Evaluating the Effectiveness of a Pharmacy Pre-Matriculation Program (PMP) through Multi-Year Comparative Baseline Performances

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**Objective**

To evaluate the effectiveness of a Pre-Matriculation Program (PMP) by comparing pharmacy baseline performances of PMP students with Non-PMP students within three cohorts.

**Methods**

- A 6-week summer Pre-Matriculation Program (PMP) funded by the THECB Minority Health Research and Education Grant Program was implemented at Texas A&M College of Pharmacy for three consecutive years (2018 – 2020).
- The PMP was specifically designed to improve pharmacy baseline performances of underrepresented and first-generation pharmacy matriculated students.
- This 6-week program was built using five key content areas (Part I: calculations; Part II: organic chemistry, biochemistry, physiology, and medical terminology) that are considered essential to first-year pharmacy academic success.
- Student self-paced online modules (with in-built assessments) were developed for each of the content areas by five pharmacy faculty subject experts alongside academic coaching and peer mentoring.
- Pre/post-PMP baseline assessments on each of the content areas were administered to evaluate the effectiveness of PMP and compared with the non-PMP matriculated students.
- The test questions remained the same for pre-PMP, post-PMP and non-PMP baseline readiness assessments.

**Results**

- 21.3% (23/108), 33.6% (38/113) and 41.4% (46/111) of matriculated pharmacy students participated in PMP during 2018, 2019 and 2020 respectively.
- PMP participants’ mean % score (baseline assessments) positively shifted at post-PMP (Part I: 71.0%; Part II: 67.4%) when compared to their own pre-PMP performance (Part I: 50.9%; Part II: 57.6%) and when compared with the non-PMP group (Part I: 50.6%; Part II: 58.5%) averaged over the three cohorts.

**Conclusions**

- The implementation of the 6-week summer PMP resulted in a significant increase in participants’ knowledge in all five content areas studied over a three-year period.
- Such positive PMP intervention is predictive of enhancing first-year pharmacy academic success, especially for underrepresented and first-generation pharmacy students.

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