

Identification of predictor factors of post-traumatic growth (PTG) post COVID-19 Pandemic: A systematic literature review

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Abstract

COVID-19 pandemic left so much unknown and unexplored knowledge in the field of Positive Psychology. This systematic literature review (SLR) aims to identify the factors that can predict posttraumatic growth after the traumatic exposure of COVID-19 pandemic. This SLR employed the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) guidelines, with article selection criteria formulated using the Populations, Exposure, Outcomes, and Study Design (PEOS) framework. This SLR found that the only consistent external predictive factor for PTG is social support, while the consistent internal factors from inside the individual are self-efficacy, resilience, adaptive coping, and rumination. Emotional creativity and psychological flexibility were other internal factors considered as predictors. The demographic factors which are considered can predict PTG are being female, age, and economic status. The results of this literature review found that most studies on predictors for PTG came from the geographical setting of China, with Cross-Sectional as the most preferred study design. Findings from this SLR contribute to future research agenda concerning study design and geographical setting, as well as mental health promotion to increase PTG in the community after years of COVID-19 pandemic.

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INTRODUCTION

The World Health Organization (WHO) declared the coronavirus or COVID-19 outbreak a pandemic on March 11, 2020. The spread of the COVID-19 pandemic around the world occurred massively and affected various aspects of life, such as health, the economy and society. In facing these problems, various governments began to implement policies to prevent COVID-19 transmission, including Large-Scale Social Restrictions (PSBB), maintaining physical distance (social distancing), independent isolation, lockdown, and the use of personal protective equipment (PPE) (Juaningsih et al., 2020; Wibawa & Putri, 2021). In addition to government action and the implementation of various policies to prevent virus transmission in the community, PSBB has also changed various lifestyles of the community in maintaining health and increasing body immunity.

It has been found that various psychological reactions emerge as an effort to adapt to uncertain and stressful situations. The COVID-19 pandemic is often referred to as a traumatic and stressful event because it has met the characteristics of a life-threatening event and triggers unusual psychological reactions (Greenberg & Rafferty,

2021; May, 2022; Miller, 2020). Uncertain situations and changing government regulations and policies have contributed to changes in psycho-social environmental conditions, giving rise to the potential to threaten people's mental health, such as depression, anxiety, stress, and mild to severe disorders (Falobi et al., 2023; Febriani et al., 2021; Patrika & Villaruel, 2021; Sulistyorini et al., 2022). Although the COVID crisis is already over, long-term effects caused by the threatening situation during the pandemic might develop in the post-COVID era, either negatively or positively. Negative impacts on mental health might take the form of Post Traumatic Stress Disorder (PTSD), and positive impacts may take the form of positive growth or Post-traumatic Growth (PTG). Post-traumatic growth is a positive change after a crisis or stressful event that triggers distress in the individual (Taku et al., 2009; Tedeschi & Moore, 2016). PTG is a form of transformation that is positive and different from the usual forms of coping mechanisms used in dealing with difficult situations (Linley & Joseph, 2004).

Based on the results of previous research, not everyone can experience growth after going through an adversity because growth does not occur by itself and is influenced by various factors that can encourage individuals to experience PTG. There are various forms of PTG and each is caused by a combination of each individual's responses to traumatic situations. Thus, each individual's post-traumatic growth experience may vary. According to Tedeschi and Moore (2016), there are five common types of post-traumatic growth, including personal perseverance, better relationships with people, an appreciation for life, new possibilities and spiritual change. As an extraordinary event that has befallen all of humanity worldwide, the COVID-19 pandemic is a traumatic event that has the potential to produce post-traumatic personal growth that has not yet been widely studied, as well as predictors for achieving this personal growth.

This article aims to identify factors that can predict the occurrence of PTG after years of traumatic exposure of COVID-19 through reviewing the literature of previous research. The findings of this study will be referred to the fields of Clinical Psychology, Community Psychology, as well as Mental Health to develop programs to facilitate people in the community to promote and encourage their positive growth after exposure to traumatic events during COVID-19 pandemic.

