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Abstract

Entertainment-education represents an intriguing area of translational communication research for health promotion and social change that can potentially connect theoretical models and principles with practices in the creative industry, governmental and non-governmental organizations, as well as communities in need. In this chapter, we point out the gap between what works in the lab and what works in reality through two examples of recent entertainment-education collaborations: one in the United States and the other in India. In both cases, we discuss the difficulties we encountered when applying textbook clean research designs to population groups whom the entertainment-education programs aimed to serve. Most importantly, we share insights about strategic communication among project partners that are never taught in the textbook but ultimately helped us adapt during the implementation process to ensure quality program evaluation and beyond.

Mind the Gap! Confronting the Challenges of Translational Communication Research in Entertainment-Education

Hua Wang and Arvind Singhal

The term “translational research” refers to research that makes it possible to translate abstract concepts into real-life applications (Romeroy & Sanfilippo, 2015). In medicine, translational research often involves the process where “basic research” is conducted by scientists in the lab to test out new ideas; then it moves onto “clinical trials” with human subjects; and if successful, the result is disseminated through industry and institutions such as pharmacies and hospitals to change population-level practice (Rubio et al., 2010; Woolf, 2008). Translational research in the field of communication involves applying interpersonal and technology-mediated solutions to engage stakeholders from different sectors and disciplines,

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16 implementing innovative methods and measures, and contributing to
17 effective and sustainable efforts to improve people's quality of life (Kreps,
18 2020). The focus of this chapter, the entertainment-education (EE) strategy,
19 represents an intriguing area of translational communication research
20 with wide-ranging implications for theory and practice of health promotion
21 and social change.

22 Our pathway and purpose for this chapter are two-fold: (1) By chronicling
23 the historical and recent developments of EE, we emphasize why EE
24 researchers should not be shy of stepping out of their ivory towers to
25 actively engage the communities being served; and (2) by sharing our
26 experience with two EE projects, one in the United States and the other
27 in India, we illustrate the wide gap that exists between the ideals that typically
28 guide research design and the realities in the field. In so doing, we
29 distill the lessons learned about building deeply trusting and mutually
30 beneficial partnerships between researchers and other stakeholders; and
31 the advantage of adopting a multi-method "bicycle design" that is relatively
32 low cost, high yield, steadfast, and yet nimble enough to swiftly
33 adapt to project needs.

34 ENTERTAINMENT-EDUCATION AS AN EVOLVING FIELD

35 In the past five decades, EE has evolved from being a creative field-centered
36 approach aimed at addressing real-world problems to an established field of
37 scholarship and praxis in social and behavioral change communication (SBCC)
38 (SBCC Summit Report, 2018; Singhal, Wang, & Rogers, 2013; Storey & Sood,
39 2013).

40 *History of the Rise of Entertainment-Education*

41 EE gained currency by accident when a telenovela, *Simplemente María*
42 (*Simply María*), took Peru by storm from 1969 to 1971 and subsequently
43 swept across Central and South America (Singhal, Obregon, & Rogers,
44 1994). Its story revolved around the travails and triumphs of its protagonist,
45 *María*, a rural-urban migrant who worked as a maid during the day
46 and enrolled in adult literacy classes at night. She also developed seamstress
47 skills using a Singer sewing machine and, as the plot twisted and
48 turned, became a renowned fashion designer. *Simplemente María* attracted
49 record-breaking ratings in Peru—on average about 85%. Surprisingly, the
50 sale of Singer sewing machines skyrocketed as did enrollments in adult

literacy classes. Such phenomena occurred not just in Peru but in all countries of Central and South America where the telenovela was broadcast. What was supposed to be just another entertaining television serial on a commercial network turned out to be something with much wider social implications (Singhal & Rogers, 1999).

The *Simplemente María* fever sparked a moment of epiphany for Mexican television writer-producer-director, Miguel Sabido. Struck by the unprecedented audience success of *Simplemente María*, Sabido was convinced that mass-mediated dramatic storytelling had the potential to shape public discourses on important social issues and even change audience behavior. Sabido studied human communication theories in many disciplines: Eric Bentley's (1967) dramatic theory, Carl Jung's (1953, 1970) theory of archetypes, Paul MacLean's (1973) triune brain theory, and Albert Bandura's (1977, 1986) social learning/cognitive theory. Backed by an interdisciplinary conceptual foundation, Sabido actively began experimenting with social use of melodramatic serials on television. Through trials, evaluation research, and constant incorporation of learnings, he produced seven EE telenovelas between 1975 and 1982 to promote issues like adult literacy, family planning, and gender equality (Sabido, 2004). There was evidence to suggest that Sabido's telenovelas significantly boosted enrollments in adult literacy classes and led to increased adoption of condoms, pills, and other reproductive health services (Poindexter, 2004; Singhal & Rogers, 1999). And the method he developed to produce EE serial dramas began to be called the Sabido methodology.

