Effect of leader-member exchange social comparison on co-worker's envy and work behavior moderated by perceived deservingness of star workers

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Work Behavior Moderated by Perceived Deservingness of Star Workers

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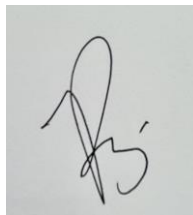2023

I hereby declare that this Doctor of Business Administration dissertation is my original work and it has been written by me in its entirety.
I have duly acknowledged all the sources of information which have been used in this dissertation.

This Doctor of Business Administration dissertation has also not been submitted for any degree in any university previously.

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Abstract

The extant leader-member exchange (LMX) literature suggests that leaders establish and develop different quality dyadic relationships with members in the same workgroup. High-quality LMX is argued as beneficial to employees. However, studies have overlooked the emotions and behaviors of low-quality LMX employees to determine how they differ from high-quality LMX employees. This study integrates LMX differentiation literature, social comparison theory and attributional theory to examine the role of LMX social comparison (LMXSC) perceptions in triggering help-seeking and knowledge hiding from star co-workers in the workplace. This study also explores the mediating role of dual envy, that is, benign and malicious envy and the moderating role of perceived deservingness of star co-workers within the proposed relationship.

Using time-lagged data from 293 employees in China, the results show that lower LMXSC is associated with malicious envy, which in turn, evokes knowledge hiding from higher LMXSC star co-workers. The indirect effect of LMXSC on knowledge hiding via malicious envy is stronger when perceived deservingness of star co-workers is lower. This study concludes with theoretical and practical implications.

Keywords: leader-member exchange social comparison (LMXSC), benign envy, malicious envy, perceived deservingness, help-seeking, knowledge hiding, star employees

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Chapter 1   Introduction

As a relationship-based approach to leadership focusing on the dyadic relationship between supervisor and subordinates, leader-member exchange (LMX) theory suggests that leaders establish and maintain differential relationships with employees, in order to use their resources, time and energy effectively (Graen & Uhl-Bien, 1995). In the past years, research has sought to understand the development of LMX relationships, and its consequences and outcomes (Bolino & Turnley, 2009). Previous research shows that high LMX relationships between leaders and employees engenders mutual respect, trust, liking, attention, obligation, reciprocity and loyalty (Graen & Uhl-Bien, 1995) with favorable outcomes such as employees' work attitudes and behaviors (Gerstner & Day, 1997), job performance (Xue & Moon, 2019), higher performance ratings (Vecchio & Gobdel, 1984), organizational commitment (Duchon, Green & Taber, 1986), organizational citizenship behaviors (Gerstner & Day, 1997), satisfaction with supervision (Vecchio & Gobdel, 1984) and frequency of promotions (Wakabayashi, Graen, Graen & Graen, 1988) while negatively related to turnover intentions (Liden & Graen, 1980) and workplace ostracism (Xue & Moon, 2019).

Although LMX research has examined the role of leaders in contributing to employees' attitudes and behaviors, it neglects to investigate the surrounding social context of a given LMX relationship; that is, the individuals within the same workgroup with a common leader (Sparrowe & Liden, 1997; Vidyarthi, Linden, Anand, Erdogan & Ghosh, 2010). Given that the fundamental premise of LMX theory purports that leaders differentiate their relationships with employees within the same workgroup, leaders would therefore not devote the required time and energy to

each and all of his employees to ensure their optimal performance – operationalized as LMX differentiation (Dansereau, Graen & Haga, 1975).

When leaders differentiate, they do not use the same leadership style in managing all employees but differential behaviors and levels of work relationship with each employee (Dansereau et al., 1975; Graen, Novak & Sommerkamp, 1982; Liden & Graen, 1980). Ideally, as employees work in the same workgroup and are reporting to the same leader, they should be viewed as equal in the organizational hierarchy. Consequently, the destiny of employees in the organizational hinges on the quality of his or her relationship with the leader and it is difficult for employees to change the LMX relationship on their own (Sparrowe & Liden, 1997). Due to LMX differentiation, leaders form high-quality socio-emotional relationships with some employees (i.e., high LMX or "in-group' members) and low-quality transactional relationships with others (i.e., low LMX or "out-group" members; Vidyarthi et al., 2010).

Traditionally, LMX researchers focus on the bright side of LMX positing that high-quality LMX employees are associated with better job performance and outcomes. Given that low-quality LMX employees have been associated with negative consequences, which may result in high costs to organizations, it is imperative that the neglected dark side of low-quality LMX relationships be studied (Kim et al., 2010). As employees are working within workgroups, when the leader differentiates among employees, different levels of LMX quality are likely to trigger the social comparison processes of employees as they obtain information about their own standing (Vidyarthi et al., 2010). The concept of leader-member exchange social comparison (LMXSC) by Vidyarthi et al. (2010) blends the theoretical perspectives of LMX and social comparison theory thus extending the concept of LMX to workgroups. Employees consider not just the absolute quality of

their relationship with their supervisor, but also the relative quality based on comparisons with others and use these as the basis for assessing a series of outcomes (Zhao, Liu, Li & Yu, 2019). Naturally, employees working together compare themselves with co-workers as they compete for position and workplace resources (Vecchio, 2005).

The nature of work in an organization offers many opportunities where employees can observe, learn, and compare their own LMX relationships with those of their co-workers through daily interactions, informal conversations, and shared events (Hu & Liden, 2013). By comparing, employees observe what they receive and what others receive. Despite the extant literature on LMX and LMXSC, when and how individual's behavior and in-role performance are affected by a focal individual's LMX relative to those of other co-workers within the workgroup are largely ignored (Hu & Liden, 2013). Borrowing from social comparison theory (Festinger, 1954), low-quality LMX employees may engage in upward (better-off) social comparison with co-workers who appear to have high-quality LMX (Kim & Lee, 2021). As social comparison is directional, i.e., in the form of upward comparison with the better-off or downward comparison with the worst-off (Li, Xu & Kwan, 2021), this research focuses on upward comparison as it represents the direction of the emotion of low-quality LMX employees.

Upward social comparisons involve using information about other individuals to learn about the self (Festinger, 1954) and it can produce emotions which subsequently elicit behaviors and emotional reactions towards the high-quality LMX employees in the workplace (Buunk, Collins, Taylor, VanYperen & Dakok, 1990). The most common social comparison-based emotion evoked by upward social comparison is envy (Smith, 2000). Extant literature shows that there is a

positive relationship between perceived low-level of LMXSC and workplace envy where LMXSC is frequently analyzed as a contextual antecedent of workplace envy (Hilal, 2022).

This research focuses on the consequences of low-quality LMX relationships resentment towards star co-workers who are perceived as having high-quality LMX. As alluded to early, due to LMX differentiation, leaders form high-quality socio-emotional relationships with some employees, especially those that they consider as star employees. Due to their visibility, star employees are likely to affect co-workers' self-review when they are considered relevant and similar (Lockwood & Kunda, 1997).

Drawing on social comparison (Festinger, 1954) and equity theory (Adams, 1963), low-quality LMX employees evaluate their own outcome-input ratios and those of their comparative referents (i.e., star employees in the same workgroup). Inequity exists when the output-input ratios are not perceived to be equal. Such inequity fosters animosity, perception of injustice, creates imbalance and low-quality LMX employees may feel envy (Ng, 2017). Thus, the development of preferential treatment to star employees may have unintended consequences of negative emotions and outcomes. The triangular relationship between the leader, star employees and the co-workers influence whether such preferential treatment is effective for an organization should be considered.

Envy has deleterious outcomes and is a prevalent phenomenon in organizations (Tai, Narayanan & McAllister, 2012). It is important to understand what employee envy is to avoid or diffuse it, as envy appears to be a hostile emotion that elicits aggressive behaviors (Smith & Kim, 2007). The feeling of envy arises from lacking the superior quality, achievement, or possession of another and either wanting it or wanting it not to exist (Parrott & Smith, 1993). Low-quality LMX employees feel envy when the good fortune or advantage of the star co-workers makes them feel

discontent and ill willed (Salovey & Rodin, 1984). Low-quality LMX employees feel discontent probably because of the unpleasant perception of one's own self as a result of an upward comparison in an area that is important to them (Salovey & Rodin, 1984); the feeling of being overlooked ("why not me") by the leader and not in the in-group (social status) to enjoy the same treatment as star employees.

According to social identity theory, being excluded within organizations may motivate employees to enhance self-interest behaviors (Turner & Reynolds, 2010). Low-quality LMX employees feel ill willed because of the perception that the star employees' advantage and superiority are unfair and that they do not deserve it ("could have been me"; Salovey & Rodin, 1984). In other words, envy driven by upward social comparison occurs when the low-quality LMX employee notices that a similar other, star employee has something (material or personal) that he or she wants but does not have and the desired something is central to his or her self-concept. Empirical studies have shown that unfriendly, low-quality relationships between leader and members will lead to a lower job performance (Jaramillo, Mulki & Boles, 2011) but there is little work on the interactions between low-quality LMX members with star members. Thus, we assert that low-quality LMX employees would have a strong tendency to feel inferior, resentful over this disadvantage in the relationship with the leader and hence become envious of the star employees which subsequently will affect their attitudes and behaviors toward their star co-workers.

Despite receiving considerable attention over the past few years, the relationship between LMXSC and envy has been a subject of discussion (Hilal, 2022) and studies on the relationships between low- and high-quality LMX members due to envy have been sparse (Shu & Lazatkhan, 2017). Scholars believe the relationship is direct and positive, while others say it is not always

straightforward (Liu, Geng & Yao, 2021), thus this relationship needs to be investigated further. Liden, Erdogan, Wayne and Sparrowe (2006) suggest that LMX differentiation and envy are directly and positively related to low-quality LMX employees' performance. Sui, Wang, Kirkman and Li (2015) posit that the relationship between LMX differentiation and envy is not direct, rather, moderators typically determine whether the relationship is positive or negative. They propose that the relationship is curvilinear and that LMX differentiation affects performance both positively and negatively. Matta and Van Dyne (2020) contend that the mixed findings lie in the diverse emotions experienced by employees making social comparisons due to LMX differentiation.

As the experience of envy is highly unpleasant, hostile and is viewed as painful emotion (Tai et. al, 2012), the goal of the low-quality LMX employees (envious person) is to reduce his or her level of envy by reducing the perceived gap or to overcome the comparative disadvantages with the star employees (Heider, 1958). Behaviorally, equalizing the low-quality LMX employees' position with that of the star employees may result in positive or negative consequences for the low-quality LMX employees and the organization (Duffy, Shaw & Schaubroeck, 2008). Heider (1958) argues that envy includes a sense of injustice as similar people should have similar outcomes and the envied person's advantage violates what "ought to be" (Smith & Kim, 2007), one way is to harm the envied person to "balance forces".

Traditionally, most organizational scholars have posited envy as an undesirable destructive emotion that causes one to harm (Duffy et. al, 2008), to act unethically (Moran & Schweitzer, 2008) and to undermine the envied person (Cohen-Charash & Mueller, 2007; Eissa & Wyland, 2016; Kim & Glomb, 2014; Menon & Thompson, 2010). However, research has also ascertained that envy can be regarded as a constructive emotion that can motivate people to accomplish desired

objectives by improving themselves or even surpass the performance of the envied person and emulation of the envied person with positive thoughts (van de Ven, Zeelenberg & Peters, 2009). For instance, preliminary research elucidates that envy can lead to advancement effort (Cohen-Charash, 2009) and higher job performance (Schaubroeck & Lam, 2004; Lee & Duffy, 2019).

Past research defines two types of envy, namely, benign and malicious envy (van de Ven et al., 2009; Crusius & Lange, 2014;). Benign envy is productive as it motivates self-improvement whereas malicious envy is destructive as it motivates to harm the position of the superior others, such as "pull-down", hostility, social undermining and ill will toward the envied persons (Crusius & Lange, 2014; Lee & Duffy, 2019; van de Ven et al., 2009). Both benign and malicious envy are annoying, unpleasant, negative feelings elicited by unfavorable upward social comparison and can be mitigated by levelling the perceived gap between the self and the envied person.

However, the distinct difference between benign and malicious envy is the emotions, motivations and the resulting behaviors (van de Ven et al., 2009). Research has identified key factors influencing whether benign or malicious envy is experienced by low-quality LMX employees. Factors related to the envious person (low-quality LMX) such as perceived deservingness of the superior advantage (Crusius & Lange, 2014), challenge- and threat-oriented action perceived (Tai et al., 2012), perceived control of the situation that allows the motivation to improve oneself (van de Ven et al., 2009), risk taking behavior (Kwon, Han & Nam, 2017), core self-evaluation (self-esteem and neuroticism; Shu & Lazatkhan, 2017), and trait competitiveness (Peng, Bell & Li, 2020). Factors related to the envied person (high-quality LMX) such as agreeableness (Wang & Li, 2018) and pride (Pan, Zheng, Xu, Li & Lam, 2021).

Although previous research focuses on the consequences of workplace envy and behaviors such as employees' effect on counter-productive workplace behavior, work engagement, core performance and social undermining (Duffy et al., 2008), limited research investigates both the positive and negative outcomes of workplace envy under the influence of LMXSC with most of the research focusing on the traditional view of negative outcomes (Shu & Lazatkhan, 2017). To draw a complete picture, this research investigates how lower LMXSC is associated with positive and negative interpersonal behaviors via two different types of envy.

We propose that in addition to the traditional negative view of envy (i.e., malicious envy), low-quality LMX employees may engage in benign envy by narrowing the comparison gap and alleviating pain through increasing performance and self-improvement. We focus on low-quality LMX employees' help-seeking behaviors as a form of self-improvement (Bamberger, 2009). One means by which one can improve is to seek help from star employees in understanding the goals of the superiors and what it means to be in the "in-group" (Li, Xu & Kwan, 2021).

On the other hand, malicious envy may cause low-quality LMX employees to engage in knowledge hiding acts. Such knowledge hiding acts of low-quality LMX employees are attempts to reduce the frustration of feeling inferior and in some cases, to reduce the envy-provoking advantage the envied persons have (Peng et al., 2020; Weng, Latif, Khan, Tariq, Butt, Obaid & Sarwar, 2020). We focus on knowledge hiding as it is the most common way to undermine the star employee as it is easier to withhold assistance than to take hostile actions, and voluntary assistance is not included in the job description (Floyd, Hoogland & Smith, 2016). As most organizations are knowledge-based, help-seeking and information sharing are key to success (Connelly et al., 2012). Yet, although organizations encourage and motivate employees to share knowledge to achieve

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optimal performance, not all employees act accordingly and some engage in knowledge hiding demanded by their co-workers (Zhao et al., 2019).

As alluded earlier, the next important question is, what are the factors that may influence when low-quality LMX employees are more likely to experience benign or malicious envy which then leads to help-seeking and knowledge hiding. Emotion theories suggest that the unfolding of emotion episodes depends on appraisals of the situation (Clore & Ortony, 2013). We focus on perceived deservingness (justice) of star worker as a moderator because it play a central role in determining how envy is manifested; whether envy is developed into its benign or malicious form.

Drawing on deservingness theory (Feather, 1999), we examine how perceptions by a low-quality LMX employee that the star co-worker status is deserved or undeserved, and its effect on the low-quality LMX employee's envy and behavior towards a deserving or undeserving star co-worker. We propose that low-quality LMX employees' perceptions of deservingness of the star employees' advantage moderates the effects of LMXSC on benign and malicious envy. Research suggests that when envious persons appraise the envied person's advantage as undeserved, envy is more likely to manifest in its malicious form (Lange et al., 2016; van de Ven et al., 2012). To a lesser extent, when envious persons appraise the envied person's advantage as deserved, envy is more likely to manifest in its benign form.

Although the idea that the influence of perceptions of deservingness in envy is not new, evidence suggests that its influence is partly mixed, thus requiring further research on appraisals shaping benign and malicious envy (Lange & Protasi, 2021). Thus, this study postulates that the envious employee's perceptions of deservingness in the LMXSC relationship influences the type of envy experienced by the envious employees and the outcomes. In unfavorable upward social

comparisons, when low-quality LMX employees' perceptions of deservingness of the star employees' advantage is high, benign envy is elicited, behave constructively and motivate help-seeking due to a desire to improve oneself. Contrariwise, when perceptions of deservingness of the star employees' advantage is low, malicious envy is elicited, behave destructively and motivate knowledge hiding due to a desire to narrow the comparison gap.

This research significantly contributes to the literature of LMXSC theory and knowledge management by advancing understanding of workplace envy in three ways. First, the research contributes to social comparison theory by examining and extending our understanding of the relationship between LMXSC and workplace envy; in response to call for further examining the detrimental effect of LMX differentiation on the broader social networks. Second, it attempts to provide some clarity on the inconsistent evidence in past studies on the effect of LMXSC on workplace envy. This research examines two competing mechanisms to derive two major types of behavioral outcomes of co-worker envy in which LMXSC has indirect effects on help-seeking and knowledge hiding via two different types of envy. Third, this research theorizes and empirically tests the focal employees' appraisals of deservingness of star worker as moderator of the relationship between LMXSC perceptions with both types of envy, hence delineating possible contextual boundary conditions in which envy operates in. Overall, this research strives to augment our understanding of why, how and when employees' unfavorable LMXSC perceptions drive them to instigate discretionary workplace behavior onto star employees in relatively high-LMX relationships. This research also provides meaningful insights that would enable leaders to curtail discretionary workplace behavior.

Chapter 2   Literature review and hypotheses development

2.1.   Literature review

This section reviews the literature on leader-member exchange social comparison (LMXSC), star employees, attributional theory and perceived star employee status, envy in the workplace, leader-member exchange social comparison (LMXSC) and envy, help-seeking, knowledge hiding and deservingness. The research hypotheses are developed by reviewing the literature of these potential drivers of help-seeking and knowledge hiding from star co-workers.

2.1.1   Leader-member exchange social comparison (LMXSC)

LMX, founded on the Vertical Dyadic Linkage (VDL) theory (Dansereau, Graen & Haga, 1975), is defined as "the quality of exchange relationship between leader and subordinate" (Schriesheim, Castro & Cogliser, 1999, p.76). LMX theory states that due to limited time, energy and resources, leaders typically differentiate among their followers by establishing low-quality transactional relationships with some and special high-quality socio-emotional relationships with others in the same workgroup (Graen & Uhl-Bien, 1995; Sparrowe & Liden, 1997). LMX differentiation within the team is thus a necessity and not a choice for the leader as it is impossible to keep quality exchange relationships with all the employees. Depending on whether an employee belongs to the in-group or out-group, the quality of the working relationship could be high or low.

Research has shown the value of high-quality LMX (i.e., higher scores on the LMX scale) relationships; that the higher the quality, the more benefits the employees receive (Maslyn & Uhl-Bien, 2001). High-quality LMX relationships are therefore beneficial to the employees in the

leader-member dyadic pair as they feel a high-level of respect by their leaders (Graen & Uhl-Bien, 1995). As the literature suggests, employees who have a high-quality LMX relationship with their leader could enjoy preferential treatments and benefits such as care, attention, support, greater resources or better job assignments and are considered insiders while low-quality LMX employees do not receive the same treatment, support and experience a formal exchange with the same leader (Liden & Graen, 1980; Liden & Maslyn, 1998). Consequently, low-quality LMX employees may resent high-quality LMX co-workers as these co-workers are given more benefits than themselves, thus creating a sense of imbalance in the workplace (Kim, O'Neill & Cho, 2010). In addition, low-quality LMX employees perceive that as "out-group" members, they have been treated unfairly and their sense of "identity security" are threatened. Without this security, low-quality LMX employees may not interact comfortably with their co-workers on an affective level.

According to social comparison theory, individuals have a fundamental need to reduce uncertainty while living in an uncertain world. Hence, they tend to compare themselves with similar others in order to arrive at an opinion about themselves (Festinger, 1954). In addition to telling oneself whether one has performed well or poorly, social comparisons also provide information on one's performance. In the competitive workplace, employees naturally compare themselves to other employees who share comparison-related attributes in their same workgroup (Hu & Liden, 2013). Scenarios such as salary increases, bonuses, promotions and performance recognition offer the opportunity for employees to elicit social comparisons (Duffy et al., 2008). When individuals make social comparisons, they can compare themselves with those who are better-off (i.e., upward social comparison) or with those who are worse-off (i.e., downward social comparison; Buunk et al., 1990; Smith, 2000). When one is in a position of inferiority, one compares oneself upwards (Wood, 1989).

Integrating the above two theoretical perspectives, employees within a workgroup would compare their LMX relationships. Low-quality LMX employees who perceive that their LMX relationships are not better than others will feel a sense of imbalance (Kim et al., 2010). As LMX formation is bilateral with the leader as the predominant person, it is unlikely for the low-quality LMX employees to improve the existing LMX relationship on their own effort as the relationship is stable (Maslyn & Uhl-Bien, 2001).

Research suggests that when individuals engage in upward social comparisons, they are subject to self-construal and there are two functions: adaptive and aversive (Collins, 1996; Pan et al., 2021). Adaptive function refers to individuals' awareness of their personal limitations and motivation to be similar to the superior referents who are performing better whereas aversive function refers to individuals' defensive reaction such as avoidance or unwillingness to provide helpful information (Buunk et al., 1990). In accordance with these two functions, researchers elucidate that upward social comparison elicits two types of emotional process based on whether the individuals judge the superior's advantage as attainable: assimilation and contrast (Smith, 2000). Assimilation process occurs when attainability is judged achievable and assumed similarities with their upward social comparison referents, resulting in self-enhancement (Collins, 1996). In most cases, the individuals perceived themselves as having similar abilities or in the same superior class as the referents (Wheeler, 1966). Contrast process occurs when the superior referents' advantage is unattainable, focusing on differences with the upward social comparison referents, resulting in a reduced self-concept (Buunk et al., 1990). Hence, low-quality LMX employees can feel inspired to perform similarly to their upward social comparison referents, the star employees, under the adaptive function and assimilation process or perceive the differences as unattainable and unchangeable under the aversive function and contrast process.

As discussed above, LMX theory focuses on differentiation as the fundamental component and different LMX relationships will trigger social comparisons among members (Sun, Li, Li, Liden, Li & Zhang, 2021). Much existing research views each leader-subordinate pairing as an isolated entity, ignoring the possible differences in LMX between workgroup members (Sharma, Mishra, Pandey & Ghosh, 2020). In order to study this phenomenon, Vidyarthi et al. (2010) introduce the concept of LMX social comparison (LMXSC). That is, employees evaluate how their relationship with the leader compares with others' relationships with the leader. Vidyarthi et al. (2010) further contend that in addition to understanding the quality of the exchange relationship between the leader and employees, LMXSC provides an understanding of the social context within which these relationships take place. To distinguish, LMXSC is based on individual-within group social comparison with group members as the reference point, whereas LMX has no comparative judgement reference point. In sum, by integrating LMX and social comparison theory, the construct of LMXSC is based on the notion that LMX differentiation by leaders triggers social comparison processes that allow employees to determine their own standing in a same workgroup compared to others. The higher the LMXSC, the more the employees receive a larger share of their leader's resources compared to their co-workers.