METHODS

Screening process

This literature review was conducted by selecting relevant articles based on PEOS criteria (Population, Exposure, Outcomes, and Study Design). PEOS is a technique of literature review that aims to make it easier for researchers to find the journal article that will be excluded and included (Bettany-Saltikov, 2010). Based on this framework, the research questions of this study are formulated as “What factors determine or predict people or groups of people who are exposed to COVID-19, to achieve PTG? Below is the description of PEOS criteria in this study (see Table 1).

Table 1. PEOS criteria

Criteria	Description
Population	University Students, Healthcare workers, and other parties
Exposure	Covid-19 pandemic
Outcomes	Factors that predict post-traumatic growth, and an improved psychological state led to positive changes.
Study Design	Quantitative, Qualitative.

Search strategy and Data source

The search was conducted during June 2023 through Google Scholar, PubMed Central, Elsevier, Frontiers, and Wiley database searches. The keywords used were "predictor factors", "posttraumatic growth", "post-traumatic growth" and "COVID-19 pandemic". The inclusion criteria applied were full-text articles written in English or Indonesian, and published between January 2020 to May 2023. Criteria for inclusion were those that the research findings are significant PTG in the context of the COVID-19 Pandemic.

Data Extraction and Analysis

After selecting articles using PEOS criteria, the screened articles were then adjusted to the inclusion and exclusion criteria followed and described in the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) diagram. The use of PRISMA diagram enables the systematic review to be done carefully for further judgment and decision about reducing any duplication of certain publications (Shamseer et al., 2015). To ensure the eligibility of each article for further process, two people were involved to critically appraise it. Those two were a master's student in Clinical Psychology and a Clinical Psychologist. The result of that appraisal is shown in Figure 1.

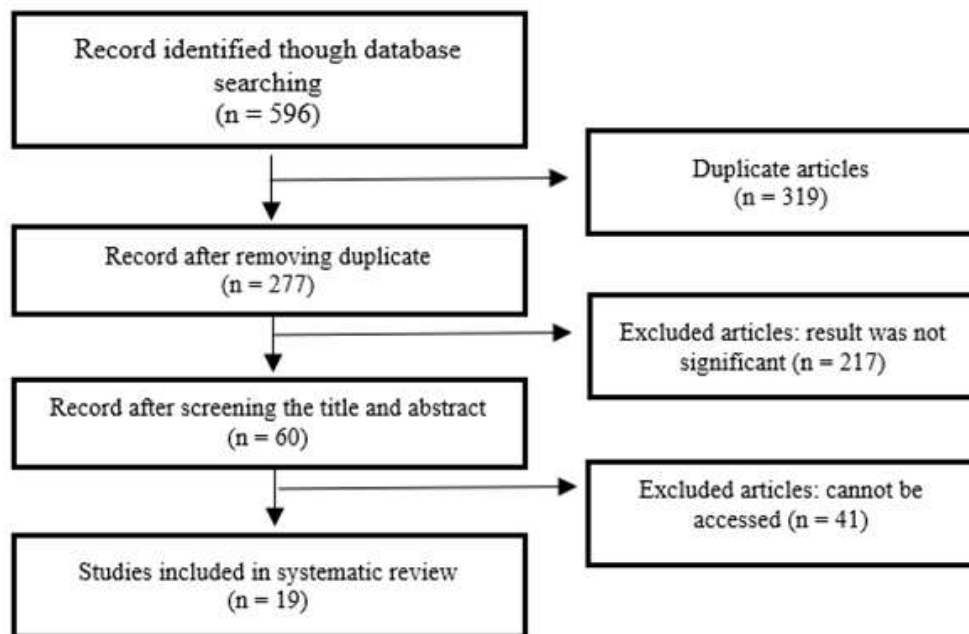


Figure 1. Database Flow diagram (PRISMA)

RESULTS AND DISCUSSION

The results of article selection using PEOS criteria and further selection using the PRISMA diagram, finally found 19 articles that were relevant to the research objectives. The selected articles came from China (n=11), the United States (n=2), Turkey (n=1), Spain (n=1), Italy (n=1), the Netherlands (n=1), the United Kingdom (n=1), and combination countries (n=1). The research designs were mostly Cross-Sectional (n=13), Longitudinal Studies (n=5), and Qualitative studies (n=1). The following is a summary of the results of the review of 19 articles that were netted to answer the research objectives (see Table 2).

