FULL LENGTH MANUSCRIPT

In the Interest of Time: Assessing the Role of Resilience Across an Intergenerational Sample of People Living with HIV

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Abstract

Background Biomedical advances have improved the quality of life of people living with HIV (PLWH); however, barriers to optimal well-being remain. A key feature in understanding the lived experiences of PLWH is resilience. The concept of resilience is quite complex in terms of its antecedents and expressions, suggesting the need for more nuanced understandings of how it could be harnessed to better support this population.

Method The concept of resilience was explored in a qualitative study involving 22 PLWH, selectively sampled by era of diagnosis. Through interviews focused on context and experiences of living with HIV, the sample highlighted resilience processes corresponding to *Positive reappraisal of life events*, *Positive reappraisal of self*, and *Community as resilience*.

Results Participants who have lived with HIV longer more commonly described engaging in *psychological* processes of resilience, whereas those who were more recently diagnosed reported engaging in more *social* processes. However, these processes were not mutually exclusive and the ability to perform resilience through community seems to be key to optimizing outcomes, irrespective of era of diagnosis.

Conclusion PLWH are a heterogeneous population where engagement in distinct processes of resilience may have important implications for optimal social and health outcomes. Better understanding of the distinct and diverse pathways through which PLWH engage in resilience may inform interventions promoting optimal well-being.

Keywords Stress and coping · HIV · Resilience · Reappraisal · Aging

Introduction

In the early years of the now five-decade-long HIV epidemic, people living with HIV (PLWH) faced an uncertain disease course, substantial disability, and multiple bereavements [1–4]. Since the advent of highly active anti-retroviral therapy (HAART) in 1996, HIV has been transformed into a manageable, chronic illness [5–8]. Due in part to biomedical

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treatments being highly effective and well tolerated [9–11], approximately 45% of PLWH are over 50 years of age [12].

The profound biomedical advances in HIV treatment have had distinct social and psychological consequences. For example, a substantial number of those who lived through the early days of the epidemic experienced enduring negative effects of multiple, repeated traumatic events related to HIV [1, 13] that have been referred to as an AIDS Survivor Syndrome [14]. Although those more recently diagnosed with HIV face a manageable, chronic medical condition, there are enduring barriers to optimizing health and well-being such as poverty, stigma, discrimination, trauma, and psychiatric comorbidities [6, 10, 15].

In the face of this adversity, PLWH as well as their communities have repeatedly demonstrated unprecedented resilience and thriving [16]. Moreover, evidence indicates that these effective coping strategies are both psychological and social in nature [16, 17]. Positive psychological factors such as personality traits, finding meaning, and positive affect are important intrinsic processes that foster resilience and health

among PLWH [18, 19]. At the same time, social factors such as social support and community mobilization are crucial to mitigate the effects of multiple, overlapping sources of adversity such as stigma that impact the day-to-day experiences of PLWH [20–22]. Further understanding resilience as a multi-level process consistent with the heterogeneity of the human experience could help reframe it as a more advantageous feature of interventions tasked with ameliorating the burdens of an HIV diagnosis. Recent research has understood resilience, particularly among PLWH, as necessitating a more multi-level approach to attend to broader structural factors, prioritize the role of contextual features (i.e., local politics, neighborhood resources, etc.), and assess successfully living with HIV beyond standard medical markers such as viral suppression and medication adherence [23, 24].

Revised Stress and Coping Theory posits that affective and cognitive mechanisms assist in the development of adaptive responses to adverse events [25], as well as underscoring the role that stress antecedents play in social and psychological resilience factors [26–28]. Resilience often emerges through cognitive and behavioral coping responses to the stress of living with HIV [28]. Most importantly, successful adaptation among PLWH is driven in part by cognitive reappraisals of stressors and problem-focused coping to manage stressful circumstances [28]. There is also increasing recognition that these and other resilience processes may be associated with the absence of negative outcomes following stressful life events such as trauma and bereavement [29, 30], as well as the experience of post-traumatic growth [31, 32]. Despite these theoretical and empirical advances, there continues to be debate surrounding the optimal combination of social and psychological facets of resilience, as well as the mechanisms whereby distinct features of resilience may optimize health and well-being among PLWH [16].

