

# Do Nonclinical Community-Based Youth-Serving Professionals Talk With Young Men About Sexual and Reproductive Health and Intend to Refer Them for Care?

American Journal of Men's Health  
2017, Vol. 11(4) 1046–1054  
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DOI: 10.1177/1557988317696640  
journals.sagepub.com/home/ajmh



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## Abstract

Young men (ages 15–24) may benefit from community-based connections to care since many have sexual and reproductive health (SRH) needs and low care use. This study describes nonclinical community-based youth-serving professionals' (YSPs) SRH knowledge, confidence, past behaviors, and future intentions to talk with young men about SRH and refer them to care, and examines factors associated with care referral intentions. YSPs ( $n = 158$ ) from 22 settings in one mid-Atlantic city answered questions about the study's goal, their demographics and work environment from August 2014 to December 2015. Poisson regression assessed factors associated with YSPs' care referral intentions. On average, YSPs answered 58% of knowledge questions correctly, knew 5 of 8 SRH care dimensions of where to refer young men, and perceived being somewhat/very confident talking with young men about SRH (63%) and referring them to care (77%). During the past month, the majority (63%) talked with young men about SRH but only one-third made care referrals; the majority (66%) were somewhat/very likely to refer them to care in the next 3 months. Adjusted models indicated YSPs were more likely to refer young men if they had a very supportive work environment to talk about SRH (adjusted RR = 1.51, 95% CI [1.15, 1.98]), greater confidence in SRH care referral (1.28 [1.00, 1.62]), and greater SRH care referrals in the past month (1.16 [1.02, 1.33]). Nonclinical community-based YSPs have poor-to-moderate knowledge about young men's SRH care, and less than one-third reported referrals in the past month. Findings have implications for educating YSPs about young men's SRH care.

## Keywords

access to health care, adolescents and young adults, community organizations, health education, men's health, reproductive health, sexual health

Received August 15, 2016; revised January 11, 2017; accepted January 13, 2017

Engaging young men (ages 15–24) in sexual and reproductive health (SRH) care is a public health priority (Gavin et al., 2014; Hagan, Shaw, & Duncan, 2008; U.S. Department of Health and Human Services, Office of Disease Prevention and Health Promotion, 2010). In the United States, young men experience high rates of sexually transmitted infections (STIs), HIV (Satterwhite et al., 2013), and unintended partner pregnancies (Finer & Zolna, 2014). Costs of unintended pregnancies and STDs/HIV are many and include personal (e.g., truncated

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school, unemployment, lower earning, poor infant outcomes, infertility, ectopic pregnancy) and societal costs (~\$25 billion) nationally (Owusu-Edusei et al., 2013; The National Campaign to Prevent Teen and Unplanned Pregnancy, 2013). Young men's involvement in SRH care is low (Marcell, Bell, Lindberg, & Takruri, 2010) due in part to their reduction in health-care visits during adolescence (Marcell, Klein, Fischer, Allan, & Kokotailo, 2002; Marcell, Matson, Ellen, & Ford, 2011). While many programs focus on engaging young women in SRH, fewer public health approaches are designed to engage young men in SRH. The International Conference on Population and Development and the World Health Organization define SRH as being "a state of physical, mental, and social well-being and not merely the absence of disease, dysfunction, or infirmity, in all matters relating to the reproductive system, its functions, and its processes" (ICPD Programme of Action Summary, 1994; World Health Organization, 2006). Community-based approaches are needed to successfully promote young men's sexual and reproductive well-being and connect them to SRH-related clinical services (Johnson, Warner, Carlon, & Fine, 2014).

Changes in health care related to the Affordable Care Act emphasize population health and provide an opportunity to move toward a "community-integrated" health system that promotes health across multiple sectors (Halfon et al., 2014). Nonclinical professional staff work with youth in a wide range of community-based settings (e.g., recreation centers, after-school programs, job placement programs) and represent a diverse workforce (e.g., health educators, teachers, caseworkers). These staff are ideally situated to talk with young men about their SRH and link them to clinical care resources. Many young people report being connected to or involved with community organizations or social services agencies (Duke, Borowsky, & Pettingell, 2012), and many staff are already making referrals to connect members with services provided by other organizations and agencies. Past studies have not examined youth-serving professionals' (YSPs) capacity to engage young men in discussions about SRH, including their knowledge and confidence about young men's SRH, and their SRH referral behaviors to clinical services.

