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It Gets Better: A Content Analysis of Health Behavior Theory in Anti-Bullying YouTube Videos

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Abstract

Bullying is a pervasive problem that affects children and adolescents of all backgrounds. Public Service Announcements (PSAs) spread through social media present a unique opportunity to reach many young people and teach skills for dealing with bullying. The purpose of this paper is to examine health behavior theory content of anti-bullying YouTube PSAs, and other YouTube videos containing anti-bullying messages. This study design comprised a content analysis for health behavior theory of anti-bullying YouTube videos. Videos were selected from www.YouTube.com using specific search terms typed into the search tool bar. Three graduate students trained in health behavior theory coded the videos. Results demonstrate that most anti-bullying YouTube videos do not incorporate health behavior theoretical constructs. Videos containing links to other websites were found to have greater inclusion of health behavior theory constructs. Theory was also positively associated with the number of views ($p < .05$). This paper represents the first in-depth content analysis for health behavior theoretical constructs in YouTube videos targeting bullying PSAs. Organizations should incorporate health behavior theories when developing PSAs to maximize behavioral impact, and to achieve high viewership. Overall anti-bullying videos on YouTube are ineffective in both utilizing theory and garnering views.

Keywords: *bullying, health behavior, PSA, social media, YouTube*

1 Introduction

Adolescent bullying is a serious public health concern that has garnered significant attention both from the peer-reviewed literature and popular media [1]. Bullying is prevalent throughout the United States [2] and globally impacting approximately 10-30% of children [3]. National Institutes of Health (NIH) report that 13% of children are involved in this behavior as a bully or perpetrator, 10.6% as a victim or target, and 6.3% as both bully and victim [2]. Participants in bullying (victims, bullies, and bully/victims) are at increased risk of many deleterious outcomes: low academic achievement [4], substance abuse [5], depression and suicide [6], problems with relationships [7], and several other indicators [1]. Addressing this problem, its predictors, propagating behaviors and outcomes is of great public health concern.

Significant bullying prevention strategies have been developed [8, 9]. The Olweus Bullying Prevention Program is perhaps the most widespread and well-known program [10]. This program focuses on school environment and uses teachers as principle sources for implementation. Other programs involve adolescent students in the process of planning and implementing anti-bullying strategies [11]. Several school-programs have aimed at reducing bullying and victimization [12, 13]; however, the most effective programs appear to be comprehensive approaches that include children, families, communities, and schools [9, 14]. More recent preventive approaches include media campaigns utilizing social media such as the 'It Gets Better' campaign and 'The Trevor Project,' which address bullying behavior and the LGBT community [15, 16].

Public Service Announcements (PSAs) or mass-media efforts have been an instrumental part of public health campaigns for many years [17, 18]. PSAs have been used to promote a wide variety of health behaviors and health-related topics [19, 20]. Web 2.0 technologies provide the opportunity to post PSAs on social networking and video sharing sites such as YouTube at no cost to a potentially limitless audience. With the growth of Web 2.0 capabilities much focus in public health research has shifted towards how to effectively use social networking sites for health promotion [21, 22].

Research has also begun examining how to most effectively use social media tools for health promotion [23]. Examining the inclusion of established health behavior change theoretical constructs in social media-based interventions and health promotion efforts is an area of emerging research. Doshi, and colleagues evaluated physical activity websites for inclusion of health behavior change theory constructs [24]. Similar content analyses of health-related mobile phone applications have been conducted [25, 26]. Recent content analyses of both obesity-related [27] and anti-smoking-related [28] videos posted to YouTube have similarly been completed. To date no study has explored the inclusion of health behavior change constructs in bullying-related PSAs posted on YouTube. The purpose of this paper is to examine health behavior theory content of anti-bullying YouTube PSAs, and other YouTube videos containing an anti-bullying message. Specifically, this paper looks at health behavior theory constructs used in anti-bullying videos and explores related factors with inclusion of theoretical constructs.

2 Methods

2.1 Study design

This study design comprised a content analysis for health behavior theory of anti-bullying YouTube videos. Videos were selected from www.YouTube.com using specific search terms typed into the YouTube search tool bar. Three graduate students trained in health behavior theory coded the videos.