The fields of HIV and resilience studies need to recognize the generational heterogeneity of PLWH. Consistent with scholarship on the life course, it is important to recognize the human experience as it is informed by both the historical time (e.g., calendar year) and the timing of life (e.g., developmental stage) in order to best assess the impact that adverse events may have on future outcomes [33]. In the case of PLWH, it would be relevant to observe differential resilient processes related to era of diagnosis, to attend to both historical time and the development of HIV as both a medical and social phenomenon. In addition, recent literature has suggested differential experiences of coping with HIV by function of age and developmental stages. For instance, younger PLWH report currently experiencing higher levels of HIV-related stigma and discrimination than their older counterparts [34, 35]. In addition, older people living with HIV seem to develop more individual-level strategies to cope with their diagnosis [36]. Lastly, a recent study [37] with Black men who have sex with men living with HIV indicates that younger participants reported lower HIV medication adherence, which was associated with their substance use.

The overarching goal of this qualitative study is to characterize key social and psychological processes of resilience among PLWH who experienced their diagnoses and related coping during different stages of the HIV epidemic. Using Constructivist Grounded Theory and Narrative approaches, we specifically examined whether and how resilience processes differed as a function of the era in which people were diagnosed with HIV, anticipating diverse experiences related to the psychological and social nature of resilient factors.

Method

Procedures

The qualitative data utilized for this study emerged from a mixed methods longitudinal study based in San Francisco, CA. The study's primary sample consisted of 108 participants that were enrolled at a non-profit agency offering vocational rehabilitation for PLWH from December 2010 through January 2012. After providing informed consent, participants completed a baseline assessment at the vocational rehabilitation program site, further details of the study can be found elsewhere [38]. Twenty-two participants were purposively sampled out of the 108 participants to complete in-depth semi-structured interviews to explore themes relevant to their HIV diagnosis, experiences around Supplemental Security Income (SSI)/Social Security Disability Insurance (SSDI) benefits, and vocational rehabilitation goals. The research team was particularly invested in eliciting narratives consistent with participants' coping strategies regarding experiences of living with HIV and navigating social and vocational rehabilitation services. Interviews were conducted by four team members, all of whom held graduate degrees at the time and had prior experience conducting qualitative interviews. The interviews took place at the agency where participants were receiving vocational rehabilitation services and lasted between 1 and 2 hours, on average. Participants were reimbursed with a $50 preloaded debit card during each visit. All study procedures were approved by the Institutional Review Board at the University of California, San Francisco.

Originally, the study's purposive sampling criterion was meant to include three groups based on time of HIV diagnosis: (1) recently diagnosed (i.e., within the past 2 years); (2) diagnosed post-HAART (i.e., after 1996); and (3) diagnosed pre-HAART (i.e., before 1996). However, given that the parent study's sample skewed older, very few participants sampled for this qualitative sub-study qualified into the "Recently diagnosed" category; thus, the team decided

to merge that category with the "Diagnosed post-HAART" one. The questions in the interview guide were organized in a thematically relevant manner and featured probing opportunities for interviewer and interviewee to expand upon statements and experiences. The interview guide queried about participants' personal background, context and experiences of living with HIV, perceptions around disability benefits, past and current work history, vocational goals, and expectations regarding vocational rehabilitation services. Theoretical and a priori thematic saturation were achieved during the interviewing process, as the vocational rehabilitation-based themes contributed to theory development and exemplification [39]. At this stage, the research team had already enrolled one-fifth (22/108) of the original research sample into this qualitative sub-study, consistent with the achievement of thematic saturation.