LMXSC is a different concept from that of relative LMX (RLMX) which is another extension of LMX. LMXSC refers to employees' perception of differences between them and other co-workers in a workgroup whereas RLMX refers to actual differences of one's own LMX quality as compared with the average LMX in a workgroup (Vidyarthi et al., 2010). As low-quality LMX employees' reactions are based on their perception of differences with a specific high-quality LMX co-worker rather than with the average LMX within a workgroup, this study examines the concept of LMXSC over RLMX.

A substantial body of literature on LMXSC focuses on how higher LMXSC results in positive outcomes. For instance, Vidyarthi et al., (2010) find that higher LMXSC is positively associated with job performance and organizational citizenship behavior. Son, Choi, and Park (2011) suggest that higher LMXSC is positively related to organizational commitment, with perceived leader status moderating the relationship between LMXSC and organizational commitment. Their study also suggests that higher LMXSC has no significant effect on workplace deviant behavior.

In contrast, in a Chinese context, Huang, Shi, Xie and Wang (2015) found that low LMXSC is negatively related to organizational behaviors (organizational deviance and supervisory-directed deviance), and that procedural justice and interpersonal justice mediate the relationship between LMXSC and organizational deviance and supervisor-directed deviance respectively. Another study by Tse, Lam, Lawrence and Huang (2013) suggest that low LMXSC is related to contrastive emotions, inducing hostile interpersonal emotions for co-workers that have higher-level of LMX. The results shed light on the dark side of LMXSC (Bolino & Turnley, 2009) and the need to consider the double-edged sword of LMXSC (Huang et al., 2015). To date, little is known about how and when low LMXSC triggers assimilation process which motivates employees to "level-up" so as to improve themselves or contrast process which induces employees to "pull-down" others.

From the above discussion on examining LMXSC impact on employees, it is important to understand the surrounding context of a given LMX relationship. This research examines the dark side of LMX social comparison, highlighting the underlying emotions and behaviors of employees who perceive to have lower-quality LMX relationship than their star co-workers in the same

workgroup. Briefly stated, LMXSC theory suggests that low LMXSC employees will not seek help from the star workers as it entails social cost and implies incompetence. Low LMXSC employees will also engage in knowledge hiding when requested from star workers as possibly to restore or maintain positive self-evaluation and balance the mental state. Specifically, this research argues that lower LMXSC perceptions can elicit benign envy which in turn lead to self-enhancing behavior by help-seeking from the high-quality LMX star co-workers. Furthermore, lower LMXSC perception is also associated with knowledge hiding via malicious envy. Moreover, low-quality LMX employees' perceived deservingness of star employee plays a moderating role, whereby it strengthens the relation that LMXSC with benign envy when perceived deservingness is high. Meanwhile, it also strengthens the relation that LMXSC with malicious envy when perceived deservingness is low. In what follows, we delve into this possibility and formulate the hypotheses for the present research. Figure 2.1 illustrates the overall research framework.

Insert Figure 2.1 about here

2.1.2   Star employees

Star employees are defined as those with "disproportionately high and prolonged performance, visibility and relevant social capital" relative to others (Call, Nyberg & Thatcher, 2015, p.624). Star employees exist across many organizations context and their presence create opportunities for organizations to capitalize on their high performance and value, at the same time, create challenges in managing and retaining them (Aguinis & O'Boyle, 2014). It is easy for star

employees to seek alternative employment due to their higher levels of performance, visibility (e.g., easy for recruiters to identify them) and large relevant social networks. Losing star employees is detrimental; in addition to productivity losses, there can also be a negative reputation effect on the leaders. Thus, leaders are motivated to focus and direct their limited resources (e.g., time, effort, and rewards) on star employees who are most likely to yield the highest payoff (Hobfoll, 1989).

In order to attract, motivate and retain star employees, leaders give preferential treatment to them, for example, pay increases and flexible idiosyncratic deals (i-deals) which are personalized employment conditions that star employees have negotiated (Hornung, Rousseau & Glaser, 2009). I-deals are non-standard employment deals that the star worker has negotiated for, and which differ from the standards that apply to others (e.g., customized duties, individual career opportunities, a variety of hours and workloads). Effects of i-deals can be understood from social exchange theory (Blau, 1964) and norm of reciprocity (Hornung et al., 2009). Recipients of i-deals tend to reciprocate contributions and favors with their leaders in a relationship, putting them in a position of being better off in the workgroup (i.e., in-group). While the i-deals bring benefits to the star employees, their co-workers may take on increased workload, burden and may miss out on career development opportunities due to limited organizational resources, irrespective of whether they believe the star employees deserved the i-deal (Yang, 2020). This research focuses on the consequences of low-quality LMX relationships resentment towards star co-workers who are perceived as having high-quality LMX.

2.1.3 Attributional theory and perceived star employee status

Attributional theory (Weiner, 1985) on motivation deals with the interpretive process of how people interpret events and how this relates to their thinking and behavior. Drawing upon attributional theory (Weiner, 1985), this research posits that low-quality LMX employees become motivated to make casual explanations about the star status that is ascribed to a star employee. Accordingly, low-quality LMX employees (non-stars) seek to identify the internal and external (dispositional vs situational) causal ascriptions, which refer to the perceived causes of the event. We focus on the interaction of these two casual ascriptions to produce two different star status attributions, namely, self-made star employee and political star employee (Boekhorst, Basir & Malhotra, 2021). The application of attributional theory on star status attributions explains the emotional and behavioral implications associated with low-quality LMX employees, to theorize how they can improve themselves and harm the star employees. Internal causal ascriptions are related to causes that are internal or dispositional characteristics to a star employee such as intelligence, effort or abilities, whereas external causal ascriptions are related to causes that are external or situational characteristics such as pure luck, kinship, family ties or sponsorship (Boekhorst et al., 2021). These attributions influence the emotions that the low-quality LMX employees experience, which in turn influences their behaviors towards the star co-workers.

According to the attributional theory (Weiner, 1985), there are three stages in the attribution process; (i) behavior is observed, (ii) behavior is determined to be deliberate and (iii) behavior is attributed to internal and/or external causes. Low-quality LMX employees will first consider the internal causal ascriptions that relate to the dispositions of star co-worker such as their intelligence, effort or effort. As star employees may collaborate with others to achieve success, low-quality LMX employees will seek to determine whether there are external causal ascriptions. The external causal ascriptions include luck, sponsorship from important advocates and social

networks. Therefore, low-quality LMX employees who consider their co-worker as star employees are motivated to make sense of their star employee status.

Based on the low-quality LMX employees' own belief about why star employees acquired their star status, low-quality LMX employees make self-made star attributions when they perceive high internal and low external attributions. Attributional theory suggests that low-quality LMX employees perceive that these self-made star co-workers acquired their status due to their effort, knowledge, expertise, skills or abilities (high internal causal ascriptions). This distinct portfolio of human capital characteristics allows star employees to consistently demonstrate high job performance which makes possible the labeling of their star status (Wright, Coff & Moliterno, 2013). Research on social capital suggests that social networks play an important part in facilitating employees to access critical information, resources and sponsorship, which have an impact on career success (Nahapiet & Ghoshal, 1998). Low-quality LMX employees make political star attributions when they form low and high external attributions as they perceived that their star co-workers acquired their status due to external causal ascriptions such as sponsorship from high-profile executives or important clients of the company. As such, externally driven attributions cause low-quality LMX employees to construct political star status attribution. In sum, these attributions influence the emotions and behaviors of the low-quality LMX employees.

2.1.4 Envy in the workplace

Envy is an unpleasant and negative emotion triggered by unfavorable upward social comparison with a focus on what one does not have compared with others (Menon & Thompson, 2010). Parrott and Smith (1993, p.906) define envy as a negative emotion experienced "when a

person lacks another's superior quality, achievement or possession and either desires it or wishes that the other lacked it". Consistent with this argument, Smith and Kim (2007, p. 49) affirm that envy is "an unpleasant and often painful blend of feelings characterized by inferiority, hostility and resentment caused by a comparison with a person or a group of persons who possess something we desire".

There is a conceptual difference between envy and jealousy, and it is noteworthy to distinguish them as they are often used interchangeably (Salovey & Rodin, 1984). Besides semantic ambiguity, research shows that these two emotions are quite different (Parrott & Smith, 1993). First, envy is a dyadic emotion in which one person longs for what the other has, while jealousy is triadic in nature where three people are involved in which one person fears losing someone to another person (Smith & Kim, 2007). Second, unlike jealousy, envy does not involve fearing the loss of a relationship, while jealousy is manifested when a person fears losing a valuable or important relationship to a rival (Parrott, 1991). For instance, a man would be jealous when he perceived that his girlfriend is attracting the attention of his friend with the fear of losing his girlfriend to his friend. Third, envy is characterized by feelings of inferiority, longing and resentment while jealousy is identified by feelings of fear of loss, distrust, anxiety and anger (Smith & Kim, 2007). In sum, jealousy and envy stem from different causes, create distinctive appraisals, and produce distinct emotional experiences. Envy is elicited from social comparisons while jealousy is an intense emotion related to threat and fear of loss of intimacy. In the context of this research, it is a critical distinction as a low-quality LMX employee feels longing for or desire to be an "in-group" member, experiences inferiority and resentment towards the star employees.

The experience of envy is conceptualized in three related ways: (i) situational envy – which involves multiple referents or comparators in a specific setting, usually in the context of a work environment or team (Duffy & Shaw, 2000), (ii) episodic envy – which involves a specific person as a referent (Cohen-Charash, 2009) and (iii) dispositional envy – which is individual tendencies in differences envy (Smith et al., 1999). Situational envy in the context of workplace is also distinguished from dispositional envy which is generalized across all situations and episodic envy is an emotional response to a specific event. This research focuses on episodic envy in which employees make invidious social comparisons with star co-workers in their workplace (Vecchio, 1995).

The concept of envy in the workplace is grounded on several theories such as the social comparison theory (Festinger, 1954), Tesser's self-evaluation maintenance theory (SEM; (Salovey & Rodin, 1984; Tesser, 1988) and equity theory (Adams, 1963). These theories are useful in understanding envy's behavioral outcomes as a workplace is characterized by uncertainty and competition which are viewed to elicit social comparison (Duffy et al., 2008). The social comparison theory is most important and frequently studied by researchers in framing envy. Envy is triggered when the comparison is unfavorable. The closer an individual is to someone, the more likely there will be envious comparisons (Tesser, 1988). The SEM model posits that individuals are driven to maintain positive self-evaluations and the relevance of a similar other's can either stimulate a comparison or a reflection process (Salovey & Rodin, 1984; Tesser, 1988). For instance, a person usually feels good when their friend who works in a different job receives a promotion, thus reflection occurs. However, social comparison with negative affect occurs if their friend works in an identical job to one's own. According to the equity theory, individuals assess their work inputs (contributions) and perceptions of the output (outcomes) they receive influence their

behavior (Adams, 1963). Similar to social comparison theory and SEM, individuals do not only assess themselves and compare themselves against others. If individuals compare and perceive that their own ratio of input to output is not equal to others, inequity occurs and resentment results. At one extreme, envious people may work harder to recover equity; at the other extreme, they may try to sabotage their rival.

Another important distinction in defining envy is that there are two types of envy: benign and malicious envy. The means by which an envious person narrows the gap between oneself, and the envied person determine whether envy is benign or malicious (Smith & Kim, 2007). We adopt the definition of Lange, Weidman and Crusius (2018, p.592) who stated that "envy involves burdensome pain about being inferior to another person. It occurs as either benign envy, entailing a longing to improve oneself and emulate the envied person, or malicious envy, entailing hostile thoughts and intentions directed at harming the other". Benign envy is experienced when the envious person does not consider the envied person's good fortune with displeasure and may even view their good fortune with pleasure. In some cases, an envious person may admire the envied person and may draw inspiration from it (Parrott, 1991). Some scholars have also argued that admiration is not benign envy as admiration is a positive emotion that resulted from social comparison (Lyu, 2014). Hence, benign envy without hostility motivates people to "level-up", to strive to obtain what others have by working harder and a willingness to learn and to the extent of help-seeking from envied targets (Shu & Lazatkhan, 2017). Research shows that benign envy is related to increase in performance (van de Ven et al., 2011), are less sensitive to potential losses in risk taking (Kwon et al., 2017) and viewed positively by their co-workers (Lange et al., 2016). Malicious envy is experienced when the envious person considers the envied person's good fortune with displeasure and wishes the envied person to possess none of the desired characteristics and

qualities (Parrott & Smith, 1993; Salovey & Rodin, 1984). Malicious envy is associated with negative emotions of hostility, resentment, anger and feelings of unfairness or injustice (Parrott & Smith, 1993; Salovey & Rodin, 1984). Hence, malicious envy with hostility motivates people to "level-down", to strive to reduce the differences between the envious and envied person by damaging behaviors that harm the envied targets (Shu & Lazatkhan, 2017). The action tendencies of the two types of envy thus appear to initiate different behavioral consequences; threat- and challenge-oriented and both play an important role in alleviating the pain of envy (Tai et al., 2012). In appraising situations of envy in terms of "threat", the envious person becomes hostile towards the envied person (Cohen-Charash & Mueller, 2007), and in the "challenge" situations, envious person responds by improving themselves to match the level of the envied person (van de Ven et al., 2009). Drawing from this body of work, the present research suggests that both types of envy consist of burdensome painful feelings with different cognitions and motivations that are critical in shaping the envied person's attitudes and behaviors. The strategies used to alleviate the pain are either positive to improve the envious person (attain the level of other) or negative to harm the envied person (pull-down the level of other to theirs).

Envy cannot be hidden, controlled, or changed once it has been experienced (Parrott, 1991; Parrott & Smith, 1993). If one feels envy more deeply, one reacts more negatively to those envied (Cohen-Charash & Mueller, 2007). Their study shows that high levels of envy are related with higher levels of harming behavior toward the envied person. The emotional consequences of workplace envy are viewed with negativity and hostility towards the envied person and negative outcomes for the self. In particular, scholars have identified various consequences of envy that serves to degrade organizational relationships (see meta-analytic review, Li, Xu & Kwan, 2021): deteriorating relationship with envied person (Salovey & Rodin, 1984), ostracism (Mao et al., 2021;

Wang & Li, 2018; Yang & Moon, 2019), unwillingness to share information (Dunn & Schweitzer, 2004), knowledge hiding (Weng et al., 2020), desire to harm (Cohen-Charash & Mueller, 2007), deception (Moran & Schweitzer, 2008), lower affective trust (Dunn & Schweitzer, 2004), unethical behavior, not helping envied person (Bamberger & Belogolovsky, 2017; Gino & Pierce, 2010); social loafing (lower effort levels; Duffy & Shaw, 2000), counter-productive work behavior (Kim & Lee, 2021), prosocial and social undermining behavior (Tai et al., 2012), disengagement from moral standards (Thiel, Bonner, Bush, Welsh & Pati, 2021) and emotions of schadenfreude (joy in the failure of envied person; Hareli & Weiner, 2002).

As for individual attributes, envy predicts negative emotions, depression and poor mental health (Smith, Parrott, Diener, Hoyle & Kim, 1999), lack of control, low job satisfaction, low commitment, high absenteeism and turnover intentions (Vecchio, 2005). Although envious persons respond negatively to envy, they can also act positively by capitalizing on benign envy by focusing on improving themselves to "getting ahead" (Lange & Protasi, 2021), help-seeking and learning behaviors (Lee & Duffy, 2019), working harder (Khan, Bell & Quratulain, 2017) and increase work effort (Sterling, 2013) to attain better job performance (Schaubroeck & Lam, 2004).

Many studies have investigated various contextual antecedents of workplace envy (Thompson, Glaso & Martinsen, 2016). Empirical studies also suggest that the predicting factors can be classified as either personal/ individual or contextual/ situational (Lyu, 2014; Salovey, 1991). Table 2.1 presents a view of the existing literature on the antecedents of envy in the workplace.

Insert Table 2.1 about here

Vecchio (1995) introduces his seminal model of how envy is developed in the workplace: (i) arising from precipitating (triggering) events that represent either potential or actual threat, (ii) recognition of a rival, which is the main appraisal (e.g., a rival getting promotion), (iii) cognitive appraisal of loss to the rival which is influenced by individual attributes, work unit attributes or organization attributes, (iv) affective response to the perceived loss (e.g., negative emotions toward the envied person), (v) envious person's reduced sense of self-esteem and control and (vi) cognitive appraisal of coping responses to reduce self-threatening feelings which may be denial or avoidance reaction, seeking emotional support or other coping strategies which are influenced by individual attributes, work unit attributes or organizational attributes. In his paper, Vecchio (1995) suggests further research on whether employee envy is related to organizational constructs such as LMX in which out-group members should experience envy relative to in-group members due to their perceive differences in the quality of the LMX working relationships and the perceive differences in reward allocations.

2.1.5 Leader-member exchange social comparison (LMXSC) and envy

A voluminous body of literature shows that high-quality LMX employees perceiving that they have better exchange relationships with their leader are likely to receive tangible and intangible benefits than their co-workers in the same workgroup. Traditionally, research has shown

that high-quality LMX employees show evidence of better job satisfaction, job performance and organizational citizenship behavior (Vidyarthi et al., 2010). Furthermore, based on social exchange theory (Blau, 1964), high-quality LMX employees are obligated to repay their leaders, increase efforts to become more committed to the organization, better in-role and extra-role performance (Hu & Liden, 2013; Lee et al., 2019). While the positive outcomes of high-levels LMXSC perceptions are obvious, there is a lack of focus on the fallout of low-levels LMXSC perceptions that can lead to completely different outcomes (Sharma et al., 2020).

This research addresses this shortcoming in the literature by postulating that employees perceiving low levels of LMXSC may experience negative emotion of workplace envy directed towards their star employees after perceiving that what they receive is less favorable compared with them. Star employees are often seen as high-quality LMX employees as leaders spend more quality time and trust them to work and perform at a high level. According to Vecchio's (1995) model, leaders differentiate between subordinates should generate envy among subordinates. Although the situation may not seem fair or deserved, envy can still be generated towards the star employees. To support this position, this research offers the following argument. In most of the organizations, owing to their position, leaders have the most powerful resources regarding jobs assignment, promotions and rewards and are possible sources, neutralizers or amplifiers for social comparisons that affect employees' emotions. Employees who perceive high LMXSC are expected to enjoy more favorable opportunities, including good performance rating, promotions and rewards from the leader, it might be a different situation for those with low LMXSC perceptions. Driven by employees' tendency of social comparison (Festinger, 1954), each employee can compare what he or she receives and what others receive from the same leader. Accordingly, when low-quality LMX employees fail to possess enough of these attributes that they covet, it is likely to affect their

attitudes and behaviors. Low-quality LMX employees can cognitively evaluate that in terms of closeness to the leader, disadvantageous position and receiving lesser allocation of support. As there are limited opportunities or scarce resources such as promotions in the organizations, low-quality LMX employees are unlikely to turn a blind eye and disregard this unfavorable social comparison information as they also desire to have them. As Cohen-Charash (2009, p.2129) notes that "when person A notices that a similar other, person B, has something (e.g., promotion) that person A wants but does not have, and the desired object or condition (e.g., promotion) is important to A, A will probably experience envy". Thus, when low-quality LMX employees notice that star employees have a close, good working relationship with the same leader (i.e., high-quality LMX), and it is important to them (e.g., promotion), the low-quality LMX employees may likely to experience envy. In addition, the disadvantageous position affects low-quality LMX employees' status in the workplace as the desire for status is one of the most basic human needs (Anderson, Hildreth & Howland, 2015). Thus, low-quality LMX employees' cognizant of their lower status, quality of LMX relationship and access to resources as compared to the star employees are likely to experience negative emotions. Feelings of inferiority and dissatisfaction would signal that they are being treated unfavorably by the same leader who treats the star employees favorably. Specifically, low-quality LMX employees would express bitterness, resentfulness of the star employees who enjoy disproportionately better access to resources due to their close relationship with their leader. This research therefore postulates that low-quality LMX employees' cognizance of their lack of status compared to star employees with better LMX relationships with the same leader would give rise to envy.

Empirical studies support this research's argument that LMXSC is a predictor of envy (Pan et al., 2021; Sharma et al., 2020; Weng et al., 2020). Table 2.2 presents a view of the empirical studies on LMXSC as the predictor of envy in the workplace.

Insert Table 2.2 about here

As evidence, empirical studies suggest that LMXSC is a predictor of envy, only one study (Pan et al., 2021) investigates why and how the two types of envy can be elicited. In sum, this research postulates that low LMXSC perceptions are associated with two types of envy directed towards the star employees with the same leader.

2.1.6   Help-seeking

Scholars have noted the importance of employee help-seeking in organizations. Capers and Lipton (1993) document how the Hubble Space Telescope development team failed to solicit help for technical problems that they were unable to solve on their own. That costs the company time and millions of dollars when launching a space telescope with a flawed mirror. Prior research on help-seeking suggests that help-seeking is an important step to problem solving and learning in organizations (Nelson-Le Gall, 1985). Although help-seeking is viewed as important and beneficial, there are social psychological costs as help-seeking has also been recognized as a

degrading action that implies incompetence and dependence, and hence to be avoided if possible (Lee, 1997; Nelson-Le Gall, 1985).

In organizational context, help-seeking is a social and interpersonal dynamic and calling on co-workers for instrumental and socio-emotional help is an important and valuable strategy (van der Rijt, Van den Bossche, van de Wiel, De Maeyer, Gijselaers & Segers, 2013) to improve employee job performance and well-being (Nadler, Ellis & Bar, 2003). While help-seeking behavior receives significant focus in the organizational literature (Nadler et al., 2003), the understanding of its antecedents and consequences are surprisingly limited and largely unexplored (Bamberger, 2009; Lee, 1997). In addition, research on factors affecting employee help-seeking behavior focuses primarily on individual attributes and relatively little research examines the contextual variables of the help-seekers' perceptions of potential help providers and the mechanisms in the organizational setting (Cleavenger, Gardner & Mhatre, 2006).

Help-seeking is defined as "an informal, interpersonal activity in which individuals deliberately approach others whom they consider to be better endowed with the skills, capabilities or resources required to manage some problem." (Bamberger, 2009, p.51). In general, help-seeking is an interpersonal process by which one deliberately solicits a co-worker's emotional or instrumental assistance to manage a work or non-work problem (Bamberger, 2009). Help-seeking is the act of asking others for assistance, advice, information or support (Lee, 1997). Nadler (1991) notes that a help-seeking interaction comprises of three elements: (i) a person in need of help, (ii) the source of help, and (iii) a specific need for help. We note that first, help-seeking behaviors are related to specific problems as without problems there is no need to seek help (Lee, 1997). Second, help-seeking behaviors are interpersonal, involving more than one person. Third, help is sought

from individuals who are perceived as more knowledgeable and who are able to extricate one from his/her problems (Nadler et al., 2003). Fourth, help-seeking behaviors are proactive; help-seekers actively decide whether they need to get help, whom to seek help from and how to initiate connection with help-givers (Lee, 1997).

The help-seeking literature classifies different forms of help-seeking behaviour based on two different approaches: process and content (Bamberger, 2009). In the process approach, help-seeking is distinguished between autonomous and dependent help-seeking. In autonomous help-seeking, individuals seek help to become more independent; that is, one solicits the means to solve the problem by him or herself. In dependent help-seeking, individuals rely on others to solve an immediate problem usually with a complete solution with little attention paid to the process leading to the solution of the problem (Nadler, 1998). In the content approach, help-seeking is distinguished between instrumental and emotional help-seeking. Instrumental help-seeking involves seeking help that is tangible in nature (e.g., asking for human capital, equipment) for fulfillment of the job. On the other hand, emotional help-seeking involves seeking help that is non-tangible (e.g., relationship problems) and not directly for fulfillment of the job. It is likely personal in nature and involves the sharing of intimate thoughts and feelings. However, the boundaries between these two content approaches are not always clear (Bamberger, 2009). It is useful to distinguish between these different forms of help-seeking as the processes and consequences differ in some ways (Bamberger, 2009).

