

The Impact of the Media in Influencing Extension's Perceptions of Methamphetamine

Abstract

The study reported here explored media dependency and moral panic involving methamphetamine perceptions among a national sample of Extension Directors through survey methodology. With a 70.0% response rate, the questionnaire concentrated on demographics; methamphetamine knowledge, information sources, and dependency; and perceptions of the media. Supporting the media dependency and moral panic theories, 85.0% perceived the media as their primary source of methamphetamine information. Yet 90.3% of Extension Directors possessed inaccurate methamphetamine use perceptions.

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Introduction

The media dependency theory (Ball-Rokeach & DeFleur, 1976; Price & Roberts, 1987) attempts to explain why the mass media has powerful and direct effects on individuals and societies. Media dependency relies on the goals and resources of an individual—under the assumption that individuals depend on the media to meet the goal of being informed on certain topics (DeFleur & Ball-Rokeach, 1989). Mass media makes information accessible to attain understanding and orientation. The goal of the research reported here was to determine if Extension Directors (blocked as Area Directors, District Directors, Program Directors, Regional Directors, and Other of 1862 land-grant universities) were influenced by the media's coverage of methamphetamine and if the media affected their perceptions.

Although methamphetamine was first developed in 1919 by the Japanese and was used by German, Japanese, and American military throughout World War II (Sato, 2008; Ulrich, 2005; Grinspoon & Hedblom, 1975), the drug gained national exposure in the United States through the media starting in the 2000s. Methamphetamine played a leading role in documentaries like PBS Frontline's *The Meth Epidemic* (2006); reality television such as A&E's *Intervention* (2005); fictional dramas like FX's *Nip/Tuck* (2007), and AMC's *Breaking Bad* (2008) and local and national news covering laboratory (lab) seizures.

Methamphetamine, commonly referred to as "crystal meth," is a highly addictive drug that affects the human central nervous system and can be injected, snorted, smoked, or ingested orally. Methamphetamine can be produced almost anywhere with limited supplies, including the one-pot lab, which can be "cooked" in the backseat of moving vehicles. Despite high rates of Mexico drug trafficking, the National Drug Threat Assessment reported small-scale methamphetamine production in the United States is most prevalent in rural areas of the Florida/Caribbean, Great Lakes, Southeast, and West Central Organized Crime Drug Enforcement Task Force Regions (U.S. Department of Justice National Drug Intelligence Center, 2011).

Although research is limited concerning media dependency and illicit drugs, in particular methamphetamine, studies do support media dependency in similar social topics. News dependency elevates during times of intense conflict or change. During these times, media responds with additional coverage to interest audiences. Research found positive relationships between health and other general risk situations and media exposure (Coleman, 1993; Loges, 1994; Tucker, Whaley, & Sharp, 2006).

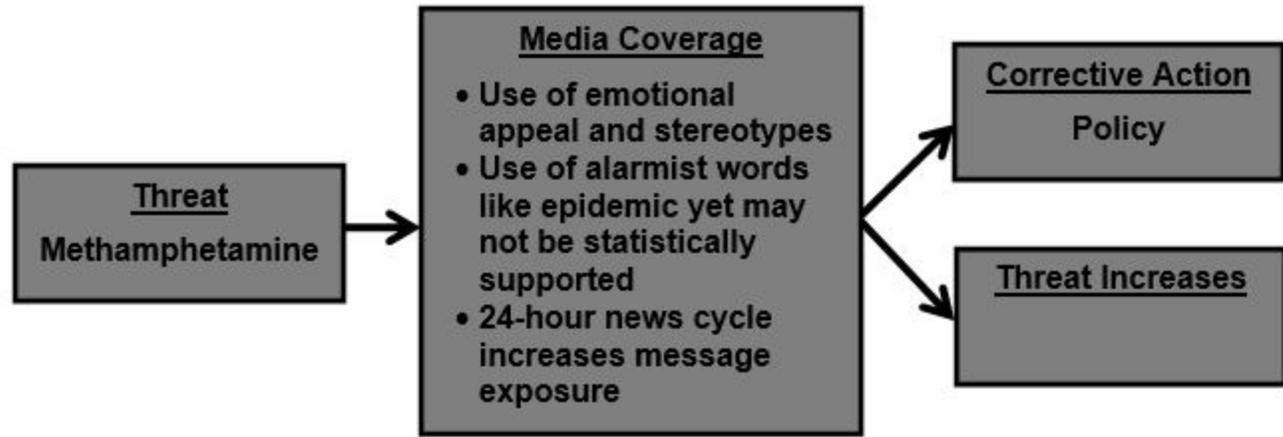
In addition to media dependency with methamphetamine is the theory of moral panic, which began in the 1970s in the sociology of deviance (Zajdow, 2008). Cohen (1972) identified a moral panic as when the majority of society views a social group or activity as threatening.