Qualitative Analyses

The qualitative analyses utilized a triangulation [40] of methods, which allowed us to invite further rigor into our analytical activities through the utilization of diverse methodologies [41, 42]. In addition, it helped to mitigate bias and avoid assigning the bulk of the study's findings upon one insulated set of observations [40]. Three team members reviewed, coded, and analyzed verbatim transcripts of interviews initially using a Constructivist Grounded Theory approach, later supplemented by Narrative Analysis, as described below [43, 44]. The qualitative software program Atlas.ti was used as an organizing tool for managing the interview transcripts. Specific quotes and concepts were examined through iterative and recursive processes of review, to ensure careful consideration of the meanings and patterns embedded in the data. To enhance trustworthiness and rigor in the creation of the codebook, team members worked individually and in pairs to review, challenge, and refine code definitions and proposed typologies. The use of Grounded Theory-driven *cross-case* coding was supplemented by *within-case* exploration of each interview —guided by principles of Narrative Analysis — with the goal of holistically illuminating participants' perspectives related to resilience, to enrich our understanding of meaning-making in context [45, 46]. This dual approach to analysis strengthened the methodological rigor of the examination of interview transcripts and enabled the research team to view the data from multiple perspectives.

In addition to the qualitative codebook, a narrative summary was created for each interview transcript, following the principles of Narrative Analysis [47, 48]. The creation of these participant-specific narrative summaries enabled the research team to identify a "story arc" for each interview — that is, a characterization of lived experiences described holistically within the context of

participants' own constructions of meaning. Each narrative summary contained two components: a holistic story-arc as described above, along with a recap of key resilience-related themes that were associated with the resilience-related events, or meaning-constructions for each participant. Despite the interview guide not including questions that explicitly asked about resilience, the utilization of both Constructivist Grounded Theory and Narrative Analysis approaches allowed for the data analysis activities to identify mechanisms consistent with resilience. This approach is particularly consistent with Constructivist Grounded Theory, which presents amenable conditions wherein participants' voices are further elevated in the analysis process [43, 49]. The aforementioned activities align with the qualitative methods field's expectations to engage with complex methodologies, develop thick description, achieve practical goals, and deliver it all in a coherent manner [42]. This iterative process resulted in the identification of three themes that captured the experiences that participants had with regard to identifying, enacting, and sustaining resilience processes.

Results

Demographics

The ages of the 22 participants ranged from 25 to 58 ($M = 43$; SD $= 9.9$). Sixteen of the participants (73%) identified as cisgender men, five (23%) as cisgender women, and one (4%) as a transgender woman. Eleven (50%) identified as White, four (18%) as Hispanic/Latinx, four (18%) as Black, and three (14%) as Multiracial. Only three (14%) of the participants self-identified as exclusively heterosexual. Among the 22 participants, 12 (55%) were diagnosed in the HAART era, and 10 (45%) were diagnosed prior to the advent of HAART.

Themes

For the purposes of this study, the research team focused on themes that encompassed processes that were consistent with cognitive, relational, and institutional engagement around participants' narratives on resilience related to experiences of living with HIV, as well as navigating a variety of social services and experiences. The iterative, inductive analysis resulted in three comprehensive themes that captured participants' shared narratives: *Positive reappraisal of life events*, *Positive reappraisal of self*, and *Community as resilience*. The proceeding findings are accompanied by pseudonyms, in order to protect participants' identities.

Positive Reappraisal of Life Events

One of the key features of resilience present throughout participants' narratives was the notion and the capacity to positively reappraise a stressor. The analysis surfaced this theme more consistently and explicitly from the participants diagnosed pre-HAART. For instance, narratives from participants diagnosed with HIV during the earlier stages of the epidemic conveyed how positive reappraisals contributed to identifying beneficial aspects to living with HIV and an enhanced present-centered awareness:

> It's a big question. I mean, [HIV] affected me in a lot of ways. I'm mostly grateful for it, because it makes you more aware of your mortality in this time and space. So, you have to be living in the moment more than you would be if you're not facing a supposedly fatal disease. So, that's how it is in my mind and I saw so many people die right away, because almost everyone died and I was only 30 years old. Coming out on the other end of it, you realize that it's a gift in that, even though your life didn't turn out the way you thought it was going to be, you know, at least you had a life and unless you're living in the moment, you're really not living and I escaped that. So, I feel very lucky. I feel very lucky. (Arthur, diagnosed pre-HAART) .

