

Determinants of Middle and High School Teachers' Well-Being: A Systematic Review

Fitri Lestari Issom¹, Hendriati Agustiani², Fredrick Dermawan Purba²,
Fitriani Yustikasari Lubis²

¹Psychology Study Program, Faculty of Psychology, Universitas Padjadjaran, Bandung, Indonesia; ²Department of Psychology, Faculty of Psychology, Universitas Padjadjaran, Bandung, Indonesia

Correspondence: Fitri Lestari Issom, Psychology Study Program, Faculty of Psychology, Universitas Padjadjaran, Bandung, Indonesia, Email fitri22006@mail.unpad.ac.id

Purpose: In this review, the determinant of teachers' well-being in middle and high school teachers and to identify potential avenues for future investigation was evaluated.

Patients and Methods: The systematic review of this study was conducted using the Preferred Reporting Items for System Reviews and Meta-Analysis (PRISMA) methodology. We looked through a range of scholarly research on teachers' well-being that had been published in English and included in Scopus, EBSCO host, Science Direct, and Springer Link. There were 465 publications found throughout the literature search. The final analysis contained 12 publications after duplicates were eliminated and titles, abstracts, and full texts were screened. Articles unrelated to the topic and did not concentrate on TWB in middle and high school were excluded. The findings were checked and verified. A risk-of-bias assessment tool designed for systematic reviews of mixed research (ie, reviews that combine qualitative, quantitative, and/or mixed methods studies) was the Mixed Methods Appraisal Tool (MMAT).

Results: There were fourth determinants of middle and high school TWB. The most powerful determinants were physical health, mental and emotional health, social support, professional development and autonomy. Meanwhile, the areas that required further investigation included TWB intervention programs, influential cultural and social factors, research methodology, and measurement procedures.

Conclusion: Key determinants of teacher well-being (TWB) in middle and high school, such as physical and mental health, social support, professional development and autonomy, suggest several clinical applications. Targeted mental health resources, wellness initiatives, and strong support networks could significantly enhance TWB. Additionally, empowering teachers through skill development and autonomy may improve their job satisfaction and reduce burnout. Future intervention should consider cultural and social nuances to maximize TWB support.

Keywords: determinants factors, teacher well-being, middle and high school teacher, systematic review

Introduction

Teachers' well-being (TWB) is a significant concern, which has attracted substantial interest, particularly within educational institutions. Teacher well-being is not only an individual responsibility but also a shared responsibility of the organization, society, and the world.¹ The high workload, task demands, emotional, and many challenges for teachers can provide high pressure, so that if teachers do not have high well-being, they will have a desire to leave the profession.² Well-being will affect every activity that teachers do at school, from teaching to their interactions with other individuals. Based on these studies, research on TWB is important to develop because it can bring progress for teachers if they have a high TWB, and vice versa, it will cause teachers to leave the profession if they have a low TWB. Several studies have reported the relevance of TWB to teaching effectiveness, students' outcomes, and educational governance.^{3,4} TWB has also been shown to be a major contributor to school stability and enhancement of staff commitment.⁵ In addition, it has a positive correlation with satisfaction, positive emotions, resilience, flourishing, motivation, commitment,⁶⁻⁸ school climate, and job crafting.⁹ A recent review showed that TWB was associated with feelings of competence, teaching efficacy, commitment/identification, and a sense of belonging to organization. A significant association was also found with professional learning, positive collegial

relation, collegial support, collaboration, positive relation with students, support for quality teaching, supportive work environment, support by principals, and leadership school collective efficacy/school ethos.¹⁰ Meanwhile, low TWB is often considered a barrier to educational reform and school improvement, leading to increased rates of teachers' absenteeism.¹¹ TWB has been reported to have a negative correlation with teachers' stress and burnout¹² frustration, and anxiety.^{13–15} This shows that it must be a vital consideration in educational studies and policy formulation. However, based on previous findings, no research has been found discussing the determinants that influence TWB based on a systematic literature review methodology from the past few years. Current literature on TWB predominantly focuses on various pedagogical approaches centered on problem-solving, with fewer interventions using solution-focused and positively framed approaches that leverage teachers' intrinsic strengths or resources associated with well-being. Despite the presence of promising findings in this area,^{16–18} the investigation of teachers' workplace well-being and happiness remains relatively limited compared to other topics. In addition, the well-being of middle and high school teachers is a crucial issue that has received significant attention in literature. Previous studies showed that many educators in these settings often face various challenges, including student aggression and victimization, which have negative impacts on their emotional and physical health, as well as job performance.¹⁹ Therefore, this study will discuss the determinants of teachers' well-being in middle and high school teachers.

According to several reports, the adolescent phase is a challenging period for students, and teachers in middle and high school must contend with the behaviors associated with this developmental phase. This is a sensitive period for developing social and cultural identity and highlights the difficulty adolescents experience when balancing individual identity with social expectations.²⁰ School environment impacts adolescent motivation, identity formation, and mental health, focusing on the need for a supportive environment during this stage.²¹ Peer dynamics can influence mental health in adolescence, addressing the pressures adolescents face in adapting to group dynamics and the potential for negative social influence.²² Based on those studies, adolescents are experiencing difficulties in balancing their identity and the identity of their environment. Peer relationships and the school environment in particular play a significant effect. Teenagers who live in unfavorable environments will also exhibit undesirable behaviors. According to earlier research, these environments are common places for theft, vandalism, sexual harassment, verbal abuse, and non-physical contact hostility, and a sizable percentage of teachers have been victims for several years.¹⁹ Lower levels of school connection, decreased job satisfaction, and even contemplation of quitting teaching might result from victimization.¹⁹ Furthermore, a meta-analysis of 24 studies from different countries revealed that the prevalence of teacher-reported violence ranged from 20% to 75% over two years, demonstrating that this phenomenon is not exclusive to any one culture or nation.¹⁹ Given the prevalence of student aggression towards teachers, middle and high school teachers often face significant challenges in managing student behavior and maintaining their well-being and job satisfaction. In recent years, several studies have explored the impact of TWB on various aspects of middle and high school, namely health, effectiveness, instructional quality,²³ and teaching efficiency.²⁴ TWB has also been reported to be negatively associated with students' school grades, school satisfaction achievement test scores, and perceived teachers support at the classroom level.^{25,26} Despite the availability of literature, there are limited reports on the factors causing teachers well-being in middle and high school. This shows that it is essential to discern and address the limitations encountered in previous studies TWB while also formulating a roadmap for future investigations. Therefore, this review aims to provide an overview of the current literature on determinants of TWB in middle and high school and to identify potential areas for the future investigation based on systematic review.

