

Assessing the influence of socio-demographic characteristics on teachers' resilience in Tanzania: A study of selected secondary schools in Morogoro Municipality

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Abstract. This study explored how socio-demographic factors affect teachers' resilience in selected secondary schools in Morogoro Municipality, Tanzania, using a mixed-method approach. Data were collected from 238 participants via questionnaires and interviews and analyzed with SPSS version 25. Key statistical methods, including binary logistic regression and chi-square tests, were employed to examine the relationships between socio-demographic variables and resilience that were measured by teachers' resilience scale. The findings highlighted significant correlations between resilience levels and factors such as education, media exposure, and marital status. About half of the teachers showed high resilience, while the other half demonstrated low resilience, indicating diverse coping abilities. Teachers with higher educational qualifications and greater exposure to educational media exhibited better resilience and adaptive strategies. The study emphasizes the need for reforms in educational institutions and policies to enhance professional development and media access, ultimately aiming to improve teachers' resilience in Tanzanian secondary schools.

Keywords: socio-demographic characteristics, teachers' resilience, Tanzania

1. Background

Globally, teaching is the most demanding profession that requires educators to navigate various challenges, including heavy workloads, student-challenging behaviour, and pressure to meet the great demand of academic standards of learners in schools [19, 26, 29, 33, 38]. These challenges can significantly impact the well-being and resilience level of teachers, which, in turn, can affect their job satisfaction, motivation to work hard, effectiveness in job performance, and long-term retention in the field of education [20]. Thus, teaching is one of the most challenging and complicated professions, capturing the emotional nature of a person and requiring a high level of resilience in the process of service delivery. In the current study, resilience refers to an individual's ability to adapt, cope, and bounce back from stress, adversity, and setbacks that characterize their daily undertakings of teachers [2]. It involves the capacity of a person to continue maintaining psychological well-being, positive attitudes, and effective functioning in the face of challenging situations [13]. Therefore, understanding the influence of socio-demographic variables on teachers' resilience is important for promoting their well-being and ultimately enhancing the quality of education provision in the country.

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*Educational
Dimension*



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Numerous global studies have investigated the connection between resilience and demographic characteristics, particularly focusing on gender, which is crucial for understanding teachers' resilience. Taylor [34] underscores the significance of resilience in empowering and retaining teachers in the USA, illustrating that resilient educators are better equipped to handle the myriad challenges inherent in the teaching and learning process. This research also suggests that resilience levels differ by gender, with females typically demonstrating higher resilience, as noted in the black feminist theory [3, 13]. In a study of Tanzanian primary school teachers, Habibu Baruani, Li and Sun [10] identified six protective factors linked to socio-demographic variables that foster resilience. They include purpose and expectation, nurture and support, positive connections, meaningful participation, life-guiding skills, and clear boundaries. These factors were shown to enhance resilience, which can be further bolstered through knowledge, experience, training, and professional development opportunities. Similarly, Van Hoek, Portzky and Franck [36] explored how socio-demographic characteristics and stress-reducing activities affect academic outcomes among nursing students in Belgium, which revealed socio-demographic factors to influence resilience development and stress reduction positively. Their findings indicated that low resilience correlated with higher dropout rates, while higher resilience predicted better academic performance, although they found no significant effects of gender, educational background, or nationality.

Additionally, Kalumanga [12] examined gender's role in resilience against food insecurity in Tanzanian agro-pastoral communities, whose findings revealed that women exhibited greater resilience in food preservation during famine conditions than men. This underscores the researchers' intent on the importance of considering gender as a demographic factor in understanding resilience, particularly in the teaching profession, and indicates a pressing need for further research into the resilience mechanisms of teachers facing challenging educational environments. In general, social demographic characteristics encompass a range of factors that focus on describing individuals in terms of their personal and social attributes, including age, gender, race/ethnicity, marital status, education level, socio-economic status, years of teaching experience, level of disability, and distance from home to the workplace [12, 30]. This study focuses on variables like age, sex, working experience, marital status, distance from home to the workplace, family size, level of education, and exposure to media. These characteristics can shape individuals' experiences, perspectives, and resources that are potentially influencing their resilience levels in varied teaching and learning contexts.

However, previous research has managed to demonstrate that social demographic characteristics perform a significant role in shaping teachers' well-being and job-related outcomes [7, 10, 12]. Likewise, other studies have indicated that younger teachers may experience higher levels of stress due to their limited experience and the challenges associated with early career development. Such a younger group is termed as the vulnerability age group [18, 37, 38]. Gender and gender roles, for example, have been found to be associated with differences in stress level and stress management, resilience level and coping strategies among teachers in various contexts [3]. In addition, socio-economic status has been linked to significant disparities in the availability of resources and support systems, which can significantly impact teachers' ability to cope with job-related stressors, as well as job satisfaction in various contexts [22]. Here, the author is of the view that economic status as an attribute of socio-demographic variables can have a significant influence on the reduction of stress and stress management among teachers, which in turn promotes their job satisfaction as well as enhances their resilience level in their daily undertakings.

Despite the existing significance of the connection between socio-demographic vari-

ables and resilience in different disciplines, there are still limited studies, specifically those examining the association between social demographic characteristics and the resilience level of teachers, particularly in Africa, East Africa and Tanzanian context, as it was reported by Xu [38]. Understanding how these characteristics relate to teachers' resilience can provide significant and valuable insights into the factors that promote or rather hinder the teachers' ability to cope sustainably with the demands of their profession and the changing educational echo as a whole.

Therefore, this study has a great focus on filling the available gap in the literature by examining the association between social demographic characteristics and the resilience level of teachers in the Tanzanian context, where Morogoro Municipality is taken as a reference point to generate data to inform the study empirically, by exploring how factors such as age, sex, level of education, marital status, work of teaching experience, distance from home to the workplace, exposure to media, and family size, we can significantly manage to identify potential areas that need special intervention and support system for enhancing teachers' well-being and resilience as whole. Such significant insights can perfectly inform the development of targeted strategies and policy interventions that are aimed at promoting the long-term achievement and satisfaction of teachers, resulting in the benefit of both educators and their students.

