



# Høgskolen i Hedmark

Faculty of Business Administration

## BRAGE

Hedmark University of Applied Sciences Open Research Archive

<http://brage.bibsys.no/hhe/>

This is the author's version of the article published in

### *American Journal of Public Health*

The article has been peer-reviewed, but does not include the publisher's layout, page numbers and proof-corrections

Citation for the published paper:

Wang, H. & Singhal, A. (2016). East Los High: Transmedia Edutainment to Promote Sexual and Reproductive Health of Young Latina/o Americans. *American Journal of Public Health*, 106, 1002-1010.

DOI: 10.2105/AJPH.2016.303072

This article has open access full-text online:

<http://ajph.aphapublications.org/doi/full/10.2105/AJPH.2016.303072>

*East Los High: Transmedia Edutainment to Promote Sexual and Reproductive  
Health of Young Latina/o Americans*

Hua Wang

University at Buffalo, The State University of New York

hwang23@buffalo.edu

Arvind Singhal

The University of Texas at El Paso

asinghal@utep.edu

Pre-Print Version

Wang, H., & Singhal, A. (2016). *East Los High: Transmedia edutainment to promote sexual and reproductive health of young Latina/o Americans*. *American Journal of Public Health*, 106, 1002–1010. doi:10.2105/AJPH.2016.303072

## Abstract

Latina/o Americans are at high risk for sexually transmitted infections and teen pregnancies. Needed urgently are innovative health promotion approaches that are engaging and culturally sensitive. *East Los High*, a transmedia edutainment program, was purposefully designed to embed educational messages in entertainment narratives across several digital platforms to promote sexual and reproductive health among young Latina/o Americans. By employing analytics tracking, a viewer survey, and a lab experiment, we found that *East Los High* had a wide audience reach, strong audience engagement and, in general, a positive cognitive, emotional, and social impact on sexual and reproductive health communication and education. Culturally-sensitive transmedia edutainment programs represent a promising health promotion strategy for minority populations and warrant further investigation and validation.

*Keywords:* transmedia edutainment, Latina/o youth, sexual and reproductive health, health promotion, program evaluation

Latina/o represent the largest and fastest-growing racial/ethnic minority in the United States.<sup>1,2</sup> By 2020, as per Census projections, 25% of American teens will be Latina/o.<sup>3</sup> These changing demographics hold significant implications for public health. Although risky sexual behaviors among American youth have declined since 1990, Latina/o youth have higher rates of sexually transmitted infections (STIs) and unintended pregnancies than other racial/ethnic groups.<sup>4,6</sup> One in 3 Latina teens become pregnant before the age of 20, 1.5 times the national average.<sup>3</sup> This is not surprising as only about half of sexually active Latina/o teens reported using a condom during their last intercourse, and only 1 in 7 used birth control pills or other contraceptives.<sup>7</sup> Latina teen mothers bear the greatest burden of higher order and rapid repeat pregnancies.<sup>8,9</sup> Poverty, school dropout, and limited healthcare access also affect young Latina/o Americans, exacerbating disparities in sexual and reproductive health.<sup>10</sup>

Despite the high risks, there is a dearth of effective health interventions targeted and tailored for Latina/o youth.<sup>6,11</sup> Most current interventions are predominantly targeted at African-Americans, largely tied to school-based programs, and their evidence of effectiveness is limited.<sup>4,11</sup> Urgently needed are innovative and culturally-sensitive health promotion approaches for Latina/o youth.<sup>6,12</sup> *East Los High (ELH)*, the subject of this article, is one such sexual and reproductive health intervention. Incorporating a web-based melodramatic serial and several narrative extensions across multiple digital platforms, *ELH* followed the principles of entertainment-education and transmedia storytelling to purposefully reach, engage, and influence young Latina/o Americans toward teen pregnancy prevention and better sexual and reproductive health.

This article analyzes the strategic design elements of *ELH Season 1* programming, including its theoretical foundations in narrative engagement and persuasion; and discusses the research methods employed for its program evaluation, the key findings, and implications for designing sexual and reproductive health interventions for Latina/o youth.

## **LITERATURE REVIEW**

### **Transmedia Edutainment**

While storytelling has served as a vehicle of recreation, instruction, and transformation for thousands of years, only in recent decades, has it been purposely used in entertainment media for health promotion—a field of scholarship and practice known as entertainment-education or edutainment.<sup>13-16</sup> Edutainment programs increasingly supplement and complement traditional public health interventions. In the early days, radio and television dramatic serials were designed and broadcast in Latin America, Asia, and Africa to entertain and educate on a variety of topics.<sup>13-15</sup> Using fictional melodramatic narratives, they educated audience about contraceptive methods, modeled positive sexual attitudes and behaviors, and improved the reproductive health of millions in developing countries.<sup>13-15</sup>

However, edutainment programs in North America and Europe face stiff competition in what represents a media saturated environment.<sup>17</sup> To earn audience ratings, sexual content on commercial channels is usually highly explicit, often inaccurate, and devoid of discussion about risks and associated consequences.<sup>18</sup> To overcome these challenges, several institutions (e.g. Hollywood Health & Society in the U.S.) provide

creative writers and producers the knowhow to accurately portray critical health information in the popular media.<sup>15</sup>

Transmedia storytelling is an innovative media programming trend.<sup>15</sup> Instead of telling the story on a single medium, narrative elements are creatively coordinated across different media platforms (hence “transmedia”) to build a story world, engage a broader spectrum of audience, and provide them an enriching experience beyond pure entertainment.<sup>19,20</sup> Leveraging on its commercial success in entertainment franchises like *Star Wars*, certain transmedia producers are now collaborating with NGOs and public health professionals to create prosocial programs. For young audience members, who are savvy entertainment consumers and can easily navigate across multiple digital platforms, transmedia edutainment holds promise as a health promotion and education interventional tool.<sup>15,21-23</sup>

### **Theoretical Foundations**

Edutainment programs are grounded in theories of narrative persuasion that explain the factors and processes that facilitate changes in audience members’ knowledge, attitudes, and behaviors. In contrast to political campaigns, embedding educational messages in entertainment narratives represent a genre of implicit persuasion.<sup>24,25</sup> Certain elements of narrative-based entertainment help suspend audience disbelief and reduce their resistance to persuasion.<sup>26</sup>

Edutainment programs are also grounded in social cognitive theory, an agentic framework of psychosocial change with a dual path of influence: direct exposure to media models and indirect social learning through interpersonal discussions.<sup>27</sup> The transportation-imagery model posits that narratives can be highly immersive, prompting

the audience to pay attention, generate mental imagery of a prospective potentiality, and transport them into a world of different time and space.<sup>28</sup> In addition, narratives resonate particularly well with the audience when they perceive the stories to be realistic and can identify with the characters based on existing similarities or desirable attributes.<sup>26,29,30</sup> Further, theories of culture-centric health promotion emphasize that narratives built with familiar cultural markers are especially effective when targeting minority populations.<sup>12,31</sup>

Recent meta-analyses have demonstrated the advantages of using narratives in health interventions: Narratives have a sizable significant impact on combined changes in attitudes, intention, and behavior, even if they have a relatively small effect size in individual outcomes. Narratives are powerful interventional tools for eliciting affective audience response; and evidence suggests that those delivered through audio and video are more effective than print.<sup>32-34</sup> Moreover, empirical studies show supporting evidence of narrative-based interventions for racial/ethnic minority groups to reduce disparities.<sup>35-37</sup> Narrative persuasion theories guided the *ELH* program development (in terms of character building and content production) and its program evaluation (in terms of choosing key measures and hypotheses).