Of studies that have examined YSPs' capacity to talk about or refer young people more generally for SRH, variation in YSPs' talking with youth about sex behavior and health has been observed (Colarossi, Betancourt, Perez, Weidl, & Morales, 2014; Fisher et al., 2010; Gupta et al., 2015). While one exploratory semistructured interview study conducted among 21 youth development professionals highlighted that they discussed with youth a wide range of sexual health concerns, including STIs, pregnancy, and birth control (Gupta et al., 2015), another study that was designed as a

quasi-experimental evaluation of a capacity-building intervention with after-school programs in New York identified that staff reported before the intervention, on average, infrequent communication about SRH with the youth with whom they work (Colarossi et al., 2014). One past study also described that YSPs did not have referrals in place for members related to their SRH (e.g., for contraception, HIV/AIDS or other STI care) (Fisher et al., 2012). In one study, few YSPs reported that the youth they interact with "most often" or "sometimes" initiated talking with them about sexual health promotion (Fisher et al., 2010). Passive approaches for addressing SRH with young men may not be the best approach to engage them in SRH. In fact, one clinic-based study reported that young men were interested in talking about a wide range of SRH topics (from STIs and pregnancy prevention to relationships) with their health-care provider, but preferred their provider to bring up the topic rather than bring it up themselves (Same, Bell, Rosenthal, & Marcell, 2014). Young men in community-based settings may be similarly reluctant to initiate discussions about SRH yet willing to discuss SRH if raised by the YSP.

YSPs' ability to talk with and refer young men to SRH care may stem from workplace as well as personal contexts. For example, the degree to which a workplace is supportive of YSPs talking about SRH with male youth and the amount of flexibility one has in his or her job may influence a YSP's willingness to engage young men in these types of discussions. Past work identifies variation in work environments that support youth access to SRH information from being relatively supportive (Fisher et al., 2012) to neither supportive nor unsupportive (Colarossi et al., 2014). YSPs may require further training to have the sufficient knowledge and confidence to engage in SRH discussions or referrals for clinical care. For example, one study conducted among a convenience sample of 169 YSPs working in nonprofit youth-serving organizations across Indiana identified overall high levels of perceived knowledge and comfort talking about sexuality topics (i.e., human development, relationships, personal skills, sexual behavior, sexual health, and society and culture); however, perceived knowledge and comfort in talking about sexual behavior and health was significantly lower than in talking about relationships and personal skills (Fisher et al., 2010). This study also identified that YSPs' prior training (either formal or informal) about youth sexuality was associated with having higher levels of comfort, confidence, skills, and knowledge about sexuality in general (Fisher et al., 2010). Although these studies provide general insights into YSPs' SRH knowledge, confidence, and actual behaviors with youth in general, they are not focused on engaging young men in SRH, a

population that is typically left out of these types of discussions, nor do they explore key factors that are associated with referring young men to SRH care.

The primary goal of this study was to describe nonclinical community-based YSPs' SRH knowledge, confidence, past behaviors, and future behavioral intentions to talk with young men about SRH and refer them to care. The study's secondary goal was to examine factors associated with YSPs' future behavioral intentions to refer young men to SRH care.

## Methods

### Study Procedure and Sample

This study is part of a larger study to train nonclinical community-based YSP staff on a clinical service referral guide for young men on SRH care. In a series of steps, organizations in one mid-Atlantic city were selected to participate. First, using the 2010 American Community Survey (American Fact Finder, 2010), areas (i.e., census tracts) with the greatest concentration of male minority youth were identified. Using public health surveillance data, information was then overlaid using a geographic information system program (ArcGIS v9.3, ESRI, Redlands, CA) on areas above the 50th percentile in cases of chlamydia, gonorrhea, syphilis, and HIV separately among male, minority youth from 2009 to 2011. These layers of information identified one contiguous, geographical area composed of six zip codes within the city, which represented areas where there was a concentration of young minority males and a need for care related to HIV and STI morbidity.

A list of potential youth-serving organizations was then identified from a number of preexisting resources including a database of community organizations created by the Mayor's Office of Information Technology, the Wave study that used community-mapping activities to identify youth-serving organizations within the catchment area (Mmari et al., 2014), Google map searches within the catchment area (that used search terms such as "youth" and "community-based organizations"), and referral from surveyed organizations to other relevant organizations. Organizations were then geocoded to identify settings within or inside a half-mile buffer around the identified geographical area. Of the eligible organizations that were successfully contacted, 81% ( $N = 51$ ) agreed to participate. Recruitment included a structured phone survey in which a director or administrator from each organization was asked questions about the organization (e.g., the age of population served and the services offered) (Marcell et al., 2016).

