The Power of Storytelling and Media Interventions to Advance Health and Gender Equity: The Girl Rising Case Study

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Abstract:

Background: Storytelling is one of the most powerful forms of communication. It has been used for centuries as a basis to effect change with respect to public knowledge, attitudes, and behavior. However, to date, very little work has been done to evaluate its impact on behavior change and social norms when understanding theoretical perspectives and media interventions.

Materials and Methods: This present manuscript reviews and assesses current behavioral theoretical frameworks to explain narrative's effect on behavior change and the social beliefs and practices that guide individuals' decision making and behavior, thus showcasing how storytelling is an important tool for bringing about change to advance health and gender equity. In addition, narrative perspectives are taken from health, education and gender equity interventions to illustrate how media interventions in these various domains can play a major role in igniting changes in behavior, attitudes, and social norms.

Results: Drawing upon theoretical perspective, research, and practice, the present manuscript utilizes the Girl Rising Framework, a framework grounded in theory, storytelling, on-the-ground programming, and movement building, to illustrate how storytelling can inspire individuals and communities to shift attitudes and break gender barriers.

Conclusion: Storytelling has emerged as an important tool to create empathy and bring about change. While not as commonly utilized in the health behavior space, this manuscript takes a first look at how interventions grounded in theory and media can create empathetic environments that advance health and gender equity.

Key Word: Storytelling; Gender Equity; Health; Theoretical Frameworks; Girl Rising; Behavior Change

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I. Introduction

Science and storytelling are two ways of obtaining information. Storytelling has been used as an approach in various disciplines as the basis of an intervention to effect change with respect to the public knowledge, attitudes, and behaviors.[1] Storytelling may seem like an "old-fashioned" tool today, however, human lives have long been formed by the narratives that have been told.[2] Compared to more conventional analytical methods, stories have an explanatory value, yet its validation remains to be established. With the growth of digital communication mediums, humans have evolved rapidly over the last decade, with the ability to consume content much more than ever before. Lives are impacted every day through the sharing of stories, which is what makes interactive narratives so important.[1] There is, however, a lack of substantial body of validation that does not justify storytelling as a research method.[1] While little research has explored the power of

storytelling in film and television, its power to transport and transform means that it may be a tool to affect social change. It is exactly *how* that is measured and the contexts in *which it can be assessed* that are still open questions.

There is a growing trend to use storytelling as a research tool to extract information and/or as an intervention as stories are often utilized as a mechanism to engage individuals and communities with quality improvement work.[3] For generations, oral storytelling has been relied upon to share generalizable knowledge and essential information in a wide range of topic areas which commonly involve community values, promoting the development of curiosity: the gateway to empathy.[4] However, there has been limited evidence on storytelling, particularly the depth of its capacity as it relates from individual to societal level impact on health, specifically for adolescents in the realm of gender equity. Utilizing the Girl Rising Framework and Model, this case study explores what has been measured thus far in understanding storytelling; how it fits into current social and behavioral theories of change; and the gaps and recommendations on the utilization of storytelling and media interventions on sharing information in a meaningful way that can trigger positive social impact.

II. Storytelling for Social Impact

To date, very little work has been done to evaluate a film or television series in terms of its impact on behavior change and challenging social norms. Yet, stories and storytelling help us to make sense of our thoughts and experiences, our interactions with the environment and each other, to formulate our beliefs, identities, and our values. Essential to storytelling is conveying an experience in such a way that it seems real enough to shift public perceptions, to communicate and disseminate information, and to potentially motivate change in relevant behaviors.[1] Storytelling is often described as a function of four key elements (see Figure 1): learning; organizing; educating; and advocating. These elements enable change in public attitudes, behavior, culture, and in public policy.[5] Narratives are intrinsically persuasive, offering increased comprehension, interest, and engagement. Through these elements, a process is created by collecting and presenting stories, which unlocks the magic of difference, dialogue, and collaboration as individuals begin to build new stories together.[6]

LEARN
WHAT STORY DOES: Helps communities assess needs and strengths and evaluate a program throughout its life.
EXAMPLE: The GlobalGiving storytelling project collects "micro-narratives" from communities in Africa where development projects it supports are based; these mini-stories help the organization assess community needs and evaluate the work of those projects.