#### *ELH* PROGRAM DEVELOPMENT

At least 3 unique aspects of *ELH* set it apart from popular series such as *Degrassi* and *16 & Pregnant* that also discuss sexual and reproductive health issues among youth: cultural sensitivity, transmedia edutainment programing, and collaborative multilateral partnerships.

*ELH* is a culturally-sensitive intervention: the first English-language edutainment program in the United States made entirely by Latinos and for Latinos, using all-Latina/o

creators, writers, and cast to tackle challenges within the Latina/o community.<sup>21,38</sup> *ELH* is set in a fictional high school in East Los Angeles, a predominantly Latina/o area in Los Angeles County with high rates of poverty, low educational attainment, and low household income. It was purposely designed to subvert the stereotypes of Latina/o characters beyond “gardener, maid, and gang member.”<sup>38</sup> Among the main characters are Jacob, a graduating senior and popular football jock; Jessie, an intelligent, attractive junior who secretly admires Jacob, and is a newbie on the school’s Bomb Squad dance team; Maya, Jessie’s cousin, a troubled runaway, who takes refuge in Jessie’s home and would soon become Jacob’s heartthrob; Ceci, a lead dancer of the Bomb Squad, who is sexually active, becomes pregnant, and finds her life turned upside-down; and Vanessa, captain of the Bomb Squad, who trades sex for favors and discovers she is HIV positive. The plot simmers further when Jessie, a member of the “virgin club,” is forced to disclose her secret as things get hot between her and Jacob; Maya, scarred by a past rape, rebuilds her life through work in a restaurant owned by Jacob’s father; Ceci, deserted by her boyfriend after pregnancy, considers abortion but decides to keep her child; Vanessa, jealous and vengeful, orchestrates Jessie’s seduction, and repents as she copes with HIV.

Further, *ELH* is the first transmedia edutainment program purposely designed to tackle sexual and reproductive health issues across multiple media platforms. Previously, certain commercial franchises created such transmedia experiences for their audience members.<sup>23</sup> A notable example was *The Matrix* where the overarching storyline was conveyed through the movie trilogy, a series of animations, comic books, and video game tie-ins.<sup>19</sup> The interwoven transmedia tapestry made a richer story world, deepening the audience’s relationship with the characters, plotlines, and issues.<sup>19,22</sup> Similarly, *ELH*



offered multiple entry points for Latina/o youth, who are avid consumers of dramas and digital entertainment, to engage in the narrative through their preferred platform.<sup>19,39-42</sup>

*ELH*'s transmedia approach was highly strategic as Latina/o are 40% more likely than the general population to watch television/video online or on a smartphone, and 3 times more likely to check, via social media, what programs their friends are watching.<sup>43</sup> *ELH* capitalized on the digital usage patterns of Latina/o youth to engage them about sexual and reproductive health issues.<sup>21,44</sup>

*ELH Season 1* kicked off with a 24-episode original teen drama series on Hulu, the popular web-streaming site. At the end of each episode, viewers were nudged to the *ELH* website (eastloshigh.com) where viewers could access 9 transmedia narrative extensions (Figure 1).<sup>45</sup> Viewers, for instance, could watch an extended scene where a health clinic counselor talks compassionately with Maya about correct condom use. They could also access Ceci's Vlogs. After being abandoned by her boyfriend, the pregnant Ceci is taken in by a women's shelter where she learns about services available for pregnant teens, including options to give birth and raise the child, give up the child for adoption, or terminate the pregnancy. Viewers could access 6 of Ceci's Vlogs linked to different episodes as the major storyline unfolded in the online drama. In the Vlogs, the audience could see Ceci talking about her feelings of being a pregnant teen, the physiological changes in her body, and the socio-economic and cultural challenges she faced. From there, viewers could visit the *ELH* resources page, use widgets to find local health clinics, and click on external links for additional information. These transmedia extensions of *ELH* were promoted on popular social networking sites (Facebook, Twitter, Tumblr, Instagram).

Finally, *ELH* fostered an extensive web of collaborative multilateral partnerships. Over 3 years in development, *ELH* was the brainchild of executive producer Katie Elmore Mota, who forged a unique collaboration between Wise Entertainment (a Hollywood-based production company), Population Media Center (a Vermont-based non-profit organization that excels in entertainment-education), and various national and local NGOs such as Planned Parenthood Federation of America, The National Campaign to Prevent Teen & Unplanned Pregnancy, Advocates for Youth, National Latina Initiative, National Latina Institute for Reproductive Health, California Latinas for Reproductive Justice, and Legacy LA.<sup>46</sup> Focus groups with Latina/o teens, conducted through NGO partners, ensured realistic character portrayals and authentic dialogues.<sup>47</sup> Further, certain solutions for Latina teen pregnancy prevention were incorporated from an existing positive deviance inquiry.<sup>48</sup> The result: Since 2013, *ELH* has been consistently rated as a top show on Hulu, helping to draw 1 million unique visitors each month to its Hulu Latino page.<sup>38,44</sup> In 2015, *ELH* received 3 Daytime Emmy Award nominations in the category of “Outstanding New Approaches to Drama Series.”<sup>49</sup>

## *ELH* PROGRAM EVALUATION

### Research design

Program evaluation of edutainment programs in the 1980s and 1990s relied primarily on audience surveys. In recent decades, methodological pluralism is evident,<sup>50</sup> including more studies that employ experimental design to assess the effect of various narrative persuasion mechanisms.<sup>37,51</sup> Telephone hotlines have tracked viewer response post-exposure to an edutainment program.<sup>52</sup> Participant observation and in-depth interviews have provided deeper insights into the viewer’s experience.<sup>50</sup>

We adopted a mixed-method approach to evaluate *ELH Season 1*. The 3 primary methods were: (1) analytics tracking to assess audience reach, which monitored web traffic to the *ELH* website and to NGO partners' websites and widgets; (2) a viewer survey to assess narrative engagement and intended outcomes; and (3) a lab experiment with non-viewers of *ELH* to compare the effect of transmedia edutainment with other forms of narrative presentation. These are detailed in the following sections.

Complementary methods included: social network analysis and content analysis to understand the social dynamics, message framing, and user generated content around *ELH's* social media presence; participant observation and in-depth interviews with young Latino couples to reveal *ELH's* influence on their sexual decision-making. Preliminary results of these analyses are reported elsewhere.<sup>53-55</sup>

## Methods

**Analytics Tracking.** Anonymous and unobtrusive tracking data were collected through Google Analytics from May 2013 to January 2014 to capture *ELH* audience reach during the pre-program publicity and premier of *Season 1* and after it ended. Number of visitors, pageviews, average duration, and geographic location were recorded. GIS software generated spatial-temporal dynamic visualizations of the geographic diffusion of *ELH* website visitors over time.<sup>56</sup> Two NGO partners (Planned Parenthood and StayTeen.org) independently monitored and shared statistics of their website traffic and health service widgets on the *ELH* website.