Moral panics assist the news industry in developing emotional appeal to content (McRobbie & Thornton, 1995), ultimately intensifying the interest of the audience. Stereotyping is one way the media connects unrelated events. With methamphetamine, the extreme physical decay after continued use is an example of emotional involvement. Weisheit and White (2009) described that using words like "epidemic" inflames the public rather than informs them.

Despite the media's attention to methamphetamine, the National Survey on Drug Use and Health (U.S. Department of Health and Human Services, 2010) findings are positive regarding methamphetamine use. From 2002 to 2008, the past month use of methamphetamine decreased for young adults (from 0.6% to 0.2%). The number of first users aged 12 or older was 105,000 in 2010, down from 157,000 in 2007 and 299,000 in 2002. Yet a 2005 National Association for Counties report found that of the 500 responding law enforcement agencies, 87% reported an increase in meth-related arrests since 2002, and 58% of counties responded that methamphetamine was "their" largest drug problem.

A moral panic covered by the media has two outcomes: corrective action or increase of panic (Figure 1). Similar to the CNN effect (Robinson, 2002), corrective action most likely forms policy. New technologies such as the Internet, smartphones, and social media have amplified the 24-hour news cycle.

Figure 1.
Stages of Moral Panic and Media Exposure



With methamphetamine, many federal policies were enacted because of the moral panic. The Combat Methamphetamine Epidemic Act of 2005 is found in Title VII of the USA Patriot Improvement and Reauthorization Act of 2005 (H.R. 3199). Another federal initiative against methamphetamine was the Congressional Caucus to Fight and Control Methamphetamine (2005).

Purpose of Study and Objectives

The purpose of the study reported here (Beaudreault & Miller, 2011) was to explore and describe the methamphetamine perceptions of the media among a random sample of U.S. states and their Extension Directors.

Objective 1: To describe Extension Directors in: (a) age, (b) gender, (c) level of education obtained, (d) years in current Extension title, (e) geographic location description of residence, (f) geographic location description of Extension territory, (g) U.S. state geographic description, and (h) current community involvement.

Objective 2: To describe the methamphetamine information sources of Extension Directors.

Objective 3: To describe the perceived media dependency of Extension Directors for methamphetamine information.

Objective 4: To describe the perceived methamphetamine knowledge of Extension Directors.

Objective 5: To describe the portrayal of methamphetamine in the media as perceived by Extension Directors.

Objective 6: To describe the relationships among selected demographic characteristics (gender, age, level of education obtained, years of Extension experience, geographic location description of residence and Extension territory, U.S. state geographic description, years in current Extension title, and current community involvement) and perceived media dependency, methamphetamine knowledge, and methamphetamine media portrayal.

Objective 7: To identify significant differences in selected demographic characteristics (gender, age, level of education obtained, years of Extension experience, geographic location description of

residence and Extension territory, U.S state geographic description, years in current Extension title, and current community involvement) and perceived media dependency, methamphetamine knowledge, and methamphetamine media portrayal.

Method

The study focused on a random sample of U.S. states and the Extension Directors (or similar appointee) within each state. Extension Directors were an appropriate sample because they work with diverse populations, are active in community engagement, are aware of state's programming, and many live in the rural communities they service. A random sample of 50 states ($n = 44$) resulted in an $N = 207$ of Extension Directors (CI of 95%; Cochran, 1977).