2.2 Sample

The sample was derived from videos available on YouTube during the second week of October, 2012. Specific dates of searches for each of the five search terms were tracked accordingly. Anti-bullying videos/PSAs were identified through five specific search terms: "bullying campaign," "stop bullying," "bullying PSA," "anti-bullying," and "cyber bullying PSA." These terms were selected based on variation in video results obtained from searching an array of possible search terms. Preliminary search results returned 107,840 possible videos. Specific inclusion criteria were established in the initial development of the sample for purposes of narrowing results.

Videos longer than 4 minutes and 30 seconds were excluded after initial searches to eliminate short films, personal blogs, and films that did not fit a PSA format. Videos were also excluded for having less than 1,000 views in effort to only identify higher quality videos with increased viewership. Additionally, news stories were excluded due to a high unlikelihood of containing health behavior theory constructs.

YouTube.com groups search results onto pages of 25 each, with the most relevant (or most viewed) videos appearing first in ascending order. On average 2-3 videos per page are advertisements, narrowing the results to approximately 22 videos per page. To manage the significant number of video results, coders viewed all results per page until either reaching 60 videos to add to the sample or reaching a saturation point—meaning viewing multiple pages in a row and not finding any relevant videos for the sample.

All video links that met the inclusion criteria were copied and placed on a spreadsheet shared by the researchers. Following this first inclusion process and accounting for duplicates, the total sample included 274 videos. An additional 16 videos were excluded based on issues regarding relevance to anti-bullying messaging. Finally, a search was conducted online for anti-bullying campaigns and websites which were included in the sample in an effort to have a complete representative sample of available anti-bullying PSAs. These campaigns included The Trevor Project, stopbullying.gov, the It Gets Better Project, Think before You Speak, I Choose, and the Grin Campaign. Only videos from The Trevor Project, and the It Gets Better Project met the study inclusion criteria (N=6). The total sample of videos coded was 264.

2.3 Procedure

Coders viewed study videos by selecting the appropriate link from the shared spreadsheet. First the coders viewed each video in its entirety recording key background on each video. Coders then evaluated each video according to the study instrument and entered scores directly into an electronic database.

2.4 Measurement

The study instrument included several key descriptive variables such as bullying setting, target audience, bullying behavior, gender, ethnicity, professionalism, and content validity (see Table 1). Theoretical constructs used to code the videos were adapted from the work of Doshi et al. (2003) who evaluated theoretical content of websites designed to

promote physical activity. Doshi et al. (2003) used four prominent theories of behavior change: health belief model, the theory of reasoned action/planned behavior, the transtheoretical model, and the social cognitive theory/social learning theory. The current study instrument coded for each of these prominent theories as well as specific constructs designed to measure social capital [29]. As shown in Table 2, there were 22 total theoretical constructs coded for in the current study.

2.5 Interrater reliability

Three coders independently coded 10% (n=26) of the sample, 5% at the beginning and 5% at the end, in order to verify interrater reliability and check for rater drift. A Cohen's kappa coefficient was calculated both at the beginning and the end of sampling to measure interrater agreement (k= .5 & k= .5). The coefficients measured are categorized as moderate agreement in a division from .41 to .60, and are acceptable levels of interrater agreement [30].

2.6 Analysis

Each YouTube video was coded for a total of 22 theoretical constructs. The constructs were subsequently scored using a dichotomous scale (1=construct present, 0=construct not present), and totaled for each video to obtain a continuous total theory score (out of 22). Multiple regression analysis was used to determine the relationship between theory presence and total video views, length of video, publisher of the video, videos targeting bullies or victims, method of communicating PSA message, and containing links to other websites.

3 Main results

Characteristics of YouTube videos are presented in Table 1. The majority of videos (75%) were created for addressing bullying in a school setting, as well as targeting generic bullying behavior (88%). More than half of the sample (58%) was created to specifically address the bully, with a similar percentage (57%) created for a central audience of a victim (multiple responses were available for some questions which explains percentages not adding to 100). The most common bullying behaviors addressed in the videos were physical (42%), verbal (54%), and cyber-bullying (38%). Only 3% (N=8) of the videos included citation for data referenced.