ORGANIZE
WHAT STORY DOES: Builds strength and leadership within an organization or movement and serves as a means of exchanging strategies for social change.
EXAMPLE: Community organizer and Harvard professor Marshall Ganz developed a story-sharing method called "Public Narrative," in which members of a group or campaign share their stories of "self," "us," and "now." People become more invested in an organization if they have given a part of themselves to it.

EDUCATE
WHAT STORY DOES: Engages a variety of large audiences or publics in civic dialogue and public education.
EXAMPLE: The more than 50,000 video testimonials on the It Gets Better Project website provide lifesaving encouragement to LGBT young people, urging them to stay alive and stick around for the good stuff.

ADVOCATE
WHAT STORY DOES: Engages diverse civic actors for large-scale constituency building, fundraising, and policy advocacy.
EXAMPLE: The Health Media Initiative of the Open Society Foundations provides storytelling training and production assistance to groups working on issues such as AIDS prevention for sex workers in South Africa and the rights of intellectually disabled people in Moldova.

Figure 1. Elements to Storytelling

How does storytelling impact the brain?

When individuals engage in trust building, acts of kindness, or maternal behaviors (such as mother-infant bonding while breastfeeding) oxytocin is secreted into the bloodstream by the pituitary gland.[7] During the tense moments in a story, the brain simultaneously releases the stress hormone cortisol, and the "feel good" chemical oxytocin. Oxytocin is the chemical that promotes connection and empathy, and therefore, as a story ebbs and flows, our brains inherently begin to form trust based on the shared chemical reactions and resulting feelings.

Other neurological research tells us that a happy ending to a story triggers the limbic system - our brain's reward center, to release dopamine - making us feel more hopeful and optimistic. In another experiment, Zak asked study participants to donate money to a stranger after watching an emotionally charged movie about a father and son.[2] Those with higher measures of oxytocin were significantly more likely to give money to a stranger, which explains implications for advertisers to use emotionally charged stories. Though advertisers certainly are not the only ones tapping into the trust-inducing power of storytelling: strategic storytelling has also been commonly used to change attitudes and behaviors. Researchers at Penn State College of Medicine found that medical students' attitudes about dementia patients were initially perceived as burdensome and tough to provide care for, however, their perceptions improved significantly after students participated in storytelling exercises that made them feel more sympathetic.[8]

How does storytelling drive social change?

As one of the most powerful forms of communication that exists, storytelling is now being embraced by scientists and researchers who want to more authentically share their knowledge with broad audiences. Research has also indicated that storytelling can be a compelling and an effective strategy in altering behaviors

while instilling and reinforcing cultural norms. For example, using storytelling in learning can enhance engagement among learners and aid in influencing a company's culture and the behavior of its employees.[4]

In public health, stories bridge the gap between inspiration and action.[9] If the story is able to create tension in its viewers and listeners, they will start to feel shared emotions with the characters in the story. Stories where characters find new ability within themselves to triumph over adversity cause consistent oxytocin synthesis, naturally attracting the brain. A simple series of sentences, relaying the account of an event or the unfolding of a compelling tale leads to the activation of affective, cognitive, and belief changes in those on the receiving end of an adventure. At the conclusion, viewers hold a strong potential to continue mimicking these feelings and behaviors.[10] Populations largely source information on scientific matters in narrative format from mass media, which relies on storytelling to optimize engagement with the reader, listener or viewer.[11]

III. Theoretical Frameworks

Widely used to understand intentions, predict behavior, inflate perceptions, and transport audiences into someone else's shoes, social and behavioral science theories have increasingly gained recognition in the development and evaluation of public health interventions .[12] Theoretical models have been tested to validate how stories and media influence social norms, transport audiences, and cause changes in diverse fields such as anthropology, marketing, psychology, communication, consumer, and literary studies. Interventions are best designed by using relevant theories of behavior change while being deployed skillfully in each particular population.

The following section provides an overview of the Theory of Planned Behavior, the Theory of Social Norms, Transportation Theory, and the Social-ecological model, where key concepts in each theory encapsulate the evidence and validate their influence.[12] Both explanatory theories and change theories are rooted in an understanding of the social determinants of health and health behavior. Many social, cultural, and economic factors contribute to the development, maintenance, and change of health behavior patterns.

