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The role of perceived impact on relationship quality in pharmacists' willingness to influence indication-based off-label prescribing decisions

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ABSTRACT

Little is known about factors that affect pharmacists' roles in off-label prescribing. This study examined the effect of perceived impact on relationship quality (IRQ) on hospital pharmacists' willingness to influence a physician's decision regarding an indication-based off-label medication order (WTIP) (i.e., beyond FDA-approved indications) and the moderating roles of the appropriateness of the medication order and the relative expert power of the pharmacist.

Pharmacists practicing in U.S. hospitals, recruited from membership rolls of state affiliates of the American Society of Health-System Pharmacists, were sent an electronic link to a questionnaire via their respective affiliates. A cross-sectional, randomized, 2 × 2 experimental design was used; participants were assigned to one of the indication-based off-label medication order scenarios. Relative expert power (i.e., power differential between the pharmacist and the physician) and appropriateness of the prescription were manipulated. Perceived IRQ was measured with multiple items. Pharmacists' WTIP in the scenario was the outcome variable.

A total of 243 responses were included in multiple linear regression analyses. After controlling for dependence power, information power, communication effectiveness, perceived responsibility, and attitude, pharmacists' WTIP was negatively affected by perceived IRQ (estimate = −0.309, $P < 0.05$). This effect was more pronounced in groups exposed to the scenario where the pharmacist had lower relative expert power (estimate = −0.438, $P < 0.05$) and where the medication was less appropriate (estimate = −0.503, $P < 0.05$).

Although willing to ensure rationality of off-label prescribing, pharmacists' WTIP was affected by a complex array of factors – the perceived impact of influence attempts on relationship quality between the pharmacist and the prescriber, the pharmacist's relative expert power, and the appropriateness of the off-label prescription. Increasing pharmacists' expert power and collaboration with physicians and promoting pharmacists' multifaceted contribution, collaborative or independent, to patient care may facilitate pharmacist services in off-label pharmaceutical care.

1. Introduction

Off-label prescribing is a common or legal practice in many countries (Neubert et al., 2004; Radley et al., 2006). However, off-label prescribing often occurs with inadequate evidence of effectiveness. The U.S. Agency for Healthcare Research and Quality (AHRQ) published a list of medications with off-label uses that had inadequate or uncertain evidence (Walton et al., 2009). Such practice, especially when a medication is prescribed for diseases/conditions that are different from FDA (or, equivalent regulators)-approved clinical indications (indication-based off-label prescribing), brings about controversy and has the potential to cause harm to patients and other stakeholders in healthcare (Neubert et al., 2004; Turner et al., 1999).

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Pharmacists provide medication therapy management services that may include consultations to physicians (Barnett et al., 2009; Geurts et al., 2012 for a review of pharmacist interventions in cooperation with physicians across many countries; Pedersen et al., 2011). The literature reveals that pharmacists recognize differing roles for themselves in the process of off-label medication use. For example, a study reported that 78% of pharmacists would consider as their professional duty to inform the physician in case a prescribed medication was off-label. Such decisions, however, may be case-specific such that 39% of pharmacists, as reported in the study, would always contact the physician for an off-label order of a high dose of β-agonist or steroids, while 74% would always do so for an off-label prescription of a high dose of paracetamol (acetaminophen) (Stewart et al., 2007).

In addition to role recognition, policy has the potential to affect pharmacist involvement in off-label medication use. Ansani et al. (2006) found that less than 25% of the respondents of U.S. academic medical centers (AMC) reported having any policy for off-label use of medications, and only about 17% had policies for 'innovative' off-label medication use. There may be many reasons for not having an off-label medication use policy. Surprisingly, the authors concluded, the topic of off-label medication use policy "never addressed by physicians, pharmacists" was cited by over one-third of the respondent AMCs as a reason; in addition, fewer than half of the AMCs were reported to require follow up action and aggressive monitoring of off-label or 'innovative' off-label medication use.

Given the complexity of pharmacotherapeutic treatment plans, collaboration between physicians and pharmacists practicing in healthcare institutions may be considered necessary in order to provide comprehensive, efficient, and effective patient care. However, the practice of patient-centered pharmacy services has the potential to cause undesirable tension or conflict between the physician and the practicing pharmacist (Hepler and Strand, 1990). Indeed, interactions and communication among healthcare team members is likely to be at least partially affected by its members' relative social power (Ellingson, 2002; Lambert, 1996).

