Results from a global pharmacy leadership needs assessment: Opportunities to advance pharmacy leadership

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Abstract

Background: Leadership skills in the pharmacy profession are essential for career development and advancement. Pharmacy education is often not focused on developing these leadership skills. This study determines the exact pharmacist leadership traits needed across the globe. **Methods:** A three-part leadership needs assessment was developed by three International Pharmaceutical Federation (FIP) global leads for leadership development. Pharmacy management leaders within FIP headquarters vetted the survey for external validity, and their feedback was incorporated. In January 2021, the survey was disseminated to around 3000 FIP members using Qualtrics. The survey took approximately 15 minutes to complete 28 questions. Qualitative and quantitative analyses were used for the data. **Results:** A total of 239 participants (~8%) completed the survey. On average, participants felt that innovation/entrepreneurship, negotiating, strategic context, conflict management, and vision were among the top five leadership competencies that they would like more training in. When stratified by work setting, pharmacists in academia ranked conflict management, in inpatient hospitals ranked change management, and in community/retail settings ranked prioritisation as the top leadership competency need. **Conclusion**: Pharmacists in different work settings and different parts of the world have a need for different leadership skills which should be carefully considered when providing leadership training.

Introduction

Leadership in pharmacy, although integral to the success of many pharmacist's roles, has not been properly explored worldwide. It is unknown what leadership skills pharmacists want or desire to learn more about. The International Pharmacists Federation (FIP) Workforce Development Hub leaders focusing on Leadership Development (WDG6) embarked on a project to identify leadership needs for the organisation's members. FIP is a global organisation serving four million pharmacists and pharmaceutical scientists worldwide.

Leadership has been determined to be a pillar in the pharmacy profession. Its standardisation has sparked increased research surrounding its definitions, competencies, and assessment methods throughout the profession and within pharmacy schools. The most common definitions of leadership involve the motivation of others toward the achievement of a specific goal and leading organisational change (Reed *et al.*, 2019). In a Saudi Arabian workforce development needs survey, the professional development cluster was identified as a priority area for improvement. The subsection "*Leadership Development*" was a top priority within this cluster. Most pharmacy education is devoted to pharmaceutical science and clinical practice, leaving a gap in understanding and leadership

skills for pharmacists working in academia, industry, and community settings (Almaghaslah & Alsayari, 2021). A survey of Royal Medical Services and Community Pharmacists showed that only 19.1% and 18.4% reported a written policy regarding personal development and leadership, respectively. Participants reported a strong desire for continued educational training concerning personal development skills (Odeh *et al.*, 2021). Based on a national survey of a post-graduate year one resident in US institutions, less than 20% of residency training is related to leadership. Only 30% of that time is spent on mentorship and leadership tools, leaving practitioners yearning for further development (Cho & Girnys, 2015). Possessing leadership skills contributes to effective engagement amongst pharmacy practitioners and is a motivating force behind the progression of the profession. Current research does not reflect the leadership interests of practising pharmacists. However, motivating factors for student leadership have been studied in depth and serve as a direct indicator of practitioner interests. One study has identified motivating factors for student leadership to be networking, presenting a well-rounded image, and interest in organisation activities mirroring the FIP research indicating practitioner interests in joining international organisations (e.g. networking opportunities, career development, exploration of opportunities and incentives for implementing new professional services) (Phillips *et al.*, 2015).

Determining and identifying leadership areas of improvement amongst pharmacists optimises opportunities for growth and continuous professional development. To achieve the goal of transforming the global impact of pharmacy to meet health needs, understanding leadership deficits in pharmacists and their desire to develop these skills is integral. Healthcare outcomes are improved when there is strong leadership. Change is fostered, loyalty is improved, and error rates are decreased. Investing in developing strong pharmacy leaders will only positively impact global health (Jeyaraman *et al.*, 2018). FIP has established workforce development goals to assist with transforming the profession of pharmacy globally over the next decade, and Development Goal Six (DG6) focuses on leadership development. Global pharmacy leaders for DG6 have been assigned to create, promote, and advocate for strategies to increase the development of professional leadership skills for pharmacists in all stages of pharmacy careers (FIP, International Pharmaceutical Federation, 2020).