1.1. Overview of socio-demographic characteristics of teachers

1.1.1. Sex

Research indicates that sex influences teachers' resilience, with female teachers generally showing higher resilience levels than their male counterparts. This difference may stem from gender socialization, which encourages women to develop effective coping strategies and emotional management skills that contribute to their resilience in challenging workplace conditions. Female teachers are also more likely to engage in self-care practices, such as seeking social support and mindfulness activities, which enhance their resilience. Additionally, qualitative studies suggest that female teachers are better at building strong professional and personal support networks, serving as buffers against the demands of the teaching profession [6]. Overall, existing research supports the notion that gender plays a significant role in resilience, with female teachers typically demonstrating higher levels of resilience compared to males, a view supported by feminist theory [3].

1.1.2. Age

Age impacts teachers' resilience in nuanced ways. Younger teachers may bring energy and enthusiasm but lack experience, making them more vulnerable [28]. Conversely, older teachers often possess greater experience and coping strategies but might face fatigue or resistance to change [9]. Research indicates that teachers with 8-23 years of experience exhibit the highest resilience, balancing passion and expertise [2]. Overall, resilience evolves throughout a teacher's career, influenced by various personal and contextual factors [21]. Therefore, age performs a double role in enhancing resilience among teachers in different contexts.

1.1.3. Level of education

Teachers' resilience is significantly affected by their educational level. Studies show that those with advanced degrees, such as a master's or doctorate, demonstrate greater resilience when facing challenges [13]. Higher education equips teachers with problem-solving skills and a strong sense of self-efficacy, allowing them to adapt their teaching to meet diverse student needs. Thus, educational attainment is crucial for enhancing teachers' resilience.

1.1.4. Work experience

Work experience plays a vital role in shaping teachers' resilience. Experienced teachers typically show higher resilience due to a deeper understanding of classroom challenges and effective coping strategies they have developed over time [8, 9]. They often have broader support networks, which help buffer job-related stress. Therefore, greater work experience contributes positively to teachers' resilience in various teaching environments in the education discipline.

1.1.5. Exposure to media technology

Media technology's impact on teachers' resilience is mixed. On the positive side, it offers access to professional development and innovative teaching strategies, enhancing self-efficacy [21]. However, the pressure to integrate technology can also induce stress and anxiety, undermining resilience [14]. The overall effect of technology on resilience depends on the specific tools used, the support available, and teachers' adaptability to technological changes. Technology helps the teacher to seek alternative sources of information related to the teaching and learning activities in their daily undertakings.

1.1.6. Family size

The size of a teacher's family significantly affects their resilience in the face of professional challenges. Teachers from smaller families often benefit from more personalized support, enabling them to navigate work-related stress more effectively [38]. This individualized attention can foster a stronger sense of well-being and coping strategies. Conversely, those from larger families may experience heightened demands and responsibilities, which can contribute to increased stress levels and diminish their ability to cope with the rigours of teaching [31]. Therefore, the interplay between family size and resilience is nuanced and influenced by various factors, including individual circumstances, support systems, and the resources available to each teacher.

1.1.7. Distance from home to work

The distance between a teacher's home and workplace plays a crucial role in shaping their resilience. Longer commutes often correlate with heightened stress levels and a greater risk of burnout, which can ultimately erode a teacher's ability to cope with challenges. Teachers who live further from their schools may experience physical fatigue and a sense of isolation, making it more difficult to access social support networks that are vital for emotional well-being [21]. In contrast, those who reside closer to their schools tend to benefit from shorter travel times, allowing them more opportunities for self-care and to foster meaningful relationships with colleagues. This proximity can enhance their sense of community and support, thereby positively impacting their resilience and overall job satisfaction.

1.1.8. Marital status

Marital status influences teachers' resilience in complex ways. Generally, married teachers report higher resilience and better stress management, likely due to the support from their spouses [1]. However, some studies suggest that married teachers may also experience lower job satisfaction and higher stress, complicating the relationship. Ultimately, the effect of marital status on resilience varies based on individual and contextual factors [9]. Marital status influences the level of responsibilities that an individual possesses, which also has reparation to the resilience level of teachers.

1.2. Challenges and gap in the literature

The reviewed literature on the influence of socio-demographic characteristics on teachers' resilience reveals significant insights but also highlights notable limitations and gaps. While various studies indicate that factors such as gender, age, educational

level, work experience, media exposure, family size, distance from home to work, and marital status play critical roles in shaping teachers' resilience [10, 12], there is a lack of comprehensive exploration into the intersectionality of these factors within the specific context of African and Tanzanian educational settings in particular. Most existing research focuses predominantly on Western contexts, which may not adequately capture the unique socio-cultural dynamics influencing resilience in East Africa [3, 21, 32, 38]. In addition, the literature often fails to address how these socio-demographic factors interact with systemic issues such as educational policy, resource availability, and cultural expectations, which can further complicate teachers' experiences. Furthermore, while individual characteristics are examined, there is insufficient emphasis on the collective impact of teachers' support networks and institutional environments in fostering resilience [23]. This gap suggests a need for more localized studies that adopt a holistic approach, integrating both individual and systemic perspectives to understand better how socio-demographic characteristics contribute to teachers' resilience in challenging educational landscapes, especially in developing countries and Tanzania, in particular, where education discipline experiences great challenges. Addressing these limitations could enhance the development of targeted interventions and support systems aimed at promoting teacher well-being and retention in the profession.

1.3. Research question

This study focuses on responding to a research question: *How do socio-demographic variables influence the resilience of teachers in selected secondary schools in Tanzania?*

2. Theoretical underpinning of the study

2.1. Polidore's resilience theory

Resilience theory explores how individuals adapt to challenges within their social environments, emphasizing their responses rather than the adversities themselves. Polidore's resilience theory (PRT), developed in 2004 based on research with African American female teachers [27], incorporates two main perspectives: developmental and ecological. The developmental perspective suggests that resilience develops through adaptive processes over time, while the ecological perspective highlights the impact of external environments and social interactions on resilience in educational settings. This framework posits that resilient individuals can recover from adversity, cultivate positive relationships, and maintain a commitment to their work, thereby enhancing the teaching-learning experience, particularly in challenging environments. When assessing teachers' resilience in Tanzania, especially in Morogoro Municipality's secondary schools, resilience theory is crucial for understanding how socio-demographic factors affect teachers' coping abilities amid evolving educational policies. However, the theory's limitations, particularly its insufficient emphasis on resource management, can be supplemented by the conservation of resources theory, which advocates for sustainable resource use to bolster resilience. This combined approach offers a more comprehensive understanding of the factors influencing teachers' resilience in difficult contexts.