Over the next couple of decades, EE and the Sabido methodology snowballed globally, inspiring the development of television soap operas such as *Hum Log (We People)* in India (Singhal & Rogers, 1988) and radio soap operas such as *Twende Na Wakati (Let's Go with the Times)* in Tanzania (Vaughan, Rogers, Singhal, & Swalche, 2000). The Sabido methodology was adopted and adapted far and wide in countries of Latin America, Asia, and Africa, championed mainly by the international non-profit, Population Communication International, and Johns Hopkins University's Center for Communication Programs (Singhal & Rogers, 1999). While early EE practice centered around serving communities in developing countries with reproductive health and HIV prevention messages (Singhal, Cody, Rogers, & Sabido, 2004), EE now tackles a wide range of complex social issues around the world (Sood, Riley, & Alarcon, 2017), such as domestic violence (Yue, Wang, & Singhal, 2019),

90 post-genocide group prejudice (Paluck, 2009), cancer prevention (Murphy
 91 et al., 2015), organ donation (Morgan, Movius, & Cody, 2009), and envi-
 92 ronmental sustainability (Reinermann, Lubjuhn, Bouman, & Singhal,
 93 2014). With Sabido's trials and experiments with EE drama serials in
 94 Mexico, and also their global adoption and adaptation, EE represents a
 95 worthy case of translational communication research.

96 *Keeping with the Times: Changing Definition*
 97 *of Entertainment-Education*


98 In its early years, the primary spread of EE occurred through entertain-
 99 ment genres in radio and television. EE practitioners mainly worked with
 100 government agencies, non-governmental organizations, and creative pro-
 101 fessionals to develop prosocial drama serials. In that context, EE was
 102 defined as “the process of purposely designing and implementing a media
 103 message to both entertain and educate, in order to increase audience
 104 knowledge about an educational issue, create favorable attitudes, and
 105 change overt behavior” (Singhal & Rogers, 1999, p. 9; also see Singhal
 106 et al., 2004, p. 5). The focus was to find the “sweet spot” that helped bal-
 107 ance the entertaining and the educational elements in the story so the
 108 audience members would relate to the plots, fall in love with the charac-
 109 ters, not feel they were being preached at, and could see new possibilities
 110 to enhance their lives.

111 At the turn of this century, with the internet becoming more accessible
 112 and popular, storytelling on web-based platforms with immersive environ-
 113 ments rose rapidly. EE evolved with the capacities and possibilities that
 114 accompanied digital and interactive technologies. EE scholars also called
 115 for more theoretical development and diversity in EE research (Singhal &
 116 Rogers, 2002). In 2009, we proposed a reformulated definition to empha-
 117 size that EE is “a theory-based communication strategy for purposefully
 118 embedding educational and social issues in the creation, production, pro-
 119 cessing, and dissemination process of an entertainment program, in order
 120 to achieve desired individual, community, institutional, and societal
 121 changes among the intended media user populations” (Wang & Singhal,
 122 2009, pp. 272–273). This reformulation of the definition was necessary
 123 for at least three reasons: (1) EE programs expanded beyond radio and
 124 television dramatic serials to include music videos, cartoons, comic books,
 125 web series, and digital games; (2) EE initiatives spread from developing
 126 countries to include vulnerable audience groups in industrialized

developing countries and media saturated markets; and (3) EE research broadened its conceptual and methodological scope (Singhal, 2013; Singhal, Cody, et al., 2004; Singhal, Wang, et al., 2013; Wang, Choi, Wu, & DeMarle, 2018; Wang & Singhal, 2016).