**Viewer Survey.** An online survey was embedded on the *ELH* website and promoted on social media with custom incentives. Between August and September, 2013, 202 viewers who watched at least 20 of the 24 *ELH* episodes completed the survey,

including 110 Latina females who were 23 years old or younger—the program’s primary target audience (Table 1). Some 55% of those watched the entire series more than once and 87% viewed transmedia extensions. They answered close and open-ended questions about their impressions of the program, their engagement with its narrative elements, their interpersonal discussions about the show, and their knowledge, attitudes, and behavioral intentions related to sexual and reproductive health. Measures of audience experience were derived from established scales of transportation, identification, and narrative engagement (Table 2), and health-related outcome measures were adapted from the 2013 CDC Youth Risk Behavior Survey.<sup>26,28,30,37,57</sup>

Lab Experiment. A 2 (non-dramatic vs. dramatic narratives) X 3 (text vs. multimedia vs. transmedia) partial factorial design was used to test the effect of different storytelling formats on *ELH*'s target audience. A priori power analysis with the alpha level set at .05, power=.80, a medium effect size ( $F=.25$ ) for 5 groups and 3 repeated measures suggested a sample size of at least 14 participants in each condition. After screening 1,379 students at the University of Texas at El Paso, 309 met our inclusion criteria: female, age 18-28 ( $M=20.74$ ,  $SD=2.39$ ), Latina, with sufficient English proficiency, and non-viewer of *ELH*, *Degrassi*, or *16 & Pregnant*. Of the 309, 136 completed the study. They were randomly assigned to 1 of the following conditions. Condition 1 ( $n=30$ ) was a true control group without any intervention. Condition 2 ( $n=21$ ) was a non-dramatic text version of *ELH* presented as a newspaper story. Condition 3 ( $n=21$ ) was a dramatic text version, presented as an *ELH* script. Condition 4 ( $n=32$ ) was an online drama, presented as an abbreviated version of *ELH* Hulu series. Condition 5 ( $n=32$ ) was a transmedia version, presented as the online drama along with

selected transmedia extensions. The content was carefully selected according to the program's objectives and the messages were identical across all experimental conditions. Repeated measures of narrative engagement, knowledge (correct condom use, birth control pills, emergency contraception), attitudes (sex education, women's rights to choose, importance of HIV/STD testing, importance of sex communication), and behavior (protection during last sex intercourse, sex communication) occurred at baseline/T1, posttest/T2, and 2-week follow-up/T3. Data were collected from June to August 2014 with gift card rewards. Mixed ANOVA models were used to test the effect of stimuli in different conditions over time in SPSS.

## **Results**

**Analytics Tracking.** During the 9 months of tracking (most of it post *Season 1*), the *ELH* website attracted 215,964 visits from 123,728 unique visitors, with 870,684 pageviews and an average of 9.2 minutes per viewing session. About 57% were new visitors and 43% were returning visitors. Interestingly, even after *Season 1* ended, the *ELH* website still attracted 36,935 new visitors and 34,784 returning visitors in 136,251 viewing sessions, with 535,124 pageviews and an average of 12.0 minutes per viewing session. The resources page had 5,254 pageviews with information and hyperlinks to NGO partners. Planned Parenthood reported that during *Season 1*, 22% of their total widget visits ( $n = 26,414$ ) were accessed through the *ELH* website; in the 6 weeks thereafter, they had 30,868 widget visits accessed through the *ELH* website, including 52% new visits; and 4,795 direct *ELH* referrals to the Planned Parenthood website, including 72% new visits. Stayteen.org reported that the *ELH* premier day generated a notable spike in traffic to their website with almost 4,000 visits, more than double the

traffic on a typical day. About half of these visits were from direct traffic with users typing in the URL. In the first month Stayteen.org had about 566,000 visits, 11% higher than a comparable time period, and there was a 53% increase in direct traffic.

Analyses of GIS data indicated that *ELH* reached an audience across all 50 states and the District of Columbia.<sup>58</sup> Most visitors were located in states with the high Latina/o population and the highest rates of teen pregnancy (CA, TX, FL, NY, IL, AZ, and NJ).<sup>1,59</sup> Visitors from California accounted for 46% of the total traffic. Within California, 31% of the web traffic came from Los Angeles and 47% of the visitors came from cities with both high Latina/o population and high poverty rates. Although *ELH* was primarily developed for the English-speaking Latina/o youth population, 10,398 visitors hailed from another 163 countries, including 20 countries in Latin America.<sup>60</sup>

Viewer Survey. Participants gave *ELH* 5-star ratings on its story appeal, its production quality, their enjoyment of the drama series and its transmedia extensions, and their desire for more shows like *ELH* (Table 2). Audience involvement with *ELH* was evident in their undivided attention to the show, their clear understanding of its narrative, their immersion and felt presence in the story, their perception of the characters' realism, their constant cognitive processing of the show's elements, and their high degree of emotional engagement (Table 2). Participants exhibited strong identification with the main *ELH* characters. The most liked characters were those who demonstrated positive attitudes and behaviors; the least liked characters embodied violence, abuse, and irresponsibility (Table 2). All participants considered themselves *ELH* fans, and most were active on social media by way of liking, commenting, sharing, retweeting, and hashtagging *ELH* posts. Some 19% of the participants represented active endorsers of

*ELH*, 25% were disseminators, and 53% were advocates. Participants in the target sample reported discussing *ELH* on social media with their friends (84%), siblings (66%), parents (31%), and relatives (26%). Further, 80% engaged in face-to-face discussions about *ELH*, 69% did so via SMS, and 46% by phone.

Half of the participants reported learning at least 1 out of 10 facts about correct condom use that they did not know, and 36% reported learning at least 1 out of 7 facts about birth control pills and emergency contraception. When it came to attitudes and behavioral intentions about sexual responsibility, 95% agreed that “it doesn’t matter if you are a girl or a guy, you should take your own responsibility for birth control,” 98% said they were likely to use condoms correctly from now on, and 91% said they were likely to use condoms during sex every time. When it came to unprotected sex, 86% said they were likely to adopt emergency contraception and 93% said they were likely to recommend emergency contraception to someone they know. Almost all participants were aware of testing services for STIs (91%), HIV (90%), and pregnancy (100%) although most had not been tested (69%, 72%, and 70%, respectively). After watching *ELH*, willingness to be tested for STIs, HIV, and pregnancy was higher (96%, 96%, and 95%, respectively) as also the resolve to recommend testing to others (99%, 99%, and 100%, respectively). Most participants in the target sample knew that social services existed for pregnant teens (84%), child adoption (91%), and abortion (86%), but not many knew where to go for help (40%, 41%, and 36%, respectively). After watching *ELH*, a majority of them said they were more likely to recommend these services (93%, 89%, and 75%, respectively). Moreover, 48% of the participants visited the *ELH* resources page, and of those 100% found the information to be helpful, and 81% shared

with others. A participant's comment in the open-ended questions provides an excellent summary: *"East Los High changed my life a lot because it was so realistic...I learned a lot of things that my sex-ed class didn't talk to us about such as abortion and other options. It taught me that I have choices and responsibilities."*

