AOSIS

A tale of two ships: Follower attributions of leadership with reference to team morale in an air traffic control centre

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Background: Air traffic controllers are a unique set of individuals operating in a safety-critical environment requiring interaction with and responsiveness to an elevated load of constantly changing information. The management of such a workforce is often challenging, specifically the maintenance of sufficiently high levels of morale to prevent a high controller turnover and safety related consequences. Low morale poses a latent safety risk to aviation organisations.

Aim: This study demonstrates that discrepancies between leader perceptions of follower attributions and actual follower attributions influence team morale.

Setting: The study was completed in a large operational air traffic control centre, operated by an air navigation service provider company in South Africa. It included four teams of air traffic controllers and their direct managers.

Method: A quantitative design was adopted to collect and analyse quantitative data from a total population of 105 followers and four team leaders. The Leadership Style Inventory was developed to collect data regarding twelve follower attributions ascertained from literature.

Results: Discrepancies between leader perceptions of follower attributions and actual follower attributions were identified in all four teams at the selected air traffic control centre. In each of the teams, leaders over-estimated follower attributions, which negatively affected air traffic controller team morale. The higher the perceived discrepancy between leaders and followers, the lower the team morale. The attributions displaying the highest levels of discrepancies between leaders and followers across all teams were morality, communication and openness while professionalism and encouragement displayed the highest level of matching between leaders and followers.

Conclusion: There is limited published research on leaders' perceptions of follower attributions and the actual follower attributions - as well as the effect of this discrepancy on team morale in air traffic control centres. This study provides a tangible way for air traffic control managers to navigate the risk of low morale by ascertaining their attributional developmental areas from a follower perspective. To assist in preventing latent system failures from leading to aviation incidents, the human factor as expressed in this study should considered by navigation service providers.

Keywords: Followership; attribution theory; air traffic control; morale; safety; leadership.

'Aviation in itself is not inherently dangerous. But to an even greater degree than the sea, it is terribly unforgiving of any carelessness, incapacity or neglect' (Captain Lamplugh, World War 1).

Introduction

In the air traffic management industry, safety is the most important driver of operations. The increased in-flight demands globally necessitates continuous research to improve aviation safety and to decrease the occurrence rate of accidents. A study on job stress and turnover tendency among air traffic controllers reported 1.08 accidents per million flight hours worldwide (Jou, Kuo & Tang 2013). The study also confirmed that human error was the primary cause of 90% of flight safety-related events in Taiwan from 2000 to 2009, followed by environmental factors and aircraft mechanical error. Information is exchanged via technological equipment during in-flight interactions between pilots and air traffic controllers. Pilots follow instructions from air traffic controllers who are responsible for the direction, orderly flow and maintenance of safe distances

between aircrafts. Poor situational awareness seems to be the key driver of near accidents (Jou et al. 2013), which in turn could be the consequence of fatigue and mental stress.

When anything is likely to compromise safety, air traffic management providers go to major lengths to mitigate the risk. In addition, when failures in the system lead to incidents or accidents, rigorous investigations are performed to ascertain the causes and to prevent them from reoccurring. According to the American airline captain, Chesley 'Sully' Sullenberger, celebrated for the January 2009 water landing of US Airways Flight 1549 in the Hudson River off Manhattan, 'there is simply no substitute for experience in terms of aviation safety'.

Although experience is a critical factor in aviation safety, it takes more than human experience to ensure safe takeoffs and landings. In safety-critical industries, staff with vast experience but low morale may present a latent safety risk to the workplace (Reason 1995). An operational environment where all employees take responsibility and continuously consider the impact of their decisions on safety relies on a high degree of mutual trust, respect and effective communication between employees and their leaders. A positive organisational climate depends on the quality of the relationship between its leaders and followers (Cilliers 2018). Followers seem to be more influenced by their perceptions of a leader's skills and traits than by the actual skills or traits of the leader (Meindl 1995). A large discrepancy between leaders' perceptions of themselves and their followers' perceptions of them, as well as the relationship of the discrepancy between these perceptions with perceived team morale, may erode the organisational climate to such an extent that it becomes a safety risk. The aviation industry is particularly unforgiving of safety lapses, and latent safety risks pose severe dilemmas that require mitigation or resolution as a matter of urgency.

Several authors highlight the importance of team morale (Ivey, Blanc & Mantler 2014; Minor et al. 2014; Rimmer 2017) as well as perceived attributions of leaders – from their own viewpoint as well as from the viewpoints of their followers (Collinson 2006; DeRue & Ashford 2010; Singh & Bodhanya 2013). Comparisons between followers' perceptions of their leaders and leader comprehension of such perceptions have been studied (DeRue & Ashford 2010; Singh & Bodhanya 2013). However, within the context of Air Traffic Control (ATC) centres, research relating to the relationship between perceived leader and follower attribution discrepancies and team morale seems to be 'off the radar' and not available. Such research is vital, because of the risks posed to a safety-critical environment through human error and system failures (Reason 1995).