Table 2. Review Result

No.	First Author, Year	Research Design	Study Location and Sample Size	Title	Results and Conclusion	Implication
1.	(Cheng & Liu, 2022)	Cross-sectional	China 1165 University Students	Exploring Posttraumatic Growth after the Covid-19 Pandemic	Some factors that influence PTG after the pandemic, include social support, perceived risk of infection, and psychological distress.	The importance of psychological interventions and social support for travelers after experiencing traumatic events. In addition, tourism management and government agencies can also work together to reduce the perception of the risk of infection and promote a safe travel environment.
2.	(Van der Hallen & Godor, 2022)	Longitudinal Study	The Netherlands 70 University Students	COVID-19 Pandemic related posttraumatic growth in a small cohort of university student: A 1-year longitudinal Study	Factors such as positive affect, social support, social skills, planning behaviors, and goal efficacy contribute to the development of PTG. It highlights the importance of psychological factors in promoting growth and resilience in challenging situations.	The implications of this study illustrate the two situations and see the importance of support, social skills, and positive affect in predicting PTG.
3.	(Northfield & Johnston, 2022)	Cross-sectional	United States of America 296 women (18-78 years old)	“I get by with a little help from my friends”: Posttraumatic growth in the COVID-19 pandemic	There is a strong positive relationship between psychological distress and PTG that is moderated by social support, such that the relationship was strong at higher	The implications of this study can contribute to the understanding of PTG in uniquely traumatic events, highlighting the importance of age and the sources of social support that can be used with social support intervention

No.	First Author, Year	Research Design	Study Location and Sample Size	Title	Results and Conclusion	Implication
					level of social support and perceived social support that came from friends and family.	designs to facilitate positive psychological change for individuals exposed to trauma.
4.	(Xie & Kim, 2022)	Cross-sectional	China and Sweden 181 (>18 years)	Post-traumatic Growth during COVID-19: The Role of Social Support, Personality, and Coping Strategies	It was found that individuals who receive social support, and have personality traits (extraversion, sociability, conscientiousness, and emotional stability) can be mediated by coping strategies that focus on handling the problems to predict PTG.	The findings of this study have the potential to guide intervention efforts to promote positive changes during the pandemic.
5.	(Cerit & Kaplan, 2022)	Cross-sectional	Turkey 402 nursing students	Post Traumatic Growth during Covid 19 Outbreak and The Affecting Factors: Results of a Cross Sectional Study Among Turkish Nursing Students	It was found that female students scored higher on change in self-perception, change in life philosophy, and PTG compared to males. This difference could be related because females tend to deal with self-reflection than males. In addition, a stable economic status may also support high PTG	Both men and women can take more time for themselves which can positively affect the level of PTG.
6.	(Celdrán et al., 2021)	Cross-sectional	Spain 1009 Elderly Individuals (>55 years)	Post Traumatic Growth among Older People after the Forced Lockdown for the Covid-19 Pandemic	This study found a diversity of PTG cages, and only a quarter of the population within this study had high PTG values. Psychological effects of the COVID-19 pandemic on the older population and shows that the lockdown period is not the main determinant of PTG, but rather conditions full of uncertainty	This research can serve as a basis for the design of interventions aimed at reducing social isolation and loneliness during periods of lockdown and physical distancing in order to promote PTG in older adults.