2.2. Conservation resource theory

Conservation of resources theory (CRT) was introduced by Holmgreen et al. [11] and focuses on the importance of resources and their sustainable management in promoting individual well-being, reducing stress, and developing resilience. CRT suggests that individuals strive to obtain and protect various resources, including personal, social, and psychological resources. In the context of teachers' resilience, CRT provides insights into how teachers can effectively struggle to acquire, utilize and

maintain their limited resources in challenging teaching spaces in order to enhance their resilience.

By applying CRT, teachers can identify and leverage resources such as personal characteristics, social support, and psychological coping strategies to bounce back from adversity and sustain their resilience. Furthermore, CRT highlights the relationship between resources and teachers' resilience, enabling teachers to adapt and thrive in different teaching contexts. The theory emphasizes the need for teachers to protect and maintain their available resources in order to prevent increased stress levels and preserve their well-being.

3. Methodologies

3.1. Philosophy, approach and design

The study incorporated the principles of pragmatism philosophy and utilized a mixed research methodology to gather both qualitative and quantitative data. By following the recommendations of Kumar [16], data collection and analysis were conducted concurrently, aiming to improve the accuracy of the findings. Employing the use of a mixed approach allowed the checking and correction of the limitations of using one method of data collection to be checked and substituted by another method in a different context [4]. A convergent parallel research design was employed in this study to achieve a comprehensive understanding of the research problem. This design involved integrating both qualitative and quantitative data at various stages, including the data collection and analysis phase. The rationale behind this approach, as explained by Creswell and Creswell [4], was to combine and justify the use of both sets of data at different stages of the research process, thus during data collection and at the subsequent stage of analysis of data. Convergent research design helped the researcher to collect and merge or converge both quantitative and qualitative data for the purpose of providing a more detailed and comprehensive analysis process of a particular research problem that the researcher is investigating [4], that is, teachers' resilience. It is also argued by Lelissa [17, chap. 5] that the suggested design involves a single study containing the collection of both qualitative and quantitative data at the same time for validating the findings generated by each method by the evidence produced by the other method. Furthermore, this approach is in line with the theoretical underpinnings of pragmatism and is recognized as an effective and widely used method for integrating diverse research approaches [5]. Likewise, convergent parallel research design helped the researcher to collect both qualitative and quantitative data simultaneously.

3.2. Participants of the study

The study included 238 participants, consisting of 234 teachers selected through simple random sampling through random names at the time of data collection and four key informants (3 heads of secondary schools and 1 Municipal Education Officer) chosen through purposive sampling techniques. The key informants were selected purposively because they contained important information regarding the resilience of teachers based on their titles in schools. These participants were selected from eight secondary schools in Morogoro Municipality. The schools were chosen based on the criteria that they were among the first schools built at the municipal level over 15 years ago, and their teachers may have experienced various challenges and stress. They may also have adopted different ways to address them in their respective schools. The area was specifically selected because it had a high turnover rate of teachers, as reported by Kimaro [15], with public schools characterized by numerous challenges than private ones. This motivated the researcher to investigate the influence of socio-demographic

characteristics of teachers and their implications for the development of teachers' resilience in the selected schools in Tanzania.

3.3. Research instrument

A thorough analysis of various socio-demographic factors was conducted to understand better their impact on teachers' resilience in daily activities. The study examined several variables, including age, gender, educational background, and the distance from home to work. It also considered additional factors such as marital status, work experience, media exposure, and family size. By investigating these characteristics, the research aimed to identify patterns and relationships that could influence resilience. Each variable was carefully analyzed to assess its specific effect on teachers' ability to handle challenges. Statistical tests were performed to evaluate the significance of these variables, with those showing a significance level of 0.05 or lower considered noteworthy, following common statistical guidelines. Variables whose statistical value, after being dichotomized to the regression model, are said to have a significant influence on the development of teachers' resilience.

3.4. Validity

To ensure validity, the questionnaires were carefully assessed for their language, quality, and clarity to identify any inconsistencies, contributions, or duplications. Additionally, the socio-demographic variables were thoroughly examined to capture personal insights that reflect teachers' daily experiences. These insights were also reviewed by four experts, two from the University of Dar es Salaam and two from the University of Dodoma, to evaluate the content focus before the questionnaires were administered to participants. The experts' feedback was considered to enhance validity prior to fieldwork. To further ensure the reliability of the research instruments, participants from three schools were involved in a pilot test of the tools before the actual data collection phase. The internal consistency was assessed using a confidence level of 95%, indicating that the measuring instrument was reliable. The researcher adhered to all ethical considerations, including obtaining clearance from relevant authorities, securing consent, maintaining confidentiality, and ensuring participants' freedom throughout the research process.

3.5. Data analysis procedures

Data was screened, processed and coded through SPSS version 25 software before the analysis process. In the analysis process, descriptive statistics, through frequency and percentage, were used to describe numerous socio-demographic characteristics of the respondents. Then, the χ^2 test was used to examine the association between demographic characteristics and the exhibited teachers' resilience. Also, a regression model was used to examine the influence of socio-demographic factors on the resilience of teachers. In some cases, thematic analysis was done on qualitative data. Thus, regression model, $Y = a + b_1X_1 + b_2X_2 + b_3X_3 + b_4X_4 + b_5X_5 + b_6X_6 + b_7X_7 + b_8X_8 + e_i$, the description of the model is as seen bellow:

Y = Resilience indices of a dependent variables

a = Constant

b = Coefficient

e_i = an error term

X_1 = Age

X_2 = Sex

X_3 = Level of education

X_4 = Working experience

X_5 = Exposure to media

X_6 = Family size

X_7 = Distance from home to the workplace

X_8 = Marital status

4. Research findings

4.1. Socio-demographic variables influencing teachers' resilience

To explore the influence of socio-demographic variables on teachers' resilience, an analysis was conducted focusing on factors such as age, sex, education level, distance from home to the workplace, marital status, work experience, exposure to media, and family size. For instance, younger teachers may face different challenges than older ones, who often develop better-coping strategies. Higher education levels typically correlate with enhanced resilience due to improved resources and skills. Additionally, supportive family structures can significantly contribute to resilience, while exposure to media may provide innovative strategies for managing challenges. The findings highlight the complex interplay between these socio-demographic factors and teachers' professional resilience.