Lab Experiment. Participants in the experimental conditions had higher transportation and character identification, although the transmedia condition (C5) was not significantly better except for identification with Jacob. This may be due to the substantial abbreviation of the original drama series and transmedia content in C5. When assessing knowledge of correct condom use, mixed ANOVA indicated a significant main effect of time,  $F(2/262)=15.15$ ,  $P<.001$ , partial  $\eta^2=.104$ , suggesting participants' knowledge did change over time. Pairwise comparisons showed a significant knowledge gain about correct condom use from T1 to T2 ( $P<.001$ ) and from T1 to T3 ( $P=.007$ ), indicating knowledge gain; but not from T2 to T3 ( $P=.062$ ), indicating retention of the knowledge gain. There was also a significant main effect of condition,  $F(4/131)=4.62$ ,  $P=.002$ , partial  $\eta^2=.124$ , suggesting some conditions yielded better outcomes than others. Post-Hoc tests found no significant differences between the pairs of C1, C2, C3, and C4; but C5 was significantly higher, suggesting the positive effect of transmedia storytelling over and above all other formats tested. Moreover, there was a significant interaction effect,  $F(8/262)=3.74$ ,  $P<.001$ , partial  $\eta^2=.103$ , suggesting that C5 trumped other conditions and achieved significant knowledge gain about correct condom use from baseline to posttest and sustained it till the 2 week follow-up (Figure 2).<sup>61</sup>

An upward trend of knowledge about birth control pills and emergency contraception were evident with higher scores towards C5, even though the differences



were not statistically significant. All attitude measures were high across conditions and over time, showing a stable and positive tendency. Behavior results of using protection during last sex intercourse among sexually active participants were not significant due to small sub-sample size. Sex-related communication with family, friends, and health professionals increased over time for C4 and C5, even if it was not statistically significant. After being exposed to *ELH*, 30% of the participants in the experimental conditions searched online for more, 30% talked to people about the show, 6% watched full episodes, and 1% of active Facebook users and 7% of active Twitter users started following *ELH*. As one would expect, participants in the lab experiment displayed less enthusiasm about *ELH* relative to the self-selected heavy viewers who participated in the survey.

## **Discussion**

The *ELH* transmedia edutainment intervention and our evaluation findings hold significant implications for scholars and practitioners of health promotion and education, specifically for the sexual and reproductive health of Latina/o (or minority) youth. Digital health is a critical area for public health promotion and education among youth and minority groups.<sup>62</sup> *ELH* represents the first culture-centric intervention that was purposefully designed to use transmedia edutainment to promote sexual and reproductive health, especially among Latina teenage girls and young women. The program development and evaluation were informed by theories of narrative persuasion and realized through collaborative partnerships between Hollywood-based independent producers, national/regional/local NGOs, and edutainment researchers. Summative research on *ELH Season 1* focused on audience reach, narrative engagement, and

intervention impact, using primarily analytics tracking, viewer survey, and lab experiment.

Major Findings and Implications. Viewership and web traffic to the program website suggested that the audience responded to *ELH* with great enthusiasm. In addition to the millions of viewers who watched *ELH* on Hulu, hundreds of thousands visited the *ELH* website to access full episodes, transmedia extensions, and other resources. Tens of thousands of visits occurred after *Season 1* ended. The trend over 9 months indicated that viewers were spending more time on the *ELH* website and almost half returned for multiple visits, showing the potential of transmedia edutainment for creating a sustainable platform for large-scale, longer-term audience engagement. Moreover, the *ELH* website served as a portal that drove viewers to additional health and social services via embedded widgets and referral to NGO partners' websites. These tight connections between the intervention exposures and an infrastructure for follow-up actions (e.g., personalized health information seeking) can greatly boost the efficacy for behavior change. Further, *ELH* was widely popular across the United States and around the world, reaching geographic areas with the highest Latino populations, teen pregnancy rates, and poverty rates. This suggests that culturally-sensitive interventions can help address, and even reduce, disparities in minority groups.

The viewer survey offered a snapshot from 202 *ELH* fans, who were predominantly young Latina females with low socioeconomic status, hence at risk for teen pregnancy. Their high ratings of the program and their fervent desire for more such programs suggests that the transmedia edutainment approach was effectively implemented in *ELH*. Viewers consistently demonstrated high levels of narrative

engagement, carefully attended to the show, understood the nuances of characters and their stories, felt immersed in the story world of *ELH*, related content to their real life experiences, actively reflected on the plotlines, and were emotionally engaged. Further, among the target audience group of Latina females, *ELH* spurred interpersonal discussions. They talked to their friends, siblings, parents, and relatives about *ELH* face-to-face and also via social media, SMS, and phone calls. They reported high level of awareness of various health services for testing and assistance to pregnant teens, but somewhat lower levels of actual testing behavior, or knowledge about where to seek help. After watching *ELH*, they indicated learning new information (correct condom use, birth control pills, and emergency contraception), displayed higher levels of behavioral intentions (using and recommending testing and pregnancy services), and appreciation for the comprehensive resources on the *ELH* website. Overall, the survey results suggested that *ELH* resonated well with its target audience; they perceived the program to be compelling, educational, and transformative. Their enthusiasm suggests that narrative-based transmedia edutainment interventions like *ELH* can cultivate a fan base for deeper learning, lasting engagement, and broader social change.

The lab experiment added evidence of the *ELH* effects on 136 non-viewers who fit the characteristics of its target audience and were randomly assigned to 1 of the 5 conditions: C1/control group, C2/non-dramatic text, C3/dramatic text, C4/online drama, and C5/transmedia. Although the messages embedded in the stimuli were identical, the results varied. There were encouraging positive trends over time and tendencies showing advantages of transmedia; but most were not statistically significant, which warrant future investigation. However, one revealing result was with the knowledge of correct

condom use, where transmedia yielded significantly better outcomes than other conditions overtime. This may have benefited from the extended scene of Maya's conversation with a health counselor about condom use that was one of the selected transmedia extensions in C5. This suggests that even though the message of promoting condom use for safe sex and preventing STIs and unplanned pregnancies is the same across all experimental conditions, using transmedia to highlight critical and accurate information as incorporated in the dialogue with a main character can give the intervention a turbocharged boost. Among the non-viewers, 30% reported searching information and discussing *ELH* after their participation in the experiment, although few watched full episodes or started following *ELH* on social media. It seems that the self-selection among *ELH* fans can make a difference in how they interact with the content and future interventions should be mindful about the match between the edutainment themes and presentation styles with the characteristics, motivations, interests, and media habits of potential target audience.

In sum, the changing demographics and consumer markets require public health interventions to be adaptive and versatile in order to achieve broader reach, deeper engagement, and more positive and sustainable outcomes. *ELH* is exemplary in that it is rewriting what is programmatically possible in the media landscape in the 21<sup>st</sup> century. The development and evaluation of *ELH Season 1* demonstrated that culturally-sensitive transmedia edutainment represents an innovative and promising approach to health promotion among minority populations like young Latina/o Americans.

