

Enhancing Hopeful Resilience Regarding Depression and Anxiety with a Narrative Method of Ordering Memory Effective in Researchers Experiencing Burnout

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Abstract: Depression and anxiety are prevalent, persistent, and difficult to treat industrialized world mental health problems that negatively modify an individual's life perspective through brain function imbalances—notably, in the amygdala and hippocampus. Primarily treated with pharmaceuticals and psychotherapy, the number of individuals affected plus the intensity of their suffering continues to rise post-COVID-19. Decreasing depression and anxiety is a major societal objective. An approach is investigated that considers depression and anxiety consequences of the particular method people adopt in ordering their memories. It focuses on narrative development and the acceptance of different perspectives as uniquely necessary in creating safe protection from research burnout. The method encourages thoughtful reconsideration by participants of the negative assessments of their circumstances that can lead to depression and anxiety. The aim is to determine if the method of ordering developed is helpful in reducing burnout. This is considered through inspecting and comparing group members' feedback form results, both pre- and post-COVID-19 restrictions. The method found useful to participants in reducing research burnout through developing hopeful resilience is comparable to authentic leadership. The conclusions offered encourage psychological and neurological research with respect to this method of promoting hopeful resilience for burnout to diminish depression and anxiety.

Keywords: hopeful resilience; depression; anxiety; amygdala; hippocampus; COVID-19; burnout; narrative research; ordering memory; authentic leadership



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1. Introduction

Depression and anxiety are prevalent, persistent, and difficult to treat industrial world mental health problems [1–4]. They are among the most common illnesses in the community and account for approximately 25% of general practice patients [5] with anxiety disorders the most ubiquitous group of psychiatric disorders worldwide [6], having a lifetime pervasiveness as high as almost 29% [7]. Depression is characterized by slow thinking, anhedonia, poor sleep duration, and early morning awakening, along with mood swings [8], while the clinical features of anxiety are generalized worry related to a feeling of being on edge and irritable with difficulty in concentrating resulting in muscle tension and being fatigued, yet unable to have satisfying sleep. Since 2020, COVID-19 pandemic restrictions and fears have only heightened the problems associated with depression and anxiety and increased their complexity [9-13]. Problems related to depression and anxiety can be anticipated to continue even once the pandemic is over as the COVID-19 virus is expected to be endemic for years to come [14].

Treatment for depression and anxiety can be significantly effective [15,16], however, it is often unsuccessful [17] as the incidence of depression and anxiety continues to increase [18]. Approaches that have been taken to address depression and anxiety have concentrated primarily on changing the chemistry of brain function through pharmaceutical intervention and/or appeasing fears by encouraging coherent memories through

Challenges **2022**, 13, 28 2 of 15

psychotherapy [19]. The intention of the therapy is to stop the negative consequences from reoccurring and engaging the affected individual to instead construct coherent narratives, including activating more adaptive emotions [20].

Although there are a number of brain regions involved [21], most relevantly, fears related to depression and anxiety are stored and accessed in the amygdala [22] and represent non-verbal memories [23] translated into a freeze, flight, or fight mechanism [24]. In contrast, the hippocampus is the site for the creation of safe, narrated memories [25]. When memories take the form of safe, personally meaningful, temporally-organized verbal narratives created and accessed in the hippocampus, they are not simultaneously being organized in the amygdala, as the two brain areas constitute memories under separate conditions [26] and are accessed independently [23]. As such, a person immersed in constructing and remembering a coherently-organized, safe, personally relevant narrative is simultaneously neither depressed nor anxious [27].

Yet, narrative construction in the hippocampus is not always safe [25]; it can be traumatic [28]. The hippocampus constructs a range of memories [29], including those that are protective of the individual and those that are potentially detrimental. What differentiates these narrative constructions is how the memories are arranged in the hippocampus [30]. For the hippocampus to create safe narratives, the individual needs to be clear on what they personally value rather than having an exact memory for semantic detail. This clarity provides them with the type of hope in relation to self-awareness that comes from participation in a personally relevant culture [31]. It is this type of hopeful mindset that predicts flourishing in contrast to depression and anxiety [32].

