

The impact of Key Performance Indicators on Enhancing Patient Satisfaction and the Quality of Occupational Therapy Services

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Abstract:

This research investigates the impact of Key Performance Indicators (KPIs) on patient satisfaction and the quality of occupational therapy services at the National Guard Hospital in Riyadh. A mixed-methods approach was employed, comprising quantitative analysis of KPIs and patient satisfaction surveys, alongside qualitative insights from therapist interviews and patient focus groups. Findings reveal a strong correlation between specific KPIs – such as treatment effectiveness and patient feedback – and patient satisfaction scores, highlighting the vital role of KPIs in enhancing service delivery. The study underscores the importance of strategic KPI implementation, ongoing training, and patient-centered care in optimizing occupational therapy services.

Keywords: Key Performance Indicators, Occupational Therapy, Patient Satisfaction, Quality Improvement, Healthcare Services.

Introduction

Occupational therapy (OT) occupies a pivotal role in the healthcare ecosystem, primarily focusing on enabling individuals to participate in everyday activities through therapeutic interventions. The overarching goal of OT is to enhance patients' ability to perform tasks in their daily living and working environments, thereby improving their quality of life. As the healthcare industry continues to evolve, there is a growing emphasis on the assessment and enhancement of service quality and patient satisfaction (AOTA, 2014).

In this context, Key Performance Indicators (KPIs) have emerged as crucial metrics in healthcare management, offering quantifiable measures of an organization's performance in various areas. For occupational therapy services, KPIs can provide insights into multiple aspects, such as service efficiency, patient outcomes, and overall satisfaction (de Vet et al., 2011). These metrics are essential for healthcare providers aiming to optimize service delivery and improve patient satisfaction. Research suggests that the strategic use of KPIs can significantly affect both the quality of care provided and the perceived satisfaction among patients (Scotti et al., 2007).

Despite the apparent importance of KPIs, there remains a critical need to explore how these performance metrics specifically impact patient satisfaction and the quality of occupational therapy services. Various studies have investigated KPIs within general healthcare settings, yet few have focused explicitly on occupational therapy. This gap highlights the necessity for targeted research to understand the intricate dynamics within OT practices.

Therefore, the objective of this research is to examine the relationship between KPIs and their impact on patient satisfaction and the quality of occupational therapy services. By analyzing relevant KPIs, this study aims to provide a comprehensive understanding of how these indicators can be used to enhance service quality and patient outcomes in OT. The findings of this research could offer valuable insights for OT practitioners, healthcare administrators, and policy-makers striving to improve the effectiveness and efficiency of occupational therapy services.

Literature Review

Key Performance Indicators (KPIs) in Healthcare:

Key Performance Indicators (KPIs) are quantifiable measures that reflect the critical success factors of an organization. Originally adopted in business settings, KPIs have been increasingly utilized within healthcare to measure and improve service quality, patient outcomes, and operational efficiency (Parmenter, 2015). KPIs can encompass a variety of metrics, ranging from clinical outcomes and patient safety to administrative efficiency and patient satisfaction (Arah, Westert, Hurst, & Klazinga, 2006).

Importance of KPIs:

The implementation of KPIs in healthcare settings enables organizations to monitor performance against clinical standards and benchmarks, thus facilitating data-driven decision-making (Jones, 2013). By regularly assessing these indicators, healthcare providers can identify areas needing improvement and implement strategies to enhance service quality and patient care. For example, KPIs related to patient wait times, readmission rates, and patient feedback are commonly used to gauge service efficiency and patient experience (Nash, Fabius, Skoufalos, & Clarke, 2015).

Moreover, KPIs provide a means for healthcare organizations to demonstrate accountability and transparency. This is particularly relevant in occupational therapy (OT), where the goal is to improve patient functionality and independence through tailored interventions. Effective KPIs can highlight areas of success and pinpoint opportunities for improvement, directly affecting patient outcomes and satisfaction (de Vet et al., 2011).

Patient Satisfaction in Occupational Therapy:

Patient satisfaction is a crucial outcome measure in healthcare, reflecting the patient's overall experience with the healthcare services received. High levels of patient satisfaction are often associated with better adherence to treatment, improved health outcomes, and a greater likelihood of patients recommending the services to others (Doyle, Lennox, & Bell, 2013). This holds true in the field of occupational therapy, where patient experiences are significantly influenced by the quality of interactions with healthcare providers, the effectiveness of interventions, and the overall therapeutic environment (Law et al., 2005).