The instrument was an online survey and a mixed-mode approach of U.S. mail and email. Reliability of the instrument was established through a pilot test among Ohio State University Extension agents ($N = 24$) who were not included in the sample of the study. Content validity was secured through an expert review ($N = 4$). Cronbach's alpha (Nunnally & Bernstein, 1994) assessed internal consistency of the domain of the instrument for the items that used Likert-type scales. All domains received a Cronbach's Alpha of .80 or higher.

A series of five contacts was implemented in data collection (during the summer of 2009) to secure a high response rate (Dillman, Smyth, & Christian, 2009). In addition, multiple follow-ups, pre-contact with subjects, use of hand-stamped return envelopes, incentive distribution, and institution sponsorship(s) with the title and signature of the responsible individual were implemented as effective strategies to maximize a survey response (Linsky, 1975). Frames were complete, and a 95% confidence interval was identified to control sampling error. Early and late respondents were compared for significant differences using t-tests for independent groups, resulting in no significant differences. Therefore, an assumption employed was that subjects who responded late were similar to those who did not respond and that the findings can be generalized (Miller & Smith, 1983).

The alpha level was set a priori at .05. Nominal, and ordinal data analysis included frequencies and percentages. Interval and ratio data analysis included means and standard deviations. For $R \times C$ contingency tables, Cramer's V was computed to describe the association for the nominal variables of responses of gender, geographic location, description of residence and Extension territory, and U.S. state description. Spearman rank order correlations (r_s) were computed for the ordinal variables of community involvement and level of education obtained. Pearson product-moment correlations (r) were computed for the ratio variables of respondents' scores of age and years in current Extension title.

One-way analysis of variance (ANOVA) was performed to determine whether significant differences existed in age, level of education obtained, years of Extension experience, geographic location, description of residence and Extension territory, U.S. state geographic description, years in current Extension title, and current community involvement. The post-hoc Scheffe test determined which mean or group of means was/were significantly different.

For significant findings between two means for independent groups, Cohen's (1988) effect size is reported using the following scale: small effect ($d = .20$), medium effect ($d = .50$), and large effect

($d = .80$). For significant findings between k means (ANOVA), Cohen's (1988) effect size was reported using the following scale: small effect ($f = .10$), medium effect ($f = .25$), and large effect ($f = .40$). Scheffe's post-hoc test (S_w) determined where differences between groups existed after a significant F ratio was obtained in a one-way ANOVA. In this study, Davis' (1971) convention was used for describing the magnitude of correlation coefficients.

Results

The accepting sample response rate was 70.0% ($n = 134$). The states were blocked by U.S. Census region (2009): West, South, Northeast, and Midwest. Ages of respondents ranged from 32 to 64 ($M = 52.9$, $SD = 7.0$). Years in current Extension title ranged from fewer than six months to 40 years ($M = 13.4$, $SD = 10.6$). Of the Extension Directors, 56.1% were male, and 43.9% were female. The majority of the sample possessed an M.S. or M.A. (65.0%), and 30.9% had earned a PhD. Approximately 50.0% of Extension Directors lived in a rural area, and 43.9% identified their Extension territory as rural. The majority of the sample lived in the Midwest (40.3%) or South (29.3%).

The community involvement of the sample was blocked into four categories: high (weekly), medium (monthly), low (yearly), and none. Twenty-six percent of the respondents had high involvement, 30.9% had medium, and 34.1% had low or yearly involvement.

