics, the mean age of the focal child in treatment was 11 years old (SD = 3.7; range 3–19) and the sample included 43.6% boys. According to chart review, the majority were primarily diagnosed with an adjustment disorder (47%), mood or depressive disorder (32%), attentional disorder (19%), or an anxiety disorder (12%), with a small number diagnosed with other types of disorders (i.e., bulimia, substance abuse, autism). It is important to note that in this clinic, externalizing disorders (i.e., oppositional defiant disorder, conduct disorder) are often diagnosed as adjustment disorders (37% of adjustment disorders involved conduct problems). The majority of children (56%) were initiating treatment at the mental health clinic for the first time (fewer than 6 visits prior to enrolling in our study).

Procedure

We approached current and new clients at this mental health clinic to invite them to participate in a treatment trial to increase their effectiveness as parents. Upon obtaining parent consent and child assent, parents were randomized to either the intervention or social support group using a block design stratified by child insurance status. A research assistant blind to intervention status conducted a baseline interview prior to starting a group. Participants then completed the four-session group (92% attended at least 1 group session; 43% attended all 4 sessions; the mean number of attended sessions was 2.8). Data were then collected by a research assistant blind to intervention status at 1-month (i.e., postgroup; data collected with 87.8% of the sample) and 3-month follow-up (data collected with 86.0% of the sample). Participants obtained $20 for each research interview. The study was conducted under the oversight of the Office of Human Research Ethics of The University of North Carolina- Chapel Hill. All participants completed the questionnaires in Spanish.

MEPREPA Intervention and Control Groups

The parental activation curriculum, MEPREPA, is a four-session 60-min parent group intervention targeting activation skills in Latina/o parents. The sessions covered activation skills in mental health and school settings using the acronym MEPREPA short for “me preparo”/I prepare (MEtas, PReguntar, Escuchar, Preguntar para Aclarar/goals, questioning, listening, questioning to clarify), to teach parents effective communication. The sessions included direct instruction, role-plays, and discussion. The social support group also met for four 60-min sessions, and the facilitator’s role was to establish confidentiality and encourage discussion among participants. The social support group had no specific curriculum and opened by asking parents to discuss issues surrounding seeking care for their children. Groups typically involved 3–6 parents for both the intervention and control groups. Cultural factors were incorporated into all aspects of the material including salient resilience and risk for Latina/o families based on

focus group data and clinical experience of the research team. First, there was a focus on familial communication as recommended by our focus groups. Second, the role of cultural values, like respeto, were incorporated into discussions of how best to engage providers. Third, groups problem-solved how to deal with issues of discrimination and language barriers in accessing care and advocating for children. Finally, the intervention validated the central role of parents as experts on their children within a cultural framework. Time was available in the groups to discuss particular questions and needs of the individual members of the group, and here is where the group may have been able to flexibly respond to adapting the intervention for important critical aspects of their family (i.e., age). All intervention and control sessions were conducted in Spanish and were led by bilingual doctoral clinical psychology students. The sessions were audiotaped and were supervised by a licensed bilingual Latina clinical psychologist (first author) to ascertain fidelity and to resolve issues regarding the implementation of the interventions. Because our study was an effectiveness trial, we took an unobtrusive approach to supervision and fidelity monitoring (Thorpe et al., 2009).

Measures

Demographic characteristics

Parents provided information regarding monthly income and child's age. Insurance status was collected from chart review.

Parent activation

A 13-item Parent Patient Activation Measure (PAM) was used to assess parent activation in health care (Hibbard et al., 2004; Hibbard, Mahoney, Stockard, & Tusler, 2005; Pennarola et al., 2012). The original PAM has been translated into Spanish (Insignia®) and adapted; shortened versions have been used successfully and validated in Latina/o patient and general populations (Alegría et al., 2014, 2008). Parents are asked to respond on a 4-point Likert-scale (1 = strongly disagree to 4 = strongly agree) the extent to which they feel efficacious at managing their child's health. Sample items include: "I am confident that I can take actions that will help prevent or minimize some symptoms or problems associated with my child's health condition," and "I am confident I can tell a doctor the concerns that I have about my child's health, even when he or she does not ask." In the current study, the scale demonstrated adequate internal consistency (α = .89). The items were summed to represent total activation, and this scale was collected at three time points (baseline; 1 month; 3 months).