No.	First Author, Year	Research Design	Study Location and Sample Size	Title	Results and Conclusion	Implication
					require a long time to process the consequences of the pandemic, whether positive or negative.	
7.	(Landi et al., 2022)	Longitudinal Study	Italy 382 adults (>18 years)	Posttraumatic Growth in People experiencing high Post-traumatic Stress during the COVID-19 pandemic: The Protective role of Psychological Flexibility	The finding indicate that higher levels of psychological flexibility are associated with higher levels of PTG in individuals with high PTS about COVID-19. However, there is no relationship between psychological flexibility and PTG in individuals with low PTS	The importance of Psychological flexibility in promoting adaptive responses to trauma and improving PTG in individuals experiencing high stress. It is therefore important to establish preventive measures that target psychological flexibility especially in self-reported individuals with high PTS such as using ACT (Acceptance and Commitment Therapy) interventions.
8.	(Zeng et al., 2021)	Cross-sectional	China 881 University Students	The influence of Post-Traumatic Growth on College Students' Creativity During the COVID-19 pandemic: The Mediating Role of General Self-Efficacy and the Moderating Role of Deliberate Rumination.	PTG positively predicts creativity in college students during the COVID-19 pandemic. Self-efficacy mediated the relationship between PTG and creativity and deliberate rumination moderated the second part of the mediation path between PTG and creativity.	Effective measures can be taken by promoting PTG and improving self-efficacy to develop creativity. This can serve as a basis to provide psychological counselling services for students, offering them access to psychological problems, timely follow-up by professionals, and regular visits so as to give better attention to students' PTG.
9.	(Xie et al., 2022)	Longitudinal Study	China 227 University Students	The Mediating role of personal values between Covid-19 related posttraumatic growth and life satisfaction among Chinese college students: A two-wave longitudinal	This study shows that PTG is a positive factor in life satisfaction that is mediated by personal values.	Psychological methods can be used to design more positive psychological interventions to assist students struggling with stress and reinforce positive emotions and experiences in their current lives.

No.	First Author, Year	Research Design	Study Location and Sample Size	Title	Results and Conclusion	Implication
10.	(Li & Hu, 2022)	Cross-sectional	China 463 University Students	Post-Traumatic Growth and Psychological Resilience During the COVID-19 Pandemic: A Serial Mediation Model	PTG, psychological resilience, positive coping styles, and cognitive reappraisal are positively correlated with each other. Direct and positive effects on psychological resilience can also be mediated by coping styles and cognitive reappraisal. Students with high levels of PTG tend to report increased use of positive coping strategies, which further facilitates their cognitive reappraisal, and subsequently, increases their psychological resilience	The findings suggest that students with PTG develop more positive coping styles and strategies in cognitive reappraisal, thus allowing them to maintain higher levels of psychological resilience.
11.	(Hyun et al., 2021)	Longitudinal Study	China 805 Young Adult	Psychosocial correlates of posttraumatic growth among U.S. young adults during the COVID-19 pandemic.	Resilience and family connectedness significantly predicted higher levels of PTG, and distress tolerance significantly predicted lower levels of PTG after accounting for sociodemographic characteristics and negative affect factors.	PTG can manifest differently in individuals, based on circumstances and sociodemographic factors (psychosocial, racial, cultural, traumatic exposure, and other typical psychological conditions), making it necessary to understand the predispositions and contributions that can stimulate PTG. This can serve as a foundation for screening, assessment, and interventions to optimize the psychological well-being of the population in the future.
12.	(Matos et al., 2021)	Cross-sectional	21 Countries 4057 Adults	The Role of Social Connection on the Experience of COVID-19	Social relationships (compassion and safety) may increase the likelihood of PTG in the context of	Social connections play an important role in how individuals can adapt and cope with the challenges of around the world, so it

No.	First Author, Year	Research Design	Study Location and Sample Size	Title	Results and Conclusion	Implication
				related Post-Traumatic Growth and Stress	perceived threats during the pandemic. Socialconnection also increases the likelihood of experiencing post-traumatic symptoms and this may be due to the physical loss of social connection (lockdown) and fear for the safety of others during the pandemic.	is possible to establish a strategy for community-based programs to support psychological resilience. This template during the pandemic can be an anticipatory step when facing similar crisis situations.
13.	(Tian & Wang, 2023)	Cross-sectional	China 1185 University Students	The Effect of College Students' Self-Efficacy on Post-Traumatic Growth Based on SPSS Data Analysis The Mediating Role of Social Support.	Self-efficacy can directly predict PTG and can also be indirectly predicted through the mediation of social support.	This study differs from previous studies that used PTG in physical illness and illustrates the role of PTG on emotional development and cognition from a post-pandemic perspective.
14.	(Xu et al., 2023)	Cross-sectional	China 881 University Students	The Influence of Deliberate rumination on the Post-Traumatic Growth of College Student during the COVID-19 Pandemic and the Moderating Role of Self-Efficacy	Intentional rumination has a positive relationship with post-traumatic growth, and this relationship is moderated by self-efficacy. Self-efficacy strengthens the relationship between intentional rumination and post-traumatic growth. Individuals who have high self-efficacy tend to experience greater PTG when they engage in intentional rumination.	The practical implications in these findings are that if individuals experience a traumatic event, close relatives, friends, or teachers should take active guidance actions to help them increase the frequency of intentional self-reflection and increase their self-efficacy to facilitate the developmentof PTG.
15.	(Xu et al., 2022)	Cross-sectional	China 457 University	The Impact of Intrusive Rumination on College	Intrusive rumination affects creativity directly and indirectly	This study provides new insights into intrusive rumination towards college students'