The ability to develop protective narratives relates to the concept of resilience. Resilience is a process of effectively adapting to significant sources of stress or trauma, promoting the ability to recover from adversity [33]. Previously thought to relate to the development of character in individuals [34], resilience has now been recognized as an interaction between an individual's problem-solving skills, temperament, relationships with family, and support from others—not only a positive outlook in the face of adversity but also a process which amplifies this approach to adversity [35], representing qualities of the environment as much as that of the person [36]. What identifies resilience is relatively better functioning when solving problems in comparison with others experiencing the same level of stress or adversity [37] where the problem-solving skills required involve narrative creativity, emotion regulation, and interpersonal collaboration [38]. With the development of a sense of autonomy, narrative coherence, and a realistically optimistic outlook—in contrast to merely reactive coping—the type of resilience that is created is hopeful. As such, rather than bouncing back to a previous level of interaction, the hopefully resilient person develops a new and more satisfying adaptive perspective in relation to their work [39]. This demands self-awareness that comes from making their narrative verbal, rather than felt but unstated [40]. It is in this way that the memories can relocate from the wordless amygdala to the narrative hippocampus and hopeful resilience can be developed to confront depression and anxiety.

In mitigating depression and anxiety, the effectiveness of a unique and intriguing way of ordering verbal narrative is important to examine. To investigate whether this specific way of ordering verbal narrative acts effectively in reducing depression and anxiety by developing hopeful resilience, an approach to constructing personally meaningful coherent narrative promoting such resilience for the purpose of reducing burnout with healthcare researchers will be examined. Burnout—a negative, job-related psychological state exhibited through physical fatigue, emotional exhaustion, and loss of motivation [41]—arises from prolonged chronic interpersonal stressors associated with work and is particularly associated with the health professions [42]. It is directly related to symptoms of depression and anxiety [43,44]. The method to be examined originated in 2015 and has continued each academic year through the Department of Psychiatry at the University of Toronto. The analysis to be presented will depend on historical narrative research of participants'

Challenges **2022**, 13, 28 3 of 15

feedback forms to investigate comparable participant views about the process with respect to expressions of depression and anxiety.

2. Materials and Methods

The Health Narratives Research Group (HeNReG) is a method that has been delivered both in-person and online for promoting resilience in researchers that is created, facilitated, and maintained by this author to appeal to those researchers who self-identify as having burnout regarding their research related to health. There is no incentive to join the group other than a desire of the participant. The group is designed to encourage participants to develop hopeful resilience through the transformation of non-verbal memories into safe (rather than traumatic) verbal narrative.

The HeNReG is a continuing, voluntary, non-credit, weekly, two-hour opportunity for university researchers in any discipline interested in health—ranging from undergraduates to full professors—to take their identified personally relevant stories that initiated their commitment to health and develop them into narratives with a particular point of view through both personal reflection and the willingness to share their story and gain additional insights from the rest of the group. The group is free of charge and operates as an intentional community [45] defined by its philosophy and practice and is neither therapy [46] nor a research study [47]. Its process has been previously reported [48,49].

Group members are self-selected. Generally, they come to know of the group by reading yearly advertisements written by the facilitator and sent out by the Department of Psychiatry through its weekly newsletter, PsychNews. Additional notice is also sent to potential members through the department's Health, Arts and Humanities listserve. To join, a potential member contacts the facilitator by email and indicates why they are interested in being part of the group. They are then sent information on the philosophy and operation of the group including this statement emphasized in the document: "By joining, members agree their work may be anonymously referenced in presentations given and/or scholarly articles written by the facilitator regarding the yearly results of the HeNReG." Members join the group by (1) emailing the facilitator their agreement to abide by the document and (2) "friending" the facilitator on Facebook so that they can be added by the facilitator to the year's private Facebook group (since its founding in 2015, each year a distinct private Facebook group has been created for the online communication of the HeNReG). A potential participant is rejected if they are unwilling to agree to abide by the document or to engage with the group over a private Facebook group. Group size has self-limited to twenty participants in any one year. From 12 March 2020, when the COVID-19 lockdown from the pandemic eliminated all in-person academic meetings [50], the yearly private Facebook group has been the sole method of communication among group members.

Pre-COVID-19 restrictions, the HeNReG met in person in the occupational therapy room of the Toronto Mount Sinai Hospital's Department of Psychiatry. The space included a large table and enough chairs to accommodate twenty participants. Meetings began with the facilitator providing a pre-planned prompt (created and stored on iPhone Notes by the facilitator during the summer before) to which members of the group would write a response without lifting their pen from the paper for five minutes. The value of prompts in memory integration and self-derivation has been recognized and provides support for using these prompts [51]. This type of stream of consciousness writing is a form of autoethnography [52] found particularly relevant and useful in self-reflection [53]. The initial prompt provided at the first meeting of the academic year has asked each person to describe themselves with respect to their research related to health. This is the story that researchers were to refer to in responding to prompts during the remainder of the academic year. In the weeks that followed, the order of the prompts asked group members to first consider what is most objective with respect to this story of their research related to health, then, as the weeks progressed, the prompt questions elicited responses that were increasingly subjective.

