



How and when does leader knowledge hiding trickle down the organisational hierarchy in the tourism context? A team-level analysis

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ABSTRACT

This research aims to extend the literature on knowledge hiding and tourism by integrating the theoretical frameworks of social exchange and social learning. Employee knowledge hiding has scarcely been examined in the tourism literature while leader knowledge hiding has not been analysed at all. Recognising that knowledge hiding can seriously undermine the ability of employees to offer innovative customer service and that leaders' knowledge hiding may trigger knowledge hiding chain reactions among tourism employees, this study attempts to fill this gap. Utilising multi-source, multi-timed and multi-level data, we hypothesise a multi-level mediation wherein leader knowledge hiding trickles down to employee knowledge hiding, which, in turn, negatively affects team organisational citizenship behaviour and positively affects team interpersonal deviance. The "trickle-down" effect of leader knowledge hiding to employee knowledge hiding is then positively moderated by perceived organisational politics, which amplifies this relationship. Relevant theoretical and managerial implications are presented.

Ana Monnar's assertion that 'sharing will enrich everyone with more knowledge' is particularly true in the competitive tourism industry, where employees from different departments must continually exchange their knowledge to provide innovative customer service (Lin et al., 2020; Zhao et al., 2016). Despite the fact that sharing knowledge can enhance organisations' growth and long-term success (Higuchi & Yamanaka, 2017; Yang, 2007), however, knowledge hiding is apparent in almost every industry (Connelly et al., 2012), including the tourism industry (Khalid et al., 2019; Lin et al., 2020; Zhao et al., 2016). Generally defined in response to a request for knowledge where the individual intentionally conceals or withholds knowledge from the requester (Connelly et al., 2012), knowledge hiding is a counterproductive behaviour that has resulted in annual financial losses of up to \$31.5 billion in Fortune 500 companies (Babcock, 2004). Indeed, existing research has revealed that knowledge hiding is detrimental to

organisational performance because it decreases creativity and innovation and increases deviant and counterproductive behaviours (Arain, Hameed, et al., 2020; Černe et al., 2017; Singh, 2019).

The literature related to outcomes of knowledge hiding primarily examines knowledge hiding between peers/colleagues, which refers to employees' knowledge hiding (EKH) from equally ranked coworkers (Connelly et al., 2012, 2019; Khalid et al., 2019; Lin et al., 2020). Recently, however, a few theoretical (e.g. Butt, 2019; Butt & Ahmad, 2019) and empirical research (e.g. Arain, Bhatti, et al., 2020; Arain et al., 2019; Chen, 2020) have highlighted the existence of "top-down" form of knowledge hiding, which refers to managers'/leaders' knowledge hiding (LKH) from their employees/followers (Arain, Bhatti, et al., 2020). These studies argued that, due to leaders' reward-punishment powers and their role modelling influence on followers' behaviours, LKH has severe implications for all three stakeholders, i.e. the

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knowledge hiding culprit (i.e. leader), the victim (i.e. follower) and the context (i.e. coworker, customer and organization). Specifically, these studies highlighted that LKH decreases employees' leader-directed trust and organisational citizenship behaviour (OCB) and increases leader-directed silence (Arain, Bhatti, et al., 2020; Arain, Hameed, et al., 2020). LKH also decreases employees' own self-efficacy and innovative behaviour (Arain et al., 2019) and reduces other-directed prosocial voice behaviour (Chen, 2020).

Despite the intriguing empirical evidence, however, research focusing on the consequences of LKH is scarce, we, therefore, aim to address the critical research gaps that remain.

First, knowledge hiding is a relatively new research area, and prior empirical findings primarily rely on research samples from knowledge-intensive industries (Arain et al., 2019; Gagné et al., 2019; Černe et al., 2017). Quite a few studies have investigated EKH in the tourism industry (e.g. Khalid et al., 2019; Lin et al., 2020; Zhao et al., 2016). Furthermore, not even a single study has yet examined LKH in the tourism industry. This oversight is quite astonishing because knowledge hiding can seriously undermine tourism employees' ability to offer innovative customer service (Khalid et al., 2019; Lin et al., 2020). To cope with the challenge of providing efficient and innovative customer service, tourism leaders must lead from the front by sharing their own prior customer service experience with employees first and then motivating employees to do the same with their coworkers. In contrast, LKH may trigger knowledge hiding chain reactions among tourism employees. For instance, one incident of LKH may motivate many employees to emulate the same behaviour towards coworkers (i.e. EKH), which, in turn, affects the entire group or team behaviour. Hence, examining the LKH–EKH relationship and its impact on tourism employees' team behaviour is imperative.

Second, we do not know how LKH influences EKH because no study has examined this relationship. Indeed, Arain, Hameed, et al. (2020) and Arain, Bhatti, et al. (2020) have urged scholars to examine the potential "trickle-down" effect of LKH to EKH. In addressing these calls, we incorporate social learning theory (Bandura, 1976, 1977), which suggests modelling as the primary source for employees to learn the acceptable and unacceptable behaviours in their organisations. This learning process involves first observing and then repeating the behaviours of their role models, particularly those in positions of authority, i.e. team leaders (Liden et al., 2014). Consistent with these arguments, prior tourism studies have highlighted that employees often perceive their leaders as their role models, mentors and sources of information from whom they learn and emulate their leaders' behaviour (Hon & Lu, 2016; Ling et al., 2016). Noting that prior research (e.g. Mawritz et al., 2012) has suggested that employees tend to model their leaders' positive and negative behaviours via social learning processes (Bandura, 1986), this study speculates the positive relationship between LKH and EKH. By proposing these effects, this research contributes to the knowledge hiding literature by (1) examining, for the very first time, both 'top-down' (i.e. LKH) and horizontal (i.e. EKH) knowledge hiding in a single research model and (2) testing the 'trickle-down' effect of LKH to EKH.

Third, prior empirical findings on the consequences of LKH primarily focus on individual-level consequences, e.g. individual self-efficacy, moral disengagement, distrust, OCB, silence, voice and innovative work behaviours (Arain, Bhatti, et al., 2020; Arain et al., 2019; Arain, Hameed, et al., 2020; Chen, 2020), whereas team-level outcomes have yet to be examined. Given that tourism organisations are increasingly moving towards a team-based work structure (Lin et al., 2020; Martin et al., 2018), it is imperative to examine the consequences of LKH for individual- and group-level outcomes. Hence, we integrate social learning theory with social exchange theory (Blau, 1964) and explore the implications of the LKH–EKH relationship for team-level OCB and team-level interpersonal deviance (IPD). Specifically, we speculate that LKH first positively leads to EKH, which, in turn, reduces team OCB and enhances team IPD.

Fourth, while suggesting the modelling effect of leader behaviour on

follower behaviour, prior research acknowledges the work environment's role in enhancing or diminishing the modelling effect. Hence, without exploring such boundary conditions, efforts to understand the LKH–EKH relationship would be incomplete (Taylor et al., 2019). In this regard, perceived organisational politics (POP) is among the most salient contextual forces shaping followers' interpretations of their leaders' behaviours and followers' subsequent understanding of the accepted and unaccepted work behaviours (Naseer et al., 2016). Thus, we examine the moderation of POP on the LKH–EKH relationship. Specifically, we expect that the LKH–EKH relationship will be stronger for high POP employees than for low POP employees. See Fig. 1 for a depiction of the hypothesised model.

