Resilience in Troubled Times:

Emotional Reactions of Teaching College Faculty during the COVID-19 Crisis

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Abstract

We hypothesized perceptions of the COVID-19 would mediate the associations between individual faculty members' resilience and certain demographics (age, gender, academic rank, exposure to COVID-19) and their emotional reactions to the COVID-19 crisis. Ninety-eight college faculty participated in this preliminary study, recruited at the height of the COVID-19 pandemic in Israel. The results suggest reported perception of the COVID-19 situation as either a threat or opportunity mediated the associations between reported resilience, demographic variables, and positive and negative emotional responses to the situation. Age was positively associated with the perception of opportunities. Gender, exposure to COVID-19, and resilience were associated with the perception of both threats and opportunities. Higher ranking faculty perceived the change as threatening more frequently than they saw it as an opportunity. The results are discussed in light of positive psychology models of effective coping.

Keywords: COVID-19, resilience, college faculty, emotional reactions, threat, opportunity.

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One of the institutions most affected by the COVID-19 pandemic has been the education system, especially the academic educational system (Viner et al., 2020). College students and faculty shifted, almost overnight, from intensive face to face interactions on campus to online formats, challenging age-old axioms about teaching and learning, testing, and assessment. How have faculty members experienced this change? To answer this question, we looked at a sample of teaching-college faculty. We adopted a positive psychology theoretical framework to account for differences in their emotional reactions to the COVID-19 pandemic and designed a model based on psychological resilience. Such a model may deepen our understanding of the dynamics of change imposed on educational systems worldwide, and the ways faculty and teachers react and adapt to them.

Resilience is a concept pertaining to individual coping resources allowing people to cope with challenge. Resilient individuals show less distress and are more likely to grow and develop as a result of a challenging experience (Ong et al., 2006; Polizzi et al., 2020). Resilience allows them to weather hardships, crises, and stressful conditions, for example, the COVID-19 crisis (Fletcher & Sarkar, 2013). We posited that resilience, together with some key demographic measures, would be associated with the extent to which faculty members experienced positive and negative emotions as a result of the changes they had to make to the way they teach and guide students. We posited this association would be mediated by the extent to which they perceived the changes as either a threat or an opportunity for development. The above association pattern suggested in our model may provide an insight into how protective factors

and characteristics work to buffer the effects of stressful events and threats to allow more

effective function and adaptation. This association was examined in a sample of Israeli College

faculty.

COVID-19 and Shifts in Teaching and Learning Methods in Academia

COVID-19 is a global crisis without precedent and, as such, was entirely unexpected in

educational research. The pandemic has caused the largest disturbance in educational history.

The flu pandemic of 1918 forced the closure of schools and brought the formal education system

to a standstill. But for COVID-19, schools the world over have continued to work, attempting to

adapt to an abrupt change almost overnight (Hall et al., 2020). The pandemic has impacted

teachers and learners at all levels – from pre-school to primary and secondary schools, from

technical and vocational training institutions to universities and colleges. It has presented

educational systems with both challenges and opportunities: on one hand, states a report for the

UN, more than 96% of the world pupil/ student population have experienced arrested and

fragmented learning as a result of the crisis, of whom many (various reports around 66%)

expressed a sense of threat and distress. On the other hand, the crisis has elicited numerous

attempts to incorporate new technologies, new pedagogies and creative solutions to the above

challenges (United Nations, 2020).

Education systems around the world are attempting to ensure the continuity of education

in diverse settings and target populations. The shift towards online teaching and learning can be

described as a paradigm shift, with teachers incorporating specific pedagogical, content, and

technological knowledge into their teaching methods to accommodate 'Emergency remote

teaching/ distance learning' (Hodges et al., 2020). The goal has been to ensure the continuity of

teaching for all students without sacrificing quality and depth (as much as possible) (OECD,

2020). Online educational resources used to support educational continuity include curriculum

resources such as lesson plans, videos, and interactive learning modules that directly support

students' acquisition of knowledge and skills, professional development resources supporting

teachers in their new kind of teaching, and tools helping with the management of teaching and

learning, such as communication or learning management tools (Reimers et al., 2020).

Like other levels of education, to handle the new reality, higher education generally and

teacher education specifically have moved towards online and distance learning and teaching.