Once the lockdown was initiated, the prompts were provided the day before the online meeting via Messenger. Although the facilitator created new individual prompt questions each year, the order of the type of questions asked has remained the same:

Challenges **2022**, 13, 28 4 of 15

when, where, who, what, how, and why. More than one session is devoted to each type of question—four weeks for the more objective questions (when, where, who, and what questions), five weeks for how questions, and six for why questions—the increasingly subjective questions. The need for both objective and subjective questions in assessing the participant's perceived relationship to their community of inquiry has been recognized [54], while the self-examination of personal stories to construct identity narratives has been noted as giving sustainable meaning to life [55].

Pre-COVID-19, during the in-person meetings, once participants had completed their written response to the weekly prompt, each person was asked to read their response, one by one. After one participant had read their response to the prompt, each other member was given the opportunity to provide a question to the person who has just read their response to further clarify what has been read. The only requirement of the question asked was that it must begin with the same word of the week, i.e., if a "who" question was asked, each person then asked a clarifying "who" question of the reader. Group members without a question could choose to pass but would be given an additional opportunity to pose a question once all others had done so. The purpose of these additional questions was to permit those who ask the questions to better see the point of view of the reader. For the reader, the objective was to get them to revisit their point of view and picture it in greater detail. In each exchange, trust development, important to the development of hope [56], was promoted, representing an important aspect of intentional communities, particularly those that are online [57]. This type of trust for online groups became relevant once the process of weekly activities after COVID-19 was modified to correspond with the online platform.

When the group was able to meet in person, the facilitator provided participants with artist's materials and paper, encouraging participants to draw or doodle during the meeting, offering an additional outlet to express their creativity. No one was required to draw. At the end of the meeting, members described their drawings or doodles one at a time going around the circle. The facilitator then noted down all the descriptions. Whatever was drawn was collected by the facilitator along with the written responses to the writing prompt. They were then posted to the private Facebook group to which all group members belonged from the first meeting onwards. Drawing or doodling is supported because it has been found to reduce the anxiety and/or depression of those who find this situation to be a novel experience in an academic setting, helping them to concentrate more deeply on questions to ask the current reader [58]. Once the COVID-19 limitations were imposed, participants were encouraged to doodle during the two-hour weekly online meeting and to send in their doodles plus a description of the doodle to the facilitator over Messenger for posting to the private Facebook group by the facilitator.

During both pre- and post-COVID-19, the data were collected in the same manner. The last week of both the first term and the final term online feedback forms—created by the facilitator on Google Forms based on a model common to the Health, Arts and Humanities Program of the Department of Psychiatry—were sent to each of the participants through a link on Messenger. Participants were asked to complete the form in a week. Any participants who did not return the form within this time were sent reminder messages weekly until the form was returned. As such, all the data were available for examination a month after the end of the sessions. The responses provided on the feedback forms are considered by the facilitator each summer with the intent of improving the HeNReG the following year in relation to the feedback received. The HeNReG has been slightly modified each year it has been offered as a result of comments received on the feedback forms. The year immediately prior to COVID-19 and the years post-COVID-19 remain comparable, even with these slight modifications. The ways in which they are comparable have been highlighted in detail elsewhere [49].

Analysis of the Method

There are three identifiable features of the process with respect to promoting hopeful narrative resilience to decrease burnout—the group, the participants, and the writing

Challenges 2022, 13, 28 5 of 15

prompts. They can be tabulated with respect to the question-asking prompt types (when, where, who, what, how, and why)—and the number of times the prompt type is posed—used during the HeNReG process itself. It is relevant to tabulate the features of the HeNReG in this way to demonstrate the clarity that comes with this process, as seen in Table 1.

Table 1. Features of the three aspects of the Health Narratives Research Group (HeNReG) arranged in relation to the HeNReG process with respect to the type and order of the six different questions of writing prompts posed.

