

Is someone listening to me? The effect of employees' perception of managers' virtual listening behaviour on turnover behaviour in the high-tech sector during the Covid-19 pandemic

Turnover
behaviour in
the high-tech
sector

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Abstract

Purpose – This paper aims to examine whether information technology (IT) managers' virtual listening, as rated by their high-tech employees, affected turnover behaviour beyond a new constellation of variables, some of which have never been researched as antecedents of turnover behaviour, particularly during a pandemic or crisis. Namely, the main aim, among others, is to answer the research question: does IT employees' perception of the quality of their supervisors' virtual listening in the pandemic and crisis era, when employees and managers work remotely, will negatively affect turnover behaviour? If yes, in which constellation of antecedents the virtual listening effecting on turnover behaviour?

Design/methodology/approach – Logistic regression analysis was conducted to test the hypotheses via SPSS 26 and PROCESS (Model 6). The variance inflation factor was calculated to test multicollinearity. Interaction was tested using the Hayes and Preacher PROCESS macro model. The researchers also used the J-N technique test (Johnson–Neyman via process). The supplemental analysis used also PROCESS MACRO (IBM Corp., Armonk, NY, USA, 2023) Model 4 and Bootstrap test.

Findings – The findings show that perceptions of supervisors' virtual listening quality as rated by their employees moderated the relationship between organisational deviance as a type of organisational misbehaviour (OMB) and turnover behaviour and had the strongest effect on turnover behaviour beyond other key predictors (organisational deviance as a type of misbehaviour, turnover intention, job satisfaction, embeddedness and alternatives in the labour market). Alternatives to current work moderated the association between the perception of managers' virtual listening behaviour as rated by their employees and turnover behaviour. Specifically, when alternatives in the labour market were high or medium, the perceived quality of



managers' virtual listening reduced turnover behaviour. Finally, the perception of the IT employees supervisors' virtual listening moderated the relationship between organisational deviance and turnover intention among high-tech employees.

Originality/value – Evaluating supervisor listening in the high-tech firm may have value in terms of its relationship to outcomes such as retaining employees, turnover intention and especially turnover behaviour. The effect on turnover behaviour and of that new constellation of antecedents on turnover behaviour when people work remotely was not researched yet and important for the post COVID-19 era. Additionally, in contrast to most studies of turnover, this study also focus on the positive aspects of turnover and especially turnover behaviour to organisations in general and especially to high-tech firm and not just the negative aspect as was researched until now. Another contribution is the finding that when employees perceived their managers' virtual listening quality as high, the effect of deviance as a type of OMB on turnover behaviour was positive. Namely, the listening as a moderator and turnover assisted in making the organisation cleaner from inappropriate behaviour. Additionally, when alternatives in the labour market are high or medium, perceived quality of virtual listening of managers as rated by their employees can reduce turnover behaviour. This virtual listening–turnover relationship and the moderator of alternatives to current work had not previously been found in the turnover literature and this is also significant a contribution to the turnover and withdrawal literature.

Keywords Turnover intention, Deviance, Embeddedness, High tech voluntary turnover, Turnover behaviour, Virtual listening

Paper type Research paper

Introduction

COVID-19 has led to a huge spike in turnover around the world (Klotz *et al.*, 2021; Chung, 2022; Peltokorpi *et al.*, 2023). In the USA, the pandemic has put turnover back in the spotlight. The latest voluntary quit (turnover) rate shows that more than 42 million employees quit their jobs in 2019, representing nearly a quarter of the US workforce. 2020 began with a decrease in voluntary turnover, with about 35 million workers quitting their jobs, after which the pandemic swept across the USA, causing significant health and economic issues in practically every major employment sector. By April 2020, unemployment increased sharply to 14.7% and voluntary turnover was down 50% to slightly more than 1.7 million workers.

During the summer of 2020, most firms partially or fully opened their economies and returned workers to work, and by the end of 2020, voluntary worker turnover had jumped to 34 million. In 2021, voluntary turnover among Americans increased to 43 million and employees' intent to stay decreased, indicating people are not afraid to leave their jobs. In July 2022, the number of employees who quit their jobs changed slightly, to 42 million or 2.7%, respectively, and the average annual turnover rate was 47.2% (The BLS, US Labour Turnover Report). That means that this is still 20% higher than the annual turnover rate at pre-pandemic levels. According to the *Harvard Business Review*, resignations increased more in the U.S. high-tech sector, growing by 4.5% compared to other sectors such as manufacturing and finance, with a rate of 3.6% (Cook, 2021). Clearly, high-tech is driving the so-called great resignation in the post COVID-19 era.

Therefore, it is necessary to keep study and thus understand better what antecedents lead to employee turnover behaviour. This is especially important in the high-tech industry, where turnover can have tangible and intangible costs for high-tech firms (Rubenstein *et al.*, 2018; Chang *et al.*, 2023). The high-tech sector in Israel was hit particularly hard by COVID-19. According to Bank of Israel reports for May 2020, the wages of 26% of all employees were cut because information technology (IT) employees voluntarily left or hopped from firm to firm (Stravchinski, 2020). During the lockdowns, many employees' working conditions worsened: some had their work hours reduced (Stravchinski, 2020), whereas

others had to rapidly designate a room at home as a workspace, which involved higher utility costs, the purchase of equipment to work remotely, etc. Thus, it seems probable that high-tech employees such as developers and programmers who had to work from home would develop turnover intentions and not remain embedded in their jobs.

Virtual listening refers to the process of actively hearing and understanding the communication of another person through digital means, such as video, phone conferencing, instant messaging or email. It also refers to the practice of using digital communication technologies, such as video conferencing, zoom, chats or social media, to communicate and listen to others remotely. The COVID-19 pandemic has accelerated the adoption of virtual listening as many businesses and organisations have shifted to remote work and limited face-to-face interactions. Managers' efforts to listen to their high-tech employees virtually during the COVID-19 pandemic (when there was no option for a face-to-face meeting and physically present in the same location and hence face to physically face communicating listening since most of the employees have been forced to work remotely from home and rely on virtual communication to stay connected with their colleagues and managers) may be seen as a strategic move to retain specialised and talented employees. However, it appears more than probable that remote work may be a staple mode of employment in the post-pandemic period. The effect of virtual listening on retaining high-tech employees is likely to be crucial for firms, employees and managers beyond the end of the pandemic. Thus, the first aim of this study was to show that virtual listening has a negative effect on actual turnover.

Furthermore, employers may have underestimated the importance of quality listening on employee performance as manifested in job satisfaction, listening, trust, speaking ability, psychological safety, organisational citizenship behaviours, inclination, dyadic communication, subjective performance and interpersonal influence. Studies have confirmed the effect of listening on organisational results, showing that it affects objective organisational performance and communication, can decrease social anxiety and can increase the perceived understanding of customers (Itzhakov and Grau, 2020). Findings suggest that good listening has contextual effects (Itzhakov and Grau, 2020). However, most of the literature on the impact of listening has focused on the individual level of the employee rather than the managerial or macro level of organisational macro management (Itzhakov and Grau, 2020) and organisational results. Additionally, the context of the COVID-19 in which the government ordered three lockdowns forced managers to listen remotely and thus virtually to their employees. This fact is important because it enables and guarantees the existence of virtual listening in the research. Thus, the second aim of this study was to examine the effects of managers' virtual listening, as rated by their employees as a macro strategy during COVID-19 lockdowns on actual turnover, beyond other classical antecedents. Finally, Lloyd *et al.* (2017) called for more research on the effect of supervisor listening on work-related outcomes such as turnover intentions. Because turnover intention is considered the best predictor of turnover behaviour, it makes sense to assume that good listening on the part of supervisors as perceived by their employees would have a negative effect on turnover behaviour, although certain meta-analyses have challenged whether turnover intention is the best predictor of turnover behaviour (Allen *et al.*, 2005; Griffeth *et al.*, 2000; Hom and Griffeth, 1995; Rubenstein *et al.*, 2018; Wong and Cheng, 2020). Thus, virtual listening can reduce intent to leave and turnover behaviour.

Furthermore, this is even more important in the context of COVID-19, during which many people began to work virtually. Therefore, virtual listening may be especially important going forward in the post COVID-19 era. Another aim of the study, the third aim, was to show the effect and role of deviant behaviour in the workplace, as a type of organisational misbehaviour (OMB), on turnover behaviour. All of these three aims evolve

from a gap in the literature and seek to feel it and thus contribute to the turnover behaviour literature and especially the IT/high-tech turnover literature.