Reason (1995) categorises two types of failures that lead to aviation incidents, namely active and latent failures. He argues that every incident contains both human (active) and organisational (latent) contributions which, when combined with local conditions, lead to failure of the system. While active failures describe actions taken by pilots or air traffic controllers at the time of the incident, they combine with latent failures (which relate to organisational conditions or procedures) to cause the event, which could simply be a minor safety incident, but might also result in a disastrous accident.

Every incident or accident follows a pathway through many layers of system defences designed to prevent them, as the 'holes' in these defences line up and allow the pathway to find its way through them all. Such a pathway could start with management activities that lead to certain workplace conditions (latent failure), which, in turn, may cause a person or team to err or violate procedures (active failure), resulting in an accident. Latent failures may occur slowly over time and are present long before the event occurs. Reason (1995) observes that management decisions on issues such as company policy, financing and operations can cause latent failures when they lead to outcomes such as fatigue, low morale, or less-than-optimal staffing levels. These decisions contribute directly via the latent failure pathway to the gradual eroding of the system's defences, as procedures, administrative controls and standards are frequently circumvented to get the job done (Reason 1995).

While this study does not claim that low team morale is the cause of all safety risks, it suggests that it may have an undetected but significant effect on safety in the researched environment, as it intensifies the latent failures eroding system defences against catastrophe (Mowday, Porter & Steers 2013). There may be a variety of different factors in the latent failure pathway that, over a period of time, may cause an aviation incident or accident to occur, of which low team morale could possibly be only a single factor.

Against this background, it was important to determine the possible discrepancies between leader-follower attributional perceptions within an ATC centre, which is a safety-critical environment. The participants in the present study comprised four teams, each with one leader.

Leadership and followership are inseparable concepts in organisational behaviour theory and cannot exist in isolation (Agho 2009; Kupers & Weibler 2008; Stech 2008). Without a leader, there is no follower; without a follower, there is no leader. Thus, the two positions go hand in hand. If leadership involves actively influencing others, then followership involves allowing oneself to be influenced (Uhl-Bien & Pillay 2007). Insight into the dynamic flow between leadership and followership and its relationship with team morale is therefore imperative, especially in the aviation industry where the safety of aircrew and passengers is critical (Reason 1995).

The purpose of this research was to determine the difference in the way leaders think they are being perceived by their followers and how they are actually being perceived, and the relationship of this discrepancy with the followers' team morale.

The research question, objectives and hypotheses were formulated as follows:

Research question: What are the possible discrepancies between follower attributions of leaders and leaders' perceptions of follower attributions in an air traffic control centre and how can the relationship of discrepancies with team morale be described?

To answer the research question the following research objectives were formulated:

Objective 1: To determine the discrepancies between follower attributions of leadership and leader perceptions of follower attributions within the various teams in an air traffic control centre.

Objective 2: To determine the statistical relationship between measured attributional discrepancies and levels of perceived team morale.

The hypotheses for this research were formulated as follows:

H_1: A statistically significant negative discrepancy (Ax_D) exists between leader perception of follower attributions and follower attributions of the leader.

H_2: A negative relationship exists between attributional discrepancy values (Ax_D) and levels of perceived team morale.

Literature review

Experience is not only a matter of what happens to you; it also entails how experiential events are perceived, how they are interpreted and how one's own emotions, as well as those of others, are managed (Hughes, Ginnet & Curphy 2015). The authors further postulate that human beings are not passive receivers of experiences; they actively interpret and construct their experiences.

Perception is an inherently interpretative and meaning making activity, and attribution is part of this process. Attributions differ from mere perceptions since they are the explanations we develop for the behaviour or actions we attend to (Hughes et al. 2015:49). The present study aimed at integrating key concepts related to the attribution theory of leadership and followership as a lens to explore the attributional perceptions of leaders and followers in an ATC centre. Attributions describe the qualities that leaders ascribe to themselves to explain their own behaviour and include the evaluations of followers regarding those attributions.

Attribution theory of leadership

Heider (1958) introduced attribution theory and explained that attributions are the outcomes by which people determine cause and effect to solve problems and become more effective in their exchanges with their surroundings. In short, an attribution is defined as a fundamental designation for a positive or negative result. It is the act of ascribing or attributing specific qualities to someone and is different from an attribute, which is a characteristic or quality of a person.

Jones and Harris (1967) expanded on this theory to describe the fundamental attribution error, which is the tendency of

humans to ascribe events to people rather than situations and contexts (Hughes et al. 2015). For example, if a colleague fails to achieve sales targets, their failure may be ascribed to dispositional attributions or internal factors, such as personality or intelligence and not on challenging economic conditions.