Language acculturation

Five language acculturation items from the larger Short Acculturation Scale served to assess parents' English-language acculturation (Marin, Sabogal, Marin, Otero-Sabogal, & Perez-Stable, 1987) at baseline. Parents were asked to rate their language use in a variety of contexts (e.g., reading, media use, speaking) on a 5-point scale (1 = only Spanish to 5 = only English). The scale has demonstrated good psychometric properties in Spanish (reliability and validity; Marin et al., 1987), and in the current study, the scale demonstrated adequate reliability (α = .84).

Because all parents were primarily Spanish-speaking, we dichotomized the scale (0 = only Spanish; 1 = some English to only English).

Parental depressive symptoms

The Patient Health Questionnaire-8 (PHQ-8; Kroenke et al., 2009) was used to assess depressive symptoms at baseline. This well-validated measure has been translated and validated in Spanish (Huang, Chung, Kroenke, Delucchi, & Spitzer, 2006). The PHQ-8 assesses frequency of depressive symptoms in the past 2 weeks. Participants rate their frequency on a 4-point Likert-type scale (0 = Not at all to 3 = Nearly every day). The continuous PHQ-8 score was used to assess depressive symptoms to test its relationship to baseline activation in the regression analysis (Question 1), but categorical classification was used in the stratified analyses (using the clinical cut-off of 15; Question 2). The scale demonstrated adequate reliability ($\alpha = .90$).

Parenting stress

The 17-item Parent Stress Scale (PSS; Berry & Jones, 1995; Oronoz, Alonso-Arbiol, & Balluerka, 2007) assessed parents' current perception of parenting stress, including feelings of role satisfaction as a parent, contentment as a parent, and strain of parenting at baseline. The measure has been translated into Spanish with good psychometric properties (reliability and validity; Oronoz et al., 2007). Parents are asked to endorse their level of agreement on a 5-point Likert-scale (1 = strongly disagree to 5 = strongly agree) on a variety of items tapping into their perceptions of their role as a parent. Sample items include "Caring for my child(ren) sometimes takes more time and energy than I have to give," and "It is difficult to balance different responsibilities because of my child(ren)." The scale demonstrated adequate reliability ($\alpha = .83$). As with parental depressive symptoms, the continuous score was used to assess parenting stress for Question 1, but a categorical classification using the top quartile (score of 37) was used for the stratified analyses (see Analytic Methods below).

Perceived severity of child psychopathology

The internalizing and externalizing scales of the Child Behavior Checklist–Spanish version were used to assess parental perception of severity of child psychopathology at baseline (Achenbach, 1991). This measure was developed and validated in Spanish-speaking populations (Rubio-Stipec, Bird, Canino, & Gould, 1990). The CBCL asks parents to endorse the frequency and/or degree of applicability to their child on a variety of behavioral/emotional symptoms on a 3-point scale (0 = not true, 1 = somewhat or sometimes true, 2 = very true or often true). The scale demonstrated adequate reliability ($\alpha = .91$ for total symptoms). For the analyses examining baseline activation, a sum total of raw scores of the internalizing and externalizing scales' items were used to assess severity. For the stratified analyses, the clinical cut-offs were used to indicate whether the child met clinical level symptoms on either the internalizing or externalizing scales.

Analytic Method

We assessed the unadjusted association between continuous child and maternal characteristics using Pearson correlations. A multiple linear regression model was estimated for baseline

activation, including intervention group, child insurance status, and other characteristics found to be associated with the activation measure in the unadjusted analyses (i.e., child age, Medicaid status). The effectiveness of the MEPREPA intervention in subgroups of the sample defined by parent depressive symptoms, parenting stress, and the severity of child psychopathology was tested in longitudinal linear mixed models, parameterized so to estimate a separate intervention effect for each level of the stratification factor. This method allows an examination of potential subgroup differences given the current sample size. In these models, which additionally controlled for child age, Medicaid status, child novice to therapy, any caregiver English language ability, and family monthly income, the time ∗ intervention interaction gives the difference in baseline to 1- or 3-month change in activation for the intervention group relative to the control group at each level of stratification. The time-varying mental health stratification factors were each tested in a separate model and included the following: parental stress (a score of 37 or more vs. <37), parental depression (a PHQ score of 15 or more vs. <15) and perceived severity of child psychopathology (total child externalizing and/or internalizing behaviors in clinical range vs. not).