1. Theoretical framework and hypotheses

1.1. Knowledge hiding

Prior research suggests that despite organisational strategies such as suggestion boxes and intra-organisational wikis, that aim to accelerate knowledge sharing, many employees tend to hide knowledge from their coworkers (Connelly & Zweig, 2015). Knowledge hiding is an increasingly reported employee behaviour, especially in knowledge-intensive industries, e.g. among high-tech employees (Pan et al., 2016; Xia et al., 2019), and in the service industry, e.g. among tourism employees (Lin et al., 2020; Zhao et al., 2016). Connelly et al. (2012) highlighted evasive hiding, playing dumb and rationalised hiding as three ways in which an employee hides knowledge requested by a coworker. In other words, when a particular employee receives a specific knowledge sharing request from a coworker, the requested employee may hide the knowledge by (1) delaying and providing incorrect or irrelevant knowledge (i.e. evasive hiding), (2) pretending to be unaware and not very knowledgeable (i.e. playing dumb) and (3) justifying the inability to provide the requested knowledge due to authorisation and confidentiality reasons (Connelly et al., 2012).

While knowledge sharing is rooted in one's prosocial motivation to help others by sharing valuable knowledge, knowledge hiding, specifically in its evasive and playing dumb forms, is primarily based on one's antisocial motivation to harm others by intentionally concealing knowledge that others have requested (Connelly & Zweig, 2015). Knowledge hiding has been suggested as an unhealthy, unethical and inappropriate behaviour that violates organisational norms of helping coworkers and not intentionally harming them (Men et al., 2018; Serenko & Bontis, 2016). Although only a few studies have examined knowledge hiding's outcomes, the reported consequences are nevertheless quite alarming.

For example, knowledge hiding fosters negative attitudes and behaviours, e.g. interpersonal distrust (Arain, Bhatti, et al., 2020), hurt relationships (Connelly & Zweig, 2015), reciprocal knowledge hiding (Černe et al., 2014), turnover intention (Offergelt et al., 2018) and interpersonal and organisational deviance (Singh, 2019). Meanwhile, it also diminishes positive work attitudes and behaviours, e.g. job satisfaction (Offergelt et al., 2018), self-efficacy (Arain et al., 2019), supervisor-directed OCB (Arain, Bhatti, et al., 2020), creativity and innovative work behaviour (Arain et al., 2019; Bogilović et al., 2017) and task performance (Singh, 2019).

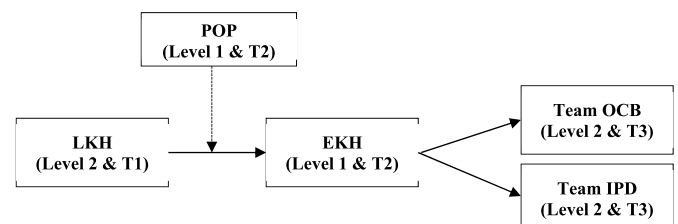


Fig. 1. Hypothesised research model.

Considering these detrimental consequences of knowledge hiding, a growing number of recent studies have sought to examine the individual, interpersonal, organisational and knowledge-related predictors of knowledge hiding. Some of the most commonly discussed predictors of knowledge hiding are the dark personality triad (Pan et al., 2018), trait competitiveness (Hernaes et al., 2018), distrust (Černe et al., 2014), abusive supervision (Khalid et al., 2018), time pressure (Škerlavaj et al., 2018), workplace ostracism (Zhao et al., 2016), organisational politics (Malik et al., 2018), psychological ownership, territoriality and complexity of knowledge (Connelly et al., 2012; Singh, 2019). However, the knowledge hiding literature remains in the early stages of development, and additional research is required to advance the knowledge hiding research, particularly in two areas.

First, existing research on knowledge hiding outcomes largely focuses on horizontal knowledge hiding (EKH), while only a few empirical studies (i.e. Arain et al., 2019; Arain, Bhatti, et al., 2020; Arain, Hameed, et al., 2020; Chen, 2020) have examined the organisational outcomes of “top-down” knowledge hiding (i.e. LKH). These studies’ assertions that LKH likely entails more negative effects for organisations than does EKH makes this research gap worth addressing. Notably, the research examining the LKH–EKH relationship in a new work context, i.e. tourism organisations for which LKH has not been studied yet, would undoubtedly add value to the knowledge hiding literature. Second, the literature on the outcomes of LKH focuses primarily on individual-level consequences, e.g. self-efficacy, moral disengagement, distrust, OCB, silence, prosocial voice, innovative work behaviour (Arain, Bhatti, et al., 2020; Arain et al., 2019; Arain, Hameed, et al., 2020; Chen, 2020); meanwhile, the team-level outcomes of LKH have not yet been identified. Given the growing trend of team-based work structure, especially in the tourism (Lin et al., 2020), it is essential to examine both the positive, i.e. team OCB, and negative, i.e. team IPD, team-level outcomes, which have severe implications for organisational growth and sustainability.

Thus, in the following section of the paper, we invoke Bandura’s (1976) social learning theory and Blau’s (1964) social exchange theory to discuss the ways in which LKH trickles down to EKH, which, in turn, translates to decreased team OCB and increased team IPD behaviours.

1.2. Social learning perspective on LKH and EKH

In the social learning system, people learn new behaviours, to some extent, by directly experiencing the reward and punishment consequences of that behaviour. According to Bandura (1976), however, if this experience is the only source of learning, it can be highly painstaking and risky for the learner. Building on this notion, Bandura (1976, 1977) suggested social learning theory, which elucidated that individuals learn to behave in certain ways, either intentionally or unintentionally, by observing the positive and negative consequences of their role models’ behaviours. People follow their role models’ actions and the consequences of those actions to understand which actions are most likely to be positively rewarded in their social system (Bandura, 1976).

For instance, people can learn to exhibit a new behaviour, which they had never directly experienced before, by witnessing their role models exhibiting that behaviour and being rewarded. On the other hand, people can unlearn previously learned behaviours—even if they had not previously displayed them and were not punished directly for such behaviours—by simply observing their role models behaving in such ways and being punished (Grusec, 1994). People’s cognitive capacity to represent the actual consequences of observed behaviour symbolically enables them to anticipate the future consequences of that behaviour; these future consequences, in turn, can be transformed into current motivators, which can impact individuals’ behaviours in the same manner as actual consequences (Bandura, 1976).

Social learning theory, therefore, differs from other learning reinforcement theories by arguing modelling as a key source through which people learn the appropriate behaviour by observing and imitating their role models’ actions, especially those in positions of power, such as

managers and supervisors (Liden et al., 2014). According to Bandura (1976, 1977), for people to effectively apply the modelled behaviour to their situation, the modelled behaviour must be (1) attractive and noticeable, (2) memorable and/or recallable, (3) reproducible and (4) because it provides the expected positive outcomes, motivational. Drawing on these four sub-processes of social learning theory, a growing number of leadership studies (e.g. Ambrose et al., 2013; Mawritz et al., 2012; Wo et al., 2015), including those conducted in tourism organisations (e.g. Hon & Lu, 2016; Ling et al., 2016), have applied social learning theory to explain the transfer of leadership values, attitudes and behaviours among organisational members.

These studies’ findings highlighted that employees are very likely to interpret their job descriptions in the light of what others do in the organization rather than what is written in their job descriptions. Specifically, employees are more likely to follow the dictum “Do as I do, not as I say” rather than the dictum “Do as I say, not as I do” (Davis & Luthans, 1980). Although employees, to some extent, learn the appropriate, such as OCB (Bommer et al., 2003), and inappropriate, such as unethical behaviour (O’Fallon & Butterfield, 2012), work behaviours by observing these behaviours among their peers, employees’ own behaviours are mostly influenced by their supervisors, who fulfil the four-subprocess of social learning theory to a greater extent than do their peers. For instance, the role modelling influence of supervisors on subordinates’ work behaviours is more potent than that of peers because supervisors’ actions are (1) noticeable due to the frequent interactions between supervisors and subordinates, (2) recallable due to the supervisors’ hierarchical position, (3) reproducible due to the subordinates’ desire for future supervisory positions and (4) reinforceable due to the supervisors’ reward-punishment powers.

