

# An Overview of The Relationship Between The Intolerance of Uncertainty and Mental Health Status of Educational Staff in The Working Environment: A Scoping Review

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**Abstract.** Educational reform requires the development of institutions and changes in organizational culture, which can potentially lead to job uncertainty and mental health issues among staff, thereby affecting the performance and productivity of the faculty. This study aims to illustrate the relationship between intolerance of uncertainty (IU), mental health conditions, employees' personal modality in the context of employees in educational institutions. This study uses a scoping review and bibliometric techniques. There were 203 relevant articles, but only 9 corpus met the defined inclusion criteria. This study describes the trend of studies on employees' adaptation to change in educational institutions and the role of employees' personal modalities in adapting to change, as well as mental health conditions in the work environment. Employee personal arrangement, such as optimism and the ability to manage work patterns in educational institutions, play an important role between IUs and their mental health conditions during work.

**Keywords:** Mental health, intolerance of uncertainty, educational staff, personal arrangement

## 1 Introduction

The occurrence of education reform in Indonesia has had a major impact in various aspects of education. Education reform has an impact on changes in the education system that occur at all of education and require the development of education institutions themselves. This also occurs in higher education institutions, especially Legal Entity Universities (PTNBH). In addition to managerial changes, organisational changes in higher education also involve changes in targets and performance evaluation associated with the achievement of recognition

at the world level. According to the World Economic Forum, Indonesia's higher education innovation index was 4.0 or ranked 60th in the world in 2015. Meanwhile, Indonesia's competitiveness index measured by the higher education and training brought it to 65th place ahead in the 2015-2016 period [1]. The existence of education reform has resulted in continuous changes in the organisation of higher education. Organisational change has a significant positive effect on organisational culture[2]. Organisational change due to the demands of the times and needs will have consequences for changes in organisational culture. This condition makes changes that have widespread impact on the area of work demands and the competence of human resources (HR). Not infrequently, changes in organisational culture also have an impact on changes in patterns of interaction and communication between employees and between employees and superiors, which of course have consequences for existing human resources [3].

Basically, organisational culture in the company is a tool to unite every individual who carries out activities together. Organisational change is an important action taken by companies or institutions to adjust to changes in the external and internal environment [4]. Changes in organisational culture can have a significant impact on employees' mental health [5]. When an organisation undergoes cultural change, such as a change in value, beliefs, attitudes, or internal systems, it can create uncertainty, tension, and stress among employees. Employees may feel uncertain about how they should adapt to the new culture or how the changes will affect work and relationships with colleagues. Their uncertainty can cause tension and anxiety that contribute to mental health disorders. Organisational culture change can also alter social norms in the workplace, creating pressure to conform and meet new expectations can also increase stress levels for employees, especially if they feel they do not have enough control or support in dealing with the changes. Chronic stress can contribute to mental health disorders such as anxiety and depression. Therefore, organisations need to pay attention to and manage the psychological and services, open communication, and creating a work environment that supports employees' mental well-being [6].

Changes in organisational culture that are not accompanied by socialisation efforts, mentoring, and a different style of leadership system can be a bad work environment for employees [5]. Issues of discrimination and inequality, excessive workload, lack of job control, and job insecurity – pose risks to mental health. 15% of working-age adults are expected to experience mental health by 2019. Globally, an estimated 12 billion is spent annually on the treatment of employees with mental health disorders, such as depression and anxiety. It also results in US\$1 trillion in lost productivity per year. There are affective measures to prevent the risk of mental health problems in the workplace, protect and promote mental health in the workplace, and support workers with mental health conditions [6].

The various changes above and the dynamics of employee problems often increase the risk of employee resistance to organisational change. Employee resistance is often associated with indicators of intolerance of uncertainty (IU). In the 1990s, research on IU was conducted by Michael Dugas and his colleagues [7,8] who focused on the relationship between IU and worry, anxiety, and the specific nature of IU that appears in people with generalised anxiety disorder (GAD). Cognitive reactions experienced by a person such as having worry, anxiety and stress will increase if individuals have a high intolerance of uncertainty. Uncertainty can be considered as a trigger for the emergence of worry that comes from cognitive itself, while intolerance of uncertainty is a major factor in the emergence of cognitive vulnerability of anxiety and related symptoms. Various conditions encountered in related research explain that it is important to have tolerance when faced with a problem related to a state of uncertainty

such as by thinking positively for the future, including accepting the challenge of change in the organisation, facing work challenges, feeling supported, positive meaning making, and re-evaluating as time goes on.

Various studies explain that psychological approaches that focus on managing IU can reduce cases of mental health disorders, such as burnout, anxiety, and depression in employees. Psychological interventions that focus on IU are beneficial in someone who experiences Generalised Anxiety Disorder (GAD) [9]. Some studies also explain that employees' modalities, such as cognitive rigour [10], personality characteristics [11,12], and coping skills [13] play a role in their tolerance for change and stress in the workplace. In addition, a perceived conducive work environment and engagement from management and co-workers are external factors helping employees manage uncertainty more effectively, improve mental well-being, and remain productive in a changing work environment [14,12,15].

Based on the above description, research on understanding the dynamics of employee adjustment in higher is important to be revealed to determine the role of IU and employee personal modalities in maintaining employee mental health conditions, given the drastic changes in the demands of higher education in Indonesia and changing the existing organisational culture. Educators are often the foundation in meeting organisational performance targets and supporting the tridharma tasks of higher education lectures. However, education personal often do not get socialisation and understanding of these changes as a whole, in contrast to lectures who tend to understand the situation of changes in the education system better. Therefore, a study is needed that focuses on examining the dynamics of the relationship between intolerance of uncertainty (IU), employees' personal modality, and mental health conditions in the context of employees in educational institutions. Before referring to the conceptual model between intolerance of uncertainty (IU), employees' personal modality, and mental health conditions, a scoping review is needed to narrow down what personal modality specifically plays a role in influencing the relationship between IU and employees' mental health conditions.