Theory and hypotheses

Effect of listening on turnover

COVID-19 obligated employees at organisations to work and communicate virtually. All types of work shifted to virtual platforms, including recruitment, selection, customer service, managerial feedback, personal conversations, promotions, downsizing processes and the daily management of employees. Recent research (i.e. [Lloyd et al., 2015](#)) demonstrated that perceived supervisor listening affected three important work outcomes: emotional exhaustion, organisational citizenship behaviour and turnover intentions. Furthermore, subordinates who reported that their supervisor listens well also reported higher job satisfaction ([Kluger et al., 2021](#)), lower job burnout ([Pines et al., 2002](#)), higher levels of commitment ([Lobdell et al., 1993](#)) and lower turnover intention ([Kristinsson et al., 2019](#); [Lloyd et al., 2017](#); [Itzhakov et al., 2022](#)).

Originally based on [Carl Rogers \(1951\)](#) reflections on client-centered psychotherapy, active listening or “empathic listening” is presented as an acknowledging and non-judgemental approach to manifesting presence to others ([Rogers, 1959](#); [Rogers and Farson, 1987](#)). Active listening creates a common bond between associates, which over time can develop into a connection of reciprocal understanding and trust ([Rogers, 1957, 1975](#)). When applied to firm settings, listening may have positive effects on supervisor–employee interactions (e.g. [Brownell, 1990](#); [Reave, 2005](#)). In fact, leader–member exchange theory, which focuses on leader–subordinate relationships, incorporates certain aspects related to listening ([Lloyd et al., 2017](#)). In addition, meta-analytic results suggest that strong leader–employee relationships significantly affect individuals’ outcomes in terms of role conflict, role clarity, satisfaction, commitment, job performance and intent to leave ([Gerstner and Day, 1997](#)).

Thus, theoretical arguments and empirical research point to the fact that evaluating supervisor listening in the firm may have value in terms of its relationship to outcomes such as retaining employees or voluntary turnover. Following [Bodie et al. \(2008\)](#) and others (e.g. [Cahn, 1990](#)), skillful listening on the part of supervisors to their employees might generate rewarding interaction outcomes by expressing understanding of the employees’ messages, creating positive affect during the interaction and more satisfaction and as a result, decreasing turnover intention and behaviour ([Weger et al., 2014](#)). In addition, the listening reported in this study was virtual, given all employees were required to work from home. Therefore, the following hypotheses was posited:

- H1a.* IT employees’ perception of the quality of their supervisors’ virtual listening will negatively affect turnover behaviour such that higher quality of perceived virtual listening will be associated with a lower likelihood that IT employees will leave.
- H1b.* Supervisors’ self-rated quality of virtual listening to their IT employees will negatively affect turnover behaviour beyond other antecedents, such that higher self-rated quality of virtual listening will reduce IT employees’ likelihood of leaving.

Effect of organisational deviance on turnover behaviour

There are several definitions of OMB in the literature. Industrial sociologists [Ackroyd and Thompson \(1999\)](#) defined OMB as “anything you do at work you are not supposed to do” (p. 2), whereas [Sprouse \(1992\)](#) used the term to describe sabotage in the American workplace. [Ackroyd and Thompson \(1999, p. 25\)](#) considered OMB to concern employee–

employer arguments over issues related to work, time, identity and product. [Watson \(2003, p. 230\)](#), presented a more complex definition: events that occur in the workplace that: (a) should not happen according to the formal composition, culture and laws of the firm; and (b) include a component of challenging the major methods of management or major concerns in the firm.

Watson's take is similar to the position of [Thompson and Newsome \(2004\)](#), who compared OMB to anything other than coordinated and collective legal action by labour as a larger class agent ([Richards, 2008](#)) [Karlsson, et al. \(2022\)](#). [Vardi and Weitz \(2020\)](#) argued that OMB has components or scholarly conceptualisations, including workplace deviance (p. 4). Workplace deviance has been defined as "voluntary behaviour that violates significant organisational norms and in so doing, threatens the well-being of the organisation, its members, or both" ([Robinson and Bennett, 1995, p. 556](#)). [Robinson and Bennett \(1997\)](#) also noted that deviance may vary along a continuum of severity, from minor to serious forms of deviance. Workplace deviance refers to voluntary behaviour indicating that employees either lack motivation to conform to or become motivated to violate normative expectations of the social context ([Kaplan, 1975](#)). Organisational norms consist of basic moral standards and other traditional community standards, including those prescribed by formal and informal organisational policies, rules and procedures ([Feldman, 1984](#)). According to [Vardi and Weitz \(2020\)](#), "OMB is a voluntary behaviour performed by choice and intentionally" (p. 35). This research adopted [Vardi and Wiener's \(1996\)](#) definition of OMB:

Every deliberate action of a member of the organisation who violates common organisational norms and expectations; or values, codes and central social standards of good conduct (p. 151; also see [Baruch and Vardi, 2016](#)).

[Kessler Ladelsky \(2019\)](#) showed how turnover intention and seeking another job behind the employer's back can be considered OMB. This is consistent with [Bolin and Heatherly \(2001\)](#), who outlined four forms of OMB: theft, turnover intention, dissatisfaction with the firm and workplace and company dislike or disrespect.

Past research has demonstrated how deviant behaviour among employees can inflict serious damage to the firm in the form of increased absenteeism, lowered job performance and higher employee turnover ([Gamian-Wilk and Madeja-Bien, 2018](#); [Hoel et al., 2011](#)). Additionally, according to [Ackroyd and Thompson \(2016\)](#), absence and turnover are OMB phenomena. Finally, during the second COVID-19 lockdown, employees worked remotely, most of the time from home. Thus, managers could not supervise their work behaviour. Employee deviance as a type of OMB such as wasting time attending to personal issues and other misbehaviours could have increased when employees worked remotely from home, and if management discovered it, this might lead to developing intent to leave and hence, actual turnover. Therefore, the following was predicted:

H2a. Employee deviance (OMB) directed at the organisation will be positively related to an employee's turnover intention.

H2b. Employee deviance (OMB) directed at the organisation will be positively related to an employee's actual turnover.

Effect of turnover intention on actual turnover

Intent to leave, also called turnover intention, is defined as a mindful and planned wish to leave the workplace ([Tett and Meyer, 1993, p. 262](#)). This includes discussions about

resigning from the current position and searching for another position, which motivate a mindful and personal decision to voluntarily leave the position (Tett and Meyer, 1993). Intent to leave is often seen as a precondition for actual steps towards turnover (Lee *et al.*, 2017; Walsh *et al.*, 1985). In most studies in the USA and Europe, stated intention to leave and actual turnover are usually positively and significantly related (Brett and Reilly, 1988; Kraus, 1995; Motowidlo and Lawton, 1984). For example, this relationship typically ranges from $r = 0.35$ (Mobley *et al.*, 1979) to $r = 0.85$ (Griffeth *et al.*, 2000), with a weighted average of 0.45 (Hom *et al.*, 2019). Among applied psychologists, intention to leave is often described as an immediate precursor to voluntary departure (e.g. Steel and Ovalle, 1984; Tett and Meyer, 1993).

To explain why turnover intentions do not inevitably culminate in leaving (a classic tenet; Mobley, 1979), turnover researchers have further identified how environmental variables can moderate this relationship. One example is the unemployment rate (Gerhart, 1990). When unemployment is high, the effect of turnover intentions on turnover behaviour may be minimal, whereas when unemployment is low, the effect of turnover intentions is stronger. Nevertheless, scholars often use turnover intention as a proxy for turnover behaviour (Blau, 2000; Hom *et al.*, 2017; Mowday *et al.*, 1982, p. 353; Tett and Meyer, 1993). In the IT sector, where the voluntary turnover of engineers can cause great damage and incur costly expenses for high-tech companies, it is crucial to replicate the general finding that the intention to leave leads to actual turnover because it can represent an early warning signal for managers. In a recent meta-analysis, Rubenstein *et al.* (2018) developed and tested more substantive moderators that affect the turnover intention and behaviour relationship and showed that this relationship is not always direct (also see Allen *et al.*, 2005; Vardaman *et al.*, 2015). Specifically, although scholars generally acknowledge the positive relationship between intention to quit and actual quitting, there are substantial inconsistencies regarding the strength of this relationship. Nevertheless, the use of turnover intention to predict turnover behaviour is supported by the theory of reasoned action and the theory of planned behaviour. These theories suggest that attitudes towards behaviour are robust predictors of behaviour (Ajzen and Fishbein, 1980, 2005; Fishbein and Ajzen, 1975, 2010; Sun and Wang, 2017).

Scholars have argued (Baruch and Nicholson, 1997; Stravchinski, 2020) that working remotely may have negative organisational consequences due to employees' social isolation, perceived career stagnation and family conflict. Likewise, employees may develop an intent to leave and disproportionately withdraw from work. Griffeth *et al.* (2000) pointed out that quit intention was among the best predictors of turnover, as has been confirmed more recently (Rubenstein, 2018):

- H3. Turnover intention will positively affect the actual turnover rate among IT employees during the second COVID-19 lockdown. The more employees develop an intent to leave, the more they will actually leave.