Theory of Planned Behavior

The Theory of Planned Behavior (TPB) (Figure 2) is used to understand and predict behaviors, which posits that behaviors are immediately determined by behavioral intentions and under certain circumstances, perceived behavioral control.[13] It has been used successfully to predict and explain a wide range of health behaviors and intentions including smoking, drinking, health services utilization, breastfeeding, and substance use, among others. TPB distinguishes between 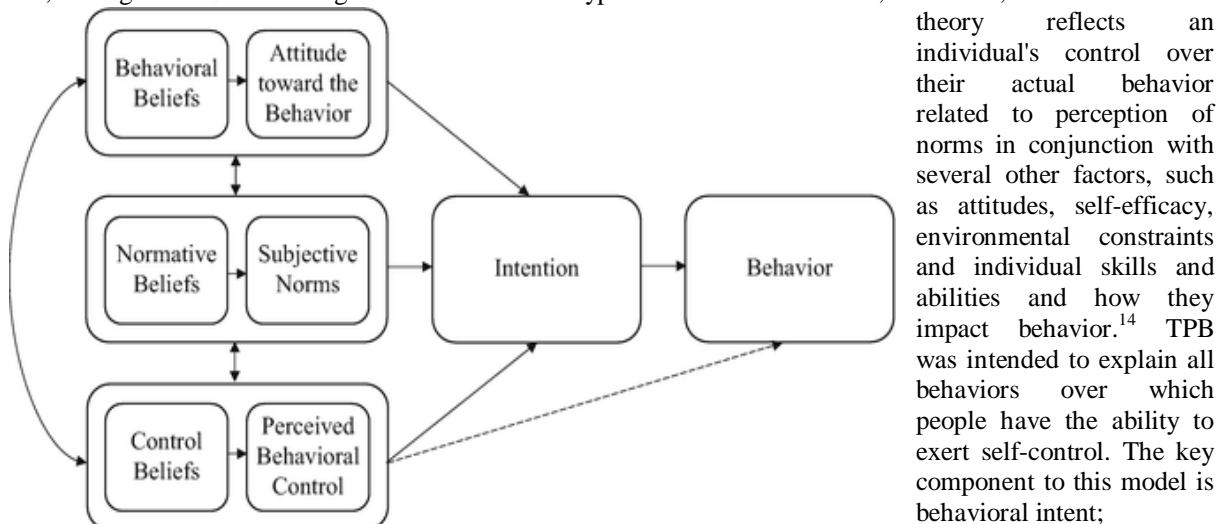three types of beliefs - behavioral, normative, and control.[13] This theory reflects an individual's control over their actual behavior related to perception of norms in conjunction with several other factors, such as attitudes, self-efficacy, environmental constraints and individual skills and abilities and how they impact behavior.[14] TPB was intended to explain all behaviors over which people have the ability to exert self-control. The key component to this model is behavioral intent;

Figure 2. Theory of Planned Behavior (TPP)

behavioral intentions are influenced by the attitude about the likelihood that the behavior will have the expected outcome and the subjective evaluation of the risks and benefits of that outcome. The TPB states that behavioral achievement depends on both motivation (intention) and ability (behavioral control).

These factors combined largely influence compliance within a behavior and inhibit decision making.[15] For example, in Nigeria, the prevalence of contraceptives remains among the lowest in the world, contributing to the country's high maternal and child mortality rate. It is also a country where mobile phone technology penetration has increased considerably, opening opportunities for programs to use this medium for reaching their intended audience with health-protective information. To that end, Smart-Client, a phone-in health tool was

piloted in 2012 in Nigeria to provide women with information to access family planning services and prevention. By 2017, Smart-Client was considered efficacious in promoting positive attitudes and encouraging women to adopt a modern contraceptive method. The program empowered women and ensured that they are informed while building confidence and self-esteem. The number of women using contraception more than doubled after exposure to the Smart Client application, thus showing its potential for reducing an unmet need.[16]

Theory of Social Norms

Figure 3: The Social Norms Approach to Health Promotion
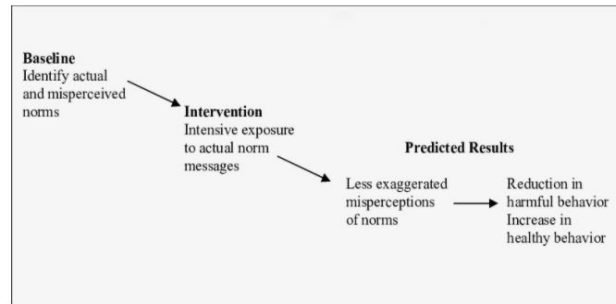
[Source: Haines et al 2005]