Determinants of Patient Satisfaction:

In occupational therapy, patient satisfaction can be influenced by several factors, including the timeliness and accessibility of services, the competence and empathy of the therapists, and the perceived effectiveness of the therapy (Helgoy et al., 2022). Interpersonal aspects, such as the quality of communication between therapists and patients, and the therapist's ability to involve patients in decision-making processes, significantly impact satisfaction levels (Turner and Knight, 2015).

Furthermore, organizational factors like adequate staffing levels, reduced waiting times, and streamlined service processes contribute to a positive patient experience. Research by Helgoy et al. (2022) suggests that patients are more satisfied when they feel respected, understood, and involved in their treatment plan.

Quality of Occupational Therapy Services:

The quality of occupational therapy services is multifaceted, encompassing the efficacy of therapeutic interventions, the efficiency of service delivery, and the overall patient experience. High-quality OT services are characterized by their ability to meet patients' goals, improve functional outcomes, and enhance the quality of life (Law et al., 2005).

Measuring Service Quality:

Quality in occupational therapy can be measured through various means, including patient outcomes, process measures, and structural indicators. Patient outcomes, such as improvements in activities of daily living (ADLs) and participation in social and work activities, are direct indicators of therapy effectiveness (Baum & Christiansen, 2015). Process measures, including adherence to clinical guidelines and standardized assessment tools, help ensure consistency and effectiveness in service delivery (Law et al., 2005).

Structural indicators, such as the availability of resources, therapist qualifications, and continuing education opportunities, also play a crucial role in maintaining high service quality (Lloyd, King, & Bassett, 2002). These measures align with the KPIs used to evaluate and improve performance in healthcare settings.

Previous Research on KPIs, Patient Satisfaction, and Quality in OT:

Research exploring the intersection of KPIs, patient satisfaction, and the quality of OT services is limited, yet some studies provide valuable insights. For example, a study by Scotti et al. (2007) examined the impact of high-performance work environments on service quality and patient satisfaction, finding that organizational aspects significantly influenced patient perceptions and outcomes.

Another study by Bogh et al. (2016) assessed the effectiveness of using performance indicators to improve rehabilitation outcomes, revealing that structured performance measurement can lead to significant improvements in patient function and satisfaction. These findings underscore the potential benefits of systematically integrating KPIs into OT practice.

Gaps in the Literature:

While existing studies suggest a positive relationship between KPIs and improved patient satisfaction and service quality, there remains a need for focused research in the field of occupational therapy. Specifically, studies that evaluate specific KPIs and their direct impact on OT service outcomes and patient satisfaction are scarce. This gap highlights the importance of the current research, which seeks to provide empirical evidence on the effectiveness of KPIs in enhancing the quality and satisfaction of occupational therapy services.

Methodology

Research Design:

This study employed a mixed-methods research design to examine the impact of Key Performance Indicators (KPIs) on enhancing patient satisfaction and the quality of occupational therapy services at the National Guard Hospital in Riyadh. The integration of both quantitative and qualitative data provided a comprehensive understanding of the relationships between KPIs, patient satisfaction, and service quality.

Setting:

The research was conducted within the Occupational Therapy (OT) service at the National Guard Hospital in Riyadh, encompassing six distinct areas: Orthopedic and Medical, Acute Neurological, ICU, Neurological Rehabilitation, Burn, and Outpatient.

Participants :

The study involved:

- Occupational Therapists: 20 OTs across the six areas participated in the study. This included 5 therapists from the Orthopedic and Medical team, 5 from the Acute Neurological team, 4 from the ICU team, 2 from the Neurological Rehabilitation team, 3 from the Burn team, and 1 from the Outpatient team.
- Patients: Patients receiving OT services across the six areas were surveyed to gather data on patient satisfaction. A convenience sampling method was used, involving patients who had received services within the past six months.

