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A Framework for Using eHealth Interventions to Overcome Medical Mistrust Among Sexual Minority Men of Color Living with Chronic Conditions

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Abstract

The purpose of this paper is to present a stepwise, multi-construct, innovative framework that supports the use of eHealth technology to reach sexual minority populations of color to establish trustworthiness and build trust. The salience of eHealth interventions can be leveraged to minimize the existing paradigm of medical mistrust among sexual minority populations of color living with chronic illnesses. These interventions include virtual environments and avatar-led eHealth videos, which address psychosocial and structural-level challenges related to mistrust. Our proposed framework addresses how eHealth interventions enable technology adoption and usage, anonymity, co-presence, self-disclosure, and social support and establish trustworthiness and build trust.

Keywords

Medical Mistrust; eHealth; Chronic Illness; Sexual and Gender Minorities; HIV

Introduction

The purpose of this paper is to present an innovative framework that supports the use of eHealth technology to reach sexual minority populations of color to establish trustworthiness and build trust. The salience of technology-based interventions can be leveraged to minimize the existing paradigm of medical mistrust among sexual minority populations of color living with chronic conditions. Chronic conditions are the leading cause of death in the United States (US) and have accounted for greater than 70% of all deaths per year.^{1,2} We define chronic conditions as a slow and prolonged course of either communicable,³ or non-communicable,⁴ diseases that may lead to other health-related complications and can adversely affect quality of life.⁵

Non-communicable diseases involving the cardiovascular and endocrine system are the most costly^{6,7} and serious.^{6,8,9} Approximately 150 million persons are living with at least one chronic condition, and close to 30 million persons are living with five or more chronic conditions, such as heart disease, diabetes, kidney disease, and/or lung disease.¹⁰ These conditions disproportionately impact racial and ethnic minority populations.¹¹

Chronic conditions in sexual minority men of color

Human Immunodeficiency Virus (HIV) is a communicable chronic disease that disproportionately affects African American and Hispanic/Latino sexual minority men. Globally, approximately 240 people are infected with HIV every hour,¹² and in the US, 1.2 million persons are living with HIV (PLWH).¹³ Published reports contend that half of sexual minority African American men and a quarter of Hispanic/Latino men will ultimately be diagnosed with HIV in their lifetime.¹⁴

Chronic conditions, such as cardiovascular disease and diabetes, affect PLWH more frequently than persons not living with HIV¹⁵ due to the effects of certain antiretroviral therapies, chronic inflammatory processes, and risk factors like tobacco use.¹⁶⁻¹⁸ The disproportionate burden of cardiovascular disease is highest in men of color,^{19,20} and has been identified as the second most common cause of death in PLWH.^{19,21,22} Specifically, African Americans have the highest prevalence of hypertension, diabetes, and HIV, which are all preventable chronic illnesses.^{14,23} Moreover, type 2 diabetes (T2D) is most prevalent in ethnic and racial minority populations.^{24,25} It was the 7th leading cause of death in 2015.²⁶ Approximately, 10-15% of PLWH have a comorbid diagnosis of T2D.^{27,28} Multiple biobehavioral factors influence the incidence of many of these chronic conditions.

Underutilized health care as a result of stigma, fear, and discrimination

In 2002, the Institute of Medicine report, “Unequal Treatment: Confronting Racial and Ethnic Disparities in Healthcare,” highlighted how preventable illnesses such as cardiovascular disease, diabetes, mental illness, and HIV were disproportionately high in ethnic minority populations when compared to non-minorities because of prejudgments and stereotyping from healthcare providers.²⁹ Sexual minority men of color who are not openly self-identified as gay or bisexual,³⁰ may not want to be “outed” by accessing or receiving care at a LGBTQ community-based health center.³¹ This is due in part to historic structural

and institutional racism that have been longstanding contributors to medical mistrust and perpetual health inequities. Moreover, past experiences with perceived stigma, and misconceptions about sexual activity have left residual fear and discrimination.³²⁻³⁶ The lack of acceptance and training on health issues salient to the LGBTQ community has affected health care access, utilization, and outcomes.³¹

Previous work has substantiated some root causes of HIV health disparities as being individual and structural-level factors.³⁷⁻⁴⁰ These factors include real and perceived racism, sexual orientation discrimination,⁴¹ healthcare provider discrimination and its resulting impact on health care utilization,³⁷⁻³⁹ and access to reliable health information. As these barriers persist, sexual minority men of color continue to live in silos and use their own social networks for support and guidance on how to best care for their health conditions. Because of this, sexual minority men of color living with HIV are at alarming risk of additional HIV-related chronic conditions. The deteriorating cumulative effects (“weathering”)⁴² of living with HIV, not having access to reliable health information, and possible development of HIV-related cardiovascular, and metabolic disease can be profoundly life threatening.

