Express yourself:
Demographic differences among physical and emotional manifestations of depression and healthcare provider interventions in pediatric primary care

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Background

- Depression is the most common mental health disorder among adolescents (Federal Interagency Forum on Child and Family Statistics, 2017).
- High levels of untreated mental health symptoms among ethnic minority youth may be due to lack of access to care or underdiagnosis (Hodgkinson et al., 2017; Kataoka et al., 2002; Bailey, et al., 2019).
- Differences in depressive symptoms among minoritized groups require that physicians and clinicians accurately identify these differences for proper diagnosis (Anderson, 2010).
- The Patient Health Questionnaire for Adolescents (PHQ-9A) can be used as a validated screening tool in pediatric primary care settings (Siu, 2016; Jonson et al., 2002).
- **Improved understanding of how demographic groups respond to items on the PHQ-9A in a primary care setting is important to better recognize and intervene for various presentations of depression.**

Objectives

1. Analyze demographic differences adolescents report of emotional (item 1: feeling down) versus physical (item 5: feeling tired) symptoms of depression on the PHQ-9A in a pediatric primary care setting.
2. Determine the most common primary care physician (PCP) and behavioral health clinician (BCH) interventions when physical or emotional symptoms of depression are endorsed.

Methods

- Project CLIMB (Consultation Liaison in Mental Health and Behavior) provides integrated behavioral health services to children and families seen in an urban residency training pediatric primary care clinic.
- 2,107 adolescents aged 11-18 completed a Patient Health Questionnaire 9-Item Modified for Adolescents (PHQ-9A).
- Participants of this study were 277 adolescents with an elevated PHQ-9A (score of 10+ and/or elevated item 9)
- Item 1 of the PHQ-9A ("Feeling down, depressed irritable, hopeless?") was used to describe reported emotional depressive symptoms; 219 of 277 had an elevated item 1.
- Item 5 of the PHQ-9A ("Feeling tired or having little energy?") was used to describe reported physical depressive symptoms; 231 of 277 had an elevated item 5.
- Demographic differences were analyzed using Chi-Square tests.
- Conventional content analyses (Hsieh & Shannon, 2005) was used to code primary care physician (PCP) and behavioral health consult (BHC) interventions for elevated PHQ-9As. Qualitative codes were transformed into quantitative results.

Results

Table 1. Demographic Information of Adolescents with and without Elevated PHQ-9A Item 1 ("Feeling down, depressed, irritable, hopeless?")

	Elevated Item 1	Non-elevated Item 1
Sample	N = 219 (79.1%)	N = 58 (20.9%)
Gender		
Male	91 (41.6%)	22 (37.9%)
Female	128 (58.4%)	36 (62.1%)
Ethnicity*		
Latino	131 (59.8%)	24 (41.4%)
Non-Latino	85 (38.8%)	32 (55.2%)
Not reported/unknown	2 (0.9%)	0 (0.0%)
Race		
American Indian/Pacific Islander	1 (0.5%)	0 (0%)
Asian	4 (1.8%)	1 (1.7%)
Black/African American*	38 (17.4%)	17 (29.3%)
White	65 (29.7%)	14 (24.1%)
More than one race	24 (11.0%)	8 (13.8%)
Other	82 (37.4%)	16 (27.6%)
Unknown	2 (0.9%)	2 (3.4%)
Primary Language*		
English	143 (65.3%)	50 (86.2%)
Spanish	72 (32.9%)	7 (12.1%)
Other	4 (1.9%)	1 (1.7%)
Insurance		
Public	192 (87.7%)	54 (93.1%)
Private/Other	27 (12.3%)	4 (6.9%)

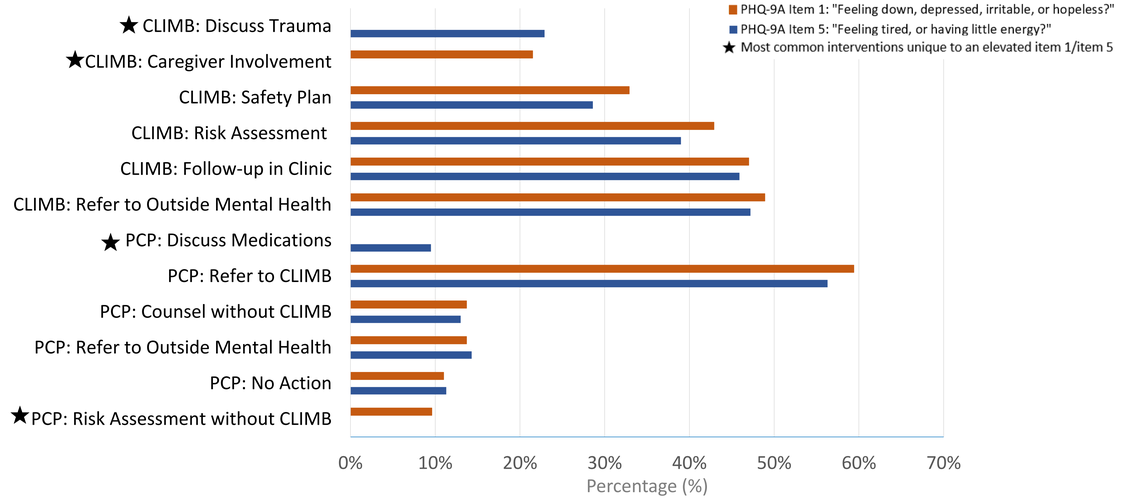
- Latino adolescents were more likely to endorse item #1 of the PHQ-9A than non-Latino adolescents (χ^2 = 10.01 ; p < .05)
- Black/African American adolescents were less likely to endorse item #1 than other racial groups (χ^2 = 4.121 ; p < .05)
- Adolescents with Spanish as their primary language were more likely to endorse item #1 than primarily English-speaking adolescents (χ^2 = 14.674 ; p < .05)