Experiences such as Arthur's allude to the recognition of a turning point, wherein participants were able to rate their quality of life as a satisfactory one, mainly as a feature of having been able to *live* a life in the present moment. The context and the referenced lost lives grant further potency to a discourse of survivorship and resilience present among many other participants diagnosed pre-HAART. Positively reappraising health as a marker of success was unequivocally important to participants, as exemplified by the following narrative:

> But I was in a lot of pain. And that's when I went to my doctor right away. I got on medication and I signed up for some classes, and that's when I started my re-training, because I needed to do something to prove to myself that I could still think and function and learn, and I needed to get out of the house. So that was a very good move. (Mason, diagnosed pre-HAART).

This account underscores the self-appraising processes of those assigned a sick role, particularly as experienced by participants diagnosed before the advent of HAART. The use of the term "re-training" is consistent with the core theme of reappraising, a process which contributed to engagement in meaningful activities, facilitated by the re-assessment of their ability to perform in different life domains, despite their diagnoses. The ability to reappraise one's life experiences also emerged as an important source of resilience in

the form of self-compassion that buffered against feelings of regret or shame:

> And I've led a very unconventional life. I've done a lot of different things. I've tried a lot of different things. I don't begrudge myself any of these experiences, really. It's just made it more challenging to go from here. (Mario, diagnosed pre-HAART).

Participants who have lived with HIV over extended periods of time tended to report finding success by reappraising their decision-making processes through a lens of self-awareness and self-acceptance. Being diagnosed during the early stages of the epidemic equipped participants with the ability to assess their accomplishments in the context of their diagnosis and credit themselves for thriving in spite of it. The reappraisal of negative events seems to have resided most prominently in the psychological sphere for participants diagnosed pre-HAART. However, for participants diagnosed post-HAART, building identity through community seemed to serve as a resilience-based reappraisal process:

> For about the next two weeks [after receiving news of the diagnosis], I woke up almost immediately with the thought, 'Fuck. I'm HIV + '. That was the first thought in my head every day, and it was really depressing. And I started talking to people. I'd come out to a few people about it, and more and more after almost a week I was able to share it at group level in an AA meeting, and be able to talk about it, and listen to other people who had been through it, and let them give me suggestions. And from there it got kind of easy. (Rich, diagnosed post-HAART).

Part of the process of reappraising the inherently negative response and internalization of an HIV diagnosis was contingent on individuals' ability to communicate their experiences, as well as to forge and sustain social networks. This narrative suggests that the cognitive process of shifting negative attitudes about their HIV diagnosis, as well as their selves, was often aided by the access they had to peers that shared their experiences, and by default, congruent identities.

Positive Reappraisal of Self

All participants described a shift in their identities related to the experience of living with HIV and other concurrent stressful life events. Participants described stress related to recent unemployment, navigating the process of enrolling in disability benefits, and disclosure of sexual or gender minority identity, as well as HIV status, among others. These events prompted many participants to alter self-appraisals to optimize well-being. For example, while many participants

were expected to orient their identities based on systems of care and social services, engaging in a process that underscored their self-worth in the context of life stressors often translated into resilient features:

> A lot of places want you to play victim. And this place [vocational rehabilitation agency] wants you to be independent. They want you to recognize that you can have HIV and you can live a full life. You can work, you can be employed. And other places want you to just collect benefits and become complacent with living on SSI. I think that this place encourages people to look beyond SSI. And I really like that. I've been so overly-stigmatized, I don't really have the stigma anymore. It's like, I'm just glad to be here and I don't really care what anyone thinks about me or my HIV, really. (Bianca, diagnosed pre-HAART).