## **2 Method**

### **2.1 Study design**

This research uses a systematic literature review design, using the Scoping Review and Bibliometric stages of the development of studies related to intolerance of uncertainty in higher education organisations related to employee mental health. PRISMA was used to help researchers track research based on the inclusion and exclusion criteria of the research corpus. Scoping Review was conducted with the data collection method with the help of Perish of Publish (PoP8) software and manually for articles that are relevant but do not appear in PoP8. The data collection process was carried out from May 13 to June 14, 2024. Meanwhile, VOSviewer was used in Bibliometric techniques to capture research related to the research variables and analyse trends in previous studies.

### **2.2 Corpus criteria**

The articles included in the articles analysed in this study are referred to as the corpus. The selection of the corpus was done by considering the predetermined inclusion and exclusion characteristics. Based on the search results using PoP8, with bilingual keywords (English and

Indonesian), 203 published articles were found in the form of articles published in scientific journals, theses and research reports, and proceedings. The search keywords used were: "intolerance of uncertainty", "organisation" or "employee", "educational institution" or "university", "mental health" or "depression" or "anxiety". The inclusion criteria applied to the research corpus are as follows: journal articles or theses on the topic of employees, educational institutions, and organisations, in English or Indonesian, published years 2013-2024, and have a qualitative or quantitative design. Then the exclusion criteria applied in this study include: not having uncertainty or mental health variables, not discussing employees, and the manuscript cannot be accessed online in full.

### **2.3 Procedure**

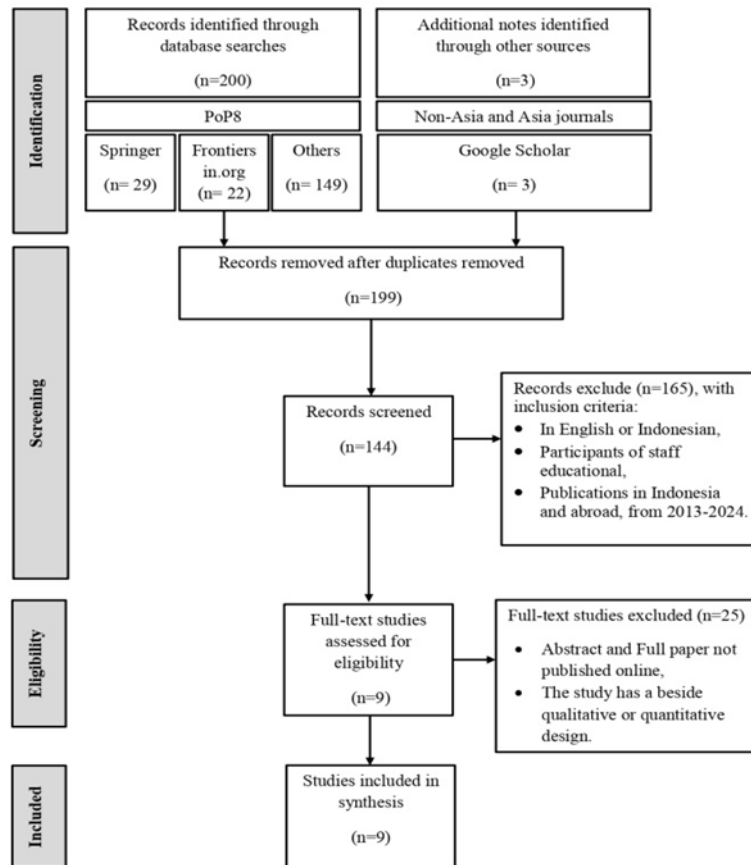
The research process in this study was completed through six stages of SLR: 1). determining the emphasis of the review, looking for and mapping the evidence that is already accessible, doing a preliminary mapping by selecting questions that are pertinent to the theory, and mapping the literature on the subject of the study; 2). Create review questions that specifically address the three primary components—the focus group (participants) and the outcomes. 3). Identifying studies to include in the review, forming the basis of specific selection criteria choosing which studies to include in the review, providing the framework for particular selection criteria, and providing further details on the essential elements of the review questions (PoP8 and PRISMA chart); 4). Data extraction and study quality appraisal with VOSViewer software carry out the processes of assessing the quality of studies and data extraction based on review questions; 5). Synthesizes findings from a series of included studies to draw evidence-based conclusions using narrative collation; 6) [16]. Reporting the results of the review and dissemination, the completed review is then disseminated.

### **2.4 Data Analysis**

Study results in the research will be analysed with Bibliometric-Visualisation and narrative analysis to provide a visualisation and synthesis of research results [17-19]. Data collection was carried out with the Publish or Perish version 8 (PoP8) software and the PRISMA chart. The bibliometric visualization analysis technique has been widely used in research trend mapping and Systematic Literature Review studies on various topics, including psychology [20]. After going through this procedure, the analysis results are in the form of a bibliometric visualization or research mapping, as well as a narrative related to the results of previous research.

## **3 Result**

Figure 1 demonstrates the process of article selection systematically. Initially, the search found 203 but only 9 corpus articles that matched the selection criteria and could be analysed using PRISMA guideline. The study captured 203 related articles, and based on the research criteria only 9 corpus articles were considered adequate. From the 9 corpuses, it was identified that the studies consisted of quantitative studies (5 articles), qualitative studies (2 articles), and mixed-method studies (2 articles).