Understanding historic and present-day enablers of mistrust

We define mistrust as engendered beliefs by an individual that the intentions or motives of another person are misaligned with the priorities of the individual and perceived as harmful.⁴³ In this paper, we refer to mistrust/distrust interchangeably.⁴⁴ Mistrust can impact health promoting behaviors, healthcare utilization, adherence to prescribed treatments, and participation in research.⁴³ Persons of color are fundamentally distrustful because of the extensive racism and discriminatory practices and experiences, beginning with the Transatlantic Slave Trade,⁴⁵ to the Jim Crow Laws, and continuing with the longstanding ethical abuses in both human subjects and health care services⁴⁶⁻⁵⁰ that are still evident and have resulted in well-founded conspiracy beliefs.^{46,51} Mistrust continues to impact the lack of health equity and health outcomes of minority populations today. Health inequity is the systemic, potentially avoidable difference in health, or in the major socially determined influences on health between groups of people who have different relative positions in social hierarchies according to wealth, power or prestige.⁵²

Additional enablers of mistrust in ethnic, racial, and sexual minority populations include microaggressive behaviors and political incivility. Microaggressions (derogatory, invalidating, oppressive snubs)^{53,54} in research and health care services have also contributed to substantiated feelings of mistrust.⁵⁵ Political incivilities (rude, threatening, insulting commentary or behaviors based on ideological biases) have created mistrust within both Latino US citizens/legal residents and undocumented Latino communities.⁵⁶ For example, in recent years, political incivilities towards Latinos have resulted in a negative impact on research participation and study retention.⁵⁶ Fear of discrimination, and in some instances deportation, has led to challenges maintaining contact with and enrolling new research participants.^{56,57} Pernicious historical events have created a macrocosm of multi-level complex problems.

The consequences of mistrust on health status

The consequences of mistrust on health-related outcomes are harmful. Psychosocial stressors, such as perceived stigma and racism, have led to feelings of mistrust of the health care system and a decreased motivation towards health seeking behaviors.^{19,55,58} There is a growing amount of literature finding plausible associations between chronic psychosocial stress from discrimination and subsequent changes in physiological and behavioral responses to disease susceptibility and incidence.^{59,60}

Sexual minority men of color encounter discrimination for being both a sexual minority and for being a person of color. Published reports suggest that sexual minority men of color who experienced incidents of discrimination did experience psychological distress.^{61,62} Findings from a meta-analysis of 105 studies suggested that racial/ethnic discrimination resulted in negative health outcomes.⁶³ African Americans are at increased risk of hypertension due to chronic stress exposure.⁶⁴ A multi-site cohort study of ethnic/racially diverse participants was the first to identify that experiences of discrimination were associated with T2D incidence.⁵⁹ The chronic stress induced physiologic changes that resulted in hyperglycemia.⁵⁹

In another study of persons living with T2D, findings suggested that discrimination-based chronic stress may lead to poor glycemic control and exacerbation of the disease.⁶⁵ Moreover, adverse behavioral coping strategies, such as smoking and loss of control over eating, have been used by persons of color to mitigate the effects of discrimination-based chronic stress.^{59,66,67} Discrimination based on sexual orientation in minority men was also associated with HIV-risk taking behaviors.⁶⁸

Overall, one can posit that constant exposure to discrimination increases the stress response, or allostatic load, on the cardiovascular and metabolic systems and thereby increases the risk for cardiovascular disease, diabetes incidence, and poor glycemic control.^{42,59,60,64,65} The effects of discrimination on health are deleterious and understandably lead to the cycle of decreased trust and lack of trustworthiness.