Societal influences are the primary focus of the Social Norms Theory (Figure 3), which articulate how behavior is influenced by perceptions of environmental norms. The foundation for this approach includes perceived norms (what we view as typical or standard approval in a group), actual norms (factual, existent beliefs and actions of a group), and misperceived norms, which are caused through social conversation mechanisms, and media, entertainment, and news. Storytelling, in particular, may have played an essential role in the evolution of human cooperation by broadcasting social and cooperative norms to coordinate group behavior.[17] You can learn a lot from a narrative — about friendship, cooperation, empathy, and an aversion to inequality. Storytelling is a powerful means of fostering social cooperation and teaching social norms, and it pays valuable dividends to the storytellers themselves, improving their chances of being chosen as social partners, receiving community support and even having healthy offspring.

Social norms interventions aim to present correct information about peer group norms in an effort to correct misperceptions of norms. The approach has been used to address a wide range of public health topics including tobacco use, driving under the influence prevention, seat belt use, and more recently, sexual assault prevention.[14] These interventions primarily target the environment of their audience and corresponding interpersonal and societal influences that could lead to a change in their perception of reality. With repeated exposure to a variety of positive, data-based messages, the misperceptions that help to sustain problem behavior are reduced, leading a larger proportion of the population to act in accordance with more accurately perceived strategies in terms of health, protection, and safety measures.[18]

Transportation Theory

An experience of being transported to the world of a story, with a powerful ability to alter one's perception of the world is referred to as *narrative t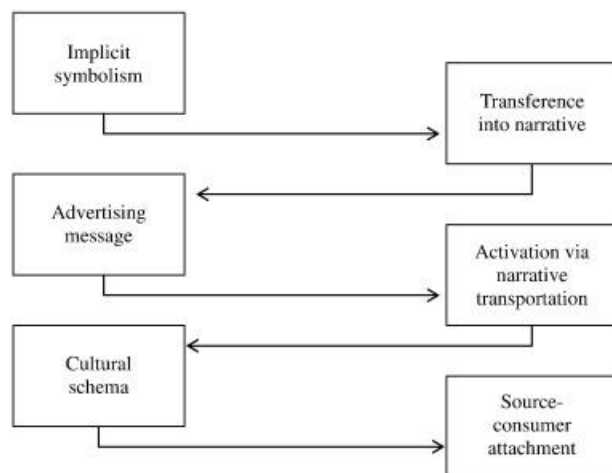ransportation* - the phenomenon in which consumers mentally enter a world that a story evokes.[10] Whether fiction or nonfiction, a particularly stirring story sweeps away an audience into an unknown world. Transportation more frequently occurs in listening to narratives. Stories are the vehicles that induce strong feelings, emotions, and senses of empathy. Figure 4 visualizes the transportation-imagery model, which is a comprehensive depiction that includes the antecedents and consequences of narrative transportation. This theory is also used as a multidisciplinary framework in which cognitive psychology and consumer culture theory cross fertilize this field of inquiry. Telling the tale of a truly engaging story resonates with people, prompting them to reflect on their own values and lives, leading them to make healthier choices.

Figure 4. Transportation Theory

According to the transportation theory, the narrative consumers tend to be mentally drawn into the fictional world -the consumers become involved in the world of the narrative to the extent of sharing emotions and cognitive responses with the characters in the description since the narrative mirrors the events in the real world.[10] Listeners who are transported in the story tend to experience vivid mental imagery. Therefore, the transportation theory predicts the powerful impact that a narrative has on its audience and their minds and behaviors.

