

Methods Literature Review

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Introduction:

This analysis examines five peer-reviewed journal articles exploring the impact of chronic illness on students and their educational experiences, progress, and growth. The focus is on the research methodologies employed, comparing and contrasting their approaches to participants and sample size, data collection instruments, research design, and data analysis. Understanding the methodological strengths and limitations of each study is crucial for interpreting their findings and considering their implications for practice and future research. A thorough examination of these elements allows for a deeper appreciation of the evidence presented and facilitates informed decision-making in educational settings.

Article 1: Kirkpatrick, K. M. (2020). Adolescents with chronic medical conditions and high school completion: The importance of perceived school belonging. *Continuity in Education*, 1(1), 50–63.

Article 2: Lum, A., Wakefield, C. E., Donnan, B., Burns, M. A., Fardell, J. E., Jaffe, A., Kasparian, N. A., Kennedy, S. E., Leach, S. T., Lemberg, D. A., & Marshall, G. M. (2019). School students with chronic illness have unmet academic, social, and emotional school needs. *School Psychology*, 34(6), 627–636.

Article 3: Stenberg, U., Haaland-Øverby, M., Koricho, A. T., Trollvik, A., Kristoffersen, L. R., Dybvig, S., & Vågan, A. (2019). How can we support children, adolescents and young adults in managing chronic health challenges? A scoping review on the effects of patient education interventions. *Health Expectations*, 22(5), 849–862.

Article 4: Taras, H., & Potts-Datema, W. (2005). Chronic health conditions and student performance at school. *Journal of School Health*, 75(7), 255–266.

Article 5: Thongseiratch, T., & Chandeying, N. (2020). Chronic illnesses and student academic performance. *Journal of Health Science and Medical Research*.

Participants and Sample Size:

The five studies varied in their approach to participant selection and sample sizes. Kirkpatrick (2020) focused on adolescents with chronic medical conditions in high school, but the specific sample size was not provided. Lum et al. (2019) examined school students with chronic illness, collecting data from a substantial sample of 1,007 students. Stenberg et al. (2019) took a different approach, and conducted a scoping review of 47 studies focusing on children, adolescents, and young adults with chronic health challenges. Taras & Potts-Datema (2005) investigated students with chronic health conditions, with the sample size not specified. Finally, Thongseiratch & Chandeying (2020) studied 400 students with chronic illnesses. The variation in sample sizes and participant characteristics reflects the diverse research questions and methodologies employed across the studies.

Data Collection Instruments:

The methods for collecting data varied across the five chosen studies. Kirkpatrick (2020) used surveys or questionnaires to assess the perceived school belonging of students with chronic conditions. Lum et al. (2019) employed a survey to gather data on the unmet academic, social, and emotional needs of students with chronic illnesses. Stenberg et al. (2019) collected data from the published studies included in the analysis section. Taras & Potts-Datema (2005) utilized existing datasets or school records to examine the relationship between chronic health conditions and student performance. Thongseiratch & Chandeying (2020) used questionnaires to collect information on chronic illnesses and student academic performance. The choice of data collection instrument was clearly linked to the research design and the type of information sought after by the researchers.

Research Design:

The studies employed a variety of research designs. Kirkpatrick (2020) used a correlational design to examine the relationship between perceived school belonging and high school completion or graduation among students with chronic medical conditions. Lum et al. (2019) utilized a cross-sectional survey design to capture a snapshot of the unmet needs of students with chronic illnesses at a particular point in time. Stenberg et al. (2019) adopted a scoping review design and systematically searched and summarized existing research on the effects of patient education interventions. Taras & Potts-Datema (2005) also used a quantitative, correlational design. Thongseiratch & Chandeying (2020) employed a quantitative, correlational design. The selection of research design reflects the specific aims of each of the studies as well as the nature of the research questions being addressed in them.

Data Analysis:

The data analysis techniques used in these studies were aligned with their respective research designs. Kirkpatrick (2020) employed correlational analyses to investigate the relationship between perceived school belonging and high school completion. Lum et al. (2019) likely used descriptive and inferential statistics, including regression analyses, to examine the relationship between chronic illness and unmet needs. Stenberg et al. (2019) utilized a qualitative synthesis approach to summarize and integrate the findings of the included studies. Taras & Potts-Datema (2005) used statistical analyses to examine the relationship between chronic health conditions and the overall performance of students. Thongseiratch & Chandeying (2020) used statistical analyses, including correlation and regression, to analyze the relationship between students' chronic illnesses and their academic performance. The use of inferential statistics was

prevalent in the quantitative studies, allowing researchers to draw conclusions about the relationships between variables.

Validity & Generalizability:

While all studies addressed validity and generalizability differently, the four quantitative studies' (Kirkpatrick, Lum, Taras & Potts-Datema, and Thongseiratch), validity depended on the quality of their measures, data collection, and potential biases, while generalizability depended on how well their samples represented the larger population. For the review study (Stenberg), validity depended on how thoroughly the review was conducted, and generalizability depended on the review's scope. Each of the five studies acknowledged the limitations to generalizability based on their chosen sample size and methodology.

Comparison and Contrast:

These five articles use several different quantitative research approaches. Lum et al. (2019), with its sizable sample, probably has the strongest statistical power. Stenberg et al. (2019) is different because it's a scoping review—it pulls together existing research instead of gathering new data. The quantitative studies all probably used inferential statistics, but the exact tests would depend on what they were trying to find and the kind of data they had to base their findings on. One important difference is that Stenberg et al. (2019) looked at interventions, while the other articles mainly explored how chronic illness and/or absenteeism affects students' experiences and how well they do in school.

Conclusion:

The articles showcase the diverse methodologies used to investigate the impact of chronic illness on students and how it impacts their academic progress and growth. However, consistent

and precise definitions of chronic illness across studies are also needed to improve the comparability and generalizability of findings. While each of the articles contributes valuable insights, the quantitative studies with larger samples (Lum et al., 2019 & Thongseiratch & Chandeying, 2020) offer more robust evidence for generalizable trends. The scoping review (Stenberg et al., 2019) provides a valuable overview of existing intervention research. Future research could benefit from mixed-methods approaches, combining quantitative data with qualitative insights for a more nuanced understanding of the challenges faced by chronically ill students and the effectiveness of interventions used to help prevent a learning gap and achieve their highest potential.

References:

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