Following social learning theory, we assert that subordinates view managers as a primary basis of knowledge for learning the ‘dos and don’ts’ in organisational settings (Arain, Bhatti, et al., 2020; Ling et al., 2016). Thus, in the increasingly team-based work setting of tourism organisations, team members’ observation and experience of LKH, such as team leaders deliberately not providing the information requested by their team members, intentionally sharing incorrect information, and/or justifying their refusal to share the requested knowledge, can result in the team members’ learning that knowledge hiding is a norm in their organization. Consequently, these team members are likely to emulate the same behaviour by hiding their own knowledge from other team members (i.e. EKH).

Our arguments for the positive relationship between LKH and EKH are consistent with past empirical studies on the ‘trickle-down’ effect of positive and negative leadership behaviours to employee behaviours. For example, using a research sample of hotel employees, Ling et al. (2016) highlighted a positive relation between top-level servant leadership and middle-level servant leadership. Similarly, relying on a research sample of hospitality employees, Hon and Lu (2016) highlighted a positive relation between abusive supervision and abusive employee behaviours.

Thus, we hypothesise the following relationship:

H1. LKH is positively related to EKH.

1.3. EKH and team OCB-IPD

OCB implies to employees’ prosocial voluntary behaviours, which are outside their formal duties or job requirements (Organ, 1988, 1997). Despite its status as extra-role discretionary behaviour, employees’ OCB is nevertheless highly desirable for creating and maintaining a supportive environment for task performance (Organ, 1997). Particularly in tourism organisations, OCB has been suggested as one of the most desirable employee behaviours for service quality and innovation (Haldorai et al., 2019). However, most OCB research, including the two studies (i.e. Arain, Bhatti, et al., 2020; Arain, Hameed, et al., 2020) that examined the relation between LKH and employees’ supervisor-directed

OCB, has emphasised individual-level OCB (e.g. Arain et al., 2017; Decoster et al., 2014; Newman et al., 2017; Podsakoff et al., 2000; Williams & Anderson, 1991).

In the present study, we emphasis on team-level OCB for two reasons. First, research has shown that individual-level OCB may not significantly impact organisational performance (Organ, 1988); rather, OCB's impact is more critical for organisational performance when it occurs at the team level (Ehrhart, 2004). Accordingly, the focus of recent OCB research (e.g. Ambrose et al., 2013; Mayer et al., 2009; Mo et al., 2012; Nohe & Michaelis, 2016; Podsakoff et al., 2009) has moved from individual-level OCB to group-/team-level OCB. Second, this research examines the proliferation effects of knowledge hiding in organisations, i.e. from leaders to members and then to the entire team. Thus, team-level OCB better complements the aim of this study. Specifically, focusing on team-level OCB helps us better understand the ways in which LKH first engenders EKH and eventually affects team outcomes.

IPD, a type of counterproductive work behaviour by employees, refers to discretionary behaviours that violate organization norms and threaten organisational members' well-being (Robinson & Bennett, 1995). According to Robinson and Bennett (1995), employees' IPD involves behaviours that range from the violation of social norms (e.g. making fun of coworkers) to severe harassment (e.g. verbal abuse, assault and racial remarks). The extant literature has suggested that employees' individual and organisational workplace deviance is detrimental to organisational performance and sustainability (Mackey et al., 2019). For example, fellow employees may experience increased strain, anxiety and burnout upon observing or experiencing workplace deviance (Mackey et al., 2019). Moreover, like OCB, the impact of IPD is more severe for organisational performance when it occurs at the workgroup or team level rather than at the individual level (Mawritz et al., 2012; Mayer et al., 2009). Thus, we focus on team-level IPD.

Following social exchange theory (Blau, 1964), we argue that the occurrence of EKH in a team-based work structure (e.g. team members don't share their knowledge, provide incorrect or incomplete information and justify their knowledge hiding behaviour by blaming others) may engender negative reciprocity and lack of trust among team members. Consequently, team members reduce their team OCB (e.g. by not assisting fellow team members) and increase their team IPD (e.g. by criticising, acting rudely towards or pranking fellow team members). Our arguments are consistent with the prior knowledge hiding literature, which utilised social exchange theory and reciprocity norms to exhibit the significant impact of knowledge hiding on individual-level OCB and IPD. For instance, Arain, Bhatti, et al. (2020) suggested that supervisors' knowledge hiding from supervisees (i.e. LKH) is inversely associated with employees' supervisor-directed OCB. Singh (2019) highlighted that employees' knowledge hiding from coworkers (i.e. EKH) is positively associated with their interpersonal deviance. We, therefore, expect the following relationships:

H2. EKH has a negative association with team OCB.

H3. EKH has a positive association with team IPD.

1.4. Mediation of EKH between LKH and team OCB-IPD

Drawing on Bandura's social learning theory, past studies on the "trickle-down" effect of leadership behaviour has described the leader-member relationship as representative of overall social interactions at the workplace rather than as a discrete event (Ambrose et al., 2013; Hon & Lu, 2016; Mawritz et al., 2012). According to these studies, the "trickle-down" effects of leadership, particularly negative leadership, significantly impact both individual- and team-level outcomes. For example, Hon and Lu (2016) observed that team managers' abusive supervision first positively resulted in employees' abusive behaviours, which then negatively affected employees' service performance. Mawritz et al. (2012) reported that abusive manager behaviour first "trickled-down" to abusive supervisor behaviour, which then resulted in

increased workgroup interpersonal deviance. In other words, subordinates' abusive supervision mediated the direct relations between managers' abusive behaviour and individual-group outcomes.

Thus, following social learning theory and the results of past empirical studies, we expect the following relationships:

H4. EKH mediates between LKH and team OCB.

H5. EKH mediates between LKH and team IPD.

2. Moderation of POP

Bandura (1973) observed that people can learn and skillfully exhibit modelled behaviours. When such learned behaviours are negatively sanctioned or not received favourably, however, they will rarely perform them publicly, suggesting that other factors can influence the role modelling influence. More specifically, Bandura (1977, 1986) acknowledged that contextual factors can influence social learning by attenuating and/or amplifying the learning process. In other words, a learner's motivation to emulate behaviour learned from a role model not only depends on the four characteristics of the modelled behaviour (i.e. it is noticeable, recallable, reproducible and motivational) but also on the learner's work environment where that social learning is taking place. These arguments suggest that employees' learning of their leaders' modelled behaviour, such as in the present case LKH, depends on the contextual factors that surround that learning. We, therefore, examine employees' perceptions of organisational politics as an important contextual factor impacting employee behaviour in organisations (Hochwarter et al., 2020) and the moderator of the direct relationship hypothesised in H1.

Organisational politics, whether perceived or actual, is among the most influential social forces that motivate employees to gain and maximise access to the resources and power that enable them to pursue their self-serving objectives (Ferris et al., 1989, 2000; Hochwarter et al., 2020; Kacmar & Baron, 1999). POP is defined as the extent to which individuals perceive the intentions behind their coworkers' and supervisors' behaviours and actions to be self-serving (Ferris et al., 2000).

POP is one of the most salient contextual forces shaping subordinates' interpretations of their supervisors' behaviours and subordinates' following learning about appropriate and inappropriate work behaviours (Naseer et al., 2016). POP's role in predicting the consequences of negative leadership behaviours towards subordinates is more critical than its role in predicting the consequences of positive leadership behaviours because the former is unauthorised, and its interpretations rely largely on contextual clues. This is why studies examining the consequences of despotic leadership (e.g. Naseer et al., 2016) and abusive supervision (e.g. Lam & Xu, 2019) have incorporated POP as a contextual factor that amplifies the detrimental consequences of these negative leadership behaviours. Furthermore, social learning theory also suggests that team members' motivation to emulate their leaders' behaviour is influenced by their work environment (Grusec, 1994; Lam & Xu, 2019). Specifically, team members working in a highly political workplace are likely to perceive their team leaders' knowledge hiding (i.e. LKH) as a legitimate means for pursuing self-serving objectives in the context of the uncertainty and chaos of the political environment.