Effect of embeddedness on turnover

Job embeddedness can be seen metaphorically as “a net or a web in which an employee can become stuck at work” (Mitchell *et al.*, 2001, p. 1104). Mitchell *et al.* (2001) proposed that an employee can be embedded in a job in various ways. Specifically, employees become embedded in their organisations via fit (the extent to which their job and community are similar to or fit with other aspects in their lives), links (the extent to which people have links to other people or activities in the organisation or community) and sacrifice (what they would give up if they left the organisation). Fit, links and sacrifice contain components that

occur both on and off the job (i.e. embeddedness in the community). For this study, the focus was on embeddedness in the organisation because behaviour at work was analysed.

Research has shown that embeddedness is a positive predictor of various organisational and individual outcomes (Halbesleben and Wheeler, 2008; Lee *et al.*, 2004). Positive outcomes might be to avoid losing a great boss or stay connected to the family (Hom *et al.*, 2019, p. 124).

In addition, individual negative outcomes include “that embedding forces exert additive and compensatory effects” (Hom *et al.*, 2019, p. 123). According to Kiazad *et al.* (2015), the “individual is embedded indirectly by the costs of leaving one’s own job for the family unit as a whole” (p. 211). They noted that family members (spouse, offspring, aging parents, shared custody arrangements) can embed the employee indirectly (p. 211).

Felps *et al.* (2009) found that the average level of job embeddedness in a unit (department, bank branch) reduces individual unit members’ turnover (controlling for a member’s job embeddedness). More embedded coworkers decrease individual turnover.

In addition, several other studies have reported the impact of job embeddedness on turnover beyond classic antecedents such as job satisfaction, affective commitment and job alternatives (e.g. Lee *et al.*, 2004; Mallol *et al.*, 2007; Tanova and Holtom, 2008). Thus, similarly, it was predicted that job embeddedness would exhibit a unique effect on turnover behaviour after controlling for its classic predictors. Additionally, job embeddedness may be especially important for organisations given the virtual nature of work during (and after) the COVID-19 pandemic. Therefore, it was predicted that embeddedness while working remotely during the pandemic would predict turnover one year later:

H4. Employee embeddedness will be negatively related to actual turnover during the second COVID-19 lockdown.

Effect of alternatives to current work on turnover

The first scholars to mention alternatives to current work as an antecedent of turnover were March and Simon (1958). According to classic studies of turnover and their first turnover theory (March and Simon, 1958, 1993), the perceived attractiveness of leaving has come to define job (dis)satisfaction, whereas the perceived ease of movement is defined as a perceived alternative to the current job or actual job alternatives.

Mobley (1977) suggested that employees’ turnover process begins with dissatisfaction that generates thoughts of quitting, which develop into a subjective expected utility analysis of the costs and benefits of seeking alternative jobs and voluntarily leaving. These create a search for alternative job offers, comparisons of job offers with the present job, intentions to quit (after choosing a job offer) and actual quitting. Thus, alternatives to current work affect the development of intention to leave and actual turnover (Hom *et al.*, 2017; Maertz and Campion, 2004).

In a later study, Price and Mueller (1986) found that alternative employment moderates the ways in which dissatisfaction drives leaving (also see Rubenstein *et al.*, 2018). Lee and Mitchell (1994) suggested the unfolding model of voluntary employee turnover, which posits that employees may leave their jobs when they receive outside job offers (e.g. an unexpected invitation to apply for an attractive job opportunity) that cause them to examine their current job commitment. Holtom *et al.* (2008) reviewed the chronological development of turnover research since March and Simon (1958) introduced their first formal turnover theory, which focused mainly on the desire to leave (i.e. job satisfaction) and the ease of leaving (i.e. job alternatives) as the primary reasons why people quit. Hom *et al.* (2017) showed 60 years later that the number of predictors of turnover had increased but the main

antecedents remained. Finally, a meta-analysis by [Rubenstein et al. \(2018\)](#) found that alternatives to the current job is one of the most important antecedents of the decision to quit (p. 17) and that employees who search for alternatives are more likely to quit. Most of these findings focused on turnover intention:

- H5.* Alternatives to the current job will positively affect actual turnover beyond other antecedents during the second COVID-19 lockdown. The more alternatives employees have to their current job, the more likely they will be to leave.

Moderation of the deviance–turnover relationship

According to [Lloyd et al. \(2015\)](#), the effect of listening on turnover is not direct nor clean. They found that listening is used as an intervention variable that may moderate or mediate the antecedents of turnover. Although not directly related to listening behaviour among supervisors, the literature on ostracism informed the writers' hypotheses. [Singh and Srivastava \(2021\)](#) examined the effect of ostracism (as OMB) on turnover among IT employees.

Ostracism involves isolating or ignoring employees and minimising opportunities for social contact ([Ferris et al., 2008](#)). For example, being cut off in interactions, avoiding eye contact and ignoring employees are considered forms of OMB and inconsistent or incompatible with positive supervisory listening skills. [Singh and Srivastava \(2021\)](#) tested the effect of ostracism on turnover among IT employees and found that this effect was positive but non-significant ($r = 0.85, p > 0.05$). However, other experiential research has found that ostracism in the workplace raises professionals' turnover intent ([Ferris et al., 2008](#); [Howard et al., 2019](#); [Scott and Duffy, 2015](#); [Zheng et al., 2016](#)). When workers encounter ostracism, their work dissatisfaction and intent to leave increase ([Ferris et al., 2008](#); [Scott and Duffy, 2015](#)). Another OMB type discussed in this paper evolved from neuroticism. Neurotic employees in the workplace suffer from interpersonal problems ([Scott and Judge, 2009](#)); during challenging situations, they tend to express hostile emotions and behaviour ([Liu et al., 2019](#)), which forces others to ignore them. [Salgado et al. \(2002\)](#) found a strong association between personality characteristics and turnover intent. Scholars have argued that due to negative orientation, including frustration, anger and anxiety, neurotic individuals find it tough to remain with an organisation for long ([Costa and McCrae, 1992](#); [Singh et al., 2014](#)).

Resilience is a supportive characteristic linked to problem-solving abilities, flexibility and associations ([Cooke et al., 2019](#); [Wang et al., 2014](#)). Based on this definition, listening is supportive behaviour. [Singh and Srivastava \(2021\)](#) examined the effects of resilience on the neuroticism–turnover intention relationship. The results showed that the interaction between ostracism (a type of deviance) and resilience was significant in forecasting turnover intention ($\beta = 0.20, p < 0.01$). Similarly, the interaction between neuroticism and resilience was significant in forecasting turnover intention ($\beta = 0.14, p < 0.01$), indicating that the relationship between neuroticism and turnover intention would be weaker among individuals with strong resilience (also see [Fiset et al., 2017](#)). This suggests that employees' perception of the quality of their managers' listening may moderate the relationship between employee deviance (as a type of OMB) and turnover behaviour. Specifically, it was expected that the relationship between employee deviance and turnover would be stronger among employees who perceive their supervisor's listening skills as low:

H6. Employees' perceptions of the quality of their supervisors' virtual listening will moderate the relationship between employee deviance (as a type of OMB) and turnover intention.

Job market conditions and job alternatives (ease of movement) as moderators of listening and turnover

Past research has demonstrated that employees who search for another job while still employed are more likely to quit their current organisation (Boswell *et al.*, 2004). However, this effect, which is relatively broad, might be a possible moderator of the antecedent–turnover relationship (e.g. Hom *et al.*, 2012; Lee *et al.*, 2017; Swider *et al.*, 2011). Meta-analyses by Hom and Griffeth (1995) and Griffeth *et al.* (2000) found that changes in labour market conditions such as alternative job opportunities, although distal causes of turnover, were mediated by individuals' perceptions of job alternatives and subjective comparisons of alternatives to their present position to predict turnover modestly at a meta-analytic population-level correlation. According to Rubenstein *et al.* (2018, p. 21), alternatives to the current job in the labour market positively predict turnover. However, perceptions of alternative job opportunities or alternatives in the labour market may moderate other antecedent–turnover relationships.

When job market alternatives are perceived by high-tech employees as high, it was expected that their ratings of their managers' quality of virtual listening would have a negative effect on actual turnover. When job market alternatives are perceived as medium or average, it was expected that the coefficient would remain negative and the effect of managers' virtual listening quality as rated by their employees on actual turnover would be less intense. By contrast, when job market alternatives are perceived as low, it was expected that the effect of supervisors' virtual listening as rated by employees on turnover behaviour would remain negative but would become less intense and non-significant. Thus, the level of job market conditions or alternatives to current work might differentially affect the relationship between listening at the current job and turnover:

H7. Job market conditions (alternatives to current work) will moderate the virtual listening–turnover behaviour relationship such that the relationship will be more positive and significant when more alternative jobs are available.