FIP Global pharmacy leads for WDG6 have developed and implemented a global pharmacy leadership needs assessment aid to identify leadership competencies in pharmacists and pharmacy leaders around the world.

This study aims to provide data to inform on leadership needs for pharmacists across the globe.

Methods

Survey design

In August 2020, a survey instrument focusing on the leadership development needs of the organisation was drafted by the leaders of WDG6. The survey was organised into three sections. One section focused on generalised anonymous demographic-type questions, leadership experiences and practice areas, current situations concerning leadership, and views on mentorship in leadership. The second section focused on leadership needs, competencies desired to accomplish their role as a leader and the preferred way to acquire those competencies via training modalities. In this second section, participants could answer competency questions by selecting from 24 prespecified leadership competencies (Table I). The third section focused on leadership perceptions around title, growth, resources, and barriers in leadership. Question types included multiple choices, multiple select, slider scales, and open-ended free responses. No personally identifiable data was collected in the survey.

Table I: Pre-specified leadership competencies included in a survey

Competencies
Time management
Quality management
Prioritisation
Run effective meetings
Programme evaluation
Communication
Emotional intelligence
Cultural intelligence
Conflict management
Giving and receiving feedback
Negotiating
Team building
Innovation/entrepreneurship
Policy development
Strategic context
Motivational
Governance
Vision
Human resources
Advocating
Change management
Risk management
Budget management
Service development

Survey audit feedback and distribution

This survey was conducted in several stages and had gone through the scrutiny of four quarters/stratum before reaching the final consent of 239 participants representing all six regions of the world demarcated by the World Health Organization (WHO) out of a total of 3000 FIP individual members. Firstly, the initial survey draft was circulated to the FIP Academic Institutional Members (AIM) advisory group leaders, the academic section officers, and the executive committee for input and feedback. After feedback was incorporated, the finalised survey was shared with the programme management leaders in FIP headquarters for additional input. A copy of the survey and project purpose was submitted to the Howard University Institutional Review Board (IRB) for approval in August 2020. The IRB approved the study in December 2020. After IRB approval, the survey was shared with the FIP Global Observatory leader and FIP project manager for further input about survey dissemination. Finally, in January 2021, an e-mail was sent inviting all FIP individual members, numbering around 3000, to participate in the survey using Qualtrics. Individuals had to complete a consent page before beginning the survey. The survey took approximately 15 minutes to complete 28 questions. A friendly reminder was sent in early February 2021 to all individual FIP members to complete the survey again. 239 participants completed the survey. It is important to note that it is not just a simple random sample of 8% participation. This type of multistage participation of the different strata of FIP starts from the AIM advisory group, section officers, executive committee, programme management leaders, IRB scrutiny, Global Observatory leader, project manager and finally, individual FIP members and inclusion of their feedback at each stage has provided great psychometric reliability and validity to the survey findings. Finally, the last sampling stage was started at the beginning of January 2021 and continued till the end of February 2021. Many members were on the New Year extended leave during that time and hence could not participate. All protocols regarding the design and dissemination of this survey followed the European Union's General Data Protection Regulations.

The WHO divides the world into six regions for reporting, analysis, and administration. The Global Leadership Needs Assessment Survey participants, representing these six regions come from various countries, with their numbers shown in parenthesis:

1) African region of 46 countries:

The survey had 32 respondents coming from 11 countries:

Algeria (1), Cameroon (1), Ghana (3), Kenya (1), Nigeria (15), Rwanda (1), South Africa (5). Tanzania (2), Uganda (1), Zambia (1), and Zimbabwe (1)

2) Region of the Americas of 35 countries:

The survey had 28 respondents coming from six countries:

Argentina (1), Brazil (2), Canada (5), Costa Rica (1), Mexico City (1), and USA (18)

3) South-east Asian region of 11 countries:

The survey had three respondents coming from one country:

India (3)

4) European region of 53 countries:

The survey had 37 respondents coming from 21 countries:

Albania (1), Bulgaria (1), Denmark (1), Spain (1), France (1), Germany (2), Greece (1), Ireland (2), Israel (2), Italy (1), Malta (1), Montenegro (2), Netherlands (2), Portugal (7), RN Macedonia (1), Russia (1), Spain (3), Sweden (1), Switzerland (3), UK (2), and Ukraine (1)

5) Eastern Mediterranean region of 21 countries:

The survey had 13 respondents coming from seven countries:

Iraq (1), Jordan (3), Kuwait (3), Lebanon (3), Pakistan (1), Qatar (1), and UAE (1)

6) Western Pacific region of 27 countries:

The survey had 22 respondents coming from six countries:

Australia (13), Japan (1), Malaysia (3), Philippines (2), Singapore (1), and Taiwan (2)

Statistical analysis

Qualitative and quantitative analyses were used for the data. Two hundred thirty-nine participants responded to the Global Leadership Needs Survey representing all six regions of the world demarcated by the WHO. A text search mechanism using the "*COUNTIF*" command was used to find the keywords or phrases related to the leadership competency traits. The responses to the 26 survey questions in three sections, Demographics (Qn. 1 - 17), Leadership Needs (Qn. 18), and Leadership Perceptions (Qn. 19 - 26), are recorded in counts and percentages (n / %). A Chi-Square test of independence was performed to check the independence of two

categorical variables based on a *p-value*. IBM SPSS software was used to get the cross-tabulation counts using pivot tables. The data were summarised into demographic tables: the top five ranking leadership needs and perceptions for those who had attended leadership training *vs* those who had not, the top five ranking leadership needs and perceptions based on the work setting, the top five leadership needs and perceptions based on the six WHO world regions, barriers to leadership training, and preferred modalities for training.

Results

A total of 239 participants out of approximately 3000 (response rate of ~8%) completed the survey between the beginning of January and the end of February 2022. Most participants were between the ages of 35–54 and worked in either the academic or hospital inpatient setting (Table II). Approximately a third of the participants reported that they had received prior leadership training since graduating from college, with most of those leadership experiences being live in person. Most participants believed there were not enough opportunities for pharmacists to learn and develop in leadership.

In the second section of the survey, participants selected up to five leadership competencies that they felt were the most important about the question. On average, participants felt that innovation/entrepreneurship, negotiating, strategic context, conflict management, and vision were among the top five leadership competencies in which they would like more training. Participants ranked communication, emotional intelligence, team building, vision, and conflict management among the top five when asked what leadership competencies were required to be a good leader. Lastly, when asked about leadership competencies they personally wanted to develop to be a leader, participants ranked conflict management, change management, negotiating, strategic context, and time management as the top five competencies.

Table II: Participant age, work setting and previous leadership training demographics

Demographics	n (%)
Age range	
18 - 24	6 (4.11)
25 - 34	23 (15.75)
25 - 44	39 (26.71)
45 - 54	35(23.97)
55 - 64	26 (17.81)
65 - 70	10 (6.85)
70+	7(4.79)
Work setting	
Academia	53 (30.29)
Hospital Inpatient (all areas of practice)	29 (16.57)
Ambulatory care	1 (0.57)
Community/Retail	28 (16)
Pharmaceutical scientist	6 (3.43)
Industry	14 (8)
Government	1 (0.57)
Regulatory	6 (3.43)
Continuing education	1 (0.57)
Professional organisation	13 (7.43)
Retired	6 (3.43)
Other	17 (9.71)
Previous leadership training	
No	56 (33.53)
Yes	111 (66.47)

Data evaluated based on cohorts revealed that participants in different work settings had different leadership needs. Those in academia ranked conflict management as the top leadership competency need, those in inpatient hospitals ranked change management as the top leadership competency need, and those in community/retail settings ranked prioritisation as the top leadership competency need (Table III). When stratified by work setting, most participants in each work setting still indicated that they did not believe there were enough opportunities for pharmacists to learn and develop in leadership.