Building on these past findings and the theoretical premise of social learning theory, we speculate that team members' POP will amplify the positive relationship between LKH and EKH for at least two reasons. First, team members' observation and experience of LKH provides them with an implicit signal that knowledge is a source of power and emphasises team leaders' use of LKH to secure their leadership positions. Given that POP can encourage for the use of self-serving and morally unethical behaviours (Ferris et al., 1989), team members with high POP are, therefore, very likely to emulate their team leaders' self-serving behaviour (i.e. LKH) by engaging in EKH. Second, a highly political work environment is characterised not only by leaders' and employees'

self-serving behaviours but also by the uncertainty of expected work outcomes. For instance, in a highly politicised workplace, team members are likely to be uncertain about the use and consequences of the knowledge they share with others (Malik et al., 2018). Thus, employees with high POP are likely to become fearful, insecure and apprehensive about sharing their valuable knowledge with other team members and are thus likely to emulate LKH by engaging in EKH.

For these reasons, we expect the following relationship:

H6. POP moderates the relationship between LKH and EKH such that the relationship will be amplified for team members who have high POP than for those who have low POP.

3. Research sample and methodology

We collected data from tourism organisations in Pakistan using convenience sampling and a supervisor-subordinate dyadic design. Specifically, relying on university alumni contacts, we approached 60 hotels in Pakistan's two most populated provinces, i.e. Punjab and Sindh. The selected hotels were medium-to large-sized and privately-owned independent units with three-, four- and five-star rankings. We requested the human resource departments of the chosen hotels allow us to collect data from their employees working in the finance, marketing, human resource, front desk management and information technology departments. The inclusion of a diverse range of hotels and a diverse group of employees from each hotel is adequate for offering generalisable findings to the tourism literature (Khalid et al., 2019).

In the first step, with the assistance of the human resource departments, we identified 165 teams with at least two members in each team reporting to the same team supervisor. In the next step, we asked these 165 team supervisors to complete the LKH and demographics questionnaire (T1 & Level 2 measures). Of the 165 supervisors, 124 completed and returned the questionnaire.

Two weeks after the first survey, we approached the 502 team members of the 124 teams whose supervisors had completed the supervisor-related questionnaire in T1 and requested their completion of the team member-related questionnaire, i.e. EKH, POP and demographic measures (T2 & Level 1 measures). Of the 502 team members, 398 completed and returned the questionnaires for a 79% response rate. Two weeks later, we requested that the participants of the T1 survey complete a questionnaire containing team OCB and team IPD measures (T3 & Level 2 measures), and all 124 supervisors complied. In summary, from the initially contacted dyads of 165 supervisors and 502 team members, dyadic data from 124 supervisors and 398 team members were matched using identifying codes. To protect the participants' confidentiality, we deleted their names and identifying codes during the data entry process. According to Podsakoff et al. (2012), the use of multi-source and multi-timed data can minimise the threats of self-report and common method biases.

The descriptive statistics of the collected research sample of team members ($n = 398$) showed that 83.4% were males. The team members' mean age was 29.93 years, and their mean experience level was 4.06 years. The majority of these subordinates had a bachelor's level education (i.e. 54.5%). Among the participating supervisors ($n = 124$), 91% were males, and their mean experience was 5.65 years. Of the supervisors, 43.5% had a master's degree, and 48% had a bachelor's degree.

3.1. Measures

Except for the demographic items, all items were assessed using a Likert scale ranging from 1 (fully disagree) to 6 (fully agree). All measures employed in the current study have been well established in past studies conducted in the Pakistani context (e.g. Arain, Hameed, et al., 2020; Javed et al., 2018; Khalid et al., 2019; Malik et al., 2018).

LKH and EKH were assessed using a 12-item scale from Connelly et al. (2012). This scale comprises three dimensions of knowledge hiding

measured through four items each. The dimensions are playing dumb, evasive hiding and rationalised hiding. Given that one leader headed each of our sample's participating teams, we measured LKH at the team level (i.e. Arain, Hameed, et al., 2020). On the other hand, we measured the EKH of all team members to assess how much each member of the same team was engaging in knowledge hiding from coworkers (i.e. Connelly et al., 2019; Connelly et al., 2012). The alpha reliability values for LKH and EKH were 0.89 and 0.92, respectively.

Team OCB was measured using a seven-item scale adapted from Williams and Anderson (1991)'s Organisational Citizenship Behaviour towards Individuals (OCB-I) scale. We slightly modified the wording of the original scale to better align with our team-level measure of OCB. Team supervisors were asked to report the extent to which their employees/supervisees engaged, as a team, in various team OCBs. The alpha reliability value of this scale was .96.

Team IPD was assessed using a seven-item scale of interpersonal deviance developed by Bennett and Robinson (2000). Team leaders were asked to report the extent to which their team members engaged, as a team, in various deviant behaviours towards one another. The alpha reliability value of this scale was 0.87.

POP was assessed using the seven-item scale developed by Kacmar and Ferris (1991) and employed by Vigoda-Gadot (2007). Because POP refers to an individual's perception of organisational politics at the workplace, we measured POP at the individual level (i.e. Malik et al., 2018). The alpha reliability value for this scale was .88.

3.2. Control variables

Based on the results of prior empirical studies regarding the consequences of LKH (e.g. Arain, Bhatti, et al., 2020; Arain et al., 2019; Arain, Hameed, et al., 2020; Chen, 2020), we controlled for gender, age, education and experience-related information while testing the hypothesised relationships. Specifically, we utilised the following codes for the control variables: employee gender and supervisor gender (male = 1, female = 2) and employee education and supervisor education (less than bachelor's = 1, bachelor's = 2, master's = 3, PhD = 5); finally, we recorded employee experience, supervisor experience and employee age in years.

4. Results

4.1. Data analysis strategy

Given the nested nature of our data, we used multi-level confirmatory factor analysis (CFA) and multi-level structural equation modelling (ML-SEM) to test the measurement model and hypotheses. We applied these techniques through Mplus 7.11 (Muthén & Muthén, 2013). The advantage of ML-SEM over ordinary techniques is that it partitions the variance of multi-level/nested data and provides an opportunity to test both within and between level influences. To test the multi-level mediation in this study (i.e. 2-1-2 mediation model), we applied the procedure explained by Preacher et al. (2011).

4.2. Measurement model results

We performed multi-level CFA for all variables, i.e. LKH, EKH, POP, team OCB and team IPD. First, we calculated the intraclass correlation coefficient (ICC) values for the Level 1 variables to determine the proportion of individual-level responses explained by group/team-level responses. The results provided in Table 3 suggest that the proportion of total variance explained by between cluster variations is sufficient for multi-level analysis (Bliese, 2000). We, therefore, proceeded to the multi-level analysis.

