



Optimistic Bias About Intimate Partner Violence Among Medical Personnel

John Chapin, PhD

BACKGROUND AND OBJECTIVES: The study seeks to contribute to the optimistic bias literature by studying the perceptual bias among medical personnel within the context of intimate partner violence (IPV).

METHODS: A total of 316 medical students, residents, and nurses were surveyed.

RESULTS: Care providers exhibit optimistic bias, believing they are less likely than others to become victims of intimate partner violence (IPV). Optimistic bias was related to age, third-person perception, and knowledge/expertise.

CONCLUSIONS: From a screening standpoint, the finding suggests that care providers distance themselves from patients by believing they are less vulnerable to IPV, which could decrease screening or negatively impact the effectiveness of screening or the quality of patient care. This finding extends the literature, because it documents optimistic bias among medical personnel, whereas previous findings were limited to patients.

(Fam Med 2011;43(6):429-32.)

“I am afraid of being alone with my health, I got AIDS, I got diabetes, I got arthritis. I found out I will be blind in my right eye in 2 years.”

This quote is from a hospital patient and shelter resident in a women’s center for intimate partner violence (IPV). The study¹ of IPV victims highlights the relationship between IPV victims and medical personnel. Abuse victims want and need medical offices and hospitals to screen for IPV and to connect them with potentially life-saving counseling, legal, and shelter services. Many victims say they don’t know where to turn, but trust doctors and nurses to guide them. IPV is the most common cause of serious injury to women, accounting for more than 50% of female homicides.²

Women who don’t report their abuse still require medical treatment; IPV victims account for as many as 37% of women seeking care in emergency rooms, 35% seeking general medical care, and up to 20% seeking prenatal care.³

Many physicians are not screening.⁴ Discomfort with the subject, frustration with the patient’s denial, lack of skills and resources to manage IPV, and time constraints are among the reasons hospitals and medical offices choose not to screen patients.⁵ Despite the frequent exposure to IPV, a number of beliefs serve as barriers between practitioner and patient: (1) IPV is rare, (2) IPV does not occur in normal relationships, (3) women are responsible, and (4) IPV is a private matter.⁶ These barriers can be caused by

decreased knowledge of health care providers about IPV. These barriers also serve to decrease screening rates and create social distance between the provider and patient.

Optimistic Bias

This social distance between self and others is a common cause for optimistic bias, the belief that bad things happen to other people but not to oneself.⁷ Optimistic bias has been studied in dozens of contexts (for a review, see Metcalf⁸) but not among medical personnel. The current study seeks to contribute to the optimistic bias literature by studying the perceptual bias among medical personnel within the context of IPV. The study also explores the predictors of optimistic bias, including the role of the media.

Individuals use “downward social comparisons”⁹ to distance their perceived vulnerability from a rational assessment of their environment. For instance, Norwegian adults exhibit optimistic bias about the effects of poor nutrition and consequently eat fewer servings of vegetables,¹⁰ American college students believe they will attain higher grades than peers, regardless of their study habits,¹¹ and British adults exhibit optimistic bias about the health consequences of cellular telephone use but still recommend limited use by children.¹² As these recent

From Pennsylvania State University.

findings suggest, individuals underestimate their own risk and act on their misperceptions.

Optimistic bias has been documented among patients with a wide range of conditions, including skin cancer,¹³ HIV/AIDS,¹⁴ and diabetes.¹⁵ The purpose of this study is to investigate optimistic bias. The study extends the literature by predicting optimistic bias among medical personnel. The study also explores the predictors of optimistic bias, including age, knowledge, and the role of the media.

Optimistic Bias and Knowledge

While it may be logical to assume that medical personnel have specialized training or knowledge of IPV, which should reduce or eliminate the perceptual bias, previous findings suggest the opposite may be true. For instance, a study of college students and skin cancer found that students exhibit optimistic bias about tanning and skin cancer risk.¹³ As knowledge of skin cancer increased, so did optimistic bias. Students exhibiting higher degrees of optimistic bias also attended less to media messages about skin cancer. A study of adult diabetics yielded similar results.¹⁵ Study participants believed other diabetics were more likely to suffer complications of diabetes than they were. Participants exhibiting the highest levels of optimistic bias were also more educated and more knowledgeable about diabetes than others in the sample.