Patients and Methods

The Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) checklist and guidelines served as the basis for this evaluation.^{27,28} Based on the total number of references initially identified to the papers that were included and excluded, the PRISMA flow diagram (Figure 1) illustrated the many stages of this systematic review.

Inclusion and Exclusion Criteria

Inclusion criteria comprised studies published (1) in peer-reviewed journals, (2) use English language, (3) between 2013 and 2023, and (4) open access. Meanwhile, articles were excluded from consideration when the topic used was related to

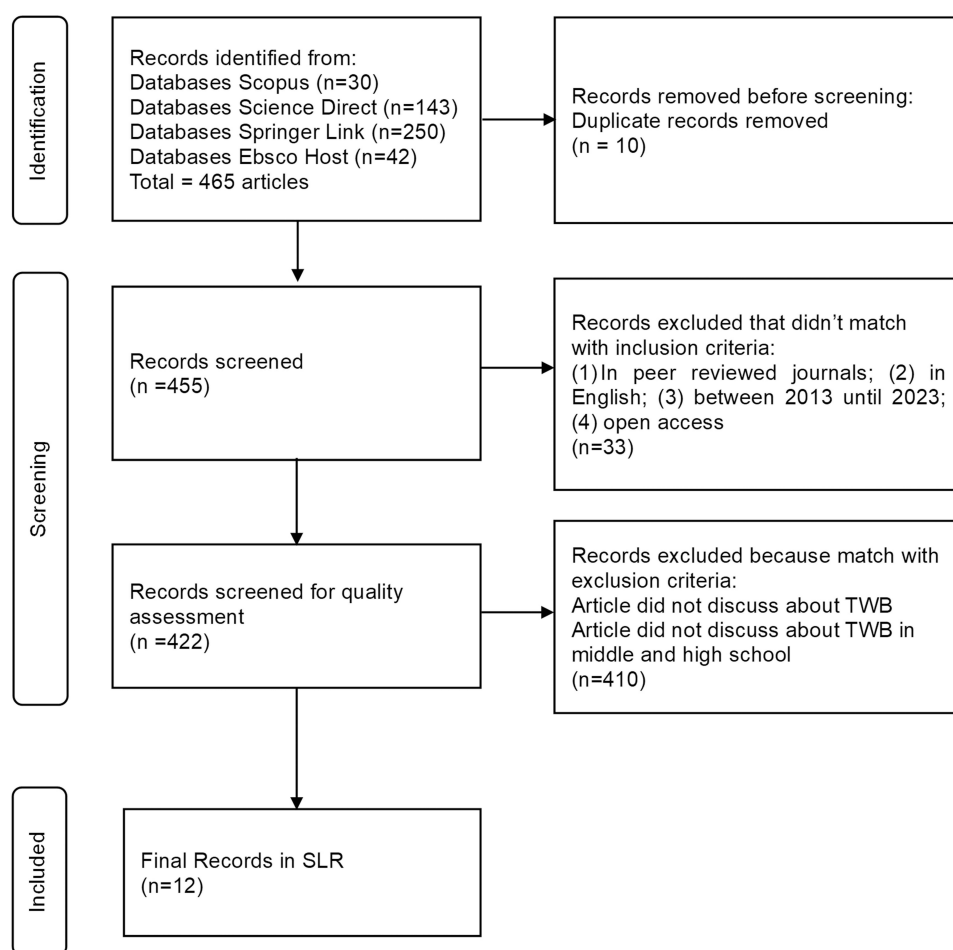


Figure 1 PRISMA flow diagram of Systematic Review. This figure is original, created for this study and has never been published before.

Abbreviation: TWB, teacher well-being.

TWB but was not limited to middle school or high school level, or when the discussion did not specifically pertain to TWB.

Databases and Search Strategy

A search was conducted between February and May 2023 to obtain the relevant literature on various databases, including Scopus, Science Direct, Springer Link, and EBSCO host. In addition, the databases selected enabled both a discipline-specific (Scopus) and a general (Science Direct; Springer Link; EBSCO) search. The search for studies published between 2013 and 2023 was limited, and peer-reviewed articles were carefully selected. Moreover, search strings consisted of a combination of, “factor” or “determinant”, “Teacher well-being” or “well-being”, or, “workplace well-being in school”, “middle school teacher”, or, “adolescence teacher”, or, “junior school teacher” or, “high school teacher”. The search terms were thoroughly discussed to ensure that relevant empirical articles were identified. The terms in titles and keywords were identified, yielding a first total of 465 hits.

All articles were identified through a search on multiple databases using synonyms, followed by removal of duplicates. The reviewer independently conducts screening based on titles and abstracts that are potentially relevant according to the inclusion and exclusion criteria described before. Subsequently, the reviewer performs full text screened. Full text articles that have met inclusion criteria are extracted into Microsoft word list by the primary author (FLI) and validated by three authors (HA, FDP, FYL). The eligibility of 12 studies was then assessed through a full-text analysis,

leading to the exclusion of articles that did not focus on TWB in middle and high school. Descriptive data extracted into Microsoft Word list include titles, authors, years, methods, determinants of TWB, and future area.

Two co-authors independently retrieved pertinent data from papers that matched our inclusion criteria. We compared the derived results and resolved any inconsistencies through team discussions before integrating the data. Because the included studies had various participant characteristics, methodologies, outcomes, and future topics, we were unable to conduct a meta-analysis of their findings. We summarized the narrative factors of each study, as well as prospective topics of TWB. The researchers used the Mixed Methods Appraisal Tool (MMAT) version 2018 to assess the risk of bias for articles that met the inclusion and exclusion criteria. MMAT is a critical appraisal instrument used during the appraisal step of systematic mixed studies reviews, which might comprise qualitative, quantitative, and mixed method research. It allows researchers to assess the methodological quality of five types of studies: qualitative research, randomized controlled trials, non-randomized studies, quantitative descriptive studies, and mixed techniques studies. There was one reviewer who assesses each study and works independently by reading the MMAT guidelines carefully. However, if doubts were found, they were discussed with other reviewers.

Results

The literature search obtained 30 articles in Scopus, 143 in Science Direct, 250 in Springer Link, and 42 in EBSCO Host. After excluding duplicates, screening titles, and abstracts, 33 studies were carefully selected for full-text evaluation. Finally, 12 studies were included in the systematic review (see Figure 1).