**Fig. 1.** Flowchart in article selection.

The total sample size was 1,950 participants from various countries outside the Asian continent, namely the United States, the United Kingdom, South Africa, and the Asian continent, namely: Turkey, Pakistan, Indonesia, and the United Arab Emirates. In terms of demographics, not all corpuses include a detailed description of their participants. Only 4 journals included the number of male and female participants from nine corpus articles, with 297 men and 298 women [21], 74 men and 104 women [22], 28 men and 60 women [23], and 520 men and 163 women [24]. The age of the participants in this study ranged from 20-69 years old and were in a work situation that they felt was uncertain. In more detail, a description of the nine corpuses can be observed in table 1 below. It appears that various measurement tools are used in data collection, namely: Tolerance of Ambiguity Scale (TOA), Resistance to Change Escalate (RTC), COVID-19 Phobia Scale (C19P-S), and The Life Orientation Test—Revised (LOT-R) to measure Intolerance of Uncertainty. Two health subscales for identify mental health condition and stress are General Health Questionnaire (GHQ-12), The Penn State Worry Questionnaire (PSWQ), The Coping Inventory for Stressful Situation (CISS), Langer Mindfulness Scale, and The Life Satisfaction Scale to measure mental health. And two scales used in studied related to organization or employee are the

Work–Family Conflict and Family–Work Conflict Scale and Four scales of the J-DR questionnaire.

**Table 1.** Corpus List Research in Non-Asia and Asia Country (n 9).

<b>Author name of and year of study</b>	<b>Purpose</b>	<b>Study sample</b>	<b>Method and instruments</b>	<b>Findings</b>	<b>Further research</b>
Dunican B; Gearin CA (2018). (25)	It aims to identify the strength of the relationship between intolerance to ambiguity, resistance to change, and attention.	N=38 staff, and faculty administrator	Mix method Budner's (1962) Tolerance of Ambiguity Scale (TOA), Oreg's (2003) Resistance to Change Escale (RTC), dan Langer Mindfulness Scale.	Individuals with high intolerance of ambiguity are more likely to become resistant to change. In this study, a correlation between tolerance for ambiguity and cognitive rigidity was not found. Not finding this may suggest evidence of evolution, where individuals prefer less ambiguity and can even reject change, but realize the inevitability of change and still need to learn new methods because of change.	
Karakose T; Yirci R; Papadakis S. (2021). (28)	The study aims to investigate the relationship between COVID-19 phobias experienced by school administrators and work-family conflicts, family-work conflicts and their life satisfaction.	N=356 School administrator.	Quantitative COVID-19 Phobia Scale (C19P-S), Work-Family Conflict and Family-Work Conflict Scale, The Life Satisfaction	This study found that intolerance of uncertainty was negatively linked to mental well-being. Loneliness and fear of COVID-19 play an interfering role in the relationship between intolerance of uncertainty and mental well-being. The study also	In this study, to evaluate the psychosocial and other effects of COVID-19 phobias on individuals from a more comprehensive perspective, conducting future scientific studies on

Barkhuizen N; Rothmann S; Van de Vijver FJR. (2013). (21)	The aim of this study was to investigate the relationship between dispositive optimism, job and resource demands, exhaustion, employment involvement, poor health and organizational commitment of South African academic staff in higher education institutions.	(N = 595) taken of academics in South African higher education institutions.	The Life Orientation Test—Revised (LOT-R), Four scales of the J-DR questionnaire, Organizational Commitment Scale, Two health subscales of the ASSET (An Organizational Stress Screening Tool; Cartwright & Cooper, 2002)	Scale, confirms the role of the sequential mediation of loneliness and fear of COVID-19 in the relationship between intolerance of uncertainty and mental well-being.  The results confirmed that job demands and lack of work resources contributed to fatigue, while work resources concentrated on employment involvement. Disposition optimism had a strong direct effect on perceptions of employment resources as well as indirect effects (through work resources) on exhaustion, employment engagement, poor health and organizational commitment. The results of this study extend the model of the double process of fatigue and involvement by showing the strong effect of dispositional optimism on construction in the model.	larger samples/groups of studies in which these forms of qualitative and quantitative studies are used as a mixed method research can provide a better understanding of the subject.  In this context, specific interventions can be directed at relationships with supervisors, role clarity and job task redesign to increase job diversity, autonomy and learning opportunities.
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Karlina Y. (2023). (26)	The aim of this research is to find out and produce a description related to any factor that has caused a staff member to suffer from mental health disorders as a result of a pandemic	Officer at the Human Rights Office of one of the colleges in Jakarta.	Qualitative The interview method, the observation method, and the observing method are involved.	It is known that there are several factors causing the occurrence of mental health disorders in employees, including a lack of communication between managers and employees, work demands exceeding working hours, luring activities, and face-to-face service in person.	
Doyumgaç I; Tanhan A; Kiymas MS. (2021). (27)	There are three main research purposes in this study including (a) understanding the most important facilitators (support, strength) and complications (lines, concerns, problems, problems) for online or distance education during COVID-19 from a unique perspective of students, academics, and teachers through Online Photovoice (OPV); (b) encouraging with participants volunteers and partners as allies to share results with key people and institutions through online paths to enhance the facilitator and overcome complications; and, finally, (c) investigating the attribution of participants of facilitators and complicators	115 participants, 63 (54.8%) were students, 40 (34.8%) were lecturers, 12 (10.4%) were academicians.	Mix method	Sixteen major topics related to facilitators have emerged, and the five most identified are technology (n = 31, 35%), the internet (n= 28, 32%), communication (N = 18, 20%), emotions ( n = 17, 19%), and economic resources (n + 16, 18%). Thirteen major themes related to complications have appeared, and five of the most obstacles are a lack of technological resources (m = 41, 47%), the Internet (m + 40, 46%), the appropriate learning environment, learning opportunities (m= 32, 36%) appropriate resources for online or distance education (n+ 18, 20%) and interaction	The following recommendations are based on research findings, discussions and results: Factors facilitating education during the COVID-19 pandemic and similar exceptional cases are the adequacy of technological infrastructure and free internet access. Thus, educational institutions and organizations must improve infrastructure and develop solutions for internet access. To ensure equal

based on the Ecological System Theory (EST) level.