Results

Question 1

Bivariate correlations suggest that need and psychological but not demographic predisposing characteristics were associated with parent activation (see Table 1). At baseline, greater depressive symptoms, $r = -.302$, $p < .0001$, parenting stress, $r = -.452$, $p < .0001$, and perceived severity of child psychopathology, $r = -.390$, $p < .0001$ were all associated with lower levels of parent activation. However, in this sample of immigrant parents, language acculturation and income were not associated with activation (see Table 1). An ANOVA examining educational level also found no significant differences across education levels (ps = .26–.47). Additionally, there was a trend level effect for parents of younger children being more activated at baseline (age p = .07).

Table 1
Correlations Between Factors and Activation at Baseline (N = 172)

		Parent activation	
Characteristic	Mean (*SD*)	Pearson *R*	*p*-value
Parental activation	72.1 (17.2)	NA	
Language acculturation	5.8 (2.1)	.002	.9761
Family monthly income	1446 (677)	.074	.3368
Child age	11.0 (3.7)	.137	.0739
Parental depressive symptoms	6.4 (6.5)	−.302	<.0001
Parenting stress	33.2 (8.1)	−.457	<.0001
Perceived child psychopathology	24.9 (13.1)	−.390	<.0001

Correlations Between Factors and Activation at Baseline (N = 172)

The baseline multiple linear regression model found that, controlling for covariates, those in the intervention group were somewhat less activated than controls ($p < .05$, Table 2). High parenting stress ($B = -.78$, $p < .0001$) and perceived severity of child psychopathology ($B = -.26$, $p = .02$)

were both associated with lower parent activation. Parental depressive symptoms were not associated with parent activation once the other variables were included in the model.

Table 2
Baseline Linear Regression for Parent Activation

Measure	Parent activation (N = 158)			
	Coefficient	*SE*	*p* (vs. ref)	*p*- (all)
Intervention group	−5.441	(2.394)	.0245	.0245
Parenting stress	−.783	(.174)	<.0001	<.0001
Parental depressive symptoms	−.144	(.218)	.5111	.5111
Any English	−.478	(2.747)	.8622	.8622
Monthly income				
<$1000/month	1.943	(3.975)	.6257	.5994
$1000–2000/month	−.809	(3.664)	.8256	
$2000/month+	Reference			
Child Age 11+	2.954	(2.623)	.2620	.2620
Medicaid	−3.805	(2.834)	.1815	.1815
Perceived child psychopathology	−.258	(.113)	.0236	.0236

Baseline Linear Regression for Parent Activation

Question 2

We next assessed the effect of the intervention in subgroups based on parenting stress, parental depressive symptoms, and perceived severity of child psychopathology (see Table 3). In terms of parenting stress, the MEPREPA group showed greater improvement in activation than the controls between baseline and 1 month for parents with higher (B = 13.09, p = .0014) and lower stress levels (B = 8.63, p = .0005), though there is some indication of stronger effects in those with higher parenting stress levels based on the magnitude of the regression coefficients weight and through the examination of means. This effect was also evident at the 3-month follow-up (high stress B = 11.32, p = .0216 vs. low stress B = 6.62, p = .0079). The findings were similar for parents stratified based on PHQ depression scores. From baseline to the 1-month follow-up and baseline to 3 months, parents in the intervention group with both higher (baseline B = 20.17, p = .0001; follow-up B = 24.81, p = .0006) and lower depression (baseline B = 8.17, p = .0006; follow-up B = 6.02; p = .0014) scores improved more in activation compared to their counterparts in the control group. An examination of the means and regression coefficients finds that parents with higher depression scores showed greater improvements than those with lower depression scores. With perceived severity of child psychopathology, we found an intervention benefit for activation and between baseline and 1 month regardless of whether or not the child was in the clinical range (see Table 3). These effects do appear to attenuate somewhat for the baseline to 3-month analysis. Only those in the clinical range showed a significant intervention effect for parent activation (B = 10.92, p = .0113).

Table 3
Parent Activation Change Scores by Treatment Group, Overall and for Selected Subgroups, With Longitudinal Model Results Estimating Separate Treatment Effects for Each Level of the Stratification Factors