Related concepts similar to proactive help-seeking behavior in organizations and used interchangeably include feedback seeking and information seeking (Bamberger, 2009). Feedback seeking refers to a self-evaluation process, searching for proactive feedback information in day-

to-day acts (Anseel, Lievens & Levy, 2007). For example, proactive feedback seeking behaviors are produced where employees gauge discrepancies between their performance and goals (Ashford & Tsui, 1991). Information seeking is defined as the proactive search for advice, information and knowledge (Borgatti & Cross, 2003). Morrison (1993) describes an example of information seeking where newcomers entering a new workplace environment proactively seek information for guidance in a new job, ranging from task mastery, role clarification, acculturation to social integration. Given that the above behaviors are proactive in nature, and that help-seeking can occur concurrently with feedback seeking and information seeking, they appear to be indistinguishable (Tyre, 1992). However, help-seeking behavior is distinct from feedback seeking and information seeking in two ways: (i) help-seeking exists when there is explicit problem to solve, whereas feedback seeking and information seeking occur even when no problem exists, (ii) help-seeking is grounded in notions of social exchange whereby individuals act out of self-interest. It also requires the help-seeker to initiate an interaction with help provider whereas in feedback seeking and information seeking, one can obtain feedback cues and information from the environment by gleaning, observing and monitoring, and at times without interaction with other people (Ashford & Tsui, 1991). In sum, help-seeking behavior is requesting help from someone to obtain specific information or to solve a challenging work-related problem.

Nadler (1991) argues that an understanding of the help-seeking process will result in the design of effective help programs to better leverage available resources and improve employee coping. Aleven et al. (2003) discuss a model of help-seeking process developed by Nelson-Le Gall (1981) for interactive learning environment. The model consists of five steps: (i) awareness of need for help, (ii) decide to seek help, (iii) determine potential help providers, (iv) define strategies to seek help and (v) evaluate the quality of help received. Bamberger (2009) expresses the lack of

a work-based help-seeking model and proposes a model that integrates many of the individual-level and contextual factors noted earlier into a model based on the theory of reasoned action (TRA; Fishbein & Ajzen, 1980) and informational processing theory (IPT; Anderson, 1982). This step-based, process model in which personal and social factors shape beliefs and expectations that influence attitudes toward help-seeking that in turn determines the likelihood that an individual will proactively seek help.

Extant research has documented that several factors have the potential to elicit help-seeking behaviors. Research in the predictors of help-seeking behaviors in organization settings focuses on the individual difference's variables, such as age, gender, education, race, socio-economic status, self-esteem, attachment style, shyness, self-efficacy, self-monitoring, power motivation and achievement motivation (Bamberger, 2009). Scholars also examine the situational factors that affect the likelihood of help-seeking. In addition, research also focuses on the relational characteristics of potential help providers (source attributes) as predictive of help-seeking behavior. Table 2.3 presents a view of the existing literature on the antecedents of help-seeking.

Insert Table 2.3 about here

For instance, Lee (1997) and Mueller and Kamdar (2011) examine factors of weighing the instrument value, benefits and costs of help-seeking to reduce uncertainty and preserving face. Van der Rijt et al. (2013) examine whether the nature of the problem is perceived as embarrassing; to minimize damage to the self-image and their public image. Bamberger (2009) studies factor on

without revealing deficiencies, inadequacy, incompetence or insecure. Sandoval and Lee (2006) examine how without revealing implicitly acknowledge dependence; making one feel inferior. Mueller and Kamdar (2011) examine obligation of future reciprocation, norms of reciprocity; reciprocation costs. Further, help-seekers' perceptions of source's accessibility (Vancouver & Morrison, 1995), trust (Hofmann et al., 2009), expertise or knowledge (Nadler et al., 2003; Vancouver & Morrison, 1995), relationship quality (Vancouver & Morrison, 1995), reward power (Ashford & Tsui, 1991; Vancouver & Morrison, 1995) and hierarchy or status (Bamberger, 2009). Besides predicting the likelihood of seeking help, these factors mentioned can also predict the frequency of seeking help and quality of the help.

Vancouver and Morrison (1995) suggest that when employees have a poor relationship with their leader, they are more likely to seek help from co-workers. The poorer the relationship, the more likely the source will react negatively to help-seeking request and the more likely the quality of the help will not be in a sensitive or constructive manner. In addition, they suggest that low performers are unlikely to seek help from persons in positions of power (reward power) or higher status who make decision on performance evaluations or rewards to avoid looking bad (impression management) to protect their ego and image. In other words, the perceived ego and social costs of help-seeking will be lower, and the quality of the help obtained is likely to be more detailed and helpful from co-workers.

In sum, empirical studies on employee help-seeking behavior investigate individual difference variables (i.e., if certain types of people are more likely to seek help than others), situational variables (i.e., help-seeking context) and relational characteristics variables (perceptions of help providers' attributes) on the likelihood and frequency of seeking help from a

particular provider. In general, individuals' perceptions of the relative benefits and costs of help-seeking influence help-seeking behaviors. Variables that increase the perceived incremental value of help are related to higher probability and higher frequency of help-seeking whereas variables that increase the perceived psychological costs are related to lower probability and frequency of help-seeking (Nadler et al., 2003). The consequences of employees' help-seeking lead to better individual and team performance and employee well-being as it reduces the level of work-related uncertainty (Bamberger, 2009).

As apparent from the literature, little research focuses on the help-seeking behavior of envious people due to LMX differentiation, for instance, what factors that encourage and discourage envious people's initial intentions to seek help and whether these intentions lead to actual help-seeking, thus research on the underlying dynamics of envious people's help-seeking is warranted. This research suggests that low-quality LMX employees via benign envy would seek help from star employees, and in turn benefit both oneself and the organization. Recalling that in benign envy the focus is not on the superior other, but rather on the envy object, the motivation consequences of benign envy is to close the gap through self-improvement rather than interpersonal destruction (Crusius & Lange, 2014). The current research focuses on explaining how low-quality LMX employees choose star co-workers in the same workgroup for help via benign envy.

2.1.7 Knowledge hiding

Knowledge hiding is defined as a deliberate act by an individual to withhold or conceal information that has been requested by another individual (Connelly, Zweig, Webster &

Trougakos, 2012). Empirical studies have shown that knowledge hiding is a pervasive and insidious behavior in the workplace (Serenko & Bontis, 2016). For instance, 76% of the workers in U.S. and 46% Chinese workers had been involved in knowledge hiding in the workplace (Pan et al., 2018).

Knowledge hiding is problematic as it is detrimental (Černe et al., 2014) and can cause economic losses to organizations (Zhao, Xia, He, Sheard & Wan, 2016). Within an organization, knowledge is associated with ideas, information, and experience needed to accomplish a task (Bartol & Srivastava, 2002). Organizations recognize and emphasize the importance of knowledge management as it can affect the employees' and firms' performance in a competitive economy. The success of an organization's knowledge management initiatives hinges on knowledge sharing among employees. Knowledge sharing is one of the fundamental means of knowledge management, whereby expertise and knowledge are transferred between employees who have it and those who need and request it (Wang & Noe, 2010). As the practice of knowledge sharing by employees are often discretionary and not obligatory, organizations often rely on employees' sense of organizational citizenship behavior (OCB; Organ, 1988) and goodwill as organizations are not able to enforce employees to share their knowledge (Kelloway & Barling, 2000). Even when encouraged and rewarded, employees are often not motivated and are reluctant to share knowledge (Bock, Zmud, Kim & Lee, 2005). In addition to unwillingness to share knowledge, employees may resort to knowledge hiding which is viewed as unethical, unhealthy, and further impedes the employees' and organizations' growth and success (Serenko & Bontis, 2016).

Knowledge hiding exists frequently in the workplace, and it is important to study it (Siachou, Trichina, Papasolomou & Sakka, 2021; Trichina, Papasolomou & Sakka, 2021).

According to Siachou et al. (2021), the consequences of knowledge hiding can be classified into two broad categories: (i) those hurting employees at individual level and (ii) those impacting teams or groups in the workplace. The negative consequences of knowledge hiding may be devastating, hurting the organization's competitive advantage (Hosseini & Akhavan, 2017), reduce social support (Černe, Nerstad, Dysvik & Skerlavaj, 2014), organizational commitment (Serenko & Bontis, 2016), organizational innovativeness (Connelly & Zweig, 2015), profitability (i.e., costing the Fortune 500 companies to lose USD31.5 billion annually; Babcock, 2004), job satisfaction (Offergelt, Sporrle, Moser & Shaw, 2019), team satisfaction (Zhang & Min, 2019), individual (Chatterjee, Chaudhuri, Thrassou &Vrontis, 2021) and team performance (Zhang & Min, 2019), team (Bogilović et al., 2017; Fong, Men, Luo & Jia, 2018) and individual creativity (Bogilović et al., 2017; Černe et al., 2014) and promotes turnover intention (Serenko & Bontis, 2016), decrease interpersonal distrust (Černe et al., 2014) and increase workplace deviance (Singh, 2019).

Knowledge hiding is a dyadic process involving the knowledge hider, the one who hides knowledge, and the knowledge seeker, the one who requests knowledge. Employees working together in a workgroup often make requests and seek knowledge and information regularly from their co-workers. In general, employees seek knowledge and information from their co-workers whom they perceive to have relatively more knowledge and information of the task at hand.

Connelly et al. (2012) states that knowledge hiding is implemented through three separate but related strategies such as rationalized hiding, playing dumb, and evasive hiding. In rationalized hiding, the attempt is made to provide an explanation or justification for failing to provide the requested information by "either suggesting he or she cannot provide the information or blaming an external factor". On the other hand, playing dumb involves deception and refers to the

knowledge hider pretending to know nothing about the requested information and not wanting to help. The third form of hiding, evasive hiding, involves giving unrelated, incorrect information or making promises to help in the future that are not likely to be fulfilled (Connelly & Zweig, 2015). As far as deception is concerned, both playing dumb and evasive hiding comprise deception, whereas rationalized hiding might not as it could be due to confidentiality (Pan, Zhang, Teo & Lim, 2018). Thus, knowledge hiding is not always considered as deception and it could have positive intentions such as "white lies" to protect the interests of other parties and confidentiality (Connelly et al., 2012).

It is noteworthy that knowledge hiding is a distinct construct from knowledge sharing and one should not assume that they are opposite of each other (Connelly et al., 2012; Serenko & Bontis, 2016). Knowledge sharing and knowledge hiding both have different motivations, sources and outcomes (Connelly et al., 2012; Tsay, Lin, Yoon & Huang, 2014). In general, the motivation for knowledge sharing is primarily prosocial, while knowledge hiding is primarily self-focused and instrumental. In addition, an individual can be both knowledge sharing and knowledge hiding at the same time (Ford & Staples, 2008). Knowledge sharing does not mean a decrease in knowledge hiding as it is possible to share large amounts of unimportant knowledge while concealing critical and important knowledge simultaneously (Pan et al., 2018).

In addition, knowledge hiding is also different from knowledge withholding. An employee who withholds knowledge exhibits the counterproductive behavior of giving less effort than necessary to contribute knowledge (Kidwell & Bennett, 1993; Lin & Huang, 2010). Employees may intentionally or unintentionally withhold knowledge because they are not aware of whether it is useful or not (Wang, Lin, Li & Lin, 2014) whereas knowledge hiding is intentional and occurs

when useful information is concealed from requestors. In addition, knowledge withholding behavior can either be targeted at organizational level or individual level whereas knowledge hiding is an individually targeted behavior to intentionally conceal knowledge from requestors (Pan et al., 2018).

The concept of knowledge hiding is also different from knowledge hoarding (Connelly et al., 2012). The act of hoarding knowledge is the accumulation of knowledge, which may or may not be shared in the future. It also hides the fact that the person is in possession of this knowledge (Connelly et al., 2012). In general, under the concept of knowledge hiding, knowledge is intentionally concealed, whereas knowledge hoarding is the accumulation of knowledge that requires no request or request from other people.

Knowledge hiding appears to be similar to counter-productive work behavior (CWB) as these two behaviors is viewed as moral disengagement (Connelly et al., 2012). CWB consists of the intention or actions taken to harm the organizations and stakeholders (Spector & Fox, 2005), whereas knowledge hiding behavior may not be intentional. For instance, rationalized knowledge hiding can be either to protect oneself or avoid harming another person. In addition, knowledge hiding is specifically directed towards individuals, whereas CWB can either be directed towards individuals (e.g., abusing someone) or the organizations (e.g., sabotage, theft).

Extant research has also identified several factors that have the potential to elicit knowledge-hiding behaviors. A literature review by Sheidae, Rajabion, Philsoophian and Akhavan (2021) present sixty-three antecedents, broadly categorized into eight factors: (i) job related, (ii) interpersonal related, (iii) organizational culture related, (iv) attitude related, (v) personality traits and behavioral characteristics related, (vi) knowledge related, (vii) leadership related and (viii)

supervisor related. Table 2.4 presents a view of the existing literature on the antecedents of knowledge hiding.

Insert Table 2.4 about here

In sum, it is important to understand what is and what is not knowledge hiding (Zhao et al., 2019). Since knowledge hiding is ubiquitous, highly detrimental and occurs between co-worker dyads, it is crucial to investigate its antecedents, so that interventions can be designed that minimize its incidence within organizations. In addition, although both knowledge sharing and knowledge hiding behaviors are in the area of knowledge management, studies on knowledge hiding is underrepresented in knowledge management research as the focus is on knowledge sharing (Serenko & Bontis, 2016), this calls for further study to close the gap. This research investigates individually targeted intentional hiding of the requested knowledge from star co-workers, namely, from the perspectives of knowledge hiding by low-quality LMX employees.

2.1.8 Deservingness

Deservingness is defined as judgements related to outcomes that are achieved by another person's action, either directly or inferred directly (Feather, 1999). The concept of deservingness is a core element of beliefs about justice; a central element of fairness perceptions (Feather, 1999). Feather (1999) further describes the concept of deservingness is considered in relation to whether the outcome for oneself or other is contingent on the situation; it is deserved if the situation matches

the outcome, otherwise it is undeserved. Deservingness theory (Feather, 1999) assumes that "good outcomes (e.g., success) that follow positive actions (e.g., hard work), and bad outcomes (e.g., failures) that follow negative actions (e.g., lack of effort), are both perceived to be deserved. In contrast, good outcomes (e.g., success) that follow negative actions (e.g., lack of effort), and bad outcomes (e.g., failures) that follow positive actions (e.g., hard work), are both perceived to be undeserved (Feather & Nairn, 2005, p.89). For example, an employee who worked hard and performed well and got a good performance appraisal is perceived to deserve it (as the situation of good job performance is consistent with getting a good performance appraisal), whereas a situation in which an employee who performed poorly and got a good performance appraisal is perceived to be undeserved. These examples show the principle that judgements of deservingness occur when there is a match or consistent between the outcome and the action that produced it, and that judgements of undeservingness occurs when there is a mismatch or inconsistent between the outcome and the action that produced it.

Studies have suggested that perception of deservingness may be mediated by focus of concern; the envious persons focused on the object or on the envied person (Protasi, 2016). If the envious person cares about the envied person's superiority and reduces the comparative advantage by leveling down, then it is likely to rationalize their success as undeserved. On the contrary, if the envious person cares about the object, then he is likely to rationalize their success as deserved. An appraisal of undeservingness may result from disliking the envied person and the perceived immoral character of a person (Feather, 1999). Van de Ven et al. (2012) suggest that people are more likely to consider persons that they liked as more deserving of advantages compared to disliked persons. Other variables correlating with lower appraisals of deservingness are narcissistic

aggression or the signals that the envied person's success was not based on invested effort but on natural talent (Lange et al., 2016).

As we investigate envy experiences, we focus on perceived undeservingness; a mismatch between a person's positive outcome (e.g., success) and negative action (e.g., lack of effort). Parrot (1991) argues that an envious person will appraise the perceived deservingness of the actions and outcomes of the envied person. The relation between envy and deservingness has been examined, with undeservingness as a key factor of envy (Ben-Ze'ev, 1992). Although prior research suggests subjective unfairness is associated with envy (Smith, 1991; Smith, Parrot, Ozer & Moniz, 1994), it did not differentiate benign envy from malicious envy and take into account its dual facet nature (van de Ven et al., 2009). In this current study, as lower LMXSC perceptions may lead to benign envy and/ or malicious envy, the important question to be answered is when benign envy and malicious envy are more likely to be triggered in considering perceived deservingness of the star workers. Thus, perceived deservingness of star workers relates more to outcomes that are earned or achieved through a person's action.

2.2   Hypotheses Development

In this section, we formulate the hypotheses for the present study. The literature review suggests that LMXSC will have a significant impact on the behavioral consequences of these comparisons. We suggest that LMXSC will shape emotional experience and that these emotions will motivate specific types of organization behavior including help-seeking and knowledge hiding from star co-worker. In addition, LMXSC will impact the amount of benign and malicious envy an individual experiences at the workplace. These two different types of envy will in turn elicit

workplace behavior. The perceived deservingness of star co-worker moderates the relationship between LMXSC and the two types of envy.

Therefore, in this study we examine the following: (i) how LMXSC impacts the discretionary workplace behavior of help-seeking and knowledge hiding from star worker; (ii) whether different types of envy mediate the relationship between LMXSC and discretionary workplace behavior and (iii) how perceived deservingness of star co-worker moderates the relationship between LMXSC and different types of envy.

2.2.1 LMXSC and help-seeking from star co-worker

Help-seeking in the workplace involves the efforts of employees to secure assistance from other persons (Bamberger, 2009). Although prior research has primarily examined the relationships between helpers and help-seekers (Nadler, 1991, 1998), these studies focused on the individual attributes of employees. Specifically, not much research has examined contextual factors, such as LMX differentiation in the workplace and their effects on help-seeking behavior (van der Rijt et al., 2013).

Nelson-LeGall's (1985) model addresses the steps in help-seeking and one of the steps involve identifying potential helper(s). Although few studies have explored factors that encourage or discourage workers from seeking help at work, it is likely that employees seeking help will consider who can help them and the benefits and costs associated with seeking help from each of them. They may also be concerned about being refused assistance by a potential helper (Shapiro, 1984). Hence, the benefits and social costs of help-seeking from star co-workers may have

implications for low LMXSC employees, making them hesitant to seek help. We argue that low LMXSC perceptions employees may not seek help from star co-workers. The qualities of relationship impact help-seeking. Low-quality LMXSC employees' unwillingness to seek help from their star co-workers is affected by two basic psychological needs: independence and belongingness.

As alluded, the construct of LMXSC is based on the notion of employees evaluating how their relationship with the leader compares with others' relationships with the leader (Vidyarthi et al., 2010). A leader's relatively unfavorable treatment to low LMX employees (i.e., out-group members) can be considered as a symbol of low LMXSC employees' inferior social status. The lower the LMXSC, the lesser the employees receive a share of their leader's limited resources and consequently, perceived relative lower status compared to their co-workers. Within the boundary of social psychology, the idea of giving help is a signal of strength, resourceful and high status and seeking help a signal of relative weakness and lower status (Nadler, 2015). People with low status seeking help were interpreted as chronically incompetent, leading to dependency-oriented assistance and feeling inferior to another person. By seeking help from star co-workers, low quality LMX employees make an admission of their relative inability, incompetence and acknowledge that they need to be dependent on knowledgeable or powerful star co-workers (Nadler, 2015) which conflicts with the basic human need for independent and self-reliance. Furthermore, Lee (1997) suggests that help-seeking entails social cost and more help-seeking between equal-status individuals (i.e., equal LMX) as seeking help from higher status implies incompetence. Therefore, low-quality LMX employees may be unlikely to seek help from their star co-worker as this acknowledges incompetence, dependence on another person and putting them in a diminishing power position.

Studies have indicated that dependency on similar others is more threatening than dependency on dissimilar others (Nadler, 2015). The interpretation from these findings suggests that in congruence with social comparison theory (Festinger, 1954), the self-threat to low quality LMX employees implied in dependency is meaningful when the helper is a relevant comparison other. As such, recipients of help from a star co-worker under the same supervisor experienced the receipt of help as more threatening than those who received the same help from others within or outside the organization. Thus, this dependency on star co-workers is a threat to low quality LMX employees' self-esteem when seeking help, exacerbating their perceptions of inequality and feelings of inadequacy relative to the star co-workers. Due to these implications of their relatively low LMX status and risk of exposing themselves to being rejected, low quality LMX employees may prefer to risk continued difficulties and failure rather than seek help from star co-workers. In other words, the perceived ego and social costs of help-seeking will be higher, and this suggests that low quality LMX employees are unlikely to seek help from persons with higher LMX quality.

In addition, low-quality LMX employees likely do not have strong affective bonds with the star workers as they dislike and do not trust them. In such relationships, they see themselves as differentiated from the star co-worker and do not share a feeling of belongingness and closeness (i.e., out-group member). Studies have found that there are high perceived costs associated with seeking help from individuals with whom one has a poor relationship (Anderson & Williams, 1996). Employees perceive that in poor relationships, the disclosure of problems or help seeking will result in a negative evaluation. As star co-workers have better relationships with the supervisor, low LMSXC employees do not trust one another with not leaking private information. Klein (2013) asserts that genuine closeness with others is characterized by gratitude and gratitude is a warm, friendly and positive feeling. By seeking and receiving help from star co-workers, low LMXSC

employees do not have a positive feeling as they feel indebted and obliged to return a favor or expectation of some future reciprocation; this so-called norm of reciprocity (Levy et al., 1995). Low LMXSC employees perceived ability to reciprocate may impact their decision to seek help. With respect to either difficulty in achieving or no desire to maintain closeness or social relations with star co-workers (i.e., low LMX is mostly not reachable for "in-group members) added to the concerns of indebtedness, low LMXSC employees will likely not seek help from the star co-workers.

In sum, little is known about help-seeking in the workplace. In the context of working relationships, employees would assess the quality of the working relationship and link the judgement about the costs associated with seeking help from potential helper. This study examines situations in which help-seeking from star co-workers is unlikely from low LMXSC employees. The quality of the working relationship between these individuals will likely affect one's willingness to seek help. By integrating a social comparison perspective with LMX literature suggests that low LMXSC employees will likely not seek help from star co-workers. Taken together with the relationship between low LMXSC and help-seeking from star co-workers, the following is hypothesized:

> *Hypothesis 1 (H1): Low LMXSC employees will be less likely to seek help from star co-worker.*

2.2.2   LMXSC and knowledge hiding from star co-worker

Knowledge hiding from star co-workers is proposed as one of the two ending points (besides, help-seeking from star co-workers) in our research model because of its importance to individuals' and organizations' performance. Previous studies have found that employees with low LMXSC are consequently essential to understanding employees' attitudes and behaviors at work (Pan et al., 2021). Social comparison theory (Festinger, 1954) suggests that low LMXSC employees may display hostile behavior towards co-workers with privileges from their supervisors (Tse et al., 2018). However, few researchers have examined the consequences of employees' perceptions of relative deprivation at LMXSC, specifically their effects on knowledge hiding, despite an increasing awareness of the importance of employee emotions (Matta & Van Dyne, 2020).