Social-ecological model

The social ecological model (Figure 5) shows the levels of influence on individual health outcomes, which ranges from the individual to interpersonal relationships, institutions, community, and public policy. Interventions should not only be targeted at individuals but should also aim to affect interpersonal, organizational, public policy, and environmental (community) factors, each which influence behavior. A story is usually created for an audience for it to possess its universal appeal. When an account is being narrated to an audience, it becomes a poignant material as well as a vehicle for sociological theorizing. According to the sociological model, for people to interact with the world around them, they need to look at other people's experiences, such as reading their biographies and their lived history experiences. Therefore, through storytelling, individuals get to know what is happening around them in terms of health disparities and the state of the economy.[19]
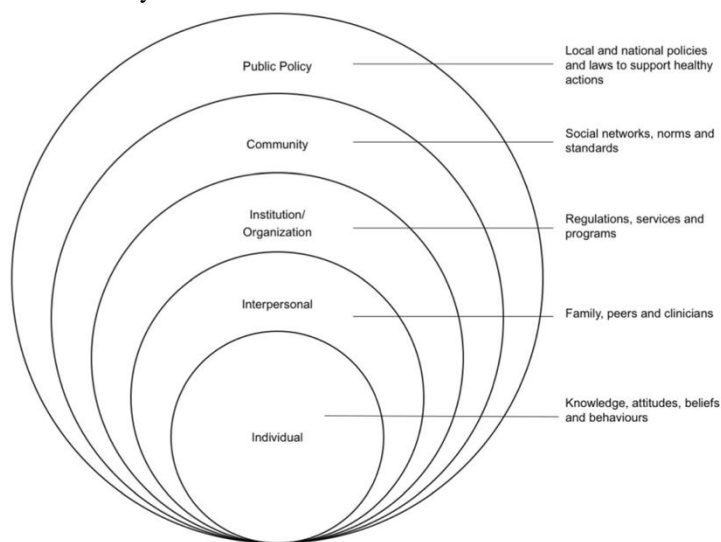

Figure 5. Socio-ecological Model

A theory presents a systematic way of understanding events, behaviors and/or situations. The Theory of Planned Behavior, the Theory of Social Norms, Transportation Theory, and the Social-ecological model are some of the theories consistently used in the development, implementation, and evaluation of public health and health promotion programs. In storytelling, viewers are granted the opportunity to critically assess various health disparities through the lens of the social determinants of health. Furthermore, the depth of character development and vivid portrayal of the environment in which the characters exist, magnifies

social justice issues that are present. Pushing the viewer to search for solutions grounded in equity.[20]

A growing body of evidence suggests that interventions developed with explicit theoretical foundations view human behavior as determined by conscious processes that involve intentional motives and beliefs. Theoretical models explaining narrative's effect on behavior change consider the social context of narratives, while the use of health behavior theories reflect an amalgamation of approaches, methods, and strategies from both social and health sciences.[21] The hierarchical nesting of three different levels—functions, actions, and discourses—makes the processes of story creation (the storyteller's side) and story interpretation (the story receiver's side) plausible, possible, and pleasurable.[10]

The most successful public health initiatives are based on an understanding of health behaviors and the context in which they occur. In order to gain influence, one must draw on this broad range of theoretical perspective, research, and practice. It has shaped the field, defined the scope of practice, and influenced the training and socialization of professionals in mixed disciplines.[22]

In technology, digital platforms allow scientists to exemplify how health behaviors can enable change via storytelling through using messaging that models behavior related to urgent health and social topics in mass numbers.[2] Traditional media used newspapers, radio stations, TV channels and magazines as means for publishing information before the Internet became the major preferred platform to suit the masses.

IV. Social Impact

Health

Stories are often a mechanism to engage individuals and communities with quality improvement work.[3] In healthcare, telling the story of one person's experience can illustrate a care pathway, particularly when there

are emotional details that enable people to remember the information more vividly. Statistics and data have an important place in monitoring and understanding services and facilitating improvement, most people are not data driven (Pratt, 2020). On the other hand, the power of a story provides individuals with evidence and context, and tucking data points into the story narrative, allowing listeners to feel connected and empowered to motivate and change minds.[3]

More and more health communication campaigns are seeking to impact behavior by using theories to change social norms through media. When implemented as an intervention, a variety of genres can be used to promote overall health based on research that shows individuals can be strongly influenced by the real, imagined, or implied behaviors within their surroundings, linking perceived norms to a variety of health behaviors, from alcohol use to cancer screening, condom use to human rights, and more.[14]

The South African television series *Intersexions* focuses on how inter-relationships between sexual partners enable the spread of HIV across society. Through the series, the community gets to know how the disease is spread and what ways they could use to curb it. The show was associated with 1.6 million conversations about HIV testing, an increased number of people getting tested, and the use of more than 600,000 condoms.[23]

Education

New research illuminates the dramatic facts behind film and capturing underlying and deeply rooted social and gender injustice on camera. Multiple studies have shown that video, specifically, can be a highly effective educational tool.[7] There are many in-depth barriers to education—among them, early child marriage and childbearing, slavery, sexual trafficking, gender discrimination, and poverty.[24] Removing these barriers means not only a better life for girls, but also safer, healthier, and more prosperous communities.[7]