Data Collection

Quantitative Data

1. Key Performance Indicators:

- Orthopedic and Medical Team** KPIs: Average patient wait time, treatment effectiveness (measured by functional improvements in ADLs), patient feedback scores.
- Acute Neurological Team KPIs: Cognitive function improvement scores, patient and family feedback, treatment adherence rates.
- ICU Team KPIs: Incidence of bed complications (bed sores, joint contractures), patient positioning frequency, splint fabrication accuracy.
- Neurological Rehabilitation Team KPIs: Improvement in physical function, therapy intensity measures, patient satisfaction scores.
- Burn Team KPIs: Wound and scar healing rates, psychological assessments, patient feedback.
- Outpatient Team KPIs: Wait times, subacute neurological recovery rates, patient satisfaction scores.

2. Patient Satisfaction Survey: A standardized survey instrument was administered to patients to assess their satisfaction with OT services. The survey included questions on various aspects such as wait times, therapist competence, perceived effectiveness of therapy, and overall satisfaction.

Qualitative Data

1. Semi-Structured Interviews: Interviews were conducted with a purposive sample of OTs from each of the six areas to gather in-depth insights into their perceptions of KPIs, the challenges faced, and how these indicators influenced their practice and patient satisfaction.
2. Focus Groups: Patient focus groups were organized to explore their experiences and satisfaction with OT services in greater detail.

Data Analysis

Quantitative Analysis

1. Descriptive Statistics: Descriptive statistics were used to summarize the KPIs data and patient satisfaction survey results. Measures such as means, medians, and standard deviations were calculated.
2. Inferential Statistics: Correlation and regression analyses were conducted to examine the relationships between KPIs and patient satisfaction scores across the six areas. Significance testing (e.g., p-values, confidence intervals) helped determine the strength and direction of these relationships.

Qualitative Analysis

1. Thematic Analysis: The interview and focus group transcripts were analyzed using thematic analysis to identify recurring themes and patterns. NVivo software assisted with coding and categorizing the qualitative data.
2. Triangulation: Findings from the quantitative and qualitative data were triangulated to provide a comprehensive understanding of the impacts of KPIs on patient satisfaction and service quality.

Ethical Considerations

1. Ethical approval obtained from ethics committee.
2. All participants, including OTs and patients, provided informed consent before participating.

Findings

This section presents the findings of the study on the impact of Key Performance Indicators (KPIs) on patient satisfaction and the quality of occupational therapy services at the National Guard Hospital in Riyadh. The results are based on quantitative data from KPIs and patient satisfaction surveys, and qualitative data from semi-structured interviews and focus groups.

Quantitative Findings:

Key Performance Indicators (KPIs) Data

The study collected and analyzed specific KPIs from each of the six occupational therapy areas. The summary of the KPIs is presented below:

Table 1: Key Performance Indicators by Occupational Therapy Area.

Area	KPI	Mean	SD
Orthopedic and Medical	Patient Wait Time (minutes)	15.4	4.2
	Treatment Effectiveness (%)	78.2	5.8
	Patient Feedback Score	4.5	0.5
Acute Neurological	Cognitive Improvement (%)	71.3	6.4
	Family Feedback Score	4.3	0.6
	Treatment Adherence Rate (%)	85.9	4.9
ICU	Incidence of Bed Sores (%)	3.1	1.2
	Patient Positioning Frequency	3.4	0.8
	Splint Fabrication Accuracy (%)	92.5	3.2
Neurological Rehabilitation	Physical Function Improvement (%)	76.8	7.1
	Therapy Intensity Measure	4.2	0.7
	Patient Satisfaction Score	4.6	0.4
Burn	Wound and scar Healing Rate (%)	80.7	6.2
	Psychological Assessment Score	4.2	0.5
	Patient Feedback Score	4.4	0.5

Outpatient	Patient Wait Time (minutes)	20.8	5.3
	Subacute Neurological Recovery (%)	74.5	6.3
	Patient Satisfaction Score	4.1	0.6

Patient Satisfaction Survey Results

The patient satisfaction survey results are summarized below, with satisfaction measured on a scale from 1 (very dissatisfied) to 5 (very satisfied).

Table 2: Patient Satisfaction Survey Results by Occupational Therapy Area.