Questions Related to HeNReG Features	Group	Participants	Writing Prompts
When	October–April yearly Real-time—weekly, 2 h Virtually—anytime Feedback—twice a year	After seeing the yearly ad Contacted facilitator After agreeing to terms Convenient to participate	Composed each summer Provided each week Offered after a response Access—Facebook group
Where	Dept. of Psychiatry Email communication Messenger app Private Facebook group	Occupational therapy rm. Home/office—COVID-19 Messenger account Private Facebook wall	Created—iPhone Notes Copied to Messenger Posted—Facebook group Stored—Word file
Who	Have seen the ad Have facilitator contact Voluntarily want to join Those agreeing to terms	Come from any discipline All stages of careers Facilitator seen as equal Members considered equal	Created by facilitator Provided to participants All members respond Promote question asking
What	Dept. of Psychiatry offering Health, Arts and Humanities Free of charge Community of researchers	Feel burned out Unclear on their direction Willing to engage in the process Have time to devote	Invoke personal values Express current concern Redirect attention Are short questions
How	Ad in psychiatry newsletter Email to facilitator Facebook group created Members invited to the group Google form feedback	Read newsletter ad Contact facilitator Email agreement to join "Friend" facilitator Get Facebook invitation	Sent day before meeting Responses provided Responses posted Questions asked New responses provided
Why	Create research community Enhance resilience Interdisciplinary Mix career stages Narrative development Feedback for model	Looking for community Want to decrease burnout Open to other disciplines Open to other career stages To develop their narrative To have an equal voice	Reveal personal values Create narrative To differ each year Elicit current concerns Provide insight to others To order memory

The method of the HeNReG is based on the presupposition that creating a mental landscape of what is considered true by participants, in relation to what they value with respect to health, is the optimal way to construct a robust narrative [59]. The reason for this assumption is that narratives are formed and accessed in the hippocampus [60]. As such, this stops the creation of memories resulting from fear created in the amygdala or traumatic memory formation in the hippocampus elicited from burnout [61]. The transition from memory creation and storage in the amygdala to safe memory formation in the hippocampus begins in the HeNReG process by asking participants to initially describe themselves regarding their research related to health. In this way, the tropes that are felt but not verbalized through memories created in the amygdala are accessed to offer a bridge from those fear-induced memories in that region of the brain to evolve to the verbalized narrative memories developed in the hippocampus, providing a high-level architecture [62] for these memories.

The question-asking can be visualized as a layered image following a pattern in constructing a landscape of truth. The initial description of themselves, in relation to their research, places the characters presented in their descriptions by each of the participants into an idealized space. The four 'when' questions, posed over the same number of weeks,

Challenges **2022**, 13, 28 6 of 15

create a one-dimensional timeline for the characters in the landscape. The four 'where' questions pinpoint the characters' location in three-dimensional space. Therefore, once the first nine weeks of the process are complete, the landscape has been figuratively drawn for the characters representing the group's participants, in acting as avatars, in this virtual space. The next eight weeks of 'who' and 'what' questions place objects in the field of this landscape—the 'who' questions situate the valued people, while the 'what' questions place the objects that are considered important. Now, the imagined landscape becomes similar to a virtual walk-through for a designed space. The next five weeks of 'how' questions permit participants to conceive routes through the landscape. The questions asked of them facilitate routes to the people and things each participant has placed in the landscape while the questions participants ask of others allow them to forge routes to the people and things placed in the landscape by other members. In the final six weeks, participants are prompted with 'why' questions. Up until these 'why' questions, the landscape created has been revealed uncritically by participants. With the introduction of 'why' questions, participants are given the opportunity to critique each aspect of the created landscape, its timeline, the three-dimensional space, the "non-playable" characters (in video game terminology [63]), accumulated objects, and the routes that have been devised—similar to using Google Street View [64]. In answering these prompted questions, the avatar of the participant's initial character description becomes a responsible actor in a personal narrative plot. The group members have at this point developed a complex and interrelated narrative defining them as their authors. Placing participants in this type of virtual narrated space has been found particularly important during COVID-19 limitations [65]. Figure 1 is a stylized representation of this layering process.

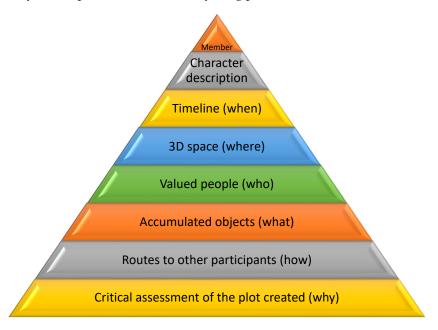


Figure 1. A stylized representation of the levels of the HeNReG process for each member, including the initial description of the participant regarding their research related to health (character description), and the six different types of questions (narrative plot) that follow in constructing the landscape of truth. Answers provided to questions lower on the pyramid include a knowledge of the previous answers provided higher on the pyramid, explaining why in this depiction the base is increasingly wider as each type of question is subsequently asked of participants.