It is now more urgent than ever that scientists actively take a roll in engaging with and educating the public about what they do, why they do it, and why it matters. Scientists and researchers have embraced digital storytelling to authentically share their knowledge with broad audiences in the education space. Courses in higher education are currently being taught at Harvard University and Johns Hopkins University, among many other institutions, that utilize media as a means to focus on issues that contribute to existing health disparities, making their content relevant and timely in addressing current public health challenges. Storytelling has the ability to teach individuals how to deal with the different situations by improvising alternative futures through narratives of change.[25] Details at the heart of great stories powerfully engages listeners in the scientific journey and creates a stronger, more meaningful transfer of knowledge.[26] This then elicits participation and creates an intellectual investment and emotional bond between the speaker and the audience, allowing a smooth transition to action.

Entertainment-Education, a term coined by Johns Hopkins Center for Communication Programs, uses dynamic storytelling to intentionally weave major health and social issues into influential tales that compels millions of viewers to be drawn in each year.[27] The series "The Wire", an American crime drama that depicts life in and around Baltimore, Maryland, focuses on five major themes including the drug trade, seaport system, city government/bureaucracy, education and schools, and print news media. What makes "The Wire" different from other television shows about inner-city life is its examination of the root causes of the various issues that are depicted, using a systematic storytelling approach that does not merely look at the *what,* but also explores the *how* and *why*.[20]

Gender Equity

Narratives illustrate both favorable and unfavorable attitudes which people can relate to, through obstacles and perseverance that leads to resilience and positive adaptation.[7] Hunter-gatherer societies have strong oral storytelling traditions dictating behavior regarding marriage, interactions with in-laws, food sharing, and hunting norms. These stories convey sex equality and social egalitarianism, coordinate group behavior and facilitate cooperation by providing individuals with social information about the norms, rules, and expectations in any given society.[17] Programs such as "Young Life" use stories to ignite an alteration in behavior that is necessary to sustain deep behavior change that fosters diversity, inclusion, fairness, and justice.[27] The main character, Mr. Query, generates debate and discussions around adolescent and youth issues in Bangladesh.[27] In this program, the fictional character acts as a guardian and discusses common issues among youth, enabling an open, accepting space for adolescents to be able to air out their problems. This environment provides an opportunity for teens to address issues in a safe, reliable place where they may otherwise not feel comfortable, allowing them to discuss resources and action to make a change.

V. Discussion

Social Movement and Engagement: The Girl Rising Model

Girl Rising is a global campaign for girls' education and empowerment. In 2013, the film, *Girl Rising*, launched showcasing the lives of nine young girls from nine different countries around the world who overcame barriers to their education. The film's narration encourages viewers to understand that the solution to poverty, childhood marriage, war and conflict, and natural disasters is to educate a girl. The stories inspired imaginations, shifted mindsets, and ignited change. To supplement the film, elementary, middle school, and high school curricula was developed in the United States to mobilize teachers and students, and to encourage students to critically think about all facets related to gender issues and encourage conversations about their roles as global citizens and their responsibilities to their own communities. Further, in 2014, the United States Agency for International Development (USAID), provided funding to support the Empowering Next Generations to Advance Girls' Education (ENGAGE) program to increase girls' school enrollment in the Democratic Republic of Congo, Nigeria, and India through film screenings, localized campaigns and school programs.

Since its inception, the film has been transformed into a campaign, utilizing the power of storytelling to inspire, shift attitudes, and change behavior amongst girls and communities. Girl Rising has launched numerous campaigns to bring visibility to the issues girls face and inspire people to make change and break these barriers. By uniting celebrities, global leaders, and media influences to act as a collective effort/voice of positive change for girls, Girl Rising has a presence in more than 150 countries. Today, Girl Rising has on-the-ground programs and curricula in Argentina, Ethiopia, Guatemala, India, Indonesia, Kenya, Pakistan, Philippines, Thailand, Vietnam, and the U.S. Previous campaigns also include Northern Nigeria and the Democratic Republic of Congo. Throughout these country campaigns, the evidence has become even more clear that educating girls and advancing their opportunities radically transforms families, communities, and entire nations, helping to end cycles of poverty, improve environmental conditions, and increase health, peace, and prosperity.

The Girl Rising Model

The Girl Rising model is a three-pronged approach: (1) Storytelling; (2) On-the-ground programs; and (3) Movement building.