Based on MMAT for assessment, there were 12 articles with 1 article using mixed methods (quantitative and qualitative), 8 articles with quantitative non-randomized control trial, 1 article with randomized control trial, and 2 articles with quantitative descriptive studies Table 1–4. The scales used to measure teacher well-being vary, namely PERMA Questionnaire, Ryff Psychological Well-being Scale, Warwick-Edinburgh Mental Well-being Scale (WEMWBS), Depression Anxiety Stress Scale (DASS), Flourishing Scale, and Occupational Well-being. There are several articles that use the same measurement scale. Then, there are several confounders accounted for in the design and analysis, namely: gender, age, marital status, teaching experience, socioeconomic status, number of children, school level, personality, school size, school location, school type, and proportion of students and teachers. Participants in these articles were middle or high school teachers, and some articles had a mix of other professions. The participating came from different countries: Italy, Hungary, England and Wales, Zambia, Malaysia, India, USA, Norway, Lithuania, Australia, Germany.

Based on the findings presented in Table 5, four domains of determinants of TWB among middle and high school teachers were identified. An overview of these factors and their relationship with TWB is presented in Table 6. Physical health: The foundation of TWB lay in maintaining good physical health. This aspect comprised ensuring sufficient sleep, adopting relaxation techniques, and engaging in regular physical activity.³⁵ Mental and emotional health: An integral aspect that influenced TWB was mental and emotional well-being. Numerous factors were identified as impacting TWB either positively or negatively. These factors included job stressors, job insecurity,³¹ psychological capital (such as hope, efficacy, resilience, and optimism),²⁹ teachers’ personality traits (such as extraversion, neuroticism, and conscientiousness),³⁴ psychopathy,

Table 1 Quality Appraisal of Mixed Methods Studies

Mixed Methods Appraisal Tool (MMAT) Criteria	Agota Kun, 2022 ²⁹
Clear research question(s)	Yes
Collected data addresses the research questions	Yes
Is there an adequate rationale for using a mixed method design to address the research question?	Yes
Are the different components of the study effectively integrated to answer the research question?	Yes
Are the outputs of the integration of qualitative and quantitative components adequately inter-pretred?	Yes
Are divergences and inconsistencies between quantitative and qualitative results adequately addressed?	Not clear
Do the different components of the study adhere to the quality criteria of each tradition of the methods involved?	Yes

Notes: Adapted from Hong Q, Pluye P, Fàbregues S, et al, MIXED METHODS APPRAISAL TOOL (MMAT) VERSION 2018 User guide. McGill. Published online 2018:1–10.³⁰

Table 2 Quality Appraisal of Quantitative Studies (Non-Randomized: Case-Control Studies)

Mixed Methods Appraisal Tool (MMAT) Criteria	Guido Alessandri et al, 2021 ³¹	Zirwatul Aida R Ibrahim et al, 2021 ³²	Chinthana Rajesh et al, 2020 ³³	Byongook Moon et al, 2019 ¹⁹	Richard Andrew Burns et al, 2013 ³⁴	Mark J. Taylor, 2017 ³⁵	Karen Aldrup, 2017 ³⁶	Karen Aldrup, 2018 ³⁷
Clear research question(s)	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Collected data addresses the research questions	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Participants are representative of the target population	Yes	Yes	Yes	Yes	Yes	Not Clear	Yes	Yes
Measurements are appropriate regarding both the outcome and intervention (or exposure)	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Outcome data are complete	Yes	Yes	Yes	Yes	Yes	Yes	Not Clear	Not Clear
Confounders are accounted for in the design and analysis	Yes	Yes	Yes	Yes	Yes	No	Yes	Yes
During the study period, the intervention is administered (or)	No	No	No	Yes	Not Clear	Yes	Yes	Yes

Notes: Adapted from Hong Q, Pluye P, Fàbregues S, et al, MIXED METHODS APPRAISAL TOOL (MMAT) VERSION 2018 User guide. *McGill*. Published online 2018:1–10.³⁰

Table 3 Quality Appraisal of Quantitative Descriptive Studies

Mixed Methods Appraisal Tool (MMAT) Criteria	Kristina Kovalčikienė, 2017 ³⁸	Belinda Agyapong, 2023 ³⁹
Clear research question(s)	Yes	Yes
Collected data addresses the research questions	Yes	Yes
Sampling strategy is relevant to address the research question(s)	Yes	Yes
Sample is representative of target population	Yes	Not Clear
Measurements are appropriate	Yes	Yes
The risk of nonresponse bias is low	Not Clear	No
The statistical analysis is appropriate to answer the research question	Yes	Yes

Notes: Adapted from Hong Q, Pluye P, Fàbregues S, et al, MIXED METHODS APPRAISAL TOOL (MMAT) VERSION 2018 User guide. *McGill*. Published online 2018:1–10.³⁰

Table 4 Quality Appraisal of Quantitative Studies (Randomized Controlled Trials)

Mixed Methods Appraisal Tool (MMAT) Criteria	Judi Kidger et al, 2021 ⁴⁰
Clear research question(s)	Yes
Collected data addresses the research questions	Yes
Randomization is appropriately performed	Yes
The groups are comparable at baseline	Yes
There are complete outcome data	Yes
Outcome assessors are blinded to the intervention pro-vided	No
The participants adhere to the assigned intervention	Not Clear

Notes: Adapted from Hong Q, Pluye P, Fàbregues S, et al, MIXED METHODS APPRAISAL TOOL (MMAT) VERSION 2018 User guide. *McGill*. Published online 2018:1–10.³⁰

economic distress,³¹ personal growth, purpose in life, self-acceptance,³³ teachers victimization,¹⁹ and mindfulness.³⁵ Social support: Adequate social support was crucial for teachers as it significantly influenced TWB. This support could manifest in various forms, including support from colleagues, principals/senior leaders, and family. In addition, establishing meaningful connections with students' colleagues,³⁶ fostering positive teacher–student relationships, and nurturing overall positive

