

Leadership through the subordinates' eye: perceptions of leader behaviors in relation to age and gender

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Abstract

Purpose – The study represents a theory-based leadership approach in exploring the subordinate's perceptions of leadership behaviors in relation to age, gender and type of work environment. The aim was (1) to compare subordinates' ratings of their respective leaders' leadership behaviors based on of the leaders' age and gender, controlling for type of work environment and (2) to analyze the relationship between the subordinates' ratings of their leaders' leadership behaviors and their ratings of the outcome of these leadership behaviors.

Design/methodology/approach – Data were collected using the Developmental Leadership Questionnaire (DLQ) from a sample of Swedish leadership course participants ($n = 10,869$) and their respective subordinates ($n = 97,943$). The DLQ measures leadership behaviors designed to reflect the following leadership styles: developmental leadership, conventional-positive leadership, conventional-negative leadership and destructive leadership.

Findings – Results showed that older leaders (51 years or older) were rated less favorably than younger (29 years or younger) and mid-aged leaders. Female leaders received more positive ratings than male leaders. A 3-way analysis-of-variance showed strong main effects for age, gender, and type of work environment and no significant interaction effects. A significant model with high equivalents of R^2 coefficients (Cox and Snell, 1989; Nagelkerke, 1991) was obtained in a logistic regression analysis. Developmental leadership and conventional-positive leadership made significant positive contributions to the subordinates' ratings of the outcome of their leaders' leadership behaviors. Destructive leadership behaviors contributed negatively to the outcome ratings.

Research limitations/implications – Weaknesses include the cross-sectional study design. The large sample size is a strength, and the results have novel implications for leadership theory related to subordinates' view on leadership.

Practical implications – Counter-stereotype age and gender findings may have implications for organizational decisions and processes regarding selection of managers. Development programs are suggested for all categories but for older, male leaders with a focus on reducing their use of leadership



behaviors perceived negatively by their subordinates, whereas younger female leaders should be encouraged to continue to develop their positive leadership behaviors.

Originality/value – The theory-based approach on subordinates' perceptions of leadership behaviors with a simultaneous focus on age, gender and type of work environment, based on a large-scale data set, is new.

Keywords Leadership, Subordinate perspective, Age, Gender, Developmental Leadership

Questionnaire (DLQ)

Paper type Research paper

Introduction

Today's working life is largely affected by a generational change, where many leader positions held by older men are to be passed on to a new generation where female and male candidates should be encouraged and valued on equal terms (Shultz and Adams, 2007). In addition, due to both societal development and medical advances our working life has become prolonged. This in turn has resulted in the workforce becoming increasingly age heterogeneous, with as much as five different generations sharing the same workplace (Holian, 2015). The labor market has also witnessed major changes during the last decades in terms of women taking on leading position to a greater extent than earlier. Age and gender diversity at the workplace can have great advantages but could also bring challenges.

One such challenge relating to generational differences is an increasing reluctance among young people, at least in Sweden, to take on leadership positions (Fjällberg, 2012; Ledarna, 2014). The organizational demands on leaders are perceived to complicate a healthy work–life balance (Perry-Jenkins and Wadsworth, 2017). Young female leaders report this concern at a higher frequency than male leaders (Björklund *et al.*, 2013; Ipsen and Jensen, 2012; Skakon *et al.*, 2011).

Other challenges faced by young leaders include lack of experience and uncertainty of their identity as leaders (Hill, 1992), and that they are perceived as less prototypical and have lower status than older leaders (Buengeler *et al.*, 2016). To illustrate, a recent Swedish study showed that younger leaders (up to 29 years of age) self-rated their leadership behaviors less positively than did leaders in older age groups (Larsson and Björklund, 2020). This might be related to younger leaders having difficulty establishing trustworthiness in relation to older subordinates (Benjamin and O'Reilly, 2011). However, the reluctance for younger individual to take on a leader position could also suggest that there are marked differences in expectations and motivators across generational cohorts. Research also shows that leader identity seems to grow over time from experiences of encounters with other people in different social contexts (Ibarra *et al.*, 2010). In order for organizations to offer the right preconditions for young managers to grow in their role, more research is warranted to identify the leadership areas in which young managers are in need of support in their development (Bolander *et al.*, 2019).

A second issue that deserves special attention in leadership research is gender. Sweden is ranked as one of the most gender equal countries in the world (European Institute for Gender Equality, 2017; United Nations, 2010). The average proportion of female managers is about 40% and increasing. However, when it comes to top managerial positions in private enterprises women are still largely underrepresented, with men holding 90% of chairman and CEO positions on the private stock market (Statistics Sweden, 2020; Confederation of Swedish Enterprises, 2020).