Optimistic Bias and Age

The optimistic bias literature is less conclusive about the role of demographics. In the first comprehensive review of the literature, Weinstein, who originated the concept, concluded that demographics had no significant impact on optimistic bias.¹⁶ Since then, a number of studies suggest the opposite. A study of adolescents found higher levels of optimistic bias regarding school violence risks among high school students than among middle school students;¹⁷ Arnett found similar results

in a study of smoking risks.¹⁸ Adults exhibited more optimistic bias than did adolescents. The study of adult diabetics found that optimistic bias increased among college-educated samples.¹⁵ The literature in this area is far from established. Based on the limited findings, the following hypothesis is proposed.

Optimistic Bias and the Media

A number of studies posit possible explanations for optimistic bias. These range from ego-centrism¹⁹ and self-esteem¹⁷ to defensiveness.²⁰ It is surprising how limited the literature is on the influence of the media on optimistic bias. Information on diabetes, skin cancer, HIV/AIDS, and IPV is readily available on TV screens and computer monitors. Medical dramas routinely highlight unusual conditions, while under-representing more common conditions. The current paper considers the influence of media within the framework of third-person perception.

Like optimistic bias, third-person perception (TPP) is a perceptual bias. TPP²¹ predicts that individuals believe others are more influenced by the media than they are. The phenomenon has been well established in the literature in a variety of media contexts, including advertising,²² online social networking,²³ and educational television.²⁴ If an individual perceives a medium to be negative (ie, advertising), he or she is likely to exhibit third-person perception; in contrast, if the medium or message is perceived to be positive (ie, educational television), the same individual is likely to exhibit first-person perception (FPP), the belief that oneself is more influenced than are others by the media.

A few studies have explored TPP and FPP regarding violent media, with mixed results. A study of adolescents and school violence¹⁷ found TPP among middle school and high school students. The study also reported a positive relationship between TPP and optimistic bias. TPP was also found among college students and adults regarding

pornography and violent movies.²⁵ College students exhibited TPP regarding news coverage of terrorism.²⁶ Two additional studies reported a relationship between optimistic bias and person perception. Chapin²⁷ reported an inverse relationship between FPP and optimistic bias among adolescents exposed to an anti-violence documentary. The first to link the literatures²⁸ also reported an inverse relationship between FPP and optimistic bias among middle school students exposed to safe-sex messages. Salwen and Dupagne²⁹ found no relationship between TPP and optimistic bias among adults regarding news coverage of anticipated computer calamities related to Y2K.

The present study sought to document optimistic bias among medical personnel. It also explores predictors of optimistic bias, including knowledge, age, and third-person perception.

Methods

Participants

A total of 316 medical personnel participated in the study, between July 2009 and June 2010. Participants were medical students/interns (69%), nurses (24%), and administrators (7%) in Pennsylvania. Individuals were targeted for inclusion because they either currently screened patients for IPV or were preparing to do so in the future. The sample was 89% female and 90% Caucasian, ranging in age from 27 to 66 ($X=32.1$, $SD=13.3$). The study was approved for use with human subjects by the university's Office of Regulatory Compliance and adheres to strict professional and ethical guidelines.

Materials and Procedure

Participants were recruited by a women's center providing IPV training to improve screening quality in the region. All study measures were completed prior to the training to prevent priming or skewing results. Participation was voluntary.

Methods of Measurement

Optimistic bias was measured with a standard instrument used throughout the literature.¹⁶ Participants were asked to respond to the following item: “Compared to other people my age in the US, my chances of being abused by an intimate partner are:” (much lower=-3, about the same =0, much greater=+3). A negative mean indicates optimistic bias, the belief that others are more likely to be victims of IPV than oneself.

Knowledge of IPV was measured through five questions about IPV and screening policy: It is important to call an advocate, even if the victim does not want one present (False); I am required to report all domestic violence incidents to police (False); Patients should never be screened for abuse in the presence of others (True); Domestic violence often begins during pregnancy (True); Drug and alcohol abuse are reasonable explanations for the prevalence of domestic violence (False). Each correct response was coded as a 1, yielding a scale ranging from 0 (0% correct) to 5 (100% correct).

Participants self-reported their age, race, gender, and professional position.

Third-person perception was measured with a standard instrument.³⁰ Participants completed the following two items on a Likert-type scale (1=not at all, 7=very much): (1) How much are patients affected by media depictions of intimate partner violence? (2) How much are YOU affected by media depictions of intimate partner violence? A measure of TPP is obtained by subtracting the “other” rating from the “self” rating. TPP is indicated by a negative mean, which can be interpreted as the perception that others are more influenced than oneself.