Storytelling. Girl Rising tells stories about girls who face daunting barriers to their independence – and stand up to them with determination and courage. The original Girl Rising film was translated into 30 languages and dubbed into 8 languages. In addition to the original Girl Rising film, Brave Girl Rising debuted in 2019 in response to the global refugee crisis prohibiting millions of young girls to continue their education. Further, short form content has been developed to be disseminated via social media, and as public service announcements in theatres and on television. Curricula and books are available to encourage young people to be change agents in their communities.

On-the-ground Programs. Girl Rising provides tools and training to local partners to fill a critical gap in their life skills and mind-set change programming. On-the-ground program efforts are underway in the U.S., India, Nigeria, Pakistan, Guatemala, Thailand, Indonesia, Philippines, Vietnam, Argentina, and Kenya.[28,29,30] Globally, over 10,000 teachers are using the GR curricula, with the support of over 35 local partners around the world working to address gender equality. Further, since 2013, over 1 million youth and community members have been reached via community-based programs and screenings of the Girl Rising film.

Through independent evaluations, impact evaluations have been conducted to determine whether the Girl Rising program has achieved its intended outcomes. Girl Rising's impact includes:

- Higher aspirations for girls by both parents and girls
- Improved attitudes towards gender equality amongst boys and girls
- Improved confidence, agency, and decision-making for girls
- Increased enrollment of girls in schools
- Promotion of critical thinking and global citizenship

Movement Building. Girl Rising unites global leaders, celebrities, media influencers and everyday citizens to act as a collective force of positive change for girls. To date, Girl Rising content has broadcasted to over 400 million viewers in over 170 countries worldwide and reaching over 5 billion media impressions. Due to the large following, tens of thousands of grassroots, corporate, and policy leaders have been reached through the hundreds of thousands of screenings worldwide.

Girl Rising's Theory of Change

The Girl Rising Framework depicts how Girl Rising continues to create impact. Girl Rising defines change through the utilization of multiple media platforms, galvanizing the public, and targeting key audiences over an extended period of time through partner programming. The Girl Rising Framework, as seen Figure 6, allows the opportunity for acceptance of wider societies through its multi-level approach and gives context for collective action by its effect on the mental models of individual viewers – pulling specific constructs from all of the aforementioned theories above.

Figure 6. Girl Rising Framework

Girl Rising places a high value on involving partners and participants—those closest to the issues involved—in defining success and establishing evaluation processes that are meaningful and useful to them. Participation is a fundamental value of arts-based civic engagement work. Principles of democracy and equity, and a valuing of stakeholders' knowledge and experience guide cultural workers to engage stakeholders in many major facets of Girl Risings mission.[31] Sharing stories has played a powerful role in creating trust, cultivating norms, transferring tacit knowledge, facilitating unlearning, and generating emotional connections.

Because humans are social creatures and relate best to other people, people are attracted to stories. Telling the story of one person's experience can memorably illustrate improvements or problems in a care pathway, particularly when there is emotional detail or commonalities, in which case individuals tend to hold onto detailed information much more vividly.[3] Coupled with the use of mass media, Girl Rising has been able to build movements to spread the message of girls' education and empowerment to build a bigger and better future for all girls.[3]

An educated girl is more likely to stay healthy, save money, build a business, have fewer and healthier children, innovate community solutions and educate both sons and daughters equally, moving away from traditional social norms. Social norms are an important predictor of health behaviors. Research is consistent with the theory that storytelling performs as an adaptive function through organizing and serving the function of broadcasting cooperative norms.[14] Girl Rising successfully uses entertainment-education as a catalyst for behavior change and effectively used stories to employ the idea of changing cultural norms. Though it has considerably enriched its format, presentation and distribution modes, the media still owes most of its structure and elements to traditional storytelling.[32] Entertainment education has been referred to as the "future of communication in public health," as it inspires healthy behaviors worldwide. Health and social messages being intentionally integrated and woven throughout the storylines, as characters model positive (and negative) behaviors in compelling ways. Characters can inspire audiences to engage in new thinking and change the perception of what is considered normal and socially acceptable behavior. As seen in Girl Rising, storytelling accumulates knowledge and produces infinite hope, allowing listeners to dwell in the endless possibility of what can be accomplished.[6]