No.	First Author, Year	Research Design	Study Location and Sample Size	Title	Results and Conclusion	Implication
			Students	Students' Creativity During the Covid-19 Pandemic: the Mediating Effect of Post Traumatic Growth and the Moderating Role of Psychological Resilience	through PTG. At the same time, resilience plays a moderating role between intrusive rumination and creativity. Intrusive rumination and PTG are strongly correlated when the level of psychological resilience is higher.	creativity by increasing the growth of PTG, and how resilience has a positive moderating effect on the relationship between intrusive rumination and PTG.
16.	(Shigemoto, 2022)	Cross-sectional	Texas 71 Adults (>18years)	Association Between Daily Rumination and Posttraumatic Growth During the COVID-19 Pandemic: An Experience Sampling Method	The general public who engage in deliberate rumination is more likely to report higher levels of PTG during the COVID-19 pandemic.	The importance of increasing the intensity of deliberate rumination to improve the growth of PTG.
17.	(Lewis et al., 2022)	Longitudinal Study	The United Kingdom 1424 Adults	Post traumatic growth related to the Covid-19 Pandemic among Individuals with Lived Experience of Psychiatric Disorder	There is a strong relationship between high levels of PTG and social support, perceptions of the pandemic, and psychological well-being.	Social support and perceptions towards the pandemic are the most important aspects of PTG in dealing with the COVID-19 pandemic.
18.	(Zhai et al., 2021)	Cross-sectional	China 423 Adults (>18 years)	Emotional Creativity Improves Posttraumatic Growth and Mental Health During the COVID-19 Pandemic	Emotional creativity that is mediated by social support has a positive relationship with PTG, so creativity has an important role as a coping mechanism for stressful events related to COVID-19.	This study provides a better understanding of how emotional creativity can be accompanied by social support to promote mental health and PTG.
19.	(Jiang et al., 2022)	Phenomenology	China 13 nurses (aged >26 years)	Post-traumatic growth experience of first-line emergency nurses infected	The study describes the process of PTG in nurses infected with COVID-19, namely, a period of stress a period of	These findings have implications related to a deeper understanding of the process of PTG in nurses infected with COVID-19.

No.	First Author, Year	Research Design	Study Location and Sample Size	Title	Results and Conclusion	Implication
				with COVID-19 during the epidemic period—A qualitative study in Shanghai, China	adjustment, and a period of growth. Social support from the hospital management had a crucial role in facilitating positive growth among the infected nurses.	

PTG Predictor Factors

In general, the only external predictor factor for PTG is social support, while the internal factors of psychological characteristics inside the individual are self-efficacy, adaptive coping, deliberate rumination, resilience, emotional flexibility, and other factors. The demographic factors that can predict PTG are being female, age, and economic status.

Social support.

This has been identified as the consistent external contributor in predicting positive growth after traumatic exposure to the COVID-19 pandemic. The impact of social support on alleviating stress and facilitating coping mechanisms is contingent upon whether the type of assistance provided is suitable for the specific stressor at hand (Cohen, 1988). During the COVID-19 pandemic, government regulations of social distancing and territorial lockdowns have impacted social change. People become more vulnerable to impaired psychological functioning as a result of physical and social restrictions and quarantine (Febriani et al., 2021).