In line with this, international studies show that even though female leaders have a large potential to contribute positively to organizations by, for instance, increased innovation, profitability, more customers and greater market share (Dezsö and Ross, 2012; Herring, 2009), women remain significantly underrepresented in corporate leadership positions. In addition, women are more likely than men to be promoted to high-risk leadership positions in

struggling organizations and often experience shorter tenures compared to men (Glass and Cook, 2016). A recurring explanation for the so often disadvantageous situation for women with leadership aspirations is prevailing gender stereotypes, e.g. the preconception of women being less capable and competent as leaders, in combination with homosocial reproduction, i.e. in-group favoritism that leads men to prefer other men for high level promotions (Reskin, 2000; Ridgeway and England, 2007). A large-scale study on leadership ranking and gender found that even though more than half of the participants in the study stated that they had no gender preferences if they were to choose their leader, the majority (72%) of the ones having an opinion on the matter preferred a male manager (Elsesser and Lever, 2011). The study also revealed that the most common justifications for preferring a male manager was based on stereotypical and negative attributes of female leaders rather than positive attributes or competence possessed by male leaders. These theories indicate that social norms and conventions regarding what constitutes a good leader is significantly affecting people's perceptions of women as competent leaders. Previous research targeting leadership in relation to gender have illustrated the prevailing male norm in management, which could explain why women leaders often experience that they are put under more harsh scrutiny and are being trapped in the need for high performance to prove that they fit in and are competent (Wahl, 2014). The male norm often leaves women leaders in a double bind, where they are considered to be weak and unsuitable for leadership if they conform to their traditional gender role whereas they risk being evaluated negatively for behaving unfeminine if they instead adopt the agentic characteristics generally associated with successful leaders (Elsesser and Lever, 2011). This phenomenon is often referred to as an "agency penalty", inhibiting the career of female leaders (Rudman and Glick, 2001).

The intersection of age and gender was examined by Scheuer and Loughlin (2020) in an experimental vignette study focusing on older workers' perception of younger supervisors. The study highlights how leadership stereotypes traditionally have not only been male, but also aged-biased, and thus a leader is stereotypically often seen as an older male. Scheuer and Loughlin's results show that older workers value communal qualities in a leader, but also that they perceive supervisors most favorably when they are depicted as being older than their direct reports. However, the results also revealed that if a supervisor is not showing communal qualities, this tends to affect the perception of young male leaders more negatively than young females in the same position. If these perceptions of leadership competence also apply to subordinates' (of all genders) evaluations of their actual leaders is unclear.

Since the middle of the last century, numerous research studies have made efforts to identify categories of leadership behaviors, i.e. leadership styles and to determine their respective effectiveness for organizational success. The far most researched leadership style during the last decades is transformational leadership (Barling, 2014), which composes one of three leadership styles in Bass's and Avolio's Full Range Leadership model (1994). Several researchers have addressed whether and how different leadership styles vary with the age and gender of the leader (e.g. Cox *et al.*, 2014; Salahuddin, 2010; Van Engen and Willemssen, 2004). However, the findings in previous studies are fragmented and the observed differences have often been small (Birkinshaw *et al.*, 2019).

As people from the same generation often share similar values, preferences, attitudes and lifestyles, which have been shaped by a specific era (Rogler, 2002), it is reasonable to assume that those generational characteristics also affect how leadership is viewed by subordinates of different ages (Zemke *et al.*, 2013). The results from a study comparing two generations showed that transformational leadership was equally effective in promoting positive work attitudes among subordinates regardless of their age (Bell, 2018). However, research regarding how a broader spectrum of leader behaviors and their respective effectiveness are perceived by subordinates of different generations is still rare and often based on small samples (e.g. Salahuddin, 2010). It is still not clear whether there are intergenerational

differences in the perception of what constitutes good, effective and preferable leader behaviors and whether those leader behaviors and leader results can be related to the age and gender of the leader.

Following from the presented uncertainties, the present study addresses an under-researched area in the rich field of leadership studies – theory-based, large-scale exploration of leadership through the subordinates' eye. Most prior studies of subordinates' ratings of their leaders' behaviors address the convergence between leader and observer ratings (Lee and Carpenter, 2018; Shen *et al.*, 2021), or consist of small-scale qualitative studies (Jones and Kriflik, 2006). Thus, a research gap exists when it comes to knowledge of subordinates' views on their leaders' behaviors in relation to the leaders' age and gender. The need for further exploration of subordinates' perceptions of their leaders in relation to age and gender has also been pointed out given previous evidence for the significant impact that those perceptions may have on the subordinates motivational, organizational and productivity outcomes (Chi *et al.*, 2013; Wang *et al.*, 2011). As leadership tends to be influenced by environmental factors, type of work environment was also added as a control condition in the present study.