The demographic profile of the respondents in the current study reveals a diverse group with varying backgrounds (table 1). Among the respondents, the majority fall within the 30-39 age range (47.01%), followed closely by those aged 40 and above (42.31%), indicating a predominance of experienced educators. The gender distribution shows a higher representation of males (62.39%) compared to females (37.61%), which may reflect broader societal norms. Educationally, the respondents are predominantly degree holders (54.7%), with a significant portion having postgraduate qualifications (27.78%), suggesting a well-educated teaching workforce in the selected schools in Tanzania. In terms of work experience, nearly half (47.01%) have ten years or less, while a comparable number (52.99%) possess more than ten years of experience, highlighting a balance between new and seasoned teachers. Furthermore, a significant majority (67.52%) have exposure to media technology, which may enhance their teaching methods and resilience as a whole. Regarding family dynamics, more than half (53.42%) of the respondents come from larger families (more than five members), which may impact their socio-economic context and support systems in their daily undertakings.

Additionally, a notable proportion (66.67%) travel more than five kilometres to their workplaces, potentially influencing their daily stress levels and overall resilience in the teaching profession. Lastly, a considerable majority of respondents are married (67.52%), which may correlate with their support structures and coping mechanisms in the face of educational challenges. This overview underscores the complex interplay of age, gender, education, experience, and social factors in shaping the resilience of teachers in this specific context.

4.1.1. Association between socio-demographic factors and teachers' resilience

The objective of this research was to investigate the statistical correlation between the socio-demographic characteristics of participants and their levels of resilience in selected schools. To analyze the distribution of these variables, the researcher utilized the chi-square test, as detailed in table 2. This statistical method was employed

Table 1Socio-demographic influences to teachers' resilience ($N = 234$).

Variable	Frequency	Percent
Age of respondent		
20–29 years	25	10.68
30–39 years	110	47.01
40 years and above	99	42.31
Sex		
Female	88	37.61
Male	146	62.39
Level of education		
Diploma	41	17.52
Degree	128	54.7
Postgraduate	65	27.78
Work experience		
≤ 10 years	110	47.01
> 10 years	124	52.99
Exposure to media technology		
No	76	32.48
Yes	158	67.52
Family size		
≤ 5 people	109	46.58
> 5 people	125	53.42
Distance from home to the workplace		
≤ 5 kilometers	78	33.33
> 5 kilometers	156	66.67
Marital status		
Single	76	32.48
Married	122	67.52

Source: Field data 2023.

to assess the significance of the relationships between various socio-demographic factors and teachers' resilience, which had been previously outlined. The analysis encompassed several key variables, including age, gender, work experience, educational attainment, family size, exposure to media technology, commuting distance from home to the workplace, and marital status. Through this rigorous statistical testing, the study aimed to uncover potential patterns and insights that could inform the understanding of resilience among teachers in the selected educational contexts.

Resilience levels among the 234 participants in the study were categorized into two distinct groups: those exhibiting high resilience and those demonstrating low resilience. The findings revealed that 45% of the respondents displayed high levels of resilience in their teaching profession, while the remaining 55% were classified as having low resilience. This division underscores the varying capacities of educators to cope with the challenges inherent in their roles, suggesting that while a significant portion of teachers possess strong resilience, a larger group may struggle with the demands of their profession. Such insights into resilience levels are crucial, as they can inform targeted interventions aimed at enhancing the coping mechanisms of teachers, ultimately leading to improved educational outcomes.

Further statistical analysis revealed significant associations between resilience levels and several socio-demographic variables, precisely level of education ($\chi^2 = 6.3614$,

Table 2

The association between socio-demographic factors and level of teachers' resilience in selected schools ($N = 234$).

Variable	Response	Level of resilience		χ^2	p-value
		High	Low		
Age of respondents	20–29 years	11 (44%)	14 (56%)	1.6076	0.448
	30–39 years	34 (30.91%)	76 (69.09%)		
	40 years and above	32 (32.32%)	67 (67.68%)		
Sex	Female	33 (37.50%)	55 (62.50%)	1.3483	0.246
	Male	44 (30.14%)	102 (69.86%)		
Level of education	Diploma	9 (21.95%)	32 (78.05%)	6.3614	0.042
	Degree	51 (39.84%)	77 (60.16%)		
	Postgraduate	17 (26.15%)	48 (73.85%)		
Work experience	≤ 10 years	34 (30.91%)	76 (69.09%)	0.3749	0.54
	> 10 years	43 (34.68%)	81 (65.32%)		
Exposure to media	No	11 (14.47%)	65 (85.53%)	17.321	0.001
	Yes	66 (41.77%)	92 (58.23%)		
Family size	≤ 5 people	40 (36.70%)	69 (63.30%)	1.3284	0.249
	> 5 people	37 (29.60%)	88 (70.40%)		
Distance from home	≤ 5 people	26 (33.33%)	52 (66.67%)	0.0097	0.922
	> 5 people	51 (32.69%)	105 (67.31%)		
Marital status	Single	18 (23.68%)	58 (76.32%)	4.3355	0.037
	Married	59 (37.34%)	99 (62.66%)		

$p = 0.042$), exposure to media technology ($\chi^2 = 17.321$, $p = 0.001$), and marital status ($\chi^2 = 4.3355$, $p = 0.037$). These findings indicate that teachers with higher educational attainment tend to exhibit greater resilience, potentially due to enhanced knowledge and coping strategies acquired through their academic experiences. Additionally, exposure to media technology appears to play a vital role in fostering resilience, possibly by providing educators with innovative teaching tools and support networks. Marital status also emerged as a significant factor, suggesting that the social support and stability associated with being married may contribute positively to a teacher's resilience. According to the established rule of thumb in statistical analysis, any variable with a p -value of 0.05 or less is deemed statistically significant, reinforcing the importance of these three variables in understanding the resilience landscape among teachers in the study.

4.1.2. Relationship between socio-demographic factors and teachers' resilience

Table 3 presents the distribution of the binary logistic regression model, revealing the intricate connection between the socio-demographic characteristics of participants and their resilience levels. To identify which socio-demographic factors correlate with resilience among teachers in the selected schools, the analysis focused exclusively on variables that yielded χ^2 test p -values of 0.05 or less. This rigorous selection process ensured that only the most statistically significant predictors were included in the multivariable logistic regression model. The results underscore that teachers holding a bachelor's degree (AOR = 2.5653, $p = 0.030$, 95% CI: 1.096; 6.00) are significantly more likely to exhibit high resilience traits. This finding suggests that higher educational attainment provides teachers with not only advanced knowledge but also the skills necessary to cope with challenges effectively, thereby enhancing their resilience in the

classroom.