(n > 14, 16%). Participants allocated facilitators and complications to their respective EST levels as follows: individual/intrapsychic factors (84%; 69%), microsystems (45%; 59%), ecosystems (36%; 43%), and macrosystem (34%; 44%). The researchers gave practical recommendations.

opportunities in distance/online education, different socio-economic levels of students should also be considered. Furthermore, measures should be taken to improve the validity and reliability of measurements and assessments in electronic or remote/online exams based on the principle of equal opportunity.

Further studies and applications can be developed to ensure objectivity and fairness in online examinations. If education is not to be conducted in a face-to-face physical environment, care should be done to ensure that the course is conducted online (live, online) by providing

adequate technological infrastructure, free internet access, and technological knowledge and competence for students and instructors. Online course videos (live, online) and other documents should be uploaded to the system for students to watch / see later. Although students are equipped with technology infrastructure and free internet access in distance or online education, online mental health services can be provided to students to prevent emotions such as loneliness and discomfort, etc. using distance learning tools. To ensure understanding in online or distance courses, the use of

<p>Rahmandani A; Salma S; La Kahija Y; Kaloeti DVS; Sakti H; Ediati A. (2021). (22)</p>	<p>The study aims to explore psychological districts as the risk of mental health problems amongst law enforcement state college educators.</p>	<p>178 educational staff from the Law College "X" with the involvement of male officials of 41.6%</p>	<p>Cross sectional General Health Questionnaire (GHQ-12)</p>	<p>It was found that 26.4% of the educated personnel in PTNBH 'X' have a level of psychological distress at risk of mental health problems, not differentiated according to gender or the field of science of the faculty where they work. So the findings of this research require the provision of mental health programs for the university's educational staff.</p>	<p>augmented reality should be enhanced in education and "augmented reading" techniques should be used. Further research may involve more subjects and take into account more diverse variables such as in terms of age, employee status, or work unit. The possibility of distraction sources, attribution styles, working skills, as well as institutional policy roles as PTNBH can be an empirical study in further research</p>
<p>Al Miskry ASA; Hamid AAM; Darweesh AMD. (2021). (23)</p>	<p>The aim of the study was to investigate the psychological impact of the COVID-19 pandemic on university faculty, staff, and students in the United Arab Emirates, including examining the level of suffering, concerns, tactics to cope, and behavioral changes during closures. The study aims to highlight the mental health challenges faced by individuals</p>	<p>The sample of this study consisted of 737 participants, including 60.7% university students, 27.4% faculty members, and 11.9%</p>	<p>The instruments used in the study included the General Health Questionnaire (GHQ-12) to measure general distress. The Penn State</p>	<p>The study found that 57.4% of faculty members, 52.3% of staff, and 60.4% of students were at mild risk of psychiatric problems during the closure of the COVID-19 pandemic. In addition, significant gender differences were observed, with female participants consistently scoring higher than men in trouble, anxiety,</p>	<p>Furthermore, future studies may consider longitudinal research to examine the long-term psychological impact of COVID-19 among university communities in the United Arab Emirates.</p>

	during pandemics and provide insight into effective management mechanisms and supporting strategies.	staff, selected through convenience sampling.	Worry Questionnaire (PSWQ) to assess worry levels. The Coping Inventory for Stressful Situation (CISS) to evaluate coping strategies.	avoidance, and coping with focused emotions. In addition, the study revealed that 18.9% of participants did not report any changes in their behavior, while behaviors such as increased consumption of tobacco, alcohol, and coffee were recorded during closures.	
Nicklin L ; Wilsdon L; Chadwick D; Rhoden L; Ormerod D; Allen D; Witton G; Lloyd J.(2021). (29)	The aim of this study is to explore and understand the experiences, challenges, successes, and lessons learned by staff and students during the rapid transition to online learning at a UK higher education institution in response to the COVID-19 pandemic. The study aims to provide insight into the implications of online learning, focusing primarily on the needs of students with additional support requirements, and to offer practical recommendations to improve the delivery of online education during times of stress and	The sample of this study consisted of nine teaching-responsible staff members and eleven students from a Social Science department in a UK Higher Education Institution. The participants were recruited	The study utilized a qualitative investigation approach, employing a "bricolage" methodology that involved semi-structured one-to-one remote interviews and written reflections submitted online via synchronous	The research findings are structured into five core themes, including: - Methods and means of involvement - Learning Maintenance, Destruction, and Construction - Remote Education and Accessibility Resources and Literacy - Support and Communication - Life and Learning: Response, Adaptation, and Impact  Participants highlighted the challenges and adaptation in	Future research derived from this study may focus on exploring the long-term impact, both positive and negative, of the transition to online learning beyond the initial period of 3-6 months investigated in this study. Further research may also investigate the effectiveness of the recommendations given in the study in improving measure-based online learning

uncertainty

through purposive sampling to include individuals from various demographic backgrounds, teaching and learning profiles, and with an emphasis on recruiting students with additional learning needs

digital chat, email, or a research portal. The interviews were conducted by multiple researchers, audio recorded, transcribed, and analyzed by NVIVO 12 software. The data analysis process involved a framework analysis procedure, including transcription, familiarization with interviews, code generation, framework development, data charting, and interpretation.

interacting with online learning, changes in learning experiences, practical factors affecting accessibility, communication problems, and the overall impact of the rapid transition to online learning. Staff and students enjoy a mixture of positive and negative experiences, with some feeling depressed by the volume of communication and others developing new empathy and support strategies.

performance. International comparative studies can also be done to understand variations in online learning experiences across different geographical locations and cultural contexts.

