

Psychometric Evaluation Professional Quality of Life in Special Education Teachers

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Abstract: Professional Quality of Life (ProQOL) is a general instrument to measure positive and negative aspects that affect the quality of helping professionals. Although ProQOL has been widely adapted, only few have evaluated its psychometric properties and predominantly used in medical nurse populations. The current study aims to evaluate the psychometric properties of ProQOL in special education teachers which often exposed by secondary trauma and burnout as helping professional. Research uses quantitative study to assess the correlation between ProQOL with Depression Anxiety Stress Scale (DASS) and Satisfaction with Life Scale (SWLS), difference in demographic data through ANOVA and Independent Sample T-Test, and item validity through confirmatory factor analysis. Result shows that there is evidence of content validity through expert judgement. Criterion-related (concurrent) validity was evidenced by coefficient correlations of ProQOL, DASS, and SWLS, as predicted by theory. CFA ProQOL shows adequate model fit to data, with respect to some items being eliminated from the original instrument. Overall, ProQOL in special education teacher that has been adapted to Bahasa Indonesia has adequate evidence of content validity, construct validity, and criterion related validity.

Keywords: *compassion satisfaction, compassion fatigue, burnout, special education teacher*

I. INTRODUCTION

Professional Quality of Life, the quality of life of professionals who provide assistance to others in their work, has become a growing topic in the last 20 years. Research shows that those who work by helping others often experience stress that can develop into burnout, depression and posttraumatic stress disorder [1].

Professional Quality of Life Scale, or ProQOL [1], is the most common measurement tool used to measure positive and negative aspects of working with people who have experienced trauma or traumatic events. The measuring instrument was originally called the Compassion Fatigue Self Test

developed by Figley in the 1980s. Then Stamm and Figley began collaborating in 1998. In 1993, Stamm added the concept of compassion satisfaction and the name of the measuring instrument was changed to Compassion Satisfaction and Fatigue Test. In the 1990s, through a positive agreement between Figley and Stamm, this measurement was later changed to become the Professional Quality of Life Scale [2].

ProQOL is designed to measure professional quality of life, or it can be defined as the quality of individual work as a helper. This self-report instrument consists of three different subscales. The Burnout Scale measures feelings of hopelessness and difficulty in working or working effectively. The Compassion Fatigue / Secondary Traumatic Stress subscales are work-related trauma as a result of exposure to traumatic events experienced by someone. The signs include fear, sleep disorders, and avoidance. Finally, the Compassion Satisfaction subscale measures satisfaction and positive feelings from work that helps others.

Although ProQOL has been widely used, ProQOL scale has been used extensively in nursing research. The term compassion fatigue is usually given to nurses and workers in the emergency section [3]. Based on the results of 2000 research publications using ProQOL measuring instruments, most of the research focused on nurse participants (Stamm, 2016). Nurses tend to experience compassion fatigue due to the condition of the patients. The nurse profession can be said to be the backbone of services in the health sector which is required to treat and maintain the patient's condition for a long time. However, compassion fatigue can occur to anyone who provides services or care to others, such as doctors, psychologists, psychiatrists, police officers, and teachers [1].

The teacher is presented by cases of trauma experienced by students they taught. This puts teacher in a demanding position, because the

teacher must also play a role to balance their mental health needs and their students [4]. Listening to stories of students who experience trauma and assisting them in dealing with trauma can improve the emotional, cognitive, and physical response to the teacher, similar to the symptoms of posttraumatic stress. This phenomenon has been referred to as secondary traumatic stress (STS) or vicarious traumatization. STS is characterized as fatigue, frustration, depression, disconnectedness, and lack of sensitivity to the work environment, showing symptoms similar to those with PTSD, namely reexperiencing, avoidance, numbing, and arousal [5].

Compared to the development of the concept of burnout and teachers, research on compassion fatigue in teacher is still limited [6]. Most of the literature examines compassion fatigue with workers in other professional services sectors. The study carried out by Borntreger [7] is a study that first examined compassion fatigue quantitatively with American education workers found that 75% experienced high levels of compassion fatigue, based on the Secondary Traumatic Stress Scale (STSS) that measures the severity of symptom like PTSD. Johnson et al [8] added that teachers are one of the professions with the highest stress levels, compared to stress levels in those who work as paramedics, police, and social service workers. This high level of stress can have an influence on the physical and mental health of the teachers. Stress can lead to individual well-being and weaken performance.