For LKH and EKH, we followed the parcelling approach of Lin et al. (2020) and Lin et al. (2017) to maintain a favourable indicator-to-sample size ratio. Specifically, because knowledge hiding

includes three dimensions (i.e. evasive hiding, playing dumb and rationalised hiding), we parcelled the items for these dimensions and used the scores for each dimension as indicators of knowledge hiding. **Table 1** summarises the model fit indices. The results of the first CFA model for the five factors (i.e. LKH, EKH, POP, team OCB and team IPD) demonstrated a poor fit (i.e. Chi-square = 901.13, DF = 391, CFI = 0.86, TLI = 0.85, RMSEA = 0.06). A close inspection of the modification indices and factor loadings revealed that one item of POP had poor loading (i.e. < 0.50). We followed the recommendation of [Hair et al. \(2010\)](#) and removed items with loadings below 0.50. Furthermore, following the recommendation of [Kline \(2011\)](#), we noticed those modification indices where items from a single construct were involved and no across-construct covariances were drawn. Therefore, we removed that item of POP, drew covariance among error terms (i.e. highlighted by the modification indices) belonging to the same construct and conducted the CFA again. The results of the revised CFA model showed good fit indices (i.e. Chi-square = 734.17, DF = 347, CFI = 0.90, TLI = 0.88, RMSEA = 0.05).

We then compared this measurement model with two alternative models. The first alternative model—a four-factor model that loaded the indicators of the two Level 2 dependent variables on a single factor (i.e. team OCB and team IPD)—showed a poor fit to the data (i.e. Chi-square = 973.94, DF = 349, CFI = 0.82, TLI = 0.81, RMSEA = 0.07). In the second alternative model, we created one factor containing all Level 2 variables (i.e. LKH, team OCB and team IPD) and a second factor containing all Level 1 variables (i.e. EKH and POP). The results showed that this alternate model also had a poor fit to the data (i.e. Chi-square = 1094.11, DF = 351, CFI = 0.79, TLI = 0.77, RMSEA = 0.07). These multi-level CFA results supported the proposed five-factor measurement model. Further, the Cronbach's alpha values for all constructs met the threshold of 0.7. Specifically, the alpha values for LKH, EKH, POP, team OCB and team IPD were 0.89, 0.92, 0.88, 0.96 and 0.87, respectively.

The result of the reliability and validity analyses (see **Table 2**) further revealed that all variables have excellent composite reliability (CR) values and fulfil the convergent validity criteria (i.e. average variance extracted [AVE] values should exceed 0.50; [Hair et al., 2010](#)), except for team IPD where the AVE value falls slightly below 0.50 (i.e. 0.47). Similarly, all variables fulfil the discriminant validity criteria (i.e. the correlation should be less than the square root of the AVE), except for the OP-EKH relation where the correlation (i.e. 0.78) slightly exceeds

the square root of the AVE (i.e. 0.75).

4.3. Descriptive statistics

Table 3 summarises the descriptive statistics. We also included all supervisor and employee demographics in this initial analysis. The result of the correlation analysis (see **Table 3**) showed that employee age and education were significantly correlated with team IPD, whereas supervisor experience, education and gender were significantly correlated with both team IPD and team OCB. Considering the correlation analysis results and the complex multi-level nature of the hypothesised model, we utilised these five demographic variables (i.e. employee's age, employee's education, supervisor's education, supervisor's experience and supervisor's gender) as control variables when testing the hypotheses ([Becker et al., 2016](#)). As hypothesised, LKH was positively correlated with EKH, while EKH was positively correlated with team IPD and negatively correlated with team OCB.

4.4. Hypotheses testing

Table 4 reports the unstandardised path coefficients of the tested relationships. The results revealed that supervisor gender had a significant impact on team OCB ($\gamma = -0.78$, SE = 0.35, $p < .05$) while supervisor education had a significant impact on team IPD ($\gamma = 0.31$, SE = 0.13, $p < .05$). As predicted in the hypothesised model (see **Fig. 1**), the results of the analysis supported **H1** ($\gamma = 0.39$, SE = 0.07, $p < .001$), showing that LKH (Level 2) was positively related to EKH (Level 1). **H2**, which stated that EKH (Level 1) is negatively related to team OCB (Level 2), was also supported ($\gamma = -0.93$, SE = 0.29, $p < .01$). **H3**, which posited that EKH (Level 1) is positively related to team IPD (Level 2; $\gamma = 0.69$, SE = 0.16, $p < .001$), was supported as well. **H4** posited that EKH (Level 1) mediates the relationship between LKH (Level 2) and team OCB (Level 2), indicating a 2-1-2 multi-level mediation model. We followed the recommendations of [Preacher et al. \(2011\)](#) in testing this hypothesis. The results for **H1** demonstrated that the a-path was significant, while the results for **H2** demonstrated that the b-path was also significant. Finally, we tested the indirect effect; the results of this analysis supported **H4**, with LKH exhibiting a significant indirect effect on team OCB via the mediating role of EKH ($\gamma = -0.37$, SE = 0.13, $p < .01$). The 95% confidence intervals (CIs) of the effect reported for the mediation hypothesis also confirmed the significant indirect effect because no zeroes appeared in the CI values (-0.62, -0.11).

H5 proposed that EKH (Level 1) mediates the relationship between LKH (Level 2) and team IPD (Level 2), indicating a 2-1-2 multi-level mediation model. The a-path was the same as reported for **H3**, and the results of **H3** also supported the b-path. Finally, we tested the mediation effect, and the results of this analysis supported **H5**, with LKH exhibiting a significant indirect effect on team IPD via the mediating role of EKH ($\gamma = 0.27$, SE = 0.08, $p < .001$). The 95% CIs of the effect reported for the mediation hypothesis also confirmed the significant indirect effect because no zeroes appeared in the CI values (0.12, 0.42).

Finally, **H6** proposed the moderating effect of POP on the association between LKH and EKH. Following the recommendations of [Preacher et al. \(2016\)](#), the results of the analysis, which are presented in **Table 4**, showed that the interaction effect of LKH x POP was significant ($\gamma = .36$, SE = 0.10, $p < .001$). We further probed the moderation effect with the help of the graph presented in **Fig. 2** and the simple slope test recommended by [Cohen et al. \(2003\)](#). The result of the simple slope test suggested that the relationship between LKH and EKH was stronger at high POP (i.e. Mean + 1 standard deviation: slope = .64, $p < .001$) than at low POP (i.e. Mean - 1 standard deviation: slope = .28, $p < .001$).

4.5. Post hoc analysis

Although a dimension-wise analysis was not the objective of the current study, we nevertheless conducted a post hoc analysis to identify

Table 1
Model fit indices.

Models	χ^2	df	$\Delta \chi^2$	CFI	TLI	RMSEA
Model 1: Hypothesised model with five factors	901.13	391	–	.86	.85	.06
Model 2: Hypothesised model with five factors after removing one item of POP	734.17	347	166.96***	.90	.88	.05
Model 3: First alternate four-factor model created by combining two Level 2 outcome variables	973.94	349	239.77***	.82	.81	.07
Model 4: Second alternate two-factor model created by combining Level 2 variables on one factor and Level 1 variables on second factor	1094.11	351	359.94***	.79	.77	.07

Note: $\Delta \chi^2$ for Model 2 is computed and compared to Model 1, whereas for Model 3 and 4, $\Delta \chi^2$ is computed and compared to Model 2; CFI = Comparative fit index; TLI = Tucker-Lewis index; RMSEA = Root mean square error of approximation; POP = Perceived organisational politics; *** = $p < .001$.

Table 2
Reliability and validity analyses.

	α	CR	AVE	EKH	OP	LKH	TIPD	TOCB
EKH	0.92	0.88	0.72	0.85				
POP	0.88	0.89	0.57	0.78*	0.75			
LKH	0.89	0.84	0.64	0.43*	0.28*	0.80		
TIPD	0.87	0.87	0.47	0.50*	0.41*	0.57*	0.69	
TOCB	0.96	0.96	0.75	-0.38*	-0.27*	-0.32*	-0.47*	0.87

Note: * = $p < .05$; EKH = Employee knowledge hiding; POP = Perceived organisational politics; LKH = Leader knowledge hiding; TIPD = Team interpersonal deviance; TOCB = Team organisational citizenship behaviour; CR = Composite reliability; AVE = Average variance extracted; α = Cronbach's alpha; Square root of AVE is provided on the diagonal.