We propose that employees' upward LMXSC perceptions toward star co-workers affect their knowledge hiding behavior from star co-workers. As social comparison theory (Festinger, 1954) suggests, when employees evaluate their state and properties, they tend to compare themselves with their co-workers, supervised by the same leader. As such, LMXSC phenomenon occurs when employees recognize that they have a relatively (un)favorable situation regarding their degree of importance or similarity with another co-worker (Tse et al., 2012). When the comparison falls short of low LMXSC perceptions employees' expectations and experiencing unpleasant events at work, negative emotions are elicited and employees are likely to display negative work-related behaviors, enacting hostility toward high LXMSC co-workers. Prior research has found that low LMXSC perceptions employees are likely to experience negative emotions and behaviors, such as low job performance and increase in counterwork productive behaviors (Vidyarthi et al, 2010). To support our argument, Weng et al. (2020) have provided

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evidence that there is a direct relationship between LMXSC and knowledge hiding on the basis of social comparison.

Collaboration, sharing of information, and positive responses to requests from others can be affected by interpersonal relationships (Connelly et al., 2012). It is expected that low-quality working relationships will be characterized by a lack of mutual concern and lack of a sense of responsibility for providing help when needed. In light of social comparison theory (Festinger, 1954), if low LMXSC employees perceive their status of out-group member as being disadvantaged, their motivation is to harm the advantaged rather than collaborating and supporting. In addition, on the basis of social exchange theory, the negative reciprocation of not providing help and knowledge served to restore balance and eliminate anger and frustration. A plausible explanation why low LMXSC employees hide knowledge is that they see knowledge as their personal, valuable asset and are motivated to hide it to protect their own interests (Peng et al., 2020). Knowledge as a valuable resource can be withheld to increase one's power or status and to prevent others from increasing their relative power or status. Consequently, low LMXSC employees are motivated to engage in knowledge hiding behaviors from star co-workers as the loss of knowledge is perceived as a threat, also to restore their positive self-evaluation (Tesser, 1988). Thus, consistent with the conservation of resource (COR) theory, low LMXSC employees have an inherent desire to maintain, protect and build resources (knowledge) and the potential loss of these valuable knowledge is a threat to them (Hobfoll, 1989). Besides protecting their own interests, In addition, on the basis of social exchange theory, the negative reciprocation of not providing help and knowledge served to restore balance and eliminate anger and frustration.

In sum, as research in knowledge hiding in the workplace is scare, it seems plausible that being subjected to LMXSC may impact whether and how knowledge is hidden. This study examines situations in which knowledge is requested by star co-workers and that knowledge is hidden by low LMXSC employees. As knowledge hiding occurs between co-worker dyads, so the quality of the relationship between these individuals will likely affect how one responds to the other's request for knowledge. Engaging in knowledge hiding behavior could possibly restore or maintain positive self-evaluation and balance the mental state of low LMXSC employees. By integrating a social comparison perspective with LMX literature suggests that low LMXSC employees instigate knowledge hiding behavior from star co-workers. Taken together with the relationship between low LMXSC and knowledge hiding from star co-workers, the following is hypothesized:

Hypothesis 2 (H2): Low LMXSC employees will be more likely to engaging in knowledge hiding from star co-worker.

2.2.3   The pathway from LMXSC to help-seeking from star co-worker via benign envy

To understand employees' emotion and behaviors in the LMSXC context, research has explored the effects of envy resulting from social comparison in the workplace. Nevertheless, these studies seem to ignore the fact that there are two types of envy in the workplace – benign and malicious envy (Shu and Lazatkhan, 2017). The important underlying mechanism, that is, dual envy between LMXSC and co-workers' behaviors is examined in this study. We first examine the relationship between low LMXSC and help-seeking from star co-workers via benign envy.

So far, this research theorizes that LMXSC serves as a basis upon which employees compare themselves with others and when they perceive that they fail to have the benefits and rewards that they desire, they feel the pain of envy from the upward social comparisons (Tai et al., 2012). Envy at the workplace touches the heart of envious employees and questions their professional identity. The experience of envy causes envious employees to examine who they are professionally, what they want to be, who they think they are, and what they have not managed to become (Duffy et al., 2008) As envy is an unpleasant and aversive emotional state, envious person often attempt to ameliorate the intensity of the emotion or change the underlying conditions fostering it (Smith & Kim, 2007).

As aforementioned, unfavorable upward social comparisons elicit envy and there are two distinct types of envy, namely benign and malicious envy which caused different effects on the low-quality LMXSC employees. Research on envy shows that benign envy is a form of adaptive and assimilative social comparison-based emotion and when benign envy is produced, low LMXSC employees perceive that they have opportunities to have similar LMX as the star co-worker in the future and are motivated to improve themselves. Rather than feeling demoralized and hostile as with malicious envy, benign envy provides low LMXSC employees a "picture of what they might become" if the envied targets are believed to be similar (Duffy et al., 2008). As a challenge-oriented behavior, low LMXSC employees attempt to even the score by "leveling-up" to improve themselves to match the level of the envied person. Although envy has its dark side in that it could trigger envious employees to undermine the envied targets, research also suggests that envious employees may capitalize on their envy as an impetus for improvement to engage in self-enhancing actions, such as identifying the envied targets as "role model" to actively learn from them through observation and help-seeking instead of undermining the envied targets to reduce

the comparison gap (Cohen-Charash & Mueller, 2007; Eissa & Wyland, 2016; Kim & Glomb, 2014; Lee & Duffy, 2019; van de Ven et al., 2011).

Social learning theory suggests that it is not uncommon for people to emulate the behaviors of their role models at the workplace (Bandura, 1977). These studies show that the desire to improve performance is resulted when low LMXSC employees perceived that self-improvement is possible to attain. Studies have also shown that envious employees are motivated to improve if they believed that they can control their own circumstances (i.e., personal control) relative to the comparison other (Major, Testa & Blysma, 1991). Specifically, accordingly to achievement-goal theory (Dweck, 1986), individuals who lean toward learning goal and performance goal motivation, and when taking self-perceptions of ability and personal control into consideration, will likely associate with help-seeking (Geller & Bamberger, 2012).

In addition, drawing upon social functions of emotions theory (Fischer & Manstead, 2008; Keltner & Haidt, 1999) suggests that emotions in the workplace can help individuals to compete for social position relative to others (competing function) and to establish social relationships (coordinating function) for social survival. In line with these interpersonal functions of emotions perspective, envious employees may reduce the social comparison gaps through a form of peer-based learning, i.e., self-initiated help-seeking from the star co-workers that they envy (Lee & Duffy, 2019). Although social undermining may be used as the competing function to reduce the gap, it does not align with the coordination function of emotion, as over time it comes with social costs of damaging relationships, self-image, and reputation at work. Alternatively, through constructive actions of competing function by help-seeking from the envied targets can enhance the envious employees' job performance yet fulfilling the coordination function of maintaining

relationship with envied targets. Although there are other constructive ways to reduce the gap, envious employees are motivated to seek help directly from the referents to address a complex problem at hand as they are perceived to possess the knowledge and have superior strategies for success at work (Crusius & Lange, 2014).

Although many scholars have examined the antecedents of help-seeking (Bamberger, 2009), limited studies have focused on workplace envy as the predictor of help-seeking. Montal-Robsenberg (2017) hypothesizes that envious people will be more reluctant to seek help from envied targets as seeking help poses a high psychological cost of feeling less independence, competence and self-esteem. Li et al. (2021) assert that envy did not significantly affect help-seeking. Specifically, this causes the perceived gap between the envious person and envied targets to be more salient.

In the context of this research, help-seeking serves to satisfy the competing function (enhancing job performance) and at the same time fulfills the coordinating function by establishing positive relationships with the star co-workers. Over time, low LMXSC employees may gain the trust and respect from the star employees who approach them for help and through them to pass positive "word-of-mouth" to their common leader. In a high safe relationship where trust is high with the star employees, low LMXSC employees are more willing to bring up difficult issues and seek help from them (Cross & Borgatti, 2004; Edmondson, 1999). In addition, because of the trust developed, low LMXSC employees trust one another with not leaking information, should these matters come to the attention of their leader, they could severely affect their relationship with the leaders and their careers (Bamberger, 2009).

This research argues that low LMXSC employees with benign envy will directly seek help from the star employees within the same workgroup if they are perceived to possess the knowledge. This is a quick and direct way to attain success similar to what the star employees have achieved. The higher the instrumental value, the more the low LMXSC employees are motivated to seek help from the star employees especially under the conditions of high time pressure when a quick solution is needed to solve a difficult task at hand (Nadler et al., 2003). Tang, Lam, Ouyang, Huang and Tse (2022) in their study show that low LMXSC employees may seek affiliation with star employees to improve their co-worker exchange (CWX), as affiliation and positive relationship can provide instrumental (e.g., obtain information to improve LMX) and emotional benefits (e.g., low stress). Importantly, low LMXSC employees may also seek help directly from the star employees on how to build good relationships with the common leader to interact effectively with the common leader and enjoy the benefits and status that they desire.

To support our argument, prior research has shown that LMXSC can motivate learning behaviour such as observational learning and advice seeking (e.g., Pan et al., 2012). As benign envy is regarded as a predictor of help-seeking (Montal-Rosenberg, 2017) and LMXSC is an important factor to envy (e.g., Hilal, 2022), it is logical that LMXSC will motivate help-seeking through the role of benign envy. Hence, based on the theoretical arguments and empirical support, the following is hypothesized:

Hypothesis 3 (H3): Benign envy mediates the relationship between LMXSC and help-seeking from star co-worker.

2.2.4 The pathway from LMXSC to knowledge hiding from star co-worker via malicious envy

We now examine the underlying mechanism, that is, malicious envy between low LMXSC and knowledge hiding from star co-workers. One area of envy research in organization settings concerns envy and counter-productive work behavior as a result of malicious envy. Although there are many forms of counter-productive behavior to devalue others in the workplace, the link between malicious envy and knowledge hiding seems to be strong. Integrating equity (Adams, 1963) and social exchange (Blau, 1964) theories provide the theoretical underpinnings the relationship between malicious envy and knowledge hiding as both social comparisons and social relationships are involved (Tai et al., 2012). One tenet of the equity theory motivates envious individuals to restore balance when the input/output ratio is negative compared with others' ratio (Adams, 1963). Knowledge hiding is considered as a social exchange on the basis that it explains cooperation between two or more people for mutual benefits, guided by reciprocity norm, rewards and cost-benefits calculus (Cropanzano & Mitchell, 2005). With social exchange theory, malicious envy is suggested to be associated with knowledge hiding such that envious employees acting out of self-interest are most likely to exhibit knowledge hiding behavior as a form of reciprocity when he/she perceives to be treated unfairly (Pradhan, Srivastava and Mishra, 2019). In the same vein, Cohen-Charash and Mueller (2007) based on the social exchange framework argue that perceives unfairness (undeservingness) exacerbates the feelings of envy and in turn higher levels of harmful behavior. According to the aversive function and contrast process of upward social comparisons, when employees' perception of the differences with similar others are unattainable and unchangeable, malicious envy is elicited.

Once malicious envy arises, envious employees attempt to balance what they do not possess with what the superior employees have (Heider, 1958). The central motive of envy is either to level down the envied person or level up oneself to reduce the comparison gap (van de Ven et al., 2009). This process of balancing to "correct" the conditions perceived as the underlying state of relative deprivation, motivates envious employees to resort to different tactics (e.g., removing or destroying the envied object) to influence the envied person's work performance outcomes negatively (Duffy et al., 2012). Thus, when the envious employees perceive that the discrepancy is unlikely to be reduced by effort, not possible to have what the envied employees have and to thereby alleviate the frustration and painful experience of envy, they resort to decrease the discrepancy by "leveling-down" (pulling-down) the envied employees (van de Ven et al., 2009). The two major negative outcomes of malicious envy by leveling down is reducing help and/or harming the envied employees.

A preponderance of envy literature suggests that malicious envy is positively associated with negative outcomes such as hostility (Smith & Kim, 2007), counter-productive work behavior (Cohen-Charash & Mueller, 2007; González-Navarro et al., 2018; Kim & Lee, 2021), organization citizenship behavior (Kim et al., 2010), deception (Moran & Schweitzer, 2008), cheating (Gino, Francesca & Pierce, Lamar, 2010), social undermining (Duffy et al., 2012; Pan et al., 2021), helping behavior (Sun et al., 2021) and knowledge hiding (Weng et al., 2020). Additionally, malicious envy causes the envious employees to focus their attention from the envied object to the envied employees, to the extent of compromising their own success to make them suffer (Crusius & Lange, 2014). Despite the costs of destructive behaviors to the envious employees, they will continue to engage in these aggressive behaviors to aggrandize the self at the expense of the envied employees.

This research examines knowledge hiding as a destructive behavior of the low LMXSC employees produced by malicious envy to not help the star co-workers with the same workgroup. Using Vecchio's (1995) model, upon explicitly being requested for knowledge, the low LMXSC employees perceives that the critical information asked is beneficial to the star employees, it develops a threat-oriented action tendency, and hostility through knowledge hiding is manifested. Under the influence of malicious envy, to mitigate the risk and the pain by refusing to help, the star employees are "pull-down" to match the level of the low-quality employees. Low LMXSC employees may perceive not helping the star employees as conservation of resources (Hobfoll, 1989). Empirical research has supported the notion that not helping via knowledge hiding is a subtle, covert behavior and is less risky to the envious person (Bamberger & Belogolovsky, 2017). As helping is viewed as discretionary, low LMXSC employees' knowledge hiding behavior is less likely to be viewed as norm violating and is less susceptible to punitive action and organizational sanctions than the direct imposition of harm. In this case, the star employees who do not have the requested knowledge are sabotaged, not able to perform the task at hand effectively, job performance suffered, and favorable reputation undermined. Similarly, this weakens the star employees' ability to demonstrate superiority with respect to those parameters for which the low-quality LMXSC employees perceive relative deprivation. Based on the above discussion, this research proposes the following hypothesis:

Hypothesis 4 (H4): Malicious envy mediates the relationship between LMXSC and knowledge hiding from star co-worker.

2.2.5 The moderating role of perceived deservingness of star co-worker

In line with dual envy theory (van de Ven et al., 2009), this research focuses on perceived deservingness of star co-workers as moderator because the social information attributed to a star co-worker status is relevant and serve to determine how low LMXSC employees interpret their position in their LMXSC comparisons and determine whether they experience benign or malicious envy (Lange et al., 2018a; Lange & Crusius, 2015). Miceli and Castelfranchi (2007) assert that causal attributions for outcomes have a critical role in envy experiences. They state that envious people search for casual attribution is initiated if an event or outcome is perceived as negative and important. Based on attributional theory (Weiner, 1985), we suggest that differences in how low LMXSC employees attribute causes to the success of star employees impact their perceptions of deservingness and influences how they feel and react.

Integrating attributional theory and social comparison theory, this research argues that perceptions of a star co-worker status as deserved or undeserved (i.e., self-made star vs political star) play a critical role in transmuting LMXSC perceptions into different envious feelings (i.e., benign and malicious envy). Although research examines non-stars play an important role in the performance of star employees and consequently, star employees' contribute substantially to the organization (Campbell, Liao, Chuang, Zhou & Dong, 2017), little is known about the cognitive processes underlying the behavior of non-stars (i.e., low LMXSC employees) towards star employees and how this influences the emotion and behavior of non-stars. Thus, we extend research to understand due to the relation of LMXSC and dual envy, how and why low LMXSC employees can help themselves and harm star employees' performance, influence by their perceptions of deservingness.

Based on the low LMXSC employees' perceptions of a star co-worker status (i.e., deserved or undeserved), we propose that self-made star attribution qualifies the effect of LMXSC on benign envy whereas political star attribution qualifies the effect of LMXSC on malicious envy. Star status attribution impacts the low LMXSC employees' attribution processes in terms of whether a star co-worker status is attained through personal effort, skills and abilities and/or whether they deserve their star status. Specifically, when low LMXSC employees perceive that the star co-worker status is attained through personal effort (internal casual ascription) and not through pure luck or sponsorship (external casual ascription), and they deserve the star status (i.e., high star co-worker deservingness), which then induces benign envy toward the star co-worker.

In contrast, when low LMXSC employees perceive that the star co-worker status cannot be attained through effort, skills and abilities and through pure luck or sponsorship, and that they do not deserve the star status (i.e., low star co-worker deservingness), which then induces malicious envy toward the star co-worker. Thus, this research suggests that low LMXSC employees who make self-made star status attributions believe that the star co-worker deserves his or her star status through internal casual ascriptions. Therefore, low LMXSC employees who make self-made status attributions are likely to experience benign envy (Lange et al., 2016).

In contrast, low LMXSC employees who make political star status attributions perceive that there is no deservingness of the star status because the external casual ascriptions that underlie their star status are due to luck or sponsorship. Therefore, low LMXSC employees who make political star status attributions are likely to experience malicious envy (Lange et al., 2018b).

We focus on perceptions of deservingness of star co-workers as a key moderator because it play a central role in determining how envy is manifested; whether envy is developed into its

benign or malicious form. Beliefs of deservingness is central to our understanding of how low LMXSC employees react both affectively and behaviorally to action and outcomes of the star employees' advantage. Star status attribution would be expected to moderate judgements of deservingness and undeservingness. In the context of this research, the moderating effect that occur in LMXSC may be in the direction of making the judgements of deservingness or undeservingness more or less pronounced and is contingent on the star employees' actions and outcomes as perceived by the low LMXSC employees.

When low LMXSC employees experience envy and perceive star employees' advantage as deserved, their focus will be on the self, emphasis placed on their own disadvantage; benign envy is manifested and they search for self-improvement (e.g., help-seeking) to diminish their disadvantage. In contrast, Cohen-Charash and Mueller (2007) based on the social exchange framework argue that perceives unfairness (undeservingness) exacerbates the feelings of malicious envy and in turn higher levels of harmful behavior. Therefore, the judgement of deservingness provides information as to which envy emotions will be elicited and thus is an important variable to consider as an appraisal dimension. The perceived deservingness of star co-workers explains the effect of low LMXSC employees' star co-worker attribution in moderating the relationship between LMXSC and dual envy.

To support our arguments, in recent years, scholars have investigated the relationship between LMXSC and knowledge hiding via malicious envy (Zhao et al., 2019) and have found moderators to explain the strength of the relationships (Nandedkar, 2016; Weng et al., 2020). Nandedkar (2016) focuses on low-quality LMX employees who do not have a good relationship with their leader will be envious of their high-quality LMX co-workers and as a result, restrict

knowledge sharing, moderates by equity sensitivity. In addition, Weng et al. (2020) integrate LMX literature with social comparison theory to show that employee's upward LMXSC is positively related to knowledge hiding via envy, moderates by the values of cooperative and competitive goal independence. Taken together, knowledge hiding may be an effective way for the envious low-quality LMX employees when they perceive that it is difficult to restore the discrepancy with the leader, and to restore equity by leveling-down the star co-workers, to reduce the perceived inferiority and in addition to raising their own standing, vented their frustrations and hostility. However, the relationship between LMXSC and help-seeking via benign envy and moderators are not known to explain the strength of the relationships.

Taken together, we propose that low LMXSC employees' perceptions of deservingness of the star employees' advantage moderates the effects of LMXSC on benign and malicious envy. Unfavorable upward comparisons with star employees who deserve the advantage will elicit benign envy, whereas comparisons with those who do not deserve the advantage will elicit malicious envy. Based on the above discussion, this research proposes the following hypotheses:

Hypothesis 5 (H5): Perceived deservingness of star co-worker moderates the relationship between LMXSC and benign envy, such that the positive relationship is stronger when employees hold high rather than low levels of perceived deservingness of star co-worker.

Hypothesis 6 (H6): Perceived deservingness of star co-worker moderates the relationship between LMXSC and malicious envy, such that the positive relationship is stronger when employees hold low rather than high levels of perceived deservingness of star co-worker.

Chapter 3   Methods

3.1   Participants and Procedures

The hypothesized model was tested with participants across China through a third-party Chinese online crowdsourcing platform (www.wjx.cn) that facilitates researchers to efficiently obtain data from working adults, which is similar to Amazon Mechanical Turk online marketplace in the U.S. Obtaining data from these crowdsourcing platforms have been used extensively in academic research and even in legal cases (Aguinis, Villamor & Ramani, 2021). This approach was chosen as it allows access to a randomly large and diverse participant population. Participants were assured confidentiality of their responses and each participant was assigned a unique alphanumeric code.

In order to reduce common method biases, surveys were administered in two waves, two-week apart (Podsakoff, MacKenzie, Lee & Podsakoff, 2003). The dependent variables were assessed separately from the independent and moderating variables. The two-week interval was chosen for practical reasons as a longer time may result in a low response rate due to participants' attrition. Reis and Wheeler (1991) suggest that a two-week interval provides a stable and generalized estimate of social life.

In the first wave of the survey, participants were asked to provide a rating of LMXSC (independent variable), perceptions of deservingness (moderator) and LMX and demographic (control variables). In the second wave which was administered two weeks later, participants were asked to complete the rating of envy (mediator), help-seeking, and knowledge-hiding from star co-worker (dependent variables). The timing of the surveys established a temporal logic that LMXSC

would predict envy, which in turn would be associated with help-seeking and knowledge hiding. As participation was voluntary and anonymous, they were allowed to drop out at any stage of the survey. Participants were awarded RMB9 (about US$1.30) for each completed survey in each round of the survey.

At Time 1, 800 working adults were invited to participate in the study, and they were requested to respond to the items on the independent variable, the moderator and the control variables. A total of 558 participants responded to our request at Time 1 (response rate = 69.75%). At Time 2, we again contacted the participants at Time 1, and they were requested to respond to another follow-up survey containing the items on the mediators and dependent variables. In total, 341 participants responded to our survey at Time 2 (final response rate = 42.63%). Out of the total 341 responses, 48 were discarded due to inappropriate data. Examples of inappropriate data are the participant's tenure in their present organization is less than 1 year and participant's tenure under their current immediate supervisor is less than 1 year. The final sample consisted of 293 responses. In total, 50.30% of the participants were male, 49.7% were female. The mean age of the participants was 31.53 years (S.D. = 5.14). In total, 83.27% of the participants have a bachelor's degree, Participants' mean tenure in their present organizations was 6.12 years (S.D. = 2.99). The mean tenure of the participants under their current immediate supervisors was 4.72 years (S.D. = 2.27). The mean team size of the group under the same immediate supervisor was 13.74 people (S.D. = 12.85). In total, 47.79% of the participants held supervisory positions in the current organization. In total, 62.46% of the participants work in private enterprises, followed by 29.33% of the participants in state-owned enterprises.