Numerous studies have provided evidence that individuals who have more social connections and experience positive relationships with others tend to have better mental health, higher levels of happiness, and lower rates of illness and death (Feeney & Collins, 2015). Social support may take the form of social connectedness, where people are closely connected within the family during the social distancing policy, it promotes life satisfaction (Blackwell et al., 2022) and increases the likelihood of positive growth after a traumatic situation such as COVID-19 pandemic (Matos et al., 2021). Another form of social support was suggested in the study by Xiao et al. (2022) that after hospitalization, recovered infected patients need to be facilitated to have social inclusion so they can reconnect with their friends and relatives. According to the study by Cheng & Liu (2022), social support is much needed for boosting post-traumatic growth after the COVID-19 pandemic, and it can be received from family, friends, and society. In Jiang et al. (2022) study, social support was given by the hospital management, since the infected person were the nurse at the emergency unit. Social support obtained from family or friends can help individuals find new appreciation in their lives and find meaning behind traumatic events that occur (Northfield & Johnston, 2022). Social support has different sources such as family, friends, or community,

and has different types such as financial, emotional, instrumental support, and appraisal support (French et al., 2018; Sarason et al., 1990).

Psychological characteristics

In this SLR, some personal qualities were consistently found as predictors for positive growth after traumatic exposures to the COVID-19 pandemic, such as self-efficacy (Tian & Wang, 2023; Van der Hallen & Godor, 2022; Xu et al., 2022; Zeng et al., 2021), adaptive coping (Li & Hu, 2022; Xie et al., 2022), rumination (Shigemoto, 2022; Xu et al., 2023; Zeng et al., 2021), and resilience (Hyun et al., 2021; Li & Hu, 2022; Thomson et al., 2022; Xu et al., 2022).

Self-efficacy

According to (Bandura, 2006), individuals' self-efficacy is the measure of their confidence in their ability to accomplish a particular goal or task. Tian & Wang (2023) conducted a study on university students and found that self-efficacy can predict post-traumatic growth and can also be predicted through social support. Confidence in oneself in completing a task can also be influenced by deliberate reflection and predict post-traumatic growth. Xu et al. (2023) revealed that individuals with higher self-efficacy are more likely to achieve post-traumatic growth, in addition, individuals who have a high frequency of rumination are positively correlated to stronger post-traumatic growth than those who engage in less frequent intentional rumination. About this rumination, self-efficacy refers to the ability of an individual to handle different situations effectively. This means that perceived self-efficacy impacts an individual's efforts to cope with different challenges, so higher self-efficacy leads to more active efforts to tackle challenges, making it a crucial component of success and resilience (Bandura, 1986).

Adaptive coping

Coping is a specific term that is related to stress. Coping is the mechanism of managing stress in life (Lazarus & Folkman, 1984). There is a rich discussion around the term coping, where coping is considered as people dealing with the regulation of feeling or cognition in facing the stressor, up to the concept of people's style in facing the stressor. Adaptive coping refers to the characteristics of a person's style in dealing with stressors through personal growth, optimism, solution-focused actions, creativity, and flexibility (Moritz et al., 2016). In this study, some characteristics that are predictive of positive growth after traumatic exposure to COVID-19 were emotional creativity (Zhai et al., 2021) and psychological flexibility (Landi et al., 2022). Li & Hu (2022) found that college students with high PTG tended to report increased use of adaptive coping strategies, which in turn facilitated reappraisal that reconstructed their thinking and ultimately increased their psychological resilience.

Rumination

According to Taku et al. (2009), there are four kinds of rumination or self-reflection in the context of PTG. Those are intrusive rumination soon after the event, intrusive rumination recently, deliberate rumination soon after the event, and deliberate rumination recently. Ruminative thoughts can be viewed not just as intrusive, potentially non-constructive, or psychologically harmful, but also as deliberate, reflective, or constructive (Taku et al., 2009). In this SLR, the practiced rumination that consistently predicted PTG among people exposed to traumatic events during COVID-19 pandemic was deliberate or intentional rumination (Shigemoto, 2022; Xu et al., 2023; Zeng et al., 2021). According to (Garnefski et al., 2003) rumination is one of the coping strategies that focus on regulating emotions that arise in response to a stressor. This means that rumination is adaptive coping that has been proven to consistently predict positive growth after traumatic events. Sesca & Hamidah (2018) found that individuals who showed positive changes engaged in purposeful self-reflection after experiencing stress (deliberate rumination). This was in line with the study of Yang & Ha (2019) who found that conscious reflection had the strongest influence on firefighters experiencing PTG. Huh et al. (2020) showed that intentional reflection is likely to be positively correlated with PTG because, during intentional reflection, individuals will be better able to understand the traumatic event and its impact and achieve growth.