Table 2. Demographic Information of Adolescents with and without Elevated PHQ-9A Item 5 ("Feeling tired, or having little energy?")

	Elevated Item 5	Non-elevated Item 5
Sample	N = 231 (83.4%)	N = 46 (16.6%)
Gender		
Male	94 (40.7%)	19 (41.3%)
Female	137 (59.3%)	27 (58.7%)
Ethnicity		
Latino	130 (56.3%)	25 (54.3%)
Non-Latino	97 (42.0%)	20 (43.5%)
Not reported/unknown	2 (0.7%)	0 (0%)
Race		
American Indian/Pacific Islander	0 (0%)	1 (2.2%)
Asian	4 (1.7%)	1 (2.2%)
Black/African American	45 (19.5%)	10 (21.7%)
White	68 (29.4%)	11 (23.9%)
More than one race	26 (11.3%)	6 (13.0%)
Other	82 (35.5%)	16 (34.8%)
Unknown	3 (1.3%)	1 (2.2%)
Primary Language		
English	162 (70.1%)	31 (67.4%)
Spanish	64 (27.7%)	15 (32.6%)
Other	5 (1.9%)	0 (0%)
Insurance		
Public	206 (89.2%)	40 (87.0%)
Private/Other	25 (10.8%)	6 (13.0%)

No differences were found when comparing demographic groups between adolescents with an elevated vs. non-elevated item 5 (all p's > .05)

Figure 1. Most frequent primary care and behavioral health provider interventions and recommendations in response to reported emotional (item 1: feeling down) and physical (item 5: feeling tired) depressive symptoms



- The most common PCP and CLIMB interventions differed when item 5 (feeling tired) versus when item 1 (feeling down) is elevated
- Discussing trauma and medication were only employed when Item 5 (feeling tired) was elevated
- Caregiver involvement and PCP risk assessment without CLIMB were only employed when item 1 (feeling down) was elevated

Discussion

- Unlike previous studies of Latino youth (e.g., Choi & Park, 2006), our results show that Latino and primarily Spanish-speaking youth were more likely to report emotional symptoms of depression (item 1: feeling down) compared to non-Latino and primarily English-speaking youth. Acculturation or differences in how mental health is viewed between successive generations may partially explain these results
  - We may have used a heterogenous sample of youth from different countries of origin, which may have different cultural perspectives and understandings of mental health (Wassertheil-Smoller et al., 2014).
  - Our findings suggest that adolescents with a medical home where depression is routinely screened may provide trust and comfort, allowing for more emotional expression compared to other mental health care facilities.
- Our results found that Black/African American youth were less likely to report emotional symptoms of depression (item 1: feeling down).
  - One explanation may be an overall positive attitude and hopefulness despite feeling depressed found in Black/African Americans (Assari & Lankarani, 2016).
  - Another explanation may be due to Black/African Americans expressing physical symptoms more than emotional symptom of depression due to stigma towards individuals with mental health conditions (National Alliance on Mental Illness, 2023).
- Limitations include: (1) Data are entirely based on adolescents' willingness and desire/ability to be forthcoming when completing the self-repot PHQ-9A and (2) Manually inputted data may contain some human error; reviewing raw screening data may ensure accuracy.

Implications

- Additional research should investigate depression symptom presentation among adolescents from different countries of origin, particularly different subgroups of Latinos.
- Universal depression screening at youth's medical homes allows for more opportunities to address depression and increase access to care, particularly among marginalized youth.
- Future studies should investigate how interventions correlate with PHQ-9A scores at subsequent visits.
- Different groups of individuals present depression with different symptoms (e.g., feeling down, fatigue). Therefore, PCPs and BHCs should be aware and employ equitable and effective interventions (e.g., discuss trauma, discuss medications, etc.).

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