Organizations were eligible for participation in the training if they served male adolescents aged 15–24 and met the

following definition of community organizations: community-based (located in and focused on serving a specific community such as after-school programs, community centers, or family centers), social service-based (these were not necessarily located in the community but did serve specific population(s) in the community or provide specific services [e.g., services dedicated to homeless, Latino, or lesbian, gay, bisexual, and transgender populations]), recreation centers, or faith-based.

Research staff met with directors/administrators and reviewed the study's goals, the purpose of the training and willingness for their setting and staff to participate in the 1-hr training designed to teach staff how to use the clinical SRH service referral guide with the young men with whom they work. Before each training, informed written consent was obtained as outlined by the approved human subjects review board protocol, and YSPs completed a baseline survey that assessed their demographics, SRH knowledge, confidence, and behaviors related to engaging and referring young men to SRH care. The analysis presented here focuses on this baseline survey with data from 158 nonclinical YSPs from 22 organizations who participated in trainings conducted from August 2014 to December 2015 and items about the organization that directors/administrators from these 22 organizations answered during the initial recruitment phone survey.

### Measures

#### Individual background characteristics ( $n = 158$ )

**Demographic characteristics.** Participants were asked about their age, sex, race/ethnicity, and occupation. Participants' age was categorized as professionals closer in age to the target population (29 and under) or 30 and older. Race/ethnicity was coded as non-Hispanic Black, non-Hispanic White, Hispanic, and other (e.g., Asian). Occupation was coded as caseworker/counselor, director/administrator, or teacher/coach/peer leader.

**Work background.** Participants were asked how many young men they had worked with in the past month ("less than 10," "10–19," or "20 or more"). Work climate was assessed using two questions: participants were asked "If their work environment" was *very, somewhat, or not supportive* "to talking about SRH"; and "Whether they had" *a lot, some, or no flexibility* "in carrying out their job."

#### SRH measures

**Knowledge about SRH.** Knowledge about general SRH care was assessed by four true/false questions (e.g., "Young sexually active men should visit a doctor each year to address their SRH needs"), and the percentage of correct

responses was calculated across the four items with overall scores ranging from 0% to 100%. Knowledge about SRH care referral was assessed by eight yes/no knowledge items about clinical dimensions of care to refer young men (i.e., “male-friendly,” “confidential,” “free or low cost,” “services in Spanish,” “lesbian, gay, bisexual, and transgender-friendly,” “HIV,” “other STD,” and “youth-friendly”), and a score was constructed by summing the number of items to which a participant responded *yes* = 1 or *no* = 0; the final score ranged from 0 to 8, with higher scores reflecting greater SRH referral dimensions known.

**Perceived confidence about SRH.** Participants were asked about their confidence in talking about SRH with young men, and this was assessed using four items (e.g., “Talking with them about sexual and reproductive health”) on a 4-point scale (*not at all confident, somewhat not confident, somewhat confident, very confident*). Participants were also asked about their confidence in referring young men for SRH, and this was assessed using four items (e.g., “Assisting young men to find a clinical setting to go to address SRH needs”) on a 4-point scale (*not at all confident, somewhat not confident, somewhat confident, very confident*). For each, a scale of items was constructed by averaging across the items, with higher values indicating greater perceived confidence (ranging from 1 to 4).

**SRH-related behavior in the past month.** Participants were asked if they “Talked with young men about SRH in the past month” (*yes* or *no*) and “Referred young men for SRH care in the past month” (*yes* or *no*).

**SRH-related behavioral intentions in the next 3 months.** Participants were asked about their “behavioral intention in the next 3 months to talk with young men about SRH care” on a 4-point scale (*very unlikely, somewhat unlikely, somewhat likely, very likely*) and to “refer young men for SRH care” on a 4-point scale (*very unlikely, somewhat unlikely, somewhat likely, very likely*). Responses were coded as *very/somewhat likely* versus *very/somewhat unlikely*.

#### Organization-level characteristics (n = 22)

**Organization type.** Organizations were coded as being community-based or recreation centers, social service-based, or faith-based.

**Perceived staff knowledge.** Organization directors/administrators were asked about their “perceived staff knowledge about young men’s SRH needs,” “availability of SRH care services,” and “reasons to refer young men for SRH care”; responses were coded as *very knowledgeable, somewhat knowledgeable, or not at all knowledgeable/don’t know*.

**Perceived staff comfort level.** “Perceived staff comfort talking about sexual health issues with clients” was coded as being *very comfortable, somewhat comfortable, or not at all comfortable/don’t know*.