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Future research

Ullah R; Imran M; Iqbal K; Saleem Z; Sajid RK. (2021). (24)	investigate the impact of uncertainty intolerance, loneliness, and fear of COVID-19 on mental well-being, especially in the context of a pandemic. The researchers aim to understand how these factors are related and how they collectively affect mental health outcomes.	this study consisted of 683 respondents from major cities in Pakistan, specifically Islamabad and Rawalpindi. The respondents were selected from universities and colleges in these cities, with a response rate of 34.15%.	utilized a Short Version scale developed by Carleton et al. (2007) to measure participants' intolerance to uncertainty. To assess mental well-being, a 14-item scale developed by Tennant et al. (2007) was adapted. Loneliness was measured using an 11-item scale developed by Gierveld and Tilburg (1999). Fear of COVID-19 was assessed using a seven-item scale developed by Ahoru et al. (2020). The study	intolerance of uncertainty was negatively linked to mental well-being. Loneliness and fear of COVID-19 play an interfering role in the relationship between intolerance of uncertainty and mental well-being. The study also confirms the role of the sequential mediation of loneliness and fear of COVID-19 in the relationship between intolerance of uncertainty and mental well-being.	derived from this research could include the replication of models in different cultural contexts to improve the generalization of findings. Furthermore, future studies may consider controlling variables such as age and gender, exploring the individual effects of different dimensions of loneliness on well-being, and investigating other potential mediators, such as the meaning and frustration of psychological needs. Furthermore, examining the impact of interventions, such as counselling programs associated with positive psychological conditions, on mental well-being in the context of uncertainty and fear, could be a valuable
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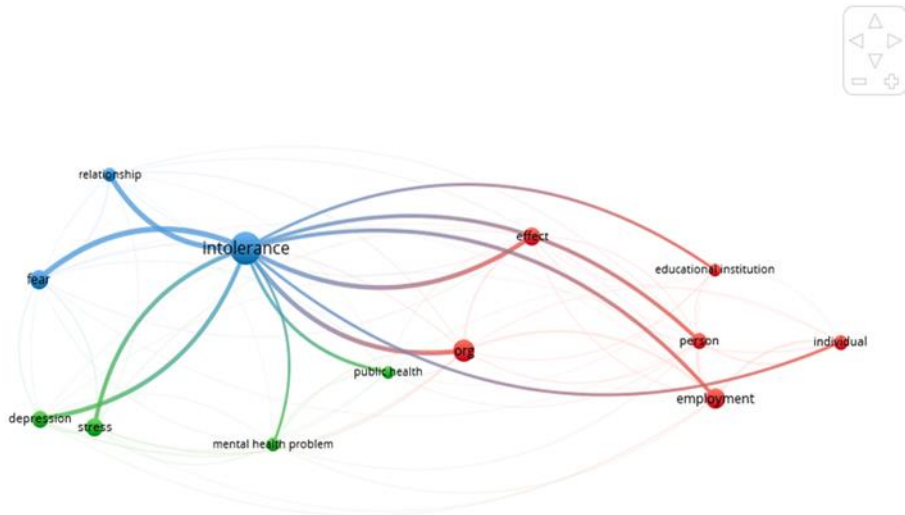
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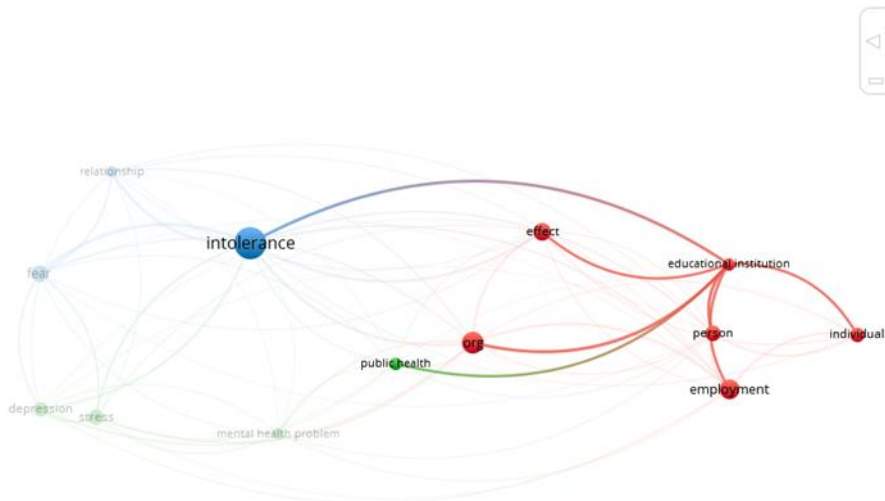


### 3.1 Bibliometric Visualitation



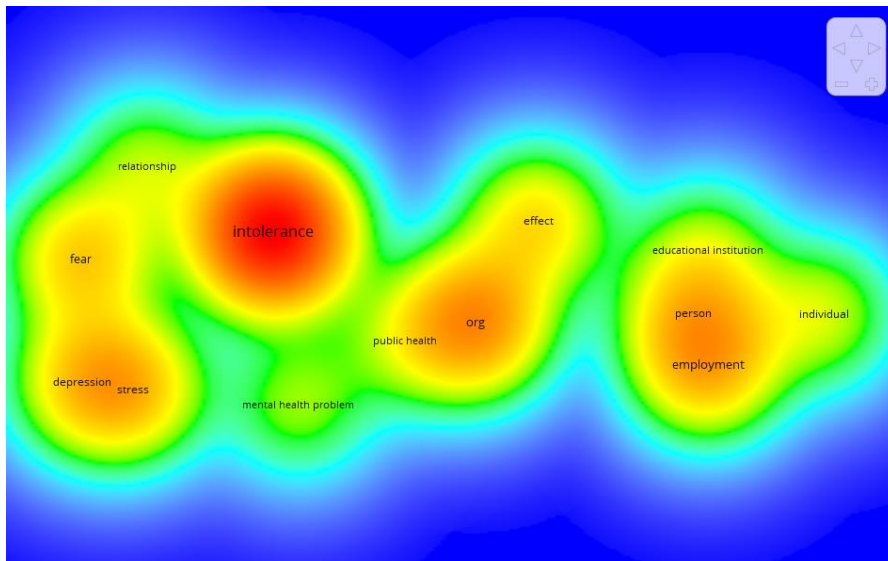
**Fig. 2.** Overview of research topics related to the intolerance of uncertainty (IU) construct.