Table 5 Determinant of TWB in Middle and High School Teacher

No	Title	Authors (Year)	Participant	Determinant of TWB	Future Areas
1.	Workplace happiness, well-being and their relationship with psychological capital: A study of Hungarian Teachers	Agota Kun & Peter Gadanez, 2022. ²⁹	297 participants Teachers at Hungary.	Psychological capital (hope, efficacy, resilience, and optimism).	1. Developing program Psychology Capital 2. Study the level of well-being and happiness among different age and occupational groups of teachers or in different educational institutes.
2.	Determinants of workers' well-being during the COVID-19 outbreak: An exploratory study	Guido Alessandri, Lorenzo Filosa, Sabine Sonnentag, Giuseppe Crea, Laura Borgnogni, Lorenzo Avanzi, Luigi Cinque, Elisabetta Crocetti, 2023. ³¹	594 workers in Italy (high school teachers)	1. Job stressors 2. Job insecurity 3. Job resources (Trust in organization) 4. Personal resources a. Conscientiousness b. Positivity 5. Personal vulnerabilities a. Neuroticism b. Probability of being infected positively c. Psychopathy d. Economic distress	Implementing leadership processes aimed to foster the level of organizational support experience.
3.	An intervention to improve teacher well-being support and training to support students in UK high schools (the WISE study): A cluster randomised controlled trial	Judi Kidger, Nicholas Turner, William Hollingworth, Rhiannon Evans, Sarah Bel, Rowan Brockman, Lauren Copeland, Harriet Fisher, Sarah Harding, Jillian Powell, Ricardo Araya, Rona Campbell, Tamsin Ford, David Gunnell, Simon Murphy, Richard Morris, 2021. ⁴¹	High school teachers	1. Visible and meaningful support from senior leaders. 2. Peer support. 3. Workload and performance management.	Interventions that focus on addressing the challenging context and culture of schools.
4.	Improving Mental Health Literacy and Reducing Psychological Problems Among Teachers in Zambia: Protocol for Implementation and Evaluation of a Wellness4Teachers Email Messaging Program	● Belinda Agyapong, Charles Chishimba, Yifeng Wei, Raquel da Luz Dias, Ejemai Eboreime, Eleanor Msidi, Syed Sibte Raza Abidi, Maryn Mutaka Loong, James Mwansa, Rita Orji, John Mathias Zulu, Vincent Israel Opoku Agyapong et al, 2023. ³⁹	1,722 high school teachers	Teacher stress	Future research should focus on structural and cultural changes to the school environment, which may be more effective at improving teacher and students mental health and well-being.
5.	Psychosocial Work Environment and Teachers' Psychological Well-Being: The Moderating Role of Job Control and Social Support	R Zirwatul Aida R Ibrahim, Wan Zaleha Mohd Zalam, Bob Foster, Teuku Afriza, Muhamad Deni Johansyah, Jumadil Saputra, Azlina Abu Bakar, Mazidah Mohd Dagang and Siti Nazilah Mat Ali, 2021. ³²	335 high school teachers.	a. Job demands, b. Job control, c. Social support	1. Involves various occupation rather than specific occupation 2. Could explain how respondent (Muslim) culture as a form of social support in the study coped (or not) with job demands 3. How eastern (compared with a western model) of analysis could be more helpful in supporting TWB.
6.	Predictors of psychological well-being among high school teachers: A cross sectional study from Southern India	Chinthana Rajesh, Lena Ashok, Chythra R. Rao, Veena G. Kamath, Asha Kamath, Varalakshmi Chandra Sekaran, 2020. ³³	460 high school teachers from government and private schools in Udupi district, India.	Autonomy, personal growth, positive relations, purpose in life and self-acceptance emerged as predictors of psychological well-being.	An intervention program designed to fit their felt needs may be a step in the right direction.

7.	Aggression against middle and high school teachers: Duration of victimization and its negative impacts	Byongook Moon, John McCluskey, Merry Morash, 2019. ¹⁹	1,236 middle and high school US teachers.	Teacher Victimization	Further longitudinal research with a nationally representative sample of teachers is necessary to better understand the pattern and duration of teacher victimization and to establish a casual sequence between teacher victimization and negative outcomes.
8.	Employee and Workplace Well-being: A Multi-level Analysis of Teacher Personality and Organizational Climate in Norwegian Teachers from Rural, Urban and City Schools	Richard Andrew Burns, Michael Anthony Machin, 2013. ³⁴	250 the lower and upper high school levels teachers in Norwegian School.	Teacher Personality (extraversion and neuroticism).	Complex modeling of longitudinal data will enable researchers to describe possible cause-and-effect relationships.
9.	Towards the Well-being of Vocational Teachers: The role of Personality Characteristics	Kristina Kovalčikienė, Aleksandras Stulginskis, 2017. ³⁸	346 teachers from the Lithuanian vocational training system.	Teachers' personality traits are among the most significant determinants of their professional identity that foster holistic well-being.	In future research, it would be useful to consider other instruments to assess personality traits.
10.	Using CALMERSS to Enhance Teacher Well-being: A Pilot Study	Mark J. Taylor, 2017. ³⁵	Five teachers.	Cognitive training and work on automatic thoughts, learning to relax, mindfulness, exercise, resolving conflict, sleep and strengths (CALMERSS).	There was only one well-being measure used, which was a short version. Although the psychometric properties of this measure have already been described as being satisfactory, the use of the longer version may have provided more useful data
11.	Does basic need satisfaction mediate the link between stress exposure and well-being ? A diary study among beginning teachers	Karen Aldrup, Uta Klusmann, Oliver Lüdtke, 2017. ³⁶	152 teachers in Germany.	Competence, relatedness with students, and relatedness with colleagues as mediator daily stress exposure and TWB.	We had no information about the teachers' general well-being at the beginning of the working day. In future research, this should be controlled for because teachers' daily stress exposure may not only be a predictor of well-being at the end of the day, but also a function of their general well-being at the start of the day.
12.	Student misbehavior and teacher well-being: Testing the mediating role of the teacher-student relationship	Karen Aldrup, Uta Klusmann, Oliver Lüdtke, Richard Göllner, Ulrich Trautwein, 2018. ³⁷	222 homeroom teachers	The teacher-student relationship was positively associated with teacher well-being and mediated the link between teacher-perceived misbehavior and enthusiasm.	Future research would profit from investigating teacher-specific views in greater detail because a deeper understanding could help optimize teacher education and interventions to improve teacher well-being.

Table 6 Determinants of Teacher Well-Being (TWB) Among Middle and High School Teachers Can Be Categorized Into the Following Domains

No.	Domains	Determinants of TWB in Middle and High School Teacher
1.	Physical Health	Ensuring sufficient sleep, adopting relaxation techniques, and engaging in regular physical activity.
2.	Mental and Emotional Health	Job stressor, job insecurity, psychological capital (hope, efficacy, resilience, and optimism), teacher personality (extraversion, neuroticism, consciousness), psychopathy, economic distress, personal growth, purpose in life, self-acceptance, teacher victimization, dan mindfulness.
3.	Social Support	Support from colleagues, principals/senior leaders, and family. Additionally, establishing meaningful connections with students and colleagues, fostering positive teacher-student relationships, and nurturing overall positive relationships
4.	Professional Development and Autonomy	Autonomy, job resources, competence, job demand, job control, cognitive training and work on automatic thought, workload, and performance management.

relationships within the educational context contributed to TWB.³⁷ Professional development and autonomy: The level of professional development and autonomy experienced by teachers was another determinant impacting TWB. Factors, such as autonomy,³³ job resources,³⁷ competence,³⁶ job demands, job control,³² cognitive training, work on automatic thought processes,³⁵ workload, and performance management were all influential in this context.⁴¹

In summary, the findings presented showed the multidimensional nature of TWB among middle and high school teachers. The identified determinants included aspects connected to physical health, mental and emotional well-being, social support, and professional development with autonomy. Understanding and addressing these determinants were crucial for promoting TWB and fostering a positive and supportive educational environment.