Although most teaching faculty were familiar with Information and Communication Technology

(ICT) experience before the pandemic (Maskit et al, 2017), the whole system of instruction had

to shift towards e-learning models as the main foundation of teaching and learning. Some

universities in the UK had already developed the infrastructure and resources needed to provide a

quality learning experience for students, but the majority did not have the resources to support

distance learning of the same quality as face-to-face teaching (Hall et al., 2020). In China, most

universities started online education, and millions of faculty members are now teaching in front

of a computer screen (Bao, 2020). In the Philippines, higher educational institutions have moved

towards online teaching (Toquero, 2020). Online learning is no longer just for some students and

not for others (Tesar, 2020).

This technical shift requires a deeper pedagogical change, including rethinking teaching

strategies, teaching methods, subject matter content, the curricula, class management, and even

educational orientation (Maskit, 2011). As Fullan and Donnelly (2015) point out, "In cases

where pedagogy is weak, it is unclear how technology can assist and accelerate learning" (p. 26).

The construction of pedagogical change has required educators to develop new curricula

following pedagogical principles for teaching in a digital environment. These include the

promotion of techno-pedagogical skills and technological and techno-pedagogical teaching

methods, addressing the diversity between students while striving for equal opportunities for

learning and appreciation, connecting teachers' fundamental beliefs with technology, and

fostering fundamental principles of online learning (Motala and Menon, 2020; Secundo et al.,

2021). There is an essential need to understand the significance of the transition toward online

teaching and its consequences on educators' teaching, especially their thinking, beliefs,

experiences, social ,emotional, and personal aspects (Orland-Barak, 2020). Some of these

concerns drive the current study.

The key pivot for our study was understanding how teaching college faculty have

experienced COVID-19, notably their emotional reactions to the rapid and unexpected changes

in their teaching. Understanding these dynamics may serve as basis for a better understanding of

wellbeing and distress among faculty members in such trying times, as emotional experiences are

often found to be antecedents of wellbeing (Tappolet and Rossi, 2015).

Perception of Change: Threat versus Opportunity

A main element of wellbeing during times of uncertainty and change is how individuals

and groups perceive and interpret change. People are often uncomfortable with change, for

example, in organizational settings, as it may threaten their habits, status, sense of control and

efficacy, and even professional identity (Fugate et al., 2012). Thus, immediate change or

uncontrollable change may be both unwanted and threatening.

Perceiving change as a threat is not a default option, however. Individuals may also see

change (even an uncomfortable or unexpected change) as an opportunity to improve the way

they have done things for years, to grow as professionals and individuals (Salavuo, 2008). The

theoretical framework of positive psychology helps us construe change, even traumatic change,

as a chance to grow, to re-assess values and priorities, and strive toward self-betterment

(Calhoun & Tedeschi, 2014). The term 'post-traumatic growth' has been coined to represent the

potential for self-betterment in the aftermath of even the harshest of challenges and changes

(Tedeschi & Calhoun, 2004).

Resilience, Its Antecedents and Main Consequences

The way we perceive change (as threat or opportunity) is often shaped by our personal

coping resources. One of the leading concepts in this area is psychological resilience: a

psychological amalgam of potentials allowing individuals to mitigate challenges and hardships

while maintaining a sense of purpose, control, and wellbeing (Davidson, 2009). Resilience is

determined by a multitude of factors, from early life experiences and role-models, to social

support and so on. In organizational and work settings, some evidence suggests organizational

status, tenure, and job design play a significant role in work related resilience (Meneghel et al.,

2016). We also know that some personal demographics, such as gender and age, may correlate

with resilience (Kimhi, et al., 2020; Sun & Stewart, 2007).

Resilience is documented to associate positively with wellbeing (Cosco et al., 2017).

Since wellbeing is often defined as the ratio between positive and negative experiences in an

individual's life, it makes sense to look at wellbeing, especially at a given point in time, as the

product of positive and negative emotional experiences (Diener et al., 2010). Within the

educational context, instructors' emotions are often associated with their work performance,

tenure on the job, and effective learning outcomes (Chen, 2016; Muntaner-Mas et al., 2017).

Hypotheses and Model Development

Based on the rationale developed above, we structured our proposed model. The model

offers a theoretical link between personal-organizational factors, the perception of change as

either an opportunity or threat, and personal emotional experiences at the height of the COVID-

19 pandemic. Figure 1 summarizes the model's paths.