Table 3
Descriptive statistics and correlation.

	1	2	3	4	5	6	7	8	9	10	11	12
1. E-GENDER	1											
2. E-EXP	-.07	1										
3. E-EDU	.08	-.15**	1									
4. E-AGE	-.13	.70**	-.08	1								
5. S-GENDER	.02	-.01	.19**	.06	1							
6. S-EXP	-.10*	.49**	-.04	.36**	-.01	1						
7. S-EDU	.02	-.13**	.63**	-.16**	.19**	.05	1					
8. EKH	-.01	.01	.18**	-.02	.19**	-.05	.33**	1				
9. POP	.02	-.04	.22**	-.05	.19**	-.04	.31**	.71**	1			
10. LKH	.01	-.08	.13**	-.06	-.08	-.07	.27**	.37**	.28**	1		
11. TOCB	-.08	.01	-.07	-.07	-.22**	.13**	-.17**	-.35**	-.26**	-.31**	1	
12. TIPD	.07	-.08	.37**	-.16**	.11**	-.17**	.52**	.46**	.38**	.53**	-.42**	1
Mean	1.17	4.06	1.76	29.93	1.09	5.65	2.35	3.25	3.38	2.97	3.61	2.75
Individual-level SD	.37	3.80	.63	6.66	.29	3.98	.63	.97	1.03	.93	1.32	1.02
Team-level SD	–	–	–	–	–	–	–	–	–	.94	1.35	1.02
ICC (1)	–	–	–	–	–	–	–	.45	.36	–	–	–

Note: E = Employee; S = Supervisor; GENDER coded as male = 1 and female = 2; EXP = Experience; EDU = Education coded as less than bachelor's = 1, bachelor's = 2, master's = 3, PhD = 5; EKH = Employee knowledge hiding; POP = Perceived organisational politics; LKH = Leader knowledge hiding; TIPD = Team interpersonal deviance; TOCB = Team organisational citizenship behaviour; ** Correlation is significant at the 0.01 level (two-tailed); * Correlation is significant at the 0.05 level (two-tailed); Team level correlations of Level 2 variables are presented above the diagonal; ICC (1) value is presented for Level 1 variables.

Table 4
Results of ML-SEM

	EKH		Team OCB		Team IPD	
	Estimate (SE)	Sign (CI)	Estimate (SE)	Sign (CI)	Estimate (SE)	Sign (CI)
Controls						
E_Age					-.02 (.02)	.290 (-.07,.02)
E_Edu					.22 (.15)	.128 (-.06,.51)
S_Exp			.03 (.03)	.232 (-.02,.08)	-.03 (.02)	.114 (-.06,.01)
S_Edu			.11 (.20)	.596 (-.29,.50)	.31 (.13)	.013 (.07,.56)
S_Gender			-.78 (.35)	.026 (-1.45, -.09)	-.01 (.20)	.958 (-.41,.38)
Main Effects						
LKH	.39 (.07)	.000 (.26,.53)	-.10 (.17)	.560 (-.44,.24)	.24 (.10)	.019 (.04,.44)
EKH			-.93 (.29)	.001 (-.150, -.36)	.69 (.16)	.000 (.38, 1.00)
Indirect Effects						
Residual Variance	.67 (.11)	.000	-.37 (.13)	.005 (-.62, -.11)	.27 (.08)	.000 (.12,.42)
R Square	.33 (.11)	.002	.28 (.07)	.000	.49 (.07)	.000
Moderation Results						
LKH	.28 (.10)	.005 (.09,.48)				
POP	.08 (.27)	.770 (-.44,.60)				
LKH x POP	.36 (.10)	.000 (.16,.56)				

Note: SE = Standard Error; CI = Confidence interval.

the impact of LKH dimensions on EKH and the subsequent impact of EKH dimensions on team IPD and team OCB. The results highlighted that LKH-EH ($\gamma = 0.05$, SE = 0.02, $p < .05$) and LKH-RH ($\gamma = 0.07$, SE = 0.03, $p < .01$) were positively and significantly related to EKH, while LKH-PD had no impact on EKH ($\gamma = 0.01$, SE = 0.03, $p > .05$). Further, EKH-EH was positively related to team IPD ($\gamma = 0.15$, SE = 0.04, $p < .001$) and negatively related to team OCB ($\gamma = -0.07$, SE = 0.03, $p < .05$). EKH-RH was positively related to team IPD ($\gamma = 0.18$, SE = 0.05, $p < .001$) but had no significant relationship with team OCB ($\gamma = 0.03$, SE = 0.03, $p > .05$), while EKH-PD was positively related to team IPD ($\gamma =$

0.11, SE = 0.05, $p < .05$) and negatively related to team OCB ($\gamma = -0.10$, SE = 0.03, $p < .01$).

5. Discussion

Drawing on social learning (Bandura, 1976, 1977) and social exchange theories (Blau, 1964), the current study hypothesised a multi-level mediation model in which LKH (Level 2) first trickles down to EKH (Level 1), which then negatively affects team OCB (Level 2) and positively affects team IPD (Level 2). POP then positively moderates (i.e.

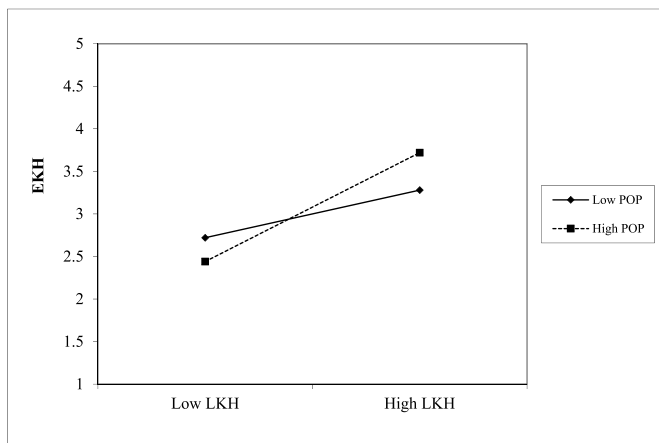


Fig. 2. Moderation of POP for the LKH–EKH relationship.

amplifies) the ‘trickle-down’ effect of LKH to EKH.

Consistent with prior studies that have invoked social learning and social exchange theories, the ML-SEM results of the current research fully supported the hypothesised model. Specifically, the ML-SEM results supported Hypothesis 1 and indicated a significant and positive association between LKH and EKH. This finding is consistent with prior research that has incorporated social learning theory and examined the “trickle-down” effect of leader behaviour to subordinate behaviour. For example, Mawritz et al. (2012) demonstrated that abusive manager behaviour led to abusive supervisor behaviour. Hon and Lu (2016) reported similar results with a research sample from tourism organisations, highlighting that team managers’ abusive supervision positively led to subordinates’ abusive supervision.

The ML-SEM results also supported Hypotheses 2 and 3, which posited a negative association between EKH and team OCB and a positive association between EKH and team IPD, respectively. These results also align with existing empirical research. For instance, Arain, Bhatti, et al. (2020) and Arain, Hameed, et al. (2020) reported that supervisors’ knowledge hiding (i.e. LKH) had an inverse relationship with employees’ supervisor-directed OCB. Singh (2019) reported the employee knowledge hiding (i.e. EKH) was positively related to interpersonal deviance.