Table 7 showed future potential areas of investigation on TWB, which could focus on intervention programs, developing influential social and cultural factors, and developing methodologies and measurements about TWB.

Table 7 Future Area Potential Research of TWB

No	Domains	Future Area Potential Research of TWB
1.	Teacher Well-being Intervention Programs	<ul style="list-style-type: none"> Developing program Psychology Capital. Implementing leadership processes aimed to foster the level of organizational support experience. Interventions that focus on addressing the challenging context and culture of schools. Intervention program TWB.
2.	Cultural and Social Factors Influencing Teacher Well-being	<ul style="list-style-type: none"> Could explain how respondent (Muslim) culture as a form of social support in the study coped (or not) with job demands. How eastern (compared with a Western model) of analysis could be more helpful in supporting TWB. Structural and cultural changes to the school environment.
3.	Research Methodology and Measurement of Teacher Well-being	<ul style="list-style-type: none"> Consider other instruments to assess personality traits. Use of the longer version of TWB instruments may have provided more useful data. Measuring effectiveness mindfulness program. Teachers' daily stress controlled the beginning of work. Investigating teacher-specific views in greater detail. Involves various occupations rather than specific occupations. Study the level of well-being and happiness among different age and occupational groups of teachers or in different educational institutes. Further longitudinal study with a nationally representative sample of teachers in necessary to better understand the pattern and duration of teachers' victimization and to establish a causal sequence between victimization and negative outcomes. Model of longitudinal data TWB.

Discussion

This study aims to provide a comprehensive review of the existing literature on the determinants of teacher well-being (TWB) among middle and high school teachers while also identifying potential areas for future research through a systematic review. The findings reveal four key domains influencing TWB: physical health, mental and emotional health, social support, and professional development with autonomy.

Future studies must emphasize TWB intervention programs, cultural and social factors influencing their well-being, methodology, and measurement of TWB. The findings of the four determinants domains of TWB were in line with the results of previous reports.³⁵ Stone et al stated that reducing physical and psychological strain and increasing self-care could improve TWB and increase health motivation, and physical activity over time was also beneficial.⁴⁰ General health and vitality showed predominantly positive correlations with TWB.⁴² Other research says that one aspect of physical health is related to sleep quality. Sleep is an important means of replenishing psychological resources. When sleep is insufficient due to poor sleep quality, work wellbeing suffers as the body is easily fatigued and lacks concentration.⁴³ Thus, sleep quality is related to work wellbeing. In addition, participation in sports activities can also reduce stress and improve teacher well-being.⁴⁴ Adequate diet, sports practice, and adequate sleep reduce stress and improve mental well-being.⁴⁵ Teachers who exercise regularly will have lower levels of fatigue and better work balance. This shows how the physical health domain affects TWB.

In terms of mental and emotional health, various factors contribute to TWB, including the development of psychological capital (hope, optimism, resilience, and self-efficacy) and proactive coping mechanisms through interventions could be a valuable avenue to this variable.⁴⁶ In addition, well-being was influenced by hope,⁴⁷ self-efficacy,⁴⁸ optimism, and resilience.⁴⁹ These findings suggested that the Psychology Capital also contributed to well-being. Additionally, mindfulness among teachers has been associated with reduced job stress, occupational burnout, depressive symptoms, and anxiety, thereby enhancing TWB.⁴⁵ Mindfulness not only improves well-being but also mitigates depression among educators. These factors should be incorporated into interventions aimed at improving teacher's well-being.

Victimization both verbally and physically by students to teachers also affected their well-being.¹⁹ Based on the review of various articles assessing TWB in middle and senior high school, a difference emerged, namely the existence of determinants regarding victimization at this level, which was not found in other grades. Aggression against teachers had negative impacts on victimized emotional and physical well-being as well as job performance.¹⁹

The third domain, social support, plays a critical role in TWB. This includes teacher–student relationships, which are often perceived as more supportive than relationships with fathers, siblings, or other family members, though still less influential than maternal relationships.⁵⁰ Misbehavior students have been directly linked to increased teacher burnout and reduced enthusiasm, further affecting TWB within this domain.³⁷

The domain of professional development and autonomy strongly influenced TWB. Kaur et al stated that improving and managing well-being was not just a task for teachers but a shared responsibility where all education stakeholders worked together to make it an important issue in all stages of preparation and professional development.⁵¹ The well-being of teachers who had autonomy,³³ job resources, competence, and workload⁵² was often affected. In addition, there were some similarities between TWB determination in middle and senior high school and other grades. This showed that further investigation was needed to explore preschool TWB, self-efficacy, life satisfaction, financial stability, emotional and physical health, and autonomy.⁵³ Several studies have also reported the association of Big 5 personality traits with TWB through the impact of optimism but not pessimism.⁵⁴

A comparison with the TWB predictors identified by Hascher and Waber,¹⁰ using their self-regulated learning (SRL) approach, reveals differences in domain classification. While their study identified two domain-objective variables (eg, gender, age, school size) and subjective variables (eg, personality traits, virtues, job satisfaction, collegial support) – this study highlights four determinants of TWB, as described above. These findings have the potential to complement and expand upon prior research in the field.

This review covered several potential areas of future investigation of TWB, including intervention programs, cultural and social factors that influenced the variable, and study methodology and measurement. TWB was a crucial aspect of education; hence, intervention programs were constantly being developed. Previous studies had implemented several interventions, such as the PERMA model,¹ mindfulness training, and self-help techniques to reduce teachers' stress,⁵⁵

and emphasize the importance of goal setting to achieve work–life balance.⁵⁶ The organization-level intervention, the Work Life Support Well-being Programmed, was implemented in the UK⁵⁶ with confidence.

Previous reports showed that social and cultural factors had a significant impact on individuals' well-being^{57,58} also showed the importance of the cultural environment in shaping well-being. In addition,⁵⁹ studies identified 9 dimensions that formed the Indonesian cultural version of psychological well-being, namely standard of living, lifestyle, a sense of security, social connectedness, life achievement, mental and physical health, religiosity, spirituality, and ethics. The standard of living dimension served as the foundation for other dimensions. Every culture had its local wisdom, and when the standard of living was not met, individuals had a mechanism of self-defense that involved being submissive, patient, and grateful.