3.2   Measures

This research measured all the major study variables with well-validated scales adopted from previous studies. The five research variables are upward leader-member exchange social comparison (LMXSC), perceived deservingness, envy, help-seeking, and knowledge hiding. As the research was conducted in China, the respondents' mother tongue was Chinese, the standard back-translation procedures were followed as suggested by Brislin (1970) in order to ensure equivalency in meanings when translating the items in the survey questionnaire from English into Chinese language. First, the items were translated from English into Chinese. Thereafter, another translator was tasked with translating the Chinese instrument into English. The original English version and the back-translated English version were compared to ensure that no loss of information or change in the meanings was found. Responses to the survey questionnaires were measured using a five-point Likert scale (1 = "strongly disagree" to 5 = "strongly agree"), unless specified otherwise. For a full list of all the measure items, see Appendix A and Appendix B (Chinese version).

3.2.1   LMXSC with star co-worker (Time 1)

To measure the focal employee's perceptions of upward LMXSC with their star co-worker, this research followed the studies of Weng et al. (2020) and Mishra et al. (2020), used the six-item scale developed by Vidyarthi et al. (2010). The LMXSC scale was distinct from the related concepts of LMX (Vidyarthi et al., 2010). We instructed respondents to rate their LMXSC with star co-worker. We added the definition of star employees, told them the specific person is star co-

worker and to evaluate with regard to the same star co-worker. An example of the items is "My supervisor is more loyal to my star co-worker compared to me." Cronbach's coefficient α was 0.86.

3.2.2 Perceived deservingness (Time 1)

To measure the focal employee's perceptions of deservingness, we use perceived unfairness as proxy for perceived deservingness. The perceived unfairness scale was adapted using Smith et al.'s (1994) Objective Injustice Beliefs Scale. This three-item scale was developed specifically to assess unfairness in envy situations (Cohen-Charash & Mueller, 2007). These are (i) An objective judge who knows the fact would agree that the star co-worker did not deserve to succeed at work, (ii) Anyone would agree that the star co-worker's advantage was unfairly obtained", and (iii) Star co-worker achieved the advantage over me through undeniably unjust actions or unjust procedures. Cronbach's coefficient α was 0.77.

3.2.3 Dual envy (Time 2)

Measures of envy should capture the spectrum of (benign versus malicious) envious thoughts, feeling, cognitive, motivational components and action tendencies as they describe the nature of envy comprehensively (Crusius, Gonzalez, Lange & Cohen-Charash, 2020). One critique of including action tendencies into a measure of an emotion is that it seems tautological (Tai et al., 2012). From a functional perspective, however, action tendencies are integral parts of what an emotion is and cannot be separated from it since they make up the definition of what an emotion is (Frijda, 1986). To measure the focal employee's feelings of benign and malicious envy of specific star co-worker, this research followed the study by Pan et al. (2021) who used the scale

developed by Lange, Weidman and Crusius (2018). The four-item full scale for each type of envy from the original scale was used. An example for benign envy is "I wanted to work harder to also attain exactly the same as my star co-worker's relationship with our leader." An example for malicious envy, "I felt hostile towards my star co-worker." Cronbach's coefficient α for benign and malicious envy were 0.70 and 0.87 respectively.

3.2.4   Help-seeking (Time 2)

To measure the focal employee's help-seeking from envied star co-worker, participants rated their agreement with the eight-item scale adopted from the OCB measure, which was based on Podsakoff, Ahearne and MacKenzie (1997), assessing their willingness to help the envied star co-worker. We rephrased the items of help giving with help-seeking in the present study. An example is "I would have asked my star co-worker to share his or her knowledge and expertise with me." Cronbach's coefficient α was 0.77.

3.2.5   Knowledge hiding (Time 2)

To measure knowledge hiding behavior, the most widely used twelve-item scale instrument consisting of three dimensions (i.e., rationalized hiding, evasive hiding and playing dumb), each of which included four items developed by Connelly et al. (2012) was used, following the recent study of Weng et al. (2020) and Peng et al. (2021). This is a self-reported measure of knowledge hiding as it is important to determine it from the hider's perspective. Weng and colleagues note the importance of measuring knowledge hiding as a holistic construct instead of examining the

roles of each dimension of knowledge hiding separately, thus Connelly's twelve-item scale was adopted. One-item scale from rationalized hiding was omitted from the original twelve-item scale as it was deemed inappropriate for this current study, thus we have an eleven-item scale. Specifically, respondents were asked to think of situations in which star co-worker explicitly requested knowledge from them and they declined to help. Thereafter, respondents were asked to indicate their behaviors in these situations by responding to the knowledge hiding items. Examples include "I agreed to help the star co-worker but never really intended to (evasive hiding)", "I explained to the star co-worker that I would like to tell him or her but was not supposed to (rationalized hiding)" and "I said that I did not know, even though I did when the star co-worker requesting me for knowledge (playing dumb)". Cronbach's coefficient α for the eleven-item was 0.91, α for rationalized hiding was 0.75, α for evasive hiding was 0.86 and α for playing dumb was 0.96.

3.2.6 Control variables

Although LMX is not the research focus, to determine whether an employee's upward LMXSC influences their feelings of envy, help-seeking and knowledge hiding behaviors, the employee's own perceptions of his or her LMX quality was controlled. The LMX scale which measures the quality of leader-member exchange was adapted from the seven-item scale used by Scandura and Graen (1984). The LMX7 scale was the most widely used scale among the several different measures of LMX (Kim et al., 2010). The instrument asks participants to rate the extent to which they agree with each item on a 5-point scale ranging from "rarely" (1) to "very often" (5).

An example item is "How would you characterize your working relationship with your immediate supervisor?" A high score indicated a high quality of LMX. Cronbach's coefficient α was 0.79.

Based on prior LMX literature, we considered a pool of control variables that would share their variance with LMX, help-seeking and knowledge hiding. Following the recommendations from Bernerth and Aguinis (2016) for control variable usage, each variable was tested as a predictor of the dependent variables (i.e., help-seeking and knowledge hiding) and retained variables that are significantly related. Specifically, tenure in the organization and tenure with their current immediate supervisor were not included in the final analyses. We retained LMX, gender, age, and education showing significant association. Prior studies have shown that the participant's gender, age and education may have an influence on their emotions and behaviors (Tse et al., 2018; Weng et al., 2020). Interestingly, in the envy literature, demographic variables (gender, age, education and tenure) have non-significant effects on envy, suggesting that envy is independent of these variables (Li et al., 2021). Gender was dummy coded as 1 = female and 0 = male. Education was dummy coded as 1 = non-graduate and 0 = graduate. Age was coded as 1 = 20 - 29 years, 2 = 30 – 39 years, 3 = 40 – 49 years and 4 = 50 years and above.

Chapter 4   Results

4.1   Descriptive statistics, correlations and reliability analysis

Table 4.5 presents the descriptive statistics and zero-order correlations of the variables. We first calculated the mean and standard deviation of each variable. In addition, we reported the zero-order correlations for all variables. The internal consistency reliability (Cronbach's coefficient α) of all the items were found to be above the required threshold of 0.70 (Hair, 2011).

We found preliminary support for the hypothesized relationships. LMXSC is significantly and negatively related to help-seeking from star co-worker (r = -0.23, $p < 0.01$) and LMXSC is significantly and positively related to knowledge hiding from star co-worker (r = 0.19, $p < 0.01$). LMXSC is significantly and negatively related to benign envy (r = -0.16, $p < 0.01$) and significantly and positively related to malicious envy (r = 0.23, $p < 0.01$). Benign envy is significantly and positively related to help-seeking (r = 0.66, $p < 0.01$) and not significant and negatively related to knowledge hiding (r = -0.08, n.s.). Malicious envy is significantly and negatively related to help-seeking (r = -0.25, $p < 0.01$) and significantly and positively related to knowledge hiding (r = 0.60, $p < 0.01$).

Insert Table 4.5 about here

4.2 Confirmation factor analyses

Before testing our hypotheses, we performed a series of confirmatory factor analyses (CFAs) using Mplus version 8.3 to examine the discriminant validity of the study variables, assess the distinctiveness of our measures. We assessed model fit by using the model's overall chi-square (χ^2), degrees-of-freedom (df), root mean square error of approximate (RMSEA), comparative fit index (CFI), Tucker-Lewis index (TFI) and standardized root mean square residual (SRMR). As the multiple variables have more than six items, we utilized item parceling technique to alleviate the confound effects among items (Matsunaga, 2008).

From a modeling perspective, item parceling has been shown to stabilize parameter estimates and also to improve model fit. Specifically, we parceled each variable with more than five items into different parcels. Then, we compared the baseline model (a seven-factor model consisting of LMX, LMXSC, perceived deservingness, benign envy, malicious envy, help-seeking and knowledge hiding) with six alternative models in which these latent variables are combined. Table 4.6 presents the CFA of discrimination validity. The baseline seven-factor model provided a good overall fit to the data ($\chi^2 = 303.25$, df = 209, χ^2/df < 1.45, RMSEA = 0.04, CFI = 0.97, TLI = 0.96, SRMR = 0.05). All factor loadings are statistically significant (χ^2/df < 3, RMSEA < 0.05, CFI > 0.90, TLI > 0.90, SRMR < 0.08; Hair, 2011). A six-factor model in which benign envy and malicious envy were combined, onto one-factor yielded a significantly worst fit to the data ($\chi^2 = 632.77$, df = 215, RMSEA = 0.08, CFI = 0.86, TLI = 0.83, SRMR = 0.11, $\Delta\chi^2 = 329.52$, Δdf = 6, $p < 0.01$). A five-factor model in which benign envy and malicious envy were combined and help-seeking and knowledge hiding were combined into one factor yielded a significantly worst fit to the data ($\chi^2 = 1003.02$, df = 220, RMSEA = 0.11, CFI = 0.74, TLI = 0.70, SRMR = 0.14, $\Delta\chi^2 = $

699.77, Δdf = 11, $p < 0.01$). A four-factor model in which LMX and LMXSC were combined, benign envy and malicious envy were combined and help-seeking and knowledge hiding were combined into one factor yielded a weak fit to the data ($\chi^2 = 1264.38$, df = 224, RMSEA = 0.13, CFI = 0.65, TLI = 0.60, SRMR = 0.16, $\Delta\chi^2 = 961.13$, Δdf = 15, $p < 0.01$). A three-factor model in which LMX, LMXSC and perceived deservingness were combined, benign envy combined with malicious envy and help-seeking combined with knowledge hiding into one factor yielded a weak fit to the data ($\chi^2 = 1493.67$, df = 227, RMSEA = 0.14, CFI = 0.57, TLI = 0.52, SRMR = 0.17, $\Delta\chi^2 = 1190.42$, Δdf = 18, $p < 0.01$). A two-factor model in which a combination of 5 variables (i.e., LMX, LMXSC, perceived deservingness, benign envy and malicious envy) and a combination of help-seeking and knowledge hiding into one factor yielded a weak fit to the data ($\chi^2 = 1735.48$, df = 229, RMSEA = 0.15, CFI = 0.49, TLI = 0.44, SRMR = 0.16, $\Delta\chi^2 = 1432.23$, Δdf = 20, $p < 0.01$). Finally, a one-factor model combining all the seven variables into one factor yielded a weak fit to the data ($\chi^2 = 1850.73$, df = 230, RMSEA = 0.16, CFI = 0.45, TLI = 0.40, SRMR = 0.15, $\Delta\chi^2 = 1547.48$, Δdf = 21, $p < 0.01$). Additionally, we tested our full seven-factor model without parceling ($\chi^2 = 1385.96$, df = 798, RMSEA = 0.05, CFI = 0.89, TLI = 0.69, SRMR = 0.06), which was better than alternative models. As shown in Table 4.7, we also conducted a series of chi-square difference ($\Delta\chi^2$ (Δdf)) comparison test between these models, and the results showed that the hypothesized model is better than any other models. Collectively, these tests provided evidence of the distinctiveness of the construct. The results therefore provided support for the discriminant validity of the seven constructs in the current study. All the factor loadings for the items on their respective construct were above 0.70 and reliable ($p < 0.05$).

Insert Table 4.6 and Table 4.7 about here

4.3 Hypotheses testing

To test the hypotheses, we conducted path analyses following the recommendations of Edwards and Lambert (2007) via MPlus version 8.3. We tested hypotheses 1 and 2 using the analyses of hierarchical regression. As shown in table 4.8, the negative relationship between LMXSC and help-seeking from star co-worker was not significant (β = -0.03, SE = 0.03, n.s.; Model 1) after controlling for LMX, gender, age and education, thus Hypothesis 1 was not supported. LMXSC is related to knowledge hiding from star-coworker was found to be significant (β = 0.12, SE = 0.05, $p < 0.05$; Model 4), thus supporting Hypothesis 2.

To test hypotheses 3 and 4, we adopted an unconditional indirect effects with a parameter-based bootstrapping approach (MacKinnon, Lockwood & Williams, 2004) to establish the significance of the mediation. The results of a two-tailed significance testing (assuming normal distribution) showed that the indirect effect of LMXSC on help-seeking from star co-worker via benign envy was not significant, containing zero (β = -0.00, SE = 0.02, 95% CI [-0.033, 0.026]; Table 4.8). Bootstrapping results (bootstrap sample size = 5,000) also confirmed the test, with a bootstrapped 95% bias-corrected CI around the indirect effect of LMXSC on knowledge hiding from star co-worker via malicious envy was significant, not containing zero ((β = 0.09, SE = 0.03, 95% CI [0.027, 0.157]; Table 4.8). Taken together, Hypothesis 3 was not supported, and Hypothesis 4 was supported.

Hypothesis 5 proposed that perceived deservingness of star co-worker moderates the relationship between LMXSC and benign envy and hypothesis 6 that perceived deservingness of star co-worker moderates the relationship between LMXSC and benign envy. The interactive effect of LMXSC and perceived deservingness on benign envy was not significant (see Table 4.9, $\beta = 0.07$, SE = 0.04, n.s.; Model 2). Hence hypothesis 5 was not supported.

The interactive effect of LMXSC and perceived deservingness of star worker on malicious envy was significant (see Table 4.9, $\beta = -0.13$, SE = 0.06, $p < 0.05$; Model 4).We further plotted the interaction effect (Aiken, West & Reno, 1991) at different levels of perceived deservingness of star co-worker (i.e., one standard deviation above and below the mean of perceived deservingness of star worker) to explain the demonstrated moderation effect (see Figure 4.2). Consistent with Hypothesis 6, the simple slop tests indicated that the positive relationship between LMXSC and malicious envy was significant when perceived deservingness of star worker was lower (-1SD, $\beta = 0.25$, SE = 0.09, $p < 0.05$), but not significant when perceived deservingness was higher (+1SD, $\beta = 0.02$, SE = 0.07, n.s.) (Difference = -0.23. SE = 0.09, 95% CI [-0.394, -0.053]). Taken together, these results showed Hypothesis 5 was not supported and Hypothesis 6 was supported.

4.4 Supplementary Analyses

4.4.1 First-stage moderated mediation test

In addition to testing our hypotheses, in order to clarify the form of interaction, we further analyzed the conditional indirect effects of LMXSC on help seeking and knowledge hiding from star co-worker through benign envy as well as malicious envy respectively at different levels of perceived deservingness of star co-worker (-1SD, +1SD, and difference; see Table 4.8).

The negative indirect relationship between LMXSC and help-seeking via benign envy was not significant when perceived deservingness was higher (β = -0.04, SE = 0.02, 95% CI [-0.082, 0.008]; Diff = 0.06, SE = 0.03, 95% CI [0.004, 0.117]). However, the positive indirect relationship between LMXSC and knowledge hiding via malicious envy was significant when perceived deservingness was lower (β = 0.06, SE = 0.03, 95% CI [0.004, 0.117]; Diff = 0.11, SE = 0.04, 95% CI [0.024, 0.195]).

4.4.2 Alternative second-stage moderation test

In addition, we also conducted supplementary analyses to investigate the interactive effect between (1) benign envy and perceived deservingness on help-seeking and (2) malicious envy and perceived deservingness on knowledge hiding. The interactive effects of benign envy and perceived deservingness on help-seeking was negative and significant (β = -0.09, SE = 0.04, p < 0.01). Additionally, the interactive effects of malicious envy and perceived deservingness on knowledge hiding was not significant (β = 0.03, SE = 0.05, n.s.).

4.4.3 Exploring the relations between LMXSC and benign envy and LMXSC and malicious envy

Prior studies have proposed that the relationship between LMX and individual outcome variables are not linear; assuming that linear relationships between variables are overtly simplistic or misleading. Ionescu and Iliescu (2021) have found a significantly unmoderated quadratic effect (inverted U-shaped) of LMX-performance aspect on task performance. Harris and Kacmar (2006) have empirically supported that the relationship between LMX and stress is curvilinear (U-shaped). In addition, Sui, Wang, Kirkman and Li (2015) found an inverted U-shaped relationship between LMX differentiation and team co-ordination, which, in turn, partially mediated LMX differentiation's inverted U-shaped relationship with team performance. These results reinforce Pierce and Aguinis's (2013) "Too-Much-of-a-Good-Thing (TMGT) effect in management research. Pierce and Aguinis (2013, p.313) posit that, "due to the TMGT effect, all seemingly monotonic positive relations reach context-specific inflection points after which the relations turn asymptotic and often negative, resulting in an overall pattern of curvilinearity".

In this study, further analyses showed that LMXSC has a U-shaped (curvilinear) relationship with benign envy and that LMXSC has an inverted U-shaped relationship with malicious envy (see Table 4.10).

As shown in model 2, after entering LMXSC and its quadratic term of LMXSC into the model resulted in a significant amount of incremental explained variance in benign envy ($\Delta R^2 = 0.01$, $p < 0.05$); the coefficient of the linear term of LMXSC was not significant ($\beta = 0.03$, SE = 0.04, n.s.), whereas the quadratic term was significant and positively associated with benign envy

(β = 0.09, SE = 0.04, $p < 0.05$). This indicated that LMXSC was curvilinearly (U-shaped relationship) related to benign envy. Following the guidelines of Aiken and West's study (1991), we created a graphical representation of the above relationship in Figure 4.3. Benign envy decreased as LMXSC increased, and once LMXSC reached a certain level, benign envy troughed and then increased as LMXSC increased further. In other words, at lower level of LMXSC, the relationship between LMXSC and benign envy showed a negative trend, whereas at higher levels of LMXSC, the relationship between LMXSC and benign envy becomes positive.

As shown in Model 4, after entering LMXSC and its quadratic term into the model resulted in a significant amount of incremental explained variance in malicious envy ($\Delta R^2 = 0.02, p < 0.01$); the coefficient of the quadratic term was significant and negative (β = -0.14, SE = 0.06, $p < 0.05$), an inverted U-shaped relationship. As shown in Figure 4.4, malicious envy increased as LMXSC increased, and once LMXSC reached a certain level, malicious envy peaked and then declined as LMXSC increased further.

Insert Table 4.10 and Figures 4.3 and 4.4 about here

4.4.4 The mediating role of malicious envy on the relationship between LMXSC and the three dimensions of knowledge hiding

Connelly et al., (2012) assert that knowledge hiding is a multi-dimensional construct, consists of three separate but related dimensions (i.e., rationalized hiding, evasive hiding and

playing dumb) and that each dimension may be differently related to antecedents and mediators. For example, Zhao et al. (2019) confirmed that high-quality LMX was negatively related to evasive hiding and playing dumb but not to rationalized hiding. Thus it is imperative that we investigate the mediating role of malicious envy on the relationship between LMXSC and the three dimensions of knowledge hiding.

We adopted an unconditional indirect effects with a parameter-based bootstrapping approach (MacKinnon, Lockwood & Williams, 2004) to establish the significance of the mediation. The results of a two-tailed significance testing (assuming normal distribution) in Table 4.11 showed that the indirect effect of LMXSC on all three dimensions of knowledge hiding from star co-worker via malicious envy was significant, not containing zero. For rationalized hiding, β = 0.07, SE = 0.03, 95% CI [0.021, 0.132], for evasive hiding, β = 0.10, SE = 0.04, 95% CI [0.030, 0.173] and for playing dumb, β = 0.09, SE = 0.04, 95% CI [0.028, 0.164]. Taken together, we found that malicious envy mediated the influence of LMXSC on rationalized hiding, evasive hiding and playing dumb.

Insert Table 4.11 about here

In addition, we performed moderated mediation test, analyzed the conditional indirect effects of LMXSC on the three dimensions of knowledge hiding from star co-worker through malicious envy. The positive indirect relationship between LMXSC and the three dimensions of knowledge hiding via malicious envy were significant when perceived deservingness was lower.

As shown in Table 4.11, for rationalized hiding, $\beta = 0.09$, SE $= 0.04$, 95% CI (0.019, 0.165); Diff $= -0.08$, SE $= 0.04$, 95% CI (-0.153, -0.018), for evasive hiding, $\beta = 0.13$, SE $= 0.05$, 95% CI (0.030, 0.235); Diff $= -0.12$, SE $= 0.05$, 95% CI (-0.221, -0.028) and playing dumb, $\beta = 0.12$, SE $= 0.05$, 95% CI (0.028, 0.225); Diff $= -0.11$, SE $= 0.05$, 95% CI (-0.209, -0.024).

In sum, the results showed that malicious envy mediated the influence of LMXSC on all the three dimensions of knowledge hiding from star co-worker and no significant difference among these three dimensions.

Chapter 5   Discussion

LMX researchers have suggested that critical steps for future research is the investigation of the implication of LMXSC differentiation (Sparrowe & Linden, 1997; Vidyarthi et al., 2010). To date, little is known about the relations between LMXSC and workplace behaviors of help-seeking and knowledge hiding. Research on help-seeking and knowledge hiding has however shown that such behaviors occur regularly in the workplace and have both potential positive and negative outcomes (Connelly et al., 2012; Bamberger, 2009). Even less is examined about the antecedents of the specific behaviors of both help-seeking and knowledge hiding. The purpose of this research was, therefore, to uncover the role of LMXSC in eliciting workplace behaviors including help-seeking and knowledge hiding from star workers.

Integrating social comparison theory (Festinger, 1954), social exchange theory (Blau, 1964) and attributional theory (Weiner, 1985), a conditional dual path model was developed to examine the relationships between LMXSC perceptions, help-seeking and knowledge hiding via dual envy and the moderating roles of perceived deservingness when LMXSC is related to each type of envy and how it shaped employee behaviors. Results based on time-lagged data, we found that upward LMXSC perceptions were negatively associated with envy such that low-quality LMX employees are more likely to experience envy. This is in line with the studies of Ahmed (2019), Kim et al. (2010), Kim and Lee (2021), Nandedkar (2016), Pan et al. (2018), Sharma et al. (2020) and Shu and Lazatkhan (2017).

LMXSC was found to be significant and positively related to knowledge hiding, whereas LMXSC was non-significant and negatively related to help-seeking. This could be the result of the low-LMXSC employees' perceptions that the benefits derived from instrumental help-seeking (not emotional help-seeking) outweigh the social costs; regardless of benign envy, they will seek help at all costs to improve one-self.

Further, malicious envy mediated the relationship between LMXSC perceptions and knowledge hiding (pulling down behavior) whereas benign envy did not mediate the relationship between LMXSC perceptions and help-seeking (levelling up behavior). The reason why LMXSC influence on help-seeking via benign envy was not found may be attributed that the relationship being curvilinear (i.e., U-shaped relationship). What we interpreted as a linear interaction may be spurious, in fact disguising a significant main effect of the squared independent variable.