Hence, the overall aim of the present study was to take the subordinates' perceptions of their leaders' leadership behaviors as point of departure using a theory-based leadership model. More specifically, the aims were: (1) to compare subordinates' ratings of their respective leaders' leadership behaviors based on the leaders' age and gender, controlling for type of work environment and (2) to analyze the relationship between the subordinates' ratings of their leaders' leadership behaviors and their ratings of the outcome of these leadership behaviors.

Theoretical leadership model

The current study draws on *the leadership model*, as developed by Larsson *et al.* (2003, 2018), which is a Scandinavian adaptation of the transformational leadership model (Bass and Avolio, 1994). The adaptation mainly includes the following four changes: (1) the addition of the interactional person-situation paradigm (Endler and Magnusson, 1976, see below); (2) the expansion of laissez-faire leadership to a system of destructive leadership behaviors; (3) the division of the conventional leadership dimension into two positive and two negative factors has yielded higher reliability scores than has usually been found in research on transactional leadership without such a subdivision and (4) the concept of charisma, which is central in the writings on transformational leadership, was regarded as unsuitable in an egalitarian Scandinavian leadership culture because here it appears to evoke negative associations of elitism and a glorifying of the leader. The phenomenon of charisma is not denied but the model rather highlights the concept of inspiration. The model is presented below.

According to the leadership model, the actual behavior of a leader depends on an interaction between a number of leader and contextual characteristics. In theoretical terms, this means that the model is based on the interactional person-situation paradigm (Endler and Magnusson, 1976). Leader characteristics involve two components: basic prerequisites and desirable skills. The higher the level of basic prerequisites possessed by the individual leader, the greater is his or her potential to develop the desirable skills.

The contextual characteristics shown in Figure 1 should be regarded as examples. The illustration demonstrates that groups and organizations influence one another. The same applies to organizations and the environments in which they operate (Larsson *et al.*, 2003; Larsson and Hyllengren, 2013).

As shown in Figure 1, the model presents four different types of leadership styles (Larsson *et al.*, 2003, 2018). The first is labeled "developmental leadership" and is characterized by exemplary, authentic actions and individualized consideration. Furthermore, developmental leadership is inspiring and encourages participation and creativity. The model also includes

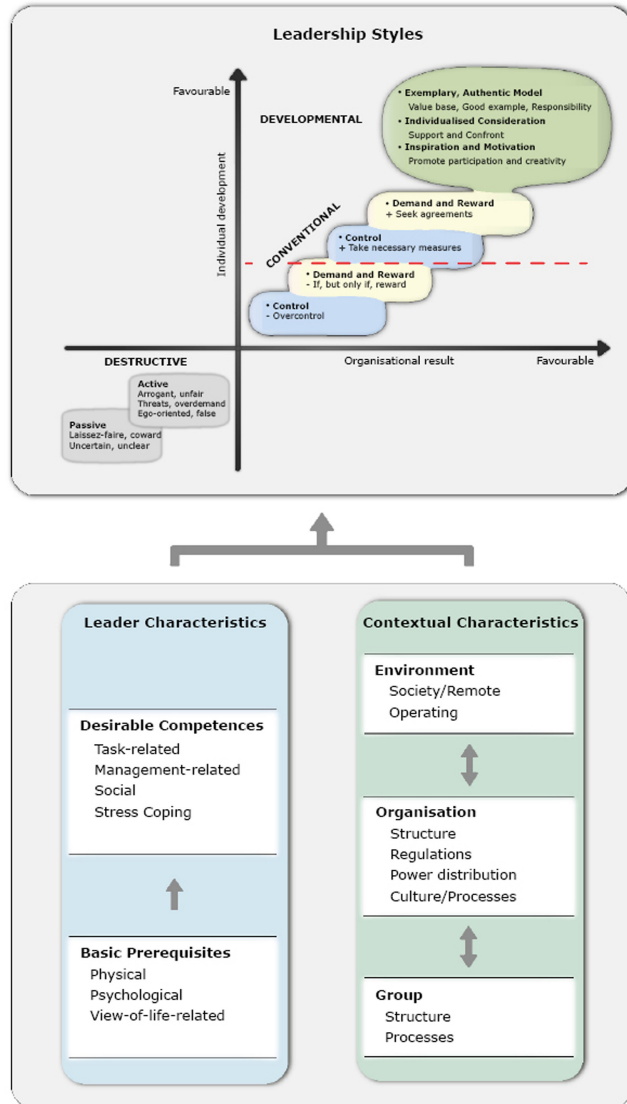


Figure 1.
The leadership model

Source(s): Larsson *et al.* (2018), reprinted with permission from Studentlitteratur AB