Based on the several definitions of TWB, its methodology and measurement were likely to vary. However, it was commonly referred to as a future area of study for TWB and is generally measured using the Satisfaction with Life Scale (SWLS) and Positive and Negative Scale (PANAS). Meanwhile,⁶⁰ Ryff measured psychological well-being using PERMA well-being combined with PANAS⁶¹ to assess TWB. In the context of employment in Western countries, the concept of human flourishing⁶² was commonly used when discussing well-being. The most contextual instrument for this measurement was the teachers' well-being scale (TWBS), developed by Collie, et al.⁵²

Based on the results of the MMAT evaluation, we can compare the findings of Hascher and Waber who examined the systematic review of TWB from 2000 to 2019. The article found that there are several things that are predictors of TWB in terms of objective variables, namely: gender, age, marital status, religion, ethnic background, personal social status, years of teaching, school level, employment status, teacher educational level, position rank in school, teacher education, classroom teacher, salary, mentoring role, school size, school status, socioeconomic status, curriculum, home-based teaching, political situation, and teaching in conflict settings.¹⁰ The MMAT findings in this study, which examined systematic review TWB from 2013 to 2023, added several predictors of TWB that were not mentioned in Hascher and Weber's study, namely number of children, school location, school type, and proportion of students and teachers.

The subjective variables found in this study were related to physical health (sleep quality, relaxation adaptation, general health, vitality health and physical activity); mental, emotional, and social health including job stressors, job insecurity, psychological capital (such as hope, efficacy, resilience, and optimism) teachers' personality traits (such as extraversion, neuroticism, and conscientiousness), psychopathy, economic distress, personal growth, purpose in life, self-acceptance, teachers victimization, aggression, mindfulness, and support from colleagues, principals/senior leaders, and family, establishing meaningful connections with students' colleagues, fostering positive teacher–student relationships, and nurturing overall positive relationships within the educational context contributed to TWB; professional development and autonomy include job resources, competence, job demands, job control, cognitive training, work on automatic thought processes, workload, and performance management. Meanwhile, when viewed from Hascher and Weber's research, there are several subjective predictors of TWB, namely: arrogance, diverse virtues and character strengths, emotion regulation, experience of burden (stress, sickness, depression, burn out, exhaustion, and fatigue), jobs satisfaction, commitment, motivation, positive and negative affect, role conflict, threat appraisal, school ethos, school climate, positive relationship with parents, student well-being. Therefore, the findings from these two articles can complement each other to assess the longitudinal trajectories of wellbeing in middle school teachers.¹⁰

Limitations

There are several limitations to the current systematic review that need to be considered and incorporated into future research. First, there may be bias because this systematic review only included open access, English-language studies, which may have excluded important studies published in other languages with less availability. Second, 54% of the well-being studies reviewed were conducted in European countries, while only 18% were conducted in Asian countries, with smaller percentages in other countries. The author cautions that the results are strongly influenced by the culture in Europe and less representative of countries with Asian or other cultures. Third, theories of teacher well-being still come from a variety of foundational theories, some have taken a positive psychology perspective, but there are still many that focus on the negative perspective of well-being. The author recommends literature review research that focuses more on teacher well-being from a positive psychology perspective only.

Conclusion and Implication

In conclusion, the results showed that there were four determinants of middle and senior high-school TWB, including physical health, mental and emotional health, social support, and professional development and autonomy. This review also showed areas that required further investigation, such as TWB intervention programs, cultural and social factors influencing TWB, study methodology, and measurement of TWB.

The results of this review have several implications for teacher well-being. First, there is a need to develop and implement intervention programs to improve teacher well-being, which should be tailored to the local cultural and social context of schools and countries. Second, teachers' physical health, including sleep quality and physical fitness, and mental health should be considered. Third, good social support from colleagues, students, and principals should be continuously improved. Fourth, autonomy in teaching and opportunities for professional development are needed to develop teachers' well-being.

Acknowledgments

This Systematic Review was supported by Universitas Padjadjaran, and for first author scholarship was supported by Beasiswa Pendidikan Indonesia (BPI) from the Indonesian Ministry of Education, Culture, Research, and Technology.

Disclosure

The authors report that there are no conflicts of interest in this work.

References

1. Falecki D, Man E. *Practical Applications for Building Teacher WellBeing in Education*. Singapore: Springer; 2021. doi:10.1007/978-981-15-5963-1
2. Winesa SA, Saleh AY. Resiliensi sebagai Prediktor Teacher Well-Being (Resilience as a Predictor of Teacher Well-Being). *J Ilm Psikol MIND SET*. 2020;11(02):116–128. doi:10.35814/mindset.v11i02.1446
3. Duckworth AL, Quinn PD, Seligman MEP. Positive Predictors of Teacher Effectiveness. *J Posit Psychol*. 2009;4(6):540–547. doi:10.1080/17439760903157232
4. Sutton RE, Wheatley KF. Teachers' Emotions and Teaching: a Review of the Literature and Directions for Future Research. *Educ Psychol Rev*. 2003;15(4):327–358. doi:10.1023/A:1026131715856
5. Creemers BPM, Reezigt GJ. School Level Conditions Affecting the Effectiveness of Instruction. *Sch Eff Sch Improv*. 1996;7(3):197–228. doi:10.1080/0924345960070301
6. Bullough RV, Pinnegar S. The Happiness of Teaching (as Eudaimonia): disciplinary Knowledge and The Threat of Performativity. *Teach Teach Theory Pract*. 2009;15(2):241–256. doi:10.1080/13540600902875324
7. Beltman S, Mansfield C, Price A. Thriving not just surviving: a review of research on teacher resilience. *Educ Res Rev*. 2011;6(3):185–207. doi:10.1016/j.edurev.2011.09.001
8. Cameron M, Lovett S. Sustaining the Commitment and Realising the Potential of Highly Promising Teachers. *Teach Teach Theory Pract*. 2015;21(2):150–163. doi:10.1080/13540602.2014.928132
9. Dreer B. Teacher Well-Being: investigating The Contributions of School Climate and Job Crafting. *Cogent Educ*. 2022;9(1). doi:10.1080/2331186X.2022.2044583
10. Hascher T, Waber J. Teacher Well-Being: a Systematic Review of The Research Literature from The Year 2000–2019. *Educ Res Rev*. 2021;34(December 2020):100411. doi:10.1016/j.edurev.2021.100411
11. Brearty S. *Teacher Wellbeing Index*. 2019.
12. Burić I, Slišković A, Penezić Z. Understanding teacher well-being: a cross-lagged analysis of burnout, negative student-related emotions, psychopathological symptoms, and resilience. *Educ Psychol*. 2019;39(9):1136–1155. doi:10.1080/01443410.2019.1577952
13. Singh K, Billingsley BS. Intent to Stay in Teaching. *Remedial Spec Educ*. 1996;17(1):37–47. doi:10.1177/074193259601700105
14. Brouwers A, Tomic W. A Longitudinal Study of Teacher Burnout and Perceived Self-Efficacy in Classroom Management. *Teach Teach Educ*. 2000;16(2):239–253. doi:10.1016/S0742-051X(99)00057-8
15. Kyriacou C. Teacher Stress Directions for Future Research. *Educ Rev*. 2001;1(53):27–35. doi:10.1080/0013191012003362
16. Hoy WK, Tarter CJ. Positive Psychology and Educational Administration: an Optimistic Research Agenda. *Educ Adm Q*. 2011;47(3):427–445. doi:10.1177/0013161X10396930
17. Benevene P, Ittan MM, Cortini M. Self-Esteem and Happiness as Predictors of School Teachers' Health: the Mediating Role of Job Satisfaction. *Front Psychol*. 2018;9(JUL):1–5. doi:10.3389/fpsyg.2018.00933
18. Lavy S, Bocker S. A Path to Teacher Happiness? A Sense of Meaning Affects Teacher–Student Relationships, Which Affect Job Satisfaction. *J Happiness Stud*. 2018;19(5):1485–1503. doi:10.1007/s10902-017-9883-9
19. Moon B, McCluskey J, Morash M. Aggression Against Middle and High School Teachers: duration of Victimization and its Negative Impacts. *Aggress Behav*. 2019;45(5):517–526. doi:10.1002/ab.21840
20. Blakemore SJ, Mills KL. Is adolescence a sensitive period for sociocultural processing? *Annu Rev Psychol*. 2014;65(August 2013):187–207. doi:10.1146/annurev-psych-010213-115202