The role of trustworthiness and trust

Trustworthiness and trust are essential to enhancing participation in research and facilitating health care utilization.⁶⁹ Trustworthiness precedes trust. Trustworthiness is the demonstration of integrity by an individual;⁶⁹ and the belief that they will tell you the truth.⁷⁰ It is a demonstrated assurance of protection from harm.⁶⁹ Trustworthiness must be established before trust can be expected. Conversely, repeated violations of trustworthiness have resulted in hesitation and /or refusal by persons of color to trust human subjects and health care venues.⁷¹ A reliable blueprint to assure trustworthiness in less advantaged populations remains elusive in the presence of persisting inequities. Trust is established over time⁴⁶ and is founded on transparency in communications and intentions.⁶⁹ Trust is a continuous interaction that symbolizes verification of honesty, reliability, and confidence.⁶⁹ All too often, trust is expected before trustworthiness can be established.

With the understanding of how the products of mistrust have adversely shaped health outcomes in sexual minority populations, new efforts must be directed at establishing trustworthiness and trust through non-traditional approaches. To increase accessibility of trusted forms of health-information and to facilitate health promoting behaviors, we contend that strategies utilizing eHealth technology are a good approach to address mistrust. Therefore, we introduce an innovative framework using eHealth technology to reach sexual minority populations of color, begin to establish trustworthiness, and build trust in health-related information and health promotion behaviors.

The salience of eHealth technology

Ubiquitous computing, or the availability and use of technology everywhere,⁷² is changing the paradigm of in-person health care and research interactions.⁷³ According to findings from the 2018 Pew Research Center reports, 75% of African American and 77% of Latino adults own a smartphone.⁷⁴ Smartphone ownership in US adults ages 18 through 64 is greater than 70%.⁷⁴ In families with an annual household income of less than \$30,000, almost 70% own a smartphone device.⁷⁴ Smartphone functionalities (internet access, downloading content, video chatting, and gaming) enable users to interact with their phones much like they would a standard computer. As such, research and medicine have shifted towards utilizing eHealth technology to promote health behaviors and lifestyle changes.^{75,76}

eHealth broadly refers to the advantageous use and access of online technologies to facilitate health education, information, and social support in order to prevent or self-manage chronic illness.^{77,78} eHealth is advantageous for hard-to-reach, marginalized populations, such as sexual minority men of color. It is a means of obtaining health-related information discreetly and privately to increase knowledge or enable health.

Virtual environments are one modality used in eHealth. Virtual environments are interactive virtual spaces where individuals can actively learn and practice health promoting behaviors and life skills that can be directly translated to the real world,⁷⁹ and they have been successful in motivating and engaging users with points, badges, rewards, and other incentives.⁷⁶

Virtual environments have been used in research to intervene with patients for self-management of diabetes,⁷⁹⁻⁸¹ smoking cessation,⁸² HIV medication adherence,⁸³ and prevention of HIV risk behaviors.^{84,85} However, a promising and innovative application is the use of eHealth to decrease medical mistrust and establish trustworthiness and trust among sexual minority men of color. We present a stepwise ascending framework to broaden understanding of how utilizing eHealth technology can increase trustworthiness in order to establish trust.

A proposed stepwise multi-construct framework towards trustworthiness and trust using eHealth technology

Two types of eHealth technologies we will discuss are virtual environments and avatar-led eHealth videos. Virtual environments are 3-dimensional, computer-generated interactive

spaces.⁸¹ Users interact with other persons online, usually in the form of an avatar (computer-generated representation of a human).⁸¹ Avatar-led eHealth videos are interactive vignettes that utilize avatars to convey storylines on sensitive topics.⁸⁶ Both types of eHealth technologies provide many benefits to users and can promote engagement without the stigma associated with face-to-face encounters. The benefits of utilizing eHealth technologies, such as virtual environments, include anonymity, co-presence, self-disclosure, and social support. Adoption and usage of eHealth technologies are expedient and promising given the broad appeal to varying age groups, backgrounds, and levels of technological experience.

