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RESEARCH PAPER

Healthcare Professionals' Lay Definitions of Hope

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Abstract
Although lay beliefs about hope have been studied extensively in college student populations, little is known about how working professionals understand hope. Accordingly, the present study examined lay beliefs about hope among healthcare workers through the prism of two prominent models of hope. A directed content analysis of healthcare professionals' qualitative responses indicated that the top seven most prevalent lay beliefs about hope were: cognition, implicit goal, agency thoughts, future orientation, likely, affect, and pathway thoughts. Consistent with the dominant perspective in the hope literature, Snyder's Hope Theory, the three key ingredients of hope—agency thoughts, pathway thoughts, and goals—were all present, albeit to varying degrees. Aspects of Herth's hope model, another prominent conceptualization, were less supported by our findings. When examining whether agency thoughts or pathway thoughts were more prevalent, there were no significant differences. When examining whether cognition or affect were more prevalent, there was a significant difference such that lay theories of hope typically reflected cognitive rather than affective processes. We discuss implications for existing hope models, implications for healthcare professionals, and future research avenues.

Keywords Hope · Snyder Hope Theory · Herth hope · Lay beliefs · Lay definitions · Healthcare · Content analysis

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Hope is important because it can make the present moment less difficult to bear. If we believe that tomorrow will be better, we can bear a hardship today.
— Thich Nhat Hanh.
Peace Is Every Step: The Path of Mindfulness in Everyday Life.

1 Introduction

Hope has been identified as an important factor in both psychological and physical healthcare. Higher hope has been linked to lower levels of depression and anxiety (Feldman & Snyder, 2005), lower levels of negative affect following traumatic events (Hassija et al., 2011), greater levels of cardiovascular health-promoting behavior (Feldman & Sill, 2013), and even longer survival in patients with advanced cancers (Corn et al., 2022). In healthcare professionals, hope is associated with lower levels of burnout and higher levels of life satisfaction (Feldman et al., 2021; Vetter et al., 2018). Moreover, patients often desire for healthcare professionals to project hopefulness in their communication (Hagerty et al., 2005; Prip et al., 2018), and much has been written about the importance of hopeful provider-patient communication (e.g., Evans et al., 2006; Mack et al., 2007). However, very little research has explored how healthcare professionals personally define hope.

In the present research, we explore healthcare providers' "lay" definitions of hope—that is, what being hopeful personally means to them. It is important to understand healthcare professionals' views of hope for two reasons. First, most research on hopefulness in mental and physical health operationalizes hope using two particular models developed by Snyder (1994) and Herth (2001), both of which define hope at least in part as a set of positive future-focused beliefs. However, if professionals are using vastly different lay definitions of hope than the conceptualizations set forth by Snyder and Herth, these established hope theories may lack generalizability to health care providers, or fail to sufficiently explain health care providers' behaviors and interactions. Second, understanding healthcare professionals' views of hope may yield information useful in designing more targeted techniques for conveying hopefulness in provider-patient communication as well as interventions for mitigating burnout.

1.1 Prominent Models of Hope

Although various models of hope exist in the literature, the two models that have produced the greatest amount of research were developed by Snyder (1994, 2002) and Herth (1991, 1992). In this section, we discuss how each of these models defines and operationalizes hopefulness.

Snyder's (1994; 2002) conceptualization, known as Hope Theory, has received the most research attention over the past 30 years in the field of psychology. It constitutes an attempt to operationalize the dictionary definition of hope: "desire accompanied by expectation of or belief in fulfillment" (Hope, 2022). Within this model, a base condition for the presence of hope is to have something for which to hope—a goal or goals. Goals have been defined as the targets of "mental action-sequences" (Snyder, 1994, 2002; Snyder et al., 2002) and consist of anything that an individual desires to get, do, be, experience, or create. Thus,

virtually all purposive behavior is directed toward some goal. Snyder and colleagues (1991) further define hope as "a cognitive set that is based on a reciprocally-derived sense of successful agency (goal-directed determination) and pathways (planning to meet goals)" (p. 571). Thus, hope is composed of two additional components: pathways thinking and agency thinking.

A *pathway* is a plan or strategy for achieving a goal (Snyder et al., 2002). People engage in "pathways thinking" whenever they consider how to reach their goals, and high-hope people tend to produce many pathways in order to circumvent possible obstacles (Snyder, 2002). It is important to emphasize, however, that the subjective experience of hope does not depend upon the existence of real, workable pathways to goals, but rather upon a perception that such pathways exist and can be used if desired (Snyder et al., 1991).

The final component of hope, *agency*, consists of "the thoughts that people have regarding their ability to begin and continue movement on selected pathways toward those goals" (Snyder et al., 1999, p. 180). As in Watty Piper's (1978) famous children's book, *The Little Engine That Could*, agency thoughts such as "I think I can," are the fuel that drives the goal-pursuit engine. These thoughts motivate individuals to pursue their goals even when faced with challenges and setbacks.