Social power – resources that impart an ability to a person to influence others – plays an implicit or explicit role in interactions within a team or across inter-professional team members that provide healthcare. Hospital and nursing staff and their supervisors recognize that expertise, organizational position, dependence legitimacy (i.e., obligation to provide assistance), and referent power (i.e., the influencer's ability to raise in others feelings of oneness and a desire to identify with the influencer) are the top-rated power bases that are effective to influence a target (Koslowsky et al., 2001; Raven et al., 1998). Similarly, pharmacists have been shown to have access to certain power bases such as expert power (i.e., knowledge and/or expertise in relevant areas) and information power (i.e., one's access to or ability to present information or logical argument) when attempting to influence members of the pharmacy and therapeutics (P&T) committee (Arntson et al., 2010). As the "medication experts" on the team, their perceived expert power may be higher, relative to some others on the P&T committee. Power and influence are distinct but related concepts; power is defined as the potential for influence (Raven, 1992). Thus, the choice of any influence strategy may depend on the evaluation of power over the target (Fung, 1991; Raven, 1992). However, the simple fact of having a power base available does not imply that the pharmacist will attempt to influence, nor does it mean that the pharmacist will prepare for the attempt. The influencing agent (in this case, a pharmacist) may evaluate the potential outcomes of influence (e.g., secondary gains and losses) as well as the time and effort required for achieving the desired outcomes before an influence attempt is made (Raven, 1992). In addition, there are potential relational, situational, and/or ethical ramifications of using a particular power base (Getty, 2006) and it is quite possible that the pharmacist, while considering an intervention, may think of those outcomes. For example, the use of a direct form of information power may result in harm to the interpersonal relationship (Raven, 1993) between the pharmacist and the receiver of the "thoroughly direct" message. Does the use of a seemingly effective power base affect relationships? Is it ethically and/or professionally appropriate in a given context? These are some questions that the pharmacist may ask himself or herself in these situations.

Expanded clinical roles of pharmacists were perceived as an invasion into physicians' professional domain by both general physicians and community pharmacists; however, the latter were reluctant to compromise on such roles (Paulino et al., 2010). Inappropriateness of a prescription makes for a logical ground for pharmacists to decide to influence prescribing. Pharmacists recognize a responsibility to ensure medication safety by identifying unsafe conditions and the need for process/systems improvement (Leape et al., 1999). However, in case of indication-based off-label prescribing, pharmacists may weigh the degree of appropriateness of that off-label prescription with its likely relational consequences. More specifically, relationship quality or relationship management with respect to developing, managing, and evaluating relationships within the context of dyadic transactions may become critical to influence intents. Whether pharmacists are willing to influence prescribers in the case of indication-based off-label prescribing and how various factors—including perceived impact on relationship quality (IRQ) with a physician–affect pharmacists' willingness to attempt to influence has not been studied. Off-label prescribing—especially, indication-based (or, innovative) off-label prescribing—has important implications given the potential impact, both positive and negative, of off-label medication use in patient care. However, past research has not focused on enabling factors that affect multi-disciplinary monitoring and evaluating the risk-effectiveness potential of off-label prescribing.

This study aimed to assess how hospital pharmacists' willingness to influence a physician's decision regarding an indication-based off-label medication order (WTIP) is affected by pharmacists' perceived impact on the quality of the physician-pharmacist relationship (IRQ). The power/interaction model of interpersonal influence (Raven, 1992) provided the conceptual framework for the study. Specifically, the following hypotheses were examined (Fig. 1):

H_1: There is a negative relationship between perceived IRQ and pharmacists' WTIP, such that stronger perceptions of the deleterious impact of the pharmacist's influence attempt on the pharmacist's relationship with the physician are associated with a lower willingness on the part of the pharmacist to influence the physician's prescribing decision.
H_2: The effect of pharmacists' perceived IRQ on pharmacists' WTIP is moderated by the relative expert power of the pharmacist.
H_3: The effect of pharmacists' perceived IRQ on pharmacists' WTIP is moderated by the appropriateness of the off-label medication order.

2. Methods

2.1. Dependent variable

WTIP was conceptualized as the pharmacists' willingness to attempt to influence a physician's decision in order to ensure the