When the perceived alternatives in the labour market are high, high virtual listening will result in less turnover behaviour. When the perceived alternatives in the labour market are medium or average, the coefficient will remain negative and the effect of quality virtual listening on the part of managers as rated by their employees on turnover behaviour will be negative and less intense. When job market alternatives are perceived as low, the effect of quality of supervisors' virtual listening as rated by their employees on turnover behaviour will remain negative but become less intense and not significant. Figure 1 illustrates the research model.

Method

Participants and procedures

The sample consisted of high-tech employees of a Tel Aviv, Israel, office of a private, multinational company headquartered in the USA. The Israeli branch has approximately 500 employees, of whom 200 are software engineers and programmers or developers, who constituted the present sample. The software engineers received an email from the vice president of human resources asking them to participate in the study and respond to questions in an online survey. To ensure confidentiality and anonymity, employees were

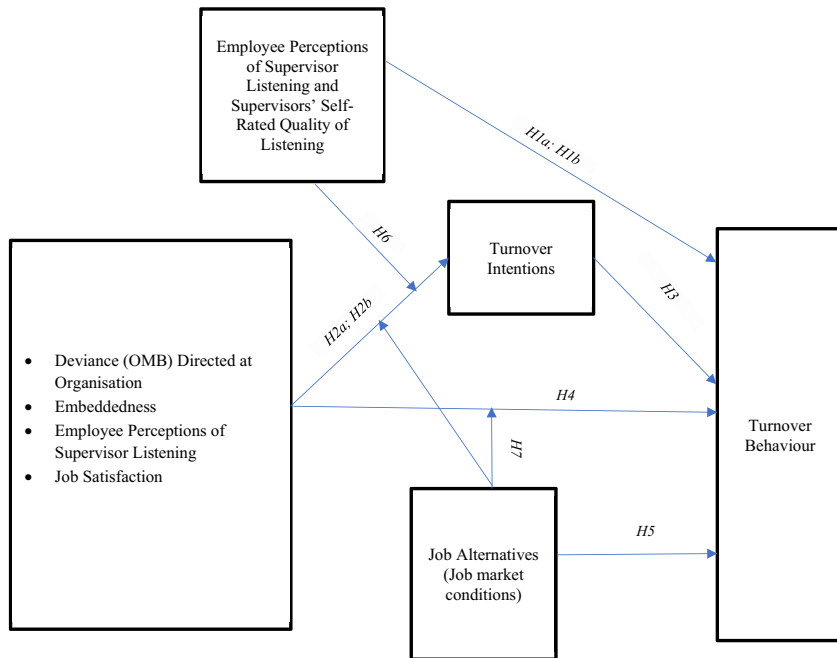


Figure 1.
Effect of personal external variables on turnover intention and behaviour

Source: Authors' design and development based on the literature

asked to write their employee number instead of their email or name. Participants were required to sign an online consent form before answering the online survey. The online survey was distributed during the second wave of the COVID-19 lockdown in Israel from September to October 2020. All items in the survey were adapted from existing questionnaires in English and translated to Hebrew following well-established procedures (e.g. Brislin, 1970; Jones *et al.*, 2001). An English version of the survey was provided to participants who preferred to answer the questions in English. At the end of the questionnaire, the respondents were thanked for their participation.

A pilot questionnaire was administered to 35 randomly professional IT employees who were not part of the research, and they reported that the items of the questionnaire are clear. The results (including reliability, and skewness and kurtosis indices) and showed a normal distribution of the data, supported parametric tests. The assumptions of regressions were tested and met.

Of the 200 software engineers and programmers contacted, responses were received from 167 participants, indicating an 84% response rate. Forty-eight percent of the participants were female, and the average age of participants was approximately 30 years old ($SD = 6.5$). Sixty-five percent of the participants had an academic degree in technological areas such as software engineering, computer engineering, computer science or mathematics. The respondents had worked at the firm for approximately 3.4 years on average ($SD = 4.4$).

Measures

Voluntary turnover (turnover behaviour). The organisation provided a list of all employees who voluntarily quit during the 12 months following the administration of the survey

(November 2020–November 2021). To confirm that the employee departure was voluntarily, the research team called a sample of the individuals who left the company to ask if they left the firm on their own initiative (i.e. voluntarily) or were formally terminated by the firm. Voluntary turnover was coded as 0 (*stayed*) or 1 (*voluntarily left*).

Organisational deviance as a type of misbehaviour. Twelve items (1 = *never*; 5 = *daily*) developed by [Bennett and Robinson \(2000\)](#) were used to assess deviant behaviour directed at the organisation. Sample items are: “Spent too much time fantasizing or daydreaming instead of working” and “Intentionally worked slower than you could have worked”. Seven items were combined to measure interpersonal deviance ($M = 12.98$, $SD = 5.97$, $\alpha = 0.78$). Sample items are: “Said something hurtful to someone at work” and “Acted rudely toward someone at work”. The items were combined to create a composite measure of organisational deviance ($M = 19.86$, $SD = 7.31$, $\alpha = 0.81$). For organisational deviance (as a type of OMB), the items were:

- “Took property from work without permission”;
- “Spent too much time fantasizing or daydreaming instead of working”;
- “Falsified a receipt to get reimbursed for more money than you spent on business expenses”;
- “Took an additional or longer break than is acceptable at your workplace”;
- “Came in late to work without permission”;
- “Littered in your work environment”;
- “Neglected to follow your boss’s instructions”;
- “Intentionally worked slower than you could have worked”;
- “Discussed confidential company information with an unauthorized person”;
- “Used an illegal drug or consumed alcohol on the job”;
- “Put little effort into your work”;
- “Dragged out work in order to get overtime” ([Bennett and Robinson, 2000](#), p. 12).

Cronbach’s alpha for the overall scale was 0.90. Cronbach’s alpha for the interpersonal deviance scale was 0.80. Cronbach’s alpha for the organisational deviance scale was 0.86. Only the organisational scale, which is more relevant to misbehaviour in high-tech firms, was used ($M = 26$, $SD = 13$, $\alpha = 0.90$).

Turnover intention. Four items (1 = *strongly disagree*; 5 = *strongly agree*) adapted from [Price \(2001\)](#) were used to measure an employee’s intention to leave the organisation. Sample items are: “I would like to quit my job at workplace” and “I plan to quit my job at workplace as soon as possible”. The items were averaged. In this study, Cronbach’s alpha of the two remaining items was 0.80 ($M = 2.1$, $SD = 0.19$).

Job embeddedness. Twenty-seven items from [Mitchell et al. \(2001\)](#) were used to measure an employee’s job embeddedness. Specifically, nine items measured fit in the organisation, eight items measured links in the organisation and ten items measured sacrifice. Consistent with past research using this scale, a composite measure of embeddedness was created by averaging the mean of fit, links and sacrifice ($M = 3.07$, $SD = 22.2$, $\alpha = 0.83$).

Job alternatives. One item (“How attractive are other job possibilities in the labor market”) based on the work of [Michaels and Spector \(1982\)](#) was used to measure employee perceptions of alternatives to their current work.

Job satisfaction. Six items were used to measure job satisfaction from [Price’s \(2001\)](#) job satisfaction scale. Examples of items are: “I am fairly well satisfied with my job” and “I am

often bored with my job” (reverse scored). The literature reports an internal consistency for this scale of 0.83 (Timmerman and Kiers, 2003). In the current study, after the reliability test (alpha after deleting items), the first and last items were dropped because their alpha was less than 0.70, and the remaining four items were averaged. The internal consistency of the four-item scale (after piloting) was 0.73. After reliability testing, a mean was calculated and the new variable was determined ($M = 8.5$, $SD = 2.9$, $\alpha = 0.73$).

Supervisor virtual listening (employee rated). Employee perceptions of supervisor virtual listening were measured with eight items (1 = *strongly disagree*; 5 = *strongly agree*) developed by Lloyd et al. (2015). Sample items are: “I feel my supervisor is interested in what I have to say” and “My supervisor makes me comfortable so I can speak openly”. In the current study, after the reliability test, the third item was dropped because its alpha was less than 0.70, and the remaining seven items were averaged to form a composite score for supervisor listening. Cronbach’s alpha was 0.97 ($M = 4.2$, $SD = 0.96$).

