Is there any relationship between role stressors, job tasks, and job satisfaction among Health Surveillance Assistants in Malawi? A cross-sectional study

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Research

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Abstract

Background: Health Surveillance Assistants (HSAs) are community-based health workers in Malawi, responsible for health services delivery at the community level. They are reported to be overloaded in their work, and anecdotal evidence suggests they are stressed. The purpose of this study was to explore the role stressors among the HSAs with the view to identify factors for role stressors and suggest some measures for the effective management of the HSAs to alleviate the problem of role stressors.

Methods: A descriptive cross-sectional study design and multistage stage sampling were used in this study. Data were collected from 430 HSAs from the districts of Mangochi, Lilongwe and Mzimba. A self-administered questionnaire was hand delivered to a total of 455 HSAs with a response rate of 94.5%. The data collected were analyzed with the aid of the computer software package Statistical Package for the Social Sciences (SPSS) version 23. Statistics used for the analysis included: Mean, Standard Deviation, correlations and principal component analysis (PCA).

Results: The key findings of this study are that role ambiguity (r = -.238, P< 0.001) and role overload (r =-.159, P< 0.01) were significantly negatively related to job satisfaction, while role conflict (r = -.004, P= 0.472) was insignificantly related to job satisfaction. Additionally, the HSAs curative role was negatively related to role ambiguity (r = -.108, P= 0.013) and positively related to role conflict (r = .118, P= 0.008) and role overload (r = .105, P= 0.015) while the HSAs overall preventive task was positively related to role overload.

Conclusion: Since the HSAs clinical tasks were significantly related to all role stressors there is need by the government of Malawi to design strategies to control the role stressors to ensure increased job performance and job satisfaction among HSAs.

Keywords : Relationship, role ambiguity, role conflict, role overload, job satisfaction, role stressors

Background

In Malawi, there is a critical shortage of health workers where the doctor/patient ratio is very high. Additionally, there has been a growing demand for health care in Malawi especially with the advent of the HIV/AIDS pandemic [1]. To meet this high demand for health care, task shifting has been advocated where some of the roles of medical doctors have been delegated to junior cadres such as clinical officers and Health Surveillance Assistants (HSAs). Task shifting is the delegation of tasks to people who are in lower positions [2, 3]. Its implementation is wholly supported by the WHO, which recommends each country introducing task shifting through CHWs should have a National Framework to guide the roles and training of CHWs [2, 3].

The HSAs cadre has its routes from the Alma Ata declaration in Russia, in 1978 [4]. The meeting was a high-level global meeting organized by the World Health Organization (WHO) and United Nations Children's Fund (UNICEF) [5]. The meeting was attended by official government representatives from all over the world and UNICEF member countries. At the meeting, the role of the community health worker

(CHW) was well defined [5]. Formerly, they were known as smallpox vaccinators or cholera assistants and were renamed HSAs immediately after the Alma Ata declaration [4]. HSAs are a group of one of the community-based health workers in Malawi. Historically, the role of the HSAs focused mainly on the delivery of preventive health services such as hygiene and sanitation promotion, immunization, and health education [6]. Since then, the HSAs' role has expanded to include roles such as community-based maternal and newborn care (CBMNC), child health, nutrition, and family planning which all are delivered under the essential health package (EHP) programme [4, 8].

With this expanded role, there is a general feeling among HSAs and other health workers that the HSAs are overloaded with work [3]. In terms of role ambiguity, issues such as the absence of standardized procedures for their selection and training have been featured including lack of job descriptions and work protocols for their use at work [4, 5]. Regarding role overload, HSAs have the feeling that they are doing too much and that they are overloaded with work [7]. In terms of role conflict, the HSAs' role overlaps with the roles of other cadres such as nurses, clinical officers and assistant environmental health officers (AEHOs). Additionally, their supervision is complex as it involves many supervisors from both clinical and the preventive section; and in the course of this, role conflict arises due to competing priorities [7]. All this has the likelihood to contribute towards high role overload, lower work performance and lower job satisfaction [10].