Methamphetamine Information Sources

The Extension Directors were asked a series of yes or no questions related to methamphetamine clandestine labs in their area. Seventy-nine percent had read or watched news coverage about a local methamphetamine lab seizure (Table 1). Yet only 15.7% of Extension Directors had seen a lab in their area. When asked about the thefts of farm chemicals, 51.5% of Extension Directors were aware of thefts in their area. Extension Directors from the Midwest had read or watched the most news about lab seizures (34.3%), saw the most methamphetamine labs in their area (29.1%), and were aware of farm chemical thefts that may have been used for methamphetamine production (29.1%). The findings dispute stereotypes that methamphetamine has been predominately a problem in the West region of the United States. Early outbreaks of the drug initially began in western states but moved east of the Mississippi River (Rawson, Gonzales, & Brethen, 2002; Donnermeyer & Tunnell, 2007; Weisheit & White, 2009).

When responses were blocked by region, the South had the highest frequency among the regions (87.2%) regarding if the Extension Directors had read or watched news coverage about a methamphetamine lab seizure. The Extension Directors in the South had seen the most methamphetamine labs in their area (21.7%). Yet Midwest Extension Directors were aware of the most farm chemical thefts that may have been used to make methamphetamine (72.2%).

Northeast Extension Directors read or watched the least amount of news coverage on lab seizures compared to the other U.S. regions (41.2%). Findings were similar with whether Extension Directors had seen a methamphetamine lab (0.0%) in their area and if they were aware of thefts of the farm chemicals used to make methamphetamine (29.4%).

The results indicated that the news covers lab seizures in such a way that Extension Directors are able to recall they had seen the topic in the past year. Except for the Northeast region, the majority (more than 80.0%) of Extension Directors remembered reading or watching local coverage of a methamphetamine lab seizure. However, less than 25.0% of Extension Directors had seen a methamphetamine lab. Results are consistent with the total clandestine lab incidents (U.S. Drug Enforcement Administration, 2009).

Table 1.

Methamphetamine Clandestine Lab Information Sources (n = 134)

Question or Statement	Region	% of region	% of region	% of region	Overall Percent	Aggregated
Answer		Yes	No	Don't know	Yes	Yes
In the past year, I have read or watched news coverage about a local meth lab seizure.	West	82.6	17.4	Not an option for item	14.2	79.1
	Midwest	85.2	14.8		34.3	
	South	87.2	12.8		25.4	
	Northeast	41.2	58.8		5.2	
Have you ever seen a meth lab in your area?	West	21.7	73.9	4.3	3.7	15.6
	Midwest	16.0	83.3	0.0	6.7	
	South	17.9	82.0	0.0	5.2	
	Northeast	0.0	100.0	0.0	0.0	
Are you aware of thefts of farm chemicals that might have been used to make meth in your area?	West	17.4	78.3	4.3	2.9	50.6
	Midwest	72.2	27.8	0.0	29.1	
	South	51.3	65.5	0.0	14.9	
	Northeast	29.4	70.6	0.0	3.7	

Extension Directors were asked to rank various sources or methods of methamphetamine information ranging from "obtained the most information" to "obtained the least or no information." Extension Directors learned the most from the news, with 44.0% ranking the media as the most information (Table 2). The second most informative source was law enforcement at 21.7%. The least amount of methamphetamine information was obtained from formal education (34.1%) and the entertainment media (23.8%).

Table 2.

Ranking (in percent) of Methamphetamine Information Source (n = 134)

