Program Evaluation Review – Annotated Bibliography

INFO 648: Health Informatics

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**Annotated Bibliography**

Chiasson, M. W., & Lovato, C. Y. (2000). The health planning context and its effect on

a user’s perceptions of software usefulness. *Canadian Journal of Public*

*Health,* 225-228.

The purpose of this case study was to examine a health planner’s experience of using software designed to aid program planning surrounding mammography screening for breast cancer. Despite using the PRECEDE-PROCEED model to assess needs and wants of the user community, Chiasson and Lovato’s software was not well received by the health planner who utilized it. Chiasson and Lovato found that while the software aided the health planner in determining new considerations about the programs that she was organizing, they also determined that the software did not meet her daily needs or work with her less-structured planning style. Thus, the software’s ability to help plan programs is not simply reliant on its functionality, but also on situational factors like the user background and the work environment. This article seems appropriate for software engineers, who might not take into account alternative planning styles or the daily needs of health planners. While the health planner was fairly critical of the software, this was a case study and thus only examines the use of healthcare planning software with one individual. Because of this, it is unclear how generalizable the findings are to the broader population. Despite this limitation, this article is valuable because it shows how vital a detailed understanding of the community that one is working with is. Future studies by researchers are needed that will help determine how and why health planners would adopt new software, as this case study only provided information as to when they would not adopt new software.

Kattlemann, K. K., White, A. A., Greene, G. W., Byrd-Bredbenner, C., Hoerr, S. L.,

Horacek, T. M., ... & Morrell, J. S. (2014). Development of Young Adults Eating

and Active for Health (YEAH) internet-based intervention via community-

based participatory research model. *Journal of Nutrition Education and*

*Behavior, 46*(2), S11-S25.

The purpose of this study was to develop a tailored, Web-based intervention that could be used to prevent undue weight gain in young adults. Using the PRECEDE-PROCEED model first to structure the development the intervention, Kattlemann et al. found that they were able to create a Web-based intervention that held the young adults’ attention, was considered useful, and instilled confidence in the ability to perform health-related behaviors. However, the researchers did not analyze whether it actually helped to limit excessive weight gain in young adults. This is a major limitation, because without verifying that the intervention led to decreased weight gain, the study only determined what type of web-based intervention was preferred by the young adults. While this is useful information, not knowing whether the Web-based intervention achieves its goal is a huge oversight. Additionally, as this study only included young adults, it is unknown whether these findings generalize to the larger population. Despite these shortcomings, both the process and the web-based intervention can be used as guides for future researchers to develop their own programs to determine their efficacy.

Lovato, C., Potvin, L., Lehoux, P., Proulx, M., Milligan, D., Chiasson, M., … & Green, L.

W. (2003). Software to assist with programme planning: Two community-based cases. *International Union for Health Promotion and Education, X*(3), 120-126.

The purpose of this study was to analyze the data from two case studies to determine how users adopt the project planning software and whether the software assisted or hindered planning. While users initially believed that the software facilitated planning by familiarizing them with the PRECEDE-PROCEED model, as they became more familiar with the model, the users felt that the software was too cumbersome and rigid to be regularly used. The users found the software to be useful in terms of strategic planning, which identified project goals and rationale. However, the users also determined that the software was not helpful for either tactical planning, which involved practical and informational tasks, and operational planning, where users needed to apply the information entered in the software. One major limitation of this study was that it did not determine if the usage of the software was able to improve the quality of the programs. Additionally, this analysis is based on two case studies, which obviously do not cover the full range of the issues that are found in health program planning. This study would be beneficial to software developers, as it provides them with guidelines on how to effectively evaluate software adoption and implementation. It also might be useful to health planners who are interested in improving their planning methods. While the study has substantial shortcomings, it does shed light into the methodological requirements of health planners and how software developers can effectively evaluate the adoption of health planning software.

Santer, M., Muller, I., Yardley, L., Burgess, H., Selinger, H., Stuart, B., & Little, P.

(2014). Supporting self-care for families of children with eczema with a Web-

based intervention plus health care professional support: Pilot randomized

controlled trial. *Journal of Medical Internet Research, 16*(3), 1-15.

As the primary cause of treatment failure in children with eczema is the failure to use the prescribed medicines, the purpose of this study was to determine if these families could be better supported by a Web-based intervention with a healthcare professional (HCP) that would encourage them to continue to use the prescribed treatments. The study found that participants who used either website-only or website and HCP support reported significantly more compliance in using the prescribed medicines than the control group. However, the statistical significance was not found at the 5% level, only at the 10% level; thus, additional studies should be completed to ensure that the study’s findings are valid. Additionally, this study only included children with eczema under the age of five, which limits its ability to be generalized to the broader population. As this was a pilot trial of the Web-based intervention, the study’s findings lend support for conducting a full-scale trial that would help to determine elements that this study did not, such as the program’s cost-effectiveness and whether the findings are consistent throughout other age groups. This article is an excellent resource for organizations that seek to improve patient compliance in eczema treatment and for researchers who want to study this issue further.

Weir, C., McLeskey, N., Brunker, C., Brooks, D., & Supiano, M. (2011). The role of

information technology in translating educational interventions into

practice: An analysis using the PRECEDE/PROCEED model. *Journal of*

*American Medical Informatics, 18,* 827-834.

The purpose of this study was to determine how geriatric educational programs and quality improvement (QI) interventions are impacted by the use of information technology (IT). By using the qualitative PRECEDE/PROCEDE model to determine key constructs that affected change in the ability of clinicians to deliver information to patients, the researchers were then able to conduct a quantitative analysis of these constructs. Weir et al. found that the easier IT resources were able to be accessed by clinicians, the better the organization’s QI and education programs were able to be actualized. As the article notes, there are few studies that investigate the role of IT as a causal variable. While the study’s findings are not shocking, they are still important to both clinicians and researchers because the findings provide a strong foundation upon which to conduct future research on the impact of IT on QI and educational healthcare programs. However, as only three institutions in the same part of the country took part in this study, it is not clear that its findings hold true across a variety of healthcare environments.

**Summary**

The PRECEDE-PROCEED model is used in order to determine predisposing factors that can contribute the program’s success, reinforcing factors that encourage the desired behavior, and enabling factors that bolster the change process (Dalrymple, 2017, s. 20). While Weir et al. (2011), Santer et al. (2014), and Kattleman et al. (2014) utilize the PRECEDE-PROCEED model within their research process to identify factors influencing their study, both Lovato et al. (2003) and Chiasson and Lovato (2000) implement the model as part of their software design structure. Weir et al. utilized the model to identify important factors, like the relationship between information technology and quality improvement, in the implementation process of its geriatric educational program. Santer et al. employed the PRECEDE-PROCEED model to determine techniques that could be utilized to encourage regular medicine usage in children with eczema. Kattlemann et al. applied the model to identify the needs of young adults when developing a Web-based intervention designed to help limit their excessive weight gain. Both Lovato et al. and Chiasson and Lovato tested software that utilized the PRECEDE-PROCEED model to aid health planners in program planning for the prevention of breast cancer. The health planners determined that the most valuable aspect of the software was that it taught them how to use the PRECEDE-PROCEED model in project planning. Because of the differences in usage of the PRECEDE-PROCEED model, we can see that the model not only helps researchers study the implementation of health informatics and information technology usage, but that it also can be utilized within the information technology itself. Overall, the model seems well suited for aiding those who are developing community-based healthcare studies or programs, as it enables researchers and planners to fully understand the many health needs facing their population and provides them with strategies to address those needs.

References

Dalrymple, P. (2017). Program evaluation re-cap. *INFO 648: Health Informatics.*

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