In addition to educational attainment, the analysis highlights the importance of media exposure as a critical factor influencing teacher resilience. The results indicate that teachers who engage with various media sources (AOR = 3.6568, $p = 0.001$, 95% CI: 1.667; 8.021) are significantly more likely to display strong resilience characteristics compared to those lacking such exposure. This suggests that access to diverse media resources equips teachers with innovative strategies, motivational narratives, and a broader understanding of educational practices, all of which can bolster their ability to navigate difficulties in their teaching environments. Collectively, these findings illustrate that among the examined socio-demographic characteristics, both the level of education and media exposure is highly associated with the resilience of teachers, indicating that targeted interventions in these areas could enhance the overall resilience of educators in challenging settings.

Table 3

Binary logistic regression model on the relationship between socio-demographic factors and teachers' resilience ($N = 234$).

Variable	Response	Level of resilience		COR (95% CI)	p-value	AOR (95% CI)	p-value
		High	Low				
Sex	Female	33 (37.50%)	55 (62.50%)	Ref	Ref	Ref	Ref
	Male	44 (30.14%)	102 (69.86%)	0.719 (0.411, 1.256)	0.246	0.739 (0.4082, 1.340)	0.321
Level of education	Diploma	9 (21.95%)	32 (78.05%)	Ref	Ref	Ref	Ref
	Degree	51 (39.84%)	77 (60.16%)	2.354 (1.037, 5.3459)	0.041	2.5653 (1.096, 6.00)	0.030
	Postgraduate	17 (26.15%)	48 (73.85%)	1.255 (0.500, 3.170)	0.625	2.1270 (0.780, 5.7939)	0.140
Exposure to media	No	11 (14.47%)	65 (85.53%)	Ref	Ref	Ref	Ref
	Yes	66 (41.77%)	92 (58.23%)	4.239 (2.07, 8.6477)	0	3.6568 (1.667, 8.021)	0.001
Family size	≤ 5 people	40 (36.70%)	69 (63.30%)	Ref	Ref	Ref	Ref
	> 5 people	37 (29.60%)	88 (70.40%)	0.725 (0.419, 1.253)	0.25	0.688 (0.374, 1.265)	0.230
Marital status	Single	18 (23.68%)	58 (76.32%)	Ref	Ref	Ref	Ref
	Married	59 (37.34%)	99 (62.66%)	2.013 (1.149, 3.529)	0.014	1.3329 (0.692, 2.565)	0.390

4.2. Discussion of the findings

The level of education among teachers has emerged as a statistically significant factor in understanding their resilience, particularly in challenging teaching environments. Teachers with higher education levels possess a broader knowledge base, which enables them to navigate difficulties better and enhances their problem-solving skills and adaptability [38]. This educational foundation is critical, as it equips educators with specialized training and exposure to a variety of teaching methodologies that empower them to tackle the multifaceted challenges they face in the classroom. For instance, the integration of advanced pedagogical techniques and evidence-based practices offers these teachers the tools necessary to create engaging learning experiences that can motivate their students, even in adverse conditions [24]. Furthermore, higher levels of education are closely linked to enhanced critical thinking abilities, which foster creativity and innovation. These skills are invaluable when it comes to developing effective strategies for overcoming complex problems, making it more likely that these educators will demonstrate resilience in the face of adversity.

However, the relationship between education level and resilience is not universally accepted, as evidenced by interviews with some respondents who argue that teachers with lower educational qualifications, such as certificates and diplomas, can exhibit even higher levels of resilience than their more highly educated counterparts. This perspective highlights the notion that practical experience and contextual understanding can sometimes outweigh formal educational credentials in fostering the resilience of teachers in varied contexts [20]. For instance, teachers who have spent years in

the field may develop an intuitive grasp of classroom dynamics, enabling them to respond effectively to student needs and classroom challenges. Additionally, these educators may cultivate strong relationships with their students and communities, which can serve as vital support systems during difficult times. Thus, while formal education undoubtedly provides valuable tools for resilience, the lived experiences and contextual adaptability of less formally educated teachers can also play a significant role in their ability to thrive in challenging teaching environments. This complexity suggests that resilience in education is multifaceted and may not be solely determined by academic qualifications.

I think you know it by yourself. Diploma teachers exhibit a higher resilience level right from the beginning of their work than those with degrees and postgraduate degrees. Those with higher education levels have many expectations that cannot easily be achieved in their daily undertakings. Hence, some of them end up at work disposal while also engaging in other commercial activities. Moreover, today, Boda-boda has become the common business among teachers, helping them to seek economic resilience. (R1 on 19th June, 2023)

Another participant illustrated;

Education helps teachers seek extra mechanisms that can help them cope with the challenges associated with resource constraints in schools. Teachers with enough education, like a master's degree, can better manage to solve different academic challenges in schools. (R4 on 22st August, 2023)

Exposure to media significantly influences teachers' resilience by providing them with a wealth of information and diverse perspectives on educational challenges and solutions. Engaging with a variety of media sources, such as educational journals, research articles, online platforms, and professional development programs, enables teachers to remain informed about the latest advancements in pedagogy and innovative teaching strategies [12]. This continuous engagement not only enhances their problem-solving skills but also broadens their instructional repertoire, allowing them to implement effective methods tailored to the unique needs of their students, especially in challenging environments.

Moreover, media exposure often includes narratives of success and resilience from other educators, which can serve as powerful motivators during tough times, inspiring teachers to persevere despite obstacles. Having access to these resources fosters a sense of confidence in their ability to tackle difficult situations, as they can draw upon a diverse array of strategies and insights. As a result, teachers who actively engage with media are better equipped to adapt to challenging teaching conditions, particularly in contexts where there may be a critical shortage of resources. This perspective is echoed by key informants who emphasize the importance of media exposure in cultivating resilience, highlighting its role as a fundamental aspect of a teacher's professional growth and effectiveness.