Thus, the Hope Theory definition of hope can be summed up as being future-focused, goal-directed, and cognitive in nature. Specifically, it involves thoughts or beliefs providing agency (i.e., motivation) and pathways toward individuals' future goals, leading to perceptions that those goals are more likely to be achieved. This theory asserts that these cognitive elements influence individuals' affect, but it does not posit that hope itself is a positive emotion. Numerous self-report measures have been developed to assess this form of hope, including the Trait Hope Scale (Snyder et al., 1991) and State Hope Scale (Snyder et al., 1996). Indeed, relationships between measures of this form of hope and positive affect are only moderate (Snyder et al., 1991).

Some have suggested that, while Snyder's Hope Theory is prevalent in the academic literature, the layperson understands hope as being primarily associated with agency thinking rather than pathways thinking (e.g., Tong et al., 2010). Others consider hope to be a future-focused affective state (e.g., Aspinwall & Leaf 2002; Averill et al., 1990; Emmons, 2005; Smith & Ellsworth 1985, 1987). Thus, in the present study, we examine each element of Hope Theory in healthcare professionals' lay definitions of hopefulness and additionally consider whether hope exists as an emotion in these lay definitions.

A second model of hope, proposed by Herth (1991), is somewhat more prominent in the nursing and medical literatures. Herth developed two instruments to assess hope—the Herth Hope Scale (HHS; 1991) and the Herth Hope Index (HHI; Herth 1992)—with the latter used much more commonly. Both of these measures are loosely based on Dufault and Martocchio's (1985) theory of hope, which takes into account philosophical, religious, sociological, and psychological factors. Dufault and Martocchio define hope as a "dynamic life force" and further state that "Hope is multidimensional and process-oriented" (p. 380). In particular, they delineate six dimensions of hope: affective, cognitive, behavioral, affiliative, temporal, and contextual. The HHI and HHS were designed, at least in part, to assess these dimensions, particularly in physically ill populations. However, not all of the dimensions are supported by factor analyses of these instruments (Herth, 1991, 1992; see Nayeri et al., 2020).

Herth (1992), for instance, performed a factor analysis of the HHI in adults with a variety of physical illnesses and found a three-factor solution. That is, all items significantly loaded on one of three factors, which were described as: (1) temporality and future, (2) readiness and expectancy, and (3) interconnectedness. However, later studies (see Nayeri et al., 2020 for a review) examining the psychometric properties of HHI have generally yielded two factors, which (depending on the study) have been described in slightly differing terms (e.g., Haugan et al., 2013; Van Gestel-Timmermans et al., 2010). Researchers have generally described one of the factors as encompassing a future-focused sense of expectancy (similar to hope as defined in Snyder's Hope Theory). A second factor encompassing interconnection and relationship is also often present. This latter factor is frequently described as involving interconnectedness with others (i.e., interpersonal relationships) as well as interconnectedness within oneself, including elements of spirituality or faith. For instance, one item on the HHI is "I have faith that gives me comfort."

As such, Herth's (1991, 1992) definition of hope can be summed up as being future-focused, much like Snyder's (1994, 2002). Additionally, it involves interconnectedness, relationally with others and also perhaps spiritually. Indeed, others have also described hope as having spiritual or religious dimensions (Holt, 2000; Anandarajah & Hight, 2001) as well as involving interpersonal relationships (Morse & Doberneck, 1995; Schrank, Stenghellini, & Slade, (2008)). For instance, in a similar multi-dimensional model of hope proposed by Scioli and colleagues (2011), factors related to spirituality and relational attachment are present. Thus, in the present study, we explore the degree to which healthcare professional's lay definitions of hope accord with these dimensions in addition to those present in Snyder's (1994, 2002) Hope Theory.

1.2 Hope in Healthcare Contexts

Many scholars in the healthcare domain have commented that "hope" and "cure" are often treated as synonyms. For instance, writing about hope in the domain of palliative care, Sullivan (2003) states, "Medicine has thought of hope at the end of life largely in terms of prognosis for survival" (p. 4). Quill (2000) writes that this perspective has resulted in clinicians' fearing that "they will be perceived as 'giving up' if they talk about dying, thereby eliminating hope and depressing patients" (p. 2503). He suggests that, in order to preserve hope, "patients, their families, and clinicians frequently collude to avoid mentioning death and dying, even when the patient's suffering is severe." Indeed, Curtis et al., (2000) asked physicians about obstacles to engaging in frank discussions about mortality with patients who were living with AIDS, finding that the second most commonly cited barrier was concern that such conversations would destroy patients' hopes.