On the other hand, if you attempt to deliver on targets and fail, you would be more likely to blame external factors in the situation for the failure, such as limited time or resources. This reflects a self-serving bias, which is the tendency to blame the situation for failures and take credit for one's successes (Hughes et al. 2015). The psychoanalyst Freud (1921:123–124) believed that 'the leader himself needs to love no one else and is an individual whose main interest is self-preservation, suffering from a narcissistic personality'. Characteristics of a narcissist include a grandiose sense of self-importance, lack of self-insight and an exaggeration of their own achievements and talents (De Vries 2019). A preoccupation with status, power, beauty and superiority may therefore have negative implications for the leader-follower relationship. Self-serving bias is a typical characteristic of a narcissistic leader and Higgs and Rowland (2009) conclude that there is a positive link between the absence of an enabling climate for sustainable team morale, team performance and narcissistic leadership.

Bar-On et al. (2007) describe the terms 'self-awareness' and 'accurate self-assessment' and relate these terms to team performance. Leaders with high self-awareness display a gracefulness in learning about their shortcomings and welcome follower attribution feedback (Goleman 1995).

The same authors argue that the success of leaders and their teams is based on characteristics such as the ability to empathise, communicate and get along with others, their persistence in the face of frustration and their ability to adapt, rather than to depend on the analytic intelligence of the leader. The four pillars of the Goleman model represent the ability to accurately perceive one's own and others' emotions, the ability to generate emotions to facilitate thought and action, the ability to accurately understand the causes of emotions and the meanings they convey and the ability to regulate one's own emotions (Goleman 1995).

The subjective nature of follower perceptions (Meindl 1995) implies that the effectiveness of leaders is influenced not only by skill and behaviour, but even more by their followers' perception of them (Singh & Bodhanya 2013). The attributions that followers make about leaders have important implications for leaders either retaining their position by being perceived as competent or losing such position due to being perceived as incompetent (Yukl 2013). In addition, Eberly and Fong (2013) suggest that co-dependent followers are sensitive to leaders' emotional inconsistency when making attributions about such leaders. Similarly, the predictive power of attributions in organisational contexts was presented by

Harvey et al. (2014) who conducted a meta-analysis of existing attributional theory research. The authors explain how the effect sizes of attributions have consistently been comparable to any of the more commonly used predictor variables in an organisational context. The same authors further indicate that attribution theory has been consistently under-utilised in organisational research.

The inclusion of attribution theory as part of the theoretical framework for the present study contributed to a deeper understanding of leader-follower relational dynamics, often described as the antecedent of followership, which signifies a readiness to submit to another person in some way (DeRue & Ashford 2010).

Followership

The nature and dynamics of leadership remain a mystery despite the vast amount of theorisation on the topic. Stogdill and Bass (1990) state that if a theory of leadership is to be used for diagnosis, training and development, it must be grounded in the concepts and assumptions that are acceptable to and used by managers and emerging leaders. In the modern organisation, employees often switch between followership and leadership roles daily, which demonstrates the relevance and dynamic flow of both concepts (Agho 2009; Kupers & Weibler 2008; Stech 2008).

Changes to the modern work environment renewed emphasis on followers. The customary power distance between leaders and their followers has been gradually eroded due to simpler access to information and ever-expanding social networks (Bagraim et al. 2011). The interaction of attributions and the behaviours of both leaders and followers may thus co-create team morale, while operational efficiency requires an organisational climate of trust and collaboration where staff are engaged and motivated. Cilliers (2018:3) defines this co-creation process from a systems psychodynamic perspective and explains that 'there is a forever fluid movement of the social leadership-followership process which cannot be reduced to skills, competencies or a way of being'.

Literature on leadership and followership and the nature of the relationship between the two is limited (Greyvenstein & Cilliers 2012). Yet, it has been shown that the leader-follower relationship appears to be of a dynamic nature, while trust and collaboration seem critical in the achievement of goals (Cappelli & Keller 2013). This is especially true in an ATC centre where compliance with safety regulations depends on good communication and positive trust relationships between team members. Ideally, the interactions between leaders and followers in this high-risk context should contribute to high team morale and operational efficiency.

Authors indicate that followership receives comparatively less attention as the object through which organisational goals are to be realised (Chen, Belkin & Kurtzberg 2007). Yun, Cox and Sims (2006), for instance, refer to this phenomenon

as the forgotten follower. In the same vein, Greyvenstein and Cilliers (2012) conclude that research on leadership focuses more on business issues than on follower matters and that this leads to followers feeling disenfranchised, de-authorised and disregarded. A focus on followership thus requires new ways of thinking, new types of theorising and the operationalising and testing of different kinds of variables (Uhl-Bien et al. 2014).

A relevant theory is the leader-member exchange (LMX) (Bauer & Green 1996) as it integrates concepts from both the leadership and followership scholarly discourses. Leader-member exchange is said to affect team morale in many different areas of organisational functioning and refers to the quality of the relations between leaders and group members (i.e. followers). High-quality LMX indicates high levels of information exchange, interaction, trust, respect, support, mutual influence and rewards. The applicability of the traditional LMX conceptualisation is challenged by the new work relationships and often completely irrelevant, especially in high autonomy working environments such as knowledge workers, freelancers or outsourced workers (Chernyak-Hai & Rabenu 2018). However, in a safety-critical environment such as an ATC centre where high levels of authority, trust, cooperative interactions and information sharing are important the LMX theory is still applicable.

