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**ADAPTIVE LEADERSHIP AND MULTILEVEL RESILIENCE IN THE CONTEXT OF
CRISIS**

Master's Thesis by the 2nd year student,
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ЗАЯВЛЕНИЕ О САМОСТОЯТЕЛЬНОМ ХАРАКТЕРЕ ВЫПОЛНЕНИЯ ВЫПУСКНОЙ КВАЛИФИКАЦИОННОЙ РАБОТЫ

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АННОТАЦИЯ

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Описание цели, задач и основных результатов	<p>Нынешняя бизнес-среда характеризуется своей непредсказуемостью и нелинейностью, а события последних нескольких лет указывают на то, что ни одна организация не застрахована от последствий масштабных кризисов. В этих условиях организациям необходимо наращивать свою устойчивость, чтобы успешно справляться с подобными, порой неожиданными событиями. В данном исследовании рассматривается адаптивный стиль лидерства в качестве фактора, который может способствовать увеличению мультиуровневой устойчивости в организациях.</p> <p>Целью ВКР является выявление влияния адаптивного стиля лидерства на устойчивость организаций на трех уровнях: устойчивость на уровне сотрудников, устойчивость на уровне команды и устойчивость на уровне организации в условиях кризисной ситуации. Для того, чтобы достигнуть поставленной цели, в ходе исследования был проведен подробный анализ концепций устойчивости и адаптивного лидерства, а также современной научной литературы по данной тематике, после чего были сформированы гипотезы количественного исследования и проведен опрос среди работников российских компаний. Результаты корреляционного и регрессионного анализов, основанные на ответах 148 респондентов, показали, что адаптивный стиль руководства статистически значимо положительно связан с устойчивостью в организации на всех трех уровнях.</p>
Ключевые слова	Мультиуровневая устойчивость, устойчивость сотрудников, устойчивость команд, устойчивость организаций, адаптивный стиль лидерства, управление человеческими ресурсами

ABSTRACT

Master Student's Name	Polina O. Yakovleva
Master Thesis Title	Adaptive leadership and multilevel resilience in the context of crisis
Main field of study	38.04.02 «Management»
Year	2022
Academic Advisor's Name	Marina O. Latukha. Associate Professor Organizational Behavior and Personnel Management Department, Doctor of Economics
Description of the goal, tasks and main results	<p>The current business environment is characterized by its unpredictability and non-linearity, and the events of the past few years indicate that no organization is immune from the consequences of large-scale crises. Under these conditions, organizations need to build their resilience in order to successfully cope with such, sometimes unexpected events. This study considers an adaptive leadership style as a factor that can help increase multi-level resilience in organizations.</p> <p>The purpose of the Master's Thesis is to identify the impact of an adaptive leadership style on the resilience of organizations at three levels: employee-level resilience, team-level resilience, and organization-level resilience in times of crisis and adversity. To achieve the goal of the research a detailed analysis of the concepts of resilience and adaptive leadership, as well as modern scientific literature on this topic, were carried out, after which quantitative research hypotheses were formulated and a survey was conducted among employees of Russian companies. The results of correlation and regression analyzes, based on the answers of 148 respondents, showed that the adaptive leadership style statistically significantly positively relates to resilience in the organization at all three levels.</p>
Keywords	Multilevel resilience, employee resilience, team resilience, organizational resilience, adaptive leadership style, human resource management

CONTENT

INTRODUCTION.....	6
CHAPTER 1. ADAPTIVE LEADERSHIP AND RESILIENCE CONCEPTS:	
THEORETICAL DISCLOSURE.....	10
1.1. Defining Multilevel Resilience.....	10
1.1.1. The origins of the concept: Personal Psychological Resilience.....	11
1.1.2. Employee Resilience.....	14
1.1.3. Resilience of Teams.....	17
1.1.4. Organizational Resilience.....	20
1.2. Leadership for Resilience.....	24
1.2.1. Adaptive Leadership framework.....	25
1.2.2. Adaptive Leadership and Multilevel Resilience: hypothesis development.....	30
1.2.3. Empirical model.....	35
CHAPTER 2. RESEARCH DESIGN.....	36
2.1. Methodology.....	36
2.1.1. Sample and data collection.....	36
2.1.2. Measures.....	38
2.1.3. Methods for testing hypotheses.....	39
2.2. Data analysis.....	40
2.2.1. Data screening.....	40
2.2.2. Validity and Reliability.....	41
CHAPTER 3. THE INFLUENCE OF ADAPTIVE LEADERSHIP ON MULTILEVEL RESILIENCE: RESULTS OF EMPIRICAL STUDY AND DUSCUSSION.....	44
3.1. Results of hypothesis testing.....	44
3.2. Main findings.....	47
3.3. Theoretical contribution.....	49
3.4. Managerial implications.....	50
3.5. Limitations and Future Research.....	51
REFERENCES.....	53
APPENDIX I.....	68

INTRODUCTION

We all lived in volatile, uncertain, complex and ambiguous environment for a long time after the emergence of VUCA-world concept in post-Cold War period. However, events such as the outbreak of the COVID-19 pandemic and unexpected geopolitical issues make us aware that our world has changed over the past few years. The old VUCA-world was replaced by the BANI-world: brittle, anxious, nonlinear and incomprehensible (Jamais Cascio on Institute of the Future event, 2020).

The same characteristics we apply to current business environment. In view of the events of the several last years, many organizations, quite unexpectedly, found themselves not just in a decline, but in a catastrophic state, and an impressive part of them went bankrupt. This made it clear that, in fact, none of us is immune from the most powerful crises and no matter how strong the basis of organizations may seem, they can all be fragile in the face of circumstances. From the realization of this and the inability to fully understand the situation, anxiety increases in front of the unknown future, in which, perhaps, new troubles will lead to irreparable losses. It becomes more difficult for organizations to build their long-term strategy, because it requires many exit routes in case of another crisis.

Past events stimulated growing interest in various topics within management science and particularly in development of organizational resilience in the face of crises. The general resilience in the business sphere can be divided into three parts: employee resilience, team resilience and the resilience of the whole organization. These phenomena have been studied separately, however, recently a new concept of multilevel resilience emerged in order to investigate the impact of one level to another and the influence of various factors on resilience across all levels in organization.

The quality of resilience implies many characteristics, but in general we can describe it as a capability to resist the adversities/crises and recover from them (Horne & Orr, 1998). Also, the presence of employee resilience, resilience of teams and organizational resilience is closely connected with various positive outcomes, for example, effectiveness, stability, creativity, innovation etc. But what's more importantly is that resilience is associated with positive adaptation to change, which is especially in need during crisis, since crisis can be caused by a change and vice versa for overcoming a crisis some changes need to be done (Hartwig et al., 2020). All three levels of resilience are connected to each other and spread their influence both from bottom to top and from top to bottom. Moreover, since resilience is a capability, it is widely believed that it can be built, developed or enhanced (Kuntz, Näswall & Malinen, 2016). And in today's world, it's a good way for a business to try to construct a sort of protective barrier between the organization and devastating consequences of abrupt, unexpected changes in the external environment.

Many factors can have a positive effect on multilevel resilience, but the main interest for management science and business now is the question of how organizations within their own boundaries can increase their ability to cope with crises. In fact, there is an agreement among the scientific community that one of the organizational enablers of resilience is leadership (Kuntz, Näswall & Malinen, 2016). Leaders effect multilevel resilience through communication with employees and teams, effective management and guidance, goal setting, through their ability to help groups to overcome stress, develop a more positive attitude and make sense of the situation.

Each style of leadership has its own particular impact on resilience at all three levels. Today we can find lots of papers dedicated to investigation of the effects of different leadership styles on employee-level resilience. Among them are humble leadership (Zhu et al., 2019), transformational leadership (Harland et al., 2005., Sommer et al., 2016), supportive leadership (Cooke et al., 2019) and others. The amount of such kind of research in the field of team resilience and organizational resilience is extremely modest in comparison with employee-level resilience. Transformational and shared leadership styles have been explored in relation to team-level and only transformational and mindful leadership in relation to organizational-level (Vera, M., Rodríguez-Sánchez, A., Salanova, M., 2017; Salas-Vallina et al., 2022; Levey, 2019; Valero, Jung, & Andrew, 2015).

If we return to characteristics of the current business environment which is prone to unexpected crises and require rapid adaptation to change, we will understand that one of the most relevant leadership styles nowadays is an adaptive leadership. According to the concept developed by Heifetz in 1994 the need for adaptive leadership appears when the organization needs to overcome an adaptive challenge – such a difficult situation in which there is no solution for the problem in its entirety (Heifetz, 1994). Crisis in its sense is an event that is rare, urgent, significant, ambiguous, have a high impact and involve high stakes (Simola S., 2014). Therefore, it is definitely can be called an adaptive challenge, probably the most severe one.

During adaptive challenge every employee, team and a whole organization need to adapt to new circumstances, engage in learning process, focus on problem-solving, overcome stress caused by situation (Heifetz, 1994). All the mentioned processes from the one hand are guided by adaptive leaders, and from the other hand are conceptually connected with demonstrating resilience. Although, what appears missing is the empirical investigation on the relationship between these two constructs, despite the actuality and relevance of such research due to present characteristics of business environment.

Based on this the **aim of our study** is to identify the influence of adaptive leadership style on resilience at three level: employee-level resilience, team-level resilience and organization-level resilience in presence of crisis situation and adversity.

Relevance of the study. This research will make a significant contribution to understanding of the multilevel resilience phenomenon, consequently, will introduce additional theoretical and empirical basis for future development of this concept.

The topic is especially relevant for business since there is a need for organizations to adapt to new reality caused by current circumstances. We propose that results of these research will be used by HR-managers, leaders and supervisors to find new ways of enhancing multilevel resilience within their organizations in time of crisis.

Object of this study is multilevel resilience. **Subject of the study** is the influence of adaptive leadership style on multilevel resilience in the context of crisis.

Research hypothesis. Based on the deep study of the scientific literature (which is only partly presented in the introduction) we formulated the following hypothesis of our research:

H1: Adaptive leadership positively relates to employee resilience.

H2: Adaptive leadership positively relates to team resilience.

H3: Adaptive leadership positively relates to organizational resilience.

To check our hypothesis and meet the research goal quantitative methods of research were used. The survey was formed using the scales existing in the scientific literature and widely used for research purposes: Adaptive Leadership scale (Northouse, 2016), Employee Resilience scale (Naswall & Kuntz, 2015), Team Resilience scale (Salanova et al., 2012) and Organizational resilience scale (Kantur & Say, 2015). The survey was translated into Russian language with the back-translation technique using an expertise of a professional translator. In order to ensure comprehensibility of the items we subjected it to expert judgment by four professionals representing both the academic side and the management side, and then the pilot study was conducted on 10 potential respondents to get their feedback on the questions' formulation. After final improvements the main study was conducted on 162 employees of Russian companies. Received responses were cleaned from unengaged ones and then research hypotheses were tested using correlation analysis and regression analysis.

The results of the research provided the support for H1, H2 and H3, confirming that adaptive leadership has significant positive effect on resilience at all three levels of organization. In addition, through our investigation we have found that the biggest positive effect adaptive leadership has on team resilience, followed by organizational resilience on the second place and employee resilience on the third place.

The research makes a theoretical contribution to the scientific literature, since there were no works dedicated to investigation of adaptive leadership as an input factor to resilience. Moreover, in our study we combined the research of all three levels in one investigation, which allows us to assess the influence of adaptive leadership on each of three levels of resilience

simultaneously. In fact, the results of our cross-level study contribute to the research of a particular kind of resilience – multilevel resilience. The research about this comparatively new phenomenon is limited, thus, our investigation opens up new opportunities for further research in this topic.

The results of our study provide list of practical implications for management side. Managers can use adaptive leadership as a factor to increase the resilience in their organizations at three levels. Our recommendations can be applied to various HR practices: creating training sessions and adaptive leadership development programs for supervisors of managers and leaders, adjusting the recruitment method to identify sustainable leaders with adaptive leadership potential, long-term work on the personnel assessment process, corporate culture, motivation systems that encourage adaptive leader behavior.

The following parts of our study are structured as follows. Chapter 1 is dedicated to extensive review of topic's theoretical background and hypotheses development. We analyzed in detail classical and modern scientific literature about resilience concepts, the concept of adaptive leadership and justified the formulated hypotheses. In Chapter 2 the process of preparing and conducting is described. In Chapter 3 we test the hypotheses of the study, summarize main findings, identify theoretical contributions of the work, derive managerial implications and recommendations for practitioners, expose limitations of the study and offer directions for future research.

CHAPTER 1. ADAPTIVE LEADERSHIP AND RESILIENCE CONCEPTS: THEORETICAL DISCLOSURE

1.1. Defining Multilevel Resilience

According to its etymology, the word resilience derived from the Latin verb "resilire", which literally meant "to jump back" (re- "back" and + salire "to jump, leap") (Online Etymology Dictionary). In modern dictionaries two meanings of this word can be found: literal and figurative. In relation to psychological science, a figurative meaning is usually used: "the quality or fact of being able to recover quickly or easily from, or resist being affected by, a misfortune, shock, illness, etc". In the business context, the term is used to describe how employees, teams, and organizations can cope with adversity, overcome crises and other difficult situations, and continue working without disruption.

The concepts of the resilience of employees, teams and the organization as a whole have been sufficiently studied separately. However, relatively recently, the term multilevel resilience has appeared in the discourse of resilience in order to focus research on the interaction of different levels of analysis. Some of the existing research is focused on determining how resilience operates at across three levels, while some are more focused on how different factors affect resilience at these levels.