Challenging student behaviors such as lack of attention, academic weakness, and students with abusive behavior are associated with higher levels of stress, burnout, and compassion fatigue for teachers [9]. What's more, teachers who work with special needs children face greater challenges and are at risk of experiencing compassion fatigue.

Compassion fatigue in special education teachers, is defined as gradual desensitization in compassion, sympathy, or empathy over a period of time. Overcoming compassion fatigue is an important factor that contributes to the teacher's ability to stay on the job. In qualitative research conducted by Palladino, Hoffman, and Barnett [10], regarding the relationship of compassion fatigue to the special education teacher profession

This study increases the urgency to evaluate the validity of ProQOL scale whether it is valid and reliable to be used in special education teachers, because the sample used is only specific to nurses in the health sector, and there is no exploration of

reported several factors that influence compassion fatigue. Participants who do not have school administrative support, support from colleagues, the ability to separate work and personal expenses, changes in school curriculum, increasing requirements so that there is less time to focus on students, are some of the factors that influence compassion fatigue teachers.

Based on the above explanation, special education teachers are one of the professions that tend to experience compassion fatigue. The reason why teachers' quality of life assessments is important is because their quality of life not only affects themselves but also influences student performance and their responsibility for educational settings [11]. In addition, demographic characteristics have been considered as important predictors for the quality of life of teachers. Demographic factors, namely teaching experience, marital status, education, and income, can affect the welfare of teachers [11]. Measuring tools are needed as screening to detect negative and positive aspects, such as in professional quality of life to maintain the quality of life of teachers in providing services. Measuring instruments can be used as prevention when teachers begin to experience fatigue compassion and to assess whether they have sufficient compassion satisfaction in providing services to students.

Before a measuring instrument can be used as a screening tool, a measuring instrument must have good psychometric criteria [12]. Psychometric assessment is based on the validity and reliability of the measuring instrument. Validity is referred to how well a scale can measure what is intended to while reliability tests the consistency of a measuring instrument. Several studies have shown the results of testing the reliability and validity of ProQOL in various countries such as Spain [13], Brazil [13], Latvia (**Circenis, Millere, & Deklava, 2013**), China [14], Italy [15], Japan [16], and Israel [17]. All studies on ProQOL psychometric testing used nurse subjects. In Indonesia, ProQOL measuring instruments have been adapted by Eka, Tahulending, Kinasih, and Yuningsih [18] with nurse population in Jakarta hospitals. However, research still limited in validity evaluation that focused on content validity.

the validity of the Indonesian version of the ProQol measuring instrument. The measurement model in factor analysis in the form of Confirmatory Factor Analysis (CFA) is important to do in research because this measurement model

confirms variables which are items that reflect latent variables [19].

II. RESEARCH METHOD

A. Research Participants

The participants of this study are 60 male and 200 female special education teachers in Jakarta, ranging from age 20 to 60 (N=260). This number still meets the criteria because there are at least 200 respondents who can be used as samples for processing data with factor analysis [20]. Samples were taken using nonprobability sampling.

B. Measures

i. Professional Quality of Life (ProQOL)

ProQOL version 5 [1], Indonesian translation by Eka [18] is a 30 item self-report questionnaire consisting of three subscales namely compassion satisfaction, compassion fatigue, and burnout. Participants were instructed to indicate how often each item was experienced within 30 days, on a 5-point Likert scale (1 = never, 2 = rare, 3 = sometimes, 4 = often, 5 = very often). An example of a positive point in ProQOL is "I feel excited after working with people I help / care for. An example of a negative item on ProQOL is "I feel happy". There is evidence of construct validity in more than 200 published studies. In a study published in fatigue compassion, secondary traumatic stress and vicarious traumatization, more than half (of 200 studies) have used ProQOL as a measure to assess the quality of life of professionals.

ii. Depression, Anxiety and Stress Scale (DASS-42)

DASS-42 [21]; [22]; [23]. DASS-42 is a self-report scale that is designed to measure negative emotional states from depression, anxiety, and stress. This measuring instrument has 4 answer choices, namely never (0), sometimes (1), often (2), and very often (3). The DASS-42 scale has adequate validity and reliability. An example of a item in DASS-21 is "I feel that I am angry because of trivial things. The Indonesian version of the DASS-42 scale has adequate internal validity and reliability (Cronbachs Alpha = 0.90) and adaptations from various languages have been carried out.

iii. 2.2.3 Satisfaction with Life Scale

Satisfaction with Life Scale [24] consists of 5 items that measures cognitive assessment of

individual life satisfaction. This measuring instrument has a choice of answers on all five items through a scale of 1 = strongly disagree, 2 = disagree, 3 = somewhat disagree, 4 = between agreeing and disagreeing, 5 = somewhat agreeing, 6 = agreeing, and 7 = very agree. There is adequate validity and reliability in the SWLS measuring instrument, extensive use, and has been translated in various languages. An example of a SWLS item is "I feel satisfied with my life."