Through the lens of translational communication research, we now propose an updated definition of EE: Entertainment-education is a social and behavioral change communication (SBCC) strategy that leverages the power of storytelling in entertainment and wisdom from theories in different disciplines—with deliberate intention and collaborative efforts throughout the process of content production, program implementation, monitoring, and evaluation—to address critical issues in the real world and create enabling conditions for desirable and sustainable change across micro-, meso-, and macro-levels. Specifically, the following points deserve emphasis:

1. EE is an SBCC strategy that has been applied and embraced by global, national, and local change makers to serve the interests of underserved communities.
2. EE is characterized by deliberate intention and requires sustained creative efforts to seamlessly incorporate educational content with enabling features into the entertainment programming.
3. EE practice is situated in and derived from theories in human communication and other social science disciplines; it will continue to widen and deepen and become more nuanced with time.
4. EE purposely tackles real-life complex social problems and should engage key field-based stakeholders to foster trusting partnerships to enable desirable and sustainable change at the individual, community, institutional, and societal level.

In essence, EE is an instrumental and field-based practice, drawn upon theories from different disciplines (Wang & Singhal, *in press*). diverse applications of EE occur across geographic regions, cultural contexts, and communication platforms, translational researchers need to recognize the following.

First, often scholars and practitioners loosely appropriate the term EE to refer to any entertainment program that happens to address a health or social issue. Despite the noble intentions of intervention designers and media producers, such programs are *not* EE. They are not created with a deep understanding of the theoretical foundation of EE, nor do they

164 employ theory-based principles to interweave educational messaging with
 165 the dramatic storytelling, the audience/user experience, and/or the pro-
 166 gram evaluation.

167 Furthermore, as EE converges with experimental research in narrative
 168 persuasion, translational scholars should fiercely guard against method-
 169 ological partisanship that view textbook lab experiments and inferential
 170 statistics as the gold standard. Much of the empirical research on narrative
 171 persuasion has been conducted with a uni-method approach and a sample
 172 bias characterized as “WEIRD,” that is, Western, educated, industrialized,
 173 rich, and democratic (Eden et al., 2014, p. 514). These WEIRD biases
 174 become insidious when scholars fail to acknowledge the fundamental limi-
 175 tation of their research—the lack of ecological validity.

176 In contrast to lab experiments on narrative persuasion, EE is applied
 177 and translational by nature. Its very existence and evolution reside in its
 178 mission to purposely address the unmet needs of societal underdogs and
 179 tackle complex social problems in real-world settings. Recognizing this
 180 salient aspect of EE, that is, its purposive alignment between theory and
 181 practice, is vitally important.

182 GAPS IN EXEMPLARY ENTERTAINMENT-EDUCATION PROJECTS

183 We discuss two recent EE projects—*East Los High* in the United States
 184 and *Main Kuch Bhi Kar Sakti Hoon* (*I, A Woman, Can Achieve Anything*)
 185 in India—to illustrate the gaps that we pointed out in translational EE
 186 research.

187 *Testing Narrative Persuasion in East Los High*

188 One pioneering example of EE is the award-winning Hollywood web
 189 series *East Los High* (*ELH*), which ran on Hulu from June 2013 to
 190 December 2017. On the surface, *ELH* could be any popular Latinx teen
 191 drama set in a fictional high school in East Los Angeles. However, the
 192 producers purposely incorporated role modeling and credible resources
 193 about safe sex, family planning, and women’s reproductive rights while
 194 addressing the social stigma and cultural barriers that young Latinx rou-
 195 tinely face in the United States. *ELH* represents an effort of, by, and for
 196 the Latinx community (Wang & Singhal, 2016; Wang, Singhal,
 197 et al., 2019).

The story world of *ELH* comprised the flagship web series and multiple associated narrative elements that were strategically rolled out across nine other digital platforms: (1) extended *ELH* scenes to deepen character development and issue engagement; (2) *The Siren*, the school student newspaper that gave young people a voice to tell their own stories; (3) “Ask Paulie”—a platform that allowed Paulie, a funny and lovable character, to answer embarrassing questions about sexuality; (4) Ceci’s vlogs which opened up a channel through her video blogs so that viewers could follow her teen pregnancy journey of dilemmas, options, and social support; (5) Tia Pepe’s Mexican cooking recipes for tasty and healthy meals; (6) dance tutorials of the high school’s Bomb Squad with signature moves as they prepare for the Big Five competition; (7) *La Voz* with Xavi to take pride in exploring cultural activities in East Los Angeles; (8) comic strips for trendy but important social topics; and (9) public service announcements delivered by *ELH* lead actors on behalf of partnering organizations such as StayTeen.org to inform and spur action among Latinx youth about health and social topics. These transmedia narrative experiences were further extended through resource links and widgets on the *ELH* website along with other audience engagement strategies on social media platforms such as Facebook and Twitter (Wang, Singhal, et al., 2019).