Anonymity is a primary reason for the success of virtual environments in attracting users for participation.⁷³ Anonymity refers to the act of remaining electronically unidentifiable and un-linkable among a group of persons with similar attributes to escape social and societal convention or persecution.^{87,88} Anonymity can decrease barriers to engagement in health-seeking behaviors,³¹ increase access to sources of reliable health information, and support health enhancing behaviors that can be transferred to real-world situations.⁸⁰ For example, fear of discrimination and being “outed” as a sexual minority or for living with chronic illness is plausibly lessened from anonymity provided through a virtual environment.⁸⁰

Virtual environments can enable the feeling of being virtually present (presence) or virtually co-present (co-presence) with others through capabilities like synchronous voice communication and avatar representation of self.⁸⁹ Co-presence in virtual environments is associated with higher levels of engagement and enjoyment in learning, as opposed to solely playing against a computer.⁹⁰ Anonymity and co-presence foster self-disclosure. Self-disclosure is the sharing of personal information about oneself^{91,92} and is an antecedent to achieving close relationships and supportive interactions with others.⁹⁰

A significant end-product of anonymity, co-presence, and self-disclosure is social support. Social support is attained when persons of similar circumstances share information and resources with the intent to increase a sense of well-being. A large body of evidence suggests that meaningful relationships or social supports are associated with lower rates of morbidity and mortality.⁹³⁻⁹⁵ In the case of a virtual environment, users interact anonymously with each other. They engage in virtual, but often synchronous, voice-conversation, and because they are similar in some aspect, they are able to relate to each other’s social, health-related, or cultural concerns.

Eysenbach proposed additional meanings for the “e” in eHealth to advance the term beyond a general definition of the usage of the internet to facilitate health-related knowledge, support, and management.⁷⁸ A few characterizations of the additional “e’s” include enabling, easy-to-use, entertaining, encouragement, ethics, empowerment, extending, education, and equity.⁷⁸ Table 1 illustrates our ascending framework constructs, their relationship to eHealth⁷⁸ characteristics and its application to trust.

We have adapted aspects of the definitions to apply them in our framework as it relates to the eHealth virtual environment. Enabling refers to the exchange of information or communication in a standardized way.⁷⁸ Easy-to-use refers to technology use that is free of

effort.⁹⁶ Entertaining refers to interface design intended to spur gratification and enjoyment.⁹⁷

Encouragement refers to embarking on a new relationship free of social or societal convention.^{78,88} Ethics refer to the privacy issues inherent to the usage of eHealth.⁷⁸ Empowerment refers to the accessibility of health information and informed choice.⁷⁸

Extending refers to the limitless geographical boundaries and meaningful relationships that are built in eHealth.⁷⁸ Education refers to the tailored health information and education tools that are available.⁷⁸ Equity refers to the availability of professional resources, tools, and health information that are not traditionally ubiquitous in marginalized populations.⁷⁸

Here, we provide two research exemplars of how our framework towards trustworthiness and trust can be used in the context of two distinct eHealth intervention studies (Figure 1). The two studies reported below are meant to illustrate how our framework constructs of adoption and usage, anonymity, presence/copresence, self-disclosure, and social support can be used in e-Health interventions to establish trustworthiness and build trust in sexual minority populations living with chronic illness.

eHealth Exemplar 1: Virtual environment for diabetes self-management and support

Trustworthiness in health promoting behaviors

The goal of the Diabetes LIVE (Learning In Virtual Environments) intervention was to provide a simulated community for participants living with diabetes to self-manage their condition. This included: accessing resources, virtually engaging with peers, and attending synchronous sessions with a diabetes educator or a health professional who could address their questions or concerns.⁸¹ Preliminary work conducted in a one group feasibility pilot study (SLIDES – Second Life Impacts Diabetes Education and Support) informed the development of LIVE and demonstrated that among a small pilot group of patients with diabetes, perceived support increased, and some participants formed longer term supportive relationships with each other and the health professionals.^{80,89} The analysis of the qualitative data collected in SLIDES⁸⁹ highlights the potential value of virtual environments in addressing trust among those living with chronic conditions, including diabetes, heart disease, and HIV. Lewinski found that the ties between many participants evolved and became stronger (i.e., closer) and that the personal nature of the narratives shared regarding living with diabetes also increased over time.⁸⁹ These indicate a high level of trust of peers and providers in the virtual environment by participants. In exemplar one, a virtual environment for chronic illness self-management supports our innovative ascending framework towards trust as follows:

- **Adoption/usage** - In SLIDES, of the 20 participants, 14 came into the site on a regular basis (i.e., at least weekly) for at least the first 3 months; and a subgroup of 6 maintained participation in the site as a group for a full 6 months.⁸⁰ Self-report perceived ease of use and usefulness were rated as moderate to high by participants at baseline and remained similar over time at 3 and 6 months as

determined by validated questionnaires.⁸⁰ This demonstrates that most of the participants used and maintained usage of the VE over time.

