

RESEARCH

Comparison of StrengthsQuest Signature Themes in Student Pharmacists and Other Health Care Profession Students

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Objective. To determine whether there is a distinctive pattern of StrengthsQuest Signature Themes or leadership domains for Doctor of Pharmacy students compared to students in other health care professional programs.

Methods. Students in Doctor of Pharmacy (PharmD), Master of Physician Assistant (PA), Doctor of Physical Therapy (DPT), and Doctor of Osteopathic Medicine (DO) programs at Campbell University completed the online Clifton StrengthsQuest assessment and received their Signature Themes. The frequency of individual themes and the leadership domains into which they are sorted by Gallup was analyzed for each program. Results were compared between programs and with national frequencies among undergraduate students.

Results. The most common themes in the total population were Learner, Relator, Responsibility, Harmony, and Achiever. Learner and Relator were among the five most frequent themes for all four individual programs while Responsibility and Harmony were among the top five for three programs. The most frequently reported themes in PharmD and PA students (39% and 38% of all themes, respectively) are grouped by Gallup into the executing domain, and into the relationship-building domain for DO and DPT students (35% and 33% of all themes, respectively). The least frequent themes in PharmD, DO and PA students were those grouped into the influencing domain, reported by 10% or fewer students.

Conclusion. Numerous similarities were found in theme frequencies among students in four different health care professions, suggesting there is not a distinctive Doctor of Pharmacy Signature Theme profile.

Keywords: strengths, student development, StrengthsFinder, talents, signature themes

INTRODUCTION

The Accreditation Council for Pharmacy Education (ACPE) Standards 2016 call for an increased emphasis on affective skills in pharmacy education.¹ This includes development and assessment of self-awareness as well as leadership. There are many approaches for developing self-awareness, and many aspects of leadership. New student orientation programs may facilitate self-awareness using one or more personality tests such as Myers-Briggs Type Indicator (CPP Inc., Sunnyvale, CA) and the Clifton StrengthsQuest (Gallup, Inc., Washington, DC). The latter

is an updated version of the StrengthsFinder program, which has been used by many US pharmacy schools for a number of years as a way to develop leadership.²⁻⁸

The premise underlying the StrengthsQuest approach is that by identifying talents and inherent tendencies, time spent developing those talents will improve one's effectiveness in school, at work, and in personal relationships.⁹ By responding to an instrument comprised of 180 questions involving paired choices, these talents and inherent tendencies are identified and grouped into what the Gallup organization calls themes. These themes are ranked from 1 to 34 based on the likelihood that they are expressed automatically and without thinking, with the number 1 theme being expressed most consistently and the number 34 theme being expressed very rarely or never. The five strongest themes are referred to as Signature Themes. Gallup advises that through practice and application, these themes can be developed into strengths, defined as the "ability to provide consistent, near-perfect

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performance in a given activity.”¹⁰ It is a tenet of the StrengthsQuest program that self-awareness regarding one’s Signature Themes and effort to develop them into strengths can improve leadership effectiveness.

Themes are organized into one of four domains that can describe one’s leadership approach: Executing, Influencing, Relationship Building and Strategic Thinking. The domains consist of those themes that are most similar with how they are applied in interpersonal interactions. The domain names are descriptive, so themes in the Executing domain readily enable getting tasks accomplished and moving a plan toward reality while themes grouped into the Influencing domain are useful for convincing others of the value of that plan and how to move ahead. Understanding the domains into which one’s themes fall can provide insight into the approach one is most likely to automatically use when dealing with others.

Knowledge of one’s Signature Themes can be used to identify approaches to tasks or assignments that are both easier and more satisfying. Early workplace research on strengths was summarized by Louis as indicating that “individuals are intuitively drawn to activities that will facilitate strengths utilization.”⁹ Although it seems intuitive that particular Signature Themes might therefore be associated with particular career paths, there is inconsistent evidence in the literature of a useful connection between specific themes and career choices. Schenck found little if any correlation among graduate students in a career counselor program between individual themes and vocational interests measured by the Strong Interest Inventory.¹¹ Carson and colleagues studied undergraduate students in an online legal program who had taken both StrengthsQuest and the Kuder Career Search (KCS), a career guidance tool.¹² Although the sample included only 117 students, they found that 24 of the 34 StrengthsQuest themes showed a significant correlation with one or more of the KCS career clusters. These clusters are used to guide student decisions about compatible career paths.