The first attempts at a cross-level analysis of organizational resilience were made by Luthans (2005), in his scientific article he suggested that organizational resilience will influence the resilience of leaders and leaders in turn will enhance individual resilience. This opinion introduced the role of leadership in the process of building and enhancing resilience across all three levels of organizational resilience. Returning to the interrelation of levels, later, a significant positive correlation between organizational resilience and employee resilience was found, and moreover, some articles identified organizational resilience as a predictor of individual resilience (Teng-Calleja et al., 2020; Prayag et al., 2020). However, there are also studies proving the opposite direction of influence, in which, on the contrary, employee resilience serves as a predictor of organizational resilience (Branicki et al., 2018; Branicki et al., 2019). Also, a statistically significant correlation between team and individual resilience has been empirically proven (McEwen & Boyd, 2018). Thus, we see that under certain conditions, resilience at different levels can influence each other.

Following sections will present an analysis of the scientific works that originated the concept of resilience and the theoretical background of the three levels of resilience in organizational context: employee resilience, team resilience, and organizational resilience.

1.1.1. The origins of the concept: personal psychological resilience

In relation to the human psyche and behavior, the term resilience was first used in the 1970s. First scientific works concerning resilience appeared in the field of child psychology. Some of the most significant scientific works were created by following authors: Anthony, Rutter and Werner.

Instead of term resilience Anthony used the term invulnerability. After eight years of research on vulnerabilities of the children Anthony developed his conceptualization of resilience, which laid the theoretical basis for the research on that topic. According to Anthony, resilience of the child's psyche was determined by two factors: heredity and the environment. These two factors interact with each other in different proportions under different circumstances and ultimately determine the type of a person's personality: vulnerable or invulnerable (Anthony, 1974). Author believed that to resist stress children's psych used "protective barriers", which contributed in their adaptational systems. Results of Anthony's research revealed that unlike vulnerable child, invulnerable one adapts to unpleasant circumstances and develops new models of behavior (Anthony, 1974).

Another component of adaptational system, according to author, is risk. Risks can also originate from hereditary and environment: for example, child's vulnerability can serve as a risk by itself, just as stressful situation. Person's environment can act either as a protective factor or as a risk. Additionally, author also proposed that one's vulnerability (and invulnerability) is not stable, thus, it can change over time.

Rutter and Werner criticized Anthony's view for usage of the term "invulnerable" as it can be misleading and make ones believe that some children undergoing the study were so "constitutionally tough" that they can resist any stress and adversity. However, similar to Anthony, authors claimed that one's resilience can change under the influence of circumstances.

Through his research, Rutter has drawn some new important conclusions about resilience. Among them are: resilience includes assessing and interpreting stressful situations appropriately, being proactive during stressful situations and requires self-esteem and self-efficacy, which emerge from a combination of natural temperament secure and relationships, achievement, and other positive experiences (Rutter, 1985). Regarding the latter conclusion, Werner in his longitudinal study also pointed out the importance of such environmental protective factors as close relationships and support (Werner, 1989).

The above-mentioned scientific works introduced foundation for the development of resilience concept. All three authors (Anthony, Rutter, Werner) in addition to recognition of biological factors' role in demonstrating resilience, emphasized the importance of the environment

in this process. Early concepts also claimed that individual's resilience is capable to change (increase/decrease) under influence of environmental conditions.

Due to complexity of the concept, there is no universal definition of resilience in modern scientific literature. Moreover, the research on resilience is characterized by some contradiction in the conceptualization of resilience. Scientists' views on resilience can be divided into several groups: resilience is seen as a static condition (resilience as a trait or as a set of attributes), resilience associated with dynamics (as a capability or as a process) and, finally, resilience is interpreted as an outcome.

According to the proponents of the first view, resilience is a static condition. Part of researchers interprets resilience as a trait; thus, an individual can be classified either resilient or not (Wright, Masten, & Narayan, 2013). Block and Block (1980), for example, used the term "ego resilience" to characterize persons' trait. Another group of researchers defines resilience as a set of attributes or a combination of various characteristics of an individual that help him adapt to the circumstances he faces (Connor & Davidson, 2003). This characteristics/attributes/instruments can exist separately from adversity, but their presence associates with higher probability of dealing with adversity (Fisher et al., 2019). According to a study by scientists recognizing this concept, six characteristics (self-efficacy, self-esteem, hope, optimism, risk propensity, and outcome expectancy) constitute resilience of an individual (Moenkemeyer, Hoegl, & Weiss, 2012).

Most scientists accept the conceptualization of resilience as a dynamic phenomenon. Firstly, resilience is seen as a capability/state-like ability that is nevertheless capable of changing, and therefore is capable of strengthening and development (Hartmann et al., 2020). Secondly, resilience is defined as a process of dealing with adversity, that includes various other individual cognitive processes, activities and behaviors. Luthar et al. (2000) defined resilience as 'dynamic process encompassing positive adaptation within the context of significant adversity'.

Also, some scholars conceptualize resilience as an outcome of the various processes described by the process view (Kalisch et al., 2017).

As it was said, dynamic conceptions of resilience are more widely accepted. According to this conceptualization, resilience changes contextually (from situation to situation) and temporally (throughout a situation and across an individual's lifespan). This means that if a person has shown resilience in one stressful situation, this does not mean that he will react in the same way to all other situations (Davydov et al., 2010; Rutter, 2006; Vanderbilt-Adriance & Shaw, 2008). Also, some studies support the notion that resilience is a capacity that develops over time in the context of person-environment interactions (Egeland, Carlson, & Sroufe, 1993), which contradicts the view of resilience as a static state. We see that this view is a continuation of earlier concepts.

According to dynamic view, adversity is the main antecedent to resilience (Atkinson, Martin, & Rankin, 2009; Herrman et al., 2011; Masten, 2001). Adversity can be understood as a multitude of events, both negative (uncertainty, conflict, failure) and positive (positive changes, progress, increased responsibility). Another principle is that the previous event can be negative and positive, but the consequence must be a positive adaptation so that the person can demonstrate resilience. Positive adaptation has been defined as 'behaviorally manifested social competence, or success at meeting stage-salient developmental tasks' (Luthar & Cicchetti, 2000).

As mentioned earlier, in early works on resilience, Anthony (1974) argued that the formation and demonstration of persons' resilience is influenced by two factors: risk factors and protective factors. In modern scientific literature both risk factors and protective factors are categorized into individual and environmental factors (Friborg, Hjemdal, Rosenvinge, & Martinussen, 2003; Tusaie & Dyer, 2004; Windle, 2011). Individual factors include genetics, optimism, self-esteem, self-efficacy, while environmental factors include economic, institutional, or ecological factors (Earvolino-Ramirez, 2007; Gillespie, Chaboyer, & Wallis, 2007; Herrman et al., 2011; Tugade & Fredrickson, 2002; Wagnild, 2009, Harms, Brady, Wood, & Silard, 2018).

Researchers determined that resilience results from basic human adaptational systems (Bonanno, 2004; Masten, 2001; Richardson, 2002). According to Masten (2001), these adaptation systems include: close relationships, emotion and behavior regulation, the motivation for learning, engaging in one's environment and biological development. If the systems function properly, resilience will develop even if the person is faced with extreme adversity. However, it should be noted, that the level of stress intensity and, accordingly, the concept of "extreme" will depend on the individual characteristics of the person. In the presence of constant and prolonged adversity, the work of adaptation systems and the development of resilience can be disrupted. In some cases, when risk factors dominate over protective factors, a person cannot demonstrate resilience, even if he has previously successfully coped with this stressful situation. In the same way, if protective factors dominate, then the person is inclined to demonstrate resilience, even if this has not been possible before. (Tusaie & Dyer, 2004).

According to the conceptualization of resilience as a dynamic state, risk factors and protection factors along with their different ratios at different times change a person's resilience. A natural continuation of this thought was the idea that resilience, not only can change inadvertently depending on factors, but can also be strengthened and learned (Näswall, Kuntz, Hodliffe, & Malinen, 2013; Winwood et al., 2013; Yost, 2016). Much research is devoted to finding out how various factors can enhance resilience. Moreover, the fact that resilience can manifest itself in different ways depending on the circumstances has sparked the interest of the

scientific community to investigate this phenomenon in different contexts. One such context is organizational one: employee resilience, resilience of teams and resilience of organization itself.

1.1.2. Employee Resilience

The concept of employee resilience is relatively new. It was introduced in 2013 in an attempt to focus the empirical investigation of resilience away from internal indicators of coping with stress, to the context of demonstrating such a behavior at work (Näswall et al., 2013). According to Kuntz, employee resilience is defined as employee capability, facilitated and supported by organization, to utilize resources to continually adapt and flourish at work, even when faced with challenging circumstances (Kuntz et al., 2016).

Adversity at the workplace can be represented by many events: failing to meet goals (personal career goals and organizational goals), losing of important client, interpersonal conflicts with colleagues or supervisors/subordinates and, adapting to change or crisis etc. The last one type of adversity is especially important for this particular study, since on the one hand organizational change often follows some crisis situations and, on the other hand, positive reaction to organizational change is included in the list of other positive consequences of demonstration of resilience in the workplace. According to research, employees with a high level of resilience use their psychological resources in order to successfully overcome the difficulties of organizational changes, and generally adapt to these changes much better than employees with a low level of resilience (Shin et al. 2012, McLarnon & Rothstein, 2013).

Resilience of employees, as well as the personal psychological resilience described previously, can change under the influence of individual and environmental factors. If we go back to the definition of resilience, we can conclude that resilience is not seen as a trait, but as a capability that can be learned and developed. It means that employees can utilize their past experience with adverse events to be more adaptive and flexible while facing other new challenging situations (Avey, Luthans, Jensen, 2009; Tugade, Fredrickson, 2004). Most researchers involved in the study of employee resilience share this opinion.

Lots of factors can influence the employee resilience. The first group connected with personality traits. Optimism, self-monitoring, Big 5 personality traits, proactive personality are confirmed to be predictors of resilience in various researches (Athota, Budhwar, & Malik, 2020; Zhu & Li, 2021; Cooper, Flint-Taylor, & Pearn, 2013; Fisk & Dionisi, 2010). Rees stated that there are key psychological variables related to employee resilience: self-efficacy, mindfulness, neuroticism, and coping. The last component is of particular interest for this study, since it is connected with the positive adaptation to crisis. Coping described as the adjustment process which follows and adverse events. There are many coping strategies, however, Rees was able to

demonstrate that two of them (positive reframing and support seeking) are associated with job satisfaction (Rees et al. 2015). Moreover, according to results of the study, participants who scored higher on mindfulness, self-efficacy and coping have lower burnout scores (Rees et al., 2016).

Another group of antecedents of individual employee resilience is competences, or in other words developed skills and experiences: cognitive, social or professional. Winwood derived seven factors that contribute to employee resilience: living authentically, finding one's calling, maintaining perspective, managing stress, interacting cooperatively, building networks and staying healthy (Winwood et al., 2013). We can find empirical evidence of positive relationship between work experience, expertise, time management with employee resilience (Mansfield, Beltman, Price, & McConney, 2012; Wang, Cooke, & Huang, 2014). Competences linked with emotions - emotional intelligence, empathy, reflective abilities – are also protective factors (Kinman & Grant, 2011).

Positive attitudes and emotions can build and influence employee resilience as well, since there is a positive relationship between these phenomena (Cameron & Brownie, 2010; Pendse & Ruikar, 2013). There is also an empirical evidence of that career orientation, workplace belongingness and sense of purpose relate to higher levels of resilience (Coetzee, Ferreira, & Potgieter, 2015; Shakespeare-Finch & Daley, 2017).

Studies defining employee resilience as a dynamic phenomenon argue that it can be enhanced through positive relationships at work. Trust and collaboration allow people to express their feelings and emotions, which significantly contributes to the level of resilience (Wilson & Ferch, 2005). Support from family, friends and more private environment also can serve as a protective factor, however, in this sphere empirical results only partially confirmed propositions (Todt, Weiss, & Hoegl, 2018).

Members of the Employee Resilience Research Group argue that that organizational environment can influence the level of resilience through various enablers - learning culture, supportive work environment and leadership (Tonkin, Malinen, Näswall, & Kuntz, 2018). Leaders through their behavior and specific way of communication can promote components of resilience at work and build supportive atmosphere which will enable employees to develop and demonstrate resilience. For example, support and feedback from supervisor positively and significantly associated with employee resilience (Connell, 2016; Meng et al., 2019). However, research on the relationship between some leadership styles and employee resilience is limited.

In 2014 Hodliffe developed 14-item Employee Resilience Scale (EmpRes) - later EmpRes was shortened to 9 items by Näswall, Kuntz, and Malinen (2015). During the process of testing the scale Hodliffe's research led to the following results: empowering leadership is positively related to employee resilience, employee resilience is negatively associated with intentions to

turnover, employee resilience positively associated with job engagement and job satisfaction, employee resilience acted as a mediator between empowering leadership and all three work-related outcomes of intention to turnover, job engagement, and job satisfaction. Based on above-mentioned results, it can be concluded that empowering leadership style leads to both positive performance at work and employee resilience. The relationship between empowering leadership along with contingent reward leadership and employee resilience was also examined by Nguyen et al. (2016). The results showed that behaviors associated with these leadership styles significantly related to employee resilience.

Today we also can find papers on humble leadership (Zhu et al., 2019), supportive leadership (Cooke et al., 2019), management-by-exception leadership (Harland et al., 2005., Sommer et al., 2016), transformational leadership (Harland et al., 2005., Sommer et al., 2016), laissez-faire leadership (Harland et al., 2005.), paradoxical leadership (Franken et al., 2019) in the context of its effects on employee resilience. What appears missing is the investigation of relationship between adaptive leadership approach and employee resilience.