Figure 1

Theoretical model
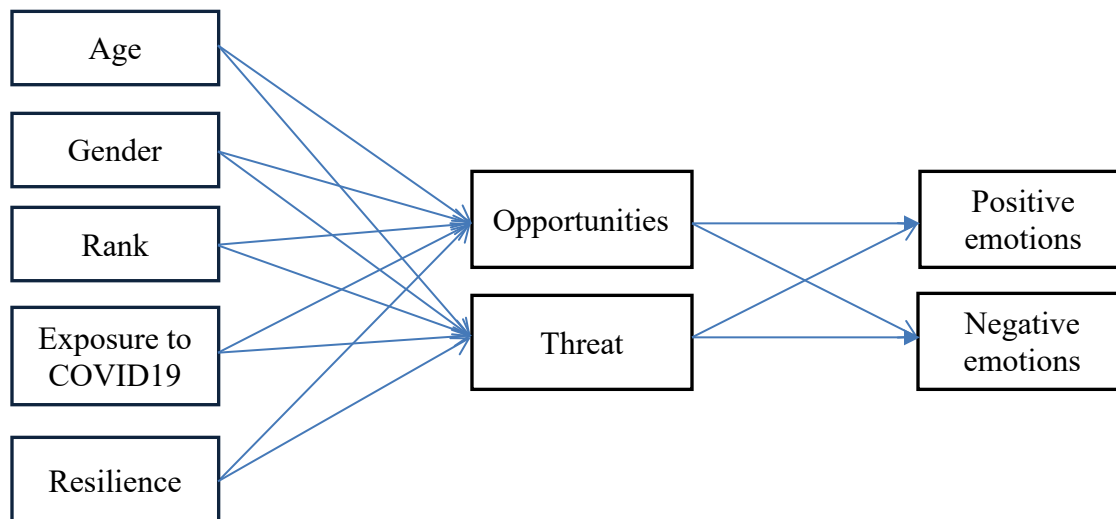
According to this model, based on the literature, we hypothesized that the perception of threat/

opportunity would mediate the associations between demographics, resilience, and positive/

negative emotions.

Model Variables

      Demographic Variables. A few common demographic variables have been shown to be

associated with how individuals manage their emotions in the face of challenges, especially

gender, suggesting women express higher levels of emotions in general and more negative

emotions than men (Gerstel & Clawson, 2014) and age, with typical findings showing a negative

association of age with wellbeing and resilience (Zacher & Griffin, 2015). We therefore included

age and gender in our model. We also included variables associated with access to resources in

the academic system (academic rank) and the level of personal exposure to COVID-19 (just

heard of it, knowing someone who contracted the virus, or suspected of it, and so on, to being

sick with the virus), an obvious factor that may influence the perception of threat and negative

emotional reaction.

Resilience. Resilience, as reviewed above, represents individual and group psychological

potential to resist stress and also to develop by coping with stress. Studies provide ample

evidence of the role played by resilience in coping with crises, challenges, and extreme

conditions (Edward & Warelow, 2005; Mayordomo et al., 2016). Therefore, resilience was a

measure of coping resources and personal hardiness at the individual level in our model.

Change as Opportunity or Threat. The model includes a self-report representation of

the subjective perception of change as an opportunity or a threat (Drach-Zahavy & Eraz, 2002).

The literature suggests that the perception of opportunity is associated with empowerment, self-

efficacy, and effective coping while the perception of threat is associated with stress and less

effective coping.

Emotional Reactions to Change. The outcome variables in our model were the

emotional experiences of faculty as they faced the changes caused by COVID-19. The most

basic categorization of emotional reaction is positive and negative (Kuppens et al., 2008), and

this, in turn, translates into the general experience of wellbeing versus distress. Surely, human

emotions are broader and deeper than basic 'positive' or 'negative' emotion, however in the

context of this study, we use this categorization based on a widely validated system and measure

(see the method section for more details). Moreover, based on the literature associating positive

and negative emotions with wellbeing (e.g. Lennard et al., 2019) we emphasize the importance

of emotional outcomes of coping with change as an antecedent of wellbeing vs. distress.

Hypotheses

Based on the above discussion, we hypothesized age would be negatively associated with the perception of opportunity and positively associated with threat. Women would report a more positive approach to change (opportunity vs. threat) than men. Job rank would positively be associated with the perception of opportunity and negatively with threat, and resilience would be positively associated with the perception of opportunity and negatively associated with stress. Opportunity/ threat, in turn, would be correlated with the emotional reactions.