Method

Research design

A quantitative, survey-based methodology was utilised to conduct the research, with one of the researchers personally explaining and administrating questionnaires to participants.

Setting

The research was conducted at a large operational ATC centre. The centre consisted of four teams, referred to as pools, with each pool comprising between 25 and 26 team or pool members and a pool manager (leader).

Sample

A convenience sampling technique, and specifically a census approach was followed aiming to include all the employees at the ATC centre in the study. The total researched population comprised 105 follower respondents and four leaders. Three follower questionnaires were refused, resulting in a realised sample of 102 team members and four leaders, as illustrated in Table 1.

TABLE 1: Realised sample framework.

Pool name	Leader name	Team members
Pool A	Leader A (1)	25
Pool B	Leader B (1)	26
Pool C	Leader C (1)	26
Pool D	Leader D (1)	26
Total	**4**	**102**

Measuring instruments and data collection

Two self-developed questionnaires, namely the Leadership Style Inventory (LSI) for leaders and the LSI for followers, were used to collect the data. The questionnaires were constructed based on relevant leadership and followership theory (Bar-On 1996; Bauer & Green 1996; Eberly & Fong 2013; Goleman 1995; Green & Mitchell 1979; Hollander 1992a, 1992b; Kelley 1973; Kent & Martinko 1995; Martinko, Harvey & Douglas 2007; Mitchell 1982; Weiner 1986; Zuckerman 1979). In total 12 attributions were measured in both questionnaires, namely: (1) conscientiousness, (2) consistency, (3) encouragement, (4) fairness, (5) leadership, (6) loyalty, (7) morality, (8) openness, (9) professionalism, (10) reputation, (11) communication and (12) trust.

The two questionnaires measure the same attributions to enable meaningful comparison between the responses of leaders and followers. While the same attributions are measured in both questionnaires the questions are posed slightly differently in order to collect the perceptions of leaders as well as perceptions of followers. Five-point Likert scales were used to collect data from leaders and followers, where 1 = Never, 2 = Almost never, 3 = Sometimes, 4 = Almost always and 5 = Always. In addition, both questionnaires included a question that measures team morale, using a five-point Likert scale, where 1 = Poor, 2 = Below average, 3 = Average, 4 = Above average and 5 = Excellent.

The questionnaire design therefore enables comparison of follower attributions to the corresponding team leader perceptions of follower attributions, as well as provides a measure of both leader and follower perceptions regarding team morale. Construct validity of the questionnaires was obtained through a review of the attributions as well as the team morale constructs by a panel of subject matter experts. Subsequently. a pilot study was conducted with one leader and five followers at a small ATC centre to ensure that the questions correctly represent the attributions to be tested. Two items rendering incorrect data were removed after the pilot study phase before the main study was conducted. The questionnaires were individually distributed to all respondents and completed in the presence of one of the researchers.

Reliability and validity

Reliability and validity in research refer to the consistency and accuracy of data. The reliability of a study refers to the expectation that similar results will be found when the study is repeated (Adams & Lawrence 2019) and is often expressed in a Cronbach's α metric. Reliability of the research process was enhanced by one of the researchers providing standardised instructions and directions to all participants as well as making participation voluntary and administering the instrument in person.

Data analysis

Data were statistically analysed in two phases, corresponding to the two research objectives. Firstly, the Likert scale rating for each follower per question on the LSI for followers was compared to the ratings for the same question in the LSI for leaders and a discrepancy value obtained. This provided an indication of the attributional discrepancy (Ax_D) for each follower attribution. A one-sample t-test was calculated to examine the differences between the follower attributions of leadership and leader perception of follower attributions.

Secondly, the perceived follower morale rating was correlated with the obtained attributional discrepancy for each attribution to describe the relationship of the Ax_D value on team morale. Spearman rho correlations, a non-parametric measure for ranked variables, were calculated to indicate the direction of association between the average discrepancy values (Ax_D) for each attribution and team morale. In addition, Cohen's d values were calculated to determine the practical significance of the discrepancies.

Ethical consideration

Ethical clearance was obtained for the research from the relevant institution (School of Business Leadership, University of South Africa).

Findings

To provide meaningful research results the reliability of the data set needs to be determined as depicted in Table 2.

The Cronbach's α was calculated at 0.97, which is higher than the minimum accepted threshold of 0.70 (Pallant 2013), indicating very good internal consistency and reliability of the constructs in the questionnaire. For each of the 12 attribution constructs a Cronbach's α was calculated and all values were above 0.70 (see Table 3).