Results

Table 1 displays zero-order correlations among the variables predicting pessimistic bias. Standard multiple regression was used to identify the predictors of pessimistic bias. Analysis of residual plots indicates that

Table 1: Zero-order Correlations Among Variables Predicting Optimistic Bias

| | 2 | 3 | 4 |
|--------------------|-------|-------|-------|
| 1. Optimistic bias | .35** | .24** | .22** |
| 2. Age | — | .11 | -.09 |
| 3. TPP | | — | -.17* |
| 4. Knowledge | | | — |

* $P < .05$, ** $P < .01$

TPP—third person perception

assumptions regarding normality, linearity, and homoscedasticity were met. Table 2 displays the regression analysis.

The first aim of the study was to document optimistic bias, that medical personnel believe they are less likely than patients to become victims of IPV. Optimistic bias is indicated by a group mean significantly less than zero. A single sample t test was used to test the hypothesis, $t(306) = 2.1$, $P < .000$. Because optimistic bias is indicated by a negative mean, signs are reversed in the tables for ease of interpretation.

There was a wide range of knowledge on the pretest, with an average score of 2.7/5 (54%). As anticipated, optimistic bias increased as knowledge increased, though knowledge was the weakest of the three predictors.

Age ranged from 20 (medical students) to 66 (nurses and administrators). As anticipated, optimistic bias increased as age increased. Age emerged as the strongest predictor of optimistic bias. Due to the lack of variance in gender and race, no

relationships were anticipated and none emerged.

Like optimistic bias, TPP is indicated by a negative mean (signs have been reversed in the table for ease of interpretation). As anticipated, medical personnel believe they are less influenced than others by media depictions of IPV. Differences in perceived media influence between self (2.8, $SD = 1.7$) and others (4.4, $SD = 1.0$) were evident, $t(206) = 9.0$, $P < .000$. As anticipated, optimistic bias increased as TPP increased.

Discussion

The study documents optimistic bias regarding IPV among medical personnel charged with screening patients for abuse. From a screening standpoint, the finding suggests that medical students, nurses, and administrators distance themselves from patients by believing they are less vulnerable to IPV. This distance may be attributable to myths, such as IPV is rare, IPV does not occur in normal relationships, women are responsible, and IPV is a private matter, any of which could reduce screening or negatively impact

Table 2: Summary of Linear Regression Analysis for Variables Predicting Optimistic Bias

| Adjusted $r^2 = .16$ $n = 306$ | | | |
|-----------------------------------|-----|------|---------|
| Predictor | B | SE B | β |
| Age | .05 | .01 | .28** |
| TPP | .25 | .11 | .18* |
| Knowledge | .38 | .16 | .17* |

* $P < .001$, ** $P < .01$

TPP—third person perception

the effectiveness of screening or the quality of patient care.

This finding extends the literature, because it documents optimistic bias among medical personnel, whereas previous findings were limited to patients. Future studies could sample both patients and care providers to make a more precise comparison. The findings further document a relationship between optimistic bias and knowledge. While this relationship is firmly established, much of the literature measured perceived knowledge instead of measuring actual knowledge or expertise. Linkages to TPP are less-well established. Further exploration into the communications and media studies literature seem fertile ground for future research. It is natural that medical personnel would be drawn to TV medical dramas. It is hard to say what impact skewed or inaccurate portrayals of IPV and victims could have on screening and patient care.

Finally, further research is needed in the area of optimistic bias and demographics. Age emerged as the strongest predictor in the current study, but earlier studies found no significant relationship. It may be that optimistic bias has a developmental component, or, in this case, there could be intervening variables, such as experience or expertise. Participants at the lower end of the age spectrum were either in hospitals or medical offices. Age was also related to knowledge but not as strongly as knowledge or age was related to optimistic bias.

A number of limitations should be considered before interpreting the results of this study. The sample is limited in diversity of race, gender, and level of provider training level. The study is based on a convenience sample of medical personnel gathered for training on IPV. Test measures were collected prior to the training to limit skewed responses, but participants were aware of the topic and some priming may have occurred. Participants were medical students and

nurses, who would have less knowledge of IPV than resident physicians and physicians who have completed residency training. The sample was 89% female; women are more likely to screen IPV than are men, which may occur because of differences in knowledge and/or interest.

ACKNOWLEDGMENTS: The author acknowledges the contributions of Erin Varner, Grace Coleman, and the staff of Crisis Center North. The author also wishes to thank the blind reviewers and editors of *Family Medicine* for their time and expertise in shaping this manuscript to its current form.

CORRESPONDENCE: Address correspondence to Dr Chapin, Pennsylvania State University, 100 University Drive, Monaca, PA 15061. 724-773-3877. jrc11@psu.edu.