The construct of intolerance of uncertainty seems to be related to three research topics in different studies, namely: (1) the relationship and fear of intolerance of change; (2) intolerance of change is also related to mental health problems, depression and stress; (3) the impact of intolerance on individuals, educational institutions, employees and organisations.



**Fig. 3.** Variables that are often used in studies on IU in educational institutions.

The construct of intolerance in educational institutions is often associated with public health, the impact of intolerance and the performance of employees, individuals and organisations. Few studies have explored the causes of intolerance to change in educational institutions. Meanwhile, based on the research density map on IU in educational institutions shown in Figure 4 below, it seems that there are still few studies that relate intolerance to change specifically to the context of employees in educational institutions. In addition, previous studies on IU in rules and organisations have mostly examined the relationships between individuals within organisations, such as mental health problems, stress and depression.



**Fig. 4.** Density and distribution map of IU research in educational intistitution.

### 3.2 Narrative analysis results

The results of the analysis can be divided into three explanations. First, in the context of changes in organisational rules and culture in educational institutions, the impact on educational staff is that: employees with high intolerance to ambiguity tend to resist change, but apparently these conditions are not related to individual cognitive rigidity. Meanwhile, conditions related to employee mental health in educational institutions are generally related to high and changing job demands, lack of competent resources, and staff personal modalities, such as: coping skills and perceptions of work situations. More specifically, it was revealed that lack of resources contributed to employee burnout, while lack of job support focused on low employee engagement. A personal modality revealed to be moderately related to the mental health of education personnel is optimism, which has a strong direct effect on their acceptance of work resource conditions and which is perceived to directly impact work engagement, organisational commitment, and poorer psychological conditions at work, also in the context of organisational health and stress [21,25,26,22].

The second result, explaining IU in the context of the COVID-19 pandemic in the setting of higher education institutions. Several factors are known to cause mental health disorders in educational staff during the COVID-19 pandemic, including: lack of communication between managers, work demands exceeding working hours, tracking activities, and continued presence of face-to-face service during the epidemic. Intolerance of the uncertainty caused by the COVID-19 pandemic is negatively linked to the mental well-being of educational staff, where loneliness and fear of Covid-19 play a role in mediating the relationship between intolerance to uncertainties and the mental welfare of staff. It also revealed the topics that are considered to be related to adaptation in the workplace during the COVID-19 pandemic, namely: technology, internet media, communication, emotions, and economic resources. As to the conditions that are hindering adaptation to work are the lack of technological and internet resources, inadequate learning environment, unequal learning opportunities, and less adequate resources for online education [23,27,28,26,29,27].

The third result explains the differences between studies in non-Asia and Asia countries. Studies in non - Asia countries further explain that IU relates to the psychological well-being of employees in educational institutions. Although employees' personal modalities, such as optimism and a positive perception of conditions at work and resource support, play a role in their mental well-being, constantly changing situations that require adaptation also have a negative impact on their tolerance of change. Exhibited in the context of the uncertain conditions of the COVID-19 pandemic, forcing changes in policies and work patterns makes employees afraid of illnesses at work and feel lonely as a result of changing work pattern. This increases their IU and ultimately affects their decreased ability to adapt to changes in the workplace. This condition indirectly also reduces their commitment to the organization and increases burnout and fatigue conditions in the workplace. It was also revealed that IU had nothing to do with the cognitive rigidity of employees. Employees' thinking and beliefs do not always play a role in their IU conditions while the atmosphere at work is considered uncomfortable and uncertain [21,25,28]. While various related studies in Asian countries, Indonesia, highlighted the impact of stressful working conditions on employee mental health [23,22,24] and the role of external factors such as senior leadership style, unequal learning opportunities, and lack of resources of support and technology in the workplace [27,29].

#### **4 Discussion**

The purpose of this study was to understand the dynamics of the relationship between intolerance to uncertainty (IU), employee personal modality, and mental health conditions in the context of employees in educational institutions. The first result of this study shows that the mental health condition of employees in educational institutions is influenced by their intolerance to change. Individuals with high intolerance to ambiguity tend to resist change, but surprisingly, intolerance to ambiguity is not always related to employees' personal modality, particularly cognitive rigour. The results of this study are consistent with previous studies in different contexts. Intolerance of uncertainty is negatively associated with mental well-being, with individuals who are more intolerant of uncertainty experiencing higher levels of anxiety and depression in the context of professional workers [30] as well as in adult age groups during the COVID-19 pandemic [31].

In this study, it was revealed that the personal modality of employees that is considered to have an important role is optimism. Optimism is a personal modality that plays an important role for employees to deal with uncertain situations in the world of work that they experience. Optimism is critical in maintaining employees' mental health, having a strong direct effect on their perceptions of work resource conditions and indirect effects on job burnout, engagement, ill health, and organisational commitment. The findings can be explained as follows that under conditions that create high uncertainty, the situation may increase the risk of deteriorating employees' mental health. Individuals who are intolerant of uncertainty are more likely to experience negative emotions, such as fear and anxiety, in response to uncertain stimuli [32]. Moreover, the lack of control and predictability in their environment can lead to feelings of helplessness and hopelessness, which can further deteriorate mental health conditions. Pessimistic feelings also develop in individuals as a result of negative cognitive coping, which is negative rumination that influences increased feelings of anxiety [31]. This pessimistic condition is likely to continue to develop and become influential on the mental health condition of employees when this individual's negative perception is not balanced with the support of the environment around the employee to be able to convey it openly to colleagues or to leaders.