two conventional leadership styles focusing on demand and reward as well as on control. “Conventional-positive leadership” implies that the leader seeks agreements with the subordinates on what to do and how to do it, but also takes necessary control measures when needed. “Conventional-negative leadership” has an undertone of threat and can be described as “If, but only if, you give me something, I will give you something in return”. A second aspect of conventional-negative leadership is over-control. This includes behaviors such as actively looking for mistakes, pointing out previous mistakes and talking patronizingly to subordinates who have not carried out their tasks properly. The fourth and final leadership

style is labeled “destructive leadership”. More active forms of destructive leadership behaviors include being arrogant, unfair, use threats and over-demands and being ego-oriented and false. Examples of passive destructive leadership behaviors are laissez-faire, acting cowardly, being uncertain, unclear and disorganized. Thus, destructive leadership does not require negative intentions on part of the leader, it is the consequences of the behaviors that count. The presented four leadership styles are the parts of the model used in the present study.

Each of these leadership styles has a hierarchical model structure (which includes factors such as Exemplary, authentic model), sub-factors, (e.g. Value base) and multiple behaviors at the lowest level (the last-mentioned not shown in Figure 1). The model also describes a relationship between different types of leadership behaviors, where leaders differ in the extent to which they exhibit these behaviors (Larsson *et al.*, 2003, 2018).

The argument for choosing the leadership model is that it draws on the transformational leadership model, the most widely used leadership model in leading scientific journals in recent decades (Bass and Riggio, 2006; Diaz-Sáenz, 2011). The transformational leadership style has repeatedly been associated with favorable organizational outcomes (Bass and Bass, 2008; Burke and Collins, 2001; Lam, 2016). In addition, the leadership model used in the study draws on the authentic leadership model (Gardner *et al.*, 2005). We also regarded the roots of the model in the interactional person-situation paradigm (Endler and Magnusson, 1976), and the Scandinavian adaptation of the original American models, as strengths which make the model an appropriate point of departure for an age- and gender-oriented leadership study in Sweden.

Method

Participants

The sample consisted of all leaders ($n = 10,869$), and four to ten subordinates ($n = 97,943$) of each leader, participating in Developmental Leadership courses from July 2017 to June 2020, conducted by trainers authorized by a Swedish university. Prior to these courses, each leader rated him- or herself on the Developmental Leadership Questionnaire (DLQ, Larsson, 2006). Each leader also asked four to ten subordinates to rate him or her on the same instrument. The leaders (course participants) and their selected subordinates accessed the DLQ via a web-based link. The response rate is estimated at one hundred per cent among the leaders because the leadership courses use the leaders' self-rating and the subordinates' leader ratings as a point of departure. The response rate among the subordinates was almost as high, at least among the first four obtained responses for each leader ($n = 10,869$ in the first selected subgroup of subordinates (see below) and 10,865 in the second).

An additional selection was made in the group of subordinates. As each leader was rated by four to ten of his or her subordinates, there exists a dependence in statistical terms between each leader's subordinates. Following from this, a first set of subordinates was selected by randomly picking one of each leader's subordinates. This is the subsample which will be presented in the forthcoming Tables (subsample A). In addition to this, a second set of subordinates (subsample B) for each leader was selected in the same way, when the first set of subordinates had been removed. All analyses were made on both subsets of subordinates. When the results of the second subset differed from the first, this will be reported in the text.

Before responding to the questionnaire, the leaders and the subordinates were informed that their responses may be used anonymously for research purposes. They could then choose to agree to this or not, without this effecting the leader's leadership course. In the present study everyone consented. The study was carried out in accordance with the ethical principles of human research (Swedish Research Council, 2002), i.e. the principle of respect for autonomy, beneficence, nonmaleficence and justice. The study has also been approved by the Ethics Review Authority Dnr. 2019-06201.

Background data (%) for the study group is presented in Table 1.

Table 1 shows that the participants from the military, the police and the rescue service, as well as from the industry sector, are heavily dominated by men. Women dominate among the participants from the educational and health care sectors. The participants in the male-dominated groups are younger.