References

- Zink T, Elder N, Jacobson J, et al. Medical management of intimate partner violence considering the stages of change: precontemplation and contemplation. *Ann Fam Med* 2004;2:231-9.
- Fact sheet: Dating and relationship violence. National Coalition Against Domestic Violence Web site. <http://www.ncadv.org>. Accessed July 15, 2009.
- Rodriguez M, Bauer H, McLoughlin E, et al. Screening and intervention for intimate partner abuse: practice and attitudes of primary care physicians. *JAMA* 2009;282:468-74.
- Lapidus G, Cooke M, Gelven E, et al. A state-wide survey of domestic violence screening behaviors among pediatricians and family physicians. *Arch Pediatr Adolesc Med* 2002;156:332-6.
- Main D, Crabtree B. The effect of families on the process of outpatient visits in family practice. *J Fam Pract* 2001;5:888-91.
- Dattel B. Intimate partner violence: the role of the obstetrician/gynecologist. *Glob Lib Women's Med* 2008;10:13.
- Weinstein N. Unrealistic optimism about future life events. *J Pers Soc Psychol* 1980;39:806-18.
- Metcalfe J. Cognitive optimism: self-deception or memory-based processing heuristics? *Pers Soc Psychol Rev* 2008;999:100-10.
- Endo Y. Optimistic and pessimistic biases and comparative judgmental processes in Japan: do people really compare themselves to their peers? *Asian J Soc Psychol* 2007;10:224-32.
- Uglem S, Frolich W, Stea T, et al. Preferences and perceptions of personal vegetable consumption: a study among young men in the Norwegian National Guard. *Int J Food Sci Nutr* 2007;59:279-90.
- Ruthig J, Haynes T, Perry R, et al. Academic optimistic bias: implications for college student performance and well-being. *Soc Psychol Educ* 2007;10:115-37.
- White M, Eiser J, Harris P, et al. Who reaps the benefits, who bears the risks? Comparative optimism, comparative utility and regulatory preferences for mobile phone technology. *Risk Anal* 2007;27:741-53.
- Luo J, Isaacowitz D. How optimists face skin cancer information: risk assessment, attention, memory and behavior. *Psychol Health* 2007;22:963-84.
- Gold R, Aucote H. I'm less at risk than most guys: gay men's unrealistic optimism about becoming infected with HIV. *Int J STD AIDS* 2003;14:18-23.
- Walker E, Caban A, Schecter C, et al. Measuring comparative risk perceptions in an urban minority population. The risk perception survey for diabetes. *Diabetes Educ* 2007;103-10.
- Weinstein N. Perceptions of personal susceptibility to harm. In: Mays V, Albee G, Schneider F, eds. *Psychological approaches to the primary prevention of acquired immune deficiency syndrome*. Newbury Park, CA: Sage, 1989:142-67.
- Chapin J. Youth perceptions of their school violence risks. *Adolesc* 2008;43:461-71.
- Arnett J. Optimistic bias in adolescent and adult smokers. *Addict Behav* 2000;25:625-32.
- Frankenberger K. Adolescent egocentrism: a comparison among adolescents and adults. *J Adolesc* 2000;23:343-54.
- Harris P, Griffin D, Murray S. Testing the limits of optimistic bias: event and person moderators in a multilevel framework. *J Pers Soc Psychol* 2008;95:1225-37.
- Davison W. The third-person effect in communication. *Public Op Q* 1983;47:1-15.
- Chia S. When the east meets the west: an examination of third-person perceptions about idealized body image in Singapore. *Mass Comm Society* 2009;12:423-45.
- Waggoner A, Smith E, Collins E. Person perception by active versus passive perceivers. *J Exp Soc Psychol* 2009;45:1028-31.
- Meirick P, Sims J, Gilchrist E. All the children are above average: parents' perceptions of education and materialism as media effects on their own and other children. *Mass Comm Society* 2009;12:217-37.
- Paek H, Lambe J, McLeod D. Antecedents to support for content restrictions. *Journ Mass Comm Q* 2008;85:273-90.
- Haridakis P, Rubin A. Third-person effects in the aftermath of terrorism. *Mass Comm Society* 2005;8:39-59.
- Chapin J. I want my FPP: reversing third-person perception for the MTV generation. *Soc Sci J* 2005;42:453-7.
- Chapin J. Third-person perception and optimistic bias among urban minority at-risk youth. *Comm Res* 2000;27:51-81.
- Salwen M, Dupagne M. News of Y2K and experiencing Y2K: exploring the relationship between the third-person effect and optimistic bias. *Media Psychol* 2003;5:57-82.
- Rubin B, Rubin A, Graham E, eds. *Communication research measures II: a sourcebook*. New York: Routledge, 2009.