Method

Sample

Ninety-eight faculty members from teaching colleges in Israel participated in this study, 74% women and 26% men, mean age 52.44 (sd=9.14). About 30% were associate professors or instructors; 37% were senior lecturers; 24.50% were assistant professors; the remaining 8.50% were full professors. The majority (74%) had not been personally exposed to COVID-19; 22% had someone in their social circle diagnosed with COVID-19, and the remaining 4% reported either being in lockdown with possible COVID-19 infection or actually being diagnosed with the virus.

Instruments

Data were collected using self-report questionnaires. Some were designed for this study, and the rest were well-established and validated measures.

Demographics and Level of Exposure to COVID-19. We designed a demographic questionnaire in which participants reported their gender, age, education level, rank, position, and the extent to which they were exposed to the virus risk. The latter was measured on a 5-point

Likert-type scale, ranging from 1 (only through the media but not personally) to 5 (being

hospitalized or in isolation with a verified COVID-19 infection).

Resilience. The level of resilience was assessed using the Connor-Davidson Resilience

scale (CD-RISC) (Connor & Davidson, 2003). The questionnaire comprises 25 items rated on a

5-point Likert-type scale, ranging from 1 (rarely or none of the time) to 5 (most or all the time).

The reported reliability of the questionnaire's items is .89.

Perceived Opportunity/ Threat. Perceived opportunity and threat were assessed using a

questionnaire based on definitions from Jackson and Dutton (1988). Twelve items assessed

perceptions of various threats (e.g., to their academic status, to their professional habits, etc.) and

opportunities (e.g., to learn new techniques, to assign more responsibilities to students, to

develop personally, etc.). Participants ranked their agreement with each item using a 5-point

Likert-type scale. The reliability of these items was .88 for threats and .79 for opportunities.

Positive and Negative Emotions. Participants' emotions were assessed using the short

version of the PANAS, a popular self-report measure used in diverse settings to assess

emotional/affective experiences (Thompson, 2007). This 20-item scale contains 10 positive

affect descriptions and 10 negative ones. The measure was found to be a reliable and useful

measure of emotional/ affective responses, with internal reliability indices (Chronbach's Alpha)

ranging .82-.89.

Procedure

The study was approved by the authors' IRB. Potential participants were approached

through email lists of faculty in various teaching colleges in northern Israel. The questionnaires

were administered online. The study was presented as "a study of faculty reactions and feeling

during the COVID19 outbreak". We assured participants that their identity would remain

confidential, and the data they provided could not be associated with them. We did not actively

recruit specific participants beyond posting the link to the study questionnaires in a general email

to the faculty of various colleges in Northern Israel. Only five participants dropped out during the study; we have no information about refusal rates due to the nature of our questionnaire dissemination.

Results

Descriptive Statistics

Before testing the proposed model, we examined the distributions and inter-correlations of the main study variables. These are summarized in Table 1.

Table 1

Descriptive statistics and inter-correlations among the study variables (n=98)

	Mean sd	1	2	3	4	5	6	7	8	9
1. Age	52.44 9.14	-								
2. Gender*		.13	-							
3. Rank*		.33**	-.07	-						
4. Exposure	1.31 .58	-.10	-.01	.05	-					
5. Threat	1.98 .88	0.01	-.30**	.15	.14	-				
6. Opportunity	3.37 .66	.20*	.23**	-.12	.01	-.12	-			
7. PANAS+	3.64 .64	.19*	.24**	-.04	.00	-.17	.30**	-		
8. PANAS-	1.89 .67	-.19*	-.26**	.15	.02	.39**	-.23*	-.22*	-	
9. Resilience	4.03 .51	.07	.11	-.07	-.10	-.35**	.28**	.68**	-.42**	-

* For descriptive statistics, see the sample description. Correlations for these variables are Spearman's rho.

PANAS – Positive And Negative Affect Scale.

The results show acceptable distributions of our measures with no significant floor or ceiling effects. The correlation matrix provided preliminary and partial support for our proposed model:

resilience and some of the demographic items were correlated with the perceptions of

threat/opportunity and with emotional reactions. As expected, resilience showed associations

with both negative and positive emotional experiences. Next, we tested our model as a whole.

Model Testing

We tested the model using path-analysis in AMOS 20.0. The original model did not show

a good fit to the data, as some of the hypothesized paths were not significant. After we deleted

non-significant paths, the resulting model was well supported by the data, described in Figure 2.