In order to assess the audience reach, engagement, and impact of *ELH*, our research team used a multi-method approach to capture the audience experience by conducting a viewer survey, an experiment differentiating various narrative experiences, digital analytics tracking, social network analyses, as well as participant observation and in-depth interviews with young Latinx couples at *ELH* watch parties. The program evaluation design, process, and results are well documented in terms of the broad geographic and sociodemographic reach among the *ELH* viewers, their enthusiastic response to the authentic stories and characters in *ELH*, and the potential of using narrative elements across digital platforms to meaningfully engage the audience and bring out positive change (Sachdev & Singhal, 2015; Wang & Singhal, 2016; Wang, Singhal, et al., 2019; Wang, Xu, Saxton, & Singhal, 2019).

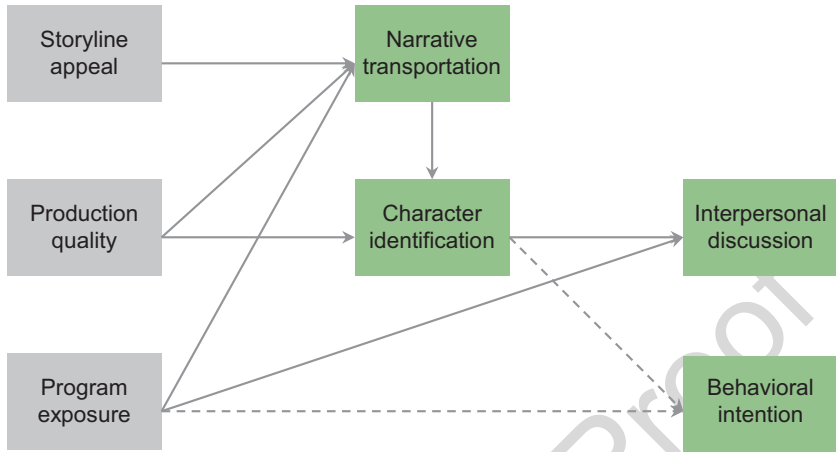
One finding on *ELH* that we have not reported previously is a translational gap we observed while testing a theory of persuasion in the field. As background, in the early 2000s, as part of its theoretical development and diversification, EE research started to converge with the growing body of experimental research on narrative persuasion in media psychology (Wang & Singhal, [in press](#)). A number of theoretical concepts and models were

237 introduced to explain and predict the ways in which media users process
238 the information embedded in narratives and how it affects their percep-
239 tions. For example, “narrative transportation” focused on the mental pro-
240 cess that explains why people can get “lost” in the world of stories, losing
241 the sense of their immediate surroundings and feeling that they have trav-
242 eled to different places and times (Green & Brock, 2000). Another exam-
243 ple was “identification with media characters,” an imaginative process
244 through which an audience member can put him/herself in the character’s
245 shoes to look at the world, consider the situation, and feel the emotions
246 (Cohen, 2001).

247 Building on the theoretical development of narrative transportation
248 and character identification, Slater (2002) argued that using stories in
249 entertainment media for persuasion was fundamentally different from the
250 dual (central and peripheral) information processing approach that Petty
251 and Cacioppo (1986) called elaboration likelihood model (ELM). Instead,
252 Slater and Rouner (2002) proposed an extended elaboration likelihood
253 model (E-ELM) to help explain how EE stories persuade their intended
254 audiences to change. They argued that factors like storyline appeal and
255 quality of production would influence audience’s narrative transportation
256 and character identification, which in turn would affect their perceptions.
257 Lab experiments with college students had shown considerable evidence
258 on how narrative transportation and character identification led to story-
259 consistent attitudes, beliefs, and behavioral intentions (e.g., Bilandzic &
260 Kinnebrock, 2009; Green, Strange, & Brock, 2002; Moyer-Gusé, 2008).
261 Therefore, we wanted to see how well E-ELM applied to the *ELH* audi-
262 ence survey data.

263 We reported the sample characteristics and key measures in the *ELH*
264 audience survey in Wang and Singhal (2016). For applied theory-testing
265 of E-ELM, we used an advanced analytical technique called structural
266 equational modeling. This technique allowed us to test multiple research
267 hypotheses at the same time by examining each individual relationship
268 while assessing how well the overall conceptual model fit the data with
269 goodness-of-fit measures and modification indicators for model optimiza-
270 tion. The final results after iterative model testing and modification are
271 summarized in Fig. 14.1.

