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The epidemiology of finding a dead body: reports from inner-city Baltimore, Maryland US

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Abstract

In the US, there are no national statistics on encountering a dead body, which can be viewed as a measure of community health and a stressful life event. Participants for an HIV prevention intervention targeting drug users were recruited in areas of inner-city Baltimore, Maryland .Nine hundred and fifty one respondents, most with a history of drug use, were asked “have you ever found a dead body?” and 17.0% reported they had. Leading causes of death were: violence (37%), natural causes (22.2%), drug overdose (21.6%), accidental death (3.1%), and suicide (2.5%). In multivariate logistic models, respondents with longer history of drug use and more roles in a drug economy were more likely to be exposed to a dead body. The study results suggest that this population has a high level of experiences with mortality associated with violence and drugs. To obtain a better understanding of community health, future studies should assess not only morbidity and mortality, but also how death and illness is experienced by the community.

Keywords

Urban Health; Mortality; Drug use; Violence; Mental Health

Introduction

Finding a dead body may be expected to occur in countries in the midst of armed conflict or natural disaster. In the US, such experiences are not known to be frequent and there are no national statistics. Encountering a dead body can be viewed as a measure of community

health as it can be considered a stressful event and one that may leave a lasting impression on a person.

Impoverished neighborhoods have high rates of premature mortality (Doubeni et al., 2011). A common cause of mortality in urban areas is drug overdose (Milloy, et al., 2008). Drug users also have high rates of mortality due to HIV and violence associated with the drug economy (Hser, Hoffman, Grella, & Anglin, 2001; Smyth, Hoffman, Fan, & Hser, 2007). Death due to drug overdose and violence may be visible to those living in the community in which they occur.

Studies of emergency responders and disaster workers find mood disturbances in individuals who encounter human remains up to 20 months after the experience (Greene, 2001; Jones, 1985). Unexpected exposure to dead bodies may also have long-lasting effects on cardiovascular and immune function (Delahanty, Dougall, Craig, Jenkins, & Baum, 1997). In the current study, we examined the frequency of finding a dead body and the characteristics of individuals that increase the likelihood of finding a dead among a sample of individuals who were recruited into an HIV prevention intervention targeting drug users and their social networks.

Methods

Participants were recruited through targeted outreach. Detailed study descriptions have been described elsewhere (Latkin, Sherman, & Knowlton, 2003). A follow-up survey was administered from April 2000 to June 2002. Participants received \$25. All protocols were approved by the Johns Hopkins School of Public Health IRB.

Measures

Survey items based on Selner-O'Hagan et al (Results from the 2006 National Survey on Drug Use and Health: National Findings, 2007; Selner-O'Hagan, Kindlon, Buka, Raudenbush, & Earls, 1998) assessed exposure to violence. The focus of the present analysis was the item "have you ever found a dead body." We expanded the prior survey to assess for the last event, the participants' relationship to the deceased person, gender, location, and cause of death. Categories for cause of death included natural causes, suicide, violent death, accidental death, drug overdose, and other. Number of roles in the drug economy was also assessed and measured by responses to 10 questions about participating in drug-related activities to get money or drugs; such as selling drugs and coping drugs for others (Cronbach's $\alpha = .77$). In addition, participants were asked about lifetime history of illicit drug use (heroin, cocaine or crack). Lastly, depressive symptoms were assessed by the Centers for Epidemiological Studies Depression (CES-D) Scale. (Radloff, 1977)

Chi-square tests were used for categorical variables. For continuous variables, analysis of variance was used for normally distributed variables, and Kruskal-Wallis tests for non-normally distributed variables. Variables that were significant at the $p < .15$ level in the univariate analyses were included in multivariate logistic regressions used by Stata 10.0.

Results

There were 951 respondents to the question "have you ever found a dead body?" and 162 (17.0%) stated "yes." The majority of the sample (95.6%) was African American and less than half (40.6%) were females (Table 1). Almost all (95.8%) participants reported history of illicit drug use (cocaine, heroin, or crack), and mean years of using drugs were 18.7. Among those who ever found a dead body, two-thirds (66.5%) reported finding a dead body once, whereas 33.5% found a dead body twice or more. Sixty-two (38.9%) reported the last

time they have found a dead body was within the last 3 years, 22 (13.6%) 4 to 6 years ago, and 77 (47.5%) more than 6 years ago. The majority (68.5%) of bodies were discovered outside of the respondents' neighborhoods. About a third (31.5%) reported the body was found in their neighborhood, with 11.7% discovered in their home, 5% in someone else's home, and 14.8% found somewhere else in their neighborhood. For the most recent event, the majority (67.9%) were male, 19.8% were family members, and 40.1% were not known by the participants. The leading purported cause of death was violence (37%), followed by natural causes (22.2%), drug overdose (21.6%), accidental death (3.1%), and suicide (2.5%). Table 2 presents logistic regression models. In the multivariate logistic models, respondents who had longer history of drug use (AOR: 1.04, 95% CI: 1.02, 1.07) and had a greater number of roles in a drug economy (AOR: 1.12, 95% CI: 1.02, 1.23) were more likely to be exposed to a dead body.