Managers’ virtual listening (self-rated). Managers assessed their quality of virtual listening to their employees on a scale developed by Lloyd et al. (2015). Participants were asked to think of a typical interaction with their employees, then respond to the following items:

- “I am interested in what he/she has to say”;
- “I make him/her comfortable so he/she can speak openly”;
- “I make it easy for him/her to open up”;
- “I understand his/her feelings”;
- “I am interested in him/her personally”;
- “I accept him/her for who he/she is”;
- “I care about him/her”; and
- “I don’t judge him/her”.

The response scale ranged from 1 (*strongly disagree*) to 5 (*strongly agree*). Lloyd et al. (2015) reported an internal consistency of 0.96. In this study, items were averaged into composite scores. The alpha coefficient was 0.82 before deleting the last item to improve reliability. This resulted in a Cronbach’s alpha of 0.92 ($M = 4.1$, $SD = 0.9$). This index was entered into the regression according to Lloyd et al. (2015).

Control variables. Demographics included age, gender, marital status and level of education in a fill-in-the-blank format based on Mitchell et al. (2001, p. 22).

Analytic strategy

Logistic regression analysis was conducted to test the hypotheses (via SPSS 26 and PROCESS). The variance inflation factor (VIF) was calculated. It was found to be below the accepted limit of ten points. Thus, there was no multicollinearity between the antecedents of turnover behaviour (the predictors) in the logistic equation. All predictors were grand-mean centered. The interaction was tested using the Hayes and Preacher PROCESS macro model. The researchers also used the J-N technique test (Johnson–Neyman via process). The supplemental analysis used also PROCESS (IBM Corp., Armonk, NY, USA) Model 4 and Bootstrap test.

Results

As a result of the study’s sample size, confirmatory factor analysis could be considered unsuitable and lead to biased estimates (Kyriazos, 2018). Therefore, exploratory factor

analyses were performed with the study's variables. Results show that all variables loaded on their expected unique factors. All scales were validated, and no new scale was built. Additionally, the maximum shared variance and the average variance extracted (AVE) values were used to determine the measurement model's discriminant validity. The AVE and composite reliability values were used to ascertain the convergent validity. The AVE for each construct was 0.52 that shows there is adequate high convergent validity.

The means, standard deviations and correlations among the variables are reported in Table 1.

Logistic regression was conducted to examine the hypotheses. In the first stage, the demographic variables (gender, age, marital status and level of education) were entered into the regression. In the second stage, deviance as a type of OMB and turnover intention, which is known to be a main predictor of actual turnover, were entered into the regression. In the third stage, job embeddedness was entered into the regression. In the fourth stage, alternatives to the current job were entered into the regression, as in the Rubenstein *et al.* (2018) meta-analysis and other studies as previously described. In the fifth phase, job satisfaction was entered because it plays a major role, according to the turnover literature. In the sixth stage, managers' quality of virtual listening to employees (self-rated and employee-rated) was entered into the regression.

This constellation of variables as potential predictors of turnover included classic antecedents typically examined in the turnover literature and new antecedents that had not been previously examined. Table 2 displays the results of the logistic analyses and the moderation analysis.

H1a posited that employee-rated quality of virtual listening of their IT managers would negatively affect turnover behaviour beyond other antecedents such that the higher the supervisors' quality of virtual listening, the less likely their IT employees would be to leave. This hypothesis was supported ($\beta = -0.40$, $SE = 0.19$, $Wald = 4.5$, $p < 0.05$; Table 2, Model 6). Model 6 was significant, as indicated by the chi-square statistic (4.9, $df = 11$); however, this addition to the model was not significant ($\beta = -0.40$, $Exp[B] = 0.67$, $p < 0.05$).

H1b posited that supervisors' self-rated quality of virtual listening to their IT employees would negatively affect turnover beyond other antecedents such that the higher the supervisors' self-rated quality of virtual listening, the less likely their IT employees would be to leave. This hypothesis was not supported ($\beta = -0.06$, $SE = 0.16$, $Wald = 0.13$, $p > 0.05$; Table 2, Model 6).

	<i>M</i>	<i>SD</i>	1	2	3	4	5	6	7
1. Voluntary turnover ^a	0.41	0.49							
2. Turnover intentions	2.6	1.2	0.15						
3. Supervisor listening ^b	3.6	0.91	-0.17*	-0.06					
4. Employee deviance ^c	1.7	1.3	-0.03	-0.01	-0.17*				
5. Embeddedness	4.1	0.43	-0.08	0.01	-0.02	0.01			
6. Job alternatives	5.2	0.54	0.13	0.10	0.05	0.10	0.04		
7. Gender ^d	-	-	-0.02	0.00	-0.09	-0.01	-0.07	0.05	
8. Age	30	6.5	-0.05	0.16	0.05	-0.00	-0.20*	0.00	-0.05

Notes: $n = 167$. * $p < 0.05$; ^aVoluntary turnover/turnover behaviour: 0 = stay, 1 = leave; ^bSupervisor listening: Employee perceptions of supervisor listening; ^cEmployee deviance: Employee deviance directed at the organisation; ^dGender: 0 = male, 1 = female

Sources: Personal development; developed by the authors based on the raw data

Table 1.
Means, standard
deviations and
correlations

Table 2. Logistic regression model to predict turnover, individual level

Variable	Model 2		Model 3		Model 4		Model 5		Model 6											
	<i>b</i>	Exp(<i>b</i>)	<i>b</i>	Exp(<i>b</i>)	<i>b</i>	Exp(<i>b</i>)	<i>b</i>	Exp(<i>b</i>)	<i>b</i>	Exp(<i>b</i>)										
Gender ^a	-0.07	0.93	0.34	0.04	-0.10	0.91	0.34	0.08	-0.11	0.90	0.34	0.10	-0.13	0.84	0.35	0.23	-0.19	0.83	0.35	0.29
Age ^b	0.02	1.0	0.02	0.61	0.01	1.0	0.02	0.27	0.01	1.0	0.03	0.23	0.01	1.0	0.03	1.0	0.02	1.0	0.03	0.32
Marital status ^c	-0.25	0.78	0.19	1.7	-0.28 [†]	0.76	0.19	2.1	-0.30	0.74	0.20	2.4	-0.32	0.73	0.20	0.73	-0.33	0.72	0.20	2.7
Education ^d					0.62 [†]	1.8	0.36	3.0	0.72 [†]	2.1	0.37	3.7	0.70 [*]	1.9	0.38	1.9	0.65	1.9	0.39	2.8
Deviance					0.02	1.0	0.13	0.01	0.03	1.0	0.13	0.05	0.03	1.0	0.14	1.0	0.05	1.05	0.14	0.13
Turnover intention	0.28*	1.3	0.14	4.4	0.28*	1.33	0.13	0.44	0.26 [†]	1.3	0.14	3.2	0.26 [†]	1.3	0.14	1.2	0.24 [†]	1.3	0.14	3.0
Embeddedness					-0.46	0.63	0.39	1.5	-0.51	0.60	0.39	1.7	-0.50	0.60	0.41	0.6	-0.51	0.60	0.41	1.6
Alternative									0.69 [†]	2.0	0.39	3.2	0.71 [†]	2.1	0.39	3.4	0.85 [*]	2.4	0.41	4.4
Job satisfaction													-0.16	0.85	0.19	0.66	-0.16	0.85	0.19	0.66
Listening by manager																	-0.06	0.95	0.16	0.13
Listening by employees																				
Listening by employees × organisational misbehaviour																				
Listening by employees, low																				
Listening by employees, medium																				
Listening by employees, high																				
Alternative × listening																				
Alternative × listening, low																				
Alternative × listening, medium																				
Alternative × listening, high																				
χ^2 (df)					9.5 (6)				10.9 (7)				14.4 (7)				20* (10)			
$\Delta\chi^2$					7.5%				10.3				3.5				5.6*			
Nagelkerke pseudo- R^2					8.6%				8.6%				11.3%				15%*			

Notes: *n* = 167. Turnover was a binary, dichotomous variable coded as 1 (*leave*) or 0 (*stay*). For turnover intention, the hierarchical method was used. Standardised coefficients (B) are presented; ^a0 = *male*, 1 = *female*. ^bWhat is your age?. ^c0 = *single*, 1 = *other*. d0 = *non-academic*, 1 = *academic*. [†]*p* < 0.10. **p* < 0.05. ***p* < 0.01. ****p* < 0.001; [†]Footnotes for the moderators' exp(B) values greater than 1.0 indicate a positive effect; values at 1.0 indicate no effect (same chance), and values less than 1.0 indicate a negative effect (also refer to ^cto ^eexp[B]).

Source: Developed by the authors based on the raw data

H2a predicted that deviance as a type of OMB would have a positive effect on turnover intention. Thus, the more an employee misbehaves, the more they will develop an intent to leave. However, the correlation matrix (shown in [Table 1](#)) did not confirm this hypothesis ($r = -0.01, p > 0.05$).

