**Evidence-Based Practice**

 Evidence-based practice, in the most common definition, refers to the judicious and explicit use of evidence drawn from literary sources to make healthcare decisions. According to Frewin and Court (2009), evidence-based practice is a systematic research that envisages the integration of external clinical evidence in exercising individual clinical expertise. Barclay, (2012) defined clinical expertise as the cumulative clinical skills, education and experience at the disposal of a clinician. Evidence-based practice is significant in mapping in the unique concerns of patients to the diverse clinical solutions that have been proven to work in similar situations.

 The purpose of this study is to demonstrate the use of evidence-based practice in answering a PICO question: “Do stimulants increase academic performance in university students?” Drawing references from peer-reviewed articles, this study will illustrate how clinical decisions are made from the inferences acquired from the literature sources. Through demonstrating an understanding of the principles of evidence-based practice, the paper will prove the validity of the statement by Khalil (2017) that it is imperative to evaluate and apply evidence-based practice in improving the quality of healthcare.

**Part A**

Hildt, E., Lieb, K., & Franke, A. (2014). Life context of pharmacological academic performance enhancement among university students – A qualitative approach. *BMC Medical Ethics*, *15*(1). <http://dx.doi.org/10.1186/1472-6939-15-23>

This article was authored by Elsabeth Hildt, Klaus Lieb, and Andreas Günter Franke. The authors have affiliations to the department of philosophy, psychiatry and psychotherapy in different universities. Looking at the qualifications of the authors, it is evident that they have attained the required level of expertise required to conduct a study of such magnitude. However, there may be grounds for bias in the study findings, as these authors are sponsored by institutions of higher learning, which may want to prove that academic performance is either linked or not linked to the use of stimulant drugs. The purpose of this study was to put the phenomenon of academic performance enhancement through illicit and prescription stimulant use among university students. In addition, the study aimed at understanding the experiences of students and the effects that the use of stimulants have on the academic performance and private lives.

This study adopts a quantitative research design in which the researchers used a sample of eighteen healthy university students to report on the non medical use of elicit and prescription stimulants for enhancing academic performance. The data was collected through face to face interview. The methodology and methods of research were appropriate to course of the study since the researchers had a large sample size which guaranteed the generalization of the research findings.

The study findings identified six categories relating to the life context of stimulant use for the enhancement of academic performance. Therefore, the study reveals that the use of stimulants with the aim of enhancing academic performance is a phenomenon that stretches beyond the sole aim of enhancing cognition to attain better academic outcomes to envisage the multifaceted contexts of life. The study illustrates that the most common reasons provided for stimulant use among the participants were to cope with memorizing, to increase motivation and to maximize on the limited time available for studying.

This research conducts a cross-sectional analysis of the factors that encourage the use of stimulants among university students, hence focusing on more than the academic performance of the students who use the stimulants. This is a strength that the study exhibits, since it focuses on more than one aspect of the use of stimulants among university students. However, interviews are not often regarded as credible sources of data since there can be discrepancies between the objective academic results achieved and the subjective experiences reported by the participants.

Munro, B., Weyandt, L., Marraccini, M., & Oster, D. (2017). The relationship between nonmedical use of prescription stimulants, executive functioning and academic outcomes. *Addictive Behaviors*, *65*, 250-257. <http://dx.doi.org/10.1016/j.addbeh.2016.08.023>

In this article, Bailey A.Munro, Lisa L.Weyandt, Marisa E.Marraccini and Danielle R.Oster combined to analyze the relationship between non-medical use of prescription stimulants, executive functioning and academic outcomes. These authors have qualifications in psychology, neuroscience and work at departments of different universities. These authors are affiliated to research centers at institutions of higher learning, a factor that gives room for conflict of interest, as they are sponsored by these institutions to conduct the studies.

The purpose of this study was to examine the relationship between non medical use of prescription stimulants and executive functioning among university students. The authors justified the need for the study by referring to literature that highlighted the possibility of students with executive functioning deficits to overcome their deficits through engaging in the non medical use of prescription stimulants.