Perceived deservingness moderated the relationship between LMXSC and malicious envy and that the indirect effect of LMXSC perceptions on knowledge hiding (via malicious envy) is stronger when perceived deservingness is low (vs. high). However, perceived deservingness did not moderate the relationship between LMXSC and benign envy. Sui et al. (2016, p.559) assert that "LMX differentiation by leaders can be thought of as lying on a continuum from a minimum level (i.e., leaders have high similar relationships with all followers, regardless of quality) to a maximum level (i.e., a team is divided into very low- and high quality sets of LMX relationships)". As such, the most plausible explanation is that when low-LMXSC employees rated perceived deservingness of star co-worker as high, and that they feel treated with respect and consideration by their supervisor even though the LMX quality is low with their supervisor (i.e., minimum level of LMX differentiation), feeling of benign envy would disappear. This research demonstrates that

the LMXSC perceptions and the behaviors toward the star co-worker is much more complicated than past studies have suggested. In the following section, we discuss the implications of these findings for theory and practice.

5.1   Theoretical contributions

This research makes several contributions to the literature of workplace emotion by proposing a model that considered LMXSC, dual envy, perceived deservingness and knowledge management in the following ways.

First, this research provides an in-depth understanding of the interrelationship between LMXSC perceptions and workplace envy by demonstrating that LMXSC perceptions were a precursor to workplace envy. Although research has focused and analyzed on the effects of LMXSC with positive outcomes and benefits to organizations (Gerstner & Day, 1997; Graen & Uhl-Bien, 1995), this research suggests that out-group members (low LMX) due to their perceived low LMXSC perceptions should not be neglected as they may feel envious of the superior referents (i.e., star co-workers) and likely to indulge in negative behaviors. Integrating LMX literature and social comparison theory to establish who engages in social comparison in the workplace, how they make the comparisons (organizational contexts), the effects (reaction responses) and the moderator. This research has responded to the call for further examining and extending the understanding of the relationship between LMXSC and envy (Hilal, 2022; Shu & Lazatkhan, 2017). The findings shed light on the dark side of LMX between supervisor-subordinate dyads (Bolino & Turnley, 2009) and complements the findings of past studies that examined the beneficial outcomes of LMX differentiation for employees who perceive higher levels of LMXSC (Lee et al.,

2019; Vidyarthi et al., 2010). This research suggests that a high-quality LMX relationship would prevent the feeling of envy in the upward social comparisons' context, in contrast, a low-quality LMX relationship would elicit envy. In doing so, this research demonstrates the double-edged sword of LMX differentiation and reveals that employees assess their own relationship with the leader in the context of the relationships co-workers have with the leader. Low-quality LMX employees may not feel envy if the leader has a poor relationship with every employee in the work group. However, if the leader exhibits favoritism, this can elicit envy as the LMX differentiation increases the discrepancy perceived in social comparison. The findings clarify that high-quality LMX employees (i.e., star employees) can be victims of low-quality LMX employees social undermining (Kim & Glomb, 2014). By providing empirical evidence, this research indicates that LMXSC is a critical factor underlying envy in the workplace.

In addition, extending the envy literature to suggest that envy can be operationalized in two types (i.e., benign and malicious envy) by using the dual envy framework in organizational setting. The two types of envy further induce opposing behaviors: help-seeking and knowledge hiding. The findings on the effect of benign envy provide evidence of the underlying mechanism of the indirect influence of LMXSC perceptions on help-seeking, as the positive outcome of envy. This research theorizes help-seeking as a constructive consequence of benign envy under the influence of low LMXSC perceptions. The findings suggest that self-improvement motivations exist in the process of LMXSC perceptions on help-seeking via benign envy, an assimilative social comparison emotion. Low-quality LMX employees perceived that the star co-worker deserved his or her star status and they have opportunities to have similar LMX as the high-quality LMX star co-workers would be motivated to seek help directly from the star employees to improve themselves. Thus, when low-quality LMX employees decide that the star co-worker's advantage

is deserved, the focus shifts to the self and how one might obtain the object of envy (Floyd et al., 2016). Importantly, on how to build good relationships with the common leader to interact effectively with the common leader and enjoy the benefits and status that they desire. Thus, this research confirms the constructive actions of competing function of social comparison via benign envy by help-seeking from their envied star co-workers.

On the other hand, the findings on the effect of malicious envy further clarify the underlying mechanism of the indirect influence of LMXSC perceptions via malicious envy on knowledge hiding in that the result of this research provides evidence for the hostile behavior of knowledge hiding. The findings suggest that destructive behaviors exist in the process of lower LMXSC perceptions on knowledge hiding via malicious envy, a contrastive social comparison emotion, to reduce the comparison gap with the similar others. Low-quality LMX employees perceived that the star co-worker does not deserve his or her star status and differences with the envied star co-workers were unattainable and unchangeable would be motivated to influence the envied co-workers' work performance outcomes negatively by refusing to help via knowledge hiding. With malicious envy, the star employees become the center of attention, rather than the object of envy (Floyd et al., 2016). Thus, this research also confirms the destructive actions of contrastive function of social comparison via malicious envy by knowledge hiding.

This research clarifies the controversies and inconsistent evidence in past studies on the indirect effect of LMXSC perceptions via workplace envy (i.e., the two competing mechanisms of benign and malicious envy) on the behavioral outcomes of help-seeking and knowledge hiding. Taken together, this research extends the existing envy literature by demonstrating the leveling-up and pulling-down reactions associated with lower LMXSC perceptions. Specifically, the findings

show that the effect of LMXSC perceptions on constructive behavior of help-seeking is through benign envy and the effect on destructive behavior of knowledge hiding is through malicious envy.

Furthermore, this research reveals the moderating influence of low-quality LMX employees' perceived deservingness on the relationship between LMXSC and dual envy and its outcomes. We suggest that star status attributions serve as a social information that leads low-quality LMX employees to make sense of the star employees' status. Using attributional theory to theorize how internal and external attributions coexist in two different star status attributions (i.e., self-made stars and political stars). The star status attributions show why low-quality LMX employees perceive differences in how star employees achieve their star status and the differences in the LMX standing. This has important behavioral implications for the low-quality LMX employees as they become motivated to develop causal explanations to make sense of the star status. In line with the dual envy theory (van de Ven et al., 2019) to delineate how star status attributions lead to determine either benign or malicious envy, based on the perceptions of deservingness. Perceived deservingness moderator can strengthen or weaken the relationship between LMXSC and envy, as the star status attributions by the low-quality LMX employees facilitate their emotional and behavioral reactions. Thus, a high or low degree of perceived deservingness in the LMXSC relationship influenced the behavior of the envious employees.

This research shows that low-quality LMX employees with higher level of perceived deservingness are more likely to treat envy as benign and behave constructively to improve oneself through help-seeking from the star employees to level-up. On the other hand, low-quality LMX employees with lower level of perceived deservingness are more likely to treat envy as malicious and behave destructively to pull down the star employees by engaging in knowledge hiding.

Specifically, this research indicates that the indirect effect of upwards LMXSC on help-seeking behavior via feelings of benign envy is stronger vs weaker when low-quality LMX employees' perceptions of deservingness is high vs low and, as expected, the indirect relationship between upwards LMXSC and knowledge hiding behavior via feelings of malicious envy is stronger vs weaker when low-quality LMX employees' perceptions of deservingness is low vs high. This research responded to the call that more attention should be paid to deservingness on specific referents in situations such as workplace envy (Crusius et al., 2020).

5.2   Managerial implications

Besides the theoretical contributions discussed above, the findings of this research provide critical implications for practitioners. Knowledge management is critical for any organization and this research explores the antecedents of help-seeking and knowledge hiding behaviors. Understanding how, why, and when help-seeking and knowledge hiding behaviors transpire is essential for practitioners in preventing and repairing them. First, this research suggests that the influence of unfavorable LMXSC perceptions via dual envy on help-seeking and knowledge hiding behavior toward high-quality LMX star co-workers in the workplace. In doing so, these findings reveal the double facets of LMXSC and envy; note the possibility that envious employees' personal effects to improve and uncivil work behaviors towards star co-workers may be resulted from differentiated social exchange relationships within the workgroup. Organizations often need their employees to cooperate, share information and rely upon each other in a complex and dynamic nature of work. As a result, leaders should be particularly careful with LMX differentiation and control their biased treatment, reducing the emotional burden of employees.

While LMX differentiation may elicit benign envy to motivate individual workers to improve themselves, this same practice may generate malicious envy to harm others' job performance. As it is not practical for leaders to treat all employees equally because of constraints in time and resources, leaders are recommended not to avoid altogether neglect employees whom they have low-quality LMX relationships and may attempt to build strong relationship with low-quality LMX relationships as they are more likely to respond constructively to positive treatment. Thus, leaders should understand the power of LMXSC and be aware of its impact. For example, providing a forum for all employees to discuss how important decisions are made, and policies are formulated, may be of value. Job designs, duties and responsibilities should be impartial and objective (Nandedkar, 2016). Engaging affected low-quality LMX employees in formal and informal group social activities that provides a sense of inclusivity should be encouraged (Kim et al., 2010). Specifically, leaders may be able to motivate high-quality LMX star employees by letting them know of their high relative standing with them and should not over-emphasize differentiate treatment towards low-quality LMX employees. In addition, leadership training for leaders may help them to manage working relationships with different kinds of employees in their team (Graen et al., 1982). The training curriculum may include material for managing psychologically low-quality LMX employees to reduce resentment.

Second, this research provides insight into the underlying mechanisms by which co-worker envy is developed, what could be done to mitigate and manage it and how employees can increase help-seeking and decrease knowledge hiding behaviors. The findings suggest that employees can react differently to feeling envious of their superior referents whom they perceived as similar to themselves. Envy is often viewed as "poisonous" that can damage workplace relationships. However, organizations should recognize that envy can be a driver for success by promoting

healthy competition among employees and should be viewed as a challenge instead of a threat. Organizations can create a workplace environment where constructive envy can be utilized by providing resources to help employees to turn envy into opportunities for development and improvement. In addition, an environment where it is comfortable for employees to learn and approach co-workers when encountering problems. Leaders should be vigilant and foresee signs of tension in their day-to-day engagement with employees, to provide guidance, counseling and encouraging low-quality LMX employees to harness their envy for self-improvement and to impede the incident of knowledge hiding in the workplace. Specifically, leaders are encouraged to take pro-active initiatives to foster a cohesive and harmonious working environment. For example, leaders should avoid assigning the low-quality LMX employees working on tasks or projects with the star employees that require close interpersonal and interdependent interactions because it is likely for envy and knowledge hiding to take place in such situations. In addition, leaders should mediate in situations where tensions arise between the employees. In performance appraisal, leaders should discuss weaknesses and encourage low-quality LMX to learn from high-quality LMX star employees. This transparent appraisal should show how star employees perform better, guiding them to focus on benign aspects to level themselves up to narrow the comparison gap. Diverse mandatory behavioral training, counseling program, feedback and coaching can be provided to low-quality LMX employees with the objectives to regulate their envious feelings and motivate them to level-up through self-improvement, importantly to convey the message that each employee is unique and valued. Behavioral training could be in the form of role-playing and case studies.

Third, the extent of envious reactions depends on one's perceptions of deservingness. Leaders' determination, efforts and abilities to respond to perceptions of deservingness are

important. By attentive to their employees and situation, and adjusting communication, leaders can manage their employees' perception of deservingness. When low-quality LMX employee complain about star employee's advantages is justified, they will likely voice indignation and may take actions to alter the situation. For example, the most common way for the low-quality LMX employees to undermine the star employee is to withhold assistance as it is easier to conceal than outright hostile actions. Leaders should try to correct the situation, if indeed the assessment is correct. Sometimes low-quality LMX employees' belief about the situation are subjective and cannot accurately see the star employee's inputs and outputs, leaders can help low-quality LMX employees to make them objective by stating the inputs that earned the star employees their status and outcome, and motivate them to strive for the same level of performance. In addition, leaders can hold informal conversations to state clearly the process and procedure that lead to the other's advantage so that low-quality LMX employees can understand the criteria, to avoid searching for reasons to justify the outcomes.

In sum, the findings of this research are vital in helping organizations and leaders better understand the behaviors and attributions of employees, which can go a long way to improve everyone's job performance and contribute to their organizations. Leaders must recognize the benefits of high-quality LMX, and their employees' need for high-quality LMX relationships to mitigate envy. Undertaking these initiatives suggested above could be rewarding for both low-quality and star employees and to prevent the organization from suffering financial losses while improving productivity.

5.3   Limitations and future research

In addition to the findings, there are several limitations in this research as every research has. First, data was collected from an online crowdsourcing platform and common criticism of convenience sampling is that they are not representative of the general population though it is a more diverse sampling than the typical lab sampling setting. To ameliorate the selection bias, care has been taken to control for the demographic variables.

A second limitation is the cross-sectional, self-reporting of all the variables in this research could result in common method variance. As the objective of this research was to examine how employees perceive deservingness, their LMX relationships and envious feelings within their workplace, in this respect, self-report data are considered as adequate instruments and in line with the past studies. Adopting this self-report measurement approach resulted in the independent and dependent variables were provided by the same source. We tried to minimize the risks of self-report through the design of a two-stage survey. In addition, scholars contend that self-reporting surveys may lead to participants under reporting of their negative emotions about their immediate supervisor and co-workers. Social desirability bias may be a concern as participants may be sensitive to provide their true feelings of envy and their response to being envious. To that effect, we suggest adding social desirability as one of the controls to evaluate its effects on the variables. We also suggest adding dispositional envy as a personality trait which refers to a generalized state of feeling inferior to others and of experiencing envy frequently as one of the other controls (Smith, Parrot, Diener, Hoyle and Kim, 1999). Furthermore, to mitigate this potential problem, participants were assured of their confidentiality and evaluation apprehension was reduced by informing participants that there were no right or wrong answers and to rate honestly to all the items. This

was recommended by Podsakoff et al. (2003) as a technique to control common method variance. Although this research separated data collection into two waves as suggested by Podsakoff et al. (2003), research can further reduce common method variance using both self-report and multi-source data such as supervisor rating or co-worker rating. Specifically, employees could be asked to complete ratings of perceived deservingness and envy while their star co-worker rates help-seeking and knowledge hiding.

Third, the correlational nature of this research makes it difficult to rule out reverse causality and alternative explanations for the observed results to establish causality. It is valid to assume that the flow of relationship from envy to LMXSC is a possibility and studies have examined LMX as the mediator (González-Navarro et al., 2018; Han, 2010). Moreover, Matta and Van Dyne (2020) have shown that high-quality LMX can moderate the effects of unfavorable social comparisons with superior referents, thereby reducing envy. In addition, the hypothesized relationship with deservingness as the moderator between LMXSC perceptions and dual envy could function with deservingness as the moderator between dual envy and the dependent variables (see above supplementary analyses). A longitudinal or experimental design is recommended for future studies to track the relations in the research over time to evaluate the causal claims or to rule out the reversal causality.

Fourth, the survey questionnaires asked whether the participants would seek help from envied star co-workers on work-related matters or challenging problems at work and knowledge hiding when requested for help from envied co-workers. The formulation of help-seek and knowledge hiding in the instruments may be broad and it is not sure if participants understood the

instructions uniformly. Further research can consider using critical incidents or scenarios to specify situations of help-seeking and knowledge hiding.

Fifth, the research was conducted in China and may present a limitation as whether it can be generalized to other cultural settings is questionable. Hofstede (1980) argues that the Chinese culture is collectivist in nature and thus, the LMX outcomes may be affected. Chung and Mallery (1999) suggest that high collectivism is associated with an increased desire to make upward social comparisons. This would inflate the correlation between upward LMXSC and envy. On the contrary, Vidyarthi et al (2010) suggest that collectivists are likely to be more concerned about the welfare of the group as opposed to their self-interest than individualists. Thus, the effects for LMXSC would be lower for collectivists than individualists. High collectivism may lead individuals with low level of envy as they are likely to suppress their negative emotions for the sake of solidarity and harmony (Lee & Duffy, 2019). Future research should replicate this theoretical model in different or cross-cultural contexts and to include the moderating influence of group-level variables as well.

Sixth, help-seeking and knowledge hiding are multi-dimensional construct, for instance, help-seeking consists of two components (i.e., autonomous, and dependent help-seeking) and knowledge hiding consists of three components (i.e., evasive hiding, rational hiding and play dumb) and each dimension has its own distinctive antecedents and outcomes. Future research can develop a model to examine these dimensions when investigating LMXSC or envy as the antecedents of such behavior.

Apart from these methodological limitations, this research also provided the groundwork for various potential avenues for future research. By extending the current research model with

other potential mediating and moderating variables to examine how this workplace phenomenon is developed and how to mitigate. First, besides envy, there are other negative emotions that prevail in the workplace, for instance, fear, hatred, frustration, stress that are needed to manage by organizations to avoid destructive consequences.

Second, measuring variables from the viewpoint of others (such as supervisor and envied persons) in the workplace as a moderator. Besides focusing on the low-quality LMX employees, the feeling of being envied could be explored as star employees may assess their behavior such as exhibiting empathy towards the envious person.

Third, besides exploring at the individual level, which is the focus of this research, future research should extend the model by incorporating the role of group members' characteristics such as agreeableness in attenuating the effect of LMXSC employees from envious feeling. At the organization level, Brown, Ferris, Heller and Keeping (2007) contend that whether an individual exhibits assimilative or contrastive behavior depends on the social context of the organization. An organization with a cooperative environment elicits assimilative effects which harness self-improvement, whereas a competitive environment elicits contrastive effects to promote social undermining.

The current research examined the dependent variables on the two consequences of envy (i.e., help-seeking and knowledge hiding), future research can identify the exact reaction on envy, exploring other attitudinal and behavioral outcomes such as knowledge sharing, workplace incivility and sabotage in the workplace (Duffy et al., 2008).

Lastly, another interesting avenue for future research is to consider expanding the research design with qualitative measures using interviews or round-robin peer ratings. As LMXSC is

dyadic, this technique allows the collection of data from the participants to solicit their self-descriptive information and rate their co-workers within the same workplace. This would allow for an insightful understanding of how and why LMX relationships exist and for what reasons help-seeking and knowledge hiding behaviors are triggered.

5.4   Conclusion

It was not the intention of this research to suggest that LMX does not have benefits. Rather, the objective of this research was to examine the dark side of LMX social comparison, highlighting the underlying emotions and behaviors of employees who perceive to have lower-quality LMX relationship than their star co-worker in the same workgroup. Specifically, this research suggested that lower LMXSC perceptions can elicit benign envy which in turn lead to self-enhancing behavior by help-seeking from the high-quality LMX star co-workers. Furthermore, lower LMXSC perception is also associated with knowledge hiding via malicious envy. Moreover, low-quality LMX employees' perceived deservingness plays a moderating role, whereby it strengthens the relation that LMXSC has with benign envy. Meanwhile, it also strengthens the relation that LMXSC with malicious envy. The hypotheses were tested through an online crowdsourcing platform in China. The findings contributed to the LMX, envy and knowledge management literatures by investigating the relation of LMXSC perception, help-seeking and knowledge hiding to unexplored mediator and moderator in the workplace. This research also provided insights for practitioners to understand why, how, and when employees in any organizations are motivated to seek help and can also harm their co-workers by refusing to help when requested for knowledge and information. In addition, this research advised leaders in their day-to-day management of their

subordinates not to overlook their distant subordinates so that they do not develop negative emotions and behaviors, and to capitalize on powerful emotions to learn and seek help from their star co-workers. In doing so, this research provided a springboard for future research to look at other constructs and examine the underlying mechanisms that facilitate help-seeking and inhibit knowledge hiding.

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Table 2.1

Review of studies investigating the antecedents of envy in the workplace

Source	Variables studied	Boundary conditions	Key findings
Cohen-Charash and Mueller (2007)	Perceived unfairness	Self-esteem	According to the social exchange model of fairness, perceived unfairness is positively related to envy, in turn, associated with higher interpersonal counterproductive work behavior (Study 1), especially among individuals with high self-esteem (Study 2).
Dunn and Schweitzer (2004)	Relative performance judgement	-	Relative performance judgement is positively associated with envy.
Smith et al. (1999)	Feeling of inferiority	-	Feeling of inferiority is positively related to envy.
Vecchio (2005)	Sense of competitive reward, job satisfaction, employee self-esteem, Machiavellianism and LMX,	-	Self-esteem, Machiavellianism, LMX, sense of competitive reward, and job dissatisfaction are positively related to feeling envy towards others.
Schaubroeck and Lam, (2004)	Promotion expectation	Perceived similarity to promotees	The relationship between promotion expectation and promotion envy is stronger at a higher level of perceived similarity.
Smith (2004)	Similarity, self-esteem, self-efficacy, neuroticism, agreeableness	-	Individuals who perceived similarity with others, low self-esteem, low efficacy, high neuroticism and low agreeableness are likely to experience envy.

Lange et al. (2016)	Hope for success and fear of failure	-	Hope for success is positively related to benign envy and fear of failure is positively related to malicious envy.
Thompson et al. (2016)	Span of supervision (leadership style	-	The span of supervision is negatively related to envy.
Reh et al. (2018)	Future status threat	-	Future status threat is positively related to envy.
Li and Xiang (2020)	Authentic pride and hubris pride	-	Authentic pride is positively related to benign envy while hubristic pride is positively related to malicious envy.
Watkins (2021)	Workplace interpersonal capitalization	Competition	The positive relationship between workplace interpersonal capitalization and envy is strong when competition is high.
van de Ven et al. (2012)	Perceived deservingness and personal control potential	-	In upward social comparison situation, perceived deservingness elicits benign envy, whereas undeserved elicits malicious envy. Appraisal of personal control is related to benign envy only when in deserved situations.
Kim et al. (2010)	LMX	-	In their study on the hospitality industry note that employees who have a relatively poor working relationship with their supervisor were likely to generate higher levels of envy than employees who have relatively closer working relationships with the same supervisor.
Shu & Lazatkhan (2017)	LMX	Self-esteem and neuroticism	The quality of LMX relationships is negatively related to envy which

			subsequently causes social undermining behaviors.
Kim and Lee (2021)	LMX	Similarity	Using relative deprivation theory (Bolino & Turnley, 2009) to examine the negative side of LMX as a precursor to envy in the service industry, moderated by similarity.
Hilal (2022)	LMX	-	A study on athletes suggests that dissimilar LMX is associated with workplace envy.
Shkoler et al. (2019)	LMX	Envy	Study demonstrates that envy moderates the relationship between LMX and counter-productive work behavior and between team-member exchange (TMX) and counter-productive work behaviour.
Nandedkar (2016)	LMX	Equity sensitivity	Building on affective event theory (AET; Weiss & Cropanzano, 1996), to examine the impact of LMXSC on workplace envy. When a leader places an employee into an "out-group" (affective event) with bad treatment (low LMX), it elicits envy (affective state) which eventually resulted in the outcomes workplace incivility (behavioral consequences).
Ahmed (2019)	LMX	Self-control	Adaptation of AET, tests the serial mediation of social comparison and envy between LMX and subjective career success. LMX and social comparison lead to envy.