The first objective was to determine the discrepancies between follower attributions of leadership and leader perceptions of

TABLE 2: Descriptive statistics.

N	Test mean	Variance	Standard deviation	Cronbach's $α$
102	2.98	1.005	1.003	0.97

TABLE 3: Attribution Cronbach's alpha scores.

Attribution	Cronbach's $α$
A1 Conscientiousness	0.92
A2 Consistency	0.92
A3 Encouragement	0.93
A4 Fairness	0.89
A5 Leadership	0.96
A6 Loyalty	0.89
A7 Morality	0.93
A8 Openness	0.92
A9 Professionalism	0.91
A10 Repute	0.96
A11 Trust	0.96
A12 Communication	0.93

TABLE 4: Leadership Style Inventory attribution criteria and attributional discrepancy (Ax_D) values.

Item	Attribution	Description	Pool	Pool rating	Leader rating	Ax_D
A1	Conscientiousness	Desires to do the task well, is thorough, careful, vigilant, efficient and organised.	A	2.58	3.83	-1.26
			B	2.63	3.50	-0.87
			C	3.05	4.50	-1.45
			D	3.08	4.20	-1.12
A2	Consistency	Does things (good or bad) every time without fail.	A	2.86	4.10	-1.24
			B	2.72	3.70	-0.98
			C	3.28	4.80	-1.52
			D	3.38	4.20	-0.82
A3	Encouragement	Personally encourages or contributes to encouraging environment.	A	2.76	3.71	-0.96
			B	2.73	3.43	-0.70
			C	2.99	4.64	-1.65
			D	3.05	3.92	-0.88
A4	Fairness	Deals fairly with subordinates, including violations and mistakes.	A	2.93	4.50	-1.57
			B	2.78	3.80	-1.02
			C	3.21	4.80	-1.59
			D	3.33	4.40	-1.07
A5	Leadership	Leadership style leads to trust, pride and respect from team and others.	A	2.75	3.68	-0.93
			B	2.74	3.41	-0.67
			C	3.00	4.82	-1.82
			D	3.03	3.74	-0.71
A6	Loyalty	Is primarily loyal to team: mistakes and problems dealt with internally first.	A	2.95	4.57	-1.62
			B	2.85	3.86	-1.00
			C	3.37	4.57	-1.20
			D	3.39	4.14	-0.75
A7	Morality	Personal and professional morals lead to trust and respect from all.	A	2.85	4.18	-1.34
			B	2.86	3.64	-0.77
			C	3.12	4.91	-1.79
			D	3.26	4.09	-0.83
A8	Openness	Transparency in actions leads to trust and cooperation.	A	2.40	3.50	-1.10
			B	2.45	3.50	-1.05
			C	3.07	5.00	-1.93
			D	3.09	3.80	-0.71
A9	Professionalism	Professional conduct is consistently of a high standard and leads to respect.	A	2.76	3.44	-0.68
			B	2.70	3.33	-0.64
			C	3.12	4.78	-1.66
			D	3.15	4.00	-0.85
A10	Repute	Conduct leads to high regard/reputation among pool members and outsiders.	A	2.83	3.96	-1.13
			B	2.82	3.62	-0.79
			C	3.07	4.85	-1.77
			D	3.09	3.96	-0.86
A11	Trust	Is trusted by the team to have their best interests at heart.	A	2.80	4.16	-1.36
			B	2.81	3.74	-0.92
			C	3.00	4.84	-1.85
			D	3.08	3.82	-0.74
A12	Communication	Communicates consistently and often, leading to trust and respect.	A	2.53	3.88	-1.35
			B	2.57	3.63	-1.06
			C	3.04	4.75	-1.72
			D	3.03	4.00	-0.97

follower attributions within the various teams in the ATC centre. Table 4 indicates the average team or pool rating, the leader rating and the difference or discrepancy between the two ratings (Ax_D value) for each attribution.

In the case of all four teams (pools), the average follower attribution values were consistently lower than leader perceptions of follower attributions. Stated differently, leaders perceived follower attributions consistently higher than how follower attributions were actually rated. This resulted in significant attributional discrepancies (Ax_D) for all 12 follower attributions, as illustrated in Figure 1.

H_1: A statistically significant negative discrepancy (Ax_D) is observed between follower attributions of leadership and leader perception of follower attributions.