#### Data Analysis

Frequencies were generated for categorical measures, and means and standard deviations (SDs) for continuous measures (Table 1). Next, bivariate analyses were conducted to examine the association between participants’ background characteristics and work environment with YSPs’ behavioral intentions to refer young men to SRH care. Exploratory analyses were conducted with and without organizational-level covariates using multilevel mixed effects model and standard regression approaches, respectively. Results presented here focus on the standard regression models, because, due to small sample sizes, there was insufficient power to detect differences using the multilevel mixed effects model approach. Separate bivariate and multivariable Poisson regression models examined the association between YSPs’ behavioral intention to refer young men to SRH care (*very/somewhat unlikely* vs. *very/somewhat likely*) and their SRH knowledge, perceived confidence, work environment, and SRH care referral behavior in the past month; these models also accounted for clustering of YSP responses within organizations. Bivariate analyses did not demonstrate that YSPs’ age, sex, race/ethnicity, occupation or number of young male clients worked with per month were associated with behavioral intentions to refer young men to SRH care. For multivariable analysis, a level of  $p < .10$  was used for determining variables from bivariate analyses to include in the final model. The final multivariable model was also adjusted by participants’ background characteristics due to a priori importance and potential confounding. Poisson analyses were applied to calculate a relative risk (RR) because odds ratios overestimate RR when the outcome event is common (incidence of  $\geq 10\%$ ) (Barros & Hirakata, 2003). Data management was conducted with SPSS and analysis with StataSE 14.

#### Results

The majority of YSPs were 30 years old or older (76%,  $n = 120$ ), female (64%, 101), non-Hispanic Black (65%, 103), and reported working with 10 or more young men in the past month (80%, 126) (Table 1). About two-thirds of YSPs perceived they had a very supportive work environment to talk about SRH (66%, 104), and about one-third perceived they had a lot of flexibility in their job (31%, 49).

**Table 1.** Background Characteristics and Sexual and Reproductive Health (SRH) Knowledge, Confidence, Behaviors in Past Month, and Behavioral Intentions in Next 3 Months Among Nonclinical Youth-Serving Professionals<sup>a</sup>.

Background characteristics and SRH measures	% (n)
<b>Individual level data (n = 158)</b>	
<b>Background factors</b>	
Age	
29 or younger	24.0 (38)
30 or older	76.0 (120)
Sex	
Female	63.9 (101)
Male	36.1 (57)
Race/ethnicity	
Non-Hispanic White	19 (30)
Non-Hispanic Black	65 (103)
Hispanic	7 (11)
Other	9 (14)
Occupation	
Caseworker/counselor	53.8 (85)
Director/administrator	13.9 (22)
Teacher/coach/peer leader	32.3 (51)
Number of young male clients work with per month	
<10	20.2 (32)
10–19	30.4 (48)
≥20	49.4 (78)
Supportive work environment	
Very	65.8 (104)
Somewhat	24.7 (39)
Not	1.9 (3)
Job flexibility	
A lot	31.0 (49)
Some	60.8 (96)
None	5.7 (9)
<b>SRH measures</b>	
Knowledge scores	
General SRH care ( $M = 58.0$ ; $SD = 24.0$ ; range: 0–100) <sup>b</sup>	
0% correct	1.3 (2)
25% correct	19.6 (31)
33% correct	0.6 (1)
50% correct	29.7 (47)
75% correct	36.7 (58)
100% correct	9.5 (15)
Refer for SRH care ( $M = 4.7$ ; $SD = 2.6$ ; range: 0–8) <sup>c</sup>	
0 known	10.8 (17)
1 known	3.2 (5)
2 known	8.2 (13)
3 known	8.2 (13)
4 known	8.2 (13)
5 known	14.6 (23)
6 known	14.6 (23)
7 known	15.8 (25)
8 known	14.6 (23)

(continued)

**Table 1. (continued)**

Background characteristics and SRH measures	% (n)
Confidence scales	
To talk about SRH ( $M = 3.1$ ; $SD = .7$ ; range: 1–4) <sup>d</sup>	
Very/somewhat unlikely	35.4 (56)
Very/somewhat likely	62.7 (99)
To refer for SRH care ( $M = 3.3$ ; $SD = .7$ ; range: 1–4) <sup>d</sup>	
Very/somewhat unlikely	21.5 (34)
Very/somewhat likely	76.6 (121)
Behavior in past month	
Talk about SRH	63.3 (100)
Refer for SRH care	33.5 (53)
Behavioral intention in next 3 months	
To talk about SRH	
Very unlikely	7.6 (12)
Somewhat unlikely	19.6 (31)
Somewhat likely	41.1 (65)
Very likely	29.7 (47)
To refer for SRH care	
Very unlikely	9.5 (15)
Somewhat unlikely	24.1 (38)
Somewhat likely	39.9 (63)
Very likely	24.7 (39)
<b>Organizational level data (n = 22)</b>	
Organization type	
Community-based or recreation centers	68.2 (15)
Social service-based	22.7 (5)
Faith-based	9.1 (2)
Staff is knowledgeable about...	
...young men's SRH needs	
Very informed	36.4 (8)
Somewhat informed	36.4 (8)
Not at all informed/don't know	9.0 (2)
...SRH services available for young men	
Very informed	18.2 (4)
Somewhat informed	45.5 (10)
Not at all informed	18.2 (4)
...reasons to refer young men to SRH care	
Very informed	40.9 (9)
Somewhat informed	27.3 (6)
Not at all informed	13.6 (3)
Staff is comfortable talking about SRH with clients	
Very comfortable	40.9 (9)
Somewhat comfortable	36.4 (8)
Not at all comfortable	4.5 (1)