Some participants conveyed acceptance of their HIV status as a way to combat the compounded stigma they had been subjected to for many years. This process towards acceptance was facilitated by institutions that promoted holistic well-being, rather than only focusing on navigating overly-complex social service systems. Reclaiming this stigmatized identity led to feelings of positive emotions such as happiness and gratitude. Other participants, however, described active efforts to reject disclosure of stigmatized identities related to medical disability:

> If they're [a potential employer] going to want to know what the nature of my disability is -that's one of my concerns, because I don't want to have to tell them what that's all about. I don't think that has bearing on what my job function or my performance capability is. (Logan, diagnosed pre-HAART)

This narrative illustrates many PLWH's intention to reject a "disabled" identity. This participant's desire to present as efficient and self-sufficient superseded the consideration of the social services he was entitled to. For him, and many others, HIV only had a role in his sexual and intimate relationships, and he seemed to have had no problem disclosing his diagnosis and embodying that identity in those specific contexts.

The stress of living with HIV can manifest in myriad ways. The following narrative underscores the role that social services had in allowing participants to differentiate between the cognitive and affective ways in which their diagnosis impacted their well-being:

> Emotionally, in fact, even when I did the first intake meeting here, he said that he thought that I was suffering from a kind of PTSD. And when he mentioned it that fits, as far as I'm concerned. It fits. And it's pervasive – it affects every aspect of my personality.

I don't see myself as having a mental illness, but I definitely have an emotional illness. (Sal, diagnosed post-HAART).

Locating the sources and expressions of trauma and stress is a formidable task, particularly when individuals are not connected to efficient systems of care. Reappraising one's state in the context of chronic conditions could serve as an impetus to engage in resilient processes conducive to optimizing health and social outcomes. Moreover, processes that lend themselves to pathways of self-awareness may benefit PLWH as they navigate the complexity of their condition. These processes are emboldened by institutions staffed with team members oriented toward holistic well-being.

Community as Resilience

Processes and features of resilience are often catalogued as existing and developing through social interactions. The current section highlights the role that engaging with peers and building community plays in the development of resilience. The following narrative relays insights about the ways in which PLWH encompass a heterogeneous group of individuals who were often able to find commonalities in their shared experiences:

> I think, most importantly the only thing I could do to prevent this imminent death was to live as thoughtfully, as heavily and as peacefully as I could. And so, I went to groups and I learned. And at that time there were no women, so I went to gay men's groups and learned about how resentments make you sick, so I just had this whole community of people. (Carrie, diagnosed pre-HAART).

This process of going from resenting an HIV diagnosis to a place of acceptance through community underscores the importance of seeking fellowship among people who were diagnosed in the early days of the epidemic. This narrative also echoes previously featured narratives by highlighting how mindfulness was used to facilitate coping and ultimately survival. In this particular case, the concept of peace is coupled with the notion of living a *heavy* life, a choice of words that underscores the role that agency and intentionality have in this population's path towards optimizing health.

Participants made further reference to strategies conducive to forging social connections:

> I just felt like a bad person around good people, and I feel like there are other people who've had the same self-issues and was always surrounded by negativity, and yet there's no way for them to see out of that. So, I'm at that part of my life where I'm starting to really learn how to be in relationships with people, with friends on all different levels. It's also like even though I've had HIV for so long, it's kind of re-learning how

to have those conversations with people, how to date, how to have sex with it, how to not use it as an excuse for when I'm not doing things that I'm supposed to be doing, and also now how to go to people and actually say, 'This is affecting me, and I've been hiding it'. It's kind of reverse now. (Colin, diagnosed pre-HAART).

