

# Evaluating the Impact of Interprofessional Collaboration on the Adoption and Sustainability of Evidence-Based Practices in Nursing Care: A Mixed-Methods Study in Hafr Albatin Healthcare Settings

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## ABSTRACT

**Objective:** This mixed-methods study aimed to evaluate the impact of interprofessional collaboration (IPC) on the adoption and sustainability of evidence-based practices (EBPs) in nursing care within Hafr Albatin healthcare settings.

**Methods:** A convergent parallel mixed-methods design was employed. Quantitative data was collected through surveys administered to 200 healthcare professionals. Qualitative data was gathered via semi-structured interviews with 25 purposively sampled participants.

**Results:** Quantitative findings revealed a significant positive correlation between IPC and EBP adoption ( $r=0.76$ ,  $p<0.01$ ) as well as EBP sustainability ( $r=0.72$ ,  $p<0.01$ ). Thematic analysis of qualitative data yielded four main themes: (1) Collaborative knowledge sharing, (2) Collective problem-solving, (3) Mutual support and accountability, and (4) Enhanced patient outcomes.

**Conclusion:** IPC positively influences the adoption and sustainability of EBPs in nursing care. Healthcare organizations should cultivate an interprofessional collaborative culture to facilitate the implementation and maintenance of best practices, ultimately improving patient care quality.

**KEYWORDS:** interprofessional collaboration, evidence-based practices.

## 1. Introduction

Evidence-based practice (EBP) is widely recognized as a cornerstone of high-quality healthcare delivery. EBP involves the integration of the best available research evidence, clinical expertise, and patient values and preferences to guide clinical decision-making and optimize patient outcomes (Sackett et al., 1996). In nursing care, the adoption and sustainability of EBPs are crucial for ensuring the provision of

safe, effective, and patient-centered care.

Interprofessional collaboration (IPC) has emerged as a promising strategy for promoting EBP in healthcare settings. IPC involves healthcare professionals from different disciplines working together to deliver comprehensive and coordinated patient care (World Health Organization, 2010). By fostering communication, shared decision-making, and mutual respect among team members, IPC has the potential to facilitate the uptake and maintenance of EBPs in nursing care.

The purpose of this mixed-methods study was to evaluate the impact of IPC on the adoption and sustainability of EBPs in nursing care within Hafr Albatin healthcare settings. By employing both quantitative and qualitative approaches, this study aimed to provide a comprehensive understanding of how IPC influences the implementation and long-term use of evidence-based nursing practices.

The significance of this study lies in its potential to inform healthcare policies and practices that promote IPC as a means of advancing EBP in nursing care. By identifying the mechanisms through which IPC facilitates EBP adoption and sustainability, this study can guide the development of targeted interventions to enhance collaborative practice and ultimately improve patient outcomes.

## **2. Literature Review**

### **1. Evidence-Based Practice in Nursing Care**

EBP is a problem-solving approach to clinical decision-making that integrates the best available scientific evidence, clinician expertise, and patient values and preferences (Melnik et al., 2014). The Institute of Medicine (2001) has identified EBP as a key component of high-quality healthcare delivery, emphasizing its role in improving patient safety, clinical effectiveness, and cost-efficiency.

In nursing care, EBP has been shown to enhance patient outcomes, reduce healthcare costs, and increase job satisfaction among nurses (Melnik et al., 2012). A systematic review by Ubbink et al. (2013) found that EBP implementation in nursing led to improvements in patient outcomes, such as reduced pain, fewer complications, and shorter hospital stays.

Despite the recognized benefits of EBP, its adoption and sustainability in nursing practice remain challenging. Barriers to EBP implementation include lack of time, limited access to resources, inadequate skills and knowledge, and resistance to change (Melnik et al., 2012). A qualitative study by Solomons and Spross (2011) highlighted the importance of organizational support, leadership, and interprofessional collaboration in overcoming these barriers and promoting EBP in nursing.

### **2. Interprofessional Collaboration in Healthcare**

IPC is a collaborative practice model that involves healthcare professionals from different disciplines working together to deliver comprehensive and coordinated patient care (WHO, 2010). IPC is characterized by shared goals, clear roles and responsibilities, effective communication, and mutual respect and trust among team

members (Interprofessional Education Collaborative, 2016).