In addition, this study also revealed that in the context of organisational change in higher education, education personnel are also at risk of experiencing psychological distress at work and require mental health programmes. This may occur because mental health conditions among employees of educational institutions are generally related to high and changing job demands, lack of competent resources, and inadequate personal modalities of employees. The results of this study can be explained by several related studies that reveal that the lack of adequate resources in the organisation contributes to employee burnout, while the absence of work support from superiors will focus on low employee engagement [33,34].

Uncertain situations and changes in organisations can occur due to unpredictable natural conditions, such as natural disasters and pandemics) in addition to large-scale or internal policy changes. This study also reveals previous research that addresses intolerance of uncertainty in the context of the COVID-19 pandemic in higher education institutions. Several factors are known to cause mental health problems in education personnel during the COVID-19 pandemic, including a lack of communication between employees and managers, work demands that exceed working hours, and the continued existence of face-to-face services during the pandemic. Intolerance of uncertainty in the context of the COVID-19 pandemic is negatively related to the mental well-being of education staff, where loneliness and fear of COVID-19 play a role in mediating the relationship between intolerance of uncertainty and the mental well-being of education personnel. Outlines that these changes can involve various factors, such as new leadership, shifts in team structure implementation of new technology, or adoption of different business models [4]. Organisational change is divided into two main types, namely adaptive change and transformational change. Adaptive change tends to be gradual and involves small modifications in business processes to address evolving needs over time. Transformational change, on the other hand, is larger in scale and scope, often involving shifts in mission strategy, organisational structure or business processes. Based on this explanation, the COVID-19 pandemic situation is included in conditions that result in large-scale policy changes. This forces employees not only to adjust to changes in their organisation, but also to immediately adjust to drastically changed work patterns, in addition to overcoming their health concerns.

The following finding explains the disparities between research in non-Asia and Asian nations. According to studies conducted in non-Asian nations, IU has an impact on the psychological well-being of personnel in educational institutions. Although employees' personal qualities, such as optimism, a favourable view of working circumstances, and resource support, contribute to their mental well-being, continually changing settings that need adaptation have a detrimental influence on their tolerance for change. Exhibited in the context of the COVID-19 pandemic's unpredictable conditions, requiring changes in rules and work patterns causes employees to be fearful of diseases at work and to feel lonely as a result of the shifting work patterns. This increases their IU and ultimately affects their decreased ability to adapt to changes in the workplace. This condition indirectly also reduces their commitment to the organization and increases burnout and fatigue conditions in the workplace. It was also revealed that IU had nothing to do with the cognitive rigidity of employees. Employees' thinking and beliefs do not always play a role in their IU conditions while the atmosphere at work is considered uncomfortable and uncertain. While various related studies in Asian countries, especially in Indonesia, highlight the impact of stressful working conditions on employee mental health. Changes in the organization and uncertainty in workloads and patterns are thought to increase the employee's risk of stress and impact on their mental health. Not much has revealed the dynamics of association between employees' perceptions, in higher education institutions, of organizational changes with their personal modalities, as well as their mental health conditions.

The results of the scope review found several limitations in the studies that have been conducted. Methodologically, most of the research employs a self-report model based on the subjects' self-reports, which may lead to significant biases stemming from individual differences as well as the desire for social acceptance. The majority of the studies included are conducted in the context of the COVID-19 pandemic, so caution is needed when generalising the results. In addition, the research subjects that have been conducted often do not distinguish between educational staff, lecturers, and students, mostly referring to them simply as the academic community.

## **5 Conclusion**

There is a relationship between intolerance of uncertainty (IU), personal modalities of employees, and mental health conditions in the context of employees in educational institutions. Personal modalities and work situations play an important role in employee job conditions, especially in educational institutions. However, cognitive rigidity does not seem to play a role in the occurrence of IU among employees; rather, it is personal modalities such as optimism and their perception of the work situations they face. The role of positive support in the workplace, such as from supervisors and colleagues, provides employees with the opportunity to remain committed to the organisation and manage their mental health conditions. In Asia, especially in Indonesia, this topic has not been extensively researched, thus opening opportunities for further studies to explore the dynamics of the correlation between IU, personal modalities of employees, and their mental health conditions. This study differs from previous studies because it reveals personal modalities that are important for employee mental health in uncertain situations, such as optimism. In addition, it has been revealed that a positive work situation perceived by employees can help them manage their mental health.

