

# Academic Resilience Among Doctor of Pharmacy Students

## Authors:

### Tina Caliendo, PharmD, BCGP, BCACP

Associate Professor, Department of Pharmacy Practice  
St. John's University  
College of Pharmacy and Health Sciences  
Queens, New York  
Email: caliendt@stjohns.edu

### Olga Hilas, PharmD, MPH, BCPS, BCGP, FASCP

Professor, Department of Pharmacy Practice  
St. John's University  
College of Pharmacy and Health Sciences  
Queens, New York  
Email: hilaso@stjohns.edu

### Vassilia Plakas, Pharm.D. Candidate 2024

St. John's University  
College of Pharmacy and Health Sciences  
Queens, New York  
Email: vassilia.plakas18@my.stjohns.edu

## ABSTRACT

**Objective:** To assess the academic resilience of Doctor of Pharmacy students returning to in-person classes post-COVID for their first professional year of study. **Methods:** The validated Academic Pharmacy Resilience Scale (APRS-16) was sent electronically to all first professional year Doctor of Pharmacy students who had completed most of their previous coursework via remote learning modalities during the COVID-19 pandemic ( $n=217$ ). Participation was voluntary and anonymous, with implied informed consent obtained from students. Campus dining credit was provided to all students who completed the APRS-16. The University Institutional Review Board reviewed and granted an exemption for this study. **Results:** A total of 158 of 217 students (73%) completed the APRS-16 survey. Findings revealed that upon facing a challenging academic situation, the majority of students felt likely or somewhat likely to: (1) begin doubting their chances to succeed academically; (2) be disappointed and probably get depressed; (3) think that everything was ruined or going wrong; (4) be concerned about their chances of getting the job or residency they wanted; (5) try to think of new solutions; (6) use past successes to help motivate themselves; (7) set goals for achievement; (8) seek encouragement from family and friends; (9) try to think about their strengths and weaknesses to help them; and (10) see the situation as temporary. **Recommendations:** Findings support the continued availability, and potential expansion of, support services for students. The consequences of social isolation and remote learning environments continue to affect students' mental health and academic resilience; however, the extent of these consequences vary and the majority of students in this study had positive outlooks when facing adversity. Institutions of higher education should be aware of these challenges and provide resources necessary to promote student wellbeing and academic achievement.

**Keywords:** Academic Resilience, COVID-19, Doctor of Pharmacy, Remote Learning, Social Isolation

## INTRODUCTION

Challenges related to the COVID-19 pandemic continue to be a concern for students in higher education (Son et al., 2020; Pandya & Lodha, 2022). Numerous consequences have been reported and include decreased motivation and learning capacity, increased mental health conditions, and reduced likelihood of sustainable employment (Brazeau et al., 2020; Lee et al., 2021; Hu et al., 2022). In a report published by the American Association of Colleges of Pharmacy, a direct correlation was found between students' perceptions of academic abilities and their academic performance (Kaur et al., 2020). This has led to commitments among accreditation agencies, universities, and colleges to encourage measures that promote student wellbeing and academic resilience (Darbishire et al., 2020).

There are multiple types of wellbeing such as physical, social, financial/economic wellbeing (Centers for Disease Control and Prevention, 2018). Analyses of institutional support resources on- and off-campus are critical to determine student needs, as well as provide the services for enhancing academic resilience (Rath et al., 2022). Academic resilience is defined as the capacity to overcome acute and/or chronic adversity threatening a student's educational development (Cassidy, 2016). Identifying and addressing concerns with academic resilience can assist in the prevention or mitigation of long-term issues such as controlling emotions or coping with normal stress (Cassidy, 2016; Schlesselman et al., 2020; Douwes et al., 2023).

To date, there is limited evidence available on the academic resilience of healthcare professional students. The purpose of this study was to assess the academic resilience of Doctor of Pharmacy students returning to in-person classes post-COVID for their first professional year of study. The researchers selected a reliable and validated tool that

would provide insights on students' emotional responses, adaptation to challenging situations and perseverance. Researchers also developed survey questions focused on students' awareness and utilization of institutional resources for support and wellness to better understand the needs of the students.

## METHODS

All students ( $\geq 18$  years of age) enrolled in their first professional year of study within our Doctor of Pharmacy program who had completed most of their coursework via remote learning modalities during the COVID-19 pandemic were invited to participate in this study. A total of 217 students were sent an email with the study information, and web link to complete an online version of the Academic Pharmacy Resilience Scale (APRS-16) along with four optional questions on their familiarity and utilization of institutional support resources. The APRS-16 was identified as a reliable and validated instrument after retrieval and appraisal of various instruments published for use in the assessment of academic resilience among students in higher education.