The initial writing prompt in the HeNReG process to determine the persona that the group member intends to assume as a participant is, "Describe yourself regarding your research related to health". As an example of the various writing prompts following this initial prompt that have been created over the years, Table 2 provides the prompts as they were presented by the facilitator over the 28-week process of the HeNReG during

Challenges **2022**, 13, 28 7 of 15

the 2020–2021 academic year—the first full year of COVID-19 restrictions—when the weekly two-hour meetings were held entirely online in the private Facebook group. It is notable that these questions refer to participants' "research related to health" rather than their "health-related research". The reason for this is that the researchers may come from disciplines other than those that are health-related. The point of the group is not that they are health researchers; rather, they are researchers whose topics of interest are related to health. Although the prompts change each year, they always follow the same pattern with the description coming first then the prompts asking questions in this order: when, where, who, what, how, and why, with four weeks of the first four, more objective questions, and five weeks for how and six for why—the increasingly subjective questions. More of the subjective questions are provided because they require additional insight to answer—an important factor to encourage the development of a hopeful, resilient narrative [66].

Table 2. The writing prompts provided to the HeNReG members through the Messenger app over the 28 weeks of the 2020–2021 academic year in the order in which they were presented to group members by the facilitator the day before the weekly meeting and to which they responded in writing through Messenger by the time of the weekly meeting.

Writing Prompts Provided to Group Members over the 28 Week 2020-2021 Academic Year

Describe yourself regarding your research related to health.

When have you felt overwhelmed regarding your research related to health?

When do you consider your research related to health ready to show others?

When is it time to move to a different aspect of your research related to health?

When have you felt yourself slowing down regarding your research related to health?

Where do you feel uncomfortable discussing your research related to health?

Where have you found important information for your research related to health?

Where do you initially turn if you have a problem regarding your research related to health?

Where do you go when you want to celebrate a milestone regarding your research related to health?

Who have you yet to reach with your research relate to health?

Who has helped you in developing your research related to health?

Who is the last person you would contact with respect to your research related to health?

Who gives you hope with respect to your research related to health?

What intrigues you regarding your research related to health?

What remains to be done of your research related to health?

What time of day do you feel the most productive in your research related to health?

What is most distracting to you in completing your research related to health?

How have you been improperly advised regarding your research related to health?

How would you like to be remembered regarding your research related to health?

How will you know you are done your research related to health?

How do you hope your research related to health will help humanity?

How can things go wrong with your research related to health?

Why would you want to be more inclusive in your research related to health?

Why would you change the way you approach your research related to health given the limitations imposed by COVID-19?

Why is your research related to health in need of an overhaul?

Why have you reassessed how you use technology regarding your research related to health?

Why do you think you haven't received the acclaim you think you deserve for your research related to health?

Why do you want a break from your research related to health?

3. Results

Although there are a number of ways that results might be examined with respect to this research method, those to be presented will correspond to the research question posed: Does a specific way of ordering verbal narratives act effectively in mitigating depression and anxiety by developing hopeful resilience? In addressing this question, the responses to the prompts provided by participants might be examined. However, doing so would require making assumptions regarding why participants responded as they did. This type of analysis goes beyond the intention of this retrospective study. Instead, the pertinent results will concern the year-end feedback that the participants provided regarding the HeNReG process. Given that each group member joined as a result of being attracted to

Challenges 2022, 13, 28 8 of 15

a group aimed at researchers who felt burnout with respect to their research related to health, it is important to identify whether the participants felt more invigorated concerning their research once they had participated in the HeNReG process and whether the process was sufficiently robust that the HeNReG was able to achieve results comparable between pre-COVID-19 and post-COVID-19 years.

The year-end feedback forms from three years—the full year before COVID-19 restrictions, the year COVID-19 required that the HeNReG no longer meet in person and moved online after 12 March 2020, and the first full year after the COVID-19 restrictions were imposed—have previously been examined chronologically in detail [49]. What will be novel in the analysis offered here is an assessment of that feedback using the HeNReG process of ordering itself. Rather than looking at the feedback as it was provided chronologically, this examination will group the feedback provided into when, where, who, what, how, and why divisions. The three questions on the feedback form for which the answers will be interpreted in this manner are the questions that depended on short written replies as opposed to the responses to multiple-choice questions. These three questions are: How was the group valuable to you as a researcher? How might the HeNReG be of help to you in the future? Do you have other thoughts/comments on your experience as a participant in the HeNReG this term (especially as a result of COVID-19)? The results follow in Tables 3–5, respectively.

Table 3. Themes mentioned in responses provided on the April feedback forms to "How was the group valuable to you as a researcher?" for each of the three most recently completed academic years in order of when, where, who, what, how, and why responses from group members.