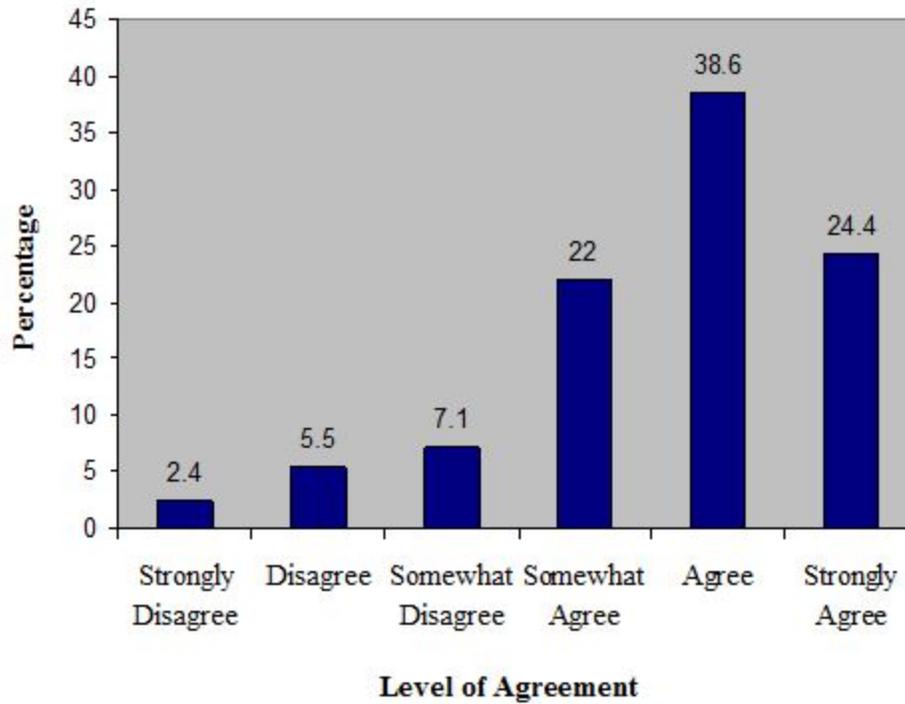
Information Source	Most %						Least %
News media	44.0	23.0	13.0	11.0	4.0	3.0	2.0
Law enforcement	21.7	21.7	23.9	10.9	9.8	6.0	5.4
Public health campaign	16.1	15.1	24.7	17.2	12.9	5.0	8.6
Extension education	4.7	10.6	10.6	20.0	18.8	16.5	18.8
Word-of-mouth	3.4	16.1	18.4	17.2	13.8	17.0	11.5
Entertainment media	0.0	11.3	10.0	12.5	16.3	21.0	23.8
Formal education	1.2	5.9	5.9	12.9	20.0	20.0	34.1

Perceived Media Dependency of Methamphetamine

Extension Directors were asked their level of agreement on a six-point Likert scale (from strongly disagree to strongly agree) to the following statement: "The media is my primary source of information regarding methamphetamine." Twenty-four percent of Extension Directors strongly agreed, 38.6% agreed, and 22.0% somewhat agreed (Figure 2). Aggregated, 85.0% perceived the media as their primary source of methamphetamine information.

Figure 2.

Level of Agreement to Statement: The Media Is My Primary Source of Information Regarding Methamphetamine (n = 134; Cronbach's α = .80).



Perceived Knowledge of Methamphetamine

Extension Directors do not perceive themselves as knowledgeable about methamphetamine (Beaudreault & Miller, 2011). Extension Directors (90.3%) responded that more people are using methamphetamine today (2009), nationally, than in 2002. Extension Directors perceived they knew the least about current federal laws regarding methamphetamine (79.5%). Extension Directors perceived they were the most familiar with signs of methamphetamine production (33.9%) and signs of methamphetamine use (35.4%)—two topics of focus in the news and entertainment media.

The Portrayal of Methamphetamine in the Media

Extension Directors were asked their level of agreement, on a six-point Likert scale (from strongly disagree to strongly agree), their agreement on three statements relating to their perceptions of trust and accuracy of the media. Although findings presented previously support Extension Directors' dependency on the media for methamphetamine information, the majority of Extension Directors did not strongly agree or agree that the media covered methamphetamine news accurately (Table 3). The majority of Extension Directors also did not strongly trust their local or national news portrayal of methamphetamine.

Forty-nine percent of Extension Directors somewhat agreed that the media covers methamphetamine news accurately. Overall, Extension Directors trust their local media portrayal of methamphetamine more than the national coverage of the issue. Seventy-seven percent generally agreed they trusted their local news compared to 72.4% in agreement that they trust the national news portrayal.

Table 3.