The APRS-16 has been used to assess the academic resilience of students pursuing Doctor of Pharmacy degrees within a fundamental mathematics course (Chisholm-Burns et al., 2021). It is a 16-item instrument based on a standardized academic vignette (Figure 1) that measures four areas of a student's resilience: (1) negative affect and emotional response; (2) reflection and adaptive help-seeking; (3) adaptive thought processes; and (4) perseverance (Chisholm-Burns et al., 2019). Permission to use the APRS-16 was requested from and granted by the researchers who developed and validated the instrument.

Student participation was voluntary and survey responses were collected anonymously. Study information was provided prior to survey access, and implied consent was

obtained upon final submission of the responses. Students were given a four-week period to complete the electronic survey, with weekly reminders sent to their university emails. Those who completed all components of the APRS-16 received campus dining credit for their time, which was funded by a grant awarded to the researchers from the university's Office of Grants and Sponsored Research. This study was reviewed and granted an exemption by the university's Institutional Review Board in 2022.

### Data Analysis

Table 1 presents the data collected from the pharmacy students who completed the online APRS-16. A descriptive analysis of the APRS-16 responses was conducted, with a focus on the subscales of the instrument (negative affect and emotional response, reflecting and adaptive help-seeking, adaptive thought processes, and perseverance). Responses to the four optional questions on familiarity and utilization of institutional resources were also analyzed to gain insights on the resources students are most aware of and seek out for support.

## RESULTS

A total of 158 pharmacy students completed the APRS-16 survey electronically, yielding a 73% response rate. For the negative affect and emotional response subscale items, 57% of students felt *likely or somewhat likely* that they would begin to doubt their chances of success in the PharmD program, 67% felt *likely or somewhat likely* they would probably get depressed, 92% felt *likely or somewhat likely* they would get disappointed, 55% felt *likely or somewhat likely* that their chances of getting the job or residency they wanted were poor, and 59% felt *likely or somewhat likely* that everything was ruined or going wrong.

For the reflecting and adaptive help-seeking subscale items, 83% of students felt *likely or somewhat likely* that they would try to think of new solutions, 63% felt *likely or somewhat likely* they would use past successes to help motivate themselves, 73% felt *likely or somewhat likely* they would set

their own goals for achievement, 70% felt *likely or somewhat likely* they would seek encouragement from family and friends, and 74% felt *likely or somewhat likely* they would try to think about their strengths and weaknesses to help them work better.

For the adaptive thought processes subscale items, 73% of students felt *likely or somewhat likely* they would see the situation as a challenge, 53% felt *likely or somewhat likely* they would do their best to stop thinking negative thoughts, and 54% felt *likely or somewhat likely* they would see the situation as temporary. For the perseverance subscale items, 22% of students felt *likely or somewhat likely* they would just give up, 18% felt *likely or somewhat likely* they would change their career plans, and 63% felt *likely or somewhat likely* they would not change their long-term goals or ambitions.

In regard to the four optional questions on students' awareness and utilization of institutional support services, responses revealed that students were most aware of the university's student health services (83%), counseling & consultation services (64%), and wellness education/prevention services (53%). Students were least aware of online self-screening (34%) and disability services (43%). The most utilized services among students were health services (46%), campus recreation (41%), and online self-screening (31%). When students were asked which services they would likely use in the future, counseling & consultation (53%), student health services (50%), and campus recreation (47%) were the most selected services. Students showed the greatest interest in learning more about wellness education / prevention services (51%), counseling & consultation (51%), and campus recreation (39%).

## DISCUSSION

The findings of this study reveal higher levels of academic resilience among pharmacy students for 11 of the 16 items on the APRS-16. For the instrument subscales of reflecting and adaptive help-seeking, adaptive

thought processes and perseverance, high levels of academic resilience were noted. For perseverance, the majority of students also indicated that they would be *somewhat unlikely* or *unlikely* to give up or change career plans. All responses for the negative affect and emotional response subscale items revealed low resilience amongst the students. The majority of students believed it would be *likely* or *somewhat likely* that they would get depressed following a challenging situation, be very disappointed, feel like everything was ruined and going wrong, begin doubting their chances of success in the Doctor of Pharmacy program, and be negatively impacted in their pursuits to secure a job or residency.

The results of the APRS-16 vignette also suggest that for help seeking, thought processes, and perseverance, students at this university have a high level of resilience indicating that our pharmacy students may have established strong support systems (e.g. family, friends, peers) and/or coping strategies. However, the data found that most students experienced difficulties when addressing emotional responses to challenging situations. This suggests that students continue to need support services available to them to provide promotion of wellbeing, and enhancement of academic resilience.

Data collected from the optional four questions on the awareness and utilization of university support resources demonstrated the continued need for these services. Although fewer students responded to these questions, the majority of the respondents were aware of key departments across the university dedicated to student wellness (i.e. student health services, counseling and consultation, wellness education/prevention services). Despite having knowledge of these resources, less than half of the student respondents reported having used any of the available services. However, the majority of students respondents did indicate that they plan on utilizing student health services, as well as counseling and consultation services, in the future demonstrating potential increases in self-awareness and acceptance of support for overall wellbeing and academic success. This

reinforces the value of student support resources and the need to increase awareness of all the available student services on- and off-campus.