- **Anonymity** – Participants in both SLIDES and LIVE studies used pseudonyms when logged into the sites. They could modify the appearance of their avatars in terms of body shape and size, hair color/style, and clothing. The VE could be accessed in a private setting without disclosing the identity of the user.
- **Presence/co-presence** – Presence and co-presence were rated as moderate to high by participants in SLIDES using validated self-report questionnaires. Participants felt a sense of truly being there with others, based on discussions about avatar appearance and their self-representation among the group.
- **Self-disclosure** – Some participants appeared to bond with each other based on their consistent attendance at weekly classes and support sessions. Conversations increased over time in terms of the depth and personal information.⁸⁹ Statements by participants to study team members directly indicated that they did not want the intervention study to end.⁸⁰
- **Social support** – Support for diabetes self-management increased significantly over the 6 months of participation in SLIDES (mean score 4.61 to 6.35 over 6 months on a scale of 1-7; $p=0.002$).⁵⁷ Supportive relationships were also noted in the qualitative data findings from the interactions in SLIDES. This will continue to inform the use of virtual environments such as LIVE among those living with other chronic conditions.

eHealth Exemplar 2: Avatar-led eHealth videos to increase knowledge of PEP and PrEP for HIV prophylaxis

Trustworthiness in reliable sources of information

The goal of the avatar-led eHealth video study was to increase awareness, knowledge, and uptake of pre-exposure (PrEP) and post-exposure (PEP) HIV prophylaxis.⁸⁶ The avatar-led eHealth videos were created as a way to engage individuals in an accessible research intervention while decreasing the stigma associated with sensitive topics, such as HIV. The avatar-led eHealth video consisted of two parts. In Part 1, the storyline described two friends in the emergency department. One of the friends was potentially exposed to HIV.⁸⁶ During this scene, the emergency department physician discusses the benefits and rationale for initiating PEP, based on the risk of HIV exposure. At the end of the scene, the character is returning for follow-up at the hospital where her PEP treatment was started 28 days ago.

In Part 2, the storyline addressed two different friends, one of whom is discussing concerns about the lack of monogamy in the relationship.⁸⁶ The character is encouraged to discuss these concerns with a clinician. In the following scene, the clinician explains how PrEP can be used in non-monogamous relationships and in relationships where one of the partners is living with HIV. The clinician goes on to describe other aspects to consider when starting PrEP, such as routine laboratory testing, side effects, and cost. This information is empowering for the character and enables an informed decision to be made.

Findings from the study suggested that only 18% of participants had heard of PrEP and 22% had heard of PEP prior to viewing the avatar-led eHealth video.⁸⁶ This was in a sample of 91 African American women with a reported annual household income of greater or equal to 50 thousand dollars and more than half having completed a college degree. This is notable because it highlights how eHealth interventions aimed at PrEP and PEP have not been accessible in some minority populations despite socioeconomic status.⁸⁶

In exemplar two, the avatar-led eHealth video supports our innovative ascending framework towards trust as follows:

- **Adoption/usage** – The avatar-led eHealth video was accessible online and took a total of 9 minutes to complete.⁸⁶
- **Anonymity** – The avatar-led eHealth video could be accessed in a private setting of choice without disclosing the identity of the viewer.
- **Presence** – The avatar-led eHealth video was very engaging due to inclusion of characters that were phenotypically relatable. Because the storylines were culturally tailored to relevant issues in the community, viewers could identify with the protagonist, thus creating an experience of presence.⁸⁶
- **Self-disclosure** – Greater than half of the participants reported that they would actively seek out PrEP and PEP if ever necessary. This demonstrates that the avatar-led eHealth video could reduce barriers to self-disclosure of the need for PrEP and PEP with clinicians and peers.⁸⁶
- **Social support** – Findings from this study suggested that participants would recommend the avatar-led eHealth video to their peers. This enables social support as peers rely on each other to navigate ambiguous situations.⁸⁶

Discussion

The purpose of this paper was to present an innovative framework to support the use of eHealth technologies, such as virtual environments and avatar-led eHealth videos, to reach sexual minority populations of color to establish trustworthiness and build trust. We provided a detailed description of how sexual minority men of color are at high risk of chronic conditions. We highlighted this population's burdensome predisposition to chronic illness via discrimination-based chronic stress. We then identified linkages between biobehavioral predisposition and discrimination-based predisposition. Finally, we presented two examples of how our framework towards trustworthiness and trust can be used in the context of two distinct eHealth intervention studies.