C. Data Analysis

This test seeks to provide a psychometric evaluation of the Professional Quality of Life (ProQOL) measurement tool using Lisrel program and SPSS. The collected data was analyzed to determine the level of reliability, content validity, correlation between ProQOL, DASS-42 and SWLS, as well as comparing ProQOL across demographic data, and construct validity through Confirmatory Factor Analysis.

III. RESULTS AND DISCUSSION

This study represents the first test to explore the factorial and psychometric structures of Professional Quality of Life which has been adapted in Indonesian in a sample of teachers of children with special needs. Then, exploring the relationship of ProQOL with other scales and several demographic variables such as age, gender, and several variables related to teacher professional work such as length of work, classifications of number of students being taught.

In the results of the ProQOL reliability test, researchers compared the results with the adaptation of Indonesian ProQOL by Eka, Kinasih, Yuningsih, & Tahulending [18] and English [1]. The Indonesian version of the ProQOL reliability test shows the Cronbach's Alpha value = 0.738 (total). Cronbach Alpha values per dimension are 0.795 for Compassion satisfaction, 0.7 for Burnout and 0.749 for Secondary Trauma Stress. The results of this reliability are also supported by previous studies with results between 0.72-0.87 [2]. In this study, the value of Cronbach's Alpha was also similar to the study (0.74- 0.85). It can be concluded that ProQOL measuring instruments are reliable and have a match to measure the level of professional quality of life in teachers of children with special needs.

First, content validity testing based on the content validity index shows that ProQOL has translation results that match the English version.

The results of CVI (content validity index) are more than 0.90. It can be said that ProQOL measuring instruments that have been adapted in Indonesian meet the content validity criteria based on expert judgment.

Then, analysis of concurrent validity using measuring instruments that are used as criteria, namely Depression, Anxiety, Stress Scale and Satisfaction with Life Scale, is given simultaneously with ProQOL. The results show a significant correlation coefficient between variables. Compassion satisfaction is positively correlated with life satisfaction and negatively correlated with depression, anxiety, and stress. Burnout and secondary traumatic stress are positively correlated with depression, anxiety, and stress, and negatively correlate with life satisfaction. These results indicate the results of the validity of the ProQOL criteria based on the correlation measuring instrument that has sufficient evidence of concurrent validity.

Nexy, testing construct validity is done by testing the validity of items using confirmatory factor analysis (CFA). The results of the CFA analysis on several variables in ProQOL were not significant with the special education teacher data. On the positive dimension of ProQOL, namely compassion satisfaction, all items have a loading factor value and goodness of fit criteria so item revisions are not needed. Whereas in the negative dimensions of ProQOL namely burnout and secondary traumatic stress, the CFA first order model is not significant with participant data. All negative items of ProQOL are located in the burnout variable and these items represent a factor loading below the criteria (<0.5) so that they must be removed from their dimensions. This is in line with the previous ProQOL psychometric testing research [25]; [17], that reverse items or negative items on the BO scale are not covered in the final solution or moved on the CS scale.

Negative items on the burnout scale are PQ1, PQ4, PQ15, PQ17, and PQ29. PQ1 namely "I feel happy", is an item in the burnout subscale that tends to be more in line with compassion satisfaction [25]. PQ4 namely "I feel connected to others" shows that if individuals have low scores, they have a tendency to burnout. This statement is also not suitable for burnout because it does not have relevance in the context of the workload that is often experienced by individuals who experience burnout. In the PQ15 item, "I have a belief that keeps me from living this life", PQ17 "I am the person I always want", and PQ29 "I am a very

caring person", also better describes compassion satisfaction than burnout. Thus, the five items were aborted in this study, so items on the burnout scale amounted to 5.

On the scale of secondary traumatic stress, items PQ2, PQ5, and PQ7 have a low loading factor (<0.5) so that these items cannot represent the STS construct. These items are then aborted, as in the Hemsworth (2017) study. Item PQ 2 "I am preoccupied with more than one student that I teach", the possibility is not something that is perceived negatively, but rather describes the condition of the teacher in general at school. Based on the demographic data obtained, there were no teacher participants who only taught 1 student. In addition, this statement can also symbolize burnout because it is associated with workload. Therefore this item does not reflect secondary traumatic stress.