I think a teacher who is exposed to media technology has a better chance of developing numerous mechanisms that can help him/her adapt to different challenging teaching and learning environments. It also helps them navigate challenges that are associated with a critical shortage of teaching and learning resources because, through internet sources, they can get different material resources that help them develop resiliently. (R2 on 24th June, 2023)

Another participant viewed that

Teachers who are exposed to media technology can demonstrate a high level of resilience because they can use technology to seek further material resources that are important in their daily teaching and learning activities, hence can impact the education achievement of students in schools. (R10 on 26th August, 2023)

The findings reveal significant implications for the professional development and support of teachers, particularly in relation to media technology exposure. Teachers who engage with media technology are better equipped to develop adaptive mechanisms that enable them to navigate the various challenges posed by resource shortages in educational settings. By leveraging online resources, these educators can access diverse materials and innovative teaching strategies that enhance their resilience and effectiveness in the classroom. Furthermore, the ability to utilize technology not only aids teachers in overcoming immediate challenges but also positively impacts student learning outcomes, as they can provide richer, more varied learning experiences [24]. This underscores the importance of integrating media technology training into teacher development programs, as fostering such skills can lead to improved educational achievements and create a more resilient teaching workforce capable of thriving in challenging environments. Ultimately, these insights highlight the need for educational institutions to prioritize media literacy and technology access as essential components of teacher resilience and effectiveness.

Higher levels of education play a crucial role in equipping teachers with not only an extensive knowledge base across various subjects but also refined critical thinking skills, both of which are essential for navigating the complexities of contemporary educational environments. This advanced educational background empowers teachers to devise innovative solutions to intricate problems they encounter in their classrooms, such as addressing diverse learning needs and adapting to ever-evolving curricular demands. Furthermore, exposure to various media sources broadens their horizons by presenting multiple perspectives and instructional strategies, which fosters creativity and adaptability in their teaching methods. This diversity of thought can also serve as a powerful source of motivation, enabling teachers to engage their students more effectively and respond to challenges with resilience. By examining the interplay between these educational factors and demographic variables, researchers and policymakers can uncover significant insights into how these elements influence teacher resilience. Such understanding is crucial for designing targeted interventions that not only support teachers in their professional development but also promote sustainable practices within their teaching processes, ultimately enhancing the educational experience for students and contributing to a more robust educational system overall.

Therefore, the observation regarding socio-demographic factors influencing teachers' resilience highlights an important aspect of educational research, yet it points to a gap in the analysis of the mechanisms at play. While the study identifies education level, media exposure, and marital status as significant factors, it lacks a thorough exploration of how these elements significantly interact to shape resilience [30]. For instance, a teacher with higher education might possess better-coping strategies and problem-solving skills, while those with strong media exposure could leverage information and resources that enhance their professional practices [35]. In addition, marital status may impact emotional support systems, where married teachers might benefit from shared responsibilities and encouragement, thus fostering resilience. Incorporated case studies or specific examples would not only illustrate these dynamics more vividly but also provide a richer understanding of how these socio-demographic

factors operate in real-world contexts, ultimately enhancing the study's findings and implications for teacher support initiatives.

Higher educational attainment often equips teachers with advanced knowledge and pedagogical strategies, enabling them to tackle classroom challenges more effectively and adapt to changing educational demands. Moreover, media exposure can provide teachers with innovative teaching methods, current educational trends, and a broader network of support through online communities and resources [25]. By discussing these factors, the study highlights how advanced knowledge fosters confidence and problem-solving abilities while media engagement encourages collaboration and the exchange of best teaching practices. Thus, addressing these reasons would deepen the understanding of how educational and informational resources contribute to building resilience, ultimately emphasizing the need for ongoing training and access to varied media for teachers.

Generally, studying the influence of socio-demographic characteristics on teachers' resilience has also presented several challenges, including difficulties in quantifying resilience and the complexity of socio-demographic interactions of teachers based on individual diversities. However, the sample is not adequate based on the general teacher population, and the findings may not accurately reflect the diverse experiences of educators across different backgrounds. Likewise, resilience is a multifaceted construct that can be hard to measure objectively, leading to reliance on self-reported data, which may be subject to bias. Therefore, the researchers employed a mixed-methods approach that combines quantitative surveys with qualitative interviews, allowing for richer, contextual insights into teachers' experiences [17, chap. 5]. Ensuring a diverse and representative sample through targeted recruitment efforts in the study location, both sampling techniques were used to enhance the validity of the findings.

5. Conclusion

Based on the discussed findings, it can be concluded that the level of education and exposure to media are significantly associated with the resilience of teachers in various teaching environments. Teachers with a higher level of education, such as a bachelor's degree or higher, demonstrate a greater likelihood of exhibiting strong resilience characteristics. This correlation suggests that the specialized training and comprehensive knowledge base acquired through higher education play a pivotal role in equipping teachers to navigate and overcome challenges encountered in the classroom effectively. Higher education often provides teachers with not only theoretical knowledge but also practical skills through internships and teaching practicums, enabling them to handle diverse classroom situations with confidence. This foundational expertise fosters a sense of self-efficacy, allowing educators to approach obstacles with a problem-solving mindset and a greater capacity for adaptive thinking.

Moreover, exposure to various media sources significantly enhances teacher resilience. Teachers who engage with educational journals, research articles, online forums, and other digital platforms are more likely to develop strong resilience traits. This exposure allows educators to access a wealth of information, including innovative teaching strategies, insights into classroom management, and evidence-based practices that can be directly applied to their teaching. Additionally, media exposure can inspire and motivate teachers by showcasing success stories and effective practices from their peers. Such diverse perspectives not only broaden their understanding of teaching methodologies but also reinforce their belief in their ability to effect positive change in their student's lives. As teachers become more informed and resourceful through media engagement, they are better equipped to adapt to the dynamic and often unpredictable nature of educational environments.

These findings underscore the importance of considering the socio-demographic characteristics of teachers—specifically their level of education and media exposure—when aiming to understand and promote resilience among educators. Policymakers and educational leaders can leverage these insights to design targeted interventions and support systems that specifically address these factors. For instance, Leroux [18] viewed that professional development programs could be tailored to include components that enhance media literacy, ensuring teachers can effectively utilize available resources for their professional growth. Furthermore, initiatives that promote higher education opportunities for teachers could lead to a more resilient workforce. Ultimately, by fostering an environment that supports both educational advancement and continuous engagement with media, we can enable teachers to thrive in challenging educational landscapes, thereby enhancing their ability to deliver quality education and support their students' learning journeys.