Conclusions

With almost one in six participants reporting finding a dead body, study results suggest that this is not an uncommon experience among some inner-city communities. The leading reported cause of death was violence. Most of the victims were known by the participants, yet less than one-fifth were family members. These results do not portray a community where death is peaceful and individuals die peacefully at home. In fact, few (7.4%) were found in their own or someone else's home who had died of "natural causes".

Study limitations include the sampling methods and self-report data. Moreover, there is not data to compare the magnitude of this experience to other communities. These data do not include homicide victims witnessed by others who may die in route or at medical facilities. Although these statistics provide a window into the lives of inner-city residents, most with a history of drug use, they also reflect a particular area of concern with regard to the assessment of community health for individuals who reside in these inner-city areas. To obtain a more inclusive understanding of community health, future studies should assess not only morbidity and mortality, but also how death and illness is experienced by the community.

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Sociodemographics Characteristics and Drug use Behaviors of Respondents: SHIELD Study, April 2000 to June 2002

TABLE 1

	Total (n=951)		Never found a dead body (n=789)		Have found a dead body (n=162)		p
	N	(%)	N	(%)	N	(%)	
Age: Mean (SD)	41.8	7.24	41.5	7.16	42.5	7.6	0.11
Race							
African American	883	95.6	730	95.4	153	96.2	
Other	41	4.4	35	4.6	6	3.8	0.655
Gender							
Female	386	40.6	329	41.7	57	35.2	
Male	565	59.4	460	58.3	105	64.8	0.124
Education							
At least high school graduate	492	53.3	408	53.3	84	52.8	
Less than high school	432	46.7	357	46.7	75	47.2	0.908
Currently having main partner							
Yes	572	60.2	483	61.2	89	54.9	
No	379	40.0	306	38.8	73	45.1	0.137
Current employment							
Employed	312	32.8	251	31.8	61	37.7	
Unemployed	639	67.2	538	68.2	101	62.4	0.149
Homeless [#]							
Yes	74	7.8	60	7.6	14	8.6	
No	877	92.2	729	92.4	148	91.4	0.653
Incarcerated [#]							
Yes	91	9.6	76	9.6	15	9.3	
No	860	90.4	713	90.4	147	90.7	0.883
Illicit drug use [#]							
Yes	595	62.6	496	62.9	99	61.0	
No	356	37.4	293	37.1	63	39.0	0.674
Daily injectors [#]							

	Total (n=951)		Never found a dead body (n=789)		Have found a dead body (n=162)		p
	N	(%)	N	(%)	N	(%)	
Yes	124	13.0	105	13.3	19	11.7	
No	827	87.0	684	86.7	143	88.3	0.587
Number of roles in drug economy: mean(SD)	1.17	1.76	1.11	1.70	1.44	1.99	0.04
Years of illicit drug use: mean (SD)	18.74	9.55	18.21	9.46	21.36	9.56	<.001
CES-D							
>=16	397	41.8	338	42.8	59	36.4	
<16	554	58.2	451	57.2	103	63.6	0.131

in the past 6 months

TABLE 2

Bivariate and Multivariate Analyses of Having Ever Found a Dead Body

	Unadjusted logistic regression (n=951)		Adjusted logistic regression (n=951)	
	OR	95%CI	OR	95%CI
Age	1.02	0.99,1.04	0.99	0.96,1.02
Gender: Female	0.76	0.53,1.08	1.04	0.71,1.51
Currently having main partner	0.77	0.55,1.09	0.75	0.52,1.07
Currently unemployed	0.77	0.54,1.10	0.72 ⁺	0.50,1.04
Number of roles in drug economy	1.02 [*]	1.01,1.20	1.12 [*]	1.02,1.23
Years of using drugs	1.04 ^{***}	1.02,1.06	1.04 ^{**}	1.02,1.07
CES-D (>=16)	0.76	0.54,1.08	0.73 ⁺	0.51,1.05

⁺
p<.10^{*}
p<.05^{**}
p<.01^{***}
p<.001