272 In each model, “behavioral intention” was tested as five separate out-
273 come variables—use of condoms, emergency contraception, abortion
274 health service recommendation, pregnancy testing, and pregnancy testing
275 recommendation. Remarkably, all final models met the criteria for overall



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Fig. 14.1 Summary of *East Los High* viewer survey results of structural equation modeling

goodness-of-fit. However, not all individual hypotheses were supported. Solid arrows indicate the relationships that were consistently significant across all models. Dotted arrows indicate the relationships that were not significant in most models, therefore, not supported with sufficient empirical evidence.

More specifically, storyline appeal, production quality, and program exposure significantly predicted audience's narrative transportation into the *ELH* story world. Production quality significantly predicted audience's identification with the main characters in *ELH*. Program exposure significantly predicted ~~narrative transportation and~~ interpersonal discussion about *ELH*. Character identification appeared to be a full mediator between narrative transportation and interpersonal discussion. There was no support for a direct link from interpersonal discussion to behavioral intention during the model modification process. The links from program exposure and character identification to behavioral intention were not significant in most models with the exceptions of (1) a significant link from program exposure to behavioral intention regarding pregnancy testing recommendation and (2) a significant link from character identification to behavioral intention regarding pregnancy testing recommendation.

Simply, our *ELH* results point to the chasm that exists in doing lab-based experiments and fieldwork. Published lab experiments conducted by

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297 media psychologists routinely show that exposure to narrative stimuli
 298 leads to statistically significant story-consistent attitudes, beliefs, and
 299 behavioral intentions. However, while our field-based survey data among
 300 the *ELH* audience provided evidence of interpersonal discussion about the
 301 show, it did not indicate any direct or immediate effects on behavioral
 302 intentions. In essence, a sharp distinction existed between findings of a
 303 textbook clean research design in a well-controlled lab environment where
 304 data is collected right after respondents are exposed and what we found in
 305 a field survey with “real” respondents. While lab experiments valorize
 306 internal validity of findings, translational researchers will do well to test the
 307 ecological validity of results. That represents the key translational chal-
 308 lenge in EE—that is, meeting the intended audience members where they
 309 are, systematically gathering information while minimizing biases, and tri-
 310 angulating findings through multi-method research designs.

311 *Nimbly Adapting Fieldwork in Main Kuch Bhi Kar Sakti Hoon*

312 We were also involved in the program evaluation of another exemplary EE
 313 initiative—*Main Kuch Bhi Kar Sakti Hoon/MKBKSH (I, A Woman, Can*
 314 *Achieve Anything)* in India. From March 2014 to September 2019, three
 315 seasons of *MKBKSH* comprising some 183 episodes were broadcast on
 316 Doordarshan, the Indian national television network, and hundreds of All
 317 India Radio stations as well as mobile and community networks to reach
 318 “media dark” rural areas (Wang & Singhal, 2018). *MKBKSH* challenged
 319 entrenched regressive gender norms and advocated for women’s empow-
 320 erment through the positive role modeling of its protagonist, Dr. Sneha
 321 Mathur, who leaves behind a lucrative medical practice in Mumbai and
 322 returns to her home village to tackle multiple social ills—child marriage,
 323 sex selection in favor of male offspring, violence against women, and mul-
 324 tiple manifestations of gender inequality.

325 *MKBKSH* was the first EE intervention to use an interactive voice
 326 response system (IVRS) across all three seasons to invite and engage audi-
 327 ence members at scale and in real time, allowing them to access and inter-
 328 act with curated *MKBKSH* content, answer questions, and share personal
 329 opinions and actions inspired by *MKBKSH* (Wang & Singhal, 2018). The
 330 IVRS represented a “voicebook” for millions of audience members, espe-
 331 cially the rural, the socioeconomically poor, and the less privileged (Wang
 332 & Singhal, 2018). Further, *MKBKSH*’s story world was supplemented
 333 with a series of mini-documentaries titled “Reel to Real” documenting Dr.