6. Recommendations

To enhance teacher resilience in various teaching environments, it is essential to implement targeted strategies that focus on both educational advancement and media engagement. First, educational institutions should develop and promote professional development programs that prioritize higher education opportunities for teachers, encouraging them to pursue advanced degrees and specialized training. This investment in their education not only equips teachers with the necessary theoretical knowledge but also provides practical skills that empower them to navigate classroom challenges effectively. Additionally, these programs should include components that enhance media literacy, enabling teachers to efficiently utilize educational journals, online resources, and digital platforms to access innovative teaching strategies and evidence-based practices that all together help them to adapt to numerous challenges that characterize their daily undertakings.

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References

- [1] Arens, A.K. and Morin, A.J.S., 2016. Relations between teachers' emotional exhaustion and students' educational outcomes. *Journal of Educational Psychology*, 108(6), pp.800–813. Available from: <https://doi.org/10.1037/edu000105>.
- [2] Carmel, R. and Badash, M., 2021. Who is the effective teacher? Perceptions of early career English teachers in Israel. *The Language Learning Journal*, 49(5), pp.614–629. Available from: <https://doi.org/10.1080/09571736.2019.1656767>.
- [3] Collins, P.H., 2000. The Politics of Black Feminist Thought. *Black Feminist Thought: Knowledge, Consciousness, and the Politics of Empowerment*. 2nd ed. New York and London: Routledge, chap. 1, pp.1–19. Available from: <https://negrasoulblog.wordpress.com/wp-content/uploads/2016/04/patricia-hill-collins-black-feminist-thought.pdf>.
- [4] Creswell, J.W. and Creswell, J.D., 2018. *Research Design: Qualitative, Quantitative and Mixed Methods Approaches*. 5th ed. Los Angeles: SAGE Publications. Available from: https://spada.uns.ac.id/pluginfile.php/510378/mod_resource/content/1/creswell.pdf.

- [5] Creswell, J.W. and Plano Clark, V.L., 2017. *Designing and Conducting Mixed Methods Research*. 3rd ed. SAGE Publications.
- [6] Cristofaro, L.H., 2022. *A Qualitative Study of the Impact of a Personal Learning Network for Women Serving as a High School Principal or Superintendent*. A Dissertation Submitted in Partial Fulfillment of the Requirements for the degree of Doctor of Education. University of St. Francis. Available from: <https://eric.ed.gov/?id=ED624716>.
- [7] Demir Polat, D. and İskender, M., 2018. Exploring Teachers' Resilience in Relation to Job Satisfaction, Burnout, Organizational Commitment and Perception of Organizational Climate. *International journal of psychology and educational studies*, 5(3), pp.1–13. Available from: <https://doi.org/10.17220/ijpes.2018.03.001>.
- [8] Flores, M.A., 2018. Teacher Resilience in Adverse Contexts: Issues of Professionalism and Professional Identity. In: M. Wosnitza, F. Peixoto, S. Beltman and C.F. Mansfield, eds. *Resilience in Education: Concepts, Contexts and Connections*. Cham: Springer International Publishing, pp.167–184. Available from: https://doi.org/10.1007/978-3-319-76690-4_10.
- [9] Gu, Q. and Day, C., 2013. Challenges to teacher resilience: conditions count. *British Educational Research Journal*, 39(1), pp.22–44. Available from: <https://doi.org/10.1080/01411926.2011.623152>.
- [10] Habibu Baruani, T., Li, X. and Sun, Q., 2023. The Association between Socio-demographic Factors and the Six Protective Factors that Foster Resilience among Tanzania Primary Schools Teachers. *Asian Journal of Education and Social Studies*, 39(1), p.1–14. Available from: <https://doi.org/10.9734/ajess/2023/v39i1834>.
- [11] Holmgreen, L., Tirone, V., Gerhart, J. and Hobfoll, S.E., 2017. Conservation of Resources Theory. *The Handbook of Stress and Health*. John Wiley & Sons, Ltd, chap. 27, pp.443–457. Available from: <https://doi.org/10.1002/9781118993811.ch27>.
- [12] Kalumanga, V.E., 2021. *Gender roles and resilience to food insecurity among agro-pastoral communities in Chamwino and Chemba districts, Tanzania*. Ph.D. thesis. The University of Dodoma, Dodoma. Available from: <http://repository.costech.or.tz/handle/20.500.12661/3435>.
- [13] Karakose, T., Polat, H., Yirci, R., Tülübaş, T., Papadakis, S., Ozdemir, T.Y. and Demirkol, M., 2023. Assessment of the Relationships between Prospective Mathematics Teachers' Classroom Management Anxiety, Academic Self-Efficacy Beliefs, Academic Amotivation and Attitudes toward the Teaching Profession Using Structural Equation Modelling. *Mathematics*, 11(2), p.449. Available from: <https://doi.org/10.3390/math11020449>.
- [14] Karsenti, T. and Fievez, A., 2013. *The iPad in education: uses, beneits, and challenges – A survey of 6,057 students and 302 teachers in Quebec (Canada)*. (0.9). Montreal, QC: CRIFPE. Available from: <https://www.researchgate.net/publication/266672409>.
- [15] Kimaro, J.W., 2015. *Strategies to reduce teachers' turnover in public schools: A case of secondary schools in Morogoro municipality*. Research report submitted in partial fulfilment of the requirements for award of the degree of Masters of Public Administration (MPA). Mzumbe University.
- [16] Kumar, R., 2011. *Research Methodology: A Step-by-Step Guide for Beginners*. 3rd ed. SAGE. Available from: http://www.sociology.kpi.ua/wp-content/uploads/2014/06/Ranjit_Kumar-Research_Methodology_A_Step-by-Step_G.pdf.
- [17] Lelissa, T.B., 2017. *The impact of industry concentration on performance, exploring a comprehensive bank performance model: the case of the Ethiopian banking sector*.