Measures

The DLQ (Larsson, 2006) was used to assess leadership behaviors. *Developmental leadership* is a leadership style with 21 items designed to measure the three factors: Exemplary, authentic model, Individualized consideration, and Inspiration and motivation. Sample developmental leadership item: “NN acts in accordance with the opinions he or she expresses.” Cronbach’s alpha: 0.96 in subsample A and .97 in subsample B. *Conventional-positive leadership* is a leadership style measured using six items covering the facets Demand and reward – seek agreements and Control – take necessary measures. Sample conventional-positive item: “NN aims to reach agreements on what must be done.” Cronbach’s alpha: 0.90 in both subsamples. The factor *Conventional-negative leadership* is also assessed using six items, measuring the two facets: Demand and reward – if, but only if, reward and Control – overcontrol. Sample conventional-negative item: “NN keeps a log of other people’s mistakes.” Cronbach’s alpha: 0.85 in subsample A and 0.86 in subsample B. Finally, the *Destructive leadership* style consists of 17 items designed to measure the two factors Active destructive leadership and Passive destructive leadership (incorporated into the DLQ from the

Variable	Rated leaders				Chi-square	p
	Military, police, rescue service (n = 772) within work-type %	Industry (n = 1,154) within work-type %	Service sector (n = 1,476) within work-type %	Education, health care (n = 2,680) within work-type %		
Gender					1293.37	0.000
Men	77%	78%	44%	24%		
Women	23%	22%	56%	76%		
Age					346.94	0.000
<30	19%	7%	4%	3%		
30–50	66%	71%	70%	66%		
>50	15%	22%	26%	31%		
Variable	Randomly selected subordinates of the rated leaders				Chi-square	p
	Military, police, rescue service (n = 763) within work-type %	Industry (n = 1,136) within work-type %	Service sector (n = 1,435) within work-type %	Education, health care (n = 2,632) within work-type %		
Gender					1193.57	0.000
Men	80%	80%	43%	27%		
Women	20%	20%	57%	73%		
Age					251.05	0.000
<30	20%	10%	8%	5%		
30–50	58%	61%	56%	52%		
>50	22%	29%	36%	43%		

Table 1.
Description of the study group

Note(s): The number of participants in Table 1 is lower than the total study group because a number of participants had responded “Other” on the question on type of work environment

instrument Destrudo-L; Larsson *et al.*, 2012). Sample destructive leadership item: “NN avoids making necessary decisions”. Cronbach’s alpha: 0.93 in both subsamples. A detailed description of the leadership dimensions, factors and facets can be found in Larsson *et al.* (2018).

Finally, the DLQ contains the following three items labeled Results, which are designed to measure the outcome of leadership: “NN helps significantly to increase my efficiency”, “NN contributes to job satisfaction in the group”, and “NN acts cost-effectively”.

Respondents (the subordinates in this case) were asked to assess how frequently they experience that their leader engaged in the specific behavior described by each item. Each behavior was rated on a nine-point frequency scale ranging from Never, or almost never (1) to Always, or almost always (9). A “Don’t know” alternative is also provided on each item. Scale scores were computed by adding the raw scores of the items representing the scale and dividing the sum by the number of items (scale scores could range from 1 to 9). Missing values were replaced by the individual’s mean score on the other items of the index in question.

Data can be obtained from the corresponding author (SPSS file) including an English translation of the questionnaire used.

Statistics

Comparisons between subgroups were performed using *t*-tests, one-way analysis-of variance followed by Scheffé tests, the most conservative post-hoc comparison method with respect to Type I errors and 3-ways analysis-of-variance. Finally, a logistic regression analysis was performed where age, gender, type of work environment and the four leadership scales were regressed on the dependent variable subordinate rated results of leadership. Statistical significance was assumed at $p < 0.05$.

Results

Comparison between subordinates’ ratings of leaders in different age groups

Table 2 presents the subordinates’ ratings of leaders in different age groups. The mean differences are statistically significant on all four leadership scales. Leaders aged 51 years or older received the least favorable evaluations. Leaders in the youngest age group had the most favorable mean scores on Conventional-positive leadership and Destructive leadership.