The study has several limitations. Firstly, survey fatigue may have played a role in the authenticity of student responses considering the number of surveys sent to students during and after the pandemic campus closures. A similar impact on student responses may have resulted from the incentive of the dining credit. Participation in the study was also solicited exclusively via email, which may have not reached all students due to access or technical issues. Response ambiguity (i.e. neutral responses) for 11 out of the 16 statements of the APRS-16 instrument was seen in more than 15% of students indicating potential concern with the true resilience measure of the responses. Finally, response rates for the optional questions pertaining to the student support services available at the university were substantially lower than those for the APRS-16, and ranged from 36% to 64% compared to 73%, respectively. Overall, study findings may not be generalizable since only one university was involved, and the study design was cross-sectional with no analysis of possible confounders.

## CONCLUSION

The longer-term impacts of the COVID-19 pandemic continue to emerge among students in all levels of education. For students in higher education, stressors related to overall wellbeing and academic performance may be particularly challenging due to the increased responsibilities of these student populations (Cassidy et al., 2023). This study highlights the need for established support resources and services within universities and colleges to help students navigate and overcome difficult times while building their resilience. The next step prompted by the study findings is to work with our college's Office of Assessment to develop a structured assessment of wellbeing and resilience for all our healthcare professional programs, in an effort to proactively empower our students with the

tools they need to overcome adversity and succeed in their pursuits.

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**Figure 1: APRS-16 Vignette**

You received an 'F' on your most recent pharmacy course exam. The grades for two other recent exams in the same course were lower than you would want. You are concerned these grades will jeopardize your academic standing and progression in the short-term, as well as your long-term goal of getting a residency after graduation. The feedback you have received from your instructors is quite critical, such as reference to 'lack of understanding' and 'poor preparation,' but also includes suggestions to improve your exam performance.

**Table 1: Academic Pharmacy Resilience Scale Responses (n=158)**

|  | Likely    | Somewhat Likely | Neutral  | Somewhat Unlikely | Unlikely |
|--|-----------|-----------------|----------|-------------------|----------|
| I would begin to doubt my chances of success in the PharmD program.*                 | 42 (27%)  | 48 (30%)        | 23 (15%) | 15 (9%)           | 30 (19%) |
| I would probably get depressed.*   | 71 (45%)  | 35 (22%)        | 26 (16%) | 13 (8%)           | 13 (8%)  |
| I would be very disappointed.*   | 121 (77%) | 24 (15%)        | 10 (6%)  | 0 (0%)            | 3 (2%)   |
| I would begin to think my chances of getting the job or residency I want were poor.* | 39 (25%)  | 47 (30%)        | 35 (22%) | 22 (14%)          | 15 (9%)  |
| I would feel like everything was ruined and going wrong.*                            | 53 (34%)  | 39 (25%)        | 34 (22%) | 16 (10%)          | 16 (10%) |
| I would try to think of new solutions.   | 70 (44%)  | 61 (39%)        | 19 (12%) | 5 (3%)            | 3 (2%)   |
| I would use my past successes to help motivate myself.                               | 55 (35%)  | 45 (28%)        | 35 (22%) | 12 (8%)           | 11 (7%)  |
| I would set my own goals for achievements.   | 61 (39%)  | 54 (34%)        | 28 (18%) | 11 (7%)           | 4 (3%)   |
| I would seek encouragement from my family and friends.                               | 74 (47%)  | 37 (23%)        | 18 (11%) | 15 (9%)           | 14 (9%)  |
| I would try to think about my strengths and weaknesses to help me work better.       | 69 (44%)  | 48 (30%)        | 23 (15%) | 12 (8%)           | 6 (4%)   |
| I would see the situation as a challenge.  | 68 (43%)  | 48 (30%)        | 24 (15%) | 12 (8%)           | 6 (4%)   |
| I would do my best to stop thinking negative thoughts.                               | 34 (22%)  | 49 (31%)        | 33 (21%) | 25 (16%)          | 17 (11%) |
| I would see the situation as temporary.  | 35 (22%)  | 51 (32%)        | 31 (20%) | 31 (20%)          | 10 (6%)  |
| I would just give up.*   | 15 (9%)   | 19 (12%)        | 30 (19%) | 35 (22%)          | 59 (37%) |
| I would change my career plans.*   | 12 (8%)   | 16 (10%)        | 29 (18%) | 38 (24%)          | 63 (40%) |
| I would not change my long-term goals and ambitions.                                 | 49 (31%)  | 50 (32%)        | 38 (24%) | 16 (10%)          | 5 (3%)   |

\* indicates reverse resilience statements