As it was said, organizational factors other than leadership can also serve as a resource for building resilience. Autonomy and empowerment incorporated in job design as well as employee-oriented and well-being-oriented HRM practices have a positive impact on social climate which consequently is associated with enhancing of employee resilience (McDonald, Jackson, Vickers, & Wilkes, 2016; Bardoel et al., 2014; Cooke, Cooper, Bartram, Wang, & Mei, 2019). It is also widely believed that resilience can be influenced through various organizational interventions. In fact, there is empirical evidence of the positive effect of resilience training on psychological functioning, employee resilience, performance (Robertson et al., 2015). According to study, individuals demonstrating the lowest level of resilience at work benefit from resilience-development programs not only during them but after as well, which confirms that resilience can be developed (Harms et al., 2018). As it was said, organizational trainings of enhancing employee resilience demonstrate the statistically significant effect on employees' psychological state and performance at work, however, most of trainings used in existing research address individual factors of employee resilience (stress management, mindfulness, self-efficacy, emotional awareness, optimism and problem-solving), hence, focus on developing personal psychological resilience and miss environmental factors that can enhance employee resilience (Kuntz et al., 2017).

Many things are the outcomes of employee resilience. Firstly, resilience is associated with higher levels of mental health, and there are many studies confirming a negative relationship between resilience and a number of mental disorders, such as depression, anxiety, etc (Kitamura, Shindo, Tachibana, Honma, & Someya, 2013; Turner, Scott-Young, & Holdsworth, 2019).

Research have shown that under conditions of job stress, job insecurity, workplace bullying, resilience mitigates their negative effect on the psyche and overall health of the employee (Wagstaff, Hings, Larner, & Fletcher, 2018; Meseguer -de-Pedro, Garcia-Izquierdo, Fernandez-Valera, & Soler-Sanchez, 2019).

Secondly, by acting as such a buffer, resilience affects not only the employee's mental health, but also their work-related behaviors and attitudes, for example, resilience is negatively associated with interpersonal counterproductive work behaviors (Shoss et al., 2018). Resilience has shown to be positively related to work engagement, job satisfaction, and negatively associated with emotional exhaustion, employee absenteeism, turnover intention (Luthans, Avolio, Walumbwa & Li, 2005; Youssef & Luthans, 2007; Wang, Li & Li, 2016; Näswall et al., 2019). Resilience can also serve as a precursor of career satisfaction, work happiness with mediating roles of other phenomena (Zheng et al., 2017; Charbonneau, 2019). And, what is important for this particular study, resilience positively associated with problem-focused coping and commitment to change, which is extremely relevant in crisis situations (Parker, Jimmieson, Walsh, & Loakes, 2015; Shin, Taylor, & Seo, 2012).

Finally, resilience linked with effectiveness, there is empirical evidence of its positive relation to organizational performance, organizational citizenship behavior, creativity with various mediators: job satisfaction, work engagement, organizational commitment, and well-being (Meneghel, Borgogni, Miraglia, Salanova, & Martinez, 2016; Gupta & Sharma, 2018; Paul, Bamel, Ashta, & Stokes, 2019).

1.1.3. Resilience of Teams

Resilience can be seen as an individual characteristic/capability, but also as a social factor in teams and organizations (Bennett et al. 2010). However, in the scientific literature, much less attention has been paid to this phenomenon than to individual employee resilience. Team resilience is especially important in situations where failure can lead to serious consequences, for example, when someone's safety or life depends on the work of the team. According to Hollenbeck, in recent years, team-based structures in organizations have increasingly become dominant (Hollenbeck et al., 2012). At the same time, continuous global changes, uncertainty and crises are becoming more frequent in the business environment, which is why it is so important to investigate this level of resilience and determine how to strengthen the resilience of teams in times of crisis.

In most existing scientific articles, team resilience is defined in much the same way as employee resilience, the only difference being an adjustment for the team level. Thus, team resilience is a team-level capacity to respond and bounce back from adversity (Blatt, 2009; McCray et al., 2016). It is also widely believed that individual employee resilience along with other

individual-level factors (adaptability, communication skills, expertise, team orientation etc.) is an antecedent of team resilience. Empirical support for this provided McEwen and Boyd (2018), in their scientific work employee resilience and team resilience showed strong positive correlation. Although, in presence of adversity team resilience can be more negatively affected by it, since it can serve as a buffer against pressure on each team member (Hartwig et al., 2020).

The key attributes of team resilience are: positive adaptation to adversity, sustained team viability and dynamic nature of resilience (Hartwig et al., 2020). Positive adaptation to adversity is one of the main components of team resilience construct. In the scientific literature, resilient teams are characterized by the fact that they can cope well with various kinds of adversity, crises, changes and quickly recover from such events, as they successfully use adaptive processes (Carmeli et al., 2013; McEwen & Boyd, 2018). During crisis situations, resilient teams assess new circumstances in a timely manner, execute plans, develop new strategies if the need for change occurs (Maynard et al., 2015). Moreover, if a crisis situation requires change, members of resilient teams are capable to recognize the demand for change and address the challenge after adjustment (Sims & Salas, 2007). Overall, resilient teams engage in team adaptive processes and adjust them.

Sustained team viability is the second characteristic of resilient teams. According to Alliger et al. (2015), many teams can overcome one or two challenges, however, what distinguishes them from resilient teams is that they “can sustain performance and morale over time” (p.177). Resilient teams through maintenance of their health and resources recover quickly, thus, show viability. Importantly, team adaptability is different from resilience itself, as resilient teams also have a protective capacity against disruptions of team performance (Hartwig et al., 2020).

Dynamic nature of team resilience means that team resilience can be influenced by team characteristics, team processes and some environmental factors. It is also possible to add individual-level factors to this list, since there is conceptual model developed by Gucciardi et al. (2018) which is focused on how team resilience emerges based on individual team member dynamic person-situation interactions. Returning to team characteristics, there is empirical evidence of positive relation diversity to resilience (Sutcliffe & Vogus, 2003). A possible explanation for this could be that diverse teams have a broader knowledge and experience base, which they can use in times of adversity and crisis, hence, they potentially possess more ways and mechanism to overcome challenging situations. Regarding team size, a large team size complicates the decision-making process and thereby negatively affects resilience (Giannoccaro, Massari, & Carbone, 2018). The roles of team tenure and interdependency for team resilience are also highlighted by some researches (McCray, Palmer, & Chmiel, 2016).

Team resilience is a function that appears as a result of team members' interaction, so it is important to emphasize the huge role of team processes in terms of their contribution to resilience

(Hartwig et al., 2020). These processes include many things: communication, coordination, situation management, risk identification, results tracking, adaptation, stress management, emotional support etc. For instance, collective positive emotions, support climate, coordination within the team, collective efficacy and teamwork have showed to be positive antecedents of resiliency (Morgan et al., 2015; Meneghel, Martinez et al., 2016; Vera, Rodriguez- Sanchez & Salanova, 2017). In fact, the effectiveness of teams in overcoming adversity can also be a factor of increase/decrease in its' resilience. For example, poor adversity management can result in reduced resources and affect relationships of team members, consequently, the capacity for overall team resilience will also be decreased (Alliger et al., 2015).

Team resilience can be enhanced by trainings or other organizational factors (Flint-Taylor & Cooper, 2017) and also through influence of leaders. According to Alliger (2015), leaders develop and provide accurate tools, involve team members in various trainings and create positive team culture, hence, they can enhance the resilience of teams. Leader as an environmental factor exerts his/her influence on resilience of the team through the management and facilitation of the processes that take place within the team. And in crisis situations leaders are involved in stress managing and adaptation processes which will also contribute to team resilience. We can conclude that, other things being equal, each leadership style will have a unique impact on team resilience, as it will facilitate these processes to varying degrees. The list of studies on how different leadership styles can influence team resilience is very modest compared to similar studies on individual employee resilience. In fact, the relationship between only two styles has been explored so far: transformational leadership and shared leadership. All of these styles have been shown to be positively associated with team resilience (Vera, M., Rodríguez-Sánchez, A., Salanova, M., 2017; Salas-Vallina et al., 2021).

Along with leadership organizational practices are also a part of environmental factors that influence team resilience. There is empirical evidence of positive effects of a wide range of organizational support structures: educational systems dedicated to development of new skills, availability of resources, HRM practices of facilitating employees' work-life balance, possibilities and awareness of future career development (Vera, M., Rodríguez-Sánchez, A., Salanova, M., 2017; van der Beek & Schraagen, 2015).

The number of studies on the impact of team resilience on other constructs is much smaller than similar studies at the individual and organizational levels. In addition, existing scientific work has explored the impact of resilience in general, that is, outside the context of a crisis or other difficult situations. It was found that resilience is linked to positive team behaviors and attitudes: it is positively related to cooperation, cohesive work process of team members, team viability and experience. (West et al., 2009; Dimas et al., 2018). Importantly, that some of the positive outcomes

were to achieve only when teams cooperate for a longer time, hence, it's possible to suggest that the time the team exists in the same composition can have a good effect on both resilience and other results of team work. Team resilience has a positive effect team performance, health and team functioning (Meneghel, I., Salanova, M., 2016, Hartwig et al., 2020). It also has connections with demonstrating team creativity (Fan, M., Cai, W., Jiang, L., 2021).

1.1.4. Organizational Resilience

In quantitative terms research concerning the organizational level of resilience occupies second place among all three levels of resilience: there are more articles on organizational resilience than on team resilience, but much less than on individual resilience. The first research work on the resilience of organizations began to appear in the 1980s, and their number gradually increased in the 21st century, since the unpredictability of the business environment is growing. Early studies have been more focused on high-reliability organizations: space agencies, emergency departments, airlines etc. (Kendra & Wachtendorf, 2003; Gittel et al., 2006). This is natural due to the extremely serious consequences of possible collapse, which may occur during crisis situations specifically in these organizations. Subsequently, resilient organizations began to be studied in the context of the business environment.

Exactly as in the case of resilience at the level of employees and teams, there is no consent of the conceptualization of organizational resilience in the scientific community. However, it is noticeable that consideration of this phenomenon as capability/capacity is the most common. Thus, organizational resilience is the organizations' ability to resist adversities and to recover from them (Horne & Orr, 1998). According to Lengnick-Hall & Beck (2003), organizational resilience is a complex blend of behaviors, prospects, and interactions that can be developed, measured, and managed "(p. 10). The view of resilience as a process is much less common. It holds that resilience is in constant change from crisis to crisis and consists of separate practices that are conceptually lie between the factors affecting resilience and its outcomes (Linnenluecke & Griffiths, 2012).

Resilient organizations are distinguished by the fact that, when possible, they are able to anticipate changes associated with crisis situations and assess risks (Gilly et al. 2014). To do this, they constantly evaluate the environment in which they operate and understand where their long-term strategy can lead (Vogus & Sutcliffe 2007; Hamel and Välikangas 2003). Thus, resilient organizations are able to consider several scenarios in advance, have a scenario of action in case of collision with various adversities (Fink et al. 2005). Moreover, many scholars note the need for the ability to make sense of change, as it is important not only to anticipate actual events, but to have the ability to analyze and make sense out of them (Teo et al. 2017). This process anticipates

decision making and action and is necessary for goal setting, preventing failure (Weick, 1993; Whiteman & Cooper 2011; Chan, 2011).

In moments of crisis, resilient organizations are able to maintain stability and operate without major disruptions. To do this, they maintain critical business functions and retain revenue (Clement & Rivera 2017; McCarthy et al. 2017). Many academic papers point to robustness as another criterion for resilience, a characteristic which refers to organization's general ability to endure and overcome difficulties caused by change or crisis (Kantur & Is ̇eri-Say, 2012; Gilly et al. 2014). Also important is the ability to recover quickly from difficult situations or in other words to return in the same position (or very close to it) as in pre-crisis condition in the shortest possible time (DesJardine et al. 2017; Lampel et al. 2014). To remain stable resilient organizations, use effective coping mechanisms, for example, rapid development of new strategies, improvisation or the ability to solve problems in a resource-poor environment (Mallak, 1998; Ray et al. 2011).

Crisis situations invariably lead to changes, and resilient organizations can cope with such changes, effectively adapt to them (Salanova et al. 2012; Teo et al. 2017). This may concern the routine work of the organization, changes affecting resources, the dynamics of processes related to employees and much more. Many authors point out that resilience can also include the ability not only to respond to changes, but also to carry out regular changes despite the lack of urgent need. The constant renewal of structures, skills and innovative development of the company will ensure that the crisis situation and new working conditions will not be too strong a shock for the company, as the company will have better resources and strategies in order to resolve the problems that have arisen, and, thus, will be more resilient (McCarthy et al. 2017; Reinmoeller & van Baardwijk, 2005).

Behavioral attributes of organizational resilience include acceptance of the situation, preventing avoidance/denial of problems, understanding of organizational purposes, positive mindset and making meaning adversities (Salanova et al. 2012; Coutu, 2002; Hamel & Välikangas, 2003).

In times of adversity resilient organizations are able to keep their performance, which relates to remaining competitiveness on the market, meeting market demands and use crisis as an opportunity for growth (Ates & Bititci 2011, Kantur & Is ̇eri-Say 2012). Abilities for growth also mean that resilient organizations successfully overcame challenges associated with crisis become more robust and experienced (Freeman et al. 2004).

Speaking about the factors that strengthen the resilience of the entire organization to crises, the importance of financial resources and other assets of the company seems obvious. Companies with large financial reserves (less debt and more cash) were able to ensure themselves to work in times of crisis with the least losses and recover faster (Gittell et al., 2006). In general, the financial

condition of the company before the crisis has a positive impact on performance after the crisis, and maintaining and preserving performance is one of the attributes of organizational resilience (Burke, 2005; Tognazzo et al., 2016).

The characteristics of an organization's structure and the features of its internal operational processes also significantly affect the organization's resilience. There is empirical evidence that a more horizontal structure has positive effects of organizational resilience (van der Vegt, Essens, Wahlström, & George, 2015). This can be explained by the fact that the process of working on acute problems in a crisis remains at the same level of employees and through better coordination and cooperation is solved much faster. Also, many scholars have noted the role of flexible structures and agile approach, as it is directly related to the ability to adapt quickly to crises by allowing more rapid adjustment of plans, tasks and responsibilities, and more rapid allocation of resources within the organization (Kantur & Iseri-Say, 2012; Lampel et al., 2014).