Whitney and colleagues (2008), in contrast, argue that physicians often conceptualize hope in two ways: (1) for specific goals (often cure or life prolongation), and (2) in a more general, expansive way pertaining to a positive future. Consistent with this assertion, one qualitative study (Wolf et al., 2018) investigated physicians' definitions of hope, finding that physicians did not necessarily define it as related only to cure or life prolongation. Instead, they defined hope as an abstract, evolving, future-focused concept involving positivity. However, this conclusion was based on interviews with only ten physicians. Moreover, the interview questions largely concerned how they viewed hope in the context of patient care,

rather than how they understood hope overall. For this reason, we seek to evaluate how a large sample of oncology professionals define hope more generally.

In the healthcare literature, hope is also sometimes viewed as a spiritual phenomenon, as previously mentioned. Puchalski (2001) comments that "spirituality and religion offer people hope. It helps people find hope in the midst of despair that often occurs in the course of serious illness and dying" (p. 13). In fact, the acronym HOPE was developed as a teaching tool to aid medical students, residents, and practicing physicians in incorporating spirituality into their conversations with patients (Anandarajah & Hight, 2001). For instance, the "O" in this acronym involves inquiring about patients' participation in "Organized religion," while the "P" involves asking about "Personal spirituality and practices." Counterintuitively, however, Duggleby, Cooper, and Penz (2009) found that, in a sample of 64 personal care aides who had registered for a 'Living with Hope' conference, scores on a spiritual well-being scale were actually negatively correlated with levels of hope. To clarify the degree to which spirituality is included in healthcare professionals' lay definitions of hope, in the present study we code for the presence of spiritually-related statements.

1.3 Previous Research on Lay Theories of Hope

Researchers have been interested in hope as it is understood by laypersons for some time. For example, Bruininks & Malle (2005) qualitatively examined the conceptual and psychological differences between hope and other states (optimism, wanting, desire, wishing, and joy). They asked 52 undergraduate students the following question: "How would you describe [state name]?". Students were told that they were not to respond with what they perceived to be the definition of the state, but rather, to respond with how they would actually use the word in everyday conversation. Analysis of qualitative data for hope revealed that the majority of students mentioned a future outcome (77%). Hope, unlike the other states, was described as serving a function (30%) such as keeping people focused on goals, keeping people going, or helping to regulate negative feelings. The majority (58%) of students described hope as an expectation. Hope was also described by most people as an emotion (56%) more so than as a cognition (40%). Finally, nearly all students (81%) stated that there was an object of hope (e.g., hopeful for X or hopeful about Y).

Similarly, Li and colleagues (2021) asked 298 college students about their lay beliefs about hope. Students were asked to respond to a variety of targeted qualitative questions about hope. Directed content analysis suggested 24 lay beliefs, 21 of which were described at least once by 10% or more of students. The top five most prevalent beliefs were that hope involved: (1) interpersonal relationships (61.7%); (2) optimism (60.4%); (3) work (56.4%); (4) spirituality (43.3%); and (5) positive emotions (36.2%). Notably, while the researchers examined agency and pathway thoughts and found that they were seldom mentioned, they did not code whether an implicit or explicit mention of a goal was present, which is one of the key components of Snyder's (1994) and Herth's (1991) prominent models of hope, as mentioned previously.

In another qualitative study, Wilson and colleagues (2021) conducted in-depth interviews with 36 young adults drawn from larger studies taking place in Ghana and South Africa. Their goal was to explore the connotations and denotations of hope, goals, and meaning as well as how these constructs were interconnected in these samples. Using a bottom-up, computer-assisted coding process, they found that a set of positive cognitive intrapersonal

processes and beliefs about participants' "outlook toward the life ahead" linked these three constructs (p. 501). In this regard, participants frequently referenced personal effort, abilities, and current performance or success, which the authors highlight as consistent with Snyder's (1994, 2002) Hope Theory. Somewhat more similar to Herth's (1991, 1992) model, however, they found strong "horizonal and vertical connectedness" (p. 502). Horizontally, participants' goals, hopes, and meanings were virtually inextricably linked to their relationships with family, peers, teachers, and the larger community. Vertically, participants made frequent reference to spirituality as a source of hope and the supernatural as helping them achieve important goals.

In a series of four quantitative studies, Tong et al., (2010) wished to test the degree to which lay notions of hope coincided with the agency and pathways components of Snyder's Hope Theory (1994). In particular, they assessed the degree to which scores on either the Trait or State Hope Scales (both of which consist of pathways and agency subscales) related to college students' ratings on items assessing "lay" hope (e.g., "I feel hopeful about being a better person than I am now," "I feel hopeful about the future," "How hopeful are you about achieving this goal?" [with reference to a particular goal nominated by the student]). Their first three studies were prospective, with the Trait Hope Scale administered at the initial time-point, followed by an assessment of lay hope one to two months later. Their fourth study was cross-sectional, involving administering the State Hope Scale and lay hope items concurrently. Across all four studies, when pathways and agency subscales were analyzed as simultaneous predictors of lay hope, only agency scores achieved statistical significance. These results collectively appear to indicate that agency accords with students' lay notions of hopefulness to a greater degree than pathways.