Sneha visiting real communities where the impact of *MKBKSH* was pro- 334
 found. Two other miniseries, *Kishor Ka Shor* (The Voice of Youth) and 335
Satya Ki Adalat (The Truth Court), were carved out of *MKBKSH*'s tele- 336
 vision content, extending the storyline on *MKBKSH*'s Facebook page and 337
 YouTube channel. In Season 3, a new transmedia extension was added by 338
 launching a chatbot called *SnehAI* (for Sneha AI) on the *MKBKSH* 339
 Facebook page via the Messenger app. This chatbot helped create a safe, 340
 non-judgmental, and private platform for India's youth to seek counseling 341
 services about sexual and reproductive health. Such services are virtually 342
 non-existent in India. 343

An interesting translational issue in program evaluation was observed in 344
 our *MKBKSH* field research. To understand the issue, a little background 345
 on EE program evaluations may be useful. Traditionally, EE program eval- 346
 uations have relied heavily on audience reception surveys and have been 347
 criticized for participants' self-selection bias (Sherry, 1997). Over the past 348
 25 years, scholars and practitioners have made extra efforts to secure 349
 resource and conduct assessments using more rigorous designs such as 350
 field experiments (e.g., Banerjee et al., 2019; Paluck, 2009; Rogers et al., 351
 1999). A recent meta-analysis on the use of EE narratives to promote safer 352
 sexual behaviors of youth from 1985 to 2017 only found 10 qualified 353
 publications using either a full or a quasi-experimental design in the field 354
 (Orozco-Olvera, Shen, & Cluver, 2019). Thus, in our research design of 355
MKBKSH Season 3 program evaluation, we purposely included an experi- 356
 mental component with repeated measures in order to better understand 357
 whether the exposure to the storylines and the underlying educational 358
 themes made any difference among the audience as compared to those 359
 without any exposure. By visiting the same participants more than once, 360
 we hoped to track any individual-level changes over time. 361

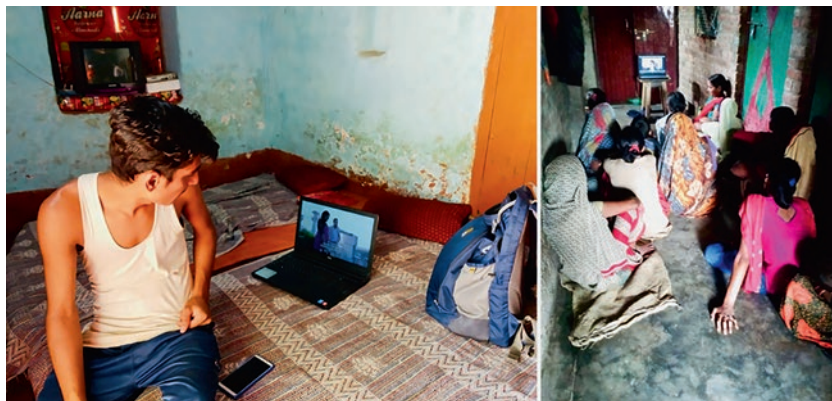
We carefully selected the villages of Kanpur Dehat in India's most popu- 362
 lar Uttar Pradesh state (population 200 million people with a total fer- 363
 tility rate of 3.1) as the site for the field experiment. The residents of 364
 Kanpur Dehat represent the characteristics of the *MKBKSH* intended 365
 audience with respect to both the theme of hygiene and sanitation and 366
 reproductive health and family planning. Working closely with our local 367
 NGO partner, Shramik Bharati, representative villages were identified to 368
 establish viewer versus non-viewer groups. We ensured that the non- 369
 viewing respondents were outside the broadcast area of the community 370
 radio station, which previously had broadcast the radio versions of 371
MKBKSH Seasons 1 and 2. 372

373 Based on respondent selection guidelines provided by us with respect
374 to gender and marital status, the field researchers of Centre for Media
375 Studies (CMS), our data-collection partner, and our local NGO collabora-
376 tor, Shramik Bharati, crafted a recruitment instrument to identify viewers
377 and non-viewers at T1 baseline. This recruitment instrument took into
378 account potential respondents' ownership of television sets, availability of
379 the Doordarshan channel on which *MKBKSH* was broadcast, their view-
380 ing habits with respect to television serials, and a reasonable availability of
381 power supply, as power outages in rural India are common. So far, so good.

382 Further, T1 baseline data were collected in January 2019 prior to
383 *MKBKSH* Season 3 launch on Doordarshan with 302 participants based
384 on their gender and viewership status. Based on the preliminary results, a
385 swift sampling adjustment was made in February 2019 to add 30 more
386 participants to the viewer group who did not have a toilet at home to (1)
387 balance out the participants' toilet ownership in the entire sample and (2)
388 account for potential high attrition rate of *MKBKSH* viewership at T2.