Effect size values are a natural way to comment on the practical significance of a data set and implies the standardised difference between the means of two populations (Ellis & Steyn 2003). Effect size values were depicted by Cohen's d values and calculated for all the attributions. All values exceeded the 0.80 value as per Cohen's guidelines (Table 5), confirming a large effect between follower attributions of leadership and leader perceptions of follower attributions.
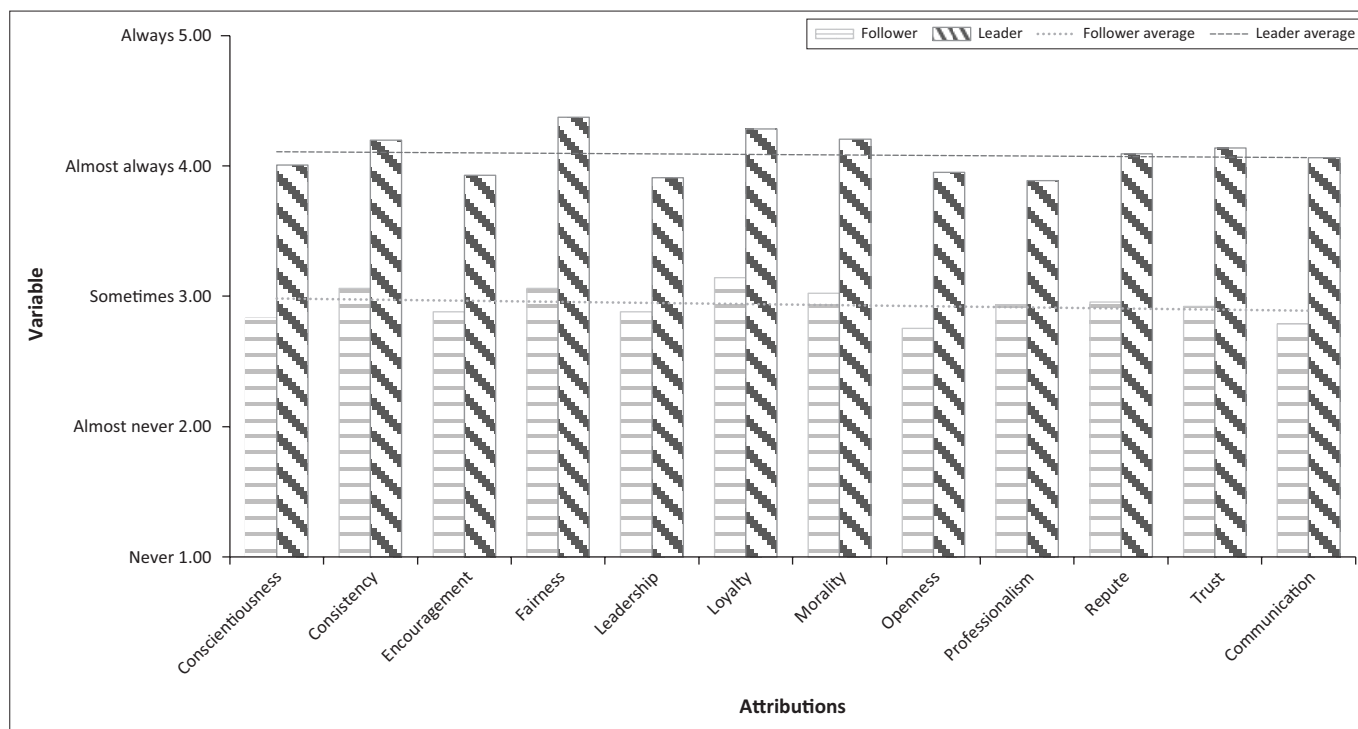
FIGURE 1: Discrepancy between leader perception of follower attributions and actual follower attributions (Ax_D).

TABLE 5: One sample statistics and test (test value = 0) (n = 102).

Ax_D	Standard deviation	Standard error mean	t	df	p	Mean difference	95% confidence interval		Effect size Cohen's d
							Lower	Upper	
A1_D	0.90	009	10 572	101	<0.0001	-0.94	-1.12	-0.76	1.04
A2_D	0.77	0.08	14 235	101	<0.0001	1.09	0.94	1.24	1.42
A3_D	0.78	0.08	10 347	101	<0.0001	-0.79	-0.95	-0.64	1.01
A4_D	0.83	0.08	11 896	101	<0.0001	-0.98	-1.14	-0.82	1.18
A5_D	0.89	0.09	10 499	101	<0.0001	-0.92	-1.10	-0.75	1.03
A6_D	0.78	0.08	9531	101	<0.0001	-0.74	-0.90	-0.59	0.95
A7_D	0.89	0.09	11 128	101	<0.0001	-0.98	-1.16	-0.81	1.10
A8_D	0.83	0.08	11 019	101	<0.0001	-0.90	-1.06	-0.74	1.08
A9_D	0.82	0.08	10 613	101	<0.0001	-0.86	-1.02	0.70	1.05
A10_D	0.85	0.08	11 100	101	<0.0001	-0.93	-1.10	-0.76	1.09
A11_D	0.91	0.09	10 282	101	<0.0001	-0.93	-1.11	-0.75	1.02
A12_D	1.03	0.10	10 717	101	<0.0001	-1.09	-1.29	-0.89	1.06

Note: Cohen's d: Small effect = 0.20; Medium effect = 0.50; Large effect = 0.80.