This statement reflects participants' complex and competing needs and identities, and exemplifies how redefining one's self-perception as a person living with HIV can enable letting go of negative cognitive, affective, and behavioral responses, as well as building networks. Rather than allowing an HIV diagnosis to become a deterrent towards pursuing one's goals, several participants described their HIV diagnosis as a key aspect of a self-concept that needed to be renegotiated. Other participants experienced different interactions between their identities as PLWH and other facets of their lives:

The nursing profession, specifically, is very important to me because I very purposely went into getting that degree because I wanted to help people. And that was my main passion and driving force, I guess, because I really cared about humanity and, specifically, health care. And then once I got my diagnosis it was really weird because I had made the decision [to go into nursing] before I tested positive. And so [testing positive] just reinforced my desire to help care for people. (Keith, diagnosed post-HAART).

As exemplified by Keith's case, participants' diagnoses often seemed to act as a catalyst for pursuing goals focused on caring for others. These goals and potential professional identities in many ways represent a desire to foster care and empathy in response to a new HIV diagnosis.

The methods and presentation of these findings underscore the distinct nature of each of these three themes. Although representing themes that are particular in essence, the narratives surfaced multiple common threads that weave through this sample's lived experiences. Throughout these findings, participants conveyed that processes of reappraisals of experiences and identities related to living with HIV served as pathways to cultivate resilient traits and strategies conducive to optimizing health and social outcomes. These processes, particularly when contextualized by the development of community belonging, should be perceived as discrete, yet interconnected mechanismss that manifested in diverse ways, particularly by function of time of diagnosis.

Discussion

Findings from this study underscore the adaptive significance of positive reappraisals of both life events and the self as important sources of resilience among PLWH, particularly

those diagnosed pre-HAART. Additionally, the role that building community played for participants across the sample illustrates the diversity of processes of resilience that this heterogeneous population is likely to benefit from. Furthermore, a variety of these processes were supported by social services structures focused on optimal outcomes envisioned through an empowerment lens [50]. While participants diagnosed pre-HAART were more likely to report resilient processes consistent with cognitive reappraisal, their peers diagnosed post-HAART invoked these processes while also referencing the role that social networks and services played in them, thus enacting a form of community-based coping. With regard to *Positive reappraisal of life events*, these findings are consistent with extant literature that highlights the importance of practices such as mindfulness, [51], re-training [52], and peer engagement [53] in processes of resilience. The theme of *Positive reappraisal of self* surfaced topics congruent with the field of study such as features like identity centrality [54], empowerment [55], self-compassion [56, 57], and self-awareness [58]. The third theme, *Community as resilience*, exemplified parallel processes of fomenting community and resilience [59, 60], as well as fostering other prosocial features such as altruism [61]. This study's findings synergize with long-standing HIV literature pertaining to Revised Stress and Coping Theory [18, 28, 62], as well as more recent frameworks, such as Intersectional Stigma [63], which understands adverse events and their sequelae through multi-level perspectives and accounts for the effects of multiply-oppressive social structures in reproducing and sustaining these experiences of stress.

Findings suggest that participants who were diagnosed with HIV during the earlier stages of the epidemic engaged in psychological processes that reframed their experiences as a means to live fully in the present. Identifying and acknowledging these turning points provided them the opportunity to reframe their schemas and retrain their behavioral repertoires in a way that was conducive to optimizing health and social outcomes. Additionally, features of self-compassion and mindfulness among participants diagnosed pre-HAART further solidified their resilient processes, grounded in the enduring negative consequences of living with HIV. These manifestations of resilience could be due to PLWH diagnosed prior to HAART witnessing the devastation of their communities, social networks, and a generation at large [34]. Their accounts highlight the difficulties they experienced with regard to sustaining these bonds in the face of fear, loss, and grief. Their counterparts who were more recently diagnosed, engaged with both HIV and resilience in different ways. The data suggest that these participants were more likely to seek out community support to manage their HIV diagnoses. These individuals seem to have been afforded a more streamlined system of care and support that facilitated these processes. Their resilience seems to

have translated into expressions of agency that resulted in actively seeking, managing, and sustaining resources, in ways that their counterparts may not have been able to.