Time period/Stratification factor[c]	Intervention		Control		Longitudinal mixed models intervention effect	
	N	Mean change[a] (*SD*)	*N*	Mean change[a] (*SD*)	Regression coefficient[b] (*SE*)	*p*-value
Baseline to 1 month						
Parenting stress						
High (37+)	19	21.47 (14.86)	22	16.97 (15.72)	13.09 (4.07)	.0014
Low (<37)	51	17.51 (14.27)	48	6.07 (14.02)	8.63 (2.46)	.0005
Parental depression						
High (15+)	10	28.17 (16.69)	8	17.90 (15.07)	20.17 (5.21)	.0001
Low (<15)	60	16.98 (13.52)	62	8.41 (15.15)	8.17 (2.35)	.0006
Perceived child symptoms						
In clinical range	38	21.31 (12.39)	38	12.97 (15.57)	9.88 (3.17)	.0020
Not in clinical range	32	15.34 (16.14)	32	5.36 (14.20)	6.97 (2.79)	.0130
Baseline to 3 months						
Parenting stress						
High (37+)	18	31.16 (13.48)	22	26.23 (14.40)	11.32 (4.90)	.0216
Low (<37)	48	22.37 (16.21)	49	12.09 (15.13)	6.62 (2.48)	.0079
Parental depression						
High (15+)	10	34.96 (19.32)	8	29.71 (14.56)	24.81 (7.18)	.0006
Low (<15)	56	22.95 (14.69)	63	14.79 (15.72)	6.02 (2.36)	.0114
Perceived child symptoms						
In clinical range	36	28.68 (13.38)	38	20.97 (15.24)	10.92 (4.28)	.0113
Not in clinical range	30	20.07 (17.59)	33	11.28 (15.94)	3.70 (2.78)	.1850

[a] Unadjusted average change in given self-report measure between baseline and 1 or 3 months. [b] Regression coefficient and standard error for treatment group (intervention vs. control), in model estimating separate treatment effects for each level of the given stratification measure; models additionally adjust for child age, Medicaid status, child novice to therapy, any caregiver English language ability, and family monthly income; positive values favor the intervention group; *p*-value is for the treatment*time interaction for each level of the stratification measure, indicating whether or not there is statistically significant improvement in activation associated with the intervention for the specified subgroup. [c] For the raw mean change scores, stratification is based on the baseline characteristic; however, in the longitudinal models, these covariates (parental stress, parental depression and child CBCL) are time-varying.

Parent Activation Change Scores by Treatment Group, Overall and for Selected Subgroups, With Longitudinal Model Results Estimating Separate Treatment Effects for Each Level of the Stratification Factors

Discussion

The current paper tested the role of demographic and psychological predisposing, enabling, and need factors in predicting parent activation in a sample of immigrant Latina/o parents. Overall, the pattern of results suggests that indeed psychological predisposing factors not only predict parental activation at baseline, but appear to be associated with the effectiveness of an activation intervention. Given the emerging evidence on the benefit of patient activation in primary and mental health care and lower rates of activation in Latina/o communities (Hibbard & Cunningham, 2008), Latina/o mental health researchers should seek to incorporate this construct in their work in order to enrich our understanding of therapeutic processes with this population.

Understanding Latina/o Parent Activation

Our hypotheses surrounding the predisposing, enabling, and need factors associated with Latina/o parent activation were only partially supported. Primarily, parenting stress and perceived severity of child psychopathology emerged as the factors significantly associated with activation. Although in the multiple regression analysis depressive symptoms were not associated with parental activation, they were associated bivariately. This suggests that for parents seeking mental health services for their children, their activation is more closely associated with their feelings of efficacy and contentment as captured through the parent stress measure than with depressive symptoms more broadly. Similarly, the perceived severity of their child's mental health symptoms also influenced how efficacious parents felt managing their child's health care and education. In other words, it appears the effects of depressive symptoms on activation are accounted for by parenting stress and the perceived severity of child

psychopathology. Our findings are in line with past work documenting that greater depressive symptoms lead to lower levels of patient activation among adult samples (not specifically Latina/o; Hibbard & Cunningham, 2008; Magnezi et al., 2014), but extends it to suggest that for parents, it is their perception of the difficulty of their child's problems in conjunction with their perceived effectiveness as parents that is paramount in predicting activation.

Surprisingly, and contrary to our predictions, none of the demographic characteristics associated with lower levels of patient activation among Latinas/os in the literature were associated with parent activation in our sample (i.e., Alegria et al., 2009; Cunningham et al., 2011). This finding is likely due to the fact that our sample had limited variability on these characteristics in conjunction with the unique clinical context of the current study. In terms of variability on demographic factors, only a handful of parents had completed college and the majority of the sample was low-income. Without sufficient variability on these demographic factors, these analyses were not able to detect meaningful differences. At the same time, the context of our intervention may have also influenced these results. Our study took place in a bilingual mental health clinic designed to meet the sociocultural needs of the Latina/o population, and help families without adequate health care coverage for their children. Within this context, traditional barriers to mental health care are addressed and may play a less significant role. However, it is important to note that other work suggests that income and education may not be the most pertinent predictors of lower levels of activation among Latinas/os. For example, Cunningham et al. (2011) found that adjusting for income and education did not account for the difference in patient activation between Latina/o and non-Latina/o Whites, but these were accounted for by differences in acculturation (nativity status; generation). Yet, we also did not find that English language acculturation was associated with activation, which again is partly due to lack of variability and the unique context of our study.