Limitations and Future Directions. Granted the merits of mixed-methods program evaluation for *ELH Season 1*, there exist several limitations to our work. First, all of the

analytics tracking data were aggregated; hence no individual demographic information or actual health seeking behavior could be directly attributed to the program. In the future, more advanced analytics tools and features can be designed and used in collaboration with NGO partners to provide more granular digital data points at the personal level while respecting individual privacy. Second, given time and financial constraints, we were only able to collect post-exposure survey data from a small sample of viewers and conduct a lab experiment with limited number of non-viewers. Future research can benefit from large-scale randomized field studies to compare the intervention experience and effect between viewers and non-viewer, Latinos and other racial/ethnic groups, younger and older generations over a longer period of time.<sup>37,63,64</sup> Last but not least, the primary target audience of *ELH* were young Latina females who enjoy watching dramas streamed online. We acknowledge the important roles that males and parents play in the communication, decision-making, and practice of sexual and reproductive health. Although these were addressed to some degree in *ELH* programming, they warrant separate research investigations beyond the scope of the current project. We conclude that pioneering transmedia edutainment interventions such as *ELH* hold tremendous promise for health promoters and educators, and more rigorous research design and empirical testing with future interventions are needed to validate this further.

**About the Authors**

Hua Wang is with the Department of Communication and the Department of Community Health and Health Behavior at the University at Buffalo, The State University of New York. Arvind Singhal is with the Department of Communication at the University of Texas at El Paso.

**Corresponding Author Contact Information**

Correspondence should be sent to Hua Wang, 359 Baldy Hall, Department of Communication, University at Buffalo, Buffalo, NY 14260. Phone: 716-645-1501. Email: hwang23@buffalo.edu

**Acceptance Date:**

January 7, 2016

**Contributor Statement**

Hua Wang and Arvind Singhal contributed equally to the project conceptualization. Hua Wang led research design, primary data collection, analysis, and writing of this article. Arvind Singhal offered expert consultation, guided project development, facilitated collaborators' communication, and edited all versions of the manuscript.

**Acknowledgements**

This research project was supported by a grant from the Population Media Center, Shelburne, Vermont ([www.populationmedia.org](http://www.populationmedia.org)). We deeply appreciate the help from the *East Los High* production team at Wise Entertainment, our NGO partners (especially Planned Parenthood Federation of America and Stayteen.org), and members of our research team: Carliene Quist, Anu Sachdev, Weiai Xu, Gregory D. Saxton, Michael Reinti Jr., Susan Kum, Gabriel A. Lira, Dana Himoff, Kristin Maki, Claudia Boyd, and Georges Khalil.

**Note.** All labels, whether Chicana, Mexican, Mexican-American, or Hispanic carry their own baggage, history, and spatial-cultural significance. We use the label Latino with the knowledge and humility that it is a broad term signifying the sharing of one common attribute: origin in a Latin American country. The content is solely the responsibility of the authors and does not necessarily represent the views of the Population Media Center.

**Human Participant Protection**

For any primary data collection that involved human research subjects, IRB approvals were obtained in advance and monitored during the project.

## References

1. Brown A, Lopez MH. *Mapping the Latino population, by state, country and city*. Washington, DC: Pew Research Center's Hispanic Trends Project. Available at: <http://www.pewresearch.org/hispanic> Published August 29, 2013. Accessed January 23, 2015.
2. U.S. Census Bureau. Facts for Features: Hispanic Heritage Month 2014: Sept.15-Oct.15. Available at: <http://www.census.gov/newsroom/facts-for-features/2014/cb14-ff22.html>. Published September 8, 2014. Accessed August 20, 2015.
3. The National Campaign to Prevent Teen and Unplanned Pregnancy. *Fact Sheet: Teen Pregnancy and Childbearing Among Latina Teens*. Available at: [https://thenationalcampaign.org/sites/default/files/resource-primary-download/fast\\_facts\\_-\\_teen\\_pregnancy\\_and\\_childbearing\\_among\\_latino\\_teens\\_july\\_2015.pdf](https://thenationalcampaign.org/sites/default/files/resource-primary-download/fast_facts_-_teen_pregnancy_and_childbearing_among_latino_teens_july_2015.pdf). Published July 2015. Accessed August 20, 2015.
4. Goesling B, Colman S, Trenholm C, Terzian M, Mooer K. Programs to reduce teen pregnancy, sexually transmitted infections, and associated sexual risk behaviors: A systematic review. *J Adolesc Health*. 2014;54:499-507.
5. Buhi ER, Marhefka SL, Wheldon CW, Tilley DL, Klinkenberger N, Lescano c, Hoban MT. Sexual and reproductive health disparities in a national sample of Hispanic and non-Hispanic white U.S. college students. *J Health Dispar Res Pract*. 2014;7(1):19-36.
6. Maness SB, Buhi ER. A systematic review of pregnancy prevention programs for minority youth in the U.S.: A critical analysis and recommendations for improvement. *J Health Dispar Res Pract*. 2103;6(2):91-106.
7. The National Campaign to Prevent Teen and Unplanned Pregnancy. *Fast Facts: Latino teens' sexual behavior and contraceptive use: Data from the youth risk behavior survey, 2013*. Available at: <https://thenationalcampaign.org/sites/default/files/resource-primary-download/fast-facts-hispanic-teen-sexual-behavior-and-contraceptive-use-yrbs-2013.aug2014.pdf>. Published August 2014. Accessed August 20, 2015.
8. Cardoza VJ, Documét PI, Fryer CS, Gold MA, Butler III J. Sexual health behavior interventions for U.S. Latino adolescents: A systematic review of the literature. *J Pediatr Adolesc Gynecol*. 2012; 25:136-149.
9. Bouris A, Guilamo-Ramos V, Cherry K, Dittus P, Michael S, Gloppen K. Preventing rapid repeat births among Latina adolescents: The role of Parents. *Am J Public Health*. 2012;102:1842-1847.
10. Guilamo-Ramos V, Goldberg V, Lee JJ, McCarthy K, Leavitt S. Latino adolescent reproductive and sexual health behaviors and outcomes: Research informed guidance for agency-based practitioners. *Clin Soc Work J*. 2012;40:144-156.

11. Office of Adolescent Health. *Open grants*. 2010. <http://www.hhs.gov/ash/oah/grants/open-grants.html>
12. Larkey LK, Hecht M. A model of effects of narrative as culture-centric health promotion. *J Health Commun*. 2010;15(2):114-135.
13. Singhal A, Rogers EM. *Entertainment-education: A communication strategy for social change*. New York: Routledge;1999.
14. Singhal A, Cody MJ, Rogers EM, Sabido M. ed. *Entertainment-education and social change: History, research, and practice*. New York: Routledge;2004.
15. Singhal A, Wang H, Rogers EM. The entertainment-education communication strategy in communication campaigns. In Rice RE, Atkins C, ed. *Public communication campaigns*. 4<sup>th</sup> ed. Beverley Hills, CA: Sage;2013:321-334.
16. Wang H, Singhal A. Entertainment-education through digital games. In Ritterfeld R, Cody MJ, Vorderer P, ed. *Serious games: Mechanism and effects*. New York, NY: Routledge; 2009: 271-292.
17. Sherry JL. Media saturation and entertainment-education. *Commun Theory*, 2002; 12: 206-224.
18. Kunkel D, Eyal K, Finnerty K, Biely E, Donnerstein E. *Sex on TV 4*. Menlo Park, CA: Henry J. Kaiser Family Foundation; 2005.
19. Jenkins H. Transmedia storytelling 101 [Web log message]. [http://henryjenkins.org/2007/03/transmedia\\_storytelling\\_101.html](http://henryjenkins.org/2007/03/transmedia_storytelling_101.html) Published March 22, 2007. Accessed March 4, 2013
20. Scolari CA. Transmedia storytelling: Implicit consumers, narrative worlds, and branding in contemporary media production. *Int J Commun*. 2009; 3: 586-606.
21. Singhal A. Wholesome entertainment-education transmedia storytelling. *Yojana*. 2013;July:9-15.
22. Gomez J. *Dare to change* [video file]. <http://tedxtransmedia.com/2010/> Published October 18, 2010. Accessed March 4, 2013.
23. Jenkins H. *Convergence culture: Where old & new media collide*. New York, NY: New York University Press; 2006.
24. Slater MD. Involvement as goal-directed, strategic processing: Extending the elaboration likelihood model. In Dillard JP, Pfau M. eds. *The persuasion handbook: Developments in theory and practice*. Thousand Oaks, CA: Sage;2002:175-194.