- Ph.D. thesis. University of South Africa. Available from: <https://uir.unisa.ac.za/handle/10500/23253>.
- [18] Leroux, M., 2013. Exploring Teacher Resilience Before and During Induction. *2013 AERA Annual Meeting, San Francisco, California, April-May 2013*. Available from: <https://www.researchgate.net/publication/265439392>.
- [19] Linkov, I., Trump, B.D. and Hynes, W., 2019. *Resilience-based Strategies and Policies to Address Systemic Risks*. (SG/NAEC(2019)5). Organisation for Economic Co-Operation and Development. Available from: [https://one.oecd.org/document/SG/NAEC\(2019\)5/en/pdf](https://one.oecd.org/document/SG/NAEC(2019)5/en/pdf).
- [20] Liu, F., Chen, H., Xu, J., Wen, Y. and Fang, T., 2021. Exploring the Relationships between Resilience and Turnover Intention in Chinese High School Teachers: Considering the Moderating Role of Job Burnout. *International Journal of Environmental Research and Public Health*, 18(12), p.6418. Available from: <https://doi.org/10.3390/ijerph18126418>.
- [21] Mansfield, C.F., Beltman, S., Broadley, T. and Weatherby-Fell, N., 2016. Building resilience in teacher education: An evidenced informed framework. *Teaching and Teacher Education*, 54, pp.77–87. Available from: <https://doi.org/10.1016/j.tate.2015.11.016>.
- [22] Msuya, O.W., 2016. Exploring levels of job satisfaction among teachers in public secondary schools in Tanzania. *International Journal of Educational Administration and Policy Studies*, 8(2), pp.9–16. Available from: <https://academicjournals.org/journal/IJEAPS/article-abstract/75FD0F658745>.
- [23] Navarro-Espinosa, J.A., Vaquero-Abellán, M., Perea-Moreno, A.J., Pedrós-Pérez, G., Aparicio-Martínez, P. and Martínez-Jiménez, M.P., 2021. The Influence of Technology on Mental Well-Being of STEM Teachers at University Level: COVID-19 as a Stressor. *International Journal of Environmental Research and Public Health*, 18(18), p.9605. Available from: <https://doi.org/10.3390/ijerph18189605>.
- [24] Ndibalema, P., 2015. *Transforming teachers' professional competence in the use of ICT as a pedagogical tool: An experience of a community of practice learning group model in secondary schools in Tanzania*. Ph.D. thesis. The University of Dodoma, Dodoma. Available from: <http://repository.costech.or.tz:8080/handle/20.500.12661/1545>.
- [25] Ndibalema, P., 2020. Unlocking the Potential of ICT for Transformative Learning among Youth: A Path to 21st Century Competencies. *Journal of Educational Technology and Online Learning*, 3(3), p.245–271. Available from: <https://doi.org/10.31681/jetol.777647>.
- [26] Ngui, G.K. and Lay, Y.F., 2020. The Effect of Emotional Intelligence, Self-Efficacy, Subjective Well-Being and Resilience on Student Teachers' Perceived Practicum Stress: A Malaysian Case Study. *European Journal of Educational Research*, 9(1), pp.277–291. Available from: <https://doi.org/10.12973/eu-jer.9.1.277>.
- [27] Polidore, E.T., 2004. *The teaching experiences of Lucille Bradley, Maudester Hicks, and Algeno McPherson before, during, and after desegregation in the rural South: A Theoretical Model of Adult Resilience among three African American female educators*. Ph.D. thesis. Sam Houston State University. Available from: <https://www.proquest.com/openview/db4629c4b2002b21f64717675bfc9fe8/1>.
- [28] Qi, X. and Mohd Shahril, A., 2024. Universalism values on sharing accommodation among domestic Gen Z tourists in China: The moderating effects of ICT use habit. *Journal of Emerging Economies and Islamic Research*, 12(1), p.587. Available from: <https://journal.uitm.edu.my/ojs/index.php/JEEIR/article/view/587>.
- [29] Reyneke, R.P., 2020. Increasing resilience, lowering risk: Teachers' use of the Circle of Courage in the classroom. *Perspectives in Education*, 38(1), pp.144–162. Available from: <https://journals.ufs.ac.za/index.php/pie/article/view/4363>.

- [30] Singh, R., Mahato, S., Singh, B., Thapa, J. and Gartland, D., 2019. Resilience In Nepalese Adolescents: Socio-Demographic Factors Associated With Low Resilience. *Journal of Multidisciplinary Healthcare*, 12, pp.893–902. Available from: <https://doi.org/10.2147/jmdh.s226011>.
- [31] Skaalvik, E.M. and Skaalvik, S., 2015. Job Satisfaction, Stress and Coping Strategies in the Teaching Profession—What Do Teachers Say? *International Education Studies*, 8(3), pp.181–192. Available from: <https://doi.org/10.5539/ies.v8n3p181>.
- [32] Smith, T.M. and Ingersoll, R.M., 2004. What Are the Effects of Induction and Mentoring on Beginning Teacher Turnover? *American Educational Research Journal*, 41(3), pp.681–714. Available from: <https://doi.org/10.3102/00028312041003681>.
- [33] Stavrou, E. and Piki, A., 2024. Cultivating self-efficacy to empower professionals' re-up skilling in cybersecurity. *Information and Computer Security*, 32(4), pp.523–541. Available from: <https://doi.org/10.1108/ICS-02-2024-0038>.
- [34] Taylor, J.L., 2013. The Power of Resilience: A Theoretical Model to Empower, Encourage and Retain Teachers. *The Qualitative Report*, 18(35), pp.1–25. Available from: <https://doi.org/10.46743/2160-3715/2013.1474>.
- [35] Tülübaş, T., Karakose, T. and Papadakis, S., 2023. A Holistic Investigation of the Relationship between Digital Addiction and Academic Achievement among Students. *European Journal of Investigation in Health, Psychology and Education*, 13(10), pp.2006–2034. Available from: <https://doi.org/10.3390/ejihpe13100143>.
- [36] Van Hoek, G., Portzky, M. and Franck, E., 2019. The influence of socio-demographic factors, resilience and stress reducing activities on academic outcomes of undergraduate nursing students: A cross-sectional research study. *Nurse Education Today*, 72, pp.90–96. Available from: <https://doi.org/10.1016/j.nedt.2018.10.013>.
- [37] Wabule, A., 2020. Resilience and care: How teachers deal with situations of adversity in the teaching and learning environment. *The Independent Journal of Teaching and Learning*, 15(1), pp.76–90. Available from: https://scielo.org.za/scielo.php?script=sci_arttext&pid=S2519-56702020000100007.
- [38] Xu, R., 2021. Book Review: Cultivating Teacher Resilience: International Approaches, Applications, and Impact. *Frontiers in Psychology*, 12. Available from: <https://doi.org/10.3389/fpsyg.2021.706751>.