While these studies are helpful in understanding hope in college student and young adult samples, few studies have involved assessing healthcare professionals' lay understandings of hope. Given that Snyder's (2002) and Herth's (1992) conceptualizations are the most researched models in the psychological and medical literatures and that measures of these hope constructs consistently have been shown to predict psychological and physical health outcomes (as mentioned earlier), it seems important to investigate the degree to which healthcare professionals' views of hope align with these models.

2 Present Study

The current study explores healthcare professionals' conceptualizations of what it means to be hopeful. Utilizing directed content analysis of professionals' responses, we examine whether the key ingredients of both Snyder's (2002) and Herth's (1992) hope models are present, including agency thoughts, pathway thoughts, goals, future focus, spirituality, and interpersonal relationships, among others.

3 Methods

3.1 Research Setting

We examined lay theories of hope among members of the SWOG Cancer Research Network. Formerly known as the Southwestern Oncology Group, SWOG (established in 1956) is a global research community receiving federal (though the National Cancer Institute) and private funds to design and conduct clinical trials. Their mission is to "significantly improve lives through cancer clinical trials and translational research" (SWOG, 2022). SWOG aspires to test new cancer treatments, new prevention strategies, and new methods for caring for cancer survivors.

3.2 Participants and Procedure

This study invited a total of 1,000 SWOG members to participate in the survey, who were randomly selected from the organization's membership database of over 12,000 members at over 1,000 hospitals, clinics, and cancer centers. Random selection reflected a cross-section of the professions most commonly represented in SWOG. To maintain anonymity, invitation emails were sent directly from the SWOG operations office; names and other identifying information were not collected. The survey was voluntary, and there was no compensation or other incentive provided for participation. The study was approved by the SWOG Cancer Research Network Executive Committee as well as the [University name blinded for peer review] Institutional Review Board.

Participants clicked on a link in the invitation email and were taken to an online survey, which was field-tested to confirm that it required less than 10-minutes. Demographic information was collected, including age, gender, ethnicity, profession, and work environment (academic, private, other). Additional quantitative surveys were also included, the analyses of which have been published elsewhere (Feldman et al., 2021). For the purposes of the present article, participants provided qualitative responses to the following open-ended question: "To you, what does it mean to be 'hopeful'?"

Of the 1,000 members invited to participate, 226 completed at least part of the survey (22.6% of invited participants, a response rate similar to past surveys of medical professional organizations; Vetter et al., 2018), and 176 completed the open-ended question (77.9% of survey respondents). Sample characteristics can be found in Table 1. The most frequent age group was 35–44 years (34.1%), most respondents identified as female (74.4%), and White (77.8%). The sample included a range of professions, primarily working in academic hospitals (46.6%), with physicians ($n=56$) and nurses ($n=48$) being the most common. Other professions ($n=72$) included patient advocates, physician assistants, clinical research associates, and PhD researchers, among many others.

3.3 Directed Content Analysis

We utilized directed content analysis, a primarily deductive, theory-driven approach which seeks to test, correct, and/or potentially extend and enrich an existing theoretical framework (Hsieh & Shannon, 2005). As detailed below, we developed an initial coding scheme before we began the coding process. This initial coding scheme was guided by the existing

Table 1 Sample Demographics (N=176)

		n	%
Age	18-24	2	1.1
	25-34	25	14.2
	35 – 44	60	34.1
	46 – 54	28	15.9
	55 – 64	42	23.9
	65 and older	19	10.8
Gender	Female	131	74.4
	Male	44	25.0
	No Response	1	0.6
Ethnicity	African American	7	4.0
	Asian/Asian American	16	9.1
	Latinx	12	6.8
	White	137	77.8
	Multi-Ethnic	4	2.3
Profession	Physician	56	31.8
	Nurse (RN/NP)	48	27.3
	Other	72	40.9
Work Setting	Academic Hospital	82	46.6
	Private Hospital	35	19.9
	Other	59	33.5

theoretical and empirical literature (i.e., top-down approach), and was further refined during the coding process (e.g., collapsing codes as needed; i.e., a bottom-up approach). To best capture the specific features of healthcare professionals' conceptualizations of hope, we began by considering Snyder's (1994, 2002) conceptualization (agency, pathway, implicit or explicit goals, future-focused, cognitive) as well as Herth's (1992) conceptualization (future-focused, interpersonal, spiritual) of the hope construct. We subsequently consulted the literature on other content analysis efforts and integrated much of the coding scheme developed by Bruininks & Malle (2005) in their aforementioned study. Finally, we considered our specific context of healthcare professionals and whether there were particular features of these professionals' conceptualizations of hope that may be present (e.g., medical cure). This resulted in a codebook comprising 13 codes: pathway thoughts, agency thoughts, explicit goal, implicit goal, cognition, affect, interpersonal relationships, temporality, hope is caused by something/cause of hope, likelihood, behavioral action, medical cure, and religious/spiritual.