Figure 2

The empirical model
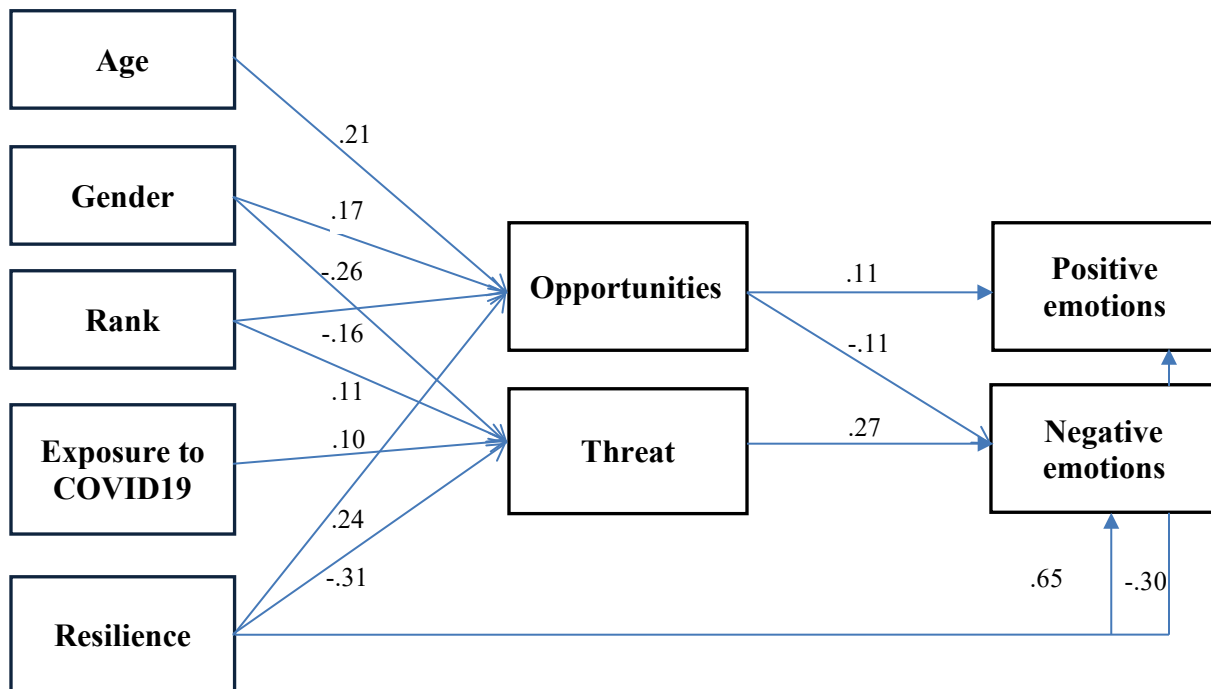
Note: Error terms were omitted from the model for the sake of ease of presentation.

Goodness of fit indices were as follows: Chi-square = 29.95, df=22 p>.05; CFI = .92, NFI = 91, RMSEA = .06.

Beyond the demographics (age, gender, academic rank, and exposure), resilience was associated with both the perception of threat vs. opportunity and positive and negative reactions to the COVID-19 challenge. The model showed partial mediation, as resilience also had significant and direct associations with positive and negative affect.

Discussion

The COVID-19 pandemic threw education systems the world over into a crisis. Educators and learners alike had to adapt to new means of teaching and learning. Educators had to reconsider their existing approaches and rethink their pedagogical methods. In teaching institutions, faculty members found themselves facing a new situation: how to reinvent themselves as educators and teachers, almost overnight (Crawford et al., 2020). The literature tells us that unexpected and dramatic changes take a toll on our coping resources, thus potentially posing a threat and causing stress (Burks & Martin, 1985). At the same time, such changes can be perceived as an opportunity for change and growth, minimizing stress and negative emotions. We tested a model associating basic demographic measures and resilience with positive and negative emotional reactions through a mediating process of perception (opportunity or threat) of the changes taking place. The model offers a comprehensive understanding of factors and processes underlying faculty members' reactions to work demands during the COVID-19 crisis.

The proposed model received partial support. While the full model did not receive adequate support from our data, enough of our hypothetical paths were supported to suggest that contrary to our hypothesis, age was positively associated with the perception of opportunities. Meanwhile, gender, exposure to COVID-19, and resilience were associated, as hypothesized,

with the perception of both threats and opportunities. Surprisingly, academic rank showed an opposite association from the one we hypothesized, suggesting higher ranking faculty perceived the change as threatening more frequently than they saw it as an opportunity. A possible explanation is academic status. Senior faculty are respected. Abrupt changes may make them feel their reputation and status are on the line; thus, they may perceive the pandemic-induced changes as threatening. Another possibility is a reluctance to change the work habits which led them to the high-ranking position in the first place. Why would age be positively associated with the perception of opportunities? One possible explanation may have to do with experience and self-confidence. Age may be associated with deeper, broader experience in coping with challenges thus leading to a broader perspective on challenges seeing them in the larger scheme of things also as opportunities.