Order	Themes Mentioned in Feedback Forms	2018–2019	2019–2020	2020-2021
When	Allowed for a comparison of ideas with previous years of this group			1
Where	Gave a safe space to verbalize ideas about research	1	4	4
	Determined the direction I should go in my research		1	
Who	Provided the perspectives of other researchers	4	3	4
	Provided community and accountability in research			1
What	Enhanced my work as a narrative researcher	1		
	Invited a broader view of research	3		
	Helped in greater understanding of one's research	2	1	
	Challenged my thinking about research	1	1	2
	Sharpened thinking about research	2	2	1
	Encouraged self-reflection on research	4	4	5
	Engaged my curiosity and focus		2	
	Restfully cleared my thoughts regarding my research		2	
How	Offered a way to access my drives and motivations related to research		1	
	Reoriented my priorities regarding my research		1	
	Sorted out my problems with my research		1	1
	Presented a useful and easily employed structure for asking questions		2	1
	Decreased barriers in research			1
	Shared valuable resources			1
	Tailored the understanding of research to the researcher			2
Why	Reminded me of what is important and valuable in my research			1
	Motivated and inspired me with respect to my research			1
	Learned more about self-expression			1

Table 4. Themes mentioned in responses provided on the April feedback forms to "How might the HeNReG be of help to you in the future?" for each of the three most recently completed academic years in order of when, where, who, what, how, and why responses from group members.

Order	Themes Mentioned in Feedback Forms	2018–2019	2019–2020	2020–2021
When	Continuing as part of the group in future years		1	
	Providing a comparison of results of the group over a number of years			1
Where	Expanding my research to other fields		2	1
	Including Zoom meetings			1
	Being a supportive community in a safe space			2

Challenges 2022, 13, 28 9 of 15

Table 4. Cont.

Order	Themes Mentioned in Feedback Forms	2018–2019	2019–2020	2020-2021
Who	Listening to others and giving feedback	1		
	Meeting additional interesting participants	1		2
What	Continuing with creative reflection	1		
	Making me more open minded	1	1	
	Keeping me updated on interesting topics in various fields	1	1	1
	Encouraging more collaborative artistic creation in my research	1		1
	Understanding and respecting different points of view	1		1
	Helping me plan my research	1		1
	Sharing resources	1		1
	Increasing my confidence as a researcher		1	
	Learning more about various ways of expressing oneself creatively		1	
How	Opening up discussion	1		
	Offering different points of view	1	1	1
	Using the structure of weekly prompts to guide my self-reflection	1	4	5
	Reminding me to construct a narrative that drives my work		1	
	Practicing writing		1	
	Acting as a sounding board		1	1
	Going on with my research		1	3
	Clarifying what I value regarding my research			2
	Supporting network connections			2
Why	Decreasing my confusion about what should be my focus in my research	1	2	1
•	Permitting me to grow as a researcher	1		1
	Coping with life challenges regarding my research		1	

Table 5. Relevant themes mentioned in responses provided on the April feedback forms to "Do you have other thoughts/comments on your experience as a participant in the HeNReG this term (especially as a result of COVID-19)?" for each of the three most recently completed academic years in order of when, where, who, what, how, and why responses from group members.

Order	Relevant * Themes Mentioned in Feedback Forms	2018–2019	2019–2020	2020–2021
When	I wish I could come to the meetings more, but the group is in the workday The group is easily accessible for people with scheduling problems Having a designated meeting time makes me take time to self-reflect	1	1	2
	I hope COVID-19 ends soon		1	2
Where	I liked the option of participating remotely, I didn't have to travel	1	2	3
	Moving online was a smooth transition		2	
Who	The people brought together in this group are amazing		1	
	I miss the personal interaction now that everything is online		1	2
What	I had expected this was a creative writing group, but I easily shifted focus		1	
	I am thankful to express myself in a non-judgmental environment		1	
	It got me engaged with research during the lockdown COVID-19 affected my ability to participate			1 1
	I like the flexibility and structure of the group			2
	The year has been very isolating, this group was a great way to network			2
How	I would like to try to not use prompts	1		
	It would be good to have some exercises related to writing and art	1		
	Maybe we could include video chatting		1	1
	Fewer people responded to questions asked when we were entirely online			1
	I'm glad we did not use the videoconferencing format; it's too exhausting			1
	It would be nice to get tips for navigating the online platform			1
Why	This is a good program	1		
	A wonderful experience	1		
	I love this group!	1		1
	I love learning about other fields of research		1	

^{*} Responses regarding themes not a focus of this article (doodling [67] and thanks given) but reported elsewhere [49] have been removed.