3.3.1 Coding Scheme and Process

Table 2 describes the coding scheme utilized for this study. We prioritized interrater reliability; thus, in our coding process we opted to stay as close to the text as possible, coding the content as it was explicitly stated by the participant (i.e., manifest coding) rather than adopting a latent content coding process wherein coders make interpretations regarding the deeper underlying meaning of a response (which inevitably sacrifices reliability given that coders' interpretations often differ).

The data were coded in four rounds. In the first round, coders coded the first 10% of the responses. In the second round, they coded the next 20% of responses. In the third round,

Table 2 Coding Scheme

Feature	Definition	Code
Pathway Thoughts	Perceived ability to generate routes or ways to get to desired outcomes or future states, including ways around obstacles that might stand in the way; Planning to meet goals. Words may include "ways," "plans," "strategy," "how to get there," "overcome," or similar.	1 = present 0 = absent
Agency Thoughts	Perceived ability to initiate and sustain movement toward a goal or desired future state. Expressing confidence that one will achieve a goal/get to a desired future state, confidence in one's capability of doing so, or energy or motivation to do so. EX: "I can do this"; "I am not going to be stopped"; "Feeling really determined to get there." (If a person expresses confidence that ways to a goal exist, this would be coded as "pathways," unless the person also says they are confident <u>they</u> can successfully act on those ways).	1 = present 0 = absent
Explicit Goal	Explicit or direct mention of a goal or the target of hope. Directly referring to something that they hope or want to accomplish or experience. EX: "Believing that it's possible to graduate from college." If in doubt, code explicit.	1 = present 0 = absent
Implicit Goal	Implicit or indirect mention of a goal or the target of hope. Though a specific goal is not mentioned, the idea of a "better future" or "something good" or a general positive future state is present in the answer.	1 = present 0 = absent
Cognition	Mention of cognitions, thoughts, or expectations. EX: "belief," "know," "conscious of," "think," "imagine," "consider," "remember," "expect", "anticipate," or similar.	1 = present 0 = absent
Affect	Excluding the word "hope", the use of affect words; feel or feeling are often included, as well as words referring to sentiments, moods, passions, longing, and yearning. References to attitudes (e.g., positive attitude, looking forward to, etc.) will generally be coded as affect since attitudes have an affective component. Note that the word "feel" may sometimes be used to refer to a cognition rather than an affective state (e.g., "I feel that something better is coming"). In this case, it would be coded as cognition rather than affect.	1 = present 0 = absent
Interpersonal Relationships	Any reference to relationships with other people (e.g., colleagues, patients, family, friends, and loved ones). Any reference to relationship with God or a higher power would not be coded as interpersonal relationship and instead would be coded as religious/spiritual.	1 = present 0 = absent
Temporality	The investment of hope in a <u>*future*</u> circumstance (e.g., "Looking forward to…"; ") vs. a present circumstance (e.g., "to remain optimistic"; "to have a positive outlook on things"). This includes phrases followed by general terms such as something or life as well as more specific things such as "that I will graduate" or "my marriage."	1 = primarily present oriented 2 = primarily future oriented 3 = equally present and future oriented 4 = unclear
Hope is Caused by Something / Cause of Hope	Naming past or present circumstances that cause the hope; e.g., "hopeful because I graduated," "when my boss gives me good feedback, I feel hopeful," "Now that I'm married, I feel hopeful," or similar.	1 = present 0 = absent

Table 2 (continued)

Feature	Definition	Code
Likelihood	Probability of an outcome occurring is coded for this feature (e.g., "chance," "possibility," "probability," "likelihood," "odds," "always", "never," "I am certain that…", "I am confident that…").	1 = likely 2 = un-likely 0 = absent
Behavioral Action	A response referring to any behavioral action (direct reference to saying or doing something) caused by experiencing hope is coded for this feature. These can be general or specific behavioral actions. Examples of taking behavioral action include: "Hope is about arguing for what you believe in," "Hope makes me try really hard to succeed," or similar. Examples of can't take action include: "Believing things will change even when there's nothing you can do," or similar. Note, thoughts or beliefs without direct reference to saying or doing something should be coded 0. If not explicitly referring to an action or if in doubt, code 0. Getting through or pressing through without reference to the specific action should be coded as 0.	1 = take action 2 = can't take action 0 = no mention of action / absent
Medical Cure	Mention of hope being about or for medical cure or life prolongation.	1 = present 0 = absent
Religious/spiritual	Mention of explicit religious or spiritual context (e.g., God, Jesus Christ, Divine, life force, etc.).	1 = present 0 = absent

they coded the final 70% of responses. The coding scheme was fine-tuned during the first three rounds. In the final round, all remaining coding discrepancies were discussed. During each round, data were coded independently by at least two coders, the second author and one research assistant. The first author served as a third coder in earlier rounds as well as the final round where remaining discrepancies were discussed. Data that could not be coded with the existing coding scheme were noted as memos with ideas for other possible codes. These memos were evaluated by all coders and the coding scheme was refined as needed.