Resilience was also directly associated with our outcome variable, emotional experience, supporting its hypothesized role as a buffer against negative experiences and a facilitator of positive emotions in times of change and uncertainty. As hypothesized, the perception of opportunity showed a moderate but significant association with the outcome variables of positive and negative experience; the perception of threat showed a higher positive association with negative emotions, as expected, but not with positive.

The model highlights the role of certain demographics and resilience in faculty members' reaction to the COVID-19 induced changes. It suggests the mediating role of perception and interpretation of change as either a threat to self, work routines, status etc. or an opportunity for improvement and learning, as suggested by the theory of psychological resistance. These findings accord with existing evidence on resilience (e.g., Kimhi & Shamai, 2004). At the same

time, they add to our understanding of the dynamics of how demographic variables, such as

academic rank, age, and gender, are associated with faculty members' perceptions.

The results also add to the literature on resilience in general – especially by proposing a

process by which resilience may work to promote wellbeing in difficult and challenging times,

specifically by altering our perception of threat versus opportunity. While this association is

often suggested by both theory and indirect empirical evidence (Arce et al., 2009), our results

show a direct path between resilience, specific perception patterns, and emotional outcomes. It is

interesting to note that perceptions only partially mediated the association between resilience and

the emotional outcomes in our study. Direct paths were also identified, suggesting resilience may

work through additional paths (other types of perceptions? emotion regulation?) to shape

emotions.

Implications for Practitioners

COVID-19 has emphasized the importance of well-trained teachers and effective,

flexible, and adaptable higher education systems. Teacher education institutions find themselves

in a position from which they may lead the way, as institutions pivot from crisis management to

planning for the longer term. Chan (2020) comments, "Higher education needs to prepare for a

different future in which we educate young adults and adult learners" (p. 9). To this Crawford

and colleagues add: "Universities have a role in the transition to support a society that needs to

stay at home for periods of time, and higher education may be a valuable addition to their

productive home environments in the short and potentially medium-term" (Crawford et al., 2020,

p. 20).

The pedagogical approaches and principles used in higher education institutes during the

shift towards digital education (Crawford et al., 2020) may point the way towards the formation

of future models of practice beyond COVID-19. Recent research findings have also suggested

ways to support higher education students while moving towards online learning (Crawford,

2020) and virtual teaching (Keefe, 2020).

Our findings have practical implications for policy makers, professionals, and

practitioners beyond the COVID-19 crisis. We have identified factors associated with how

faculty perceive and react emotionally to the changes imposed by the COVID-19 crisis. The

study highlights the role of individual demographic characteristics (such as seniority and age). At

the same time, it emphasizes the role of resilience and individual perceptions of change. While

enormous resources have been dedicated to student support in these trying times (Raaper &

Brown, 2020), little attention has been paid to faculty, their coping resources, and reaction

patterns. Our results suggest higher education systems may benefit from investing in designing

and implementing faculty support systems aimed at providing additional resources so faculty

may adapt and flourish in times of abrupt change, focusing on resilience as a key factor. On the

general level, our findings suggest interventions may target enhancing a sense of resilience

within the academic settings, and the way it modifies our perception of the unexpected whether

as a threat or an opportunity. In addition, our result may suggest that younger but more

academically senior faculty might be the most vulnerable and interventions may prioritize them.

Study Limitations

Admittedly, the study had some limitations. The sample, though sufficient to provide

adequate statistical power, was modest in size and not necessarily representative of the teaching

college faculty population in Israel, let alone other countries. For obvious reasons and constraints

caused by the COVID-19 pandemic, we used self-report measures and online questionnaires to

collect our data, a methodology with both merits and limitations (Chan, 2009). Finally, the

correlational nature of our study design prevented us from inferring causal associations from our

results.

Directions for Future Research

Larger samples representing diverse target populations within the global educational

community may help generalize our results to other settings. In addition, using behavioral

measures to assess emotional outcomes or perception patterns may contribute to the internal

validity of our model. Finally, exploring teachers' voices by including qualitative questions may

enrich our results, while shedding light on teachers' inner worlds.

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