Table 2.2

Review of empirical studies investigating LMXSC as predictor of envy in the workplace

Source	Variables studied	Boundary conditions	Key findings
Pan et al. (2021)	LMXSC	Perceived authentic pride and perceived hubris pride	LMXSC is negatively related to benign envy and the relationship is stronger when perceived authentic pride is higher. LMXSC is negatively related to malicious envy and the relationship is stronger when perceived hubris pride is higher.
Sharma et al. (2020)	LMXSC	-	The study suggests that low-level of LMXSC perceptions can lead to the development of uncivil employee behavior via envy. LMXSC is negatively related to envy.
Weng et al. (2020)	LMXSC	Cooperative goal interdependence and competitive goal interdependence	Employees with "upward LMXSC" and perceive co-workers having high LMX with supervisors are likely to instigate hostile behavior of knowledge hiding via envy.

Table 2.3

Review of studies investigating the antecedents of help-seeking

Source	Variables studied	Boundary conditions	Key findings
Lee (1997)	Gender, status, organizational norms, and power	-	Individuals are more likely to seek help between equal-status than unequal-status. Males sought more help in collective than individualistic organization norms.
Mueller and Kamdar (2011)	Intrinsic motivation	-	Intrinsic motivation is positively related to help-seeking. Seeking help from teammates can result in improved creative performance, it also incurs the need to reciprocate help.
van der Rijt et al. (2013)	Accessibility, trust, expertise, hierarchy	-	Perceptions of the helper's accessibility, trust, expertise are positively related to help-seeking. Employees are more likely to seek help upward from higher status individuals; useful and constructive.
Sandoval and Lee (2006)	Individualistic norms and collectivist norms	-	Individualist norms discourage help seeking because help seeking creates impressions of dependence, incompetence, and inferiority, values inconsistent with individualist norms. In contrast, collectivist norms facilitate help-seeking behaviors because these norms emphasize interdependence, effort, and collaboration.
Hofmann et al. (2009)	Help provider attributes (affective organizational commitment, formal	-	Decision to seek out help depends on help-seekers' perceptions of experts' accessibility and

	helping role and job experience) and help-seeker perceptions of help provider (trust, access and expertise)		trustworthiness, and that these perceptions are predicted by experience, formal roles, and affective organizational commitment
Cleavenger et al. (2006)	Task interdependence and helping norms	-	Individuals more likely to seek help when task interdependency is high and supportive help-seeking norms were operative
Montal-Rosenberg (2017)	Social comparison and episodic envy	Task interdependence	Individuals will be more reluctant to seek help from envied teammates. When seeking help from envied teammates, individuals will seek less autonomous help.
Anderson and Williams (1996)	Perceptions of costs of seeking help	-	The higher the perceived cost of help-seeking, the less the individual would seek help.

Table 2.4

Review of studies investigating the antecedents of knowledge hiding

Source	Variables studied	Boundary conditions	Key findings
Peng at al. (2002)	Perceived intragroup relationship conflict and envy	Trait competitiveness	Perceived intragroup relationship conflict is positively related to knowledge hiding. Envy mediates the positive association between relationship conflict and knowledge hiding.
Singh (2019)	Territoriality	-	Territoriality is a kind of socio-behavioral representation (e.g., "it's mine, not yours") is positively related to knowledge hiding.
Babič et al. (2018)	Cultural tightness, prosocial motivation and uncertainty avoidance	-	The highest levels of knowledge hiding occur when employees are not motivated by the welfare of others, are inclined to take the risk and simultaneously perceive that deviation from cultural norms will not be sanctioned.
Zhao and Xia (2018)	Negative affect states and moral disengagement	Ethical leadership	Negative affective states are positively related to knowledge hiding. Nurses with negative affective states are more likely to activate moral disengagement as a secondary cognitive process to make personal moral rules momentarily obscure, which, in turn, leads them to hide knowledge that is requested by other members.

Pan et al. (2018)	Machiavellianism, narcissism and psychopathy	Gender	The three dimensions of the dark triad are positively related to knowledge hiding through transactional psychological contract.
Nandedkar (2016) and Weng et al. (2020)	Workplace envy	-	Envy is positively related to knowledge hiding
Koay et al. (2020)	Affective- and cognitive-based trust	Market culture	Affective- and cognitive-based trust are positively related to knowledge hiding (evasive hiding, playing dumb and rationalized hiding
Butt and Ahmad (2019)	Individual-level antecedents (indispensability, career prospects, Job security, Fear of evaluation, expectation of outcomes (a) avoiding harmful outcomes (b) personal benefit. Interpersonal-level antecedents (lack of personal relationships (a) personal dislike (b) trust deficit, reciprocity and competition	-	All individual- and interpersonal-level antecedents are positively related to knowledge hiding
Liu et al. (2020)	Workplace status	-	Employees' workplace status is positively related to knowledge hiding and the effect is mediated by feelings of being envied
Zhao et al. (2016)	Workplace ostracism	Negative reciprocity beliefs and moral disengagement	Workplace ostracism is positively related to hospitality employees' evasive hiding and playing

			dumb, but not related to rationalized hiding.
Men et al. (2020)	Psychological safety	Masterly climate	Psychological safety is negatively related to knowledge hiding.
Zhao et al. (2019)	LMX	RLMX	LMX is negatively related to evasive hiding and playing dumb but not to rationalized hiding.
Chatterjee et al. (2021)	Organization knowledge sharing climate and knowledge characteristics	Knowledge hiders and knowledge seekers	Organization knowledge sharing climate is negatively related to knowledge hiding. The complexity of knowledge characteristics is positively related to knowledge hiding.
Malik et al. (2019)	Perceived organizational politics	Professional commitment	Perceived organizational politics is positively related to knowledge hiding.
Offergelt et al. (2019)	Leader signaled knowledge hiding	-	Leader-signaled knowledge hiding is positively related to employee knowledge hiding.

Table 4.5

Descriptive Statistics, Correlations and Estimated Reliabilities

Variable	Mean	SD	1	2	3	4	5	6	7	8	9
1. Help-seeking	3.75	0.58	(0.77)								
2. Knowledge hiding	2.39	0.80	-0.15*	(0.91)							
3. Benign envy	3.84	0.60	0.66**	-0.08	(0.70)						
4. Malicious envy	2.25	0.90	-0.25**	0.60**	-0.23**	(0.87)					
5. PD	3.09	0.89	0.18**	-0.38**	0.16**	-0.41**	(0.77)				
6. LMXSC	3.36	0.89	-0.23**	0.19**	-0.16**	0.23**	-0.24**	(0.86)			
7. LMX	3.92	0.54	0.58**	-0.21**	0.49**	-0.24**	0.23**	-0.30**	(0.79)		
8. Gender	0.51	0.51	0.01	-0.01	0.00	0.05	0.00	0.12*	0.11	(-)	
9. Age	1.69	0.65	-0.01	0.03	0.03	0.04	-0.05	0.06	0.03	0.13*	(-)
10. Education	3.94	0.48	-0.06	-0.08	-0.06	-0.09	0.18**	0.07	-0.03	-0.02	-0.21**

Notes: N = 293; Figures in parenthesis are alpha internal consistency reliabilities; PD = perceived deservingness of star worker; LMXSC = leader-member exchange social comparison, LMX = leader-member exchange

* p < 0.05, ** p < 0.01

Table 4.6

Confirmatory Factor Analysis (CFA) of discrimination validity

MODEL	χ^2	df	χ^2/df	$\Delta\chi^2$ (Δdf)	RMSEA	CFI	TLI	SRMR
Full model (LMX, LMXSC, PD, BENVY, MENVY, HS, KH)	303.25/209	209	1.45	-	0.04	0.97	0.96	0.05
Six-factor model (LMX, LMXSC, PD, BENVY+MENVY, HS, KH)	632.77/215	215	2.94	329.52 (6)**	0.08	0.86	0.83	0.11
Five-factor model (LMX, LMXSC, PD, BENVY+MENVY, HS+KH)	1003.02/220	220	4.55	370.25 (5)**	0.11	0.74	0.70	0.14
Four-factor model (LMX+LMXSC, PD, BENVY+MENVY, HS+KH)	1264.38/224	224	6.09	261.36 (4)**	0.13	0.65	0.60	0.16
Three-factor model (LMX+LMXSC+PD, BENVY+MENVY, HS+KH)	1493.67/227	227	6.58	229.29 (3)**	0.14	0.57	0.52	0.17
Two-factor model (LMX+LMXSC+PD+BENVY+MENVY, HS+KH)	1735.48/229	229	7.58	241.81 (2) **	0.15	0.49	0.44	0.16
One-factor model (LMX+LMXSC+PD+BENVY+MENVY+HS+KH)	1850.73/230	230	8.05	115.25 (1)**	0.16	0.45	0.40	0.15

Notes: N = 293; + represents two factors merge into one; $\Delta\chi^2$ tests are between the 7-factor model and each alternative model; LMX = leader-member exchange; LMXSC = leader-member social comparison; PD = perceived deservingness; BENVY = benign envy; MENVY = malicious envy; HS = help-seeking; KH = knowledge hiding.

*p < 0.05, **p < 0.01

Table 4.7

Model comparison tests

Model	$\Delta\chi^2$	Δ**df**
Model 1 - Model 2	329.52**	6
Model 3 - Model 2	370.25**	5
Model 3 - Model 4	261.36**	4
Model 3 - Model 5	490.65**	7
Model 3 - Model 6	732.46**	9
Model 3 - Model 7	847.71**	10
Model 4 - Model 2	631.61**	9
Model 4 - Model 5	229.29**	3
Model 4 - Model 6	471.1**	5
Model 4 - Model 7	586.35**	6
Model 5 - Model 2	860.9**	12
Model 5 - Model 6	241.81**	2
Model 5 - Model 7	357.06**	3
Model 6 - Model 2	1102.71**	14
Model 6 - Model 7	115.25**	1
Model 7 - Model 2	1217.96**	15

Note: Model 1 = Full model, Model 2 = Six-factor model, Model 3 = Five-factor model, Model 4 = Four-factor model, Model 5 = Three-factor model, Model 6 = Two-factor model, Model 7 = One-factor model

**p < 0.01

Table 4.8

Unstandardized results of hierarchical multi-step regressions on help-seeking and knowledge hiding

Variable	Help-seeking as dependent variable			Knowledge hiding as dependent variable		
	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6
	β(SE)	β(SE)	β(SE)	β(SE)	β(SE)	β(SE)
Intercept	2.07(0.35)	1.18(0.39)	1.08(0.37)	3.30(0.59)	1.21(0.54)	1.17(0.49)
Controls						
LMX	0.62***(0.05)	0.35***(0.06)	0.35***(0.06)	-0.24*(0.09)	-0.16(0.09)	-0.144(0.09)
Gender	-0.06(0.06)	-0.02(0.05)	-0.02(0.05)	-0.01(0.10)	-0.05(0.08)	-0.05(0.08)
Age	-0.05(0.04)	-0.04(0.04)	-0.04(0.04)	0.03(0.07)	0.01(0.06)	0.01(0.06)
Education	-0.13(0.06)	-0.08(-0.06)	-0.08(0.06)	-0.10(0.09)	-0.02(0.08)	0.02(0.07)
Focal variables						
LMXSC	**-0.03(0.03)**	-0.03(-0.03)	-0.02(0.03)	**0.12*(0.05)**	0.04(0.05)	0.04(0.05)
PD			0.00(0.03)			-0.13**(0.05)
LMXSC X PD			-0.04(0.03)			-0.08+(0.05)
Mediators						
Benign envy		**0.46***(0.06)**	0.46***(0.06)		**0.15*(0.07)**	0.47***(0.05)
Malicious envy		-0.04(0.03)	-0.04(0.03)		**0.52***(0.05)**	0.17*(0.07)
R-square	**0.35**	**0.53**	**0.53**	**0.07**	**0.38**	**0.40**
Indirect effects	Via Benign envy			Via Malicious envy		
Unconditional indirect effect	**B = -0.00, SE = 0.02, 95%CI [-0.033, 0.026]**			**B = 0.09, SE = 0.03, 95%CI [0.027, 0.157]**		
Difference	**B = 0.06, SE = 0.03, 95%CI [0.004, 0.117]**			**B = 0.11, SE = 0.04, 95%CI [0.024, 0.195]**		
Indirect effect (high)	**B = -0.04, SE = 0.02, 95%CI [-0.082, 0.008]**			**B = 0.02, SE = 0.02, 95%CI [-0.016, 0.061]**		
Indirect effect (low)	**B = -0.01, SE = 0.02, 95%CI [-0.038, 0.023]**			**B = 0.06, SE = 0.03, 95%CI [0.004, 0.117]**		

Notes: N = 293, LMXSC = leader-member exchange social comparison; LMX = leader-member exchange; PD = perceived deservingness of star worker

*$p < 0.05$, ** $p < 0.01$, *** $p < 0.001$*

Table 4.9

Unstandardized results of hierarchical multi-step regressions on benign envy and malicious envy

Variable	Benign Envy as dependent variable				Malicious Envy as dependent variable			
	Model 1		Model 2		Model 3		Model 4	
	β	SE	β	SE	β	SE	β	SE
Intercept	2.21	0.02	2.33	0.36	3.33	0.65	3.04	0.55
Controls								
LMX	0.55***	0.06	0.53***	0.06	-0.31***	0.010	-0.21*	0.09
Gender	-0.07	0.06	-0.06	0.06	0.08	0.10	0.07	0.10
Age	-0.01	0.05	-0.01	0.05	0.03	0.08	0.03	0.07
Education	-0.12+	0.07	-0.13*	0.07	-0.13	0.11	-0.03	0.10
Focal variables								
LMXSC	-0.00	0.04	-0.01	0.04	0.17**	0.06	0.13*	0.06
PD			0.04	0.04			-0.35***	0.06
LMXSC X PD			**0.07**	**0.04**			**-0.13***	**0.06**
Mediators								
Benign envy								
Malicious envy								
R-square	**0.25**		**0.26**		**0.21**		**0.22**	

Notes: N = 293, LMXSC = leader-member exchange social comparison; LMX = leader-member exchange; PD = perceived deservingness of star worker

$*p < 0.05$, $** p < 0.01$, $*** p < 0.001$

Table 4.10

Unstandardized results of hierarchical multi-step regressions of U-shaped relation between LMXSC and envy

Variable	Benign Envy				Malicious envy			
	Model 1		Model 2		Model 3		Model 4	
	β	SE	β	SE	β	SE	β	SE
Intercept	2.20***	0.35	2.28***	0.35	3.89***	0.58	2.83	
LMX	0.55***	0.06	0.53***	0.06	-0.32**	0.10	-0.28**	0.10
Gender	-0.07	0.06	-0.07	0.06	0.08	0.10	0.08	0.10
Age	-0.01	0.05	-0.01	0.05	0.03	0.08	0.04	0.08
Education	-0.12	0.07	-0.13*	-0.07	-0.13	0.11	-0.11	0.11
LMXSC	**-0.00**	**0.04**	**0.03**	**0.04**	**0.17****	**0.06**	**0.11**	**0.07**
LMXSC squared			**0.09***	**0.04**			**-0.14***	**0.06**
R²	**0.25**		**0.26**		**0.09**		**0.11**	
Change in R²			**0.01***				**0.02****	

Notes: N = 293, LMXSC = leader-member exchange social comparison; LMX = leader-member exchange;

$*p < 0.05$, $**p < 0.01$, $***p < 0.001$

Table 4.11

Unstandardized results of hierarchical multi-step regressions on the three dimensions of knowledge hiding

	Mediation test			Moderated Mediation test		
Variable	Knowledge hiding			Knowledge hiding		
	RH	EH	PLD	RH	EH	PLD
	β(SE)	β(SE)	β(SE)	β(SE)	β(SE)	β(SE)
Intercept	2.44(0.74)	0.56(0.62)	0.94(0.69)	0.70(0.05)	0.64(0.58)	1.01(0.64)
Controls						
LMX	-0.20(0.11)	-0.15(0.11)	-0.15(0.11)	-0.18(0.11)	-0.13(0.11)	-0.13(0.11)
Gender	-0.08(0.11)	-0.05(0.04)	-0.02(0.09)	-0.09(0.10)	-0.04(0.09)	-0.02(0.09)
Age	-0.065(0.08)	0.01(0.07)	0.07(0.08)	-0.07(0.08)	0.01(0.07)	0.06(0.07)
Education	-0.111(0.10)	0.03(0.10)	0.01(0.09)	-0.07(0.10)	0.06(0.10)	0.05(0.09)
Focal variables						
LMXSC	-0.04(0.07)	0.06(0.06)	0.06(0.06)	-0.02(0.07)	0.06(0.07)	0.06(0.06)
PD				-0.14*(0.07)	-0.13*(0.05)	-0.13*(0.06)
LMXSC X PD				-0.17*(0.07)	-0.04(0.05)	-0.04(0.05)
Mediators						
Benign envy	0.24*(0.10)	0.18*(0.09)	0.06(0.08)	0.27**(0.10)	0.19*(0.09)	0.08(0.08)
Malicious envy	0.42***(0.06)	0.58***(0.06)	0.54***(0.06)	0.35***(0.06)	0.53***(0.06)	0.49***(0.07)
R-square	0.19***	0.34***	0.33***	0.22***	0.36***	0.35***
Indirect effects	Via Malicious envy			Via Malicious envy		
Unconditional indirect effect	β = 0.07*, SE = 0.03, 95%CI [0.021, 0.132]	β = 0.10*, SE = 0.04, 95%CI [0.030, 0.173]	β = 0.09*, SE = 0.04, 95%CI [0.028, 0.164]	β = -0.05*, SE = 0.02, 95%CI [-0.085, -0.010]	β = -0.07*, SE = 0.03, 95%CI [-0.124, -0.016]	β = -0.06*, SE = 0.03, 95%CI [-0.117, -0.014]
Indirect effect (high)				β = 0.01*, SE = 0.02, 95%CI [-0.028, 0.044]	β = 0.01, SE = 0.03, 95%CI [-0.043, 0.063]	β = 0.01, SE = 0.03, 95%CI [-0.039, 0.059]
Indirect effect (low)				β = 0.09, SE = 0.04, 95%CI [0.019, 0.165]	β = 0.13*, SE = 0.05, 95%CI [0.030, 0.235]	β = 0.12*, SE = 0.05, 95%CI [0.028, 0.225]
Difference				β = -0.08*, SE = 0.04, 95%CI [-0.153, -0.018]	β = -0.12*, SE = 0.05, 95%CI [-0.221, -0.028]	β = -0.11*, SE = 0.05, 95%CI [-0.209, -0.024]

Notes: N = 293, LMXSC = leader-member exchange social comparison; LMX = leader-member exchange; PD = perceived deservingness of star worker; RH = rationalized hiding; EH = evasive hiding; PLD = playing dumb

*p < 0.05, ** p < 0.01, *** p < 0.001

Figure 2.1

Research Framework
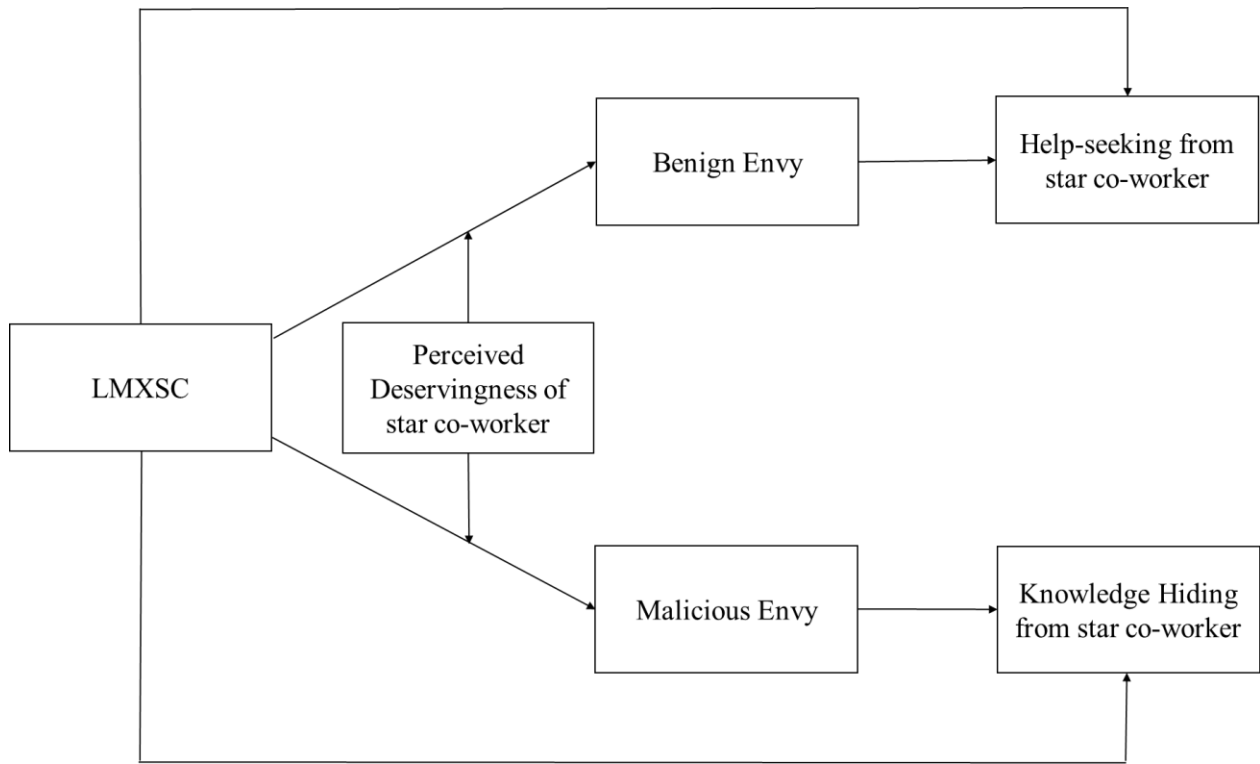
Figure 4.2

The interactive effect of LMXSC and perceived deservingness of star co-worker on malicious
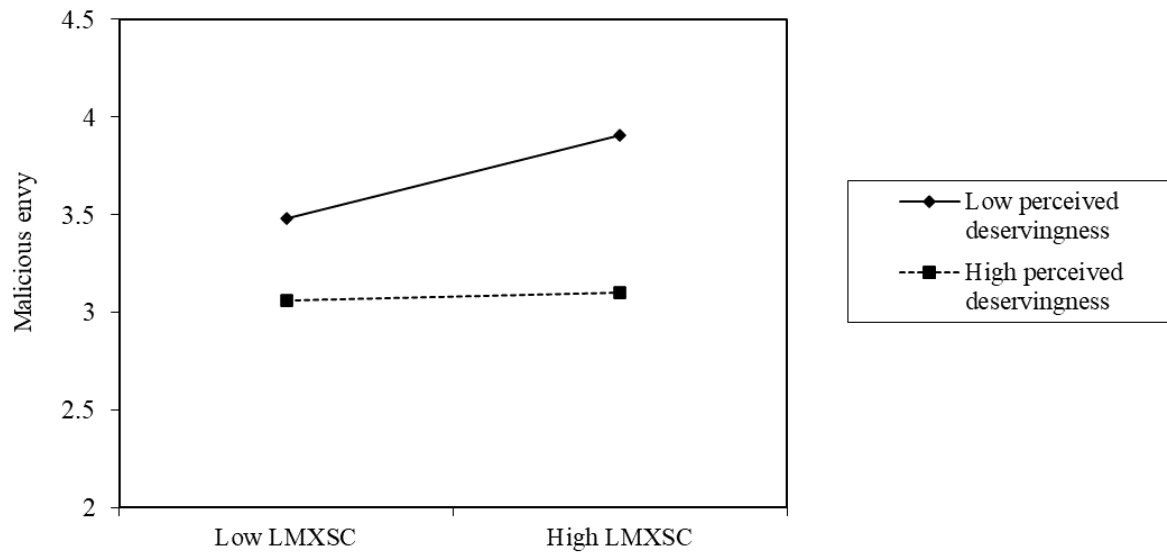
envy