Then in item PQ 5 "I jump or be surprised by unexpected sounds" does not reflect the trauma of other people's experiences, such as secondary traumatic stress. This item is also the only item that is given an assessment of 3 (from all scores scored 4) by experts at the time of expert judgment. Next item PQ7 "I find it difficult to separate my personal life from my life as a [helper]". Although the item has been carried out with back translation, this item is likely to be investigated further because there are differences in word meanings. Items in Indonesian do not describe the meaning of individual difficulties to separate between his personal life and his life as a teacher, as in English. The meaning of this statement was also found by previous research as a statement describing work-life balance constructs and not secondary traumatic stress [26].

In second order CFA analysis, all items in ProQOL have factor loading more than 0.5. Even on burnout (PQ8) items which previously had a factor loading <0.05 at CFA first order, the result increased at the second order CFA which was 0.69. This is because in the second order analysis, burnout has been linked to ProQOL latent variables related to secondary traumatic stress and compassion satisfaction. In the positive aspect, compassion satisfaction, PQ6 items have decreased factor loading values to 0.47. Item PQ6 "I feel excited after working with students that I teach". This item was not removed because of the researchers' consideration of the factor loading value which was close to 0.5, and the content of the item itself described the positive aspects of the job as a teacher.

Different test analysis was conducted to determine the difference between ProQOL between groups in demographic data, as an effort to test construct validity with the evidence from distinct group. The researcher compared the results of the study to special education teacher with previous research, namely the research of Pineio et al (2014) on special needs teacher participants in Greece as well as data obtained from Stamm [1] from 1,289 cases through various studies among populations.

In this study, there was no significant difference in ProQOL for male and female participants. The results of the study are in line with Stamm [1], that there are no differences in CS, BO, and STS scores on gender. This shows evidence that was previously validated by a group of participants who were not special education teachers. This result is not in line with the research of Pineio et al (2014) in special education teachers in Greece, that male participants tended to experience compassion fatigue compared to female participants. Previous research has mixed results regarding the role of sex in ProQOL. In metaanalysis, it was found that women experience burnout more often than men [25]. This study had a total of 200 female participants, out of a total of 260 participants. The results of the study can be influenced by the factor dominance of the number of female participants, as in the Cieslak study [6] which states that most studies are dominated by female participants so the results tend to be unrepresentative.

In the Kokkinos [27] study of stress on special education teachers in Greece stated that teachers who are at risk of stress are those aged 31-40, married, aged between 31-40, with only undergraduate training qualifications and limited teaching experience, namely under 5 years. Stress is a contributor to fatigue compassion [1].

Different test results show that there are significant differences between burnout in terms of age, but there is no difference between compassion satisfaction and secondary traumatic stress in terms of age. This is not in line with previous research, that there is no difference between age and ProQOL (Pineio, 2014; [1]. In this study, the group of participants who had the highest mean of BO were in the age range 31-34 years and in line with the Kokkinos study [27] in special education teachers, that the group of participants with the highest BO score ranged 30-34 years.

Then there is no significant difference between professional quality of life and marital status. This is also not in line with previous studies that special

education teachers who are married tend to have lower STS levels than those who are not married.

In the ProQOL difference test analysis based on the length of work as a teacher, there are differences in secondary traumatic stress and there are no differences in compassion satisfaction and burnout. This is not in line with previous research (Pienio et al., 2014), that there was no significant difference in fatigue compassion and length of time working for special education teachers teachers. The results of the study are also not in line with Stamm [1], that there is no significant difference in ProQOL based on work experience. In this study, the group of participants with the highest STS mean were those who had 1-5 years of experience.

Participants with 1-5 years of experience tend to experience secondary traumatic stress, and this is in line with previous studies [27]. This is because special education teachers teachers with limited teaching experience tend to be overwhelmed with expectations regarding work, usually regarding the development of children with special needs taught. In this case, stress correlates highly with secondary traumatic stress and burnout, so stress is likely to contribute to STS in participants who have limited work experience.

In the ProQOL difference test based on the number of students taught, there were no significant differences in the three variables. This is not in line with previous research (Pienio et al., 2014) that special education teachers who teach students show more fatigue compassion than teachers who teach fewer students.