Comparison between subordinates’ ratings of female and male leaders

Table 3 shows that female leaders received higher mean scores (more favorable) on Developmental leadership and Conventional-positive leadership. They also report lower

Variable ^a	Age of rated leader						<i>F</i>	<i>p</i>	Scheffé ^b
	29 years or younger (<i>n</i> = 672)		30–50 years (<i>n</i> = 7,216)		51 years or older (<i>n</i> = 2,930)				
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>			
<i>Subordinates’ ratings of their leaders</i>									
Developmental leadership	7.46	1.17	7.43	1.24	7.35	1.33	4.95	0.007	C
Conventional-positive leadership	7.57	1.21	7.46	1.30	7.35	1.38	10.88	0.001	B, C
Conventional-negative leadership	2.05	1.47	1.90	1.28	1.97	1.39	6.07	0.002	A, C
Destructive leadership	1.57	0.85	1.63	0.93	1.77	1.10	24.63	0.000	B, C

Note(s): ^a All scales can range from 1 (lowest frequency/level) to 9 (highest frequency/level)

^b A = Significant difference between the youngest and the mid-groups. B = significant difference between the youngest and oldest group. C = significant difference between the mid- and oldest groups

Table 2.

Comparison of subordinates’ ratings of leaders of different ages (one-way analysis of variance)

mean scores (more favorable) on Conventional-negative leadership and Destructive leadership. All differences are statistically significant. The same results were obtained when these comparisons were performed within the group of younger leaders.

Additional between-group comparisons

In addition to the two subgroup comparisons presented above, the subordinates' evaluations of their leaders were also entered into a 3-way analysis-of-variance (age – 3 categories, gender – 2 categories and type of work environment – 4 categories). Significant main effects were noted for age, gender and type of work environment on the Developmental leadership scale. Significant main effects for age and type of work environment were found on the Conventional-positive and Destructive leadership scales. On the Conventional-negative leadership scale, significant main effects for gender and type of work environment were obtained. A slightly different pattern was found in the second subset of subordinate raters (subsample B). Here, significant main effects for gender and type of work environment were noted on all four leadership scales. No 2- or 3-way interactions were statistically significant in any of the samples. Regarding all reported significant main effects above, a higher proportion of younger, female leaders from the service, education and healthcare sectors characterized higher scores on Developmental leadership and Conventional-positive leadership. Similarly, a higher proportion of older, male leaders representing the sectors military, police or rescue service and the industry, co-occurred with higher scores on the Conventional-negative leadership scale and the Destructive leadership scale.

Logistic regression analysis

A logistic regression analysis was performed based on the subordinates' rating of their leaders. The dependent variable Results was dichotomized with the lower quartile being compared with the higher quartile (the two medium quartiles were dropped from this analysis). Gender and type of work environment were entered as categorical variables in step 1 together with age. In step 2, the four leadership scales were entered.

Table 4 shows that a significant model chi-square and high R^2 equivalents (Cox and Snell, 1989; Nagelkerke, 1991) were obtained. Type of work environment and three of the four leadership scales made significant contributions to the final model. Thus, a higher proportion of leaders in education and healthcare, higher ratings of the leaders' Developmental leadership and Conventional-positive leadership, and lower ratings of the leaders' Destructive leadership behaviors contributed to a result indicating a favorable leadership profile. Fairly similar results were obtained in subsample B. However, in sample B, age (a higher proportion of younger rated leaders) plus the same three leadership scales as in sample A, made significant contributions to favorable ratings on the Results scale. In sample B, type of work environment was unrelated to the ratings on the Results scale.

Table 3.
Comparison of
subordinates' ratings
of female and male
leaders (*t*-test)

Variable ^a	Female leaders (<i>n</i> = 5,910)		Male leaders (<i>n</i> = 4,908)		<i>t</i>	<i>p</i>
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>		
<i>Leadership scales</i>						
Developmental leadership	7.55	1.21	7.24	1.30	12.90	0.000
Conventional-positive leadership	7.56	1.26	7.29	1.37	10.71	0.000
Conventional-negative leadership	1.79	1.23	2.09	1.42	-11.60	0.000
Destructive leadership	1.58	0.88	1.78	1.06	-10.88	0.000

Note(s): ^a All scales can range from 1 (lowest frequency/level) to 9 (highest frequency/level)

Discussion

The first aim was to compare subordinates' ratings of their leaders' leadership behaviors based on the leaders' age and gender, controlling for type of work environment. Beginning with age, leaders being 51 years or older consistently received the least favorable ratings. This means that their subordinates rated the older leaders as showing less developmental leadership behaviors, less conventional-positive leadership behaviors and more destructive leadership behaviors. Younger and mid-aged leaders received mixed, but more favorable ratings than older leaders.