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## References

- [1] Dadang. Menristek serukan reformasi pendidikan tinggi. ITS News. 2016.
- [2] Fahrudin V, Nurwati, Saleh S. Pengaruh Perubahan Organisasi pada Kinerja Pegawai dengan Budaya Organisasi Sebagai Variabel Mediasi. JUMBO (Jurnal Manajemen, Bisnis Dan Organisasi). 2019;2(2):25–32.
- [3] Putri IR, Yusuf NF. Pengaruh budaya organisasi dalam menciptakan perkembangan organisasi. Jurnal Administrasi Publik. 2022;18(1):143-154.
- [4] Stobierski T. Organizational change management; 2020.
- [5] Alvesson M, Svingsson S. Changing organizational culture: Cultural change work in progress. Routledge; 2008.
- [6] World Health Organization. Mental health; 2024.
- [7] Dugas MJ, Schwartz A, Francis K. Intolerance of uncertainty, worry, and depression. Cognitive Therapy and Research. 2004;28(6):835–842.
- [8] Buhr K, Dugas MJ. The intolerance of uncertainty scale: Psychometric properties of the English version. Behaviour Research and Therapy. 2022;40(8):931–945.
- [9] Wahlund T, Andersson E, Jolstedt M, Perrin S, Vigerland S, Serlachius E. Intolerance of uncertainty–focused treatment for adolescents with excessive worry: A pilot feasibility study. Cognitive and Behavioral Practice. 2020;27(2):215–230.
- [10] Shibaoka M, Masuda M, Iwasawa S, Ikezawa S, Eguchi H, Nakagome K. Relationship between objective cognitive functioning and work performance among Japanese workers. Journal of occupational health. 2023;65(1):e12385.
- [11] Hidayah AK. The influence of individual characteristics, and leadership, through work motivation and job satisfaction on employee performance of East Kalimantan forestry agency office. International Journal of Accounting, Finance, And Economics. 2018:1-14.
- [12] Sabeng DA, Mensah JV. Job satisfaction and characteristics among staff of public higher educational institutions in Ghana. Cogent Education. 2023;10(2).
- [13] Palma EMS, Reis de Sousa A, Andrade de Moraes F, Evangelista Luz R, Freitas Neto ÁL, Lima PPF. Coping moderates the relationship between intolerance of uncertainty and stress in men during the Covid-19 pandemic. Revista da Escola de Enfermagem da U S P. 2022;56: e20210303.
- [14] Baquero A. Authentic leadership, employee work Engagement, trust in the leader, and workplace well-being: A moderated mediation model. Psychology research and behavior management. 2023;16:1403–1424.
- [15] Monteiro E, Joseph J. A review on the impact of workplace culture on employee mental health and well-being. International Journal of Case Studies in Business, IT, and Education (IJCSBE). 2023;7(2):291-317.
- [16] Popay JD. Guidance on the Conduct of Advances in Social Science. Education and Humanities Research. 2006:530-241.
- [17] Anggita DR, Widayanti CG, Dewi KS. Understanding the step-sibling relationship through bibliometric-visualization and narrative analysis. Advance in Social Science, Education and Humanities Research. 2020;530:236-243.
- [18] Ellegard O, Wallin JA. The bibliometric analysis of scholarly production: How great is the impact?. Scientometrics. 2015;105(3):1809-1831.
- [19] Flis I, Van Eck NJ. Framing Psychology as a discipline (1950-1999): A large -scale term co-occurrence . History of Psychology. 2018;21(4):334–362.
- [20] Van Eck NJ, Waltman L. Visualizing bibliometric networks. Springer. 2014:285-320.

- [21] \*Barkhuizen N, Rothmann S, Van de Vijver FJR. Burnout and work engagement of academics in higher education institutions: Effects of dispositional optimism. *Stress and Health: Journal of the International Society for the Investigation of Stress*. 2013;30(4):322–332.
- [22] \*Rahmandani A, Salma S, La Kahija Y, Kaloeti DVS, Sakti H, Ediati A. Distres psikologis pada tenaga kependidikan di perguruan tinggi negeri berbaran hukum. *Jurnal Empati*. 2021;10(3):175–186.
- [23] \*Al Miskry ASA, Hamid AAM, Darweesh AMD. The impact of COVID-19 pandemic on university faculty, staff, and students and coping strategies used during the lockdown in the United Arab Emirates. *Frontiers in Psychology*. 2021;(12):682757.
- [24] \*Rehman SU, Ullah R, Imran M, Iqbal K, Saleem Z, Sajid RK. Intolerance of uncertainty and mental well-being: Important role of loneliness and fear of COVID-19: Evidence from higher educational institutions. *Multicultural Education*. 2021;7(5):147–154.
- [25] \*Dunican B, Gearin CA. Exploring resistance to change and intolerance to ambiguity in higher education institutions. *International Journal of Leadership and Change*. 2019;7(1):41–47.
- [26] \*Karlina Y. Dampak pandemi COVID-19 terhadap kesehatan mental pegawai. *Jurnal Ilmiah Muqoddimah: Jurnal Ilmu Sosial, Politik, Dan Humaniora*. 2023;7(3):677–686.
- [27] \*Doyumgaç I, Tanhan A, Kiyas MS. Understanding the most important facilitators and barriers for online education during COVID-19 through online photovoice methodology. *International Journal of Higher Education*. 2021;10(1):166–190.
- [28] \*Karakose T, Yirci R, Papadakis S. Exploring the interrelationship between COVID-19 phobia, work-family conflict, family-work conflict, and life satisfaction among school administration for advancing sustainable management. *Sustainability*. 2021;13:8654.
- [29] \*Nicklin L, Wilsdon L, Chadwick D, Rhoden L, Ormerod D, Allen D, Witton G, Lloyd J. Accelerated HE digitalisation: Exploring staff and student experiences of the COVID-19 rapid online-learning transfer. *Education and Information Technologies*. 2022;27(6):7653–7678.
- [30] Dutta T, Chhajer R, Nag S, Dhir S. Impact of intolerance of uncertainty on well-being during COVID-19 pandemic in India: Does practising gratitude and mindfulness help? *IIMB Management Review*. 2023;35(3):286–297.
- [31] Satici B, Saricali M, Satici SA, Griffith MD. Intolerance of uncertainty and mental wellbeing: Serial mediation by rumination and fear of COVID-19. *International Journal of Mental Health and Addiction*. 2022;20(5):2731–2742.
- [32] Shu J, Ochsner KN, Phelps EA. Trait intolerance of uncertainty is associated with decreased reappraisal capacity and increased suppression tendency. *Affective Science*. 2022;3(3):528–538.
- [33] Bamberger SG, Vinding AL, Larsen A, Nielsen P, Fonager K, Nielsen RN, Ryom P, Omland Ø. 2012.
- [34] Hammoudi HD, Soltani A, Dalli R, Alsarraj L, Malki A. Understanding and fostering mental health and well-being among university faculty: A narrative review. *J. Clin. Med*. 2013;12(4425):1-28.

\* The references marked with an asterisk (\*) are the corpus of this research.