<sup>a</sup>Study conducted in one mid-Atlantic city from August 2014 to December 2015.

<sup>b</sup>Knowledge score ranges from 0 to 100 representing percent answered correctly.

<sup>c</sup>Knowledge score ranges from 0 to 8, higher score representing greater knowledge about 8 dimensions on referring young men to SRH care.

<sup>d</sup>Average of items on a 4-point scale from 1 (*not at all confident*) to 4 (*very confident*), with higher values indicating greater perceived confidence.

<sup>e</sup>Four of the 22 organizations had missing contextual data for at least one of these variables.

**Table 2.** Associations Between Nonclinical Youth-Serving Professionals' (YSPs) Behavioral Intentions to Refer Young Men to Sexual and Reproductive Health (SRH) Care With Work Environment and SRH Measures<sup>a</sup>.

Covariates	SRH care referral intention			
	Somewhat/very unlikely	Somewhat/very likely	RR [95% CI] <sup>b</sup>	aRR [95% CI] <sup>c</sup>
	% or M (SD)	% or M (SD)		
Supportive work environment				
Somewhat/not at all	55.8	44.2	Ref	Ref
Very	23.3	76.7	1.73 [1.36, 2.21] <sup>***</sup>	1.51 [1.15, 1.98] <sup>**</sup>
A lot of job flexibility				
Some/none	37.7	62.3	Ref	Ref
A lot	26.5	73.5	1.18 [0.99, 1.40] <sup>^</sup>	1.10 [0.94, 1.30]
Knowledge score about SRH care referral, M (SD) <sup>d</sup>	4.04 (2.68)	5.06 (2.42)	1.06 [1.02, 1.10] <sup>**</sup>	1.00 [0.97, 1.04]
Confidence scale to refer for SRH care, M (SD) <sup>e</sup>	2.96 (0.82)	3.43 (0.64)	1.41 [1.17, 1.69] <sup>**</sup>	1.28 [1.00, 1.62] <sup>*</sup>
Past referral for SRH care				
No	41.7	58.3	Ref	Ref
Yes	19.2	80.8	1.39 [1.17, 1.65] <sup>**</sup>	1.16 [1.02, 1.33] <sup>*</sup>

<sup>a</sup>Study conducted in one mid-Atlantic city from August 2014 to December 2015.

<sup>b</sup>Relative risks (RR) and 95% confidence intervals (CI) from bivariate Poisson regression model.

<sup>c</sup>Adjusted relative risks (aRR) and 95% CI from multivariate Poisson regression model controlling for YSPs' age, gender, race/ethnicity, occupation, and number male clients work with per month.

<sup>d</sup>Knowledge score ranges from 0 to 8, higher score representing greater knowledge about 8 dimensions on referring young men to SRH care.

<sup>e</sup>Average of items on a 4-point scale from 1 (*not at all confident*) to 4 (*very confident*), with higher values indicating greater perceived confidence.

<sup>^</sup>*p* = .061; \**p* < .05; \*\**p* < .01; \*\*\**p* < .001.

Further, YSPs correctly answered 58% of the knowledge about general SRH care score questions; only 10% of YSPs responded correctly for all items. On average, YSPs reported knowing 5 out of the 8 (mean = 4.7, SD = 2.6) possible dimensions of the knowledge about SRH care referral (Cronbach's  $\alpha$  = 0.85); only 15% of YSPs knew about all 8 dimensions of SRH care referral. The majority of YSPs perceived themselves as being somewhat or very confident in talking about SRH with young men (63%, mean = 3.1, SD = 0.7, Cronbach's  $\alpha$  = 0.82) and in referring young men to SRH care (77%, mean = 3.3, SD = 0.7, Cronbach's  $\alpha$  = 0.95).