21. Eccles JS, Roeser RW. Schools as developmental contexts during adolescence. *J Res Adolesc.* 2011;21(1):225–241. doi:10.1111/j.1532-7795.2010.00725.x
22. Prinstein MJ, Giletta M. Peer Relations and Developmental Psychopathology. *Dev Psychopathol.* 2016;2016:1–53. doi:10.1002/9781119125556.devpsy112
23. Heyder A. Teachers' Beliefs About the Determinants of Student Achievement Predict Job Satisfaction and Stress. *Teach Teach Educ.* 2019;86:102926. doi:10.1016/j.tate.2019.102926
24. Wang WL, Kuo CY. Relationships Among Teachers' Positive Discipline, Students' Well-being and Teachers' Effective Teaching: a Study of Special Education Teachers and Adolescent Students With Learning Disabilities in Taiwan. *Int J Disabil Dev Educ.* 2019;66(1):82–98. doi:10.1080/1034912X.2018.1441978
25. Arens AK, Morin AJS. Supplemental Material for Relations Between Teachers' Emotional Exhaustion and Students' Educational Outcomes. *J Educ Psychol.* 2016;108(6):800–813. doi:10.1037/edu0000105.supp
26. Ramberg J, Brolin Låftman S, Åkerstedt T, Modin B. Teacher Stress and Students' School Well-being: the Case of Upper Secondary Schools in Stockholm. *Scand J Educ Res.* 2020;64(6):816–830. doi:10.1080/00313831.2019.1623308
27. Moher D, Liberati A, Tetzlaff J, et al. Preferred Reporting Items for Systematic Reviews and Meta-Analyses: the PRISMA Statement. *PLoS Med.* 2009;6(7):e1000097. doi:10.1371/journal.pmed.1000097
28. Page MJ, McKenzie JE, Bossuyt PM, et al. The PRISMA 2020 Statement: an Updated Guideline for Reporting Systematic Reviews. *BMJ.* 2021;372:1. doi:10.1136/bmj.n71
29. Kun A, Gadanez P. Workplace Happiness, Well-Being and Their Relationship with Psychological Capital: a Study of Hungarian Teachers. *Curr Psychol.* 2022;41(1):185–199. doi:10.1007/s12144-019-00550-0
30. Hong Q, Pluye P, Fàbregues S, et al. *MIXED METHODS APPRAISAL TOOL (MMAT) VERSION 2018 User Guide.* McGill. 2018:1–10.
31. Alessandri G, Filosa L, Sonnentag S, et al. Determinants of Workers' Well-Being During the COVID-19 Outbreak: an Exploratory Study. *Curr Psychol.* 2023;42(10):8595–8614. doi:10.1007/s12144-021-02408-w
32. Ibrahim RZAR, Zalam WZM, Foster B, et al. Psychosocial Work Environment and Teachers' Psychological Well-Being: the Moderating Role of Job Control and Social Support. *Int J Environ Res Public Health.* 2021;18(14):1–19. doi:10.3390/ijerph18147308
33. Rajesh C, Ashok R, Rao CR, Kamath VG, Kamath A, Sekaran VC. Predictors of Psychological Well-Being Among High School Teachers: a cross-Sectional Study from Southern India. *Indian J Community Heal.* 2020;32(4):722–726. doi:10.47203/IJCH.2020.v32i04.019
34. Burns RA, Machin MA. Employee and Workplace Well-being: a Multi-level Analysis of Teacher Personality and Organizational Climate in Norwegian Teachers from Rural, Urban and City Schools. *Scand J Educ Res.* 2013;57(3):309–324. doi:10.1080/00313831.2012.656281
35. Taylor MJ. Using CALMERSS to Enhance Teacher Well-being: a Pilot Study. *Int J Disabil Dev Educ.* 2017;65(3):243–261. doi:10.1080/1034912X.2017.1394985
36. Aldrup K, Klusmann U, Lüdtke O. Does Basic Need Satisfaction Mediate The Link Between Stress Exposure and Well-Being? A Diary Study Among Beginning Teachers. *Learn Instr.* 2017;50:21–30. doi:10.1016/j.learninstruc.2016.11.005
37. Aldrup K, Klusmann U, Lüdtke O, Göllner R, Trautwein U. Student Misbehavior and Teacher Well-Being: testing The Mediating Role of The Teacher-Student Relationship. *Learn Instr.* 2018;58(May):126–136. doi:10.1016/j.learninstruc.2018.05.006
38. Kovalčikienė K. Towards The Well-Being of Vocational Teachers: the Role of Personality Characteristics. *Int J Psychol a Biopsychosoc Approach.* 2017;21:9–28. doi:10.7220/2345-024x.21.1
39. Agyapong B, Chishimba C, Wei Y, et al. Improving Mental Health Literacy and Reducing Psychological Problems Among Teachers in Zambia: protocol for Implementation and Evaluation of a Wellness4Teachers Email Messaging Program. *JMIR Res Protoc.* 2023;12:e44370. doi:10.2196/44370
40. Stone KJ, Rancher C, Davies F, Schnake K, Moreland AD. Examining individual and contextual factors that contribute to early childhood teachers' well-being. *Psychol Sch.* 2024;61(3):903–919. doi:10.1002/pits.23089
41. Kidger J, Turner N, Hollingworth W, et al. An intervention to improve teacher well-being support and training to support students in UK high schools (the WISE study): a cluster randomised controlled trial. *PLoS Med.* 2021;18(11):1–21. doi:10.1371/journal.pmed.1003847
42. Kern M, Waters L, Adler A, White M. Assessing Employee Wellbeing in Schools Using a Multifaceted Approach: associations with Physical Health, Life Satisfaction, and Professional Thriving. *Sci Res.* 2014;5:500–513. doi:10.4236/psych.2014.56060
43. Sarwar S, Mohamed AS, Rogers S, et al. Neuropsychiatric Systemic Lupus Erythematosus: a 2021 Update on Diagnosis, Management, and Current Challenges. *Cureus.* 2021;13(9):17969. doi:10.7759/cureus.17969
44. Biddle SJH, Mutrie N. *Psychology of Physical Activity: Determinants, Well-Being & Intervention.* Routledge: Taylor & Francis Group; 2008.
45. Corbett L, Bauman A, Philayrath P. Characteristics and effectiveness of physical activity, nutrition and/or sleep interventions to improve the mental well-being of teachers: a scoping review. *Sage Journals.* 2021;81(2):196–210. doi:10.1177/0017896921106270
46. Mikus K, Teoh KR. Psychological Capital, Future-Oriented Coping, and The Well-being of Secondary School Teachers in Germany. *Education Psychology an Int J Exp Educ Psychol.* 2022;42(3):334–353. doi:10.1080/01443410.2021.1954601
47. Ciarrochi J, Heaven P, Davies F. The impact of hope, self-esteem, and attributional style on adolescents' school grades and emotional well-being: a longitudinal study. *J Res Personal.* 2007;41(6):1161–1178. doi:10.1016/j.jrp.2007.02.001
48. Seggele I. Self-reflection as a Mediator Between Self-efficacy and Well-being. *J Manag Psychol.* 2016;31(1):18–33. doi:10.1108/JMP-01-2013-0022
49. He F, Cao R, Feng Z, Guan H, Peng J. The Impacts of Dispositional Optimism and Psychological Resilience on the Subjective Well-Being of Burn Patients: a Structural Equation Modelling Analysis. *PLoS One.* 2013;8(12). doi:10.1371/journal.pone.0082939
50. Nakamura-Thomas H, Sano N, Maciver D. Factors influencing junior high school students' perceptions of attending school in Japan. *Child Adolesc Psychiatr Ment Health.* 2023;17(1):1–15. doi:10.1186/s13034-023-00631-w
51. Kaur M, Singh B. Teachers' well-being: an overlooked aspect of teacher development. *Educ Self Dev.* 2019;14(3):25–33. doi:10.26907/esd14.3.03
52. Collie RJ, Shapka JD, Perry NE, Martin AJ. Teacher Well-Being: exploring Its Components and a Practice-Oriented Scale. *J Psychoeduc Assess.* 2015;33(8):744–756. doi:10.1177/0734282915587990
53. Hall-Kenyon KM, Bullough RV, MacKay KL, Marshall EE. Preschool Teacher Well-Being: a Review of the Literature. *Early Child Educ J.* 2014;42(3):153–162. doi:10.1007/s10643-013-0595-4