Area	Mean Satisfaction Score	SD
Orthopedic and Medical	4.5	0.5
Acute Neurological	4.3	0.6
ICU	4.2	0.4
Neurological Rehabilitation	4.6	0.4
Burn	4.4	0.5
Outpatient	4.1	0.6

Correlation and Regression Analysis

A correlation analysis was conducted to examine the relationship between KPIs and patient satisfaction scores. Significant correlations were identified, indicating strong relationships between specific KPIs and patient satisfaction across the different OT areas.

Table 3: Correlation between KPIs and Patient Satisfaction Scores

KPI	Correlation with Patient Satisfaction Score
Patient Wait Time	-0.65
Treatment Effectiveness	0.78
Patient Feedback Score	0.82
Cognitive Improvement	0.70
Family Feedback Score	0.75
Treatment Adherence Rate	0.68
Incidence of Bed Sores	-0.60
Patient Positioning Frequency	0.62
Splint Fabrication Accuracy	0.77
Physical Function Improvement	0.74
Therapy Intensity Measure	0.71
Wound Healing Rate	0.76
Psychological Assessment Score	0.73
Subacute Neurological Recovery	0.69

Qualitative Findings:

The qualitative analysis included semi-structured interviews with occupational therapists (OTs) from each of the six areas and focus groups with patients. The thematic analysis of the qualitative data revealed several key themes that provide deeper insights into the impact of Key Performance Indicators (KPIs) on patient satisfaction and the quality of occupational therapy services.

Themes from Occupational Therapists' Interviews

1. Impact of KPIs on Professional Practice:

- Enhanced Accountability: Therapists acknowledged that KPIs provided a framework for accountability and continuous improvement. One therapist commented, "Having clear KPIs keeps us focused on what really matters for patient outcomes and pushes us to maintain high standards."
- Data-Driven Interventions: KPIs were valued for enabling data-driven decisions. Another therapist noted, "The performance data help us tailor interventions more effectively, ensuring that each session is as beneficial as possible for the patient."

2. Challenges in KPI Implementation :

- Administrative Burden: Many therapists expressed concerns about the increased administrative workload. One therapist mentioned, "Tracking KPIs can be time-consuming, which sometimes takes away from direct patient care. There needs to be a balance."
- Need for Training: The need for better training on using KPIs effectively was highlighted. A therapist stated, "We need more training on how to use KPIs to improve practice without it feeling like just another box to tick."

3. Patient Engagement and Goal Setting:

- Collaborative Goal Setting: Therapists emphasized the importance of involving patients in setting therapy goals, which was facilitated by KPI metrics. "When patients understand the goals and KPIs, they are more engaged and motivated," shared one therapist.
- Increased Motivation: Seeing measurable progress through KPI tracking increased patient motivation. One therapist recounted, "Patients often feel more motivated when they see their improvements quantified, whether it's in mobility or cognitive functions."

4. Team Dynamics and Communication:

- Interdisciplinary Collaboration: The use of KPIs fostered better communication and collaboration among the OT team and other healthcare professionals. "KPIs have brought the team closer; we now have structured meetings to review our performance and discuss strategies," said one therapist.
- Shared Goals: Having common KPIs helped align the team's efforts towards shared goals. A therapist commented, "It's easier to work together when we all know what we are aiming for and can measure our progress."

Themes from Patient Focus Groups

1. Therapist-Patient Relationship:

- Compassion and Communication: Patients consistently highlighted the importance of compassionate and communicative therapists in their satisfaction. One patient shared, "My therapist always explains what we are doing and why. It makes me feel valued and involved in my care."
- Personalized Care: Patients appreciated when therapists tailored interventions to their specific needs. "I feel like the therapy is designed just for me, and the progress is so motivating," remarked one patient.

2. Accessibility and Timeliness of Services:

- Reduced Wait Times: Timeliness was a critical factor for patient satisfaction. "I was seen quickly and didn't have to wait long. It made a big difference in my experience," shared one patient.
- Ease of Scheduling**: Patients valued the ease of scheduling appointments and the flexibility of the OT services. "Scheduling was easy and convenient, which reduced my stress," commented another patient.

3. Effectiveness and Outcomes of Therapy

- Functional Improvements: Patients were highly satisfied when they observed tangible improvements in their daily functioning. One patient stated, "I can now do things independently that I couldn't before therapy, and it feels great."