H2b posited that deviance as a type of OMB would have a positive effect on turnover, such that the more employees misbehave, the more likely they would be to leave the organisation. The correlation matrix (shown in [Table 1](#)) did not confirm this hypothesis ($r = -0.03, p > 0.05$).

H3 posited that turnover intention would positively affect the turnover rate among IT employees in the second COVID-19 lockdown. Thus, the more employees develop an intent to leave, the more likely they will be to leave. As shown in [Table 2](#), this hypothesis was marginally supported ($\beta = 0.24, SE = 0.14, Wald = 3.0, p < 0.10 \Rightarrow p = 0.08$; [Table 1](#): $r = 0.15, p < 0.10/0.06$). The more employees expressed an intention to leave, the more likely they were to leave the firm. Turnover intentions increased the likelihood of actual turnover by 59% ($\text{Exp}[B] = 0.59$).

H4 posited that the embeddedness of IT employees would negatively affect the turnover rate among IT employees such that the more employees are embedded in their job, the less likely they will be to leave. As shown in [Table 2](#), the results were not significant ($\beta = 0.51, SE = 0.41, Wald = 0.06, \text{Exp}[B] = 0.60; p > 0.05$; [Table 2](#), Model 6).

H5 posited that alternatives to the current job would positively affect turnover beyond other antecedents such that the more employees perceive that there are alternatives to their current job, the more likely they will be to leave. Supporting the hypothesis, alternatives to current work positively affected turnover ($\beta = 0.85, SE = 0.41, Wald = 4.4, p < 0.05$; [Table 2](#), Model 6). Model 6 was significant, as indicated by the chi-square statistic (4.9, $df = 11$); the independent variables explained 15.3% of the variance in turnover, whereas perception of alternatives to the current work increased the likelihood of turnover by 240% ($\text{Exp}[B] = 2.4, p < 0.05$).

H6 posited that supervisors' quality of virtual listening as rated by their employees would moderate the relationship between deviance as a type of OMB and actual turnover among IT employees, such that when employees perceive their managers' virtual listening quality as high, the negative effect of deviance on turnover behaviour would be positive and significant. By contrast, when employees perceive the quality of virtual listening of their managers as medium or average, the coefficient was expected to become negative and the effect of deviance was predicted to be negative but less intense. When supervisors' virtual listening was rated by their employees as low, the effect of deviance on turnover behaviour was predicted to be negative and more intense. As shown in [Table 2](#), *H6* was partially supported ($\beta = 0.50, p < 0.05$). Specifically, when employees perceived their managers' virtual listening quality as high, the negative effect of deviance on turnover behaviour was positive and significant ($\beta = 0.40, p < 0.05$). By contrast, when they perceived their managers' virtual listening quality as medium or average, the effect of deviance was negative but less intense ($\beta = 0.04, p > 0.05$). However, when supervisors' virtual listening was rated by their employees as low, deviance's effect on turnover behaviour became negative and more intense ($\beta = -0.49, p < 0.05$). Therefore, *H6* was partially supported. The interaction and slopes can be seen in [Figure 2](#).

H7 posited that job market conditions such as alternatives to current work would moderate the effect of the quality of managers' virtual listening as rated by their IT employees on turnover such that the association would be more positive and significant when high-tech employees perceived alternatives as high. When job market alternatives are perceived as medium or average, the coefficient was predicted to remain negative and the effect of quality of virtual listening on the part of managers as rated by their employees on turnover was predicted to be negative and less intense. When job market alternatives are

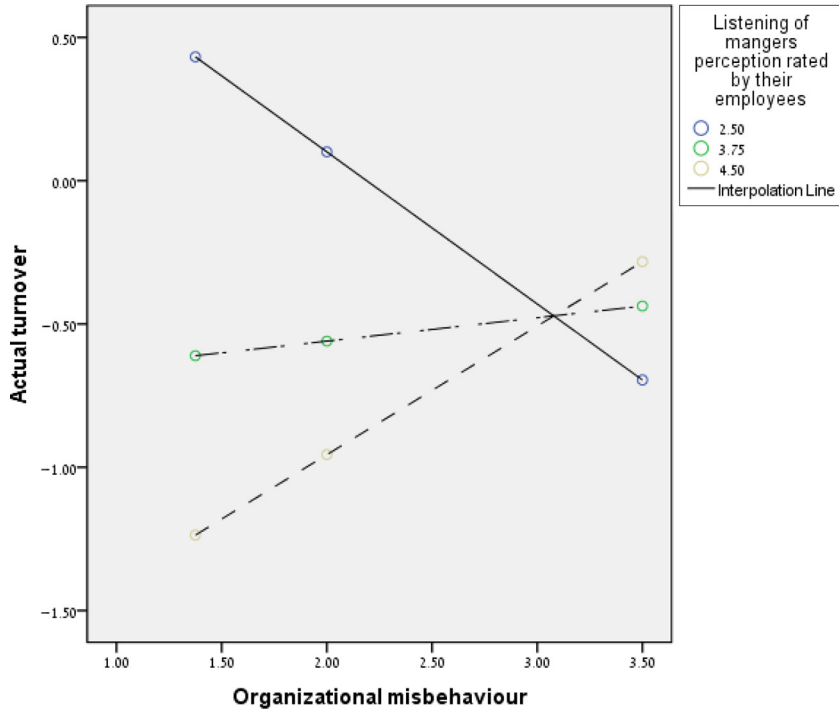


Figure 2. Moderation effect of the listening perception of managers rated by their employees on the organisational misbehaviour–turnover relationship

Source: Developed by the authors based on the raw data

perceived as low, the effect of the quality of supervisors' virtual listening as rated by their employees on turnover behaviour was predicted to remain negative and become less intense and not significant.

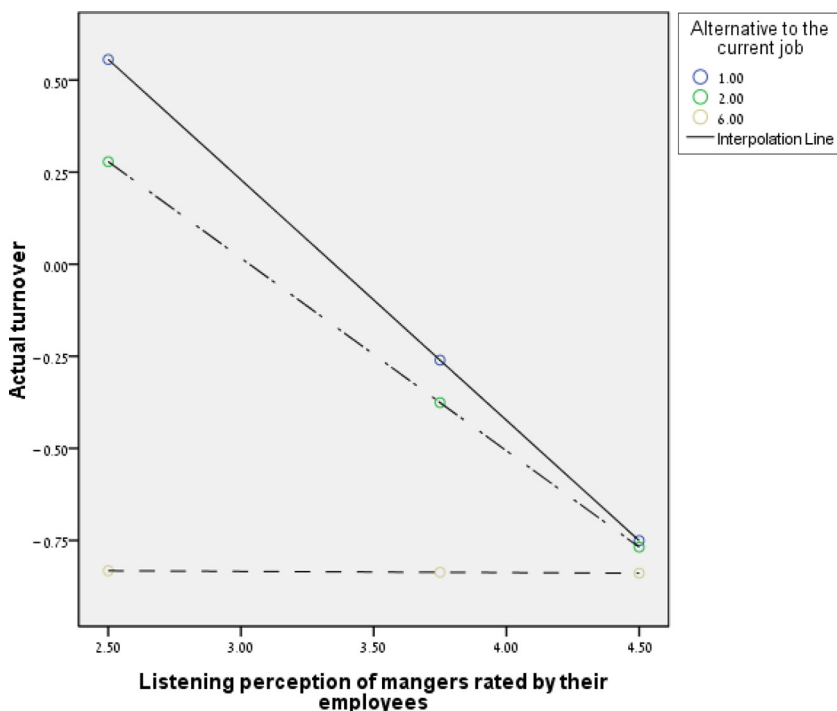
Table 2 shows that *H7* was not fully supported ($\beta = -0.19, p > 0.05$). Nevertheless, the hypothesis was partially supported based on the moderation effects. Specifically, when job market alternatives were perceived by high-tech employees as high, their ratings of their managers' quality of listening had a negative effect on turnover ($\beta = -0.50, p < 0.05$). When they perceived job market alternatives as medium or average, the coefficient remained negative and the effect of managers' virtual listening quality as rated by their employees on turnover was less intense ($\beta = -0.41, p < 0.05$). By contrast, when job market alternatives were perceived as low, the effect of supervisors' virtual listening as rated by their employees on turnover behaviour remained negative but became less intense and non-significant ($\beta = -0.30, p > 0.05$). When alternatives in the labour market are high or medium, perceived quality managers' virtual listening as rated by their employees reduced turnover behaviour. However, when alternatives in the labour market are perceived as low, virtual listening did not affect turnover behaviour. The interaction and slopes can be seen in Figure 3.