The finding regarding older leaders is the opposite of what was found recently in a study of leaders' self-rated leadership behaviors, using the same instrument and a slightly smaller sample of leaders ($n = 7,743$; Larsson and Björklund, 2020). One possible explanation of the divergent results is that the older leaders overestimate themselves, possibly due to having developed an overconfident attitude towards their leadership role. It has repeatedly been claimed that leadership requires constant commitment (Bass and Riggio, 2006). The positive ratings of younger leaders given by their subordinates should, if communicated, give young leaders a confidence boost and possibly counteract the noted tendency to be reluctant to take on new leadership positions (Hill, 1992). The confidence boost was recently explored and found to persist at a two-year follow-up of leadership courses (Soderhjelm *et al.*, 2020).

Turning to comparisons based on the gender of the rated leaders, a consistent pattern was found. Female leaders received significantly more favorable scores on all four leadership scales. This finding parallels the results of a study of females' and males' self-rated leadership behaviors (Larsson and Björklund, 2020). Thus, the results of these two studies show that female leaders look upon themselves as using more favorable leadership behaviors than male leaders, and that they are similarly perceived by their subordinates. The results are also supported by a meta-analysis of studies on gender differences in leadership styles, which concluded that even though evidence for gender differences in leadership behaviors in general are mixed, women tend to use the more democratic and transformational leadership styles to a larger extent than men (Van Engen and Willemssen, 2004). Considering that the particular styles in which female leaders are most prominent are those styles that have been shown to have the closest correlation to effectiveness (Lowe *et al.*, 1996), it seems reasonable that the old stereotype "think manager – think male" (Schein, 2001) is outdated.

The finding that women are rated higher in terms of positive leader behaviors could be seen as contradictory to previous research showing that subordinates tend to prefer a male manager if they are to choose in a hypothetical situation (Elsesser and Lever, 2011). However, the results of their study also revealed that the preference for a female manager was higher

Predictor variable	Rated leaders ($n = 2,685$)				Exp. (B)
	B (SE)	Wald	df	p	
Age	0.011 (0.131)	0.006	1	0.936	1.011
Gender	0.253 (0.187)	1.829	1	0.176	1.287
Type of work environment		10.846	3	0.013	
Developmental leadership	3.324 (0.195)	290.566	1	0.000	27.759
Conventional-positive leadership	0.443 (0.139)	10.216	1	0.001	1.557
Conventional-negative leadership	-0.049 (0.097)	0.256	1	0.613	0.952
Destructive leadership	-0.383 (0.141)	7.341	1	0.007	0.682
Note(s): R^2 equivalent = 0.64 (Cox and Snell, 1989), 0.85 (Nagelkerke, 1991). Model chi-square (9) = 2,707.25, $p < 0.001$					

Table 4.
Logistic regression analysis – subordinates ratings of their leaders' leadership behaviors on the subordinates ratings of the leadership results

among those who had experience of, or presently reported to a woman. One interpretation of this could be that negative perceptions and stereotypes about female leaders diminishes with increased actual experience of women in leading roles in one's own organization. In line with this, Gallup's annual Work and Education survey carried out between 1953 and 2006 in the US showed that although a majority still preferred a male manager, the attitudes towards having a female manager had become increasingly more positive between 1953 and 2006 (Carroll, 2006). Even though a similar development is likely to have taken place in Sweden, one possible reason for the convergent results between the studies in this regard could be attributable to differences in societal norms and national cultures between the US and Sweden. In line with this, several studies suggest that there might be contextual differences in relation to the persistence of gender stereotypes in relation to leadership and management issues, i.e. situations may vary in the extent to which female leaders are susceptible to an agency penalty (Post, 2015; Ryan *et al.*, 2011). Another reason for the convergent results is that the empirical evidence of bias against female leaders in previous studies often has been dependent on the study methodology. Studies using hypothetical situations and managers typically have revealed more bias against female leaders than those involving ratings of actual leaders (Elsesser and Lever, 2011).

When the rated leaders' age, gender and type of work environment were entered simultaneously into a 3-ways analysis-of-variance, strong main effects and no interaction effects were found. The absence of significant interaction effects indicates that the rated leaders' age, gender and type of work environment affect subordinates' leadership ratings but do so relatively independent of each other. In other words, the positive ratings of female and young leaders remain even when type of work environment is controlled for. Consequently, the most favorable combination is being a younger female leader in the educational or health care sectors, while the least favorable combination is being an older male leader in the military, the police, the rescue service, or the industry sector. These findings are the most valid regarding the first research question.