The research methodology used in the study is quantitative in nature. The study retrieves data from a sample of 308 students from six public universities located in various regions of the United States. The study, furthermore, used measures such as GPA, BDEFS and SSQ to acquire the data. The methodology was appropriate because of the large sample size and the different measures that enabled the researcher to attain more informed research findings

Consequently, the study established that the non-medical use of prescription stimulants was reported in 18.8% of the sample. Participants with executive functioning deficits reported higher rates of non-medical use of prescription stimulants as opposed to their low GPAs. Therefore, the study concludes that there is no relationship between non medical use of prescription stimulants, executive functioning and enhanced academic performance.

This study retrieves its strength from the large population sample included as participants in the study. With the large population size, it is easier to identify the sub-population of college students at a higher risk at engaging in non medical use of prescription stimulants. However this study does not include the ethical considerations that are required to conduct studies of similar magnitude. This translates to a weakness on the part of the study, as there is no declaration indicating that the researches acquired the consent of the participants prior to including them in the study.

**Part B**

**Barriers for the Application of Evidence in Practice**

Evidence-based practice is a process in which a practitioner assesses and identifies the best evidence on all areas that are relevant to the clinical decision making process. In using evidence-based practice, the practitioner has to find and discriminate evidence-based on their quality and their applicability in the decision-making process. As time-consuming as evidence-based practice may seem, the skills and knowledge acquired from this practice can guarantee better health outcomes for the patient, and promote the depth of knowledge that can be used by the practitioner. There are certain factors, however, that affect the implementation of evidence-based practice.

Time is the barrier that is mostly identifiable with evidence-based practice. As Bergstrom (2008) explains, the practitioner may not have time to search and appraise the evidence that relates to each clinical question. In addition, the time taken to discriminate and subsequently select the best evidence from the bulk of evidences often limits the ability of practitioners to consider this method when finding solutions to specific clinical questions.

Other than time, the access to quality evidence limits the use of evidence-based practice. Effective application of evidence-based practice requires the practitioner to demonstrate awareness of all the available sources of relevant evidence (Frewin, 2014). In circumstances where the practitioner is unlikely to have access to all the peer-reviewed publications, it can be challenging to use evidence-based practice. Communication is another barrier to the effective use of evidence-based practice. It is necessary for the practitioner to explain the advice clearly to the patient. However, the patient may not understand what the practitioner is advising, hence hindering the effective application of evidence-based practice.

**How closely the research studies provided align with the PICO question**

The research studies provided aimed at answering the PICO question: “Do stimulants increase academic performance in university students?” In the first research, Hildt, Lieb and Franke (2014) aimed at putting the phenomenon of academic performance enhancement through illicit and prescription stimulant use among university students. This study relates to the PICO question, as it conducts an analysis of the use of stimulants among university students. Besides, the study analyses the reasons behind the use of stimulants among university students using the parameters that affect the academic performance such as the available study time, motivation and memorizing capabilities.

In the second article used in this study, Bailey A.Munro, Lisa L.Weyandt, Marisa E.Marraccini and Danielle R.Oster combined to analyze the relationship between non-medical use of prescription stimulants, executive functioning and academic outcomes. This article relates to the PICO question, as it considers stimulant use among students to be for either medical or non-medical purposes. The study findings illustrate that there is no relationship between the use of non-medical stimulants and the enhanced academic performance and the executive functioning of the user.

**Conclusion**

By combining the findings of these studies, a comprehensive answer can be found to the PICO question. Both studies indicate that the use of stimulants among students is not aimed at enhancing academic performance, but rather at exploring the other facets of a student’s private life. This is echoed in the findings of the study by Munro, Weyandt, Marraccini and Oster (2017), who posited that there is no justification for the use of non-medical stimulants to enhance the executive functioning that participants in the study by Hildt, Lieb, and Franke (2014) had used to justify their use of these stimulants.

Evidence-based practice is gradually revolutionizing the professional requirements for skills and knowledge at the disposal of practitioners (Tan, 2013). The skills needed to demonstrate evidence-based practice are illustrated in this study, though the challenges of the usage of this practice continue to cloud the prospects of its full implementation in medical practice. In conclusion, it is imperative to develop practice environments that enable the facilitation and inhibition of evidence-based practice.

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