An examination of the means reported in the literature on the PAM with Latinas/os assessing patient activation suggests that the parents in our sample reported higher levels of activation at baseline than is typically reported in the literature. This finding may again be due to the fact that our study was located in a Spanish-speaking mental health clinic and perhaps immigrant Latina/o parents in another context without access to bilingual mental health care would not have demonstrated such high levels of activation as a result of this treatment barrier. Supporting this notion, another study examining patient activation within majority bilingual clinics found that Latina/o patients reported similar levels of activation as found in our sample (Allen et al., 2015). Therefore, bilingual clinics where immigrant Latina/o families access Spanish-speaking services may facilitate greater activation. This is consistent with past work that recommends that clinic policies and the broader health care system can address larger systemic barriers to activation (Chen et al., 2014).

Impact on Treatment Effects

This paper also provides some initial suggestive evidence of the role psychological predisposing factors play in predicting the effectiveness of our parent activation intervention and warrant further investigation in a larger effectiveness trial. Overall, the intervention was effective across the sample, but subgroup analyses suggest that Latina/o parents who demonstrate greater risk at start of treatment in terms of their depressive symptoms, parenting stress, and perceived severity

of child psychopathology may receive slightly greater benefit from the intervention in terms of their confidence in managing their child's health. It is important to note that we could not formally test moderation due to our limited sample size, but our findings suggest that more attention needs to be paid to these factors with Latina/o parents and families as our results differ from larger clinical efficacy trials documenting that these types of factors typically hamper improvement in child clinical trials (e.g., Hinshaw, 2007). Our pattern of initial findings may differ because other studies have typically focused on child mental health outcomes, whereas our study focused the effects on a parent construct. Because our intervention specifically targeted increasing parental activation through psychoeducation about child mental health, building partnership with providers, skill-building surrounding communication, incorporating cultural factors, and finding strengths as parents, our intervention may have been able to address some of the very issues that serve as barriers to effective treatment. Indeed, studies that have purposefully sought to improve treatment engagement as part of their efficacy trial typically document that it improves treatment outcomes (Ingoldsby, 2010). Our results are consistent with the finding from the original trial that those lowest in activation at the start of treatment increased the most in the intervention group (Thomas et al., 2017). This set of findings contributes to the larger literature by suggesting that not only does an activation intervention lead to increases in parent activation for Latina/o parents, but it may also specifically reach those populations that need it the most.

It is important to note that our intervention demonstrated effects while parents were actively engaged in mental health treatment for their children. Past research has documented in a majority Latina/o sample that patient activation increases as patients develop treatment alliance with their providers surrounding the goals and tasks of therapy (Allen et al., 2015). Perhaps there was a synergistic relationship between our intervention and treatment for at-risk parents (i.e., with greater depressive symptoms, parenting stress, severe child psychopathology). Our intervention, MEPREPA, specifically taught parents skills in effective communication that likely foster feelings of confidence and efficacy in interacting with the mental health care system. As parents learned activation skills and applied them with providers with whom they were developing alliances, parents may have learned skills to help their children, thereby increasing their efficacy as parents. As parents may have started to see improvement in their children, this would then foster greater feelings of efficacy at managing their child's health. MEPREPA helps parents by fostering better communication, teaching parents how best to engage with their providers, and fomenting a sense of efficacy rooted in their role as parents. Parents who began our intervention with higher levels of these risk factors may have needed the intervention to make the best use of their child's mental health treatment—especially for children demonstrating clinical levels of symptoms whose health care perhaps felt most tenuous. Although we do not have the data to test this particular cascading effect, future studies of child mental health treatments should consider addressing parent activation, treatment alliance, and treatment efficacy to test these questions.

