UNDERSTANDING THE RELATIONSHIP BETWEEN MENTAL WORKLOAD AND STRESS IN SPECIAL EDUCATION TEACHERS

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ABSTRACT

Children with Special Needs (CSN) have the right to receive inclusive education with teachers as an important factor and the center of the entire education structure. The results of data collection through Focused Group Discussion with Special Education Teachers (SET) in Pangandaran Regency on 27th October 2022, showed that SET sometimes feel anxious about the behaviors shown by CSN at school, such as eating and drinking indiscriminately from items around them that can threaten children's health. And also feel burdened by the hopes of parents who want their child to recover completely after attending special school. Objective: The purpose of this study is to identify the relationship between mental workload and the level of stress of SLTs in Pangandaran Regency. Method: The method in this study is descriptive correlational with a cross-sectional approach. Primary data were collected using the NASA-TLX questionnaire and the SET Stress Level Questionnaire. There were 82 teachers as respondents using a total sampling technique. Result: Data was collected online through a questionnaire distributed to all special education teachers in Pangandaran Regency. The data was processed statistically using the Spearman Rank test which showed a significance of 0.011 (P value <0.05) with a correlation coefficient value of 0.280 which indicated that the strength of the correlation was sufficient (moderate) with a positive correlation direction. Conclusion: It can be concluded that there is a significant relationship between mental workload and the stress level of special school teachers in Pangandaran Regency.

Keywords: children with special needs (csn); mental workload; special school teacher's stress level

INTRODUCTION

Children with Special Needs (CSN) are children who have limitations or extraordinary characteristics, whether physically, mentally-intellectually, socially, and emotionally (World Health Organization, 2001) . These diverse CSN characteristics require special and appropriate handling, so they can reach their full potential. Teachers are important factors in CSN education, because they are responsible for educating and mentoring CSN (Putri et al., 2022). The educational process carried out by special school teachers is very different from regular school teachers. It is more difficult for them to transfer knowledge to students, because in practice children with special needs need extra guidance, so teachers have the task of delivering lesson material and guiding special needs students with a variety of methods and more stimulus than teachers in regular schools (Marintan et al., 2023). This can lead to stress in special school teachers caused by high mental workload based on Hart & Staveland (1988) theory of mental workload.

Mental workload is a difference between mental work demands and the worker's mental abilities (Hart & Staveland, 1988). High mental workload can cause stress. Stress is a condition of tension in a person that can affect emotional stability, thought processes, worry, anxiety and fear (Arroisi, 2020). Based on research conducted in Indonesia, the workload of special school teachers in Indonesia can be categorized as a high workload, it can be seen from the indicators of the number of working hours that exceed the standard, big responsibilities, and an unsupportive work environment which can cause teachers become stressed (Amalia et al., 2017). Stress can have a negative impact on the work performance of special school teachers. The negative impact of stress on special school teachers can cause a drastic decline in work performance accompanied by behavioral, psychological and physiological changes (Harahap, 2022). This causes a decrease in teacher enthusiasm and motivation in educating students. Teachers are absent more often, commitment to the institution where they work decreases, and teachers even want to resign (Pratiwi, 2020).

Based on the research that was conducted to measure the stress level of special school teachers in Bandung City, shows that the teacher stress category is in the high stress category (Muhbar & Rochmawati, 2019). Other research also shows that the stress level of special school teachers in Klaten Regency can be categorized as high stress (Hidayah, 2023). Besides that, the results of data collection through the Focus Group Discussion (FGD) of special school teachers in Pangandaran Regency on 27th October 2022, showed that 8 out of 10 teachers sometimes felt anxious about the behavior exhibited by special needs students at school, such as eating and drinking carelessly, poor personal hygiene, difficulty focusing, and small motivation to learn from CSN. Careless eating and drinking behavior that worries teachers is when CSN start eating things that are not food, such as floor cleaning soap, stationery, or even rubbish. Special school teachers also feel burdened by the attitude of parents who think that Special School is a rehabilitation center that can help their children recover completely.

From the description of the phenomenon regarding mental workload and work stress experienced by special school teachers, as well as the lack of research regarding this matter in Pangandaran Regency, researchers are interested to identify the relationship between mental workload and stress levels of special school teachers in Pangandaran Regency. The aim of this research is to identify mental workload, stress levels, and the relationship between mental workload and stress levels in special school teachers in Pangandaran Regency. This research could be useful for providing information regarding the relationship between mental workload and the stress level of special school teachers in Pangandaran Regency, as well as consideration for intervention in nursing care, namely by providing education related to mental health for special school teachers.