Janke and colleagues reported Signature Themes in students from five Midwestern colleges of pharmacy.¹³ They found a consistency in the frequency of the most common and the least common themes in this population. Additionally, they observed that the most common themes were in the Executing domain while the least common were in the Influencing domain. Janke and colleagues pointed out that awareness of this profile could be used to develop interprofessional educational opportunities. They also suggested that knowledge of Signature Theme patterns in students of other health care

professions would help achieve this goal. The research described here is intended to contribute to that knowledge by comparing Signature Themes in students enrolled in pharmacy, physical therapy, physician assistant and osteopathic medicine programs at one university.

METHODS

Campbell University is a private institution with a Baptist heritage located in rural North Carolina. It is a teaching-focused university whose mission is to educate students “who are prepared for purposeful lives and meaningful service.” The Campbell University College of Pharmacy & Health Sciences (CPHS) houses programs offering the Doctor of Pharmacy (PharmD), Master of Physician Assistant (PA) and Doctor of Physical Therapy (DPT) degrees. All students entering these programs in 2016 were provided an access code to take the online Clifton StrengthsQuest assessment, an updated version of the StrengthsFinder program that is directed at students. The assessment was a mandatory part of new student orientation for all three programs. Students participated in interprofessional workshops to explore their Signature Themes, and learned how to use that self-knowledge in their academic program and in their personal life. Campbell University also has a School of Osteopathic Medicine (DO), and first- and second-year students from this program were invited to take the StrengthsQuest assessment. These participants were also provided the opportunity to participate in an interprofessional workshop. Their assessment and the workshop were not part of their orientation and student participation in both was voluntary. The research described here was determined to be exempt by the Campbell University Institutional Review Board.

The validity and reliability of the Clifton StrengthsFinder tool, the basis of the StrengthsQuest tool, has been described elsewhere.¹⁴ Participants answered a series of questions that are the basis of assigning the rank order of their themes. The top five themes, or Signature Themes, were then reported directly to each student. Results were also sent automatically to the researcher, so students were given the opportunity to opt out of having their results used in the research project. Signature Themes were grouped based on the respondents’ academic program after identifying information was removed. Signature Themes were sorted into one of the four leadership domains described by Gallup: Executing, Influencing, Relationship Building and Strategic Thinking. Themes and domains were analyzed using descriptive statistics for percent of students from each academic program reporting each theme and domain. National results from Gallup were used as a measure of typical frequency of each theme

and each domain in a large population. The only demographic group related to educational status that Gallup tracks is undergraduate students, so this population was used for comparison to the Campbell students. This population is likely a more relevant comparison for health care professions students than the general US population. The occurrence of each of the five most frequent themes seen in Campbell health profession students was compared with US undergraduates using a two-tailed Fisher's Exact Test (JMP Pro version 12, SAS Institute Inc., Cary, NC) with significance set at $p < .05$. Occurrence of themes in each of the four domains was analyzed in the same way. Results are reported as odds ratios with 95% confidence intervals.

RESULTS

A total of 1220 themes were collected from 244 students: 100 PharmD, 60 DO, 45 PA and 39 DPT. Demographic information other than academic program was not collected since according to Gallup educational background and age do not impact one's themes, making a comparison of the study population based on these characteristics uninformative. Of the first-year students in the three programs who were required to complete the StrengthsQuest instrument as part of their new student orientation, 96% allowed inclusion of their results in the analysis described here. The response rate for first- and second-year DO students who were invited to participate was 20%, giving an overall response rate of 50%.