In the past month, 63% (100) of YSPs reported having talked about SRH with young men they worked with, and 34% (53) referred young men to SRH care. In the next 3 months, 72% (112) of YSPs reported being somewhat or very likely to talk about SRH care with young men and 66% (102) somewhat or very likely to refer young men for SRH care.

Less than half of directors/administrators (*n* = 22) perceived their staff as being very knowledgeable about young men's SRH needs (36%, 8), services available for young men (18%, 4), reasons to refer young men to SRH care (41%, 9), and as being very comfortable in talking about SRH with male clients (41%, 9).

### Association Between YSPs' Background Factors With Behavioral Intentions to Refer Young Men to SRH Care (Table 2)

Bivariate analyses indicated that YSPs' greater behavioral intention to refer young men for SRH care was significantly associated with higher knowledge scores about SRH care referral (RR = 1.06, 95% CI [1.02, 1.10]), reporting working in a very versus somewhat/not at all supportive work environment regarding talking about SRH with young men (1.73 [1.36, 2.21]), greater perceived confidence in referring young men for SRH care (1.41 [1.17, 1.69]), and SRH care referral behavior in the past month with young men (1.39 [1.17, 1.65]). There was a trend relationship between YSPs' greater behavioral intention to refer young men for SRH care and reporting a lot versus some/no job role flexibility (1.18 [0.99, 1.40]). Participants' background characteristics (age, race/ethnicity, occupation) were not associated with YSPs' greater behavioral intention to refer young men for SRH care.

Multivariable analyses indicated that YSPs' greater behavioral intention to refer young men for SRH care was significantly associated with reporting working in a very versus somewhat/not at all supportive work environment regarding talking about SRH with young men (1.51 [1.15,

1.98]), greater perceived confidence in referring young men for SRH care (1.28 [1.00, 1.62]), and SRH care referral behavior in the past month with young men (1.16 [1.02, 1.33]) after controlling for other factors.

## Discussion

This study identified that nonclinical YSP staff from community-based organizations had overall poor to moderate knowledge about young men's SRH care, and less than one-third referred young men to SRH care in the past month. However, just under two-thirds of YSPs reported discussions in the past month with young men about SRH, and the majority reported being somewhat/very confident in talking and referring young men to SRH care as well as having greater intentions to refer this population to SRH care in the immediate future. Study findings have implications for mobilizing nonclinical YSP staff from community-based organizations to engage the young men with whom they work in SRH care. YSPs may require additional training and work environment support to reach their full potential in linking young men to SRH care, and successful linkages may depend on YSPs' educational level and training provided from their job.

Findings about YSPs' levels of SRH knowledge, perceived confidence, and past behaviors in this study are consistent with past work in this area that is more generally focused on engaging young people in SRH (Fisher et al., 2010, 2012; Gupta et al., 2015). The current study extends these past findings with its specific focus on young men as well as by examining referral behaviors including actual past referrals and future referral intentions. Overall, YSPs' referral of young men to SRH care in the past month was low, but YSPs who reported referral of young men to SRH care in the past month were more likely than those who did not to report greater intentions to refer them in the future. These findings highlight the need to develop strategies to increase YSPs' knowledge about young men's SRH in general and also where to refer this population to care.

This study demonstrated that YSPs who had higher perceived confidence in referring young men to SRH care and a work environment that was supportive of talking about SRH, compared to those who did not, had greater SRH care referral intentions. Strategies are needed to build YSPs' confidence around referral behaviors with young men that may further bolster both their SRH care referral intentions and actual behaviors. Such approaches may also need to involve structural-level strategies that address YSPs' work environment. For example, one structural-level intervention with after-school programs in New York City provided organization-level supports including building partnerships with local clinics and establishing supportive organization-level policies (Colarossi et al., 2014).

While results from this quasi-experimental structural change evaluation was promising (Colarossi et al., 2014), larger scale evaluations with comparison groups will be needed to strengthen the evidence base in order to facilitate mobilization of YSPs in engaging young people in SRH and referring them to care.

The majority of YSPs in this study indicated they had future intentions to talk about and refer young men to SRH care. Improving linkages between community-based agencies whose programs are not primarily focused on health or clinical services and the clinical health-care system is an emerging priority in the health-care agenda to move toward a "community-integrated" health system that promotes health across multiple sectors (Halfon et al., 2014). While building linkages between nonclinical community settings and clinical settings is a general priority, specific examples of how best to do so and whether these strategies effectively connect young people to services have not been well-established for SRH or other care areas (Porterfield et al., 2012). The methods and findings of this current study can assist in developing strategies to raise YSPs' SRH care knowledge, confidence, and referral behaviors, address the work environment so that these discussions are acceptable and supported, and expand linkage-building to other populations and other health domains.