Additionally, qualitative analyses of the process of patient activation suggest that these types of interventions are especially important to address cultural barriers associated with health activation in Latina/o populations (i.e., respect for authority; lack of familiarity with the health care system; Cortes, Mulvaney-Day, Fortuna, Reinfeld, & Alegría, 2009). As with the RQP-MH and DECIDE interventions (Alegría et al., 2008, 2014), Latina/o parents were eager to learn these activation skills and wanted to apply them with their providers. It also important to note that our measure of parent activation was not specific to the mental health milieu but instead

asked parents to report their general level of confidence and efficacy in getting help for their child's "health condition" or in general their child's "health." Future research should examine whether these processes differ for mental health activation, and Latina/o mental health interventions should take advantage of the population's desire to become activated in health care and incorporate patient activation into their curriculums.

The impact of our intervention may also be related to the specific cultural milieu for the immigrant Latina/o parents in our study. Many barriers have been identified for Latina/o families that hamper effective parental involvement in mental health treatment, including discrimination, language barriers, lack of knowledge of the health system, lack of formal education, stigma of mental health treatments, and time/work commitments (Alegría et al., 2002). Our study cannot identify which specific aspects of our intervention led to increases in activation, but as activation increased in both the control and experimental conditions, we believe this demonstrates the groups themselves provided an important avenue for support. As immigrant families can be isolated, building a sense of community may have served to link parents to others facing similar struggles leading to a reduction in stigma and building a sense of efficacy in the community. This was further fostered by an atmosphere in the clinic of culturally competent, bilingual care that respected the cultural orientation of the families in treatment. Future work should continue to examine how to best target structural barriers in a culturally competent fashion.

Finally, we have not discussed the role that the age of the child plays in parent activation, as this is beyond the scope of the current study. However, previous research finds that parents of older children with health problems experience more stress related to parenting than do parents of younger children with health problems (Macias, Saylor, Rowe, & Bell, 2003). Furthermore, research indicates that parenting stress relative to a child's age impacts a parent's role and feeling of comfort with respect to navigating their child's mental health services (parent empowerment; Bode et al., 2016). Specifically, Bode et al. (2016) found that among parents of children with behavioral and emotional problems who reported high levels of parent empowerment, those who were parents of older children reported significantly higher levels of stress than did those who were parents of younger children. Thus, parent activation may interact with age of child in important ways that need to be considered. In our analyses, we controlled for age, but there was a trend level effect for age on parent activation with parents of younger children reporting higher levels of activation. Likely, parents of teens may struggle more in helping their children navigate the complex mental health system and may feel less efficacious as parents, as noted by the literature above; therefore, future research should continue to examine the role of a child's age in parent activation and interventions targeting increasing engagement in treatment.

Limitations and Clinical Implications

Our study contributes to literature in meaningful ways, but there are also some limits to generalizability and statistical limitations. A strength of our study is that it was conducted in a bilingual mental health clinic, thereby speaking to how to engage clients in this specific setting, but our findings may not apply to Latinas/os seeking treatment in other types of mental health clinics. Similarly, because our sample was mostly immigrant parents, our findings may not generalize to Latina/o parents who are second generation or above. Although our stratified

analyses are consistent with moderation, our current study was underpowered to test a three-way interaction and larger samples will be necessary to test this process. Our sample also had limited variability on many demographic characteristics typically associated with activation, so the results surrounding those outcomes are not representative of the larger Latina/o population. Our intervention did not specifically target developmental differences across the age range, and future work on parent activation should incorporate how to involve youth in older populations (i.e., teens) as well how best to help parents with younger children. We found effects for our intervention despite the fact that only 43% of the sample attended all four sessions and most families attended two or three sessions, and future work should consider whether dose of session attendance also influenced activation outcomes. While our study did not specifically address the timing of our intervention, previous analyses on this sample found that the intervention had greater effects for those families who had been newer to treatment (fewer than 6 sessions) (Thomas et al., 2017). Taken with our results and the literature discussed above about Latina/o adults in treatment, this suggests that targeting activation skills at the start of treatment may be more impactful. Further research should tackle these limitations as parental activation may be an important facilitator of therapeutic change (Ingoldsby, 2010).

Our study has multiple clinical implications. Clinicians should inquire about Latina/o parents' feelings of efficacy at managing their child's mental health care to target activation. For immigrant Latina/o parents, perceptions of their child's symptomology and parenting stress may serve to diminish confidence and efficacy at managing their child's care. Therefore, clinicians should pay special attention to activation when their Latina/o clients are demonstrating high levels of parenting stress or significant perceived child psychopathology. By teaching activation skills and engaging parents effectively in treatment, however, these risks were mitigated by our intervention. Overall, it is imperative that mental health practitioners working with Latina/o populations pay attention to parental activation, as it appears to be an important factor in helping families to obtain the greatest benefits from treatment and building therapeutic alliance.

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