During weekly coding meetings, all codes were reviewed and all discrepancies were thoroughly discussed between the coders. As needed, following the discussions from these meetings, the coding scheme was adjusted. Adjustments included: removing entire feature codes, adding new feature codes, refining and clarifying feature definitions, and adding or clarifying the coding categories. Each time the coding scheme was adjusted, all previously coded data (even those not in question with discrepancies), were re-coded based on the newly revised feature(s), definition(s), and/or code(s). These re-coded data were again discussed under the new coding scheme. This was done to ensure that all data were coded under the same coding scheme with the same features, definitions, and codes. During the final coding meeting, all remaining discrepancies were discussed with all coders. While acceptable intercoder reliability was set at a *kappa* of 0.70 (Frey et al., 2000), the coders in this study were able to reach a full consensus on all codes.

4 Results

4.1 General Descriptives

Responses varied in length (R: 2 [e.g., "looking forward"] to 100 words) with a mean length of 17.70 words ($SD = 14.27$). This did not differ ($F = 0.37$, $p = .69$) across physicians (R:

3–88; $M = 16.63$, $SD = 14.71$), nurses (R: 2–100; $M = 17.38$, $SD = 16.66$), or other healthcare professionals (R: 3–55, $M = 18.76$, $SD = 12.18$).

Examples of what participants wrote are as follows: One nurse practitioner (Woman, between the ages of 25–44) indicated, "To me, being hopeful means that you know things may not turn out the way you want to, but you hold dear the notion that it is possible." One patient advocate (Woman, between the ages of 55–64) wrote, "To be hopeful means to accept fully all of the circumstances in any given situation (good or bad) and move through that situation with as much joy as possible." A radiation oncologist (Man, between the ages of 35–44) shared, "When things are not as good as I would want them to be—there is a feeling that future may bring improvement and satisfaction." Finally, one palliative care physician (Woman, between the ages of 35–44) stated, "To me, 'hopeful' means, to truly believe there is an opportunity for betterment in any capacity, be that in yourself, both personally and professionally, for others and for the world. It is optimism mixed with realism and creativity that strives for the 'best case scenario.'".

4.2 Most Frequent Features

In the overall sample, the top seven most common feature categories were: cognition (97.2%), implicit goal (85.8%), agency thoughts (45.4%), future oriented (38.6%), likely (36.9%), affect (33.5%), and pathway thoughts (29.5%). Among physicians, the top seven most common feature categories were: cognition (98.2%), implicit goal (85.7%), future oriented (48.2%), agency thoughts (44.6%), likely (39.3%), pathway thoughts (30.4%), and affect (25%). Amongst nurses, the top seven most common feature categories were: cognition (95.5%), implicit goal (81.3%), agency thoughts (45.8%), affect (43.8%), equally present and future oriented (39.6%), likely (39.6%), and pathway thoughts (20.8%). Finally, among those who identified as other professionals aside from physicians and nurses, the top seven most common feature categories were: cognition (97.2%), implicit goal (88.9%), agency thoughts (45.8%), future oriented (34.7%), pathway thoughts (34.7%), affect (33.3%), and likely (33.3%). See Table 3 for frequencies and percentages for all features across all three groups of professionals.

Chi-squared analyses indicated that the three groups did not differ significantly across any feature categories: pathway thoughts ($chi^2 = 2.70$, $p = .26$), agency thoughts ($chi^2 = 0.2$, $p = .99$), explicit goal ($chi^2 = 2.02$, $p = .36$), implicit goal ($chi^2 = 1.38$, $p = .50$), cognition ($chi^2 = 0.53$, $p = .77$), affect ($chi^2 = 4.08$, $p = .13$), interpersonal relationships ($chi^2 = 2.74$, $p = .25$), temporality ($chi^2 = 9.82$, $p = .13$), hope is caused by something / cause of hope ($chi^2 = 4.89$, $p = .087$), likelihood ($chi^2 = 0.68$, $p = .71$), behavioral action ($chi^2 = 0.19$, $p = .91$), medical cure ($chi^2 = 1.51$, $p = .47$), and religious/spiritual ($chi^2 = 0.26$, $p = .88$).