Resilience

According to Masten (2018), resilience can be described as the ability of a person's system to effectively adjust and cope with major obstacles that could potentially hinder its performance, existence, or growth within an individual. Logically, resilience is a predictor of positive growth because resilience is a long process of people able to maintain stable psychological conditions due to adversity, while PTG is a situation where people gain an adjustment to be stable after adversity (Infurna & Jayawickreme, 2019). That is why this SLR found that resilience consistently predicted positive growth after traumatic exposure to the COVID-19 pandemic (Hyun et al., 2021; Li & Hu, 2022; Thomson et al., 2022; Xu et al., 2021).

Other psychological characteristic that may predict PTG is psychological flexibility. Psychological flexibility refers to the capability of modifying or continuing with practical behavioral categories when it helps in achieving desired outcomes (Doorley et al., 2020). It emphasizes the significance of adaptability in particular scenarios that are essential for maintaining a healthy lifestyle, specifically tough situations that would otherwise hinder the pursuit of one's valued living. Individuals with psychological flexibility and a history of stress after a crisis can show higher rates of personal growth than individuals who do not experience stress (Landi et al., 2022; Van der Hallen & Godor, 2022).

In this SLR, emotional creativity was also found as a predictor for PTG after traumatic exposure to COVID-19 pandemic (Zhai et al., 2021). Emotional creativity refers to the capacity to feel and communicate unique, suitable, and genuine blends of emotions (Averill, 2005). Different experts Kuška et al. (2020) formulate

emotional creativity as a set of mental skills and individual qualities that enable people to come up with novel and suitable emotional responses. In the study of Zhai et al. (2021), emotional creativity is highly dependent on an individual's cognitive skill in combining the ability to experience new things and express new mixtures of emotions.

Demographic predictors.

Individuals can experience PTG after a traumatic COVID-19 pandemic and driven by demographic factors such as gender, economic status, and age (Cerit & Kaplan, 2022) revealed that female students scored higher on changes in self-perception, changes in life philosophy, and post-traumatic growth than males. Research examining PTG in both genders has found that women tend to report higher levels of PTG compared to men who experience similar traumas. A possible explanation for this gender difference could be linked to women's inclination towards engaging in more profound thinking than men. This tendency to engage in deep thinking about constructive issues such as increased self-awareness and social connections has been proposed as a mechanism that leads to higher levels of PTG in women (Shacham et al., 2020).

Good economic status and young age can also predict for PTG, as revealed by the study of (Collazo-Castiñeira et al., 2022; Jiang et al., 2022). The study found that women and young people, those who lost their jobs, and people who experienced symptoms of COVID-19 or the loss of a family member, experienced high PTG despite going through Post Traumatic Stress symptoms. Positive growth is contributed by stable and good socioeconomic because people have lower or no burden for economic survival so they can focus on improving their mental stability after traumatic (Meyerson et al., 2011; Wang et al., 2014). PTG may be more likely to occur in younger individuals because they tend to be open and engage in cognitive processing related to the traumatic event. This cognitive processing is a significant predictor of PTG (Taku et al., 2012).

CONCLUSION

This SLR found two factors that are consistent predictors for PTG, which are various personal psychological characteristics and the external predictor of social support. Personal psychological characteristics include self-efficacy, adaptive coping, rumination, and resilience. Meanwhile, from the social support factor, predictors take the form of various sources and types of support. Finally, from the demographic factor, gender, age, and socioeconomic may predict PTG, at least after being confirmed by other studies outside this SLR. This is due to the less frequent studies that explore the demographic factors in predicting PTG after traumatic exposure to the COVID-19 pandemic.

Studies identified in this SLR were mostly conducted in the region of China and other Northern high-income countries. More studies from the Southern hemisphere are needed to establish consistency of the factors as the predictors for PTG. The final note from this SLR is that the Cross-sectional design only indicates the

correlational, but not the cause-effect between variables under study. A longitudinal study is more convincing for predicting that certain factors are cause and effect for positive growth. Findings from this SLR will contribute to the future mental health promotion after long years of exposure to the COVID-19 pandemic, as well as additional notes for future research agenda in identifying predictor factors for PTG in different settings, using a more convincing research design.

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