Numerous studies have demonstrated the benefits of IPC in healthcare settings. A systematic review by Reeves et al. (2017) found that IPC interventions improved patient outcomes, reduced healthcare utilization, and enhanced professional practice. Similarly, a meta-analysis by Zwarenstein et al. (2009) revealed that IPC significantly improved patient satisfaction, reduced length of hospital stay, and decreased mortality rates.

IPC has also been identified as a key facilitator of EBP implementation in healthcare. A qualitative study by Groenewegen et al. (2021) found that IPC fostered the sharing of knowledge and expertise, collaborative decision-making, and collective problem-solving, which in turn promoted the adoption of EBPs. Similarly, a mixed-methods study by Olander et al. (2020) showed that IPC enhanced the sustainability of EBPs by providing ongoing support, feedback, and accountability among team members.

### 3. Interprofessional Collaboration and Evidence-Based Practice in Nursing

While the literature on IPC and EBP in nursing is growing, few studies have specifically examined the impact of IPC on EBP adoption and sustainability in this context. A qualitative study by Saunders et al. (2016) explored nurses' perceptions of IPC and its influence on EBP implementation. The findings revealed that IPC facilitated EBP adoption by promoting shared learning, mutual support, and collective ownership of practice changes.

Another study by Leeman et al. (2017) investigated the role of IPC in sustaining EBPs in nursing home settings. The results indicated that IPC contributed to EBP sustainability by fostering ongoing communication, problem-solving, and adaptability among team members. The authors emphasized the importance of leadership support and organizational resources in enabling effective IPC and EBP maintenance.

Despite these promising findings, there is a need for further research to elucidate the mechanisms through which IPC influences EBP adoption and sustainability in nursing care. This study aims to address this gap by employing a mixed-methods approach to provide a comprehensive understanding of the impact of IPC on EBP implementation and maintenance in Hafr Albatin healthcare settings.

## 3. Methods

### 1. Research Design

This study employed a convergent parallel mixed-methods design, combining quantitative and qualitative approaches to provide a comprehensive understanding of the research problem (Creswell & Plano Clark, 2017). Quantitative data was collected through surveys, while qualitative data was gathered via semi-structured interviews. The two data sets were analyzed separately and then integrated for interpretation.

## 2. Participants and Sampling

The target population for this study included healthcare professionals involved in nursing care within Hafr Albatin healthcare settings. A combination of purposive and snowball sampling was used to recruit participants.

For the quantitative component, 200 healthcare professionals (100 nurses, 50 physicians, 25 pharmacists, and 25 allied health professionals) were recruited. Inclusion criteria were: (a) currently employed in a nursing care role; (b) at least one year of work experience; and (c) willingness to participate in the study.

For the qualitative component, 25 participants (15 nurses, 5 physicians, 3 pharmacists, and 2 allied health professionals) were purposively sampled based on their survey responses and willingness to participate in interviews. Maximum variation sampling was used to ensure diversity in participants' professional backgrounds, years of experience, and level of involvement in EBP implementation.

## 3. Data Collection

**Quantitative Data:** A self-administered survey was developed based on a review of the literature and expert consultation. The survey consisted of four sections: (a) demographic information; (b) perceptions of IPC, measured using the Interprofessional Collaboration Scale (ICS) (Kenaszchuk et al., 2010); (c) EBP adoption, measured using the Evidence-Based Practice Questionnaire (EBPQ) (Upton & Upton, 2006); and (d) EBP sustainability, measured using adapted items from the Sustainability Assessment Tool (SAT) (Luke et al., 2014). The survey was piloted with 20 healthcare professionals to ensure clarity and content validity.

**Qualitative Data:** Semi-structured interviews were conducted with 25 participants to explore their experiences and perceptions of IPC and its impact on EBP adoption and sustainability. The interview guide was developed based on the literature review and refined through expert consultation. Interviews were conducted face-to-face or via telephone, depending on participants' preferences, and lasted 45-60 minutes. All interviews were audio-recorded and transcribed verbatim.

## 4. Data Analysis

**Quantitative Data:** Survey data was analyzed using SPSS version 27. Descriptive statistics were used to summarize participants' demographic characteristics and survey responses. Pearson correlation coefficients were calculated to examine the relationships between IPC, EBP adoption, and EBP sustainability. Multiple linear regression analyses were conducted to identify predictors of EBP adoption and sustainability.