There is a difference in compassion satisfaction based on the special education classification and there is no difference in burnout and secondary traumatic stress. Based on the mean value of compassion satisfaction, the group of participants who obtained the highest mean score was in the group of teachers who taught students with autism spectrum disorder. This still needs to be considered considering that the N value in this group is the least, namely $N = 11$, compared to the total participants of 260. Previous studies related to the classification of special needs students taught were in compassion fatigue. Teachers who tend to have high STS levels are those who teach students with more than one disorder. In addition, Nichols and Sosnowsky [28] found that special education teachers who work with children with behavioral and emotional disorders, as well as students with weak learning motivation, report higher stress levels, compared to those who work with students

who have difficulty learning, multiple disabilities, and mental retardation.

The welfare of the special education teacher in relation to the salary obtained shows that the teacher who receives a higher salary shows a higher level of compassion satisfaction. This is not in line with Stamm's [1] study, that there were no significant differences in ProQOL with salary. Teacher salaries relate to the level of education and certification they have. There are differences in compassion satisfaction with education level, but there is no difference in burnout and secondary traumatic stress with the level of education. Then there are differences in burnout and secondary traumatic stress with certification, but there is no difference in compassion satisfaction. Special education teacher participants who do not have certification tend to have higher BO and STS levels. This certification relates to benefits obtained outside of salary because the conditions for obtaining benefits are if the special education teacher has teacher registration number (NUPTK). Therefore, it can be concluded that teacher certification related to salary can affect professional quality of life.

IV CONCLUSION

Based on the results of alpha coronbach's reliability analysis as well as content, construct, and criterion-related validity of the Professional Quality of Life (ProQOL) measure was stated to be consistent and stable in special education teacher participants in Jakarta. The first hypothesis in this study was received, namely the internal consistency of ProQOL scale was more than 0.7. The second hypothesis in this study is accepted, namely there is evidence of the validity of the contents of the ProQOL measuring instrument. The fourth hypothesis in this study is accepted, that there is evidence of criterion-related validity measuring tools for professional quality of life. Based on the results of the correlation test between ProQOL and DASS and SWLS, it shows that the higher the compassion satisfaction, the higher the level of life satisfaction while the higher the burnout and secondary traumatic stress, the higher the level of depression, anxiety, and stress. The fourth hypothesis in this study was accepted, that is, there was a significant and positive relationship with $\lambda > 0.5$ from the professional quality of life item. Based on the results of the first order and second order CFA analysis, it shows that not all items show psychometric properties that can be received so that revisions need to be made. The

model in the revised ProQOL consists of 22 items, showing a model that is fit with the data. Finally, the fifth hypothesis is accepted, that there are significant differences and positive professional quality of life scores based on demographic data.

This research is still limited and there are still many shortcomings. The sample size of the measuring instrument refers to Cohen [12], which is 10 samples per item measuring instrument. ProQOL has 30 items, so 300 samples are needed. This study only had 260 samples and did not meet the requirements for the number of participants.

This research contributes to the literature and accessibility of measuring instruments of Professional Quality of Life that have been adapted and tested for validity and reliability in Indonesian, especially for special education teacher participants. This study provides a new picture of testing the validity and reliability of ProQOL which in recent years has focused more on the profession in the health sector, especially in nurse participants [1]. Further research can be conducted to test the validity and reliability of ProQOL in other helping profession participants, for example in police officers, psychologists, psychiatrists, volunteers, and others. Research can also see the difference between the quality of life of special education teachers and regular teachers, and see what factors influence it.

This research resulted in a revision of ProQOL from 30 items to 22 items that were valid and reliable. However, a number of items removed in this study can be re-tested through Exploratory Factor Analysis (EFA) as in the Duarte [25] and Slocum-Gori, Hemsworth, Chan, Carson and Kazanjian [29] studies, to review items which is more valid and reliable in representing compassion satisfaction, burnout, and compassion fatigue.

The issue of teachers and education staff is still a concern that continues to be pursued in its solution by the Ministry of Education and Culture (Kemendikbud) along with teacher professional associations (APG) in Indonesia. At least there are three main problems that occur in teachers and education personnel, namely distribution, competence, and welfare. welfare issues include teachers with non-civil servant status. Many teachers have not been given proper compensation, because most schools still provide salaries based on the School Operational Assistance budget [30].

In the results of different test analyzes, there is an influence of ProQOL on salaries, certification, teacher education levels, which contribute to teacher benefits and welfare. In line with what was

stated by Yulianto [30], this can illustrate that financial factors are one of the important factors, in order to maintain special education teachers who are currently still limited in number.

Further research can also use ProQOL to examine other variables related to teacher welfare,

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