25. Slater MD, Rouner D. Entertainment-education and elaboration likelihood: Understanding the processing of narrative persuasion. *Commun Theory*. 2002;12:173-191.
26. Moyer-Gusé E. Toward a theory of entertainment persuasion: Explaining the persuasive effects of entertainment-education messages. *Commun Theory*. 2008;18:407-425.
27. Bandura A. Social cognitive theory for personal and social change by enabling media. In Singhal A, Cody MJ, Rogers EM, Sabido M, ed. *Entertainment-Education and Social Change: History, Research, and Practice*. Mahwah, NJ: Erlbaum;2004:75-96.
28. Green MC, Brock TC. The role of transportation in the persuasiveness of public narratives. *J Pers Soc Psychol*. 2000;79:701-721.
29. Murphy ST, Frank LB, Moran MB, Patnoe-Woodley P. Involved, transported, or emotional? Exploring the determinants of change in knowledge, attitudes, and behavior in entertainment-education. *J Commun*. 2011;61:407-431.
30. Busselle R, Bilandzic H. Measuring narrative engagement. *Media Psychol*. 2009;12:321-347.
31. Lee H, Fawcett J, DeMarco R. Storytelling/narrative theory to address health communication with minority population. *Appl Nurs Res*. 2015;OnlineFirst, doi: 10.1016/j.apnr.2015.09.004
32. Shen F, Sheer VC, Li R. Impact of narratives on persuasion in health communication: A meta-analysis. *J Advertising*. 2015;44(2):105-113.
33. van Laer T, de Ruyter K, Visconti LM, Wetzels M. The extended transportation-imagery model: A meta-analysis of the antecedents and consequences of consumers' narrative transportation. *J Consum Res*. 2014;40:797-817.
34. Zebregs S, van den Putte B, Neijens P, de Graaf A. The differential impact of statistical and narrative evidence on beliefs, attitude, and intention: A meta-analysis. *Health Commun*. 2015;30:282-289.
35. Houston TK, Allison JJ, Sussman M, Horn W, Holt CL, Trobaugh J, Salas M, Pisu M, Cuffee YL, Larkin D, Person S, Barton B, Kiefe CI, Hullett S. Culturally appropriate storytelling to improve blood pressure: A randomized trial. *Ann Intern Med*. 2011;154:77-84.
36. Larkey LK, Lopez AM, Minnal A, Gonzalez J. Storytelling for promoting colorectal cancer screening among underserved Latina women: A randomized pilot study. *Cancer Cult Lit*. 2009;16(1):79-87.

37. Murphy ST, Frank LB, Chatterjee JS, Moran MB, Zhao N, de Herrera PA, Baezconde-Garbanati LA. Comparing the relative efficacy of narrative vs nonnarrative health messages in reducing health disparities using a randomized trial. *Am J Public Health*. Published online ahead of print April 23, 2015:e1–e7. doi:10.2105/AJPH.2014.302332
38. Castro T. “East Los High” on Hulu is first English language show with all Latino cast. *Huffington Post*, June 6, 2013. Available at [http://www.huffingtonpost.com/2013/06/06/east-los-high-hulu\\_n\\_3395762.html](http://www.huffingtonpost.com/2013/06/06/east-los-high-hulu_n_3395762.html) Accessed on November 4, 2014.
39. Fritz B. Hollywood takes Spanish lessons as Latinos stream to the movies. *Wall Street Journal*. August 10-11, 2013:A1 and A10.
40. Fetto J. *Hispanics are mobile-dominant. Are you campaigns?* Experian Marketing Service. May 19, 2014. Available at <http://www.experian.com/blogs/marketing-forward/2014/05/19/hispanics-are-mobile-dominant-are-your-campaigns/>
41. Lopez MH, Gonzalez-Barrera A, Patten E. *Closing the digital divide: Latinos and technology adoption*. Washington, DC: Pew Research Center’s Hispanic Trends Project. Available at <http://www.pewhispanic.org> Published March 7, 2013. Accessed November 4, 2014.
42. Lopez MH, Livingstone G. *How young Latinos communicate with friends in the digital age*. Washington, DC: Pew Research Center’s Hispanic Trends Project. Available at <http://www.pewhispanic.org> Published July 28, 2010. Accessed November 4, 2014.
43. Razzetti G. Latinos and media usage revisited. Published in 2012. Available at <http://www.clickz.com/clickz/column/2134703/latinos-media-usage-revisited> Accessed on November 13, 2013.
44. Wise Entertainment. *About us*, 2015. Available at <http://www.wiseentertainment.com/about/>
45. Hulu. East Los High transmedia trailer, 2013. Available at <http://www.hulu.com/watch/502327#i1,p25,d1>
46. Wang H, Singhal A, Quist C. *East Los High: A Transmedia Entertainment-Education Program for Latino Teen Pregnancy Prevention Empowered by Community Partnerships*. April, 2014. Presented at the Kentucky Conference on Health Communication, Lexington, KY.
47. Del Barco M. East LA homegirl goes Hollywood. Published September 13, 2013. Available at <http://www.npr.org/sections/codeswitch/2013/09/13/218943510/east-la-homegirl-goes-hollywood> Accessed November 4, 2014.

48. Diaz A. *A positive deviance inquiry of communicative behaviors that influence the prevention of Hispanic teenage pregnancy*. Unpublished Master's Thesis, The University of Texas at El Paso, TX;2010.

49. The National Academy of Television Arts & Sciences. *The National Academy of Television Arts & Sciences announces the 42<sup>nd</sup> Annual Daytime Emmy® Award nominations*. [http://emmyonline.com/day\\_42nd\\_nominations](http://emmyonline.com/day_42nd_nominations) Published March 31, 2015. Accessed April 2, 2015.

50. Singhal A, Rogers EM. A theoretical agenda for entertainment-education. *Commun Theory*. 2002;12:117-135.

51. Moyer-Gusé M, Nabi RL. Comparing the effects of entertainment and education television programming on risky sexual behavior. *Health Commun*. 2011;26(5):416-426.

52. Kennedy MG, O'Leary A, Beck V, Pollard K, Simpson P. Increases in calls to the CDC National STD and AIDS hotline following AIDS-related episodes in a soap opera. *J Commun*. 2004;54(2):287–301.