Of particular interest to this study is the role of the following factors in building resilience: the company's social resources and strategy. Firstly, the social resources - in this category we can include employees, their interaction, engagement, interpersonal relationships, and more. Voice organizations with vocal climate positively associated with organizational resilience (Brueller, & Carmeli, 2019). Some researchers have noted that high-quality relationships among employees and relational reserves have a positive effect on faster recovery from adversity and thus increase resilience (Gittell et al., 2006). There is empirical evidence of a positive social capital's impact on resilience since it is connected with mutual assistance, the unimpeded exchange of information, experience, resources, and knowledge among employees (Lengnick-Hall & Beck, 2016). Despite the lack of agreement in the scientific literature on the relationship between different levels of resilience, we consider it necessary to emphasize the impact of resilience at the level of employees and teams on the resilience of the entire organization. In our opinion, all these three constructs can influence each other, thus, become antecedents and outcomes of each other. Moreover, there is empirical evidence of significant positive relation between employee resilience and organizational resilience (Prayag et al., 2020). And given that a positive relationship between employee and team resilience has also been proven (McEwen & Boyd, 2018), in general, it is most likely that team resilience can be attributed to the antecedents of organizational resilience.

The strategy and various practices that organizations implement in their work are also important factors in influencing resilience. One of the attributes of resilient organizations, as mentioned earlier, is the commitment to innovation and constant renewal, this fact is confirmed by empirical studies of many scientists who found out that there is a positive relationship between innovative strategies and organizational resilience (Wojan et al., 2018). Strategy planning, organizational learning and implementation of change management practices also increase

resilience at the organizational level (Hillmann et al., 2018; Ates & Bititci, 2011; Do et al., 2022). It is also known that companies that have sustainability and corporate social responsibility among their values are more successful in overcoming external large-scale crises: the recent COVID-19 pandemic and the global economic recession in 2008 (Huang et al., 2020; DesJardine et al., 2019). It was also found that resource-based management initiatives have positive effects of organizational resilience, and, moreover, organizational learning practices mediate this relationship (Do et al. 2022).

The organizational practice of interest for this study is leadership. There is a rather modest amount of research on the relationship between resilience at the organizational level and leadership, and in particular different leadership styles. Some of the studies are qualitative, for example, through interviews and theoretical literature analysis, it was found that leadership can positively influence resilience if focused on engagement, empathy, transparency and collaboration (Țiclău et al. 2021). Also, some researchers build connections between mindful leadership and organizational resilience (Levey, 2019). Teo, Lee & Lim in their quantitative study proposed how leadership affects organizational level resilience using their Relational Activation of Resilience model. According to her, in the early stages of the crisis (liminality), the previous order of work was violated and the time has come for the psychological, emotional adaptation of employees and the adaptation of operational processes and, thus, new relational connections began to form. Leaders, participating in this process, contributed to the formation of trust, collective sensemaking, positive emotions. The authors suggested that through these actions, leaders form a resource base for organizational resilience (Teo, Lee, & Lim, 2017). In addition, it was found that transformational leadership style has a statistically significant impact on organizational resilience (Valero, Jung, & Andrew, 2015).

In most empirical studies, organizational resilience itself is explored as the outcome of the interaction and influence of various factors, however, the presence of organizational resilience can also lead to positive outcomes for the company, among them are: performance, efficiency, creativity and innovation. For example, there is empirical evidence that organizational resilience is positively associated with organizational effectiveness and serve as a mediator between technological capabilities and organizational effectiveness (Bustinza et al., 2019). Organizational resilience also has statistically significant positive effects on firm's performance via its connections to organizational learning (Rodriguez-Sanchez et al., 2019). Do et al., (2022) in their empirical research found that organizational resilience has a significant positive effect on innovation performance. And finally, some of the resilience components on the organizational level (emotional, cognitive and structural resources) have a direct positive relationship with creativity of the organization (Richtner & Löfsten, 2014).

1.2. Leadership for resilience

As we have noticed Luthans in his scientific works while attempting to make a cross-level analysis of resilience suggested that it is the resilience of the leader that affects the resilience of employees. Although he did not address specific leadership styles, his work initiated an investigation into how the figure of the leader and certain leadership styles affect levels of resilience (Luthans, 2005).

Having considered in detail the concepts of multilevel resilience, we can conclude that leadership acts as one of the environmental factors of influence at all three levels of resilience in organizations. We have placed all available work on how specific leadership styles affect resilience at each of the three levels of resilience in Table 1, and as we can see, research is limited, especially when it comes to team and organizational level of resilience (Table 1).

Level of Resilience	Leadership style
Employee-level	Humble leadership (Zhu et al., 2019) Supportive leadership (Cooke et al., 2019) Management-by-exception leadership (Harland et al., 2005., Sommer et al., 2016) Transformational leadership (Harland et al., 2005., Sommer et al., 2016) Laissez-faire leadership (Harland et al., 2016) Paradoxical leadership (Franken et al., 2020) Shared leadership (Salas-Vallina et al., 2021)
Team-level	Transformational leadership (Vera, Rodríguez-Sánchez, Salanova., 2017) Shared leadership (Salas-Vallina et al., 2021)
Organizational-level	Transformational leadership (Valero, Jung, & Andrew, 2015) Mindful leadership (Levey, 2019)

Table 1. Research on the influence of particular leadership styles on resilience at three levels.

However, it must be said that investigation of multilevel resilience in organization becoming more and more popular in management science. Such interest is explained by the change in the characteristics of the environment in which business operates nowadays. Such unexpected events as COVID-19 pandemic and various geopolitical issues made it clear that no business is immune from crises, and it is necessary to be prepared for crises even in the calmest times. In order to go through crises, resilience is necessary, that is, the ability to adapt to changes, since any crisis is an acute situation that, one might say, significantly changes the usual course of affairs.

In the context of the fact that during a crisis, employees, teams and organizations need to adapt to new circumstances (for example, acquiring new skills and knowledge, adapting business strategy, possibly changing organizational structure, curtailing unfinished projects, etc.) is especially relevant and, thus, what is clearly missing is an exploration of how adaptive leadership

affects resilience at all three levels of the organization. Adaptive leadership, according to the authors of the concept "is specifically about change that enables the capacity to thrive" (p. 14), and therefore this style can be most useful in times of uncertainty or crisis when changes are needed (Heifetz, Grashow & Linsky, 2009).

1.2.1. Adaptive Leadership framework.

The concept of adaptive leadership was introduced in 1994 by Heifetz in his book "Leadership Without easy answers". According to Heifetz, Grashow and Linsky (2009) "adaptive leadership is the practice of mobilizing people to tackle tough challenges and thrive". Core concepts of this theory are: technical problems and adaptive challenges. For solving technical problems (Type 1) leader can use existing solution and the process does not require additional learning. Adaptive challenges are divided into two kinds: combination of technical and adaptive challenge (Type 2) and adaptive challenge (Type 3). Type 3 challenge takes place when in particular situation leader and to a greater extent his followers have to engage in learning process since there is no solution for the problem in its entirety. In the case of Type 2, an aspect that can be solved technically is retained, and the leader's contribution is more pronounced. So, in order to overcome adaptive challenges successfully organizations' leaders need to demonstrate adaptive leadership behaviors, be engaged in adaptive learning and engage workers in this process, too (Heifetz et al., 2009).

Adaptive learning, which is needed during adaptation period, is not comprised only of certain skills people learn, but also of acquiring new mods of thinking, acting, evaluating, interacting with others etc. Sometimes it requires unlearning things (Heifetz & Laurie, 2003; Laurie, 2000). Along with the presence of adaptive challenge by itself, adaptive learning can be accompanied with various negative feelings and emotions: stress, distress, anxiety, sense of loss, incompetence, irrelevance, betrayal. Because of it groups or individuals show resistance to change and try to use a number of coping strategies to consciously or unconsciously help themselves in uncomfortable situation. For example, they tend to focus on technical problems rather than on adaptive challenges, blame the figure of authority/other group members or deny that problems even exist (Heifetz, 1994; Heifetz, 2009). Therefore, one of the key tasks for adaptive leader is to eradicate avoidance.

Also, since adaptive challenge and adaptive learning can create stress, leader should be able to regulate negative feelings within the group and keep distress in more or less balanced position. It's important to mention that maintaining tolerate level of stress doesn't necessarily mean only lowering it when the situation is too tense. Low level of stress, according to Heifetz, leads to a little progress in overcoming adaptive challenges (Heifetz, 1994).

To overcome stressful conditions people need a safe environment where they can discuss all the opinions, plans, ideas and values related to challenging task. The author of adaptive leadership concept defines it as “holding environment” (Heifetz et al., 2009). In other words, it is psychological environment in which adaptive work takes place. The core task for a leader in this context is to allow the disagreement within discussion of current issues and moderate conflicts so they not to become interpersonal. Heifetz and Linsky call this adaptive leadership function “orchestrating the conflict” and emphasize that it’s vitally important for the overall progress and particularly for the lessening tension of groups (Heifetz, Linsky, 2002).

When circumstances dictate adaptive challenge typical leaders often have intention to show initiatives and handle problems by themselves. They tend to give groups final solutions or proposals. However, according to Heifetz and his colleague Linsky, in presence of adaptive challenge when there is no clear and evident solution to most issues, this behavior is harmful for the progress. For a leader this adaptive pressure can be too high to take responsibility for resolution of situation that in fact needs mobilization group's capacities, skills and knowledge. More likely that adaptive challenge will be reconfigured into a technical problem, which will result only in a short-term relief. (Heifetz, Linsky, 2002). That's why it's important for adaptive leader to give the work to people at the level they can handle it. One more reason for doing it is the possible disequilibrium and disruption of dynamics in case of negative outcomes. When all of the group members engaged in adaptive work and do their job, they will less likely show resistance and strong negative attitude towards the leader when the solution didn't work.

Heifetz (1994) claimed that the strategy used to overcome adaptive issue that leader can employ depends on one important condition: weather the leader has the authority. In this context the author distinguished between adaptive leadership with authority and adaptive leadership without authority. Both conditions include their own advantages (Table 2).

Adaptive Leadership with authority	Adaptive Leadership without authority
<ul style="list-style-type: none"> • Control over the holding environment • Choice of decision-making process • Ability to structure the process • Access to information and authority to manage it • Ability to see a bigger picture • Resources to direct attention to the issues and regulate conflicting perspectives 	<ul style="list-style-type: none"> • Up-close view on issues, hence, ability to focus on one issue • More freedom to creative deviance • Access to information from the frontline.

Table 2. Advantages of Adaptive Leadership with and without authority.

The overall adaptive leadership in organization is comprised of both kinds of adaptive leadership. But important thing is that: these two kinds, according to Heifetz, interact with each other when authority figure protects voices of leaders without authority (Heifetz, 1994). In his subsequent work on adaptive leadership, Heifetz included the leaders' function of protecting not only the voices of leaders without authority but also the voices of dissent. An adaptive leader should listen to skeptics who express the opinion of a minority, who are constantly on the side of opponents of the generally accepted point of view, as they often ask really difficult questions that the majority unconsciously or consciously ignores. Moreover, by showing such behavior, the leader may have a chance to engage dissenters in better interaction with the rest of the group (Heifetz et al. 2009).

To successfully identify adaptive challenges and distinguish them from technical problems, to manage stress levels, to keep the group focused and prevent avoidance of difficult situations, to determine when work should be left to those who can do it better and, finally, in order to determine and to protect the opinions of others - all of these actions require perhaps the most obvious and important skill of an adaptive leader - to "get on the balcony". This metaphor was proposed by Heifetz and Linsky in 2002, and they compared the crisis situation with dance floor: while a person is on the dance floor dancing with a group of people, he/she is unable to assess the general situation, its details and the vector of movement, only when he/she gets on the balcony it becomes clear that the crowd shifts from side to side, it's possible to distinguish who is dancing and who is standing aside etc (Heifetz, Linsky, 2002). Thus, in fact, "get on the balcony" means the leader's ability to look at the situation from the outside. In a moment of crisis, the level of self-reflection of people decreases, people tend to take a common position, sometimes devalue someone's non-conformist ideas, do what seems obvious, and mistakenly take it for the best decision. The role of the adaptive leader is to abstract from the noise created by the situation, assess the situation and its dynamics in unbiased manner and bring all these nuances into the open. However, it is worth noting that "getting on the balcony" is the position of the observer, and according to Heifetz and Linsky, in order to influence what is happening, the leader must be able to return back to the "dance floor", that is, show his flexibility (Heifetz, Linsky, 2002).

To summarize, main functions and behaviors distinguishing adaptive leader with authority from other leaders, according to Heifetz, are:

1. Getting on the balcony;
2. Identifying the adaptive challenge;
3. Keeping the distress level within a bearable range;
4. Keeping attention on important issues and prevents to work avoidance;
5. Giving the work back to the employees at a level they can handle;

6. Protecting “voices of leadership without authority” providing cover to those who ask tough questions and create distress.

Later the concept of adaptive leadership, introduced by Heifetz, was expanded in various works of other scientists for example Laurie (2000) and Northouse (2012). They also provide lists of acts that adaptive leaders follow (Table 3).

Laurie (2000)	Northouse (2012)
<ol style="list-style-type: none"> 1. Going to the balcony to view reality; 2. Communicating the reality to all levels of the organization; 3. Clarifying competing values; 4. Advocating changing values; 5. Promoting discussion and dialogue; 6. Controlling the level of distress; 7. Moving responsibility for problem solving to the individuals who should solve these problems. 	<ol style="list-style-type: none"> 1. Get on the balcony; 2. Identify the Adaptive challenge; 3. Regulate the distress; 4. Maintain disciplines attention; 5. Give the work back; 6. Protect leadership voices from below.

Table 3. Laurie’s and Northouse’s models of adaptive leadership behaviors.