The concept of establishing trustworthiness and trust using eHealth has tremendous implications for bridging relational divides between researchers, patients, and clinicians. As researchers and clinicians, we need to open ourselves to “*check and clarification*” from our patients and participants with regard to our communications and intentions. Using language or vocal tone that is from stereotyped modern vernacular is a form of microaggression^{98,99} – even with the best of intentions. Trustworthiness and trust are not established because of the ability to “relate” in stereotyped language, vocal tone, or popular culture. Rather, it is

established and built on authenticity, respectful interaction, clear, honest, and thorough explanations, and consistent provision of the power of choice on behalf of the participant or patient.^{31,56} Trust needs to be earned as participants and patients determine our trustworthiness and then take a risk and give us their trust. Lars Hertzberg stated, “Trust is always for something we can rightfully demand from others: misplaced trust, accordingly, is not a shortcoming on the part of the trustful person, but of the person in whom the trust was placed.”¹⁰⁰

In order to move forward, while respecting the fact that we are not trusted until we establish trustworthiness, we must adjust the way in which we interact, recruit, conduct research, and provide care. As clinicians, we should consistently ask clarifying questions about a patient’s name and gender preference and not assume sexual promiscuity or HIV serostatus based on sexual orientation.³¹ When conducting research, relationship building is essential. This can be established by demonstrating cultural competence, fostering confidentiality with sensitive information, and assuring privacy during data collection encounters.³¹ It is also vital to lay the foundation for trust and rapport through the use of community health workers,⁵⁶ faith-based organizations,⁶⁹ and research or health care staff who resemble the community being recruited or for whom care is given; as these entities have presumably proven themselves trustworthy.⁶⁹ Moreover, appropriate remuneration for study participation should be offered since participation may take place during work hours or family time.^{56,69}

eHealth may provide platforms to reach more diverse populations for health interventions. Persons residing in the US of varying income levels, age ranges, and race/ethnicities own a smartphone. This speaks to the *growth in accessibility* of technology and the *progressive ubiquity* of eHealth as a plausible strategy to establishing trustworthiness in hard-to-reach populations, such as sexual minority men of color. As such, researchers must engage participants in contributing to eHealth interventions in terms of their perceived needs since this is necessary for trustworthy interventions.

Equitable electronic access to credible sources of health-related information is a step in the right direction to addressing health disparities in the digital era. However, research and health care should not solely rely on remote technological interactions. Personal face-to-face interaction, even in the digital era, will always be the cornerstone that differentiates being trustworthy from that of having a sustainable trusting relationship with patients and participants.

Lastly, research findings should be disseminated at timely intervals to the study participants. Participants want to know how their contribution has impacted new knowledge or practice. If we take (collect data), we must also give back (disseminate to the community). This is critical in an effort to move from trustworthiness to a place where we are extended the privilege of trust.

Conclusion:

eHealth technology can be leveraged to dismantle some traditional elements of medical mistrust and help translate trustworthiness into trust. Elements of eHealth technology can

promote engagement through adoption and use, anonymity, co-presence, and social support in populations who have historically experienced stigma and mistrust. Changing the paradigm of medical mistrust is vital and plausible.

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Figure 1.
Ascending model of how eHealth can enable stepwise progression towards trustworthiness and trust in a virtual environment.

Table 1.

Ascending Framework Constructs – Relationship to eHealth Characteristics and Application to Trustworthiness and Trust.

Framework Construct	eHealth Characteristic ⁷⁷	Application to Trustworthiness and Trust
Adoption and Usage	Enabling	Using technology to communicate on a common platform with others
	Easy-to-use	Reducing barriers to eHealth by creating an interface that requires minimal cognitive effort
	Entertaining	Making eHealth fun and enjoyable
Anonymity	Encouragement	Feeling secure about interacting with others virtually
	Ethics	Protecting one's rights to privacy
Co-presence	Empowerment	A feeling of liberation to be virtually among socially or culturally similar persons
Self-disclosure	Extending	Having a sense of security in the virtual environment to allow private conversations to occur and meaningful relationships to grow
Social Support	Education	Accessibility to likeminded peers to foster growth, knowledge, and health promoting behaviors
	Equity	Having full access to professional services, peers, and information that can be used to better one's health