VI. Discussion

Measuring Reach & Impact of Storytelling Campaigns

Measuring impact is key to demonstrating that a social enterprise is making a difference through showcasing the results of a program and communicating the outcomes being observed. This is not always a simple endeavor.[33] In fundraising and communications, metrics are set and measuring them can easily establish the success of a certain initiative in order to develop and improve the work. But because storytelling is about making an emotional connection with its audience, it can be more difficult to measure the effectiveness. Most health-related knowledge and/or evidence is largely objective, often referring to statistics and appeals through logic and reason to support a certain practice or health-related behavioral change. Further, the investment in women and girls worldwide is essential to long-term sustainable social change and it is becoming increasingly important for countries and programs to report accurate, timely, and comparable data to funders and

organizations to not only secure funding for expanding programs, but more importantly, be able to use this information to strengthen existing and evolving programs.

Historically, it has always been a challenge to evaluate on-the-ground programs and to measure long-term impact, and significantly more challenging to evaluate mass media campaigns. This challenge has also been seen evaluating and measuring impact in movement building activities such as advocacy, deep grassroots origins, civic engagement, and leadership development. Many nonprofits work in the grey areas and advocating for social justice in these areas requires a significant amount of time, energy, fundraising, and labor cost of the person-to-person contact required in building strong social movements, let alone measuring their impact. Grassroots initiatives depend on the power of organized social movements to spread change. On the flip side, communities with a high level of civic engagement are able to propel forward policies and programs that benefit the community as a whole by focusing on adopting the worldview that everyone deserves equal treatment, rights and opportunities.[34]

The Girl Rising film and campaign experienced unparalleled reach including:

- 6.6M+ Raised for girls' education programs and awareness efforts;
- 5 Billion+ Global media impressions;
- 1,500+ Articles published about Girl Rising;
- 2M+ YouTube channel views;
- 200M+ Households reached during CNN International broadcasts in 100 countries;
- 20,100+ educational, grassroots and corporate screenings reaching 300,000+ people in communities worldwide;
- 147 high-profile screenings for policy leaders, including: Presidents, Education and Finance Ministers, Congressional Leaders and First Ladies; and
- 96/100 TPI (Top media-impact score) awarded by research system, Participant Media, based on the "social impact" of entertainment on its audience.

Further, the film has been translated into 30 languages and there are over 350 global Girl Rising Ambassadors leading change in 60 countries.

In India, *Girl Rising* created a powerful social media campaign, *We Dream, We Rise,* to inspire audiences to reflect on India's daughters, and call attention to age-old gender stereotypes that have gone unquestioned for generations.[35] Told through a positive and uplifting lens, the campaign brought visibility to gender biases that are often internalized by girls and their families. Told emotively, this compelling campaign aimed to challenge viewers, particularly, parents to critically think about these questions. The *We Dream, We Rise* campaign was amplified on social media via celebrity ambassadors and supporters and reached 25 million people globally on social media.

VII. Conclusion

Storytelling is the basic mode of human communication. Narration and storytelling have been used for centuries to influence psychological, social, and political institutions. It is the basis of journalism, how stories are reported, and how people have contributed to human civilization. Building on this tradition, powerful storytelling has also been proven to be an effective strategy to change behavior and shift attitudes if grounded in research and practice as seen above. Traditional health communication campaigns have historically relied on surveys and interviews to gauge the impact of specific campaigns on individuals' attitudes, beliefs, and behaviors. However, many health communication messages are often embedded in pop culture and education and thus the need to rely on non-traditional ways to measure impact has become more essential.

Theoretical models have been tested to validate how stories and media influence social norms, transport audiences, and cause change in diverse fields. And many of these factors are rooted in understanding the development, maintenance, and change of health behavior patterns. Further, social movements typically start on the ground, with the people — springing out of communities united by geography, industry or technology. Some of these causes go on to grow into huge networks with the power to influence significant social change, others left perpetually trying to build and sustain momentum.[34] However, storytelling campaigns coupled with traditional media or social media has the potential to reach millions of people, and to create unprecedented impact. The Girl Rising case study is an example of a successful model that created massive reach through its film and unlocked and unleashed resources and advocacy for girls' education. Further, Girl Rising harnessed the film's influence to create on-the-ground impact by adapting the film and storytelling tools for localized curricula and programs The Girl Rising Framework exemplifies how storytelling, grounded in a theoretical framework, facilitates a powerful role in creating trust, cultivating norms, and generating emotional connections to shift knowledge, attitudes, and behaviors.

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