Comparing Laurie’s model of adaptive leadership behavior with Heifetz’s one we can see that Laurie made an emphasis on communication. This concentration on communicating can be justified by the following: Laurie (2000) suggested that adaptive work requires "a series of exchanges of disparate ideas, discourse that is intended to produce enlightenment but not necessarily agreement" (p. 123). Both Heifetz and Laurie claimed that in order to prevent avoidance a leader should demonstrate skills of transforming conflicts into fruitful discussion focused on important issues. Moreover, Laurie proposed that three adaptive values – trust, commitment and respect – should be included in corporate culture to raise the effectiveness of groups’ actions in challenging situation (Laurie, 2000).

According to Laurie, the ratio of adaptive and technical challenges depends on the level in the organization. The lower levels face mainly technical problems that are related to operational tasks. This means that moving up the hierarchy, the challenges become truly adaptive and include more strategic elements (Laurie, 2000).

Northouse’s concept is very close to the original concept proposed by Heifetz. The difference lies in the adaptive leader's last function, "protect leadership voices from below". Northouse used leader-member exchange theory (LMX) to describe the interaction of a leader with a group. Thus, out-group members were added to the "dissenters", whose relationships, according to the LMX, are based on the formal employment contract and generally characterized by low levels of engagement, trust and support (Graen & Cashman, 1975). Northouse describes out-group

members as individuals in a group who do not identify themselves as part of the larger group (Northouse, 2018).

In addition to six acts that adaptive leader performs, Northouse suggested that adaptive leadership is more follower-centric than leader-centric and is really different from other leadership styles since it's focused on mobilizing adaptive work rather than on leader's traits and skills in solving problems (Northouse, 2018). Northouse also developed a 30-item questionnaire to measure adaptive leadership. According to author, it was made mostly for the purpose of the personal assessment or the assessment within the organization. Despite the fact, that the instrument wasn't developed for research purposes, it is used in some studies after adaptation and validation. For example, this scale was used to measure the effects of adaptive leadership on organizational effectiveness at Public Higher Education (Nebiyu, Kassahun, 2021).

In 2005 Williams distinguished six common types of adaptive challenges: transition challenge, development challenge, maintenance challenge, creative challenge, activist challenge and crisis challenge (Williams, 2005). While these challenges are distinct concepts they can occur at once or in combination. For this study, the concept of "crisis challenge" is of greatest interest. Crisis challenge takes place when organization faces a potentially volatile situation that could endanger the life of the organization or some aspect of the prevalent order. Such situation fuels groups' fear and anxiety and creates an urgency to take some actions. People faced the crisis challenge are afraid of possible loss of their "values" (resources, culture, goods etc.), they worry of what will become with themselves, teams or a whole enterprise.

There are some barriers to the progress during the crisis challenge: the reasons underlying the crisis and emotional instability of people. The ability to think analytically is often greatly reduced. Therefore, it is important in such a situation to get out of the "fog" of the problem, evaluate it and start solving it, otherwise the likelihood of repeated crises is high. The role of leadership in such conditions is high. In fact, Williams sees it the same as his colleagues - Northouse and Heifetz: an adaptive leader needs to calmly enough assess the situation and identify an adaptive challenge, prevent group avoidance of the problem, regulate stress levels, give work back to employees in order to eliminate the possibility of substitution of concepts and a "quick victory" over a technical problem (Williams, 2005).

Faced with various types of crises, organizations find themselves in a situation of uncertainty and in most cases face the need for changes and adaptation to these changes. Crisis situations are characterized by rarity, urgency and significance, in such conditions the action plan often is not immediately clear and the right way to solve the problem is not obvious, so we assume that the probability of both technical problems and an adaptive challenge is extremely high. An

adaptive leadership style in this case can be one of the useful tools for managing the situation and those involved.

Interest in the topic of adaptive leadership has been significantly raised by the COVID-19 pandemic. However, most part of the research in adaptive leadership topic is focused on educational field - adaptive leadership contributed positively to higher education institutions' readiness for change (Murakam, A. T. et al., 2021) or medicine - adaptive leadership is used for investigation of difficulties inherent in affecting behavior change in patients undergoing treatment (Bailey et al., 2018). Research on the relationship between adaptive leadership and other constructs in business field is very modest, despite the fact that the landscape that organizations operate within becomes more brittle, anxious, nonlinear and incomprehensible. Many works on adaptive leadership in this context are so far only devoted to its theoretical analysis and consideration of the crisis (in particular COVID-19) through its lens (Cote, 2022).

Having previously analyzed the concepts of multilevel resilience in organizations, we assumed a theoretical relationship between the behavior of an adaptive leader and the mechanisms for influencing the resilience of employees, teams and organizations. In the next section, we will explore this relationship in more detail.

1.2.2. Adaptive Leadership and Multilevel Resilience: hypothesis development

As we have noted in previous chapters despite the relevance of investigation of the impact of adaptive leadership on multilevel resilience, we can't find any systematic and specific research on this topic in existing scientific literature. In the light of the events of the several last years, some researchers have so far only considered crisis situations using the theory of adaptive leadership: they try to identify the causes and form recommendations for managers, leaders and entire organizations based only on the theory (Cote, 2022). Firstly, the existing studies do not directly address the narrow, but rather relevant, specifics of increasing resilience. Secondly, any recommendations for the business sector that even partially relate to the characteristics of resilience during a crisis are not supported by empirical evidence.

In the current characteristics of the business environment, in which trends of non-linearity and unpredictability are growing, organizations have already managed to face the consequences of completely unexpected crises and there is an increasing need to prepare for this kind of adversity. As we found out, many factors can decrease and increase such a flexible ability as resilience. But the main question for management now is how the organization within their own boundaries can build and develop its readiness for positive adaptation to crises.

Adaptive leadership in this case is one of the most important tools, because in any crisis there is a need to solve an adaptive challenge. A crisis is characterized by rarity, strength,

significance and high risk, so it is clearly that crisis is an adaptive challenge for organizations, and probably the most severe. Using the pandemic as an example, we can trace this relationship: according to World Bank's statistics, COVID-19 pandemic became the deepest economic recession since World War II, before 2020 businesses did not experience a complete lockdown for the entire population with almost no exceptions, suspension of production, the strict need for remote work, the accompanying sharp financial losses of the magnitude of such a force, and moreover, the unknown when this will all be over and the organization will be able to return to normal business processes (World Bank's Group, 2020). Management had to make decisions immediately on the basis of lack of information and without experience, to think about how to keep the staff, how to teach employees new skills to work in new conditions. All of this as we can see, included the need for incorporation of adaptive learning process. Thus, it turns out that the pandemic has become one of the most striking examples of adaptive challenge in the business environment.

After analyzing the existing research on the resilience of employees, teams and organizations on the one hand and the concept of adaptive leadership on the other hand, it is not difficult to find theoretical connections between these concepts. Resilience involves positive adaptation to change and new processes, and adaptive leadership contribute to creation of such an environment that enables demonstration of resilience among employees, teams and organization as a whole, thus we suggest that leaders who are guided by the principles of adaptive leadership can positively influence the demonstration of resilience at all three levels.

Like resilience, leadership can also be analyzed at different levels. Jacobs and McGee (2001) differentiated three main levels of leadership: the bottom-level leadership involves supervision (allocation of tasks), the middle-level leadership involves formulation of operational goals and coordination of collective efforts to meet formulated objectives, the top-level leadership refers to establishing of the vision and strategic goals of the whole organization. In this study, we will focus on how the presence of an adaptive leadership style in the practices of leaders in general affects employee resilience, team resilience and organizational resilience.

Adaptive Leadership and Employee Resilience.

According to research, leaders have a significant impact on the resilience of employees at work, providing assistance and support in solving problems, creating a positive work climate (Raetze et al., 2021). Speaking about the influence of leadership and, in particular, adaptive leadership on individual stability, it is necessary to note the importance of the individual characteristics of the worker and leader, and their personalities. Firstly, the influence of an adaptive leader and its result will undoubtedly depend not only on the correct setting of tasks, but in many respects, it will also depend on interpersonal communication and personality traits of the

participants in communication (leader and employee). Secondly, another important characteristic of the interaction of adaptive leadership and employee-level resilience may be that the resilience of employees in the workplace, since it is individual (as opposed to the resilience of teams and organizations) is strongly influenced by their personal psychological resilience and many other factors not related to the work. place: relationships with relatives and friends, life experiences, recent events in personal life, general level of mental flexibility due to genetic predisposition, etc.

In general, adaptive leadership as one of the many factors influencing employee resilience can contribute to the individual coping and positive adaptation to change, which is a characteristic of resilient behavior. One of the functions of adaptive leaders is regulation of stress during overcoming and adaptive challenge/crisis. While creating supportive atmosphere and leader-employee relations and through regulation of stress leadership can create an environment where demonstration and development of individual skills and traits associated with resilience (self-efficacy, mindfulness, coping, flexibility, individual stress management, emotional intelligence) become possible. It is not uncommon for people under the influence of stress to lose the ability to critically evaluate and control their emotions, leaders help not only regulate stress by influencing from the outside, but also create a stable environment in which an employee can regulate his emotional state, thereby enhancing his resilience. Individual-level resilience positively associated with problem-focused actions during uncertainty and crises, thus adaptive leaders through their function of maintenance of disciplined attention can contribute to this resilient behavior of employees (Parker, Jimmieson, Walsh, & Loakes, 2015; Shin, Taylor, & Seo, 2012). Adaptive leaders give the work back to employees, which allows them to take responsibility and for actions helping to resolve problems caused by crisis situation, they protect voices of all group members and appreciate opinions that differ from the majority. Such leader behavior can help demonstrate, evoke and reinforce proactive employee behavior, which can have a positive impact on increasing resilience, because proactive behavior in the workplace and resilience have been scientifically proven to be related (Zhu & Li, 2021). Employee resilience is strongly associated with learning culture in organization, so there must also be a link with adaptive leadership in this case since adaptive leaders create and facilitate the learning environment which is necessary during adaptation period in overcoming crises (Tonkin, Malinen, Näswall, & Kuntz, 2018).

Based on the facts mentioned above, we can hypothesize that adaptive leadership can positively influence resilience at employee level.

H1: Adaptive leadership positively relates to employee resilience.

Adaptive Leadership and Team Resilience.

An important factor in team's resilience and its improvement is the interaction among team members and between them and the person who manages this team, that is, the leader. Some

scholars suggest that overall team resilience is a product of this interaction (Hartwig et al., 2020). Team processes, as mentioned earlier, include a lot of things adaptation, stress management, emotional support, situation management, and at all these stages, an adaptive leader can directly influence and increase resilience with the help of his functions.

Clearly, managing stress and engaging the team in adaptive learning, as well as at the individual level, is likely to promote resilience, as resilient teams are characterized by positive adaptation and the ability to evolve in times of adversity (Alliger et al., 2015). Stress management and especially interaction facilitation, the leader's ability to calm down and especially the ability to "step out" of the dispute, assess the position of all parties involved and build communication in an unbiased way can have a positive impact on building a trusting atmosphere in the team, which will strengthen team resilience (Morgan et al., 2015; Meneghel, Martinez et al., 2016; Vera, Rodriguez- Sanchez & Salanova, 2017). The ability to look at the situation from the outside is also especially useful during the identification of an adaptive call, which at the same time is handled by resilient teams. Specifically resilient teams, according to research by McCarthy (2017), have a commitment to change and the ability to identify the need for change, while adaptive leadership is connected with these processes since adaptive leader is also involved in identifying the need for change and the type of challenge which organization faced (adaptive challenge and/or technical problem). Also, an adaptive leader by focusing the attention of team members on solving problems and keeping their attention disciplined significantly contributes to resilient behavior, since resilient teams have a protective capacity against disruptions of team performance (Alliger et al. 2015, Hartwig et al., 2020). Adaptive leaders protect voices of all workers, informal leaders, out-group members, and they are open to any ideas even to those that seem quite radical and voice climate within the team in general is positively associated with resilience, so we can assume that the function of protecting voices from below of the adaptive leader, among other things, can affect the collective resilience (Brykman & King, 2021).

Thus, in our investigation we assume that adaptive leadership positively influences resilience of teams towards crisis situations.

H2: Adaptive leadership positively relates to team resilience.

Adaptive Leadership and Organizational Resilience.

Despite the fact that organizational resilience is a complex blend of behaviors, prospects, and interactions, the concept itself differs from the concepts of individual and team resilience in its systemic nature. Speaking about resilience at the organizational level, one must also take into account the fact that it is influenced by many factors that are not related to subjective or "human-related" constructs and characteristics. For example, financial resources, organizational structure, ways and speed of information transfer, bureaucracy and general flexibility of operational

processes can be said to be objective facts and are most likely to be affected by adaptive leadership to a relatively small extent. However, behavioral aspects are also present in the components of organizational resilience in the form of goals, predispositions, relationships between employees of different levels, etc.