389 After the T1 baseline data collection, random manipulation checks car-
390 ried out by CMS and Shramik Bharati gave us confidence that the non-
391 viewers did not have any exposure to *MKBKSH* Season 3. However,
392 alarmingly, the same checks showed that *MKBKSH* viewership was very
393 low even among our designated viewers (ranging from 10% to 15%). This
394 meant that our small sample of viewers could doom our experimental
395 design. On a war footing, we mobilized our local NGO partner Shramik
396 Bharati to make another swift adjustment prior to T2 data collection, that
397 is, after the broadcast of the first half of Season 3. Numerous individual
398 and group viewing sessions (Fig. 14.2) were held with the designated
399 viewers, so they were able to view at least five key sanitation episodes to
400 get an idea about the sanitation plot, the key sanitation behaviors, includ-
401 ing respect and compassion for sanitation workers, who are at the bottom
402 of India's caste hierarchy. This swift field adjustment saved our experimen-
403 tal design—albeit temporarily.

404 Manipulation checks post T2 reconfirmed that low viewership to the
405 second half of *MKBKSH* Season 3 continued, and so we had to further
406 make a swift adaptation to our research design. Prior to T3, an 86-minute
407 edited *MKBKSH* Season 3 film containing the key reproductive health
408 and family planning messages were shown to all designated viewers
409 (Fig. 14.2), ensuring that each respondent had at least the 86-minute film
410 as minimal exposure.



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Fig. 14.2 *MKBKSH* Season 3 viewing sessions among villagers facilitated by Shramik Bharati

Thanks to our ability to leverage field-based partnerships and respond 411
 swiftly to field-based contingencies, a total of 514 residents in Kanpur 412
 Dehat participated in at least one, if not all three, in-person field surveys 413
 administered before, during, and after the broadcast of Season 3—in 414
 January, June, and November, 2019; T1 had 332 participants, T2 had 415
 442 participants, and T3 had 421 participants. T1 served as the pretest for 416
 the first half of *MKBKSH* Season 3 featuring the theme of sanitation and 417
 gender equality; T2 served as the posttest on sanitation-related assess- 418
 ments and pretest for the second half of *MKBKSH* Season 3, featuring the 419
 theme of family planning and gender equality; T3 served as the follow-up 420
 on selected sanitation-related questions and posttest on family planning- 421
 related assessments. 422

Our *MKBKSH* experience reinforces how difficult it is to reconcile a 423
 rigorous research design with shifting ground-based dynamics. If we had 424
 pursued a textbook clean experimental design and simply contracted our 425
 research partners to collect data, our T1, T2, and T3 data would have 426
 been useless. A lot of time, effort, and resources would have gone down a 427
 meaningless drain. Instead, our research team spent a lot of time building 428
 strong and trusting partnerships between our data-collection agency 429
 (CMS) and local NGO partner, Shramik Bharati, weaving in several feed- 430
 back and feedforward loops. Transparent open communication marked 431
 the research journey, problem-solving was a collaborative process. In its 432

433 absence, we would have not have been able to discover the confounding
434 factors in a timely manner, adjust our sampling strategy at baseline, or
435 adapt to the unfolding realities in the villages to reduce the attrition rate
436 over time in order to have sufficient quality data for meaningful program
437 evaluation.

Cross-pollination from *ELH* to *MKBKSH*

While we were able to implement a multi-method approach to assessing *ELH*, we missed a precious opportunity to evaluate its direct impact by a whisker. This costly lesson underscores how in the field, unlike a textbook lab experiment, things often fall through the cracks despite good planning and the noble intentions of partners. Remarkably, our NGO partner behind [StayTeen.org](https://stayteen.org) worked closely with the *ELH* production team to embed widgets on the *ELH* webpage to enable motivated viewers to take actions, for example, search additional health information or seek a referral to a provider. For instance, a viewer could use a widget to type in their zip code to find local health clinics that provided a service featured in the show. While the entered zip codes were anonymous entries, they represented concrete health information-seeking behaviors directly resulting from the watching of *ELH*. Unfortunately, no such information was recorded. If the producers and writers had shared this possibility up front with the researchers and the NGO partners, a concerted effort could have been made to capture the anonymous entries of the zip codes that *ELH* viewers used to look up for local resources, providing some of the best evidence in EE program evaluation.