**Qualitative Data:** Interview transcripts were analyzed using thematic analysis (Braun & Clarke, 2006). Two researchers independently coded the transcripts and identified initial themes. The researchers then met to discuss and refine the themes until consensus was reached. NVivo 12 software was used to manage and organize the qualitative data.

## 4. Results

### 1. Quantitative Findings

The survey was completed by 200 healthcare professionals, with a response rate of 80%. Participants' demographic characteristics are summarized in Table 1.

Table 1. Demographic Characteristics of Survey Participants (N=200)

Characteristic	n	%
<b>Professional Background</b>		
Nurse	100	50.0
Physician	50	25.0
Pharmacist	25	12.5
Allied Health Professional	25	12.5
<b>Gender</b>		
Male	80	40.0
Female	120	60.0
<b>Age (years)</b>		
20-29	60	30.0
30-39	90	45.0
40-49	40	20.0
≥50	10	5.0
<b>Work Experience (years)</b>		
1-5	70	35.0
6-10	60	30.0
11-15	40	20.0
≥16	30	15.0

Participants reported generally positive perceptions of IPC, with a mean ICS score of 3.85 (SD=0.67) out of 5. The mean scores for EBP adoption and sustainability were 3.92 (SD=0.72) and 3.79 (SD=0.75), respectively.

Pearson correlation analysis revealed significant positive correlations between IPC and EBP adoption ( $r=0.76$ ,  $p<0.01$ ), as well as between IPC and EBP sustainability ( $r=0.72$ ,  $p<0.01$ ). These findings suggest that higher levels of IPC are associated with greater EBP adoption and sustainability.

Multiple linear regression analyses identified IPC as a significant predictor of both EBP adoption ( $\beta=0.68$ ,  $p<0.001$ ) and EBP sustainability ( $\beta=0.64$ ,  $p<0.001$ ), after controlling for demographic variables. These results indicate that IPC has a strong influence on the implementation and maintenance of EBPs in nursing care.

### 2. Qualitative Findings

Thematic analysis of the interview data yielded four main themes: (1) Collaborative knowledge sharing, (2) Collective problem-solving, (3) Mutual support and accountability, and (4) Enhanced patient outcomes. Each theme is discussed below with supporting quotes from participants.

#### Theme 1: Collaborative Knowledge Sharing

Participants emphasized that IPC facilitated the sharing of knowledge and expertise among healthcare professionals, which in turn promoted the adoption of EBPs. Regular interprofessional meetings, joint training sessions, and informal discussions were identified as key strategies for knowledge exchange. A nurse stated:

"IPC has greatly enhanced our ability to share knowledge and learn from each other. We have regular meetings where we discuss the latest research and how we can apply it in our practice. This helps us stay up-to-date with best practices and implement them more effectively." (Participant 7, Nurse)

A physician highlighted the importance of interprofessional learning in fostering EBP adoption:

"Collaborating with other professionals has exposed me to new ideas and approaches that I wouldn't have considered otherwise. By learning from nurses, pharmacists, and other team members, I've been able to expand my knowledge base and incorporate evidence-based practices into my work." (Participant 12, Physician)

### Theme 2: Collective Problem-Solving

Participants reported that IPC facilitated collective problem-solving, which was crucial for overcoming barriers to EBP implementation and sustainability. By working together, healthcare professionals could identify challenges, brainstorm solutions, and develop strategies for successful EBP adoption. A pharmacist shared:

"When we encounter obstacles in implementing EBPs, we come together as a team to figure out how to address them. By pooling our expertise and perspectives, we can come up with creative solutions that we might not have thought of on our own. This collaborative problem-solving approach has been essential for sustaining EBPs over time." (Participant 18, Pharmacist)

A nurse described how IPC helped navigate resistance to change:

"Some staff members were initially resistant to adopting new practices, but through open communication and collaborative problem-solving, we were able to address their concerns and find ways to make the changes more manageable. Having the support and input of other professionals made the process much smoother." (Participant 3, Nurse)

### Theme 3: Mutual Support and Accountability

Participants highlighted that IPC fostered a sense of mutual support and accountability among team members, which was essential for sustaining EBPs over time. By providing ongoing encouragement, feedback, and reinforcement, healthcare professionals could help each other maintain commitment to best practices. An allied health professional stated:

"IPC has created a culture of mutual support and accountability in our team. We hold each other accountable for following EBPs and provide constructive feedback when needed. At the same time, we also celebrate each other's successes and offer encouragement during challenging times. This supportive environment has been key to sustaining EBPs long-term." (Participant 22, Allied Health Professional)

A nurse emphasized the importance of shared responsibility in maintaining EBPs:

"Sustaining EBPs requires ongoing effort and commitment from everyone involved. Through IPC, we've developed a sense of shared responsibility for maintaining best practices. We all play a role in ensuring that EBPs are consistently followed and

adapted as needed. This collective ownership has been crucial for long-term success." (Participant 9, Nurse)

#### Theme 4: Enhanced Patient Outcomes

Participants perceived that IPC contributed to enhanced patient outcomes by promoting the adoption and sustainability of EBPs. By working collaboratively to implement best practices, healthcare professionals could provide higher-quality, more coordinated care that led to improved patient results. A physician shared:

"Since we started collaborating more closely and adopting EBPs, we've seen a marked improvement in patient outcomes. Patients are experiencing fewer complications, shorter hospital stays, and better overall health. It's clear that IPC and EBP go hand-in-hand in delivering the best possible care." (Participant 15, Physician)

A nurse described how IPC and EBP enhanced patient satisfaction:

"By working together to provide evidence-based, patient-centered care, we've been able to improve patient satisfaction and engagement. Patients appreciate the coordinated, comprehensive approach that IPC enables, and they feel more confident in the care they're receiving when they know it's based on the latest research and best practices." (Participant 5, Nurse)

## 5. Discussion

This mixed-methods study evaluated the impact of IPC on the adoption and sustainability of EBPs in nursing care within Hafr Albatin healthcare settings. The quantitative findings demonstrated significant positive correlations between IPC and both EBP adoption and sustainability, with IPC emerging as a strong predictor of these outcomes. These results align with previous research highlighting the role of IPC in facilitating the implementation and maintenance of best practices in healthcare (Groenewegen et al., 2021; Olander et al., 2020).

The qualitative findings provided insights into the mechanisms through which IPC influences EBP adoption and sustainability. Participants identified collaborative knowledge sharing, collective problem-solving, mutual support and accountability, and enhanced patient outcomes as key processes and benefits of IPC in relation to EBP implementation. These themes resonate with existing literature emphasizing the importance of interprofessional learning, shared decision-making, teamwork, and patient-centeredness in promoting EBP (Leeman et al., 2017; Saunders et al., 2016).

The study findings have important implications for healthcare practice and policy. First, they underscore the need for healthcare organizations to cultivate an interprofessional collaborative culture that supports the adoption and sustainability of EBPs. This can be achieved through initiatives such as interprofessional education and training, regular team meetings and discussions, and the establishment of clear roles and responsibilities for EBP implementation.

Second, the findings highlight the potential of IPC to address common barriers to EBP adoption, such as lack of knowledge, resistance to change, and limited

resources. By fostering collective problem-solving and shared accountability, IPC can help healthcare professionals navigate these challenges and develop strategies for successful EBP implementation.

Third, the study results suggest that IPC and EBP can have a synergistic effect on patient outcomes. By working collaboratively to implement best practices, healthcare professionals can provide higher-quality, more coordinated care that leads to improved patient satisfaction, reduced complications, and better overall health. This underscores the importance of integrating IPC and EBP as complementary approaches to healthcare delivery.

Limitations of this study include the cross-sectional design, which precludes causal inferences, and the reliance on self-reported data, which may be subject to social desirability bias. Future research could employ longitudinal designs and objective measures of EBP adoption and sustainability to further elucidate the impact of IPC on these outcomes.

## 6. Conclusion

In conclusion, this mixed-methods study provides compelling evidence for the role of IPC in promoting the adoption and sustainability of EBPs in nursing care within Hafr Albatin healthcare settings. The findings highlight the importance of cultivating an interprofessional collaborative culture, addressing barriers to EBP implementation, and leveraging the synergistic effects of IPC and EBP on patient outcomes. Healthcare organizations and policymakers should prioritize the development and support of IPC initiatives as a means of advancing evidence-based, high-quality nursing care.

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