The five most commonly reported themes for the entire Campbell population were Learner, Responsibility, Achiever, Relator and Harmony, with each being a Signature Theme for 32% to 34% of all students. (Table 1) According to the Gallup website, these themes were among the top 10 reported for 2,538,472 US undergraduate students who completed the StrengthsQuest questionnaire and all but Harmony are in the top six.¹⁵ The percentage of undergraduates having each of these themes was lower, ranging from 19% of undergraduates reporting Harmony to 28% of students reporting Achiever. Individual tests of association suggested a higher occurrence for all themes but Achiever in the professional student population (Table 2). The least commonly reported themes in Campbell health care professional students were Maximizer, Significance, Command, Ideation and Self-assurance, with 3% to 7% of students reporting them. All of these themes except Ideation are also among the five least common themes reported for the undergraduate population, being found in 4% to 11% of students (Table 1).

Themes were sorted by academic program and the most common themes in each program were identified. Of

the five themes seen most frequently in the total Campbell population, only Learner and Relator were among the five most commonly reported themes in each individual program. PharmD students shared four of their five most common themes with DPT students (Responsibility, Harmony, Relator and Learner). They shared three of their five most common themes with PA students (Harmony, Learner and Relator) and three of their five most common themes with DO students (Responsibility, Learner and Relator) (Table 3).

Gallup attributes each theme to one of four domains: Executing, Influencing, Relationship Building and Strategic Thinking. Among 2,538,472 undergraduates, 33% of Signature Themes were in the Relationship Building domain, 28% were in Executing, 24% were in Strategic Thinking, and 15% were in Influencing.¹⁵ For Campbell health care professions students, the most common domains were Executing (39% of PharmD themes and 38% of PA themes) and Relationship Building (35% of DO themes and 33% of DPT themes). The least common domain for PharmD, DO and PA students was Influencing (9%, 9% and 10% of all themes respectively) while for DPT students it was the Strategic Thinking domain (16% of all themes). Individual tests of association suggested a higher occurrence of themes in the Strategic Thinking domain for undergraduates than for PA or DPT students, and of themes in the Influencing domain when compared to PharmD, PA, and DO students. There was a higher occurrence of themes in the Executing domain for PharmD and PA students than for US undergraduates. (Table 4)

Table 1. Most and Least Frequent StrengthsQuest Themes Among Campbell University Health Care Professional Students^a

Theme	CU Professional (%)	US Undergraduates (%)
Most common		
Learner	34	22
Responsibility	34	23
Achiever	32	28
Relator	32	23
Harmony	32	19
Least common		
Maximizer	7	8
Significance	4	6
Command	4	6
Ideation	4	11
Self-Assurance	3	4

^aThe values represent the percent of students reporting having each theme in their top 5 (Signature Themes). Results are for 2,538,472 US undergraduate students and 244 Campbell students

Table 2. Comparison of US Undergraduates and CU Health Care Profession for the Most Frequent Themes Seen in CU Students

Theme	Professional N (%)	Undergraduates N (%)	OR (95% CI)	p value ^a
Learner	83 (34)	570,932 (22)	1.8 (1.4-2.3)	<.001
Responsibility	83 (34)	590,838 (23)	1.7 (1.3-2.2)	.001
Achiever	78 (32)	712,698 (28)	1.2 (0.9-1.6)	.176
Relator	78 (32)	580,105 (23)	1.6 (1.2-2.1)	.001
Harmony	79 (32)	486,471 (19)	2 (1.5-2.6)	<.001

^aThe p values were calculated based on Fisher’s exact test

The occurrence of three or more Signature Themes in one domain creates a “dominant domain” and may indicate an increased tendency to using the leadership approach implied by the domain name. Among PharmD students, 31% had Executing as their dominant domain, while another 35% had no dominant domain. Executing was the dominant domain for 20% of PA students, while 51% had no dominant domain. Relationship Building was a dominant domain for 28% of DO and 21% of DPT students, while 40% of DO and 59% of DPT students had no dominant domain. No information is currently available from Gallup on frequency of dominant domains among US undergraduate students.

DISCUSSION

Frequency of StrengthsQuest Signature Themes was analyzed for students from four health care professional programs at one institution. Signature Themes represent the top five themes identified by responses to the Strengths-Quest questionnaire. Gallup describes them as being the themes that are strongest and most likely to be used automatically and without thinking. Themes have been shown by Gallup researchers to be reasonably stable over time,

and seem to represent basic attributes of personality that are not dramatically altered during one’s education. This allows not only comparison of students at different points in a professional program but also professional students and undergraduates.