Table III: Top five ranked leadership competency needs based on work setting

Work setting	Top five ranked leadership competency needs (n)				
	Rank-1	Rank-2	Rank-3	Rank-4	Rank-5
Academia	Conflict management (18)	Time management (15)	Communication (12)	Negotiating; Change management (11)	Strategic context; Team building (11)
Inpatient hospital	Change management (10)	Conflict management; Emotional intelligence (8)	Negotiating; Team building (7)	Innovation/ Entrepreneurship; Budget management (6)	Motivational, Vision; strategic context; Risk management; Programme evaluation (5)
Community /Retail	Prioritisation (11)	Negotiating (9)	Team Building (8)	Innovation/ Entrepreneurship (7)	Quality improvement; Risk management; Emotional intelligence; Conflict management; Communication (6)
Industry	Conflict management (7)	Strategic context (6)	Time Management (5)	Change management; Negotiating; Innovation/ Entrepreneurship (4)	Vision; Emotional intelligence; Cultural intelligence (3)
Professional organisation	Conflict management; Change management; Giving and receiving feedback (4)	Emotional intelligence; Policy development (3)			

All participants were stratified based on their indicated country of employment. Participants were stratified into cohorts based on the six WHO regions (Table IV). Except for the European region and the Western Pacific Region, both ranking negotiating as the top leadership competency needs, all other regions ranked different top competencies, including innovation/entrepreneurship, strategic context, communication, time management, change management, and conflict management.

Lastly, participants indicated barriers to leadership advancement, among which the most common barriers included time constraints, financial costs, and insufficient opportunities. If provided with additional leadership training opportunities, participants indicated they prefer the training delivered in the classroom rather than online.

Table IV: Top five ranked leadership competency needs stratified by WHO regions

WHO region	Top five ranked leadership competency needs (n)				
	Rank-1	Rank-2	Rank-3	Rank-4	Rank-5
African region	Conflict management (15)	Emotional intelligence; Team building (11)	Vision (10)	Communication; Time management (9)	Policy development (5)
Region of the Americas	Change management (12)	Conflict management; Strategic context (10)	Giving and receiving feedback (7)	Negotiating; Governance; Cultural intelligence (6)	Motivational, Budget management (5)
South-East Asian region	Communication; Time Management (3)	Conflict management; Prioritisation (2)	Team building; Change management; Giving and receiving feedback; Quality improvement; Running effective meetings (1)	N/A	N/A
European region	Negotiating (14)	Innovation/ Entrepreneurship;	Communication; Conflict management; Vision (10)	Emotional intelligence; Team	Strategic context; Quality improvement (8)

WHO region	Top five ranked leadership competency needs (n)				
	Rank-1	Rank-2	Rank-3	Rank-4	Rank-5
		Change management; Prioritisation (11)		building; Time management (9)	
Eastern Mediterranean region	Innovation/Entrepreneurship; Strategic context (7)	Conflict management; Policy development (4)	Communication; Emotional intelligence; Negotiating; Team building; Change management; Prioritisation; Time management (3)	Governance; Risk management; Budget management; Vision; Service development; Programme evaluation; Quality improvement; Running effective meetings (2)	Motivational; Human resources (1)
Western Pacific region	Negotiating (9)	Conflict management (8)	Team building; Change management; Time management (7)	Communication; Emotional intelligence; Innovation/ Entrepreneurship (6)	Strategic context; Prioritisation (5)

Discussion

The results of this global pharmacy leadership needs assessment are a valuable start to determining the next steps in advancing leadership for the pharmacy profession regionally, nationally, and globally. It is clear that depending on what setting a pharmacist works in, their top-ranked leadership needs will differ. Additionally, perhaps influenced by cultural norms, the top-ranked leadership needs in different world regions also differ. This insight allows for leadership training to be developed specifically for the needs of pharmacists in all areas of practice and throughout the world.