H$_1$ is therefore supported and the finding supports the statements by Kets De Vries (2019) that leaders tend to inflate their own capabilities and may not have the insight to understand the impact they have on their followers because of their narcissistic tendencies. Self-awareness as well as social awareness are indicators of emotional intelligence (Bar-On 1996; Goleman 1995; Higgs & Rowland 2009), which include self-leadership, leadership of followers in dyads or teams, and leadership in the organisation as a system (Greif 2007).

The second research objective was to determine the relationship of the measured attributional discrepancies of leaders and followers with team morale. The Spearman's r_s signifies the direction of an association between X and Y, with a positive number signalling that Y tends to increase when X increases and vice versa (Ellis & Steyn 2003). If the Spearman rho is $r_s = 0$, it is an indication that there is no tendency for Y to either increase or decrease when X increases, while $r_s = 1$ indicates a perfectly monotone relation between Y and X.

The follower rating of team morale, obtained from the LSI for followers, was compared to the average attributional discrepancy (Ax_D) of each follower attribution (the discrepancy between leader attributional perception and actual follower attributional perception). A distinct negative relationship was clear: the larger the value of the discrepancy (both positive and negative), the lower the perceived morale. By implication, both an under and over-estimation of follower attributions results in lower morale, as illustrated in Figure 2. As a two-tailed correlation, statistical significance of a Spearman's r_s value was obtained at $r_s \geq 0.05$.

In the case of all four pools, the average follower attribution values (the perception that followers have of leaders) were consistently lower than what the leaders perceived them to be.
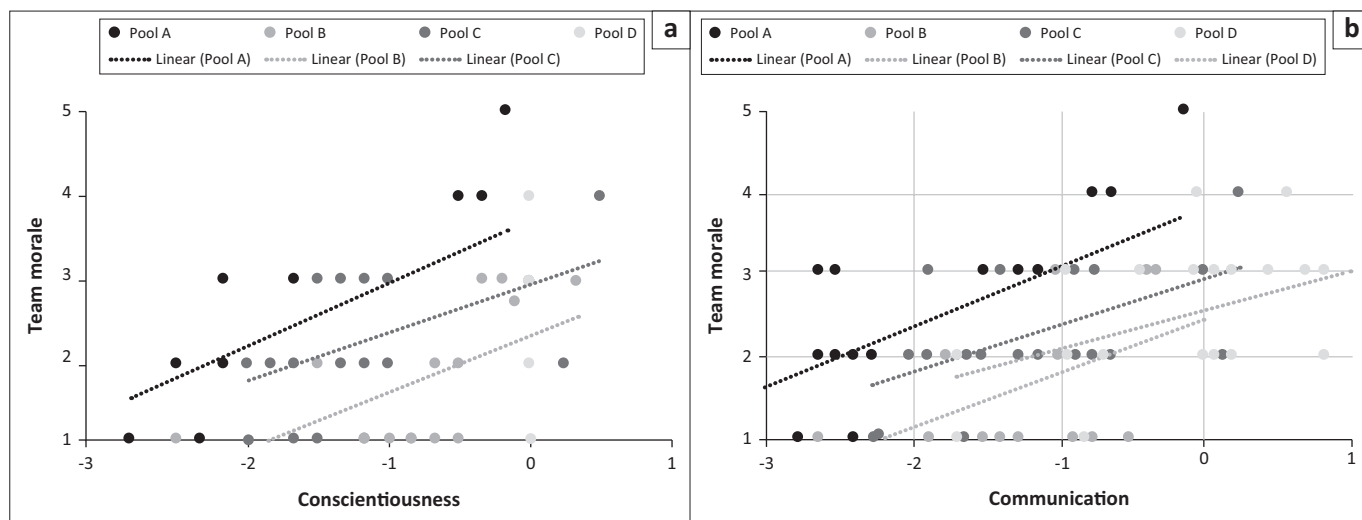
FIGURE 2: Discrepancies (A*x*_D) versus level of perceived team morale: (a) Conscientiousness; (b) Communication.

Stated differently, leaders rated follower attributions, that is, how they thought their followers perceived them, consistently higher than how their followers rated their leadership qualities. This is reflected in the average r_s values for each team, obtained by averaging the r_s values for every question in the LSI (numbered from *LSI1* to *LSI42*) and illustrated for Pool A in Table 6. Values indicated in italics are statistically significant at $p < 0.05$.

Pool B had an average r_s value of –0.214825, Pool C of –0.470991 and Pool D of –0.621079, which confirm that all four leaders were overrating their followers' perceptions on each item in the LSI by various degrees. Once the LSI items are collated into attributions (as described in Table 4), the attributional discrepancy (A*x*_D) between follower attributions and leader perception of their attributions is obtained. Once again, on each of the 12 attributions (except A2, which was underrated) leaders were overrating their follower attributions. This finding, illustrated in Figure 1, confirms the statements by Kets de Vries (2017) that leaders tend to inflate their own capabilities and may not have the insight to understand the impact they have on their followers because of their narcissistic tendencies. Self-awareness as well as social awareness are indicators of emotional intelligence (Bar-On 1996; Goleman 1995; Higgs & Rowland 2009), which includes self-leadership, leadership of followers in dyads or teams and leadership in the organisation as a system (Greif 2007).

