Effect of a 6-Lecture Course Series on Selected Pharmacy and Healthcare Topics on High School Students in Pre-Health Career Track Coursework

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Background

• Career choice is important for not just money but for long-term happiness and fulfillment.
• Information gathered and choices made during adolescence are important in career choice.
• High school health classes also often do not fully prepare students with real-life health knowledge, such as concerning illness and when to go to the doctor.
• Experts in healthcare may be able to greatly impact high school students in career choice, health-related knowledge, and long-term happiness.

Objective

• To develop a fully-fleshed out program concerning various healthcare topics aimed at high school students that is easily modifiable, adaptable, and easy-to-implement.

Methods

• A 6-lecture course series was developed regarding various healthcare topics.
• Topics covered include drug basics, drug kinetics, infectious diseases, high blood pressure, prescription verification, special populations, addiction, and more.
• Supplemental materials were developed as well, including skeleton notes for each lecture, a study packet, assessments of learning, videos, hands-on activities, and discussions.
• The hands-on activities included learning to take blood pressure as well as one day dedicated to “working like a pharmacist.”
• The Edwardsville High School class the program was given to was part of their course for students interested in healthcare professions in university.

Results

| Student Career Choice Before Lecture Series vs. After Lecture Series |
|-----------------------------|-----------------------------|-----------------------------|
| Before/ After Course Series | #1 Career Choice | #2 Career Choice | #3 Career Choice |
| Before | After | Before | After | Before | After |
| Student 1 | Physician | NP | Dermatologist | Physician | PT/OT | PT/OT |
| Student 2 | Physician | Physician | PT/OT | NP | NP | PT/OT |
| Student 3 | NP | N/A | Airforce Pararescue | NP | RPh | Physician |
| Student 4 | NP | NP | Physician | Physician | PT/OT | PT/OT |
| Student 5 | NP | NP | Nurse Research Scientist | RPh | Physician | Nurse Research Scientist |
| Student 6 | NP | NP | Forensic Examiner | PT/OT | RPh | RPh |
| Student 7 | PT/OT | PT/OT | Speech Therapist | Speech Therapist | NP | NP |
| Student 8 | Trauma Surgeon | N/A | Physician | N/A | NP | N/A |
| Student 9 | PT/OT | N/A | RPh | N/A | Physician | N/A |

• Themes for decision to take the pre-health professionals sequence:
  • Large variety of career opportunities.
  • Helping to alleviate the pain and suffering of others.
  • Challenge their own learning about disease states and how to treat them.
• The majority of students agreed that the program:
  • Provided valuable information.
  • Provided insight into topics they would have otherwise not learned about.
  • Made them realize that all healthcare providers are important in their own way and are inter-connected.
• Score on initial quiz vs final quiz increased (3.75 to 4.1 out of a total 5; 75% to 82%).
• 100% of students agreed that the program should be offered again.

Limitations

• Small class size of only nine students, with only seven students completing both the pre- and post-surveys (due to COVID-19 pandemic, normal class size around 30 students).
• Shorter-than-expected class time (due to COVID-19 pandemic).
• Virtual-only classes, no hands-on activities able to be completed (due to COVID-19 pandemic).
• No other class also surveyed to compare as a non-intervention group.

Discussion

• Students unanimously enjoyed the program and were more committed to a healthcare career after the program.
• Only small changes in the primary career choices happened (see table in Results sections).
• This could relate to reinforcement of career choice rather than decision to change due to this program.
• Pharmacy is the only profession that gained trust out of the three surveyed.
• Students gained some knowledge that was retained.

Future Direction

• The program should be repeated in a larger class with longer class time to allow for the whole expected program.
• If possible, the program should be done in-person to be able to fully complete the hands-on activities, as these were very important in the program schedule.
• A comparator group should be surveyed as well.
• Hopefully, this program can be continued and expanded upon by pharmacy students in the coming years.