4.3 Examining Differences Between Features

Finally, we tested for two particular potential differences between codes. First, we were interested in agency thoughts versus pathway thoughts, given the aforementioned debate about which is more prominent in the lay experience of hope. Second, we were interested in cognition versus affect, given that some scholars believe that hope is primarily an affective experience. Thus, we performed chi-squared analyses to test for each of these. When collapsing across the three groups, we found no significant difference in the frequency of

Table 3 Content of lay beliefs about hope

Feature of lay belief	Overall Sample (N=176)		Physician Sample (N=56)		Nurse Sample (N=48)		Other Professionals (N=72)	
	n	%	n	%	n	%	n	%
Pathway Thoughts	52	29.5	17	30.4	10	20.8	25	34.7
Agency Thoughts	80	45.4	25	44.6	22	45.8	33	45.8
Explicit Goal	20	11.4	6	10.7	8	16.7	6	8.3%
Implicit Goal	151	85.8	48	85.7	39	81.3	64	88.9
Cognition	171	97.2	55	98.2	46	95.8	70	97.2
Affect	59	33.5	14	25	21	43.8	24	33.3
Interpersonal Relationships	13	7.4	2	3.6	3	6.3	8	11.1
Temporality	24	13.6	3	5.4	8	16.7	13	18.1
Present	68	38.6	27	48.2	16	33.3	25	34.7
Future	55	31.3	14	25%	19	39.6	22	30.6
Equally present and future	29	16.5	12	21.4	5	10.4	12	16.7
Unclear								
Hope is Caused by Something/ Cause of Hope	24	13.6	3	5.4	9	18.8	12	16.7
Likelihood	65	36.9	22	39.3	19	39.6	24	33.3
Behavioral Action	13	7.4	4	7.1	3	6.3	6	8.3
Medical Cure	3	1.7	0	0	1	2.1	2	2.8
Religious / Spiritual	18	10.2	6	10.7	4	8.3	8	11.1

answers involving agency thoughts (80 responses or 45.5%), versus pathway thoughts (52 responses or 29.5%), chi^2 =0.05, p=.83. However, we did find a significant difference in the frequency of answers involving references to cognition (171 responses or 97.2%) versus affect (59 responses or 33.5%, chi^2 = 4.99, p=.026).

5 Discussion

The present study achieved two main goals. First, the qualitative data analysis with healthcare professionals indicated that the top seven most prevalent lay beliefs about hope were: cognition, implicit goal, agency thoughts, future oriented, likely, affect, and pathway thoughts. Thus, the three key ingredients of hope according to Hope Theory (agency, pathway, and goals) were present, as was the future-oriented component of Herth's model. Second, given current debates in the hope-related literature, we were interested in two targeted questions: whether agency thoughts or pathway thoughts were more prevalent as well as whether cognition or affect was more prevalent. In our sample, there was no statistically significant difference between the prevalence of agency thoughts and pathway thoughts, but there was a significant difference between cognition and affect, such that these healthcare professionals more often associated hope with a cognitive process rather than an affective process.

When contextualizing these findings within the broader literature on lay theories of hope, though this study provides a rare look at the lay theories of those in the healthcare field, it nonetheless is helpful to compare the key features from our study to papers using samples of undergraduate students (e.g., Smith & Ellsworth 1985; Bruininks & Malle, 2005; Li et al.,

2021). For example, in our sample, agency thoughts were quite prevalent (45.4%), whereas studies with college students showed agency thoughts to be less prevalent (e.g., 4%; Li et al., 2021). While it may be the case that this is an artifact of the respective samples and thus an area where healthcare professionals and college students diverge, this may also be due to how broadly or narrowly the term is defined for coders. Additionally, how the question or prompt is asked could influence the feature frequency. For instance, Li and colleagues (2021) asked a series of eight questions which included open-ended responses, fill-in-the-blank responses, recalling past experiences of hope, projecting future experiences of having more hope, and so forth. Relatedly, it is also worth noting that in the present study we did not suggest to the healthcare professionals that hope was an emotion nor did we have them compare hope to other affective states, as has been done in other studies examining lay beliefs of hope (e.g., Bruininks & Malle 2005). Keeping the prompt neutral (i.e., "To you, what does it mean to be 'hopeful'?") meant that participants were not unintentionally primed to view hope as an emotion or in any other particular way.

5.1 Implications for Snyder's Hope Theory and Herth's Hope Model

As mentioned previously, the two most researched models of hope in the psychological, medical, and nursing literatures were proposed by Snyder (1994, 2002) and Herth (1992). Consistent with Snyder's Hope Theory, we found that nearly all healthcare professionals in the present sample described hope in a cognitive manner implicitly involving goals. In addition, 69.9% of healthcare professionals in our sample described hope as either being exclusively future-focused or involving equal emphasis on the future and the present. Finally, nearly half of healthcare professionals' descriptions involved agency-related thoughts.

Of note, although pathways thinking was one of the top seven most frequently coded categories, it was present in only roughly a third of responses. Agency thinking, on the other hand, was present in nearly half of responses. Though this difference did not rise to statistical significance, it is somewhat inconsistent with Hope Theory's assertion of agency and pathways as equal components of hopefulness. However, it is broadly consistent with research cited earlier by Tong and colleagues (2010), which suggests that laypersons understand hope as being primarily associated with agency thinking rather than pathways thinking.