Perceived Trust and Accuracy of the Media (n = 134; Cronbach's α = .80)

Statement	Disagreement			Agreement		
	Strongly Disagree	Disagree	Somewhat Disagree	Somewhat Agree	Agree	Strongly Agree
	%	%	%	%	%	%
The media covers meth news accurately.	0.8	4.0	17.5	49.2	23.8	4.8
I trust my local news portrayal of meth.	0.8	7.9	14.3	44.4	27.8	4.8
I trust the national news portrayal of meth.	2.4	8.7	16.7	47.6	21.4	3.4

Extension Directors also were asked to agree or disagree with statements regarding whether they perceived the media as stereotyping and sensationalizing methamphetamine characteristics and if the media attempted to appeal to their emotions. Sixty-seven percent of Extension Directors believed the media does not stereotype (Table 4). However, 53.2% of Extension Directors agreed that the media stereotypes methamphetamine use as primarily a problem among individuals of low socioeconomic status.

When asked if the media sensationalized methamphetamine use, 64.0% of Extension Directors disagreed with the statement. Yet, 90.3% of Extension Directors said they believe that methamphetamine use is higher today (2009) than in 2002, which is incorrect according to the only available data sources on use.

The findings presented in the research and from previous studies present the following question: If the news is the primary source for methamphetamine information, why do Extension Directors believe methamphetamine use was higher in 2009 than 2002, when research supports otherwise? Despite the data, 64.3% of Extension Directors perceived the news as not sensationalizing methamphetamine use.

Emotions and news content are important when studying moral panics. When the news industry appeals to the emotions of an audience, the coverage inherently assists moral panics (McRobbie & Thornton, 1995). The interest of an audience is intensified when the audience becomes emotionally invested in the content. Fifty-six percent of Extension Directors perceived that the media attempted

to appeal to their emotions when reporting methamphetamine-related stories (Table 4). Although the majority of Extension Directors perceived the media as not sensationalizing methamphetamine content, appealing to their emotions is sensationalism.

Table 4.
Perceptions of the Media Regarding Stereotypes, Sensationalism, and Emotions.
Knowledge of Methamphetamine Use (n = 134)

Statement	Agree	Disagree
	%	%
The media stereotypes meth as primarily a rural drug.	33.3	66.7
The media stereotypes meth use primarily a problem to individuals of low socioeconomic status.	53.2	46.8
The media sensationalizes meth use.	35.7	64.3
The media attempts to appeal to my emotions when reporting meth-related stories.	56.0	44.0

Relationships and Significant Differences

The majority of the Cramer's V (Table 5) values found moderate associations among variables (values of 0.20 and less than 0.40). However, a substantial relationship (Davis, 1971) was found with gender and perceived knowledge ($r = 0.54$). Negligible Pearson product-moment correlation coefficients (r) and Spearman rank-order coefficients (r_s) were obtained for all variables.

Table 5.
Association (Cramer's V Statistic) among Gender, Location of Residence, Location of Extension Area, U.S. Region with Media Dependency, Media Portrayal, and Perceived Knowledge

	Media Dependency	Media Portrayal	Perceived Knowledge
Gender	.20	.33	.54*
Location of Residence	.20	.31	.47
Location of Extension Area	.20	.32	.41
U.S. Region	.31	.38	.45
*Substantial relationship (0.50-0.69)			

No significant differences were found among the mean scores of media dependency and media portrayal with gender (Table 6). Significant differences were found between perceived knowledge, indicating that males perceived themselves as more knowledgeable about methamphetamine ($d = 0.35$).

Table 6.
Independent Group t-test Between Male and Female Extension Directors

	n	mean	sd	df	t
Media Dependency					
Male	64	4.72	1.05	122	.41
Female	60	4.63	1.28		
Media Portrayal					
Male	64	12.75	2.33	122	.64
Female	60	12.45	2.91		
Perceived Knowledge					
Male	64	16.88	6.13	122	1.95*
Female	60	14.48	7.41		
* Statistically significant at the .05 α level; effect size ($d = 0.35$)					

Table 7 results found those who had high or medium community involvement perceived their knowledge significantly higher than those Extension Directors with low or no community involvement with a small effect size ($f = .09$).