Overall results have shown interesting trends in leadership needs. Participants were asked to rank the top five leadership competencies to be a good leader and the top five leadership competencies they would like more training in, of which only the last two competencies of the five, vision and conflict management, overlapped. Communication, emotional intelligence, and team building were listed as the top three leadership competencies required for good leadership, all related to soft skills and working well with others. Alternatively, the top three leadership competencies desired for additional training included innovation/entrepreneurship, negotiating, and strategic context, which are related more to complex problem-solving. Most participants have already undergone other leadership training, so it may be believed that to be a good leader, it is necessary to work well with others, but to excel or advance in leadership roles, skills in complex problem-solving must be further developed.

Overall, it is clear that pharmacists around the world can benefit from additional leadership opportunities, both in person and virtually. Those developing these opportunities should be cognisant of the time constraints and financial restraints that often limit the ability to participate, ensuring that the programmes delivered are provided at reasonable costs and have high-valued content delivered in the least time possible. Advancing leadership skills for pharmacists is beneficial for that individual and the profession at large.

FIP is a global body representing over four million pharmacists and pharmaceutical scientists worldwide through 139 national organisations, academic institutional members and individual members. In the survey comprising of those 239 participants in the final stage, 79 participants did not mention their leadership position and the rest 160 (67%) were holding pharmacy management leadership positions comprising nine CEO/Global Head/President/Secretary General, 40 Academic Faculty of Assistant, Associate and Full Professors, 12 Deans/Assistant Dean/Chair/Head, 37 Director of Clinical Service/Deputy Director/Manager, 47 senior pharmacist professionals, 11 senior consultants, three medical doctors and one senior legal counsel. Thus, their credentials add legitimacy to their voice as validators of this study.

Future research may add further insight into the data from this study. Future studies focused on leadership needs based on the world's regions or on a specific age group may add to this current body of knowledge and gain greater insight into developing appropriate leadership training opportunities for each cohort.

This study was undertaken by the FIP Workforce Development Hub leaders to identify leadership needs for approximately four million organisation members worldwide. Healthcare outcomes are improved when there is strong leadership. Any single sample size, regardless of size, will make the generalisability of the

study questionable, which is why this study underwent four different stages of leadership scrutiny from the AIM advisory group, section officers, executive committee, programme management leaders, IRB scrutiny, Global Observatory leaders, and project managers before the final response received from 239 individual FIP members. There is a gap in the current research literature on what leadership skills pharmacists working in academia, industry, and community settings want or desire to learn more about. Despite its response limitation, the insight provided from this research has given a valuable start in identifying and developing leadership training opportunities for the pharmacy profession regionally, nationally, and globally. Although several million pharmacists and pharmaceutical scientists are being served, one does not have a baseline number of leaders in FIP. Therefore, the data reported here will help guide what to expect for responses to future inquiries on leadership. The results of this need assessment will serve as a foundation of knowledge for future studies.

Limitations

It is important to note the limitations of this needs assessment. For a global study, the overall response rate was low, and some regions were only represented by a few participants therefore, one cannot be certain that the results of this current needs assessment are a full representation of leadership. Additionally, while all adult age groups were included in the study, the majority of the participants were between 25 and 54, resulting in a possible failure to capture the leadership needs of the younger age group immediately graduating with a pharmacy degree.

Conclusion

Leadership is an essential skill that needs to be developed for pharmacists to advance in their careers. Identifying leadership needs is the first step in understanding how to develop training opportunities that benefit the participant most. The insight provided from this research will allow discussions regarding the best ways to develop and implement leadership training opportunities, considering content, delivery method, and cost. Although future research is still necessary, the results of this need assessment can serve as a foundation of knowledge to conduct future studies.

Ethics approval and informed consent

Ethical approval for this study was granted by the Institutional Review Board of the Office of Regulatory Research Compliance of Howard University, USA. The approval reference number FWA00000891 was issued on December 12, 2020.

Conflict of interest

The authors declare that they have no known competing conflict of interests – be it financial or personal relationships that could have appeared to influence the work reported in this paper.

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