Table 1: Characteristics of study videos, n=264

Characteristic	Variable	Percent (%)
Central Audience	Bully	58.33
	Victim	57.57
	Bully/Victim	3.41
	Non-Participant	50.38
Bullying Setting	In-school	74.62
	Out-of-school	36.36
Targets of Bullying	LGBT	14.39
	Race/Minority	4.92
	Obesity	6.43
	Deviant Appear.	12.88
	Generic Bullying	87.87
Bullying Behavior	Physical	41.67
	Verbal	54.17
	Social Exclusion	20.45
	Rumors	14.77
	Cyber-Bullying	37.88
Professionalism	Students (11-18 assignment)	30.86
	Students (11-18 old Personal Video)	21.59
	School Administration	1.14
	Students (University)	1.14
	Professional (Corporation)	9.47
	Professional (NGO/Non-Profit)	23.48
	Professional (Health Department)	2.27
Content Validity	No Cite Research	96.59
	One+ Reference	3.41
Methods of Comm.	Scare Tactics	10.6
	Emotional	51.14
	Strictly Info.	41.67
	Humor	5.3
	Celebrity	18.18
	Other	8.71

Table 2 shows the percentage of videos using specific theoretical constructs. Coded theories that were most commonly found in videos were general information (72%), informational support (51%), perceived risks (40%), and self-efficacy (25%). The mean theoretical score was 5.39 and the standard deviation was 3.1.

YouTube videos were compared by their use of the five major health behavior theories (Table 3). The top five videos based on theory scores and the top five videos based on number of views are shown in the table. The theories with the highest overall percentage being used in the sample of YouTube videos were Theory of Planned Behavior (28.5%), and Health Belief Model (28.4%). Social Cognitive Theory was the least used theory in this sample (11.8%).

Results from the multiple regression analysis (Table 4) revealed that containing links to other websites ($p < .001$) was positively associated with the inclusion of health behavior theory constructs. Theory was also positively associated with the number of views ($p < .05$). The interaction between targeting bullies and the inclusion of health behavior theory was significant ($p < .05$) and negatively associated, while the interaction between targeting victims and the inclusion of health behavior theory was significant ($p < .05$) and positively associated.

Table 2: Inclusion of health behavior theory in study videos, n = 264.

Health Behavior Theory Construct	Study Variable	Description	% of Videos Containing Construct
Knowledge	General information	Provides general information about bullying	72.35
Cognitive	Perceived Benefits	Pros about speaking up, interfering w/ bullying, not bullying	9.47
	Perceived Barriers	Cons to speaking up or interfering w/ bullying	1.52
	Perceived Risks	Info addressing risks to being vocal, standing up	39.77
	Self-Efficacy	Mentions concept or importance of confidence building in relation to acting out against bully	24.62
	Self-Talk	Examples of self-statements (encouragement)	5.30
	Perceived Social Norms	Addresses social norms in relation to bullies and victims, and behavior	6.06
Behavioral	Self-Monitoring	Techniques for monitoring behavior for victims	0.0
	Stimulus-Control	Cues and prompts for non-participants to interfere with bullying	0.0
	Self-Reward	Self-praise for interfering, or being a non-passive victim	0.0
	Social Support	How to increase or utilize social support	15.15
	Modeling/Vicarious Learn	Viewer sees new behavior/method to address bullying/victimization	12.88
Emotion Focused	Stress Management	Techniques to address behaviors that enable victimization to occur (Bully/victims)	0.0
	Negative Affect Manage.	Guidelines to address mood managing for all participants (bully, victim, bully/victim)	3.03
Therapeutic Interventions	Skill-Building	Guidelines on new behaviors to address bullying	9.09
	Increasing Knowledge	Provides resources to get additional info	18.94
	Assess Motivational Readiness	Addresses stage of change viewer is in	0.0
	Ongoing Feedback	Provides method of obtaining follow-up or additional help	0.0
Social Capital	Emotional Support	Empathy, love, trust, caring	13.64
	Instrumental Support	Tangible aid, services (e.g. Phone number/ chat)	6.82
	Informational Support	Advice, suggestions, info (website/ parent)	50.76
	Appraisal Support	Information that is useful for self-evaluation, constructive feedback, affirmation	1.52