This study has several limitations. First, this is a cross-sectional study and thus not predictive in nature. Next, organizations were selected based on location or service in one geographic area with the greatest concentration of male minority youth and need for care related to HIV and STI morbidity. Thus, study findings may not be generalizable to professionals who serve youth populations in different geographic contexts including rural settings. While the organizations included in this study serve diverse populations of youth, there may be additional challenges associated with providing SRH counseling and referral to specific populations of youth (e.g., sexual minority populations of young men). The study design consisted of a nonprobability sample. Findings did not differ by participants' background characteristics including their reported occupation, although study findings might vary by YSPs' educational status, which was not assessed in this study. Measures in this study also relied on self-report by YSPs and not young men themselves. It is possible that YSPs' responses may differ from actual behavior and from young men's perspectives, although use of self-report assessments is common in research such as this. Future work is needed to examine young men's perspectives on discussions with staff from community-based organizations about SRH and referral to care. Measures used to assess YSPs' talking about SRH with young men do not differentiate who initiated the discussion—the YSP or the young man; future work will

need to distinguish the source of discussion initiation. Finally, examining contextual level influences at the organization level (e.g., concordance of YSP and supervisor responses) was not possible due to small sample sizes. Despite these limitations, this study contributes to the geographic diversity of an existing small body of literature on the capacity of YSPs to provide information, support, and referral for SRH care to young people, specifically, young men—a population that has historically not been included in these types of discussions or linkage to care (Colarossi et al., 2014; Fisher et al., 2010, 2012; Gupta et al., 2015).

This study highlights that nonclinical YSP staff from community-based organizations have much room for improvement in engaging and referring young men to SRH care especially in an urban setting where young men experience disproportionately high rates of morbidity related to SRH. Future work is needed to evaluate whether building YSPs' knowledge and confidence and improving the supportiveness of their work environment will improve their referral of young men to SRH care.

### Authors' Note

The conclusions, findings, and opinions expressed by authors contributing to this journal do not necessarily reflect the official position of the U.S. Department of Health and Human Services, the Centers for Disease Control and Prevention, or the authors' affiliated institutions.

### Declaration of Conflicting Interests

The author(s) declared no potential conflicts of interest with respect to the research, authorship, and/or publication of this article.

### Funding

The author(s) disclosed receipt of the following financial support for the research, authorship, and/or publication of this article: This study was supported by the CDC (1H25PS003796) and Secretary's Minority AIDS Initiative Fund.