METHOD
This study is a quantitative research with a correlative descriptive method and a cross sectional approach. This research has received research ethics permission from the Riau University Health Research Ethics Commission with number 196/UN19.5.1.8/KEPK.FKp/2024. The population of this study is all special school teachers in Pangandaran Regency in total 82 teachers. The sampling technique in this study used a total sampling technique. The NASA-TLX instrument is used to measure mental workload which consists of 6 assessment indicators; Mental Demands (MD); Physical Demands (PD); Temporal Demands (TD); Own Performance (OP); Effort (EF); Frustration (FR). In this questionnaire, the sample is weighted and given a rating which will produce information about their mental workload. Then, the questionnaire to measure the stress of special

school teachers was adapted from Aji (2013) which consists of 29 items which have been tested for validity and shows the result rcount > rtable and a reliability test with Cronbach Alpha 0.956 that shows the questionnaire can be used in collecting research data. This stress level measurement questionnaire is based on Spector's theory which consists of three aspects including psychological, physiological and behavioral aspects. Questions are arranged in favorable (supports the object) and unfavorable (does not support the object) (Aji, 2013). Data analysis was conducted using univariate and bivariate analysis. Univariate analysis was used to identify the mental workload and stress levels of special education (SLB) teachers through frequency distribution. Bivariate analysis was conducted to determine the relationship between stress levels and mental workload of SLB teachers in Pangandaran Regency. The bivariate analysis in this study was conducted using hypothesis testing with the Spearman Rank correlation test at a significance level of 5% (0.05).

RESULTS
The data in this study is primary data collected through a Google Form questionnaire distributed to all special school teachers in Pangandaran Regency in total 82 people. The data consists of respondent characteristics, respondent's mental workload, and respondent's stress level.

Table 1.
Respondent Characteristics (n= 82)

Respondent Characteristics	f	%
Age (years)		
<30	26	31.7
30-50	48	58.5
>50	8	9.8
Gender		
Male	28	34.1
Female	54	65.9
Working period (years)		
<1	4	4.9
1-5	36	43.9
>5	42	51.2
Amount of disability specialization		
1	60	73.2
>1	22	26.8

According to table 1, just over a half of respondents were aged 30-50 years, namely 48 people (58.5%). There were more female respondents than male, namely 54 people (65.9%). The majority of respondents' working period was >5 years, namely 42 people (51.2%). Nearly three quarters of respondents educate about one type of disability (73.2%).

Table 2.
Respondent's Mental Workload

Mental Workload	f	%
Light	22	26.8
Moderate	48	58.5
High	12	14.6

According to table 2, the mental workload of special school teachers in Pangandaran Regency is in the moderate category, namely 48 teachers (58.5%).

Table 3.
Respondent's Stress Level

Stress Levels	f	%
Low	23	28
Moderate	59	72

According to table 3, the stress level of special school teachers in Pangandaran Regency is in the moderate category, namely 59 teachers (72%) and there are no teachers who have high stress levels.

Table 4.
Relationship between Mental Workload and Respondents' Stress Levels

Mental Workload	Stress Levels				P value	Correlation Coefficient
	Low		Moderate			
	f	%	f	%		
Light	12	54.5	10	45.5		
Moderate	8	16.7	40	83.3	0.011	0.280
High	3	25	9	75		

The Spearman Rank test results in table 4 show a significance value of 0.011 (P value <0.05), which means the correlation between mental workload and teacher stress levels is significant. The correlation value is 0.280, which indicates that the strength of the correlation is sufficient (moderate) with a positive correlation direction. This means that the higher of the mental workload experienced by teachers is in line with the stress level. These results indicate that there is a significant relationship between mental workload and the level of stress experienced by teachers in Pangandaran Regency.

DISCUSSION

Mental workload refers to the cognitive demands of a job, and the extent to which these demands exceed the worker's capacity to cope (Kubicek et al., 2023). The results of the univariate analysis on this variable show that based on calculations using the NASA-TLX questionnaire, more than half of the population of special school teachers in Pangandaran Regency have a mental workload in the moderate category. There are 48 teachers (58.5%) who have this category of mental workload. This research is in line with research conducted on 32 teachers at Special School A YAAT Klaten and Special School Mitra Ananda Colomadu with the results that 24 respondents (75%) had a medium mental workload (Kurniawati et al., 2022). Moderate mental workload in special school teachers can be caused by various factors, including complex job demands, heavy workload, environmental conditions, and interaction with students with special needs. Teachers in special schools are often faced with additional tasks such as caring for wounds, providing therapy, and dealing with students who require extra attention. This can lead to high mental workload and contribute to the emergence of work stress. Lack of progress in student learning can also cause moderate stress for teacher (Olagunju et al., 2021).

Based on Hart and Staveland (1988), mental workload can be categorized into three categories, there are light; moderate; and high. For the light category characterized by relatively low mental demands, so teachers still have a lot of free time and energy for other activities. Moderate category shows a balance between mental demands and the teacher's ability to overcome them. Teachers are still able to work well and not experience excessive stress. And the high category shows the mental workload exceeds the teacher's capabilities, which can cause stress, fatigue and other negative impacts on mental health. When mental workload exceeds teachers' capacity to cope, it can lead to a range of negative consequences, including stress, reduced job satisfaction, and decreased teacher effectiveness (Jomuad et al., 2021). High levels of stress can lead to physical and emotional health problems, such as burnout, anxiety, and depression. Teachers who experience high levels of stress are more likely to be dissatisfied with their jobs and to leave the

profession. Stress and fatigue can impair teachers' ability to plan and deliver effective instruction, which can have a negative impact on student learning (Montano et al., 2023).