Challenges **2022**, 13, 28

4. Discussion

In considering how the method of ordering research-related prompts might reveal improved hopeful resilience with respect to possible depression and anxiety that results from burnout, three years of feedback responses were compared—the year before COVID-19, the year COVID-19 restrictions were imposed mid-term, and the first full year of COVID-19 restrictions. Thus, the differences between pre-COVID-19 and post-COVID-19 responses can be assessed for significance. To make the comparison, the three questions requiring written responses from the common feedback form filled out at the end of each of the relevant academic years were ordered by the type of response provided and are found in Tables 3–5. For this discussion, the most frequent types of responses will be highlighted for each question over the three-year period.

4.1. How Was the Group Valuable to You as a Researcher?

For this question, the results of which are found in Table 3, there were two types of responses that were common over all three years. These were responses related to the who and what type of prompts. In other words, the important features that group members most frequently mentioned as providing value to them were the people who were part of the group and what occurred during group interactions. The specific responses in this regard were that the group provided the perspectives of other researchers and that the HeNReG encouraged self-reflection on research. In contrast, another response became notable only once COVID-19 restrictions resulted in academic lockdowns. This was a where-type response—the group gave a safe space to verbalize ideas about research. What this points to is that although participants were still cognizant of the importance of who was in the group and what the group offered during COVID-19 limitations, they became more aware of the importance of the group offering a safe online space for meeting once they were unable to meet in person.

What is also interesting about the feedback offered by group members is that no consideration is given to either how the group functions or why with respect to its value to participants pre-COVID-19. It is only after the restrictions began that any participant reflected on how the group functions as something valuable to them. There are four types of responses provided to questions related to how the group functions that were first evident the year restrictions were imposed, and these continued to be mentioned during the second year. Additionally, there were four more replies, grouped as how responses, provided only in the second year. With respect to replies that can be classified concerning why the group was important to them, it takes the effect of more than a year of academic lockdown for any of the participants to consider why the group functions as it does as important to them. These are the three responses participants provided in this regard: Reminded me of what is important and valuable in my research, motivated and inspired me with respect to my research, and learned more about self-expression.

4.2. How Might the HeNReG Be of Help to You in the Future?

Examining how the HeNReG might be of help to participants in the future from Table 4, the year before the COVID-19 restrictions were in place, obtained answers that focused on who, what, how, and why. There are no responses related to when and where. As well, there is no consensus regarding the way that the group might be of help in the future. When the lockdown imposed by COVID-19 happened, the first responses that considered when and where to be relevant to answering how the HeNReG might be of help in the future occurred. These included continuing as part of the group in future years and providing a comparison of results of the group over a number of years as responses that highlighted when the group would be of help. In addition, there were three replies that could be grouped under where: Expanding my research to other fields, including Zoom meetings, and being a supportive community in a safe space. The first of these relates to a conceptual space, the second, a virtual space, and the third, a physical space. What is most noticeable regarding the feedback provided by group members once COVID-19 stopped

Challenges **2022**, 13, 28 11 of 15

in-person group meetings was that there was a convergence of replies that focused on using the structure of weekly prompts to guide the participants' self-reflection.

Of interest during the time when participants were not permitted to meet in person, as a result of COVID-19 restrictions, is that few of the participants mentioned concern with being unable to connect in person. During COVID-19, the HeNReG conducted its weekly two-hour meetings online in a private Facebook group visible only to the group members. Yet, very few participants made any mention of feeling they required face-to-face contact in order to consider the HeNReG likely to be helpful to them in the future. In fact, there was only one person, during the second year of COVID-19 limitations, who felt that the meetings needed to be conducted over Zoom in the future to be of help. This level of satisfaction with the online forum for the HeNReG meetings was unexpected, especially given that those group members participating in the 2020/2021 academic year did not meet face-to-face over the entire academic year. This could mean that: (1) the private Facebook group was accepted as sufficient for meeting, (2) participants believed they had more important things to give feedback on when asked how the HeNReG might help them in the future than thinking about meeting face-to-face, or (3) the participants did not consider this question to be one that reminded them of their possible need to meet face-to-face in order for this group to be of help in the future. As there was no question devoted to whether group members considered the private Facebook group sufficient as a meeting space, it is not known which one of these things is correct.

4.3. Experience as a Participant in the HeNReG (Especially as a Result of COVID-19)

Table 5 provides the responses to the question, "Do You Have Other Thoughts/Comments on Your Experience as a Participant in the HeNReG this Term (Especially as a Result of COVID-19)?" The part of the question in parentheses was added in the second of the three years, once the COVID-19 restrictions began. What is most interesting about the feedback provided to this question in its final, COVID-19-inclusive form, was that, even when participants were given the suggestion to comment on their experience with COVID-19 in relation to the function of the group, only two members made any direct mention of COVID-19. One response made to the question could be grouped as when—wishing for COVID-19 to end soon, while the other response could be grouped as a what response in saying that COVID-19 affected the group member's ability to participate. This general lack of attention to COVID-19 when thinking about the HeNReG during the lockdown then reflects that there was little difference between the experience that group members felt they had in relation to the HeNReG pre- and post-COVID-19.