Supplemental analysis

Robustness checks to reexamine the results of the model and to *H1a*.

The research model was tested through the PROCESS22 (Model 4) of SPSS. This model also tested the turnover intention as the mediation variable of the supervisors' virtual

Turnover behaviour in the high-tech sector



Source: Developed by the authors based on the raw data

Figure 3. Moderation effect of alternatives to the current job on the listening perception of managers rated by their employees and turnover relationship

listening–turnover behaviour relationship. *The results supported H1.* It was found employees' perception of the quality of their supervisors' virtual listening negatively affected negatively turnover behaviour ($\beta = -0.24, p < 0.05$) such that higher quality of perceived virtual listening, the lower likelihood that IT employees will leave. Next, a bootstrap analysis was also conducted (for further confirmation of the logistic regression results) in which there were 1,000 runs of random samples of the model, and the confidence interval of the mediator was calculated. The findings showed that *H1* was significant ($\beta = -0.37, p < 0.05$), and the confidence interval was between -0.81 and -0.02 . Hence, confirming all model and also *H1* because the confidence interval did not include 0 at the level of 95% or at the level of $p < 0.05$. Thus, the results indicated that the findings were stable, as the confidence intervals did not include zero for any of the coefficients.

Discussion

The results support *H1a*, which posited that IT employees' perception of the quality of their supervisors' listening would negatively affect turnover behaviour. This is in line with [Itzchakov et al. \(2022\)](#) although in their research the DV was turnover intention. Support for *H1b*, that supervisors' self-rated quality of virtual listening to their IT employees would negatively affect turnover beyond other antecedents, was not found.

The results confirmed that deviance as a type of OMB did not affect turnover intention, contrary to *H2a*. This might be because there was a recession in that period and no alternatives in the labour market. Additionally, the high-tech sector in Israel was hit

particularly hard by COVID-19. According to Bank of Israel reports for May 2020, the wages of 26% of all employees were cut. During the second lockdown, many employees were dismissed, working conditions worsened and some had their work hours reduced (Stravchinski, 2020), whereas others worked remotely at home and had no alternatives in the labour market.

Thus, it seems probable that high-tech employees such as developers and programmers who had to work from home would not develop turnover intentions and actually leave, instead remaining embedded in their jobs. Another explanation that might be in line with *H2b* is that deviance as a type of OMB did not affect turnover based on psychological detachment theory (Burris *et al.*, 2008; Griffeth *et al.*, 2000; Sonnentag and Bayer, 2005; Tett and Meyer, 1993). According to this theory, when a person engages in deviance as a type of OMB, it indicates they have psychologically detached from the organisation because they no longer care about the consequences. Therefore, they are more likely to have turnover intention and eventually quit.

In partial confirmation of *H3*, turnover intention marginally affected the turnover rate among IT employees during the second COVID-19 lockdown. In contrast to *H4*, the embeddedness of IT employees negatively but non-significantly affected their turnover rate. This might be because employees in the COVID-19 period were grateful to have a job and therefore, their level of embeddedness did not predict intent to leave or turnover behaviour. Alternatively, it might be that embeddedness does not predict turnover in high-stress situations (or situations where unemployment is very high, such as due to COVID-19, natural disaster, etc.).

Confirming *H5*, alternatives to current work positively affected turnover [e.g. as mentioned in Rubenstein *et al.*'s (2018) meta-analysis] during the COVID-19 pandemic lockdown.

Perhaps more interesting is the *H6* finding. When employees perceived their managers' virtual listening quality as high, the effect of deviance as a type of OMB on turnover behaviour was positive and significant (supporting *H6*), as can be explained by psychological detachment theory (Burris *et al.*, 2008; Griffeth *et al.*, 2000; Sonnentag and Bayer, 2005; Tett and Meyer, 1993). By contrast, when they perceived their managers' virtual listening quality as medium or average, the coefficient became negative and the effect of deviance on turnover was non-significant and less intense, whereas when supervisors' virtual listening was rated by their employees as low, the effect of deviance as a type of OMB on turnover behaviour was negative and more intense. Therefore, *H6* was partially supported. These results can be explained by social bonding theory (Hirschi, 1969), according to which if employees feel heard, this could increase a meaningful bond with their employer and motivate them to maintain that bond, thereby reducing turnover intentions and actual turnover.

Finally, it was found that perceived alternatives to the current job did not moderate the relationship of employees' perception of their managers' quality of virtual listening and turnover behaviour (*H7*), which may be because there were no real alternatives during the lockdown when the data were collected. However, the levels of moderation may indicate that the hypothesis was partially supported or point to promising research directions. Hence, when job market alternatives were perceived by high-tech employees as high, their ratings of their managers' quality of virtual listening negatively affected turnover. When job market alternatives were perceived as medium or average, the coefficient remained negative and the effect of managers' quality of virtual listening on turnover was less intense, albeit significant. When job market alternatives were perceived as low, the effect of employees'

ratings of their supervisors' virtual listening on turnover behaviour remained negative and became less intense and non-significant.

Theoretical contribution to the general literature on turnover

This paper makes several contributions. Firstly, it was found that turnover intention had a marginal effect on the turnover rate among IT employees in the second COVID-19 lockdown. This is consistent with studies showing that turnover intention is the best predictor and proxy for turnover behaviour (Griffeth *et al.*, 2000; Holtom *et al.*, 2008; Hom and Griffeth, 1995). However, because this relationship was marginally significant, it is also in line with studies showing that non-satisfaction or shocks (as the unfolding model suggests; Holtom *et al.*, 2008; Hom *et al.*, 2017; Lee and Mitchell, 1994; Lee *et al.*, 1996, 1999) can lead to turnover behaviour, not only intent to leave (Mitchell *et al.*, 2001), which depends on other predictors such as the type of employee (Li *et al.*, 2016). Recent meta-analyses showed that the correlations presented considerable heterogeneity and that the explained variance of turnover behaviour by turnover intention varied (Allen *et al.*, 2005, p. 980; Rubenstein *et al.*, 2018; Wong and Cheng, 2020, p. 5), which can explain the results obtained here.

Secondly, the article reports the first major positive findings on turnover behaviour. Most studies and organisational theorists have focused on the negative results of turnover intention (Dalton and Todor, 1979; Rubenstein *et al.*, 2018) and posited that the results of turnover are negative for individuals and organisations (Alterman *et al.*, 2021; Hom *et al.*, 2017). The negative aspects of voluntary turnover, as revealed by several studies, include damage to organisational efficiency, i.e. the degree to which organisations achieve their goals (Hom and Griffeth, 1995); investment of time and money in recruitment and training of new employees; high costs due to turnover of key personnel; and damage to the manufacturing process and its quality. Employee turnover also negatively affects those remaining in the organisation, thereby resulting in decreased job satisfaction, increased workload and weakened organisational commitment, which also affect social coherence.

By contrast, other studies have found that voluntary turnover is effective both for the individual and the organisation (Dalton *et al.*, 1982; Muchinsky and Morrow, 1980). Positive aspects include new promotion opportunities for remaining employees and the arrival of new employees, who may contribute knowledge, action strategies and new ideas.

Dalton and Todor (1979) suggested that turnover is a positive phenomenon. They analysed turnover from organisational, economic, sociological and psychological or sociopsychological standpoints. In terms of the organisational perspective, they argued that most researchers see an inverse relationship between turnover and organisational effectiveness (p. 1). Researchers have described the cost of turnover to organisations but failed to consider the benefits, presenting a misleading picture of the results of turnover for organisations and implying that leaving voluntarily only has negative consequences. Researchers have argued that the "vacancy chain" can inject new blood into organisations and vitalise them (Dubin, 1974). Turnover behaviour is mobilising, and it enhances "trained capacity" (a term coined by Thorstein Veblen). When there is no turnover, there is "trained incapacity" that undermines mobility and limits the input of new ideas, power and knowledge to the organisation. Thus, organisations become more dysfunctional, less effective, less innovative, etc. In other words, turnover can have positive consequences for the organisation. This may explain the interest among high-tech firm management concerning the job-hopping of high-tech employees among firms. Studies in the area of institutional management point to the value of employee mobility on the development of interfirm organisation (Dalton and Todor, 1979). Another antecedent that supports the claim

of positive turnover, constituting another contribution of this article, is deviance as a type of OMB.

There is a great deal of evidence, particularly from ethnographic research, that misbehaviour at work is prevalent at all levels and among all types of employment (Edgell *et al.*, 2016; Fleming and Spicer, 2007). Exclusion and rejection (but not bullying) were found to be related to workplace turnover three years later (O'Reilly *et al.*, 2015). As the literature on workplace bullying (which is a type of OMB) suggests, negative activities cause severe damage to the organisation in the form of increased absenteeism, lowered job performance and higher employee turnover (Gamian-Wilk and Madeja-Bien, 2018; Hoel *et al.*, 2011). According to Ackroyd and Thompson (2016), absences and turnover are forms of OMB.