In Figure 2, a value of 0 for the X measure (A*x*_D) indicates identical leader and follower perceptions of follower attributions. A negative value denotes a larger leader rating than follower rating, indicating a leader over-estimation of follower attributions. On the other hand, a positive value signifies a larger follower rating than leader rating, indicating a leader under-estimation of follower attributions. All the attributions reflect the same pattern except the attribution *consistency* which was underrated by leaders. Similar to the other 11 attributions (where leaders consistently overrated

TABLE 6: Spearman's rho values per LSI question for Pool A.

Variable	r_s
LSI1	*-0.633716*
LSI2	*-0.542140*
LSI3	*-0.392860*
LSI4	*-0.600239*
LSI5	*-0.600239*
LSI6	*-0.446145*
LSI7	*-0.576259*
LSI8	*-0.683179*
LSI9	*-0.546107*
LSI10	*-0.707220*
LSI11	*-0.658772*
LSI12	*-0.686739*
LSI13	*-0.483450*
LSI14	-0.286327
LSI15	*-0.639020*
LSI16	*-0.626335*
LSI17	*-0.430139*
LSI18	*-0.428022*
LSI19	*-0.502883*
LSI20	*-0.673888*
LSI21	*-0.777507*
LSI22	*-0.631060*
LSI23	-0.316775
LSI24	*-0.522070*
LSI25	*0.428787*
LSI26	*-0.565102*
LSI27	-0.203485
LSI28	*-0.632537*
LSI29	*-0.478901*
LSI30	-0.262115
LSI31	-0.198031
LSI32	*-0.508272*
LSI33	-0.127574
LSI34	*-0.505574*
LSI35	*-0.522323*
LSI36	*-0.642853*
LSI37	-0.118686
LSI38	*-0.649903*
LSI39	*-0.618366*
LSI40	-0.321678
LSI41	-0.020389
LSI42	-0.215219
Average	-0.568254

their follower attributions) the larger the attributional discrepancy, the lower the level of perceived morale becomes.

H₂: A significant negative correlation is observed between attributional discrepancy values (Ax_D) and perceived levels of team morale.

H₂ is supported and confirms the higher the value of Ax_D, the lower the level of perceived team morale. It is therefore evident from the data that, in the context of the present study, ATC pool managers overrate the way they think their followers perceive their leadership qualities. Furthermore, the leader-follower discrepancy has a negative effect on perceived team morale as higher measures of discrepancies between the perceptions of leaders and followers are associated with lower perceived team morale.

Conclusion

Follett (1949) reminds us of the self-serving bias of the Great Man theory in the leader-follower dynamic:

Can you not remember the picture … of the man in the swivel chair? A trembling subordinate enters, states his problem; snap goes the decision from the chair. This man disappears only for another to enter. And so it goes. The massive brain in the swivel chair all day communicates to his followers his special knowledge. (p. 311)

The attributional process between followers and leaders is a complex process and beyond the scope of this research. This article presented an analysis of the difference in the way leaders think they are being perceived by their followers and how they are actually being perceived, and the relationship of this discrepancy with the followers' team morale in an ATC centre.

Traditionally the leader role was idealised, as was evident in businesses following the model of the Great Man leadership theory where the follower was overshadowed (Baker 2007). The present research firstly confirms how the historically idealised concept of leadership is projected into the perceived self-image of individual leaders, noticeable in the overestimated leader attributions. Secondly, there is a negative relationship between the discrepancies of leader perceptions of follower attributions and actual follower attributions of their leaders and perceived team morale. The results of the study support scholarly dialogue relating to aspects of leadership and followership. Kets De Vries (2019) stated that the creation of highly motivated followers depends mostly on understanding others which is not possible if leaders and followers are alienated from each other. To involve oneself willingly to influence, coordinate and guide people's organisational activities towards attaining positive goals and outcomes for the organisation requires both self-awareness and social awareness (Cilliers 2018).

The implication of the results is that the idealised perception that leaders have may have of follower attributions may not only be true for the aviation industry, but be relevant for other working environments as well. Discrepancies between follower attributions of leadership and leader perceptions of follower attributions in any office may have a negative influence on the perceived team morale. The implementation of individual as well as group coaching sessions may create an improved office culture and remove 'blind spots' that leaders and followers may have regarding the perceptions of their own capabilities and their colleagues.

Different ATC centres have different working environments. This heterogeneity has not been considered in the research, as the study population included one specific ATC centre. The study suggests further research to include a cross-sectional and longitudinal study to investigate low perceived team morale as a latent safety risk in ATC centres as well as in other safety-critical organisations.

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Data availability statement

Data available from the authors on request.

Disclaimer

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