Table 3: Health behavior theories and view counts in top performing videos

Video Name	Health Belief Model %	Trans-theoretical Model %	Theory of Planned Behavior %	Social Cognitive Theory %	Social Capital %	Total Theory Score /22
Top 5 Videos: Theory Scores						
Stop Non-Stop Bullies	40	38.5	50	38.5	60	18
ABC – Anti Bullying Crew	40	30.8	33.3	30.8	80	15
Stop Bullying: Speak Up – Level Up	60	53.8	83.3	46.2	40	15
Glee's Max Adler: It Gets Better	0.0	15.4	33.3	15.4	60	14
Stop Bullying: Speak Up – Junior Dudes	40	38.5	50	38.5	40	14
Top 5 Videos: Views						
Anti-Bullying ad	40	15.4	33.3	15.4	20	6
Chris Colfer for the Trevor Project	40	23.1	50	30.8	60	14
Words Hurt – Bullying Commercial	20	7.7	16.7	7.7	20	4
Stand Up! – Don't Stand for Homophobic Bullying	60	30.8	83.3	15.4	40	11
Anti-Bullying Awareness	40	7.7	33.3	7.7	20	4
Total Average Mean %:	28.4	12.5	28.5	11.8	17.6	----

Table 4: Regression analyses for inclusion of health behavior theory, n = 264.

Variable	Coefficient	Standard Error	tValue	pValue	95% Confidence Interval
Number of Views	.0003	.0001	2.06	0.040	[.0000, .0007]
Time in Seconds	.0005	.0005	0.98	.328	[-.0005, .0016]
Video Publisher	-.0209	.0875	-0.24	0.811	[-.1932, .1514]
Targeting Bullies	-.1922	.0782	-2.46	0.015	[-.3461, -.0382]
Targeting Victims	.1733	.0787	2.20	0.029	[.0182, .3284]
Strictly Informational Messaging	.4706	.0782	6.02	0.000	[.3166, .6246]
Contains Links to Other Websites	.5333	.0934	5.71	0.000	[.3494, .7172]

Note. Number of Observations = *264.* R^2 = *0.27*

4 Discussion

This content analysis evaluated the theoretical content of 264 anti-bullying videos found on YouTube. Results demonstrate that most videos did not incorporate established health behavior theoretical constructs. Most videos addressed generic bullying taking place within schools, which makes sense as this setting is relevant for the adolescent target demographic. Of the behaviors represented, most videos addressed direct forms of bullying; with verbal bullying being the most prevalent, followed by physical bullying. Indirect forms of bullying received less attention: social exclusion was represented half as often as physical bullying, and other relational bullying, such as rumor spreading, was the least represented. This is significant, as males are more likely to be involved in bullying and to be victimized by direct forms of bullying, while females report similar levels of victimization, but in its indirect forms [31, 32]. Videos addressed cyber-bullying less frequently than direct bullying, but more frequently than indirect bullying. This is an important area to address, as cyber-bullying often co-occurs with other bullying behaviors in both males and females [33].

Overall, theoretical content was lacking in the majority of videos. Of the theoretical models coded for, the Theory of Planned Behavior was the most prevalent, followed by the Health Belief Model. This may in part be due to the significant overlap between theories [34]. For instance, both models involve increasing knowledge as a means of influencing beliefs, attitudes, or behavior [24]. Of the theoretical constructs coded for, the most prevalent were general information—facts and statistics related to bullying—and informational support, typically in the form of links to websites inviting viewers to learn more. Theory-based behavioral strategies had a much lower representation in this sample. This is consistent with findings from content analyses of other technological mediums like websites [24] and physical activity apps [25]. This may indicate the limitations of YouTube videos as a medium of using theory to initiate change in audience behavior.

Despite more than half of the videos addressing viewers' informational needs, the majority did not cite resources, so content validity could not be established. However, a related content analysis of YouTube videos related to HPV vaccination has indicated a high volume of misinformation pertaining to the vaccine [35]. Future research is needed to evaluate the accuracy and quality of information and recommendations presented in videos aimed at bullying prevention.