The ML-SEM results further supported Hypotheses 4 and 5, which proposed the mediation effect of EKH for the relationship between LKH and team OCB and for the relationship between LKH and team IPD. These findings are likewise consistent with prior empirical studies (i.e. Hon & Lu, 2016; Mawritz et al., 2012; Wo et al., 2018), which demonstrated that leadership behaviour first cultivated the same behaviour among subordinates and then mediated the relationship between leadership behaviour and subordinate behaviour. For instance, Mawritz et al. (2012) observed that abusive manager behaviour first led to abusive supervisor behaviour, which then led to workgroup IPD. While examining the ‘trickle-down’ effect of interactional justice, Ambrose et al. (2013) found that supervisors’ perceptions of interactional justice first engendered an interactional justice climate (i.e. reported by subordinates), which then led to group-level OCB and deviant behaviour.

Finally, our results supporting Hypothesis 6 for the moderation effect of POP on the relationship between LKH and EKH confirmed work context as a moderator of the trickle-down effect of LKH in organisations. Although we lack any precedential finding with which to directly compare the significant and positive moderation effect of POP on the direct relationship between LKH and EKH, we can draw indirect comparisons with prior studies (Aslam et al., 2017; Malik et al., 2018) that have examined POP as an antecedent of employee knowledge hiding (i.e. EKH). For instance, Malik et al. (2018) highlighted a significant and positive association between POP and employee knowledge hiding (i.e. EKH). Additionally, the role of POP as a contextual moderator for the

trickle-down effect of leadership behaviour aligns with the findings of Ling et al. (2016), who demonstrated group service climate as a contextual moderator for the trickle-down effect of servant leadership, which eventually improved the quality of service provided by tourism employees.

5.1. Theoretical implications

Our research extends the prior literature on the outcomes of knowledge hiding (i.e. LKH) in several ways. First, our research enhances the generalisability of early empirical findings regarding the consequences of LKH, i.e. the positive relationship between LKH and OCB (i.e. Arain, Bhatti, et al., 2020) by examining them, for the very first time, in the tourism sector. In doing so, this study extends the relevance of LKH from the more commonly studied knowledge-intensive industries to the service industry, where increasingly empowered leadership and a team-based work structure are likely to amplify the harmful consequences of LKH on innovative customer service (Lin et al., 2020). Second, in responding to Arain, Bhatti, et al. (2020) and Arain, Hameed et al.’s (2020) calls for research investigates the link between LKH and EKH, our study examines, for the very first time, both LKH and EKH in the same model and highlights the former as a positive antecedent of the latter type of knowledge hiding. Indeed, our results are backed by the premise of Bandura’s social learning theory, which presents a useful theoretical explanation for the ways in which employees learn the ‘dos and don’ts’ of their workplace by observing and emulating their supervisors’ behaviours.

Third, this research extends the scarce literature on the consequences of LKH by highlighting the implications of LKH for both individual- and team-level outcomes. Specifically, our results supporting the trickle-down effect of LKH to EKH and then to team-level OCB and IPD highlight the ways in which top-down knowledge hiding (i.e. LKH) engenders horizontal knowledge hiding (i.e. EKH) and eventually affects the entire team (i.e. by decreasing team OCB and increasing team IPD). Finally, this study identifies POP as an essential contextual boundary condition for the trickle-down effect of LKH to EKH. Our results suggest that workplace contexts with high POP amplify the relationship between LKH and EKH. Thus, our study explains how LKH trickles down to EKH and when this effect is amplified or diminished.

6. Practical implications

Our research provides several critical managerial implications regarding the trickle-down effect of LKH in organisations, particularly in tourism organisations. Its results broaden our understanding of the ways in which the consequences of LKH proliferate by motivating subordinates to engage in EKH, which then affects the OCB and IPD behaviours of the entire team or group. These results confirm social learning theory’s assertion that employees often interpret workplace norms, procedures, and even their job descriptions in the light their coworkers’ and supervisors’ behaviours. Especially, employees’ interpretations of supervisory behaviours are more salient than that of coworkers’ behaviours because unlike coworkers, supervisors wield reward and punishment authority. Thus, subordinates emulate both positive and negative supervisory behaviours to demonstrate their own proximity to supervisors and obtain access to supervisor-controlled perks.

It is, therefore, critical for supervisors to take a lead and exhibit fair supervisory treatment and proactively share their experiential knowledge with all of their subordinates before expecting the same knowledge sharing behaviour from them (Arain, Bhatti, et al., 2020; Arain, Hameed, et al., 2020). This can be achieved by creating a cooperative culture where supervisors not only facilitate knowledge sharing among their subordinates but also share their own tacit knowledge with them to prepare them for future supervisory roles. Indeed, employees working in such a knowledge sharing culture are quite likely to cooperate with one

another and exhibit increased productivity.

Our results supporting POP's significant moderation effect highlight the role of the self-centred work environment in fostering counterproductive individual and team behaviours. Environments with high POP are characterised by the unequal treatment of employees and a failure to value the "effort–reward expectancy" (Malik et al., 2018). Such negative work environment can be chronic, leading to unethical norms that allow the perpetrators to justify their knowledge hiding behaviour. Consistent with previous research, which has established LKH and EKH as unethical (Arain, Bhatti, et al., 2020; Serenko & Bontis, 2016) and demonstrated the negative organisational consequences of both forms of knowledge hiding (Connelly et al., 2019), we recommend that tourism management devise workplace policies and procedures that create a culture of transparency and fair treatment and reduce POP. Organisations can achieve this objective by offering ethics-focused training to their staff.

Modern-day tourism organisations are increasingly operating within a team-based work structure where each functional team is managed by an experienced team supervisor (Ghani et al., 2020). Team supervisors are expected to share their expert knowledge with their members and encourage them to provide innovative customer service (Khalid et al., 2019; Lin et al., 2020). Thus, tourism organisations should ensure that team supervisors engage in healthy leadership behaviours towards subordinates, set clear criteria for acceptable and unacceptable subordinate behaviours and implement a well-communicated disciplinary policy to address negative team behaviours in any form, e.g. withholding OCB and increasing IPD towards other team members. A healthy organisational culture usually makes it difficult for employees at any level to engage in activities that defy the established norms of collegiality, cordiality and reconciliation.

6.1. Research limitations and future directions

Despite its valuable contributions to the knowledge hiding and tourism literatures, this study also entails some limitations that need to be considered when interpreting its findings. Although our approach, which relied on multi-level and multi-timed data, presented more reliable findings than those produced by cross-sectional approach, the results remain our interpretations of the likely causal relations among the hypothesised constructs. Thus, we suggest future research employ longitudinal designs to test these potential cause-effect relations with more confidence.

Second, rather than exploring the specific dimensions of knowledge hiding, we, like much of the extant knowledge hiding literature, measured both LKH and EKH as overall measures of knowledge hiding. Given the potential differences in these dimensions, which our post hoc analysis highlighted, however, it is likely that a particular dimension of LKH, e.g. leaders' evasive hiding or rationalised hiding, may have more substantial trickle-down effects on EKH than other dimensions. In addition, one form of LKH may lead to a different form of EKH; for instance, an evasive form of LKH (i.e. a leader hid knowledge from team members by providing them with incorrect information) may result in a playing a dumb form of EKH (i.e. team members hiding knowledge from their colleagues by pretending to lack knowledge regarding the requested information). Thus, we recommend that future researchers extend our hypothesised model to the dimensional-level trickle-down effect of LKH. These efforts will improve our understanding of the phenomenon and help to devise work policies for controlling the specific EKH.

Third, this study hypothesised and tested POP as a moderator of the relationship between LKH and EKH, which is amplified in workplaces characterised by high POP. Although POP is among the potent social factors in the organisational context, some other potential contextual forces could influence this relation. For instance, the organisational justice climate, the ethical climate and the knowledge sharing climate

are some of the forces that could create social pressure and thereby weaken the transformation of LKH to EKH. Additionally, dispositional and personal factors, e.g. the Big Five personality traits, individual values and moral standards, can also moderate between LKH and EKH. Therefore, we suggest future research explore additional moderators for the model tested in the current study.