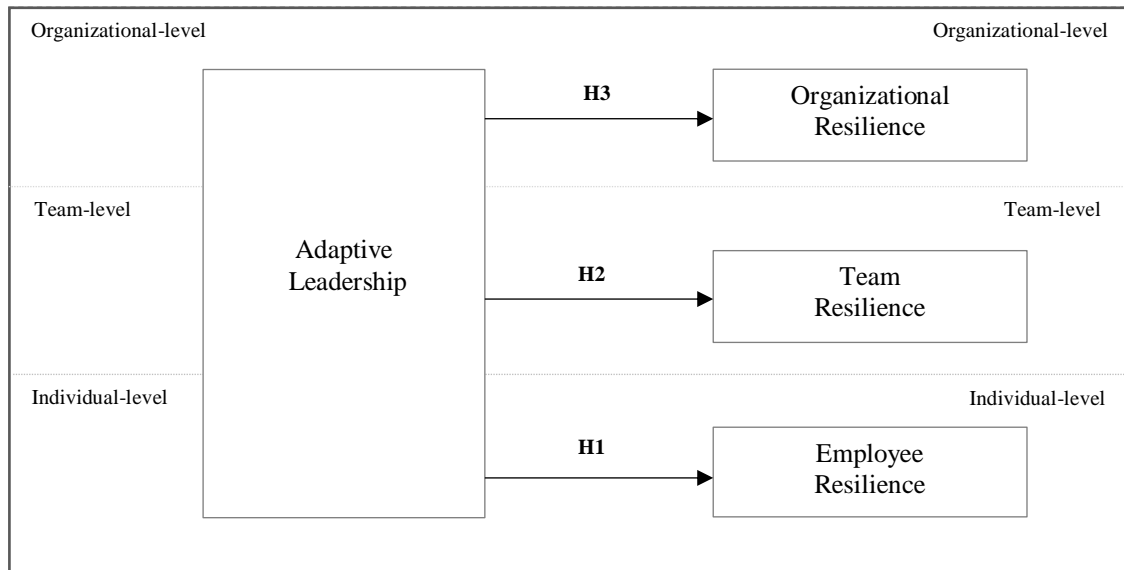
As with previous levels of resilience, adaptive leaders can increase and strengthen resilience by helping with coping and facilitating the learning environment. Resilient organizations use effective coping mechanisms to successfully adapt, constantly develop and build skills that meet the needs of the situation (Mallak, 1998; Ray et al. 2011, McCarthy et al. 2017; Reinmoeller & van Baardwijk, 2005). On the other hand, adaptive leaders have a direct impact on these processes, and, moreover, they often supervise them. Sustainable organizations are characterized by the fact that their constant learning occurs after a careful assessment of the situation, a deep analysis of trends, internal and external environment, they are able to identify in time what needs to be changed, thus, they reduce the likelihood of collapse during a crisis and increase resilience (Vogus & Sutcliffe 2007). An adaptive leaders can help them to determine which challenges they may face, since they demonstrate all these functions in their activities: an unbiased rational assessment of the situation, identifying the need for any changes/challenges and determining their nature. In addition, adaptive leaders contribute significantly to the development of voice organizations, and we know that, according to research, voice organizations are statistically significantly associated with resilience (Brueller & Carmeli, 2019). Finally, resilient organizations are capable of accepting the crisis situation, to make sense of it and to avoidance of problems (Salanova et al. 2012, Coutu, 2002; Hamel & Välikangas, 2003). We suggest that adaptive leaders can strengthen the resilience of organizations by influencing these functions, as they also direct their leadership skills towards the maintenance of disciplined attention.

Overall, having analyzed the concepts of adaptive leadership and organizational resilience, we hypothesize that adaptive leadership can positively influence resilience at organizational level.

H3: Adaptive leadership positively relates to organizational resilience.

1.2.3. Empirical model

Based on theory presented above the research framework has been developed (Picture 1).



Picture 1. Empirical model

CHAPTER 2. RESEARCH DESIGN

2.1. Methodology

2.1.1. Sample and data collection

The proposed model was tested on the sample of employees of companies in Russia. The data was gathered via an online survey. We used several sampling techniques to collect the data:

1. Convenience sampling technique: a link to the online survey was sent directly to the respondent by the researcher
2. Voluntary response sampling: the link was distributed in social networks and groups and through the service for collecting votes from the existing pool of respondents.

As a result, 162 responses were received.

The significant part of respondents are women (Table 4). This can be explained by the fact that women have more willingness to participate in online-surveys, this has been empirically proven in some studies (Smith, 2008).

Gender	# of answers	% of total
Female	97	59,9%
Male	65	40,1%

Table 4. Gender distribution of respondents.

All age groups were interviewed in order to ensure a more even representation in the study. However, according to the statistics of the collected responses (Table 5), the group of respondents whose age is in the range of 24-39 years has significant advantage.

Age	# of answers	% of total
23 or younger	25	15,4%
24 – 39	94	58,1%
40 – 55	37	22,8%
56 or older	6	3,7%

Table 5. Age distribution of respondents.

We did not establish a minimum work experience in the current position, since all employees answering questions about the behavior of the leader and the three levels of resilience are guided by their subjective view. Thus, we believe that the responses of employees who have held positions for less than one year are relevant for the study. According to statistics, specialists with more than 7 years of experience are the most represented, but this group does not significantly exceed the group of respondents with 1 to 3 years of experience (Table 6).

Experience on current position	# of answers	% of total
Less than a year	34	21,0%
1 – 3 years	49	30,2%
4 – 6 years	28	17,3%

More than 7 years	51	31,5%
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Table 6. Experience on current position distribution of respondents.

In order to measure the relationship between adaptive leadership and multilevel resilience, we focused the research on three categories of employees defined by their positions: specialists, entry-level managers, middle-level managers (Table 7). The level of top-management is less relevant in the context of our investigation, since the representatives of top-management (board of directors, president, vice-president, CEO, etc.) usually are not guided by leaders within the organization, instead, they act as leaders themselves. Thus, the upper limit of the sample is middle-level managers.

Positions	# of answers	% of total
Specialists	81	50,0%
Entry-level managers	25	15,4%
Middle-level managers	56	34,6%

Table 7. Position distribution of respondents.

In terms of the distribution of respondents by department, the most represented were specialists working in sales and in other departments not listed in the main list (Table 8).

Department	# of answers	% of total
Sales	30	18,5%
Finance	26	16,0%
Production	22	13,6%
R&D	17	10,5%
HR	15	9,3%
Marketing	13	8,0%
IT	9	5,6%
Others	30	18,5%

Table 8. Departments distribution of respondents.

During the collection of votes, we attempted to reach respondents from different industries to assess the influence of adaptive leadership regardless of the companies' area of operation (see Table 9).

Industry	# of answers	% of total
IT	25	15,4%
Construction and real estate	25	15,4%
Finance	18	11,1%
Medicine and pharmaceuticals	12	7,4%
Retail	12	7,4%
FMCG	9	5,6%
Mining, oil & gas	9	5,6%
Consulting & Audit	9	5,6%

Forest industry, woodworking	2	1,2%
Energetics	2	1,2%
Others	39	24,1%

Table 9. Industry distribution of respondents.

2.1.2. Measures

The survey that respondents received consisted of four parts, each containing items that measured the variables under study: adaptive leadership, employee resilience, team resilience, and organizational resilience. All the measures were taken from the existing literature to ensure reliability and validity of measurement. The language adjustments of the survey items were made under supervision of language experts and four professionals. After that pilot test on 10 potential respondents was run in order to ensure comprehensibility.

Adaptive leadership. The 30-item questionnaire developed by Northouse (2016) was used to measure adaptive leadership. According to the author it was created for practical applications and not for the research purposes. However, it was used in some researches with preliminary validation (Nebiyu & Kassahun, 2021).

The construct includes 6 dimensions of adaptive leadership: Get on the Balcony (e.g.: When difficulties emerge in our organization, this leader is good at stepping back and assessing the dynamics of the people involved); identify the Adaptive Challenge (e.g.: This leader encourages people to discuss the issues no one wants to address which are pivotal in making change); Regulate the Distress (e.g.: This leader has the emotional capacity to comfort others as they work through intense issues); Maintain Disciplined Attention (e.g.: In complex situations, this leader gets people to focus on the issues they are trying to avoid); Give the Work Back (e.g.: This leader encourages his/her employees to take initiative in defining and solving problems); Protect Leadership Voices from Below (e.g.: Listening to group members with radical ideas is valuable to this leader). Each of these dimensions consists of 5 items, and out of 30 items, 10 are reverse coded (e.g.: In difficult situations, this leader sometimes loses sight of the “big picture.”).

The term "leader", which is used in every item that measures adaptive leadership, was not well understood in a pilot study with 10 potential respondents. 7 out of 10 respondents had difficulty in identifying the person they should evaluate when answering the questions. Moreover, this was predicted by the experts involved in the adaptation of the questionnaire. Due to language and cultural differences, Russian-speaking workers rarely use the term "leader" that is common in the English-speaking business environment. Therefore, in all formulations of items the term “leader” has been replaced by a term that is equivalent to the term "immediate supervisor". This conversion was supported by all of three experts. Thus, each respondent had to answer questions

about their immediate supervisor after reading the exact definition of this term, which was provided along with the questions.

As it was said previously, according to the survey design, we received responses from employees, which represent three positions: specialists, entry-level managers and middle-level managers. Since they all actually assessed their supervisors for compliance with the behavior of an adaptive leader, we will get a picture of adaptive leadership in Russian companies at all levels of management and will be able to investigate how the presence of adaptive leadership in general influence multilevel resilience.

Employee resilience. Employee resilience was measured by unidimensional 9-item scale developed by Naswall & Kuntz (2015) (e.g.: I effectively collaborate with others to handle unexpected challenges at work). For items assessment 5-Likert scale was used.

Team resilience. Team resilience was measured by unidimensional 7-item scale developed by Salanova et al. (2012) on the basis of Mallak's (1998) principles for implementing resilience in organizations (e.g.: In difficult situations, my team adapts to changes in a positive way, and become stronger when overcome them). The scale was developed specifically referring to teams in an organizational context and use 7-point Likert scale.

Organizational resilience. Organizational resilience was measured by 9-item scale developed by Kantur & Say (2015). It covers 3 dimensions of organizational resilience: robustness (measured by 4 items; e.g.: My organization stands straight and preserves its position), agility (measured by 3 items; e.g.: My organization develops alternatives in order to benefit from negative circumstances) and integrity (measured 2 items; e.g.: My organization is successful in acting as a whole with all of its employees). For items assessment 5-Likert scale was used.

Thus, no major language adjustments were made within three Resilience scales except the thorough translation. Overall, the survey consisted of 61 questions, with 6 items referring to information about the respondent (gender, age, experience on current position, position, department, company's industry). The list of all items can be found in Appendix 1.

2.1.3. Methods for testing hypotheses.

To study the relationships between adaptive leadership and resilience across three levels (employee level, team level and organizational level) we run correlation and bivariate linear regression analysis using the IBM SPSS.

2.2.2. Validity and reliability

To determine validity and reliability of the research instrument in the context of Russia we performed content validity check, Cronbach's alpha test and Common method bias test.

The survey was subjected to expert judgment validation by four professionals representing both the academic side and the management side. Experts examined the content of the survey to make sure that the survey items are measuring constructs which they claim to measure and that they are in general in line with the study's objectives. After each consultation with the experts the recommended adjustments were introduced. Before that all items were translated into Russian with usage of back-translation technique under the supervision of a language expert. As previously was stated, we made several language corrections and phrasing adjustments in order to achieve the comprehensibility of the items among Russian-speaking respondents.

The formulated items were then tested in a pilot study with 10 potential respondents in order to achieve a correct understanding of the translated and adapted survey. These respondents were not included in the sample, their feedback on the comprehensibility of a items was used to make final edits.

To check the reliability of the constructs we used SPSS (Table 12). Prior to analysis we reversed the score of 10 reverse items of the scale and create new items. When analyzing each subscale separately using these 10 new variables, we found that in some subscales of adaptive leadership construct (Identify adaptive challenge; Maintain disciplined attention; Give the work back to people) Cronbach's alpha was negative or extremely low, indicating inverse relationships between at least two variables included in analysis. Within each subscale, almost all initially reversed items (with the exception of AL_balcony_q7_R, AL_balcony_q13_R) were negatively correlated with the rest of the items within the subscales, significantly reducing reliability. Thus, at the first stage, initially reversed items were removed from the Identify adaptive challenge, Maintain disciplined attention and Give the work back to people subscales in order to check the Cronbach's alpha (AL_identify_q2_R, AL_identify_q8_R, AL_identify_q14_R, AL_attention_q22_R, AL_attention_q28_R, AL_workback_q5_R, AL_workback_q23_R). In Table 11 Cronbach's alpha for these subscales is presented after deleting the above-mentioned items.

At the second stage additional 2 items were removed due to lowering subscales' Cronbach's alpha: AL_balcony_q19, AL_protectvoices_q30_R. After the removal all subscales fitted the threshold rule for construct Cronbach's alfa: should be larger than 0,6 (Pallant, 2001).

Construct	Cronbach's alfa if item Deleted	Cronbach's alfa	
Adaptive leadership scale			
Get on the balcony		0,606	
AL_balcony_q1	0,504	-	
AL_balcony_q7_R	0,538	-	
AL_balcony_q13_R	0,567	-	
AL_balcony_q19	0,637	-	<i>removed at the 2nd stage</i>
AL_balcony_q25	0,501	-	
Identify adaptive challenge		0,653	
AL_identify_q2_R	-	-	<i>removed at 1st stage</i>
AL_identify_q8_R	-	-	<i>removed at 1st stage</i>
AL_identify_q14_R	-	-	<i>removed at 1st stage</i>
AL_identify_q20	-	-	
AL_identify_q26	-	-	
Regulate distress		0,841	
AL_distress_q3	0,804	-	
AL_distress_q9	0,836	-	
AL_distress_q15	0,789	-	
AL_distress_q21	0,799	-	
AL_distress_q27	0,812	-	
Maintain disciplined attention		0,610	
AL_attention_q4	0,505	-	
AL_attention_q10	0,431	-	
AL_attention_q16	0,584	-	
AL_attention_q22_R	-	-	<i>removed at the 1st stage</i>
AL_attention_q28_R	-	-	<i>removed at the 1st stage</i>
Give the Work Back to the People		0,613	
AL_workback_q5_R	-	-	<i>removed at the 1st stage</i>
AL_workback_q11	0,525	-	
AL_workback_q17	0,449	-	
AL_workback_q23_R	0,567	-	<i>removed at the 1st stage</i>
AL_workback_q29	-	-	
Protect Leadership Voices From Below		0,642	
AL_protectvoices_q6	0,561	-	
AL_protectvoices_q12	0,506	-	
AL_protectvoices_q18	0,482	-	
AL_protectvoices_q24	0,555	-	
AL_protectvoices_q30_R	0,761	-	<i>removed at the 2nd stage</i>
Employee resilience scale			
Employee resilience		0,829	
ER_q1	0,802	-	
ER_q2	0,826	-	
ER_q3	0,811	-	
ER_q4	0,805	-	
ER_q5	0,804	-	
ER_q6	0,809	-	
ER_q7	0,812	-	
ER_q8	0,827	-	
ER_q9	0,807	-	
Team resilience scale			
Team resilience		0,867	
TR_q1	0,853	-	
TR_q1	0,833	-	
TR_q1	0,840	-	
TR_q1	0,853	-	
TR_q1	0,856	-	
TR_q1	0,832	-	
TR_q1	0,860	-	
Organizational resilience scale			
Robustness		0,829	
OR_robustness_q1	0,827	-	
OR_robustness_q5	0,790	-	
OR_robustness_q4	0,730	-	
OR_robustness_q8	0,776	-	
Agility		0,769	
OR_agility_q2	0,685	-	
OR_agility_q6	0,759	-	
OR_agility_q9	0,610	-	
Integrity		0,740	
OR_integrity_q3	-	-	
OR_integrity_q7	-	-	

Table 12. Reliability analysis.