53. Wang H, Xu W, Saxton GD. *Network structures for a better Twitter community*. September, 2014. Presented at the 2014 Social Media & Society International Conference, Toronto, Canada.

54. Wang H, Xu W, Saxton GD. *Cultivating a fan base on Facebook for public health promotion: The case of East Los High*, November, 2014. Presented at Medicine 2.0 International Conference, Maui, HI.

55. Sachdev A, Singhal A. *Where international, intranational, and development communication converge: Effects of East Los High, an entertainment-education web series, on sexual decision-making of young Latino/a couples*, in press. *J Dev Commun*.

56. Wang H, Rienti M Jr., Kum S. *Local stories, national concerns and global reach: East Los High for safe sex promotion and teen pregnancy prevention*. November, 2014. Presented at the 142<sup>nd</sup> American Public Health Association Annual Meeting & Expo, New Orleans, LA.

57. Center for Disease and Control. 2013 Youth Risk Behavior Surveillance Survey (YRBSS). Available at <http://www.cdc.gov/healthyyouth/data/yrbs/data.htm>

58. East Los High state level spatial-temporal dynamic visualization. Available at [https://www.dropbox.com/s/8ta3n9f0nd0lqrn/ELH\\_State\\_May\\_v1-iphonepod.mp4?dl=0](https://www.dropbox.com/s/8ta3n9f0nd0lqrn/ELH_State_May_v1-iphonepod.mp4?dl=0)

59. Kost K, Henshaw S. *U.S. Teenage Pregnancies, Births and Abortions, 2008: State Trends by Age, Race and Ethnicity*, Guttmacher Institute. Published March 1, 2013. Accessed February 14, 2014.

60. East Los High national level spatial-temporal dynamic visualization. Available at [https://www.dropbox.com/s/omdfly55h7mwo9q/ELH\\_World\\_4-14-14.mp4?dl=0](https://www.dropbox.com/s/omdfly55h7mwo9q/ELH_World_4-14-14.mp4?dl=0)
61. Valentine JC, Aloe AM, Lau TS. Life after NHST: How to describe your data without “p-ing” everywhere. *Basic appl soc psych*. 2015;Published online August 4, doi:10.1080/01973533.2015.1060240
62. Buhi, ER. Digital health and AJPH: The time has come! *Am J Public Health*. 2015; 105: 420. doi:10.2105/AJPH.2015.302585
63. Vaughan PW, Rogers EM, Singhal A, Swalehe RM. Entertainment-education and HIV/AIDS prevention: A field experiment in Tanzania. *J Health Commun*. 2000;5,81-100.
64. Jones R, Hoover DR, Lacroix LJ. A randomized controlled trial of soap opera videos streamed to smartphones to reduce risk of sexually transmitted human immunodeficiency virus (HIV) in young urban African American women. *Nursing Outlook*. 2013;61(4),205-215.

**Table 1—Characteristics of *East Los High* Viewer Survey Participants, United States, 2013**

| Characteristics          | Responses, Yes. (%)            |   |
|--------------------------|--------------------------------|---|
|                          | Total Sample ( <i>N</i> = 202) | Primary Target <sup>a</sup> ( <i>n</i> = 110) |
| Sex                      |                                |   |
| Female                   | 91                             | 100   |
| Ethnicity                |                                |   |
| Hispanic/Latino          | 78                             | 100   |
| Age                      |                                |   |
| 12-17                    | 25                             | 35  |
| 18-23                    | 50                             | 66  |
| 24-30                    | 15                             | 0   |
| 31-60                    | 10                             | 0   |
| Education                |                                |   |
| Elementary school        | 1                              | 2   |
| Middle school            | 10                             | 11  |
| High school              | 64                             | 72  |
| Bachelor's degree        | 20                             | 12  |
| Master's and beyond      | 5                              | 0   |
| Household annual income  |                                |   |
| < \$20,000               | 39                             | 43  |
| \$20,000-\$49,999        | 35                             | 43  |
| \$50,000-\$79,999        | 19                             | 7   |
| ≥\$80,000                | 7                              | 0   |
| Pregnant teen connection |                                |   |
| Self                     | 9                              | 5   |
| Mother                   | 21                             | 22  |
| Aunt                     | 15                             | 19  |
| Sister                   | 14                             | 12  |
| Cousin                   | 41                             | 48  |
| Niece                    | 4                              | 2   |
| Friend                   | 68                             | 76  |
| Acquaintance             | 35                             | 34  |

*Note.* <sup>a</sup>The primary target audience of *East Los High* is Latina teenage girls and young women because they are critical to the issues of safe sex and teen pregnancy and are also avid consumers of dramas and online video streaming.

**Table 2—East Los High Audience Narrative Engagement, United States, 2013**

| Item   | Total<br>Mean (SD) | Target<br>Mean (SD) |
|--|--------------------|---------------------|
| Audience program rating <sup>a</sup>           |                    |                     |
| (1) Storyline appeal                           | 4.68 (0.79)        | 4.61 (0.83)         |
| (2) Enjoyment of Hulu drama series             | 4.88 (0.45)        | 4.93 (0.26)         |
| (3) Enjoyment of transmedia extensions         | 4.56 (0.86)        | 4.58 (0.83)         |
| (4) Production quality                         | 4.74 (0.53)        | 4.73 (0.55)         |
| (5) Wanting more                               | 4.96 (0.23)        | 4.97 (0.17)         |
| Audience narrative engagement <sup>b</sup>     |                    |                     |
| (1) Attention focus                            | 1.34 (0.50)        | 1.35 (0.49)         |
| (2) Narrative understanding                    | 1.37 (0.56)        | 1.31 (0.49)         |
| (3) Narrative presence                         | 1.51 (0.67)        | 1.49 (0.68)         |
| (4) Perceived realism                          | 1.35 (0.51)        | 1.30 (0.48)         |
| (5) Cognitive processing                       | 1.42 (0.62)        | 1.42 (0.62)         |
| (6) Emotional engagement                       | 1.44 (0.62)        | 1.46 (0.67)         |
| Audience character identification <sup>c</sup> |                    |                     |
| (1) Feel like you know...                      |                    |                     |
| - Jacob  | 1.43 (0.70)        | 1.40 (0.70)         |
| - Jessie                                       | 1.57 (0.82)        | 1.48 (0.77)         |
| - Maya   | 1.45 (0.81)        | 1.53 (0.88)         |
| - Ceci   | 1.72 (0.94)        | 1.70 (1.04)         |
| - Vanessa                                      | 1.91 (1.05)        | 1.91 (1.12)         |
| - Abe (Ceci's abusive boyfriend)               | 3.14 (1.34)        | 3.19 (1.42)         |
| - Freddie (Vanessa trades sex for favor)       | 3.24 (1.33)        | 3.13 (1.31)         |
| - Ramon (Maya's rapist)                        | 3.09 (1.30)        | 2.98 (1.25)         |
| (2) You like...                                |                    |                     |
| - Jacob  | 1.31 (0.70)        | 1.22 (0.62)         |
| - Jessie                                       | 2.28 (1.40)        | 2.21 (1.44)         |
| - Maya   | 1.51 (0.99)        | 1.52 (1.00)         |
| - Ceci   | 1.55 (0.76)        | 1.51 (0.72)         |
| - Vanessa                                      | 2.73 (1.50)        | 2.62 (1.50)         |
| - Abe (Ceci's abusive boyfriend)               | 3.72 (1.43)        | 3.55 (1.51)         |
| - Freddie (Vanessa trades sex for favor)       | 3.40 (1.46)        | 3.25 (1.47)         |
| - Ramon (Maya's rapist)                        | 3.76 (1.40)        | 3.63 (1.45)         |