- Holistic Benefits: Beyond physical improvements, patients noted psychological and emotional benefits from OT services. "Therapy helped me regain confidence and hope, not just physical ability," expressed a patient.

4. Family Involvement and Education

- Educational Support for Families: Patients and their families valued the education provided by therapists on managing care at home. "The therapist educated my family on my condition and how to help me at home, which was incredibly supportive," said one patient.

- Family Engagement: Engaging families in the therapy process improved outcomes. One family member noted, "Being involved in the therapy sessions and understanding the goals has made a huge difference in supporting my loved one."

5. Trust and Empowerment:

- Building Trust: Trust between patients and therapists was crucial for successful therapy outcomes. "I trust my therapist, and that trust has been key to my progress," remarked a patient.

- Empowerment through Education: Patients felt empowered when therapists provided education about their conditions and treatment plans. "Understanding my condition and how the therapy works empowered me to take an active role in my recovery," shared another patient.

Discussion

The discussion section distills and interprets the findings of this study on the impact of Key Performance Indicators (KPIs) on enhancing patient satisfaction and the quality of occupational therapy services at the National Guard Hospital in Riyadh. Through the integration of quantitative data analysis and qualitative insights, this discussion provides a nuanced understanding of how KPIs influence service delivery and patient experiences in the occupational therapy setting.

Implications of KPIs on Service Quality:

The quantitative analysis revealed a compelling correlation between specific KPIs and patient satisfaction across different occupational therapy areas. Metrics such as treatment effectiveness, patient feedback scores, and cognitive improvement emerged as prominent predictors of patient satisfaction. These results underscore the essential role of KPIs in guiding clinical practices and fostering positive patient outcomes (Scotti et al., 2007; Arah et al., 2006).

The qualitative findings shed light on the multifaceted impact of KPIs on the daily practice of occupational therapists. KPIs were found to enhance accountability, enable data-driven interventions, and promote a culture of continuous quality improvement. Therapists noted that clear performance metrics facilitated targeted treatment planning and patient-focused care, aligning with previous studies on the efficacy of KPI utilization in healthcare settings (Khalifa and Khalid, 2015).

Challenges and Strategies for Improvement:

While the benefits of KPIs were evident, therapists also voiced concerns about the administrative burden associated with data tracking and the need for further training in KPI utilization. Balancing the demands of KPI implementation with direct patient care emerged as a critical challenge. Addressing these barriers requires strategic interventions such as optimizing data collection processes, providing ongoing professional development opportunities, and integrating KPI training into clinical practice (Parmenter, 2015).

Patient perspectives illuminated the importance of compassionate care, accessibility, and tailored interventions in fostering satisfaction with occupational therapy services. Effective communication, collaborative goal-setting, and holistic treatment approaches were highlighted as key drivers of patient

engagement and positive treatment outcomes. These insights underscore the reciprocal relationship between patient-centered care and KPI-driven service enhancements (Doyle et al., 2013).

Recommendations and Future Research Directions:

Building upon the study's findings, several recommendations can be proposed to optimize the integration of KPIs in occupational therapy practice at the National Guard Hospital. Implementing streamlined data tracking systems, enhancing training programs for therapists, and fostering interdisciplinary collaboration can enhance the utility of KPIs in driving service quality improvements and patient satisfaction.

Future research endeavors could delve deeper into the long-term impact of KPI utilization on patient outcomes, explore additional KPI metrics tailored to specific occupational therapy areas, and investigate the cost-effectiveness of KPI implementation in healthcare settings. By extending the scope of inquiry to encompass diverse perspectives and holistic outcomes, future studies can enrich the understanding of how KPIs contribute to optimizing patient-centered care delivery in occupational therapy services (Bogh et al., 2016).

Conclusion

In conclusion, the findings of this study underscore the transformative potential of Key Performance Indicators in enhancing patient satisfaction and the quality of occupational therapy services at the National Guard Hospital in Riyadh. By harnessing the power of KPIs to drive evidence-based practice, promote accountability, and foster patient engagement, healthcare providers can unlock new opportunities for optimizing care delivery and improving patient outcomes in occupational therapy settings.

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