Then, we ran the Harman's single factor test in order to check if the majority of the variance can be explained by a single factor. Principle component analysis with 1 factor extracted showed that 32, 835% can be explained by a single factor (Table 13). It is far less than the threshold of 50% (Podsakoff, 2003). So, we conclude that there is no threat of common method bias.

Component	Initial Eigenvalues			Extraction Sum of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	14,643	31,832	31,832	14,643	31,832	31,832
2	3,226	7,014	38,846			
3	2,673	5,810	44,656			
4	2,078	4,517	49,173			
5	1,723	3,746	52,919			
6	1,552	3,373	56,292			
7	1,424	3,096	59,388			
8	1,266	2,752	62,140			
9	1,147	2,493	64,633			
10	1,035	2,250	66,882			
11	1,003	2,181	69,063			
12	,947	2,059	71,122			
13	,853	1,855	72,977			
14	,824	1,791	74,768			
15	,753	1,636	76,403			
16	,733	1,592	77,996			
17	,682	1,482	79,478			
18	,634	1,378	80,856			
19	,610	1,325	82,181			
20	,590	1,283	83,464			
21	,561	1,219	84,682			
22	,534	1,161	85,843			
23	,497	1,081	86,924			
24	,482	1,048	87,973			
25	,451	,979	88,952			
26	,437	,950	89,902			
27	,406	,882	90,784			
28	,388	,843	91,627			
29	,361	,785	92,411			
30	,331	,719	93,130			
31	,318	,691	93,821			
32	,286	,621	94,442			
33	,264	,575	95,017			
34	,262	,571	95,588			
35	,251	,546	96,134			
36	,233	,507	96,641			
37	,203	,442	97,083			
38	,202	,440	97,523			
39	,190	,413	97,936			
40	,177	,385	98,321			
41	,162	,353	98,674			
42	,144	,313	98,986			
43	,134	,292	99,248			
44	,120	,261	99,539			
45	,113	,245	99,784			
46	,099	,216	100,000			

Extraction Method: Principal Component Analysis.

Table 13. PCA (total variance explained)

CHAPTER 3. RESULTS AND DISCUSSIONS

3.1. Results of hypothesis testing

Likert scale is based on the idea that a construct/phenomenon can be measured by individual's score of his/her perceptions related to a number of statements. Likert proposed that it's possible to determine the score for each individual by summarizing the scores of the all items or by calculating their mean (Likert, 1932). Kong et al. (2012) argues that these aggregated scores can be used as indicators of the component. Thus, to assess the general relationship between adaptive leadership and multilevel resilience we can find the mean value of answers of each respondent to each one of four constructs under study and then use them in correlation and regression analyses.

Before proceeding to the analysis, we checked the normality of distribution with a Kolmogorov-Smirnov (sample size > 100) test was used (Table 14). It showed that for any fixed value of adaptive leadership, employee resilience, team resilience and organizational resilience are not normally distributed. However, since our sample size is significantly bigger than 30, we can rely on Central Limit Theorem and assume that our data distributed normally.

	Kolmogorov-Smirnov ^a		
AL	.108	148	.000
ER	.105	148	.000
TR	.089	148	.006
OR	.125	148	.000
a. Lilliefors Significance correction			

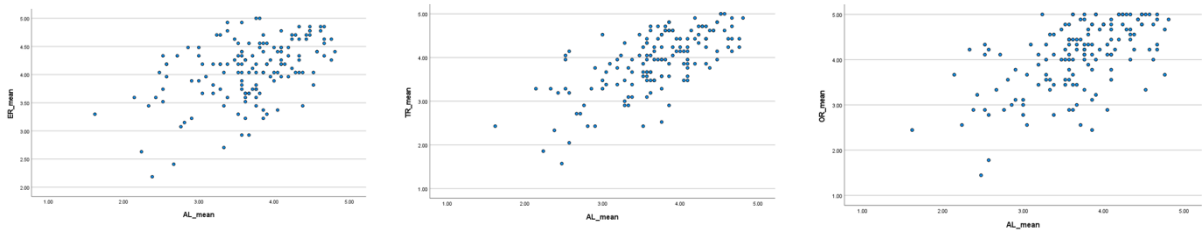
Table 14. Test of normality

From the Table 15. which represents the distribution of our data we can see that all of our variables are slightly negatively skewed. That means that a big part of our respondents gave high scores to their leaders and assess the resilience at all three levels high. No drastic kurtosis issues were observed.

	AL	ER	TR	OR
Mean	3.6853	4.0791	3.9144	4.0698
Median	3.7619	4.1850	3.9524	4.2222
Std. deviation	0.62808	.53917	.69786	.75418
Skewness	-.596	-.802	-.826	-.845
Kurtosis	.199	.796	.523	.337

Table 15. Distribution

To check assumptions of linearity and homoscedastisity we built scatterplots (Picture 3). On these scatterplots we clearly can see that there are some linear relationships between independent variable (AL) and dependent variables (ER, TR, OR), hence the assumption of linearity is not violated. Moreover, the relationship between the variables is homoscedastic.



Picture 2. Scatterplots

After that we are ready to proceed with analysis (Table 16). The result of the correlation study indicates that adaptive leadership has a strong positive correlation with team resilience ($r = .684$; $p < .05$). The relationship between adaptive leadership and employee resilience is also positive, but moderate ($r = .475$; $p < 0.05$), along with organizational resilience ($r = .585$; $p < .05$).

		AL	ER	TR	OR
AL	Pearson Correlation	1	.475	.684	.585
	Sig. (2-tailed)		0.000	.000	.000
	N	148	148	148	148

Table 16. Correlations (Adaptive Leadership & Employee Resilience, Team Resilience, Organizational Resilience)

Correlation describes just the strength of association between variables under study, but it doesn't imply causation. Therefore, if we want to assess the effect that adaptive leadership has on resilience and what changes it causes it's necessary to run the regression analysis as well. We ran 3 bivariate simple linear regressions (Table 17-25).

Employee resilience. Table 17. Model summary reveals that R^2 (or the coefficient of determination) = .226, which means that 22,6% of variance in level of employee resilience can be explained by the presence of adaptive leadership style at the employee's workplace. The model is statistically significant with $F(1, 146) = 42.612$, $p < .05$ (Table 18). In addition, β (Beta coefficient) = .475, $p < .05$ indicated this positive effect (Table 19). In general, our research is conducted in the field of social science and the main objective is testing of theory rather than actual prediction of the possible outcome, therefore, we can conclude that adaptive leadership has statistically significant positive affect on employee resilience, and the moderate value of R^2 indicated just that employee resilience is affected by various other factors apart from the one considered in our analysis (Moksony, 1999). Hence, H1 is confirmed.

Model	R	R ²	adj. R ²	St. error of the estimate	Durbin-Watson
1	.475 ^a	.226	.221	0.47597	1.649
a.Predictors: (Constant), AL					
b.Dependent variable: ER					

Table 17. Model summary^b (Adaptive Leadership & Employee Resilience)

Model		SS	df	MS	F	p
1	Regression	9.653	1	9.653	42.612	.000 ^b
	Residual	33.076	146	.227		
	Total	42.729	147			
a. Dependent variable: ER						
b. Predictors: (Constant), AL						

Table 18. ANOVA^a (Adaptive Leadership & Employee Resilience)

		Unstandardized coefficients		Standardized coefficients	t	p
Model		B	SE	β		
1	(Constant)	2.575	.234		11.023	.000
	AL	.408	.063	.475	6.528	.000
a. Dependent variable: ER						

Table 19. Coefficients^a (Adaptive Leadership & Employee Resilience)

Team resilience. Table 20. Model summary reveals that R^2 (or the coefficient of determination) = .468, which means that 46,8% of variance in level of team resilience can be explained by adaptive leadership style. The model is statistically significant with $F(1, 146) = 128.520$, $p < .05$ (Table 21). In addition, β (Beta coefficient) = .684, $p < .05$ indicated the strong positive effect (Table 22). Overall, we can conclude that adaptive leadership has a strong positive impact on team resilience. H2 is considered to be confirmed.

Model	R	R^2	adj. R^2	St. error of the estimate	Durbin-Watson
1	.684 ^a	.468	.465	0.51067	2.068
a. Predictors: (Constant), AL					
b. Dependent variable: TR					

Table 20. Model summary^b (Adaptive Leadership & Team Resilience)

Model		SS	df	MS	F	p
1	Regression	33.516	1	33.516	128.520	.000 ^b
	Residual	38.075	146	.261		
	Total	71.591	147			
a. Dependent variable: TR						
b. Predictors: (Constant), AL						

Table 21. ANOVA^a (Adaptive Leadership & Team Resilience)

		Unstandardized coefficients		Standardized coefficients	t	p
Model		B	SE	β		
1	(Constant)	1.113	.251		4.438	.000
	AL	.760	.067	.684	11.337	.000
a. Dependent variable: TR						

Table 22. Coefficients^a (Adaptive Leadership & Team Resilience)

Organizational resilience. Table 23. Model summary reveals that R^2 (or the coefficient of determination) = .342, which means that 34,2% of variance in organization's resilience can be explained by adaptive leadership style. The model is statistically significant with $F(1, 146) = 76.042$, $p < .05$ (Table 24). β (Beta coefficient) = .585, $p < .05$ indicated the strong positive effect (Table 25). Here we also can see that the effect of adaptive leadership on resilience at organizational level is considerable and positive, thus, H3 is approved.

Model	R	R^2	adj. R^2	St. error of the estimate	Durbin-Watson
1	.585 ^a	.342	.338	0.61364	1.989
a.Predictors: (Constant), AL					
b.Dependent variable: OR					

Table 23. Model summary^b (Adaptive Leadership & Organizational Resilience)

Model		SS	df	MS	F	p
1	Regression	28.634	1	28.634	76.042	.000 ^b
	Residual	54.978	146	.377		
	Total	83.612	147			
a.Dependent variable: OR						
b.Predictors: (Constant), AL						

Table 24. ANOVA^a (Adaptive Leadership & Organizational Resilience)

Model		Unstandardized coefficients		Standardized coefficients	t	p
		B	SE	β		
1	(Constant)	1.480	.301		4.914	.000
	AL	.703	.081	.585	8.720	.000
a.Dependent variable: ER						

Table 25. Coefficients^a (Adaptive Leadership & Organizational Resilience)

3.2. Main findings

This study was undertaken in order to fill in the gaps that currently exist in the research of multilevel organizational resilience and adaptive leadership. In the scientific literature, despite the relevance of the issue of how to increase the resilience of an organization in crisis situations, no attention has been paid to the research of an adaptive leadership style as one of the tools for this increase. Our study draws attention to adaptive leadership as one of the effective organizational practices for building/increasing/development of resilience at three levels: employees, teams and organizations as a whole.

Based on a review of the literature, we hypothesized that an adaptive leadership style is positively related to the resilience of employees, teams, and organizations, so we developed three hypotheses. To test the hypotheses, we used regression analysis, and its results confirmed the direct

impact of adaptive leadership on resilience at all three levels, thus, we confirmed all the hypotheses posed in the study (Table 26.)

Hypothesis	R ²	Model significance	Conclusion
H1. Adaptive leadership positively relates to employee resilience	.226	p = .000	Supported
H2. Adaptive leadership positively relates to team resilience	.468	p = .000	Supported
H3. Adaptive leadership positively relates to organizational resilience	.342	p = .000	Supported

Table 26. Final results

It is worth paying attention to the fact that adaptive leadership has the greatest influence on team resilience ($R^2 = .468$), followed by organizational resilience ($R^2 = .342$), and in the last place in terms of strength of dependence is individual resilience ($R^2 = .226$). This ordering of strength of influence is a rather interesting finding. The relatively low R^2 in the model of the influence of adaptive leadership on employee resilience suggests that there are many other factors that contribute to this characteristic of resilience in addition to the variable under study (Moksony, 1999). Indeed, the resilience of employees is quite closely related to personal psychological resilience, and other individual characteristics of a person. For example, personality traits, physiological predisposition to mental problems, heredity, mental flexibility, private relationships (with friends/family/partner), previous experience, recent events in personal life, and many other attitudes (Athota, Budhwar, & Malik, 2020; Zhu & Li, 2021; Cooper, Flint-Taylor, & Pearn, 2013; Fisk & Dionisi, 2010).

The impact of adaptive leadership on team resilience appeared to be the strongest. We assume this is due to the fact that team processes and interaction with a leader are very important in team resilience. The leader is directly involved in facilitating the work of the team, this is basically the sense of a leadership – influencing groups. All of the adaptive leaders' functions are dedicated to facilitation of team's processes. Thus, we suggest that at the level of teams' resilience adaptive leader's abilities and functions are most fully revealed. Moreover, the crucial role of leadership in developing teams' resilience also has been claimed by many other authors. For example, Hatwig et. al. (2020) used the theory of social identity to emphasize the role of leadership during changes. When people see themselves as members of group they develop group-based sense of self which enhances individuals' motivation to contribute to teams' positive processes: support, effective communication, adaptive behavior, following team's interests etc. These processes in their term strongly associate with resilience and the leader acts as a catalyst and facilitator in this case, which once again emphasizes the strong influence of the leader on the resilience at team level (Hatwig et. al., 2020).