Findings expand on the field's recent attention to the role of identity centrality and social support in the development of resilience [54, 64] by focusing on era of diagnosis as a feature in these processes. Findings suggest that participants diagnosed pre-HAART experienced more strident manifestations of stigma, which were often attached to their identities as PLWH. Having been diagnosed during time periods categorized by institutionally and structurally sponsored forms of stigma which hindered disclosure and community building required that many of these individuals resort to reclaiming their maligned identities as a means to self-empowerment. However, some participants diagnosed pre-HAART opted toward divorcing their stigmatized identities from their abilities to optimize health and social outcomes, which invoked forms of resilience more aligned with solution-focused modeling. Nevertheless, many participants diagnosed pre-HAART managed to not only access social and community networks of support, but were also able to manifest resilient traits that translated into a survivorship narrative geared toward goal-setting and goal-pursuing. It is possible that the more intense and noxious experiences these individuals had around their HIV diagnoses led them inward on their path to resilience and that their immediate goals were aimed at staying alive and healthy. These extended narratives seem to have emboldened them with a sense of agency that eventually led them to be able to (re) create the social and support networks they missed in prior stages of their lives.

Despite our data being stratified by function of era of diagnosis, rather than age explicitly, our findings offer some valuable insights into the literature regarding developmental stage and coping with HIV. These findings align with Harris and colleagues' study [36], which suggests that older PLWH are more likely to develop coping strategies consistent with identity formation and sustainment, such as self-care as resilience. Our findings, however, do not reflect recent literature that reports younger PLWH experiencing higher levels of HIV-related stigma and lower HIV medication adherence [34, 35, 37]. This is perhaps an area of study that requires further, more nuanced investigation.

Lastly, these data illustrate that among this heterogeneous sample of PLWH, consistent sentiments were described related to optimizing health and social outcomes through community building, as well as showcasing how building community led them to achieve positive reappraisals. Additionally, reappraising their HIV diagnoses sometimes led participants to pursue goals motivated by altruism and a desire to support their broader community.

This study should be understood within the context of certain limitations. For instance, despite the sample being fairly diverse, the plurality of participants consisted of White, male, and sexual minority-identified individuals. This topic would benefit from more diverse voices, to assess how other intersections of identities among PLWH have engaged with resilience. Moreover, these data were collected in San Francisco, a resource-rich city with a long history of innovation in the field of HIV. Additionally, the fact that all participants in this sample had already taken initial steps toward vocational rehabilitation may suggest a heightened resilience baseline. Moreover, while features such as gender, ethnicity, sexuality, ability, and region of origin did not explicitly suggest a direct relationship with the development and deployment of resilience, it is possible that a more intersectional analysis might reveal more nuanced findings. Additionally, the data used for this study were collected between 2011 and 2012; however, the themes that emerged are still consistent with the lived experiences of a high-priority population navigating institutions that continue to threaten social services and access to health care [65]. It is important to note that while the interviews inquired about experiences regarding HIV diagnosis, SSI/SSDI benefits, and vocational rehabilitation goals, themes related to resilience emerged. Should the interviews have focused explicitly on resilience, our findings would likely be different. Lastly, this was a qualitative cross-sectional analysis, which precludes generalizability and disallows from assessing these participants' vocational rehabilitation outcomes.

Despite these limitations, the narratives presented and the analyses performed could inform theoretically driven and culturally responsive interventions for PLWH. On the one hand, individuals who were diagnosed during the earlier stages of the epidemic might benefit from interventions in which cognitive behavioral techniques could support their reframing and renegotiating of previous identities built around illness and loss. Findings align with other data [6] that suggest that for PLWH, shedding their "sick role" allows them to better engage in prosocial behaviors. Interventions for these populations, particularly those closer to middle age, would benefit from trauma-informed frameworks to further dismantle negative core beliefs that prevent them from achieving positive outcomes [13]. The data also point toward a need to continue to pursue strategies including the use of compassionate self-reappraisal and other resilience-based features to optimize HIV self-care by harnessing text-based technologies [56].