Self-efficacy was represented in only one-fourth of the videos evaluated, despite the potential importance of this construct in taking action against bullying in any role addressed. Self-efficacy has been shown to be an important skill in mediating the effects of bullying on its victims, serving a protective function against anxiety, depression, and, possibly, retaliatory aggression toward others [36]. Among bystanders, research has indicated a positive association between level of self-efficacy and the likelihood of intervening in bulling situations [37, 38]. Videos emphasizing self-efficacy among victims could potentially be instrumental in averting some of the negative individual and social outcomes associated with bullying.

As the third most represented theory, Social Capital was included in less than one-fifth of the videos. Considering the interpersonal nature of the problem, especially with respect to its perpetuation and its solutions, this finding is surprising. Higher levels of social capital are positively associated with greater resilience, mitigating negative outcomes in unfavorable environments [39]. Specific to bullying, multiple studies have demonstrated that having friends is a protective factor against victimization [40-43]. Conversely, social groups and structures within schools may serve to reinforce and perpetuate bullying behavior [44]. Students' relationships with their peers, as well as their perceptions of peer expectations have a greater influence on bullying-related behavior than does their perception of authority figures' expectations [45]. Due to the powerful role of social factors, video creators would be wise to address social capital in their productions.

Higher theory scores were positively associated with higher view counts. This could indicate that theory-based videos attract a larger viewership than those without theory. However, this finding should be interpreted conservatively due to the number of views not necessarily being representative of popularity—as it does not take the age of the video into account. Thus, some more recently uploaded videos may garner many views early on; while older videos may have accumulated very few views relative to their "lifespan." Adjusting for this, or looking at other variables, such as viewer comments, may give a more comprehensive representation of audience engagement and impact.

Interestingly, there was no correlation between the professionalism of videos and their theoretical content scores. In other words, regardless of its source a video produced by a health department or other professional organization was no more likely to incorporate theory than one made by an individual or individuals, including adolescents. This is consistent with a recent study which found no significant association between video source and content based on the factors of the Health Belief Model [35]. Other research has found no difference in the influence on viewer attitudes and behavioral intention in young people watching pro-social YouTube videos created by peers versus issue-experts [46]. Whether this lack of influence should be attributed to the inherent challenge in influencing these factors via advertising, as was postulated by Paek et al., or due to the similarly low levels of theoretically-based behavior-change content between both sources, is a question that will require future research.

4.1 Limitations

Several key limitations may impact the interpretation of results from this study. First, the search terms for this study were limited as YouTube is a rather large database of videos, and certain media campaigns and videos may have been left out of the sample unintentionally. To control for this, a search was conducted of major bullying campaigns through the Google search engine yielding additional videos that were added to the sample according to inclusion criteria. Furthermore, the theoretical constructs that were coded for, as adapted from Doshi et al, were not all relevant to bullying behavior. For this reason certain constructs were dropped from the original set and constructs from Social Capital were added—which are much more relevant to bullying behavior.

Finally, the sample is not a complete representation of bullying videos on YouTube. Since this database in extremely comprehensive and expansive, it would be almost impossible to actually search and code all relevant videos. Additionally, YouTube is not the only source of social media videos on the internet. However, searches were conducted for large PSA campaigns and search results are structured so that the most relevant videos are placed at the beginning of the results. These factors put together should greatly minimize any misrepresentation bias that could have occurred in the initial development of the sample.

5 Conclusion

Despite these limitations, this paper represents the first in-depth content analysis of health behavior theoretical constructs in YouTube videos targeting bullying PSAs. Similar research has been conducted to date on content of YouTube videos [27, 28], and using social media effectively [21]. This paper has implications for public health practice in utilizing social media; in particular, the effective use of YouTube. Organizations and others desiring to promote health via videos on YouTube should include health behavior theories when developing their videos in order to make them more effective facilitators of change, and to achieve higher numbers of views. Overall anti-bullying videos on YouTube are ineffective in both utilizing theory and in attracting viewership. Research has indicated that, while people select and view YouTube videos both for entertainment and to gain information, they are more likely to share entertaining videos with others [47]. Those wanting to reach a large audience should keep this in mind when creating PSAs. Future research and public health practice should focus on effectively utilizing YouTube as a means to disperse public health messages to greater numbers of people.

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