The second research question concerned the relationship between the subordinates' ratings of their leaders' leadership behaviors and their evaluations of the outcome of these leadership behaviors. A significant model with high equivalents of R^2 (Cox and Snell, 1989; Nagelkerke, 1991) coefficient were obtained in the logistic regression analysis. Developmental leadership and conventional-positive leadership both made strong significant and positive contributions to the rated outcomes of leadership behaviors, while destructive leadership had a negative impact on the outcomes. These findings are consistent with findings from studies based on the transformational leadership model (Bass and Riggio, 2006) and models of destructive leadership (Einarsen *et al.*, 2007; Skogstad *et al.*, 2007). Even though developmental leadership and conventional-positive leadership are to be considered as desirable and positive leadership styles in terms of their behavioral content and effectiveness, the result confirms that those leadership styles are also perceived to be related to positive outcomes by the subordinates. The finding that the leader behaviors rated as most frequently used by young and female leaders are also the ones most strongly related to positive outcomes, provides additional support for the competence and possible under-evaluation of these leader categories in organizations.

As mentioned in the introduction, there is a shortage of large-scale studies on subordinates' view of their leaders' leadership behaviors in matched leader-subordinate samples. Given this, we suggest that a main theoretical contribution of the present study, in addition to the age and gender findings, is the observation that the subordinates' rank order of the different leadership styles is in line with results from general leadership research. This can be seen as a confirmation of the developmental (and transformational) leadership model.

Finally, it should be noted that, in absolute terms, the subordinates gave their leaders positive evaluations. Compared to the aforementioned study of a subsample of the leaders

themselves (Larsson and Björklund, 2020), the scores provided by the subordinates were slightly more favorable on the average. This could be an indication that many leaders are self-critical of their leadership capacity to an extent that is not always warranted.

Methodological concerns

Study strengths include a large sample, a theory-based assessment tool with high reliability. Another strength of the study is that it reflects the subordinates' perspective on their actual leaders' leadership behaviors. As has been noted, this study design is to be seen as an advantage compared to studies involving more hypothetical scenario techniques and adds to the external validity of the results (Elsesser and Lever, 2011; Scheuer and Loughlin, 2020).

Weaknesses include the cross-sectional study design and the lack of more objective outcome data. Besides specifics of the work environment samples, the present study includes self-reports provided by matched subordinates only. This involves a risk of common method variance with possible overestimations of associations (Podsakoff *et al.*, 2003). In particular, there is a risk of responses being affected by the subordinates' general attitudinal and emotional like – dislike situation regarding their leader. In the present case, we were restricted by the standard questions used in the developmental leadership courses and could not add specific questions aimed to map tendencies of common method variance. This is a study weakness. However, this risk may be considered limited. Individuals are still in the best position to report on their own behaviors, perceptions and experiences (Podsakoff *et al.*, 2012). The high reliability of the behaviorally anchored scales also point to a limited effect of common method variance. However, longitudinal study designs as well as data from more sources, are our main suggestions for future research. An additional suggestion for further studies on the subject would be to include individual and contextual factors that could contribute to shedding more light on the underlying causes to the study results.

Practical implications

One practical implication is related to recruitment and selection of managers in organizations. In today's competitive labor-market, there are great opportunities to gain by making better use of the benefits of a diverse workforce. The results indicating that female leaders and younger leaders make use of more favorable leader behaviors, serve as a basis for a critical reevaluation of negative attitudes towards both women and a younger generation of leaders. Organizations could have much to gain by revising selection interview guidelines to make sure they include theory-supported indicators of favorable leadership behaviors. According to our results, this would provide females and young individuals with leadership aspirations equal or increased access to leadership roles compared to their senior male counterparts.

A second practical implication is a need to explore and take action regarding the higher frequency of negative leadership behaviors among older male leaders, e.g. by adapting leadership development programs that meet the potential needs of individuals within this particular group. This could include an emphasis on less use of conventional-negative and destructive leadership behaviors. Less use of power distancing (Shen *et al.*, 2021) and more use of power sharing leadership behaviors (Li and Qi, 2015) are previous findings in line with this.

A third potential implication is that the insights provided by the study results can be a useful incentive for organizations to critically review their existing praxis regarding recruitment and selection, succession planning and personnel development in order to avoid managerial decisions being influenced by long-standing stereotype convictions.

Conclusions

The study showed that younger and female leaders received more positive ratings than older and male leaders, regardless of type of work environment. One conclusion is that young and female leaders to a larger extent tend to exhibit the leader behaviors most strongly related to positive leadership outcomes. The results are somewhat contradictory to a previous study of the rated managers' perceptions of their own leadership, where young and female leaders rated themselves lower. This indicates that these leader categories are often more self-critical than is warranted for, and that there is a possible under-evaluation of the competence of younger and female leaders in organizations.

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