The developers of the StrengthsQuest approach suggest that understanding the areas in which one is strongest promotes maximal effectiveness, engagement and satisfaction in the workplace.¹⁰ Mitchell studied the effect of strengths-based training on health care teams and observed better patient outcomes and happier team members.¹⁶ Using StrengthsQuest is one way to address Accreditation Council for Pharmaceutical Education (ACPE) Standards 2016 requirements for developing self-awareness and leadership ability in students.¹ Schools and colleges of pharmacy have reported use of strengths-based training for their students and residents for this purpose.^{2-7, 13, 17-19}

When Campbell University health care professions students were combined into one population, the five most reported themes were among the 10 most commonly seen in 2,538,472 US undergraduate students. Four of the most common themes for the health care students were also in the six most common among undergraduate students. Given this overlap, it is unclear whether there is any significance to the identity of the five most common themes reported by health care students. However, the proportion of Campbell health care professions students reporting four of these themes was significantly higher than that from a broad sample of US undergraduate students. Among the Campbell students, each of the top five themes was reported by more than 28% of respondents. These same themes were found to occur in 19% to 28% of undergraduate students. It is possible that this difference may be due to the nature of the students drawn to apply and matriculate at Campbell University because of its mission, or to the nature of those drawn to health care professions in general. Expansion of the analysis described here to a larger population of health care professions students at other institutions may help determine whether either explanation is true.

Table 3. Five Most Common StrengthsQuest Themes in Each Campbell Health Care Program

Theme ^a	PharmD N=100	DO N=60	PA N=45	DPT N=39
Responsibility	X	X		X
Harmony	X		X	X
Discipline	X			
Learner	X	X	X	X
Relator	X	X	X	X
Empathy		X		
Restorative		X		
Achiever			X	X
Positivity			X	

Abbreviations: PharmD=Doctor of Pharmacy; DO=Doctor of Osteopathic Medicine; PA=Master of Physician Assistant; DPT=Doctor of Physical Therapy

^aThe X indicates the five most common themes for each program

Table 4. Comparison of US Undergraduates' and CU Health Care Professions Students' Themes in Each StrengthsQuest Domain

Domain	Professional N (%) Group	Undergraduates N (%)	OR (95% CI)	p value ^a
Executing	196 (39) PharmD	3,572,253 (28)	1.6 (1.4-2.0)	<.001
	86 (38) PA	3,572,253 (28)	1.6 (1.2-2.1)	<.001
Strategic	37 (16) PA	3,044,170 (24)	0.6 (0.4-0.9)	<.001
	32 (16) DPT	3,044,170 (24)	0.6 (0.4-0.9)	.01
Influencing	44 (9) PharmD	1,905,117 (15)	0.5 (0.4-0.7)	<.001
	22 (10) PA	1,905,117 (15)	0.6 (0.4-0.9)	.03
	28 (9) DO	1,905,117 (15)	0.6 (0.4-0.9)	<.001

Abbreviations: PharmD=Doctor of Pharmacy; DO=Doctor of Osteopathic Medicine; PA=Master of Physician Assistant; DPT=Doctor of Physical Therapy

^aThe *p* values were calculated based on Fisher's exact test

Janke and colleagues reported on the frequency of StrengthsFinder themes in students at five Midwestern pharmacy schools.¹³ The most common themes in that population were Achiever, Harmony, Learner, Responsibility and Empathy. Janke and colleagues suggested that their results may not show a Signature Theme profile for PharmD students, and the results reported here support that caution. All of the top five themes from the Midwestern pharmacy schools except Empathy were among the five most common themes reported by Campbell health care profession students when combined into one population. The other theme in the top five among Campbell students was Relator, found to be sixth most common in the Midwestern pharmacy schools. Empathy was less common among Campbell students, ranking 10th of the 34 themes and reported by 16% of students. Campbell is a rural, private institution with a teaching focus while the schools included in the Janke and colleagues study are all public research institutions. The similarity in the most frequent themes among students at these schools with very different missions lends credibility to the results of this study, which involved fewer students. Additionally, students in the Midwestern pharmacy schools may provide a closer comparison to Campbell health care professions students than the general undergraduate population. It would be interesting to compare Signature Theme frequency with students from other academically rigorous Science, Technology, Engineering and Math (STEM) disciplines that do not include aspects of patient care. For example, Learner and Achiever may also be common in students in most STEM disciplines, but perhaps Relator and Harmony are not.