Kessler Ladelsky (2019) showed how turnover intention and seeking another job secretly while working in a firm should be considered misbehaviour. However, Rubenstein *et al.* (2018) did not mention this in their meta-analysis, suggesting that there is scant research on this topic. Thus, the first contribution of this paper (*H6*) was to show for the first time that deviance and OMB affected turnover behaviour and that when employees perceived their managers' virtual listening quality as high, the effect of OMB on turnover behaviour was significant, compared to when employees perceived their managers' virtual listening quality as low. Hence, the effect of deviance and OMB on turnover behaviour was negative. This may imply that perceptions of medium-quality virtual listening do not affect the relationship between deviance as a type of OMB and turnover, unlike high and low virtual listening quality. The second contribution emerges from the finding that when employees perceived their managers' virtual listening quality as high, the effect of deviance as a type of OMB on turnover behaviour was significant. This finding may be attributed to the fact that turnover frees the organisation from deviance that might cause damage. Thus, the result of turnover is functional and good for the company. One might say that this finding was involved from the individual-level turnover only. However, indirectly might point also on the firm level voluntary turnover phenomenon.

The third contribution is related to *H7*. The findings were that alternatives to the current job did not moderate the relationship between employees' ratings of their managers' virtual quality of listening and turnover behaviour. In their meta-analysis, Rubenstein *et al.* (2018) posited that job market conditions (alternatives to the current job) could moderate antecedent–turnover relationships such that they would be more positive when more jobs are available. However, few studies have measured both alternatives and other antecedents to fully examine this moderator. Some studies found moderation effects for alternatives to current work or unemployment rate were not significant, but that withdrawal cognitions by mean alternatives ($\beta = 0.45, p < 0.05$), job satisfaction by mean alternatives ($\beta = -0.70, p < 0.05$), education by unemployment ($\beta = 0.70, p < 0.05$) and male percentage by unemployment ($\beta = -0.76, p < 0.05$) were significant (Rubenstein *et al.*, 2018, p. 26). These results suggest that the positive relationship between thinking about quitting and actually quitting is stronger when employees perceive that there are many available alternatives in the job market. Rubenstein *et al.* (2018) concluded that their hypothesis was partially supported. Here, alternatives to current work were emphasised in the level of moderation only. It seems that based on the findings of Rubenstein *et al.* (2018), despite the non-significant general coefficient of moderation, it is rational to claim that the hypothesis was partially supported because the level of moderation's significance. Thus, the same can be said about the virtual listening–turnover relationship in the high-tech sector – that when job market alternatives are perceived by high-tech employees as high, the virtual listening quality of their managers

as rated by their employees significantly affects turnover. When job market alternatives are perceived as medium or average, the effect of virtual listening quality of managers as rated by their employees on turnover is likely to be significant but less intense. When job market alternatives are perceived as low, the effect of supervisors' virtual listening as rated by their employees on turnover behaviour stays negative, becomes less intense and is not significant. In other words, when alternatives in the labour market are high or medium, perceived quality virtual listening of managers as rated by their employees can reduce turnover behaviour. However, when perceptions of alternatives in the labour market are low (or when alternatives in the labour market are perceived as low), virtual listening does not affect antecedent–turnover behaviour. This virtual listening–turnover relationship and the moderator of alternatives to current work had not previously been found in the turnover literature, including Rubenstein *et al.*'s (2018) updated meta-analysis of turnover.

Finally, another major contribution is that virtual listening as an antecedent and moderators were not researched until now in the turnover literature, as can be seen in Rubenstein *et al.* (2018). Additionally, the virtual listening quality of managers as assessed by their employees had the greatest effect on turnover behaviour, beyond other main predictors of turnover behaviour (deviance as a type of OMB, turnover intention, job satisfaction, job embeddedness and alternatives in the labour market).

Practical implications

The study has several practical implications for professionals, firm management and leaders in the high-tech sector. Firstly, studies have suggested that employees who perceive themselves as “victims” of the workplace and engage in deviant behaviour are more likely to feel stress and show relatively decreased productivity, lost work time and a relatively high turnover rate. They cause financial damage to the firm. Hence, deviant workplace behaviour has an effect on individual performance.

The findings show that deviance as a type of OMB did not have a direct effect on turnover behaviour but that the antecedent–turnover behaviour relationship was moderated by virtual listening. If IT firms invest in coaching and training managers to be good listeners who are perceived and presented as good listeners by their employees, employees in the high-tech sector who misbehave will tend to leave the organisation. Thus, this voluntary turnover in high-tech firms can be considered positive and can prevent negative consequences to the firm and decreased performance.

Secondly, the findings show a host of antecedents predicted turnover behaviour. The findings show that when alternatives in the labour market are high or medium, employees' perception of their managers' quality of virtual listening was associated with reduced turnover behaviour. High-tech management should invest in listening coaches to retain employees and prevent turnover behaviour, such that when ample alternatives exist in the labour market, employees who perceive their managers as good listeners will not be inclined to leave the firm.

Thirdly, the findings show that employees' perception of the quality of virtual listening of their managers had the greatest effect on turnover behaviour beyond other main predictors of turnover (deviance as a type of OMB, turnover intention, job satisfaction, job embeddedness and alternatives in the labour market). This leads to the third implication: managers in the high-tech sector need to develop strategies to implement during their daily practice of virtual listening to their employees, particularly regarding their talents.

Fourthly, this paper suggests that deviance as a part of OMB can lead to positive results and hence, a remapping of the consequences of deviance as both negative and positive is needed.

Limitations and future research

Several limitations need to be acknowledged. Firstly, the study was conducted during the second COVID-19 lockdown, when there were unusual market conditions because many people had been laid off or were on unpaid vacation, with few job alternatives available. Secondly, deviance was measured as a part of OMB using [Bennett and Robinson's \(2000\)](#) final set of 19 items as recommended in their paper (and not the initial 28-item scale). Because deviance as a type of OMB in high-tech firms was measured, the organisational deviance items alone were used. Given that other sources (e.g. peers, supervisors) probably do not see all acts of deviance committed by their employees and that self-reports of deviant behaviours are subject to bias, the writers did not think they would replicate [Bennett and Robinson's \(2000\)](#) factor structure. However, the writers highly recommend using the original set of 28 items to develop a non-self-reported measure of workplace deviance and measure it against another scale to replicate this finding. They also recommend rechecking OMB using other scales such as [Vardi and Weitz's \(2020\)](#) OMB scale. Thirdly, this study focused on high-tech employees in one high-tech company in Israel. It did not deal with startup firms or IT firms that engage in outsourcing. In those contexts, the tempo of work, organisational culture and so on are different and might have affected the findings. Thus, the writers recommend replicating this study in other types of firms in the technology/high-tech sector. Fourthly, this study involved employees in a high-tech firm and not in other types of companies and at the individual and firm (management) level. Future research should examine other types of firms in the IT sector and other sectors and the relationship we tested at the group and macro level (several samples of similar high-tech firms).

Conclusion

In an article titled "On the Next Decade of Research in Voluntary Employee Turnover", [Lee et al. \(2017\)](#) noted that "there remain many untapped opportunities for turnover research" and that they "highlight some of them with the hope to inspire the next generation of scholars to creatively think about and empirically investigate the turnover phenomenon" (p. 39). [Rubenstein et al. \(2018\)](#) recommended a map for future turnover research (p. 29). One recommendation encouraged increased attention to other antecedent–turnover moderators and especially turnover behaviour.

This paper contributed to the turnover literature by examining a constellation of unexplored antecedents and model that might affect turnover behaviour and provided new insights that point to the role of listening and especially virtual listening in reducing turnover behaviour when multiple alternatives exist in the labour market. The findings show how virtual listening can help reduce deviance as a type of OMB in high-tech firms and draw attention to the positive side of turnover. In addition, the results emphasise that employees' perception of the quality of their managers' virtual listening had the greatest effect on turnover behaviour, beyond other main predictors of turnover behaviour (such as deviance as a type of OMB, turnover intention, job satisfaction, job embeddedness and alternatives in the labour market) during the COVID-19 pandemic among professional IT employees in the high-tech sector. The results also emphasise the role of listening as promising predictor in preventing actual turnover among high-tech employees during crisis periods.

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Further reading

The US Department of Labour Bureau of labour statistic (2022), "Job openings and labour turnover report, July, 2022", available at: www.bls.gov/news.release/pdf/jolts.pdf

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