Assessing Relationship between Intimate Partner Violence & Preconception Care Risks amongst African American Women thru Gabby Preconception Care System

Brian Penti, Megan Hempstead, Suzanne Mitchell, Paula Gardiner, Karla Damus, Ekaterina Sadikova, Fatima Adigun , Larry Culpepper, Tim Bickmore, Brian Jack

BACKGROUND:

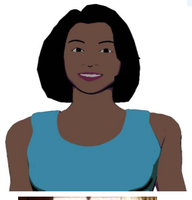
Preconception Health and Healthcare (PHHC) focuses on identifying and treating risk factors that can affect a pregnancy before a women becomes pregnant. PHHC is potentially important for African-American (AA) women, who have infant mortality rates 2.4 times the rate for non-Hispanic white women.

Intimate Partner Violence (IPV) is a risk factor for adverse pregnancy outcomes. Evidence suggests screening for and intervening against IPV during pregnancy improves birth outcomes.

Researchers at Boston University and Northeastern University developed a conversational agent, which are computerized, animated characters designed to integrate the best practices from provider-patient communication theory, known as the **"Gabby" PHHC system**, to assist in the delivery of PHHC for AA women of reproductive age. The internet based Gabby system screens for PHHC risks, assesses readiness for change to each identified risk, educates about the PHHC risks, and creates a "My Health To-Do List."

AIMS: Assess, based on data from the Gabby PHHC System, if women with a history of or ongoing IPV will have an increased number of PHHC risks compared to women who do not have history of or ongoing IPV.

Secondary outcomes included assessment of IPV & perception of discrimination & reporting increased stress.



METHODS: Analysis of Data from a RCT *(HRSA B-MCH R40 MC21510):*

90 African-American women, between the ages of 18-34 from 20 states, were recruited to participate in use of "Gabby" Preconception Care System. All participants completed a online risk assessment, which consisted of 107 PPC risk.

The risk assessment instrument used 6 questions to determine history of IPV. These questions were combined from a number of IPV screening tools to capture all domains of IPV as identified by the CDC.Those screening questions were:

- Have you ever been hit, slapped, kicked, or physically hurt in any way?
- Has anyone ever made you do something sexual that you didn't want to do?
- Have you ever felt nervous or scared because of the things that someone said to you?
- Has anyone ever told you that you are a bad person, that you are useless or that you are worth nothing?
- Are you afraid that someone you know may hurt you?
- Are you ever afraid or nervous to go home?

Women were defined as having a history of IPV if they answered yes to any of the above questions.

Perceived Discrimination was determined by using Everyday Discrimination Scale, and increased levels of stress was determined by using Perceived Stress Scale.

Study results:

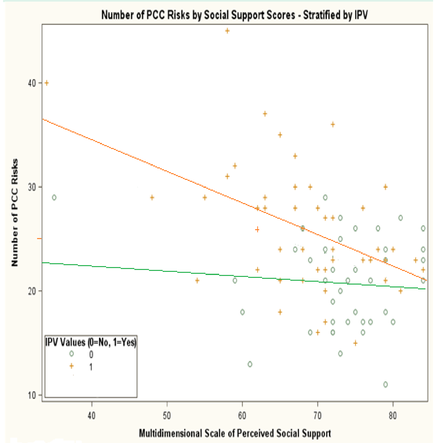
Initial Amongst 90 out of 100 women who enrolled in study
- 56.7% reported intimate pater violence (any type)
- 36.7% reported history of physical or sexual abuse
- 52% reported emotional or verbal abuse

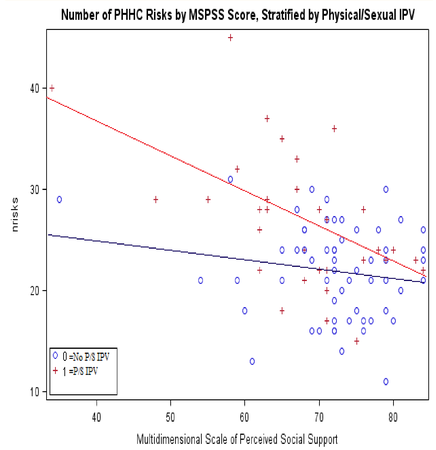
Below: Relationship between IPV (any type) and PCC risks, Discrimination, and Stress

	IPV (all types)		
	Yes (n=51)	No (n=40)	p-value
Socio-Demographic Characteristics			
Age	25.1 (3.7)	26.3 (3.2)	0.09
Education			0.01
College or above	54.9%	80.0%	
Less than college	45.1%	20.0%	
Household income			0.80
Less than $20,000	7.8%	5.0%	
$20,000-$49,999	23.5%	17.5%	
$50,000 or more	37.3%	45.0%	
Number of PHHC risks identified	25.9 (5.9)	20.9 (4.5)	<0.01
History of Illegal Drug use	27.5%	15.0%	0.15
Smoking	17.6%	10.0%	0.30*
Don't have a PCP	31.4%	22.5%	0.35
Trouble paying bills	43.1%	15.0%	<0.01
Everyday Discrimination Scale	14.6 (7.9)	10.4 (7.5)	0.01
Multidimensional Scale of Perceived Social Support	68.6 (9.6)	73.1 (8.6)	0.02

Associations with Physical or Sexual IPV	Physical or Sexual IPV Yes (n=33)	No (n=58)	p-value
Sample of Socio-Demographic Characteristics/PHHC risks			
Number of PHHC risks identified	27 (6.7)	22 (4.6)	<0.01
Multidimensional Scale of Perceived Social Support	68 (10.3)	72. (8.2)	0.03
Everyday Discrimination Scale	15 (8.0)	12 (7.7)	0.06
Education			<0.01
College or above	49%	76%	
Less than college	52%	24%	
Trouble paying bills	46%	22%	0.02
Anxiety/Depression	27%	16%	0.18

Association between Social Support, IPV, and total Number of PHHC risk.
Top: all types of IPV
Below: IPV limited physical or sexual abuse





Conclusions:

Initial data suggests the Gabby PHHC system can identify PHHC risks & reduce total number of PHHC risks, although our study was not powered to assess if Gabby can intervene in cases of IPV.

Women with history of IPV have more preconception care risks compared to women with no reported hx of IPV, and women with a history of physical or sexual abuse have the highest number of PHHC risk.

Women with a history of IPV were more likely to:
- Have higher Everyday Discrimination Scale
- Have lower scores of Multi-dimensional Scale of Perceived Social Support
- Have trouble paying bills
- Less likely to have college education

Social Support appears to be protective in reducing number of PHHC risks for women who have a history of IPV.

Limitations:

- Not able to assess birth outcomes yet
- Use of non-validated IPV screening questions, & unclear if women who report history of IPV are currently in abusive relationship (future studies will use WAST screening questions, and clarify past and present abuse)
- Limited number of test subjects
- Not powered to assess if Gabby PHHC system effective in decreasing IPV risk
- Information is self-reported

Future research:

- Study to enroll 500 AA women to use Gabby system, using WAST screening questions (currently >130 women enrolled)
- For women answer +IPV, what is the impact of the Gabby PHHC System? (as mentioned, the Klevins Study would computer-based screening to not be effective in decreasing rates of IPV or improving QoL)
- Does framing discussions regarding IPV and potential poor pregnancy outcomes decreasing rates of IPV?
- Can men be potentially screened for perpetration of IPV using such a system?
- Could this system improve birth outcomes for AA women? Could this system be effective in general population?

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For further information

Please contact Brian Penti MD at *Brian.Penti@bmc.org*