In addition to the future focus present in Snyder's model of hope, Herth's model (1991, 1992) adds the additional feature of interconnectedness, relationally with others and also spiritually. The results of the present study, however, contradict the notion that these dimensions are central to our sample of healthcare professionals' lay understandings of hope. In particular, only 7.4% and 10.2% of participants' responses involved references to interpersonal relationships and spirituality or religion, respectively.

5.2 Implications for Healthcare Professionals

Given the consistent evidence that hope predicts a variety of physical and psychological health outcomes, it is meaningful to know to what degree healthcare professional's lay definitions of hope align with the most researched models of the construct, as just discussed. However, it is also informative to note what is not present in their responses. That is, healthcare professionals in the present sample did not often reference medical cure in their responses (only 1.7% of the time). This finding may simply have resulted from the way

we asked about hope. In particular, we did not directly prompt healthcare professionals to define hope in a professional context. Instead, we asked the more general question, "To you, what does it mean to be 'hopeful'?"

Nonetheless, the fact that healthcare professionals in our sample almost never cited medical cure in their responses is inconsistent with assertions made by some authors (e.g., Sullivan 2003; Quill, (2000)) that hope among healthcare professionals is typically framed in terms of cure or survival. In this regard, Feldman and colleagues (2008) advocated that physicians and other healthcare professionals shift their understanding of hope from narrowly focused on cure to more expansively focused on quality of life and related goals, particularly when working with patients who have serious, life-limiting, or terminal illnesses. Our present results, however, suggest that they may already have this more expansive understanding. If this were true, making such a shift isn't as important as bringing this pre-existing expansive understanding to the activities of patient care.

Put differently, it may be that when healthcare professionals consider the meaning of hope in their *own* lives, they think expansively about the construct. But, when speaking with patients, they narrow this definition, making the assumption that the goal is cure or lifeprolongation. This is consistent with Whitney and colleagues' (2008) assertion that physicians conceptualize hope in two distinct ways, one pertaining to specific goals like cure or life prolongation, and another involving a more general, expansive understanding involving a positive future. When working with patients or their families, they may use the former conceptualization, a fact that could possibly explain past research showing that physicians are often reluctant to speak with patients frankly about prognosis for fear of destroying hope (Curtis et al., 2000).

5.3 Limitations and Future Research Directions

The present research examined the various features of lay beliefs about hope in healthcare professionals. Previous research has shown that lay beliefs about hope among college students predict well-being (e.g., Li et al., 2021). Given increasing calls to study resilience in healthcare professionals (Rakesh, Pier, & Costales, 2017), it may be helpful for future research to investigate whether these professionals' levels of hope predict their own personal well-being-related outcomes (e.g., burnout, job satisfaction, job engagement, etc.) as well as whether prover hope has downstream effects on patient outcomes such as frequency and length of hospital stays, adherence to treatment protocols, or patients' own senses of hope. Physician lay theories of hope may also predict important outcomes such as patient perceptions of the working alliance with physicians. Beyond the potential effects on patients, healthcare professionals' levels of hope may also be related to their colleagues' levels of hope, when considering the literature on emotional contagion (Hatfield et al., 1993) and the effects of emotional contagion on group behavior (Barsade, 2002).

Like many other studies examining lay beliefs, the present study utilized a single, open-ended, face-valid question to assess healthcare professionals' lay beliefs about hope. Future research could examine multiple, face-valid questions to assess lay beliefs about hope, which may differ depending on the reference context. As mentioned, perhaps we did not find more references in our sample to cure or life prolongation because we didn't specifically prompt participants to consider hope in the contexts of work or patient care. To assess different contexts, future research examining hope in healthcare professionals could ask

more targeted questions, including: "When considering your life outside of work, what does it mean to be 'hopeful'?", and "When considering your profession, what does it mean to be 'hopeful'?". With these targeted questions, it would be interesting to examine to what extent there is convergence or divergence in healthcare professionals' beliefs about hope between their personal lives and their professional work. Understanding professionals' answers to more focused questions may also provide further information useful for tailoring provider-patient communication.

Finally, while healthcare professionals in the present sample were representative of the population we drew upon (i.e., members of SWOG), given that it consisted predominantly of White women with high levels of education, it is important to avoid overgeneralization to other populations that may be more diverse based on factors including age, gender, ethnicity, education, and socioeconomic status, among others. More specifically, people's experiences of hope and what hope means to them may be substantially different if they are in the majority versus in the minority or if they have experienced oppression or marginalization in society. Conducting research with more diverse working professionals on lay theories of hope is an important and pressing direction for future research.

6 Conclusion

The present research provides insight into how healthcare professionals understand hope. As discussed, our data differ from the findings of past qualitative studies examining lay hope in other populations. These differences suggest that distinct populations accord different levels of importance to the various components of hope (including agency thoughts, pathway thoughts, and goals, among other features). Our findings support the utility of contextualizing the notion of hopefulness for particular samples and opens up exciting avenues for future research on lay theories of hope.

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Declarations

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