When Campbell student results were sorted by academic program, some differences were seen between programs in occurrence of themes. Among the five most common themes for the entire population, only Learner and Relator were in the top five for all four programs.

Responsibility and Harmony were each in the five most frequent for three programs, but only PharmD and DPT students had both in their top five. The Gallup organization does not collect demographic information about those completing the StrengthsQuest questionnaire. As a result, there is no information available on differences in theme frequency among subpopulations such as students in different educational programs.

While arguing that job satisfaction is improved when responsibilities and assignments are aligned with one's strengths, Gallup also advises against using themes for choosing a career path. Carson and colleagues point out that StrengthsQuest themes are determined based on responses to forced choice questions, and individuals may make some choices based on what they want to be true rather than what actually is. They recommend considering use of StrengthsQuest themes as one component among several used when providing career counseling.¹² It is clear from results reported here that there are overlaps in the frequency of themes among students in four different health care programs at one institution. Of the five themes most frequently reported by Campbell PharmD students, four were also in the top five themes for students in at least two other programs. Based on these results, it is unlikely there is a Signature Theme profile that is characteristic of any one health care profession.

Janke and colleagues reported that Signature Themes reported for PharmD students were most frequently sorted into what Gallup calls the Executing domain and that themes belonging to the Influencing domain were least frequent.¹³ That pattern was seen not only in Campbell PharmD students but also in PA students. The significance of this is unclear; it suggests that students drawn to these programs may prefer accomplishment over persuasion, but why that might be less common in DPT or DO students is unknown. The more traditional roles of pharmacists

have included business aspects, such as filling orders placed by physicians. Perhaps the tendency for PharmD students to have more themes in the Executing domain is in part due to lack of understanding in potential applicants of the broader roles in patient care that pharmacists now take on. The required oversight of physician assistants by a physician may also explain dominance by this same domain in PA students. However, consistency would predict higher occurrence of themes in the Influencing domain among medical students, so the observation that themes in the Influencing domain were as rare in Campbell DO students as in PharmD and PA students argues against such simple explanations.

In a broad sample of US undergraduate students, themes in the Influencing domain made up 15% of all themes reported, and only Campbell DPT students came close to that level, with 18% of reported themes.¹⁵ A powerful application of knowing one's strengths is the ability to compensate for weaknesses through the use of complementary strengths. The role of the pharmacist as a member of a health care team has evolved in recent years, and there is a growing movement to allow pharmacists provider status. A strong team member may need to influence others at times, and changing public perception and policy through advocacy clearly requires influencing skills. Schools and colleges of pharmacy may want to examine ways to boost influencing ability in their students by making use of themes more commonly found in this population. Interprofessional education activities provide another place for such efforts since another benefit of the StrengthsQuest approach is creating effective teams.²⁰

The results reported here might not be generalizable since students from only one institution were involved. Students may be drawn to a particular institution because of its mission and culture. This complicates interpretation of a putative relationship between StrengthsQuest themes and an individual's affinity for a particular health care profession. The number of students analyzed for each program was limited by class size, so there are fewer DPT students included and they may not be a representative sample. This is especially relevant when looking at differences in frequency of less common themes.

CONCLUSION

Analysis of StrengthsQuest Signature Themes from students in four health care professions programs at one institution found little evidence of meaningful differences in frequency of themes for students in the different programs. However, there were indications that some themes are more common in health care professions

students than in the US undergraduate population. As a population, health care professions students seem to be less likely to have themes related to influencing others, so efforts should be put into helping these students develop compensatory approaches to persuading others using themes that are more common in these students.

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