Given that COVID-19 is known to have increased depression and anxiety in healthcare workers [68], it was unexpected that HeNReG group members did not take the opportunity to mention the effect COVID-19 had had on their work as health researchers. As is evident from Table 5, there is little difference between the answers provided by participants to this question pre-COVID-19 and the replies provided post-COVID-19. So much so that, had it not been known there was a pandemic going on in part of the second and the entire third year accounted for in the table, there would have been no indication (except as noted above) that COVID-19 had a real effect on participants relationship to their health-related research. This pointing to a type of resilience that was gained from online weekly participation in the group is additionally supported by the response that was repeated most often—I liked the option of participating remotely, I didn't have to travel—indicating that one of the best features regarding the HeNReG was where it was offered, that is, online in a safe and private virtual space.

4.4. Limitations

The results of examining the April feedback forms of the HeNReG participants for the last three full years of the group have provided a strong indication that, unlike the general trend in the industrial world [69], those health researchers who participated in the HeNReG did not show an increase in their depression and anxiety during the period Challenges **2022**, 13, 28 12 of 15

they participated in this voluntary online group. On the contrary, the burnout that they likely were experiencing upon joining the HeNReG appears to have been lessened with the methodological ordering of their narrative through the use of the writing prompts beginning with words that followed the pattern of when, where, who, what, how, and why. From the perspective of what might be going on in the brain, the thought is that, by redirecting the focus from research-related fear to narrative ordering, safe memories were being ordered and accessed through the hippocampus rather than through the amygdala.

Nevertheless, there are limitations to considering the results in this manner. The first is that the feedback forms were not part of a designed study intended to answer the research question—Does a specific way of ordering verbal narrative act effectively in mitigating depression and anxiety by developing hopeful resilience? Instead, the feedback forms were created to provide information to the facilitator on how the group might be improved in the future. They were merely available for historical consideration extending to investigating whether they contained answers to the research question formulated once all feedback forms were in the possession of the facilitator. Furthermore, the interpretation of the three written answers on the forms, presented in Tables 3–5, is undertaken from the perspective of a historian conducting narrative research rather than that of a psychologist studying the effect of group participation or a neuroscientist in investigating changes in the amygdala and the hippocampus. As such, these results must be taken only as indications, pointing to a direction for further research. In this regard, groups similar to the HeNReG would need to be set up and offered to those expressing research burnout for the deliberate purpose of seeing if they develop resilience [70] by creating an ordered personal narrative with respect to their research related to health. At the same time, an appropriate, non-invasive test would be devised [71] to indicate the activity of the amygdala and hippocampus of each participant both before and after participation in these types of groups to see if research-related memories were being stored and accessed in the hippocampus rather than the amygdala.

4.5. Authentic Leadership

The HeNReG is unique as a method to engage health researchers experiencing burnout with the intent of lessening depression and anxiety. As such, there are commonalities between the role the author assumes as the facilitator of the group and what the literature describes as an authentic leader with respect to hopeful resilience. Considering a leader to be an individual who is able to influence a group to achieve a common goal [72], an authentic leader is one who knows themselves, particularly in transparently acting upon their values in engaging with the group [73]. In research on promoting authentic leadership with nurses, results report that authentic leadership positively influences the hopeful resilience of nurses [74,75] with a growing number of studies suggesting that the theory of authentic leadership [73] has relevance for leadership in modern day healthcare settings [76]. However, although the author may resemble an authentic leader, as an equal participant in the group, the role assumed of the facilitator is more egalitarian than that of a leader, permitting group members a method to carry on with further developing their hopeful resilience once their participation with the group comes to an end. For this reason, the results of studies on authentic leadership are of interest regarding hopeful resilience but are not equivalent to the method undertaken with the HeNReG.

5. Conclusions

This historical study provides an intriguing and clear direction for potentially fruitful research in creating safe narratives. What would be required for future research in this area is, (1) the development and testing of deliberate psychological studies using the method of ordered prompting devised with the HeNReG to construct safe narratives for the purpose of comparing resilience pre- and post-membership to the group and (2) a non-invasive neurological examination of the amygdala and hippocampus of those engaging in these research groups pre- and post-group participation. If the results of these types of studies

Challenges **2022**, 13, 28 13 of 15

of similar groups are able to show comparable abilities to create hopeful resilience, as found with the HeNReG, this method may be a new avenue for decreasing the incidence of depression and anxiety in the industrial world.

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