The moderate mental workload category for special school teachers in Pangandaran Regency shows that teachers have a level of mental demand that requires effort and focus, but has not yet reached a stage that endangers their mental well-being. The characteristics of the medium category mental workload for special school teachers can be seen based on continuous mental demands, manageable stress levels, good adaptive abilities, maintained motivation and job satisfaction (Olagunju et al., 2021). Teachers need to maintain concentration and focus to fulfill a variety of tasks, such as prepare and deliver learning materials that are appropriate to the special needs of students, carry out assessments and evaluations of student learning progress, provide individual guidance and counseling to students, communicate with parents and guardians of students, and collaborate with a team of experts and other educational personnel (Ma'rifah, 2023).

The workload for special school teachers in Pangandaran Regency causes feelings of fatigue and frustration, but the teachers are still able to manage this stress by using coping strategies that suit each individual. In addition, in the medium mental workload category, teachers can adapt to changing situations and overcome challenges that arise in the learning process. Even though they experience quite a heavy workload, they still have motivation and satisfaction in carrying out their duties (Widiastuti et al., 2017). This situation exemplifies the resilience and dedication of special school teachers in managing their workload effectively. It also emphasizes the importance of individualized coping mechanisms and adaptability in navigating the demands of their profession. The ability of teachers to maintain motivation and satisfaction amidst challenges speaks to their commitment to providing quality education and support to students with special needs (Mullen et al., 2021). This resilience is a testament to the professionalism and passion that educators bring to their roles, contributing positively to the learning environment for both teachers and students (Zhang et al., 2020).

Mental workload is influenced by several factors, including the type of student disability, number of students, teacher experience and competence, work environment and support received (Rochmatun & Rosidah, 2020). These factors are in line with Hart & Staveland (1988) theory which states that mental workload can be influenced by internal and external factors. Internal factors are factors that originate from within the individual, while external factors are factors that originate from outside the individual. In the realm of special school education, the mental workload experienced by teachers is influenced by a multitude of factors that can significantly impact their well-being and job performance. Understanding these factors is crucial in creating a supportive and conducive work environment for special school teachers (Aldosiry, 2022). Factors that influence the mental workload of teachers in special education such as the complexity of students' needs, lesson preparation and planning, classroom management, individualized instruction, paperwork and documentation, collaboration and communication, emotional labor, and professional development (Samsuddin, 2021).

The results of univariate analysis on this variable show that the stress level of special school teachers in Pangandaran Regency has a moderate stress level of 59 teachers (72%). This research is in line with research which shows that 75% of Semarang State special school teachers experience moderate work stress (Amalia et al., 2017). Moderate levels of stress in special school teachers are characterized by feelings of tension, anxiety, and pressure without reaching extreme or debilitating proportions. While moderate stress may not always be detrimental to an

individual's well-being, it should not be ignored because prolonged exposure to moderate stress can eventually lead to more severe forms of distress (Klapproth et al., 2020).

Based on the theory of Hancock and Meshkati (1988), the moderate category of stress experienced by special school teachers in Pangandaran Regency can be interpreted as a condition where teachers experience increased alertness and focus, but also feel fatigue and tension. This condition can be caused by various factors, such as high workload, high job demands, and interpersonal conflict. Moderate stress can have a negative impact on the performance of special school teachers, such as decreasing teaching quality, increasing absenteeism, and decreasing physical and mental health.

Factors related to moderate stress experienced by special school teachers in Pangandaran Regency include workload, job demands, interpersonal conflict, lack of social support, as well as physical and mental conditions (Pratiwi I. S., 2022). Moderate stress can lead to decreased teaching quality, increased absenteeism, and decreased physical and mental health. Special school teachers who experience moderate stress often feel tired, both physically and mentally. Moderate stress can also cause difficulty concentrating and make it difficult for special school teachers to focus on their work. Teachers who experience moderate stress can be more easily angry and offended. Moderate stress experienced by teachers can also cause changes in appetite and sleep patterns, and can cause headaches and stomach aches (Pratiwi I. S., 2022). Moderately stressed special school teachers face specific challenges related to their workload and responsibilities (Dotimas, 2022). To minimize the negative impacts of moderate stress, teachers can adopt healthy coping strategies, seek support from peers and supervisors, practice self-care, set realistic expectations, and engage in ongoing professional development (Jeon et al., 2022). Educational institutions play a vital role in fostering a supportive work environment that promotes teacher well-being and encourages retention of highly qualified and committed special school teachers (Fu et al., 2022).

CONCLUSION
Based on the results of research conducted on special school teachers in Pangandaran Regency, it can be concluded that the mental workload of special school teachers in Pangandaran Regency is in the moderate category, the stress level of special school teachers in Pangandaran Regency is in the moderate category, and there is significant relationship between mental workload and the stress level of special school teachers in Pangandaran Regency with the Spearman Rank test results showing a significance of 0.011 (P value <0.05) with a correlation coefficient value of 0.280 which shows that the strength of the correlation is sufficient (moderate) with a positive correlation direction.

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