Findings, particularly as they refer to participants diagnosed during the latter stages of the epidemic, subscribe to recent literature that suggests that an increase in positive affect may lead to better health outcomes and behaviors [18]. When engaging with individuals whose resilience-invoking antecedents are perceived as being less traumatic, engaging within a theoretical framework along the lines of Revised Coping Theory [18, 66] may result in an increase

in positive affect and prosocial behaviors. Data [62] suggest that for newly diagnosed individuals, an intervention such as this may result in more effectively engaging with HIV care. Findings echo those in Orton and colleagues' [53] study, which suggested that younger PLWH seek institutionally driven support to engage in resilient processes. Given that this group is more adept to pursue communal support, they might also benefit from group interventions to bolster their socially driven resilient behaviors. The heterogeneous nature of this sample's demographics, as well as the synergistic nature of the social and health disparities they face along with their HIV diagnosis, necessitates that research and interventions also engage with cross-cutting frameworks such as Intersectionality and Syndemics [54, 67–69].

This study has several clinical and structural implications. For instance, findings suggest that we may get closer to more effective interventions within the framework of resilience if we acknowledge the distinct mechanisms that nourish its processes in both the psychological and social spheres. Similarly, special attention needs to be paid to how either of these pathways is supported by differential demographic and contextual characteristics, specifically the era of diagnosis. Novel interventions which focus on fostering positive reappraisal across life domains and the life course are needed to optimize social and health outcomes among PLWH. Promoting processes such as self-compassion, re-training, identity centrality, and altruism, among others, could lead to PLWH mastering effective coping and self-efficacy skills conducive to improved quality of life, despite mounting structural barriers. Broadly, resilience has traditionally been understood as the capacity of individuals and communities to invoke effective coping strategies against adverse events [70]. However, the recent mainstreaming of this concept and experience has been critiqued for absolving larger social forces and institutions from their role in the aforementioned adverse events, as such, it is important that interventions are responsive to these macro-level forces, institutions, and outcomes.

Conclusion

Findings from the current study underscore the importance of recognizing the role of positive reappraisal in the resilience process of PLWH, particularly those diagnosed pre-HAART. Moreover, the role of building community as a pathway toward resilience was a constant across this diverse sample. In addition, we identified distinct mechanisms for developing resilience among this sample, wherein participants diagnosed pre-HAART were more adept to engaging in cognitively oriented approaches, while their counterparts diagnosed post-HAART leaned into strategies consistent with social networking. Systems of care are integral contexts to developing these resilience skills, making them

indispensable to designing and deploying effective health and social interventions for PLWH.

The manner in which resilience manifests is contingent upon the magnitude of the events that precede it. As suggested by these data, the said magnitude is embedded in sociohistorical contexts, such as era of diagnosis, which influenced the ways in which individuals managed to identify and respond to the event. Given that a core feature of resilience is that its presence is hard to perceive or measure until an adverse event occurs, interventions should focus on identifying and nurturing both psychological and social features in vulnerable populations in order to optimize individuals' potential for resilience. Thus, it is imperative to acknowledge the presence and role of structural factors and how they may inform culturally responsive health and social interventions for PLWH. Recognizing the demographic and generational differences that characterize the lived experiences of PLWH may be a key feature in utilizing resilience as a complex and nuanced concept that could serve as the cornerstone for more effective interventions for this population [24].

Declarations

Ethics Approval All study procedures were approved by the University of California, San Francisco's Institutional Review Board.

Consent to Participate All study participants signed consent forms prior to engaging in study activities.

Competing Interests The authors declare no competing interests.

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