Table 7.
ANOVA and Effect Size of Perceived Knowledge and Mean Scores of Community Involvement

	Low	Medium	High	None
n	31	40	41	12
Mean	18.74	15.45	14.76	12.08
sd	7.53	6.06	6.55	6.35
Source	df	ss	ms	F

Between groups	3	482.80	160.93	3.64*
Within groups	120	5300.31	44.16	
Total	123	5783.12		

* Statistically significant at the .05 α level; effect size ($f = .09$)

Table 8 results found Extension Directors in the Midwest region perceived their knowledge of methamphetamine significantly higher than those in other regions with a medium effect ($f = 0.29$).

Table 8.
ANOVA and Effect Size of Perceived Knowledge and Mean Scores of U.S. Region

	West	South	Midwest	Northeast
n	22	35	53	17
Mean	16.59	8.53	16.96	10.81
sd	6.32	1.44	5.64	5.34
Source	df	ss	ms	F
Between groups	3	483.35	161.11	.01*
Within groups	122	5405.28	44.30	
Total	125	5888.63		

* Statistically significant at the .05 α level; effect size ($f = 0.29$)

Extension Directors in the West, South, and Midwest (Table 9) perceived their media dependency as significantly higher than the educators in the Northeast with a medium effect ($f = 0.33$).

Table 9.
ANOVA and Effect Size of Perceived Media Dependency and Mean Scores of U.S. Region

	West	South	Midwest	Northeast
n	22	35	53	16

Mean	4.73	4.94	4.70	3.71
sd	1.07	.90	1.06	1.89
Source	df	ss	ms	F
Between groups	3	18.39	6.13	4.46*
Within groups	123	168.94	1,37	
Total	126	187.33		
* Statistically significant at the .05 α level; effect size ($f = 0.33$)				

No significant differences existed with age, education level, years in current Extension title, residence description, and description of Extension area. These variables do not play a significant role in the methamphetamine perceptions presented in the research reported here.

Discussion

Findings support the media dependency theory. Extension Directors rely on the media to meet their goal of being informed about methamphetamine. Media dependency increases during times of change and responds with additional coverage. The research reported here found that 79.1% of Extension Directors recalled reading or watching news coverage about a local methamphetamine lab seizure, while only 15.6% reported that they actually had seen a methamphetamine lab in their area. These findings support prior research that found positive relationships between health and other general risk situations and media exposure (Coleman, 1993; Loges, 1994).

When discussing moral panic, the media coverage of methamphetamine supports prior research. The news industry develops emotional-appeal content (McRobbie & Thornton, 1995) and the resulting emotional involvement of an audience intensifies interest. Extension Directors agreed (56.0%) that the media attempts to appeal to their emotions when reporting methamphetamine-related stories.

Stereotyping is one way the media connects unrelated events. The exemplification theory (Zillmann, 1999) identified the concept that isolated events—when aggregated in the media—imply trend presence; yet, from a statistical standpoint, a trend may not be supported. More than one-half (53.2%) of Extension Directors agreed that the media stereotyped methamphetamine use primarily as a problem to individuals of low socioeconomic status.

Extension Directors (90.3%) reported that methamphetamine use is higher today (2009) than in 2002, which is inaccurate. Although the media has given attention to methamphetamine, the National Survey on Drug Use and Health (U.S. Department of Health and Human Services, 2010) findings are positive regarding methamphetamine use. From 2002 to 2009, adults aged 18 to 25 use of methamphetamine decreased (from 0.6% to 0.2%). In addition, for individuals 12 or older who were current users of methamphetamine in 2010 (353,000 or 0.1%) were similar to those from 2007 through 2009, but lower than those from 2002 through 2006 (0.3%). The number of first

users aged 12 or older was 105,000 in 2010, down from 157,000 in 2007 and 299,000 in 2002.

Being aware of the media dependency of methamphetamine has implications for communication and drug prevention programming. In an era of increased technology and limited financial and human resources at the federal and state levels, drug prevention educators should evaluate their current programming to identify if methamphetamine can be incorporated into existing outreach efforts.

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