In our hierarchy of the power of influence of adaptive leadership on the concept of resilience, resilience at the organizational level occupied an intermediate position. We can suggest

that this is because organizational resilience also consists of processes of interaction between people led by a leader, in a manner similar to that of teams that have the highest influence. But at the same time, organizational resilience, in addition to the human factor, consists of many other characteristics that are not human-oriented, but serve as other influencing factors: financial reserves, operating models, organizational structure, workflow, and so on (Gittell et al., 2006, van der Vegt, Essens, Wahlstrom, & George, 2015, Kantur & Iseri-Say, 2012; Lampel et al., 2014). Keeping these two facts in mind, we can assume why adaptive leadership affects organizational resilience less than team resilience.

3.3. Theoretical contribution.

This study has several important theoretical contributions to the existing scientific literature in the field of management. First of all, our study complemented research on the concept of resilience in organizations in crisis, allowing us to empirically determine that an adaptive leadership style affects resilience at three levels: employee-level, team-level, and organizational-level. Previously, no attention has been given to adaptive leadership style in relation to its direct influence towards the concept of resilience. The results of our study, having filled the existed research gap, allow us to include the adaptive leadership style to other factors that can potentially increase resilience, which provides a basis for further research in the field of resilience.

The second theoretical contribution of our study is that we combined the research of all three levels in one investigation, which allows us to assess the influence of adaptive leadership on each of three levels of resilience simultaneously. In fact, the results of our cross-level study contribute to the research of a particular kind of resilience – multilevel resilience. The previous works that existed in the scientific literature if studied the influence of any other leadership style, mostly concerned only one/two of three levels. For example, Salas-Valina et. al. (2022), conducted research to investigate how shared leadership affect employee resilience and team resilience, however this study didn't touch the effects on organizational resilience. The only leadership style that was studied at all three levels of resilience is the transformational leadership (Sommer et al., 2016; Vera, Rodríguez-Sánchez & Salanova, 2017; Valero, Jung, & Andrew, 2015). However, these are three separate studies which were conducted by different scientists, on different respondents, in different environments, so it's impossible to determine how this style affects the resilience of employees, teams and organizations at the same time. There is still a lack of quantitative works that combine all three levels of resilience and use a multilevel resilience as an object of study, despite the relevance of the topic and an ongoing call for more multilevel research on resilience in organizations (Linnenluecke, 2017; Stoverink et al., 2020). Now we can only find studies consisted of thorough theoretical systemization of multilevel resilience concept (Raetze

et.al. 2021). Thus, the importance and theoretical contribution of our study lies in the fact that the same respondents participating in our investigation answered questions about individual-level, team-level and organizational level resilience all together, which allows us to draw conclusions about the impact of adaptive leadership on multilevel resilience in the organization.

3.4. Managerial implications.

Through this empirical study, some recommendations can be offered to practitioners for increasing resilience in adverse situations. Our research reveals that adaptive leadership positively relates to resilience at all three levels in an organization: employee-level, team-level, and organizational-level. A practical implication would be to include adaptive leadership as a competency in the HR management of organizational leaders to create an internal input factor of multilevel resilience in the context of a crisis.

Building this competence among managers and leaders is possible through some HR practices. First of all, the results of this study can be used to form a learning and development strategy. For example, adaptive leadership can be developed within the organization through trainings for supervisors, managers and leaders. Leadership training programs that emphasize learning through reflection, emotional intelligence and empathy, navigating business environment and change acceptance, creativity and thinking outside of the box can contribute to the formation of adaptive leadership practices, and, hence, can help to build multilevel resilience in an organization (Northouse, 2016). Also, we assume that trainings with such content can possibly increase the resilience of the leaders themselves, since the theories of adaptive leadership and resilience are closely interconnected. According to previous studies, the resilience of leaders can impact the resilience of the leader's followers and the organization (Eliot, 2020). When preparing for training, managers need to consider intervention design, as it will depend on the circumstances in which the organization is (Garavan, 2007). At a time when an organization is in an acute stage of crisis and is experiencing challenging changes, more intensive and problem-focused training will be needed (Eliot, 2020). For example, adaptive leadership training content can be timed to specific adaptive challenges facing the organization. In the case of preparation for possible situations in the future, it makes sense to conduct deep and long courses with some individual or group coaching sessions for a gradual, smooth assimilation of training materials.

Secondly, the results of our study can be used to shape the methods and strategies of recruitment and selection in organizations. Now the question of how to adapt these particular HRM practices is acute for HR-specialists. For example, according to the Association of Executive Search and Leadership (AESC), a request for articles in 2021 on how to hire leaders who can drive change is ranked first in popularity (Executive Talent, Digital magazine AESC, 2021). So, basing

on the results of our investigation, we would recommend testing candidates' skills and aptitude for adaptive leadership, when recruiting employees for leadership positions and considering candidates for promotion. With the help of specially designed interview questions, test tasks and various case-questions, it will be possible to determine the potential of a future leader to demonstrate an adaptive leadership behavior, and use it as a factor for development of multilevel resilience in organization. Resilience testing can also be included in recruitment practices. Although we will be able to assess only over some time how much the actual recruitment and selection of adaptive leaders have affected resilience, we still recommend that management evaluate the adaptive leadership competencies among candidates and make hiring decisions based on this result as well. The right choice of candidates for positions is especially important in the current business environment, which is quite non-linear. Based on experience of recent years, crisis and the need to demonstrate resilience can appear suddenly, and by hiring staff with adaptive leadership competencies on leadership positions, organizations can partially prepare for unexpected changes in advance.

Finally, we suggest that the management side use the results of our research to create an organizational environment that will promote the development of adaptive leadership and, consequently, multilevel resilience. This recommendation is more systemic and concerns a long-term strategy of human recourse management. Organizations can incorporate the characteristic behaviors of an adaptive leader into company values, and try to cultivate them in the organizational culture. Moreover, the subsequent adjustment of EVP (employer value proposition) will be able to help at the recruitment stage working as a filter for candidates who do not respond to the values and culture of the company. In addition, we suggest that HR managers redesign incentive programs so that they encourage and reward those leaders who exhibit adaptive leadership behavior. For additional monitoring, we would recommend regular 360-degree feedback assessments of leaders, managers and supervisors, along with employee, team and organizational resilience surveys, to monitor resilience levels and be prepared to make appropriate adjustments to the system. In our opinion, such an integrated approach to create an organizational system promoting adaptive leadership values combined with training programs and hiring employees with the potential of adaptive leaders, more likely will lead to increase in multilevel resilience of organizations in the context of crises.

3.5. Limitations and Future research.

Although this study has many advantages and has made significant theoretical contributions and practical implications, it faces several limitations. The first limitation is related to the scope of our investigation. The results of the study are based on the answers of 148

respondents represented by employees working in organizations of different sizes operating in various industries, which allows us to test the hypotheses posed in the study and draw the appropriate conclusions, however, the current study do not cover industry-specific analysis. But we believe there are some differences in terms of resilience among organizations operating in different industries. For example, IT companies appeared to be more flexible in terms of consequences of COVID-19 pandemic, thus, resilience level of employees, teams and organizations as a whole may be higher, and, moreover, the remote work can impose some specifics into mechanisms of adaptive leadership influence on to multilevel resilience. Therefore, for further research we would recommend to focus on investigating the influence of adaptive leadership on multilevel resilience in the context of crisis across different industries in order to provide scientific community and management with more specified insights associated with organizations' industries.

The second limitation is connected with the selected research design. The current research is quantitative and uses survey as a data collection tool and statistical methods for data analysis, which allowed us to test the theory and make general conclusions. However, we propose that conducting qualitative research using in-depth interviews as a research tool could shed light on many important details within the topic: for example, on the various mechanisms for building/developing resilience, the role of specific behaviors of adaptive leaders in this process etc.

The third limitation is that the study was conducted on the Russian market, which may impose some local specificity of results. Sociocultural characteristics play a fairly large role in research in the field of human recourse management and any other areas that deal with human behavior, communication and perception. Therefore, our study needs to be supplemented by investigations made in other countries and cultures. Moreover, it will be interesting to see some cross-cultural analysis in the future to assess the differences and country-specific character of the influence of adaptive leadership on multilevel resilience in times of adversity.

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Dimensions	Items	R	Answers
Adaptive Leadership scale (30 items)			
Get on the Balcony	When difficulties emerge in our organization, this leader is good at stepping back and assessing the dynamics of the people involved.		1 2 3 4 5
	In difficult situations, this leader sometimes loses sight of the “big picture.”	(R)	1 2 3 4 5
	When this leader disagrees with someone, he/she has difficulty listening to what the person is really saying.	(R)	1 2 3 4 5
	In challenging situations, this leader likes to observe the parties involved and assess what’s really going on.		1 2 3 4 5
	In a difficult situation, this leader will step out of the dispute to gain perspective on it.		1 2 3 4 5
Identify the Adaptive Challenge	When events trigger strong emotional responses among employees, this leader uses his/her authority as a leader to resolve the problem.	(R)	1 2 3 4 5
	When people are struggling with value questions, this leader reminds them to follow the organization’s policies.	(R)	1 2 3 4 5
	When others are struggling with intense conflicts, this leader steps in to resolve the differences.	(R)	1 2 3 4 5
	This leader encourages people to discuss the issues no one wants to address which are pivotal in making change.		1 2 3 4 5
	This leader thrives on helping people find new ways of coping with organizational problems.		1 2 3 4 5
Regulate Distress	When people feel uncertain about organizational change, they trust that this leader will help them work through the difficulties.		1 2 3 4 5
	When people begin to be disturbed by unresolved conflicts, this leader encourages them to address the issues.		1 2 3 4 5
	This leader has the emotional capacity to comfort others as they work through intense issues.		1 2 3 4 5
	People recognize that this leader has confidence to tackle challenging problems.		1 2 3 4 5
	People see this leader as someone who holds steady in the storm.		1 2 3 4 5
Maintain Disciplined Attention	In complex situations, this leader gets people to focus on the issues they are trying to avoid.		1 2 3 4 5
	During organizational change, this leader challenges people to concentrate on the “hot” topics.		1 2 3 4 5
	When people try to avoid controversial organizational issues, this leader brings these conflicts into the open.		1 2 3 4 5
	This leader thinks it is reasonable to let people avoid confronting difficult issues.	(R)	1 2 3 4 5
	In an effort to keep things moving forward, this leader lets people avoid issues that are troublesome.	(R)	1 2 3 4 5
Give the Work Back to the People	When employees are struggling with a decision, this leader tells them what he/she thinks they should do.	(R)	1 2 3 4 5
	When employees look to this leader for answers, he/she encourages them to think for themselves.		1 2 3 4 5
	This leader encourages his/her employees to take initiative in defining and solving problems.		1 2 3 4 5
	When people look to this leader to solve problems, he/she enjoys providing solutions.	(R)	1 2 3 4 5
	When people are uncertain about what to do, this leader empowers them to decide for themselves.		1 2 3 4 5
Protect Leadership Voices From Below	During times of difficult change, this leader welcomes the thoughts of group members with low status.		1 2 3 4 5
	Listening to group members with radical ideas is valuable to this leader.		1 2 3 4 5
	This leader is open to people who bring up unusual ideas that seem to hinder the progress of the group.		1 2 3 4 5

	This leader has an open ear for people who don't seem to fit in with the rest of the group.		1 2 3 4 5
	To restore equilibrium in the organization, this leader tries to neutralize comments of out-group members.	(R)	1 2 3 4 5
Employee Resilience Scale (9 items)			
	I effectively collaborate with others to handle unexpected challenges at work.		1 2 3 4 5 6 7
	I successfully manage a high workload for a long period of time.		1 2 3 4 5 6 7
	I resolve crises competently at work.		1 2 3 4 5 6 7
	I learn from mistakes at work and improve the way I do my job.		1 2 3 4 5 6 7
	I re-evaluate my performance and continually improve the way I do my work.		1 2 3 4 5 6 7
	I effectively respond to feedback at work, even criticism.		1 2 3 4 5 6 7
	I seek assistance to work when I need specific resources.		1 2 3 4 5 6 7
	I approach managers when I need specific resources. I use change at work as an opportunity for growth.		1 2 3 4 5 6 7
	I use change at work as an opportunity for growth.		1 2 3 4 5 6 7
Team Resilience Scale (7 items)			
	In difficult situations, my team tries to look on the positive side.		1 2 3 4 5 6 7
	In difficult situations, my team adapts to changes in a positive way, and become stronger when overcome them.		1 2 3 4 5 6 7
	In difficult situations, my team makes sure to have resources (e.g., information, emotional support, practical assistance and financial resources) to overcome crisis and difficult times.		1 2 3 4 5 6 7
	In difficult situations, my team gives support to each other.		1 2 3 4 5 6 7
	In difficult situations, my team thinks the company has sufficient financial solvency to overcome difficult times.		1 2 3 4 5 6 7
	In difficult situations, my team has no fear of uncertainty, we can deal with it well and become strengthened.		1 2 3 4 5 6 7
	In difficult situations, my team can work well even in absence of any group member.		1 2 3 4 5 6 7
Organizational Resilience Scale (9 items)			
Robustness	My organization stands straight and preserves its position		1 2 3 4 5 6 7
	My organization is successful in generating diverse solutions		1 2 3 4 5 6 7
	My organization shows resistance to the end in order not to lose		1 2 3 4 5 6 7
	My organization does not give up and continues its path		1 2 3 4 5 6 7
Agility	My organization rapidly takes action		1 2 3 4 5 6 7
	My organization develops alternatives in order to benefit from negative circumstances		1 2 3 4 5 6 7
	My organization is agile in taking required action when needed		1 2 3 4 5 6 7
Integrity	My organization is a place where all the employees engaged to do what is required from them		1 2 3 4 5 6 7
	My organization is successful in acting as a whole with all of its employees		1 2 3 4 5 6 7