### References

- American Fact Finder. (2010). *Census: Table P12 (2010)*. Retrieved from Factfinder2.census.gov.
- Barros, A. J., & Hirakata, V. N. (2003). Alternatives for logistic regression in cross-sectional studies: An empirical comparison of models that directly estimate the prevalence ratio. *BMC Medical Research Methodology*, 3, 21.
- Colarossi, L., Betancourt, G. S., Perez, A., Weidl, M., & Morales, H. (2014). An organizational capacity-building program to enhance adolescent sexual and reproductive health. *Health Promotion Practice*, 15(4), 538–547.
- Duke, N., Borowsky, I. W., & Pettingell, S. L. (2012). Adult perceptions of neighborhood: Links to youth engagement. *Youth & Society*, 44(3), 408–430.
- Finer, L. B., & Zolna, M. R. (2014). Shifts in intended and unintended pregnancies in the United States, 2001–2008. *American Journal of Public Health*, 104(Suppl. 1), S43–S48.
- Fisher, C. M., Reece, M., Dodge, B., Wright, E., Sherwood-Laughlin, C., & Baldwin, K. (2010). Expanding our reach: The potential for youth development professionals in community-based organizations to provide sexuality information. *American Journal of Sex Education*, 5, 36–53.
- Fisher, C. M., Reece, M., Wright, E., Dodge, B., Sherwood-Laughlin, C., & Baldwin, K. (2012). The role of community-based organizations in adolescent sexual health promotion. *Health Promotion Practice*, 13(4), 544–552.
- Gavin, L., Moskosky, S., Carter, M., Curtis, K., Godfrey, E., Marcell, A. V., . . . Zapata, L. (2014). Guidance for providing quality family planning services: Recommendations of CDC and the U.S. Office of Population Affairs. *Morbidity and Mortality Weekly Reports*, 63(4), 1–54.
- Gupta, N., Chandak, A., Gilson, G., Pelster, A. K., Schober, D. J., Goldsworthy, R., . . . Fisher, C. M. (2015). Discovering sexual health conversations between adolescents and youth development professionals. *American Journal of Sex Education*, 10, 21–39.
- Hagan, J. F., Jr., Shaw, J. S., & Duncan, P. (Eds.). (2008). *Bright futures: Guidelines for health supervision of infants, children, and adolescents* (3rd ed.). Elk Grove Village, IL: American Academy of Pediatrics.
- Halfon, N., Long, P., Chang, D. I., Hester, J., Inkelas, M., & Rodgers, A. (2014). Applying a 3.0 transformation framework to guide large-scale health system reform. *Health Affairs (Millwood)*, 33(11), 2003–2011.
- ICPD Programme of Action Summary, 1994. (1994). In *International Conference on Population and Development*. Cairo, Egypt: United Nations Department of Public Information; DPI/1618/POP-March 1995. Retrieved from <http://www.unfpa.org/public/cache/offonce/home/sitemap/icpd/International-Conference-on-Population-and-Development/ICPD-Summary>
- Johnson, D. M., Warner, L., Carlon, A., & Fine, D. (2014). *Male reproductive health project 2009–2013: Program implementation, research results and implications for STD service delivery 2014*. Paper presented at the 2014 STD Prevention Conference, Atlanta GA. Retrieved from <https://cdc.confex.com/cdc/std2014/webprogram/Paper34687.html>
- Marcell, A. V., Klein, J. D., Fischer, I., Allan, M. J., & Kokotailo, P. K. (2002). Male adolescent use of health care services: Where are the boys? *Journal of Adolescent Health*, 30(1), 35–43.
- Marcell, A. V., Bell, D. L., Lindberg, L. D., & Takturi, A. (2010). Prevalence of STI/HIV counseling services received by teen males, 1995 to 2002. *Journal of Adolescent Health*, 46(6), 553–559.
- Marcell, A. V., Matson, P., Ellen, J. M., & Ford, C. A. (2011). Annual physical examination reports vary by gender once teenagers become sexually active. *Journal of Adolescent Health*, 49(1), 47–52.
- Marcell, A. V., Okano, L., Pilgrim, N. A., Jennings, J. M., Page, K. R., Sanders, R., . . . Dittus, P. J. (2017). Prevalence of



- HIV testing provision at community organizations serving young people in a mid-Atlantic city, 2013–2014. *Public Health Reports*, 132(2), 203–209.
- Mmari, K., Blum, R., Sonenstein, F., Marshall, B., Brahmhatt, H., Venables, E., . . . Sangowawa, A. (2014). Adolescents' perceptions of health from disadvantaged urban communities: Findings from the WAVE study. *Social Science and Medicine*, 104, 124–132.
- Owusu-Edusei, K., Jr., Chesson, H. W., Gift, T. L., Tao, G., Mahajan, R., Ocfemia, M. C., & Kent, C. K. (2013). The estimated direct medical cost of selected sexually transmitted infections in the United States, 2008. *Sexually Transmitted Diseases*, 40(3), 197–201.
- Porterfield, D. S., Hinnant, L. W., Kane, H., Horne, J., McAleer, K., & Roussel, A. (2012). Linkages between clinical practices and community organizations for prevention: A literature review and environmental scan. *American Journal of Preventive Medicine*, 42(6 Suppl 2), S163–S171.
- Same, R. V., Bell, D. L., Rosenthal, S. L., & Marcell, A. V. (2014). Sexual and reproductive health care: Adolescent and adult men's willingness to talk and preferred approach. *American Journal of Preventive Medicine*, 47(2), 175–181.
- Satterwhite, C. L., Torrone, E., Meites, E., Dunne, E. F., Mahajan, R., Ocfemia, M. C., . . . Weinstock, H. (2013). Sexually transmitted infections among US women and men: Prevalence and incidence estimates, 2008. *Sexually Transmitted Diseases*, 40(3), 187–193.
- The National Campaign to Prevent Teen and Unplanned Pregnancy. (2013). *Counting it up: Key data*. Washington, DC: The National Campaign to Prevent Teen and Unplanned Pregnancy.
- U.S. Department of Health and Human Services, Office of Disease Prevention and Health Promotion. (2010). *Healthy People 2020*. Washington, DC.
- World Health Organization. (2006). *Defining sexual health: report of a technical consultation on sexual health, 28–31 January 2002, Geneva, Switzerland*: WHO Press. Retrieved from [http://www.who.int/reproductivehealth/publications/sexual\\_health/defining\\_sexual\\_health.pdf](http://www.who.int/reproductivehealth/publications/sexual_health/defining_sexual_health.pdf)