Learning from this incredibly unfortunate missed opportunity, while working on *MKBKSH*, when our NGO partners obtained the approval from the Ministry of Health & Family Welfare to provide their national toll-free helpline number to access information on sexual and reproductive health, we were able to work with the team to set up in the Snehai chatbot analytics database to track the number of unique users and clicks on the helpline link and accumulate the evidence from thousands within a few short weeks. Our *ELH* to *MKBKSH* journey demonstrates that while translational “gaps” may emerge within the container of a project, the learnings gained in one project can inform the planning and execution of another that follows.

LESSONS LEARNED AND BEST PRACTICES

438

EE represents an intriguing area of translational communication research for health promotion and social change. It holds the potential to interrogate theoretical concepts and models with creative practices in message design, intervention implementation, and program evaluation. Our experience with the two projects—*ELH* and *MKBKSH*—points to the following lessons learned about translational communication research in EE:

Lesson #1: Strive for internal *and* external validity and interrogate the strengths and weaknesses of lab experiments with fieldwork. A large gap exists between what is found in a well-controlled lab environment where data is collected right after respondents are exposed to a narrative persuasion intervention, and what is found in the applied theory-testing in the real world with a diverse set of respondents. Translational researchers should pay attention to the internal validity of lab-based findings but not be shy about stepping out of the ivory towers to constantly interrogate them in the field. Ultimately, translational scholars wish for their interventions to have high degrees of external and ecological validity.

Lesson #2: Build deeply trusting and mutually beneficial partnerships among all key stakeholders. The effectiveness of EE program evaluation is highly dependent on open and trusting communication among the team of program evaluators and representatives of field agencies and local partners. Field immersion of program evaluators is essential for them to not treat the field as a neat textbook research lab, but to understand the daily rhythms of respondents, including their sowing and harvest seasons, local electoral calendars, and the like. Regular feedback and feedforward exercises, including manipulation checks and data monitoring, should be carefully built into the research process. Even experienced field research agencies must understand the value of making swift adjustments with respect to sampling strategies, including modifying, as needed, the nature of program intervention and treatment conditions to respond to field-based emergencies. Goodwill represents an important currency especially if budgets are limited, as they often are.

Lesson #3. Adopt a multi-method approach with nimble cost-effective “bicycle” research designs. This way, the findings can be triangulated from different types of input to provide a deeper understanding of what works and why, and what does not, and why. It is important for translational researchers of EE to not put all their eggs in one basket. Our

476 research experience with *ELH* and *MKBKSH* suggests that when budgets
 477 are scarce, nimble cost-effective “bicycle” research designs may provide
 478 richer insights than an expensive uni-method “Cadillac” research design.

479 **Lesson #4: Privilege a multi-theoretical framework to EE scholar-**
 480 **ship and praxis.** EE translational research should go beyond just audience
 481 reception and media effects studies grounded in the subfields of psychol-
 482 ogy (i.e., social psychology and media psychology). As our *ELH* and
 483 *MKBKSH* research demonstrates EE can benefit tremendously from the
 484 knowledge and integration of resources in other related fields such as pub-
 485 lic health (e.g., promoting sexual and reproductive health among under-
 486 served population groups), sociology (e.g., using social network analysis
 487 to examine individual and organizational connections), information sys-
 488 tems (e.g., digital tracking and IVRS for large-scale real-time audience
 489 engagement), and artificial intelligence (e.g., use of chatbots). The **inter-**
 490 **disciplinarity** nature of EE requires a multi-theoretical and multi-method
 491 approach so that the learnings and attributions can span the micro-meso-
 492 macro levels—from individual behavioral changes to community-, soci-
 493 ety-, and policy-level praxis.

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Queries	Details Required	Author's Response
AU1	Refs. "Sherry, 1997; Banerjee et al., 2019; Rogers et al., 1999" are cited in text but not provided in the reference list. Please provide details in the list or delete the citation from the text.	Added Sherry 1997 and Banerjee et al, 2019. Replaced Rogers et al. 1999 with an existing citation Vaughan et al. 2000
AU2	References "Sood et al. (2004), Wang et al. (2019b)" were not cited anywhere in the text. Please provide in text citation or delete the reference from the reference list.	Removed Sood et al 2004. Couldn't find Wang et al. (2019b)

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