Figure 4.3

The relationship between LMXSC and benign envy
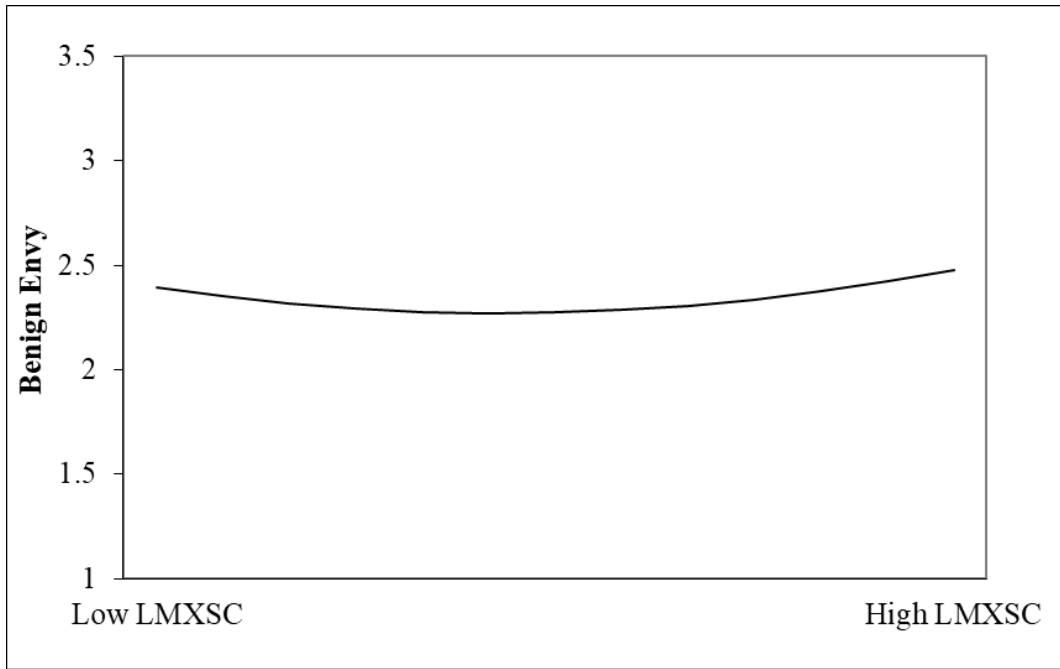
Figure 4.4

The relationship between LMXSC and malicious envy
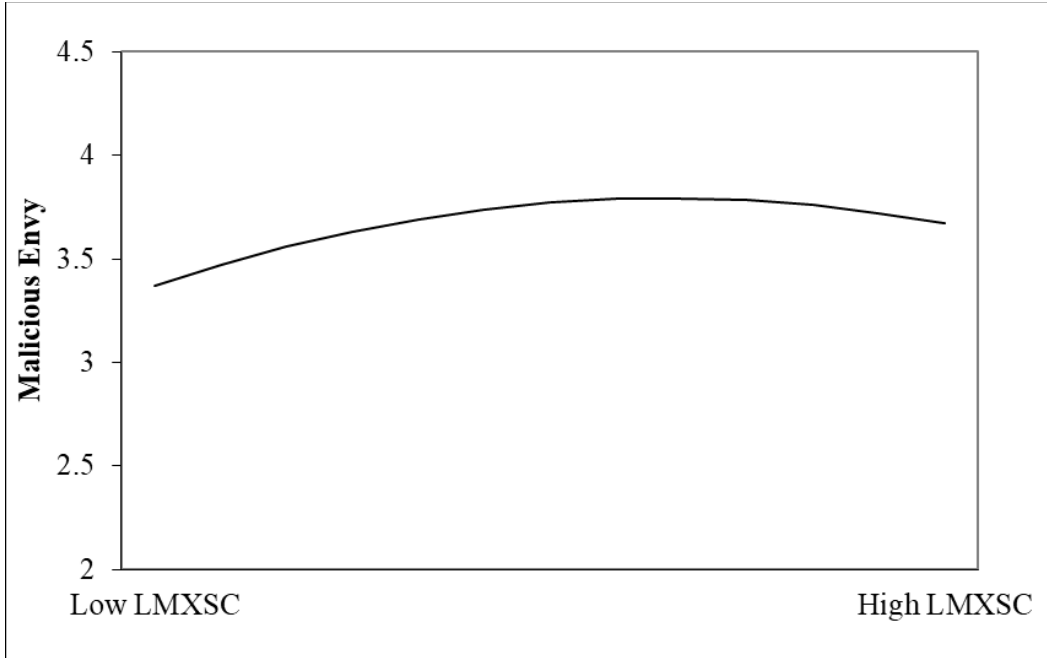
Appendix A

Survey Instruments

Instructions:

Please take the next 20 minutes to carefully read and respond to the following questions.

Personal Attributes

Gender: (Tick Relevant Box)   1. Male ☐   2. Female ☐

Your Age: _____

Education: 1. High school and below ☐   2. Senior high or vocational school ☐   3. University Zhuangke ☐   4. Undergraduate ☐   5. Postgraduate and above ☐

Type of organization: 1. Multinational Corporation (MNC) ☐

                2. State Owned Enterprise (SOE) ☐   3. Privately Owned ☐

                4. Joint Venture Enterprise ☐ 5. Others ☐ _____ (please specify)

Position in the organization: 1. Supervisory position ☐ 2. Non-supervisory position ☐

Tenure in the organization: _____ (year) _____ (month)

Tenue of working with current immediate supervisor: _____ (year) _____ (month)

Size of team or group: _____ (person)

(Definition: A work team or group is defined as two or more employees reporting to the same supervisor).

Section 1: LMX (Time 1)

Please rate the extent to which you agree or disagree with the following items with regard to how you feel toward yourself.

1. Do you usually know how satisfied your immediate supervisor is with what you do?

Rarely	Occasionally	Sometimes	Fairly often	Very often
(1)	(2)	(3)	(4)	(5)

2. How well do you feel that your immediate supervisor understands your problems and needs?

Not a bit	A little bit	A fair amount	Quite a bit	A great deal
(1)	(2)	(3)	(4)	(5)

3. How well do you feel that your immediate supervisor recognizes your potential?

Not at all	A little	Moderately	Mostly	Fully
(1)	(2)	(3)	(4)	(5)

4. Regardless of how much formal authority your immediate supervisor has built into his or her position, what are the chances that he or she would be personally inclined to use power to help you solve problems in your work?

None	Small	Moderate	High	Very High
(1)	(2)	(3)	(4)	(9)

5. Again, regardless of the amount of formal authority your immediate supervisor has, to what extent can you count on him or her to "bail you out" at his or her expense when you really need it?

None	Small	Moderate	High	Very High
(1)	(2)	(3)	(4)	(9)

1. I have enough confidence in my immediate supervisor that I would defend and justify his or her decisions if he or she were not present to do so.

Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
(1)	(2)	(3)	(4)	(5)

7. How would you characterize your working relationship with your immediate supervisor?

Extremely Ineffective	Worse than Average	Average	Better than Average	Extremely Effective
(1)	(2)	(3)	(4)	(5)

Section 2: LMXSC (Time 1)

Please rate the extent to which you agree or disagree with the following items with regard to how you feel (evaluate with regard to the same star co-worker).

Definition: A star co-worker is defined as those with disproportionately high and prolonged performance, visibility and relevant social capital relatively to others (Call et al., 2015).

1. My immediate supervisor is more loyal to my star co-worker compared to me.

Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
(1)	(2)	(3)	(4)	(5)

2. My immediate supervisor enjoys my star co-worker's companionship more than he or she enjoys my companionship.

Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
(1)	(2)	(3)	(4)	(5)

3. The working relationship my star co-worker has with my immediate supervisor is more effective than the relationship I have with my immediate supervisor.

Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
(1)	(2)	(3)	(4)	(5)

4. Relative to me in my workgroup, my star co-worker receives more support from my immediate supervisor.

Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
(1)	(2)	(3)	(4)	(5)

5. When my immediate supervisor cannot make it to an important meeting, it is likely that he or she will ask my star co-worker than me to fill in.

Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
(1)	(2)	(3)	(4)	(5)

6. My star co-worker has better relationship with my immediate supervisor than me in my work group.

Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
(1)	(2)	(3)	(4)	(5)

Section 3: Perceived Deservingness (Time 1)

Please rate the extent to which you agree or disagree with the following items with regard to how you feel toward your star co-worker (evaluate with regard to the same star co-worker). Please recall a situation in which your star co-worker was better off than you were. For example, a star co-worker who got better performance appraisal than you, made more money, won an award, etc.

1. An objective judge who knows the fact would agree that the star co-worker did not deserve to succeed at work.

Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
(1)	(2)	(3)	(4)	(5)

2. Anyone would agree that the star co-worker's advantage was unfairly obtained.

Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
(1)	(2)	(3)	(4)	(5)

3. Star co-worker achieved the advantage over me through undeniably unjust actions or unjust procedures.

Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
(1)	(2)	(3)	(4)	(5)

Section 4: Benign and Malicious Envy (Time 2)

Please rate the extent to which you agree or disagree with the following items with regard to how you feel (evaluate with regard to the same star co-worker).

1. I wanted to work harder to also attain exactly the same relationship as the star co-worker's relationship with our supervisor.

Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
(1)	(2)	(3)	(4)	(5)

2. I devised a plan to obtain exactly the same relationship as the star co-worker's relationship with our supervisor.

Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
(1)	(2)	(3)	(4)	(5)

3. The star co-worker motivated me to become just like him or her, who has a good relationship with my supervisor.

Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
(1)	(2)	(3)	(4)	(5)

4. I feel deep longing for the star co-worker's relationship with our supervisor.

Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
(1)	(2)	(3)	(4)	(5)

5. I complained to someone else about the star co-worker.

Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
(1)	(2)	(3)	(4)	(5)

6. I felt hostile towards the star co-worker.

Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
(1)	(2)	(3)	(4)	(5)

7. I secretly wished the star co-worker would lose the resources obtained from our supervisor.

Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
(1)	(2)	(3)	(4)	(5)

8. I feel hatred towards the star co-worker's relationship with our supervisor.

Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
(1)	(2)	(3)	(4)	(5)

Section 5: Help-seeking (Time 2)

Please rate the extent to which you agree or disagree with the following items with regard to how you feel (evaluate with regard to the same star co-worker).

1. I would have asked the star co-worker to cover for me, had I been absent.

Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
(1)	(2)	(3)	(4)	(5)

2. I would have asked the star co-worker to help me if I encountered a heavy workload.

Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
(1)	(2)	(3)	(4)	(5)

3. I would ask the star co-worker to share information with me.

Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
(1)	(2)	(3)	(4)	(5)

4. I would ask the star co-worker to help me if I fell behind my work schedule.

Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
(1)	(2)	(3)	(4)	(5)

5. I would ask the star co-worker to share his or her knowledge and expertise with me.

Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
(1)	(2)	(3)	(4)	(5)

6. I would ask the star co-worker to give of his or her time to help me if I experienced work-related problems.

Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
(1)	(2)	(3)	(4)	(5)

7. I would ask the star co-worker to provide me with a solution to my problem without asking him or her to explain how to solve the problem.

Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
(1)	(2)	(3)	(4)	(5)

8. I would ask the star co-worker to provide me with a solution to my problem and ask him or her to explain how to solve such problems in the future.

Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
(1)	(2)	(3)	(4)	(5)

Section 6: Knowledge Hiding (Time 2)

Please rate the extent to which you agree or disagree with the following items with regard to how you feel toward yourself (evaluate with regard to the same star co-worker).
Please think of a recent interaction with your star co-worker in a team/group activity or project, with regard to he or she may ask for some help or for some information from you.

1. I explained to the star co-worker that I would like to tell him or her but was not supposed to.

Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
(1)	(2)	(3)	(4)	(5)

2. I explained to the star co-worker that the information is confidential and only available to people on a particular project.

Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
(1)	(2)	(3)	(4)	(5)

3. I told the star co-worker that I would not answer his or her questions.

Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
(1)	(2)	(3)	(4)	(5)

4. I agreed to help the star co-worker but never really intended to.

Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
(1)	(2)	(3)	(4)	(5)

5. I agreed to help the star co-worker but instead gave him or her information different from what he or she wanted.

Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
(1)	(2)	(3)	(4)	(5)

6. I told the star co-worker that I would help him or her out later but stalled as much as possible.

Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
(1)	(2)	(3)	(4)	(5)

7. I offered the star co-worker some other information instead of what he or she really wanted.

Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
(1)	(2)	(3)	(4)	(5)

8. I pretended that I did not know the information when the star co-worker requesting me for knowledge.

Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
(1)	(2)	(3)	(4)	(5)

9. I said that I did not know, even though I did when the star co-worker requesting me for knowledge.

Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
(1)	(2)	(3)	(4)	(5)

10. I pretended that I did not know what the star co-worker was talking about when he or she request me for knowledge.

Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
(1)	(2)	(3)	(4)	(5)

11. I said that I was not very knowledgeable about the topic when the star co-worker request me for knowledge.

Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
(1)	(2)	(3)	(4)	(5)

-Thank you-

Appendix B

Survey Instruments (Chinese version)

说明：

请在接下来的 20 分钟里仔细阅读并回答下列问题。

个人属性

性别：（在对应方框内打勾） 　　1. 男□ 　　　　　　2. 女□

您的年龄： _____

学历： 1. 初中及以下 □ 　　2. 高中，中专或技校□ 　　3. 大学专科□

　　　　　4. 大学本科□ 　　5. 研究生及以上□

所在组织的类型： 　1. 跨国公司（MNC）□ 　　2.国有企业（SOE）□

　　　　　　　　　　3.私营企业□ 　　4. 合营企业□ 　　5. 其他□

公司中的职位： 　　1.管理岗□ 　　2. 非管理岗□

您在目前公司工作的时间（入职时间）： _____（年）_____（月）

您与目前的直属主管一起共事的时间： _____（年）_____（月）

团队或小组规模： _____（人）

(定义：工作团队或小组定义为向同一主管报告的两名或多名员工)

第 1 部分: LMX (T1)

请仔细阅读以下题目，并根据你的真实感受勾选相应的选项

1. 一般情况下，你知道你的直属主管对你的工作有多满意吗？

很少	偶尔	有时	经常	总是
(1)	(2)	(3)	(4)	(5)

2. 你认为你的直属主管了解你的问题和需求吗？

完全不了解	了解一点	还算了解	相当了解	非常了解
(1)	(2)	(3)	(4)	(5)

3. 你认为你的直属主管对你的潜力有多认可？

完全没看到	看到一点	一般	看到大部分	充分了解
(1)	(2)	(3)	(4)	(5)

4. 不管你的直属主管在他/她的职位上掌握了多大的正式权力，他/她个人倾向于使用权力来帮助你解决工作中问题的可能性有多大？

没有可能	可能性很小	可能性中等	可能性高	可能性非常高
(1)	(2)	(3)	(4)	(5)

5. 不管你的直属主管拥有多少正式的权力，当你真正需要的时候，你能指望他或她在多大程度上为你"纾困"？

没有可能	可能性很小	可能性中等	可能性高	可能性非常高
(1)	(2)	(3)	(4)	(5)

6. 我对我的直属主管有足够的信心，即使他/她不在场，我也会为他/她的决定辩护。

非常不同意	不同意	中立	同意	非常同意
(1)	(2)	(3)	(4)	(5)

7. 你会如何描述你与直属主管的工作关系?

极度无效	不及平均水平	平均水平	好于平均水平	极为有效
(1)	(2)	(3)	(4)	(5)

第 2 部分: LMXSC（T1）

"明星同事"指的是那些相对于其他人，持续保有例外的高绩效、曝光度以及相应的社会资源的同事(Call et al., 2015).

请回想你工作中的一位明星同事，阅读以下描述，并根据你的真实感受，选择最符合真实情况的选项。

1. 与我相比，我的直属主管对我的明星同事更忠诚。

非常不同意	不同意	中立	同意	非常同意
(1)	(2)	(3)	(4)	(5)

2. 我的直属主管更喜欢我的明星同事的陪伴，而不是我的陪伴。

非常不同意	不同意	中立	同意	非常同意
(1)	(2)	(3)	(4)	(5)

3. 我的明星同事和我的直属主管之间工作关系比我和直属主管之间的工作关系更有效。

非常不同意	不同意	中立	同意	非常同意
(1)	(2)	(3)	(4)	(5)

4. 在我的工作小组中，我的明星同事从我的直属主管那里得到了更多的支持。

非常不同意	不同意	中立	同意	非常同意
(1)	(2)	(3)	(4)	(5)

5. 当我的直属主管不能出席重要会议时，他或她很可能会让我的明星同事代替参加，而不是我。

非常不同意	不同意	中立	同意	非常同意
(1)	(2)	(3)	(4)	(5)

6. 我的明星同事与我的直属主管在我们的工作小组中的关系比我与直接属主管的关系更好。

非常不同意	不同意	中立	同意	非常同意
(1)	(2)	(3)	(4)	(5)

第 3 部分: Perceived Deservingness (T1)

请回想你的明星同事比你做得更好的某一种情况。例如，绩效评估比你好，收入比你多，获得了奖项等等。回忆当时你对明星同事的真实感觉，认真阅读以下描述，并勾选最符合的选项。

1. 一个了解事实的客观评判者会同意该明星同事不应该在工作上取得成功。

非常不同意	不同意	中立	同意	非常同意
(1)	(2)	(3)	(4)	(5)

2. 任何人都会认同，明星同事获得的优势是不公平的。

非常不同意	不同意	中立	同意	非常同意
(1)	(2)	(3)	(4)	(5)

3. 明星同事相比与我的优势是通过不可否认的不公正的行为或不公正的程序取得的。

非常不同意	不同意	中立	同意	非常同意
(1)	(2)	(3)	(4)	(5)

第 4 部分： Benign Envy and Malicious Envy (T2)

请回想上次答卷中，你选定的明星员工，并针对同一明星同事，回答以下问题.

请根据你的真实感觉，认真阅读以下描述，并勾选最符合的选项。

1. 我想更加努力地工作，以达到明星同事和我们主管之间的同样关系。

非常不同意	不同意	中立	同意	非常同意
(1)	(2)	(3)	(4)	(5)

2. 我设计了一个计划，来获得和明星同事和我们主管的关系完全一样的关系。

非常不同意	不同意	中立	同意	非常同意
(1)	(2)	(3)	(4)	(5)

3. 这位明星同事激励我成为像他/她一样和我的主管关系很好的人。

非常不同意	不同意	中立	同意	非常同意
(1)	(2)	(3)	(4)	(5)

4. 我向往明星同事和我们主管的关系。

非常不同意	不同意	中立	同意	非常同意
(1)	(2)	(3)	(4)	(5)

5. 我向别人抱怨过那个明星同事。

非常不同意	不同意	中立	同意	非常同意
(1)	(2)	(3)	(4)	(5)

6. 我对这位明星同事充满敌意。

非常不同意	不同意	中立	同意	非常同意

(1)	(2)	(3)	(4)	(5)

7. 我暗自希望这位明星同事失去从我们主管那里得到的资源。

非常不同意	不同意	中立	同意	非常同意
(1)	(2)	(3)	(4)	(5)

8. 我对明星同事和我们主管的关系感到厌恶。

非常不同意	不同意	中立	同意	非常同意
(1)	(2)	(3)	(4)	(5)

第 5 部分：Help-seeking (T2)

针对同一明星同事，请认真阅读以下描述，并勾选最符合的选项。

1. 如果我缺席的话，我会让那个明星同事替代我。

非常不同意	不同意	中立	同意	非常同意
(1)	(2)	(3)	(4)	(5)

2. 如果我遇到繁重的工作，我会找明星同事帮忙。

非常不同意	不同意	中立	同意	非常同意
(1)	(2)	(3)	(4)	(5)

3. 我会请明星同事与我分享信息。

非常不同意	不同意	中立	同意	非常同意
(1)	(2)	(3)	(4)	(5)

4. 如果我的工作进度落后了，我会请明星同事帮助我。

非常不同意	不同意	中立	同意	非常同意
(1)	(2)	(3)	(4)	(5)

5. 我会请明星同事与我分享他/她的知识和专长。

非常不同意	不同意	中立	同意	非常同意
(1)	(2)	(3)	(4)	(5)

6. 如果我遇到与工作相关的问题，我会请明星同事抽出时间来帮助我。

非常不同意	不同意	中立	同意	非常同意
(1)	(2)	(3)	(4)	(5)

7. 我会要求明星同事为我的问题提供一个解决方案，而不要求他或她解释如何解决问题。

非常不同意	不同意	中立	同意	非常同意
(1)	(2)	(3)	(4)	(5)

8. 我会请明星同事为我的问题提供一个解决方案，并请他/她解释未来如何解决这样的问题。

非常不同意	不同意	中立	同意	非常同意
(1)	(2)	(3)	(4)	(5)

第 6 部分： Knowledge hiding (T2)

针对同一明星同事，请认真阅读以下描述，并勾选最符合的选项

请回想你最近在团队/小组活动或项目中与该明星同事的互动，他或她向你寻求帮助或信息时，你会怎样回应。

1. 我向这位明星同事解释说，我很想告诉他/她，但不能告诉他/她。

非常不同意	不同意	中立	同意	非常同意
(1)	(2)	(3)	(4)	(5)

2. 我向这位明星同事解释说，这些信息是保密的，只能提供给某个项目的人。

非常不同意	不同意	中立	同意	非常同意
(1)	(2)	(3)	(4)	(5)

3. 我告诉这位明星同事，我不会回答他/她的问题。

非常不同意	不同意	中立	同意	非常同意
(1)	(2)	(3)	(4)	(5)

4. 我同意帮助那位明星同事，但从未真正打算这么做。

非常不同意	不同意	中立	同意	非常同意
(1)	(2)	(3)	(4)	(5)

5. 我同意帮助这位明星同事，但给他/她的信息不是他/她想要的。

非常不同意	不同意	中立	同意	非常同意
(1)	(2)	(3)	(4)	(5)

6. 我告诉这位明星同事，我以后会帮他或她，但却尽量拖延。

非常不同意	不同意	中立	同意	非常同意
(1)	(2)	(3)	(4)	(5)

7. 我向明星同事提供了一些其他信息，而不是他/她真正想要的信息。

非常不同意	不同意	中立	同意	非常同意
(1)	(2)	(3)	(4)	(5)

8. 明星同事向我询问信息时，我假装不知道。

非常不同意	不同意	中立	同意	非常同意
(1)	(2)	(3)	(4)	(5)

9. 尽管明星同事向我询问信息时我是知道的，但我说我不知道。

非常不同意	不同意	中立	同意	非常同意
(1)	(2)	(3)	(4)	(5)

10. 当明星同事向我询问信息时，我假装不知道他在说什么。

非常不同意	不同意	中立	同意	非常同意
(1)	(2)	(3)	(4)	(5)

11. 当明星同事向我询问信息时，我说我对这个话题不是很了解。

非常不同意	不同意	中立	同意	非常同意
(1)	(2)	(3)	(4)	(5)

-谢谢你-