*Note:* <sup>a</sup> 1=poor; 5=excellent. <sup>b</sup> Items are based on Green and Brock (2000)<sup>28</sup> and Russelle and Bilandzic (2009)<sup>30</sup>. 1=strongly agree; 5=strongly disagree. <sup>c</sup> Items are based on Moyer-Guse<sup>26</sup> and Murphy et al.<sup>37</sup>

Figure 1– The rich tapestry of *East Los High*'s website, Season 1, 2013

**EAST LOS HIGH**

facebook twitter tumblr instagram

THE SIREN EAST LOS HIGH NEWSPAPER

WATCH NOW FULL EPISODES

Share 3808

HOME VIDEOS CAST PHOTOS MUSIC DANCE FASHION EAST LA SOCIAL RESOURCES

**WATCH THE WHOLE SCANDALOUS SERIES FOR FREE! (CLICK HERE!)**

FULL EPISODES

LATEST PHOTOS

THE SIREN NEWSPAPER

MEET THE CAST

PLANNED PARENTHOOD: THE CHECK

TWEETS FROM ELH

**NEED HELP FINDING A HEALTH CENTER?**

Enter your zip code below and click Search to get started.

what's your zip code?

**SEARCH**

StayTeen.org offers these health center locations for your convenience, but we don't get to visit each provider or health center, so we can't make any endorsements or recommendations. Please use your best judgment when making any health care decision.

StayTeen.org

RESOURCE LINKS

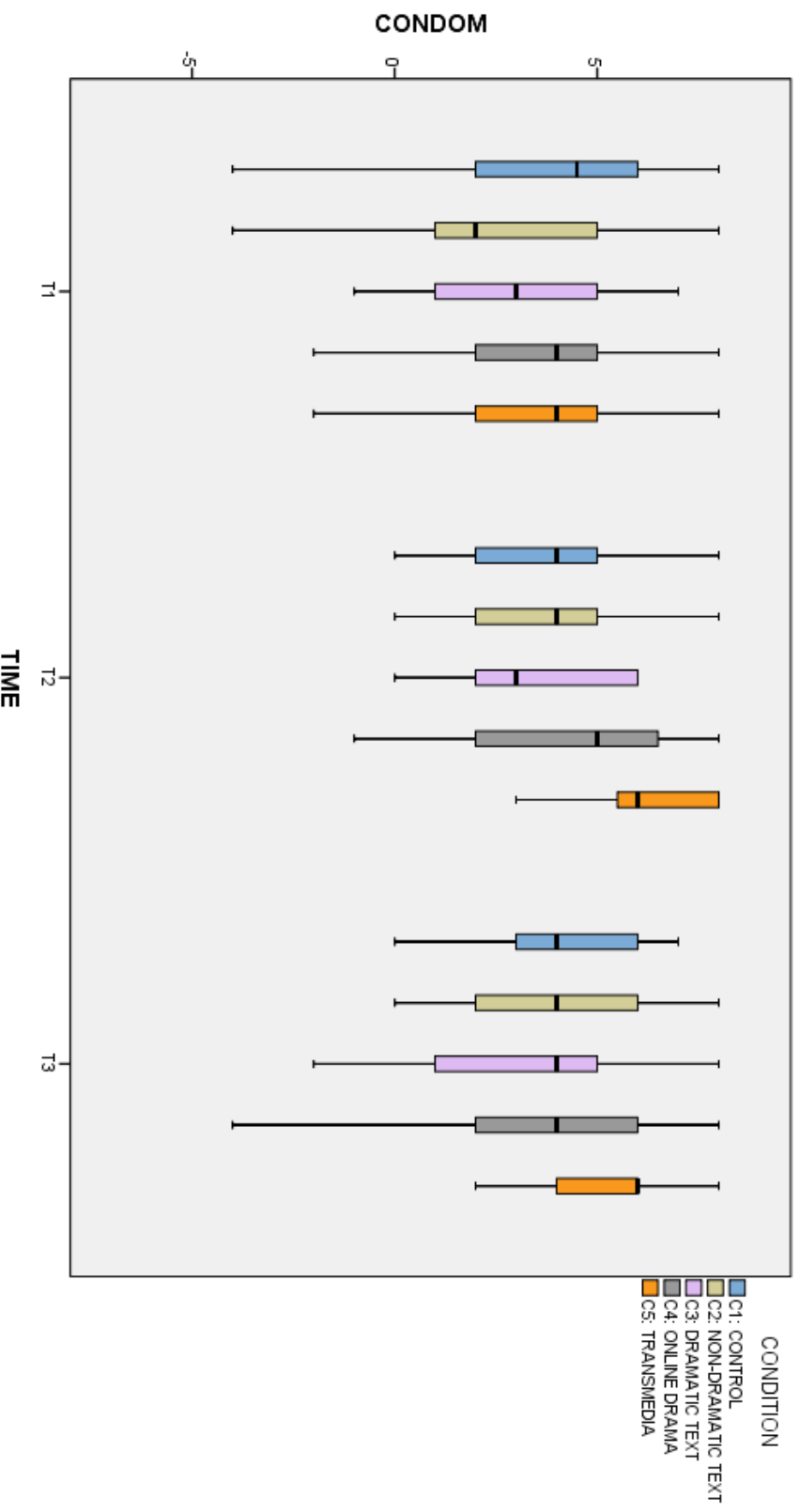
BIRTH CONTROL PREGNANCY/PARENTING ABORTION STDS/HIV ABUSE & VIOLENCE

SEXUAL RIGHTS LGBTQ YOUTH DEPRESSION BULLYING STAY IN SCHOOL

CALIFORNIA PUBLIC SERVICES BREAST CANCER PARENTS

Note. The *ELH* transmedia extensions included: extended scenes (top image), the Siren newspaper, Ask Paulie, Ceci's vlogs, Maya's recipes, dance tutorials, La Voz with Xavi, comic strips, and StayTeen PSAs. The *ELH* also has a comprehensive resources page with embedded health service widgets (bottom image).

**Figure 2-Clustered Boxplots of Knowledge about Correct Condom Use over time by condition, El Paso, Texas, 2014.**



*Note.* CONDOM is the sum of 8 items about correct condom use, with each correct answer coded as 1 and each incorrect answer coded as -1. The boxplots show the distributions of CONDOM knowledge scores for the 3 different time periods across all 5 conditions. Each box represents the interquartile range; the whiskers at the top and bottom of the box indicate the upper and lower quartile; and the middle line in each box represents the median. Descriptive  $U_3$  effect size statistics<sup>60</sup> indicated that at T2, 94% of participants in C5 had higher scores than those in C4, and 97% of participants in C5 had higher scores than those in C3, C2, and C1; at T3, 69% of participants in C5 had higher scores than those in C2, and 91% of participants in C5 had higher scores than those in C4, C3, and C1.