In addition to extending the trickle-down model tested in the current study, future research may explore the dispositional and contextual factors that could diminish and even prevent LKH from trickling down to EKH. In this regard, Taylor et al. (2019) demonstrated that abusive manager behaviour can engender either similarly abusive supervisor behaviour or contrasting supervisor ethical leadership depending on the moderation of supervisor moral identity and the mediation of supervisor relational disidentification. Building on these insights, we speculate that LKH could engender either EKH or employee knowledge sharing with coworkers depending on factors such as moral identity, moral values and moral disengagement. Thus, efforts to explore the factors that amplify or reduce the "trickle-down" effect of LKH would represent an interesting extension of our research.

Lastly, the reliability and validity analyses revealed that all the variables fulfilled the set criteria, except for the convergent validity of TIPD and discriminant validity between OP and EKH, which were slightly below (i.e., only .03) from their respective threshold. Therefore, we suggest our readers to interpret our findings in the light of this limitation. Moreover, future research may try to explore the reliability and validity of these scales in Asian context to determine whether the context influence these measures.

Credit author statement

Ghulam Ali Arain, Ph.D.: Conceptualization, writing the literature review, writing the original draft, review, editing, and the overall project administration, **Imran Hameed, Ph.D.:** methodology, questionnaire development, data collection, formal analysis, and writing the methodology and result sections, **Abdul Karim Khan, Ph.D.:** methodology, writing the literature review, the final review and editing, **Juan Luis Nicolau, Ph.D.:** Writing the original draft, review and the final editing, **Amandeep Dhir, Ph.D.:** Writing the original draft, review and the final editing.

Impact statement

Modern-day tourism organisations are increasingly following a team-based work structure in which each functional team is managed by an experienced team supervisor. Team supervisors are expected to share their expert knowledge with their members and encourage them to provide innovative customer service. Thus, tourism organisations should ensure that team supervisor engage in healthy leadership behaviors toward subordinates, set clear business rules concerning ethical and unethical subordinates' behaviors, and establish a robust admonishment mechanism to deter any form of negative team behaviors. A healthy organisational culture usually makes it difficult for employees at all levels to engage in activities that defy the established norms of collegiality, cordiality, and reconciliation. The findings of this study provide several critical guidelines about the trickle-down effect of leader's knowledge hiding in tourism organisations.

Declaration of competing interest

None.

Acknowledgements

none.

Supervisor-related Questionnaire [TIME-1]

At the workplace, employees often request knowledge from the supervisor/boss/manager, such as requesting him/her for career advice, for information sharing, for learning a new skill, etc. Please think of a recent episode in which a specific employee requested knowledge from you and you declined to share your knowledge or expertise with him/her and behaved in the following ways:	Fully disagree	Disagree	Slightly disagree	Slightly agree	Agree	Fully agree
I agreed to help him/her but never really intended to.	1	2	3	4	5	6
I agreed to help him/her but instead gave him/her information different from what he/she wanted.	1	2	3	4	5	6
I told him/her that I would help him/her out later but I delayed it a lot.	1	2	3	4	5	6
I offered him/her some other information instead of what he/she really wanted.	1	2	3	4	5	6
I pretended that I did not have the updated information.	1	2	3	4	5	6
I said that I did not know, even though I did.	1	2	3	4	5	6
I pretended I did not know what he/she was asking about.	1	2	3	4	5	6
I said that I was not very knowledgeable about the topic.	1	2	3	4	5	6
I explained that I would like to tell him/her but could not.	1	2	3	4	5	6
I explained that the information is confidential & only available to authorized people.	1	2	3	4	5	6
I told him/her that top management would not let anyone share this knowledge.	1	2	3	4	5	6
I said that I would not answer his/her request	1	2	3	4	5	6

Gender Male/Female.

Experience (in the current organization) _____ years.

Education _____ (Highest degree).

Organization type: Public/Private/NGO.

Job Status Permanent/Temporary.

Number of employees working under your supervision _____ employees.

Team Member-related Questionnaire [TIME-2]

At the workplace, employees often request knowledge from a co-worker, such as requesting him/her for career advice, for information sharing, for learning a new skill, etc. Please think of a recent episode in which any co-worker requested knowledge from you, and you declined to share your knowledge or expertise with him/her and behaved in the following ways:	Fully disagree	Disagree	Slightly disagree	Slightly agree	Agree	Fully agree
I agreed to help him/her but never really intended to.	1	2	3	4	5	6
I agreed to help him/her but instead gave him/her information different from what he/she wanted.	1	2	3	4	5	6
I told him/her that I would help him/her out later but I delayed it a lot.	1	2	3	4	5	6
I offered him/her some other information instead of what he/she really wanted.	1	2	3	4	5	6
I pretended that I did not have the updated information.	1	2	3	4	5	6
I said that I did not know, even though I did.	1	2	3	4	5	6
I pretended I did not know what he/she was asking about.	1	2	3	4	5	6
I said that I was not very knowledgeable about the topic.	1	2	3	4	5	6
I explained that I would like to tell him/her but could not.	1	2	3	4	5	6
I explained that the information is confidential & only available to authorized people.	1	2	3	4	5	6
I told him/her that top management would not let anyone share this knowledge.	1	2	3	4	5	6
I said that I would not answer his/her request	1	2	3	4	5	6
Considering your work environment, to what extent you disagree or agree with the following statements						
Favoritism rather than merit determines who gets ahead in this organization.	1	2	3	4	5	6
Rewards are given to those people who even don't work hard in this organization.	1	2	3	4	5	6
People in this organization attempt to build themselves up by pulling others down.	1	2	3	4	5	6
If co-workers offer to help you out, it is because they expect to get something in return from you, not because they really care about you.	1	2	3	4	5	6
Employees here usually don't speak up due to the fear of retaliation by others.	1	2	3	4	5	6
You can get along here by being in good books of boss, regardless of the quality of your work.	1	2	3	4	5	6
My co-workers help themselves, not others.	1	2	3	4	5	6

Gender Male/Female.

Experience (in the current organization) _____ years

Education _____ (Highest degree).

Job Status Permanent/Temporary.

Age _____ years.

Supervisor Reported Team OCB and IPD [TIME-3]

As a team lead, please indicate the extent to which employees in your team engaged in the following behaviors over the past one month.	Fully disagree	Disagree	Slightly disagree	Slightly agree	Agree	Fully agree
They made fun of coworkers.	1	2	3	4	5	6
They said something hurtful to coworkers.	1	2	3	4	5	6
They made an ethnic, religious, or racial remark at coworkers.	1	2	3	4	5	6
They cursed at coworkers.	1	2	3	4	5	6
They lost their temper while working with coworkers.	1	2	3	4	5	6

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(continued)

As a team lead, please indicate the extent to which employees in your team engaged in the following behaviors over the past one month.	Fully disagree	Disagree	Slightly disagree	Slightly agree	Agree	Fully agree
They played mean prank/joke on coworkers.	1	2	3	4	5	6
They acted rudely toward coworkers.	1	2	3	4	5	6
They publicly embarrassed coworkers.	1	2	3	4	5	6
They voluntarily assisted coworkers with their work.	1	2	3	4	5	6
They voluntarily helped coworkers when they had heavy workload.	1	2	3	4	5	6
They voluntarily helped coworkers in doing some tasks on their behalf when they were absent.	1	2	3	4	5	6
They voluntarily took time out to listen coworkers' problems.	1	2	3	4	5	6
They voluntarily took time out to help coworkers to learn more.	1	2	3	4	5	6
They voluntarily took personal interest in coworkers' work related problems.	1	2	3	4	5	6
They voluntarily passed coworkers the useful information.	1	2	3	4	5	6

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