54. Lui PP, Fernando GA. Development and Initial Validation of a Multidimensional Scale Assessing Subjective Well-Being: the Well-Being Scale (WeBS). *Psychol Rep.* **2018**;121(1):135–160. doi:10.1177/0033294117720696
55. Glasgow P. How To Manage Stress and Increasing Workload. *Indep Educ.* **2016**;466(1):3.
56. McCallum F, Price D, Graham A, Morrison A. Teacher Wellbeing: a Review of the literature. *NSW Assoc Indep Sch NSW.* **2017**;2017:112–132. doi:10.4324/9781315760834
57. Bourke S, Wright A, Guthrie J, Russell L, Dunbar T, Lovett R. Evidence Review of Indigenous Culture for Health and Wellbeing. *Int J Heal Wellness, Soc.* **2018**;8(4):11–27. doi:10.18848/2156-8960/cgp/v08i04/11-27
58. Hajdu G, Hajdu T. The Impact of Culture on Well-Being: evidence from a Natural Experiment. *J Happiness Stud.* **2016**;17(3):1089–1110. doi:10.1007/s10902-015-9633-9
59. Rahayu R, Iskandar S, Abidin Y. Inovasi Pembelajaran Abad 21 dan Penerapannya di Indonesia. *J Basicedu.* **2022**;6(2):2099–2104. doi:10.31004/basicedu.v6i2.2082
60. Ryff C. Happiness Is Everything, or Is It? Explorations on the Meaning of Psychological Well-Being. *Am Psychol Assoc Inc.* **1989**;57(6):1069–1081.
61. Watson D, Clark LA, Tellegen A. Development and validation of brief measures of positive and negative affect: the PANAS scales. *J Pers Soc Psychol.* **1988**;54(6):1063–1070. doi:10.1037/0022-3514.54.6.1063
62. Collie RJ. Understanding Teacher Well-being and Motivation: measurement, Theory, and Change Over Time. *Sage J.* **2014**;2014:1.

Psychology Research and Behavior Management

Publish your work in this journal

Psychology Research and Behavior Management is an international, peer-reviewed, open access journal focusing on the science of psychology and its application in behavior management to develop improved outcomes in the clinical, educational, sports and business arenas. Specific topics covered in the journal include: Neuroscience, memory and decision making; Behavior modification and management; Clinical applications; Business and sports performance management; Social and developmental studies; Animal studies. The manuscript management system is completely online and includes a very quick and fair peer-review system, which is all easy to use. Visit <http://www.dovepress.com/testimonials.php> to read real quotes from published authors.

Submit your manuscript here: <https://www.dovepress.com/psychology-research-and-behavior-management-journal>

Dovepress
Taylor & Francis Group