Role stressors in the literature often times have referred to the terms such as role conflict, role ambiguity, and role overload [11]. Role conflict has been defined as conflicting situations that may arise at the workplace and may affect their compliance [12]. An example to this could be a conflicting situation that may arise between the HSAs and their supervisors or coworkers at the workplace. A very likely example to this is a situation where an HSA reports to two supervisors; one supervisor may need the HSA while the HSA is busy with the other supervisor. Situations like this are likely to cause role conflict at the workplace. Role ambiguity is defined as when employees lack some clarity on their roles [12]. A good example to this could be the introduction of a new role without proper orientation or guidelines for the workers. Role overload is defined as when employees have too many roles or tasks to perform [12]. This is likely to happen when employees do not have adequate time for them to perform other roles such as those related to work or family because they have too many roles.

Generally, information about the community health workers (CHWs) role ambiguity, role conflict, role overload and job satisfaction are scanty in the literature. Studies have been conducted elsewhere in the developed or developing countries in Asia [9–12] on other professions such as nurses, accounting personnel and teachers. The studies conducted measured role stressors such as role ambiguity, role conflict and role overload and have suggested that If these role stressors remain uncontrolled, they will affect the job performance and the job satisfaction of employees in an organization [12–14]. This is why the researcher conducted the study in order to ascertain the relationships between the role stressors and job satisfaction.

Methodology

Study design: A descriptive cross-sectional study design was used in this study. The cross-sectional study design was chosen based on the fact that it was appropriate for exploring the relationships that exist between the HSAs tasks, role stressors and job satisfaction at a single given point in time [15].

Study site: The study was conducted in districts of Mangochi, Lilongwe and Mzimba South which represented the south, centre and northern regions of Malawi respectively. Lilongwe district had both urban and rural representation. The urban setting was selected for comparison if there were any differences in the role stressors and job satisfaction between the rural HSAs and the urban HSAs.

Inclusion and Exclusion Criteria. All HSAs working in the three selected districts under the government of Malawi payroll and working in either CHAM or Ministry of Health facilities and had work experience of two or more years were eligible to participate in the study. Subsequently, all HSAs working outside the three selected districts and had a work experience less than two years were excluded from the study.

Study Participants and Sampling: The study participants were HSAs. Overall, the population of HSAs in the three districts was 1924.The sample size for the study was 385 HSAs and was calculated based on Lemeshow et al.[16] sample size calculation formula for a cross-sectional study. Since studies to explore role conflict, role ambiguity, role overload and job satisfaction of HSAs had not been conducted in Malawi, it was assumed that 50% of the HSAs were affected by the phenomenon. 20% was factored in considering the rate of the non-responses. This increased the sample size to 462. Since 9 HSAs did not meet the inclusion criteria a total number of 453 questionnaires were distributed and the response rate was 93.5%. Multistage sampling was done at several stages. The PPS sampling was run several times to ensure all the three regions in Malawi had representation. All the 29 districts were listed together with their HSAs population for PPS sampling. PPS sampling was chosen because it accorded an opportunity of selecting districts and health facilities with high numbers of HSAs.

Data Collection

A standardized face to face self-administered questionnaire having five sections was used to measure study variables. The first section collected socio-demographic data, while the subsequent sections collected data on HSAs task prioritization (as taken from the HSAs job description), role conflict and role ambiguity, role overload and job satisfaction using adapted instruments as illustrated in the subsequent sub sections of this report. To adapt some items for the questionnaires, permission was sought from the American Psychological Association (APA), the University of Minnesota Vocational Psychology Research through the Rights Link of the Copyright Clearance Centre.

Instruments

Role conflict and Ambiguity Scale

A role conflict and ambiguity (RCA) scale developed by Rizzo et al.[19] was used to measure role conflict and role ambiguity. The scale in total had 14 items, 6 items for role ambiguity and 8 items for role conflict. The scale was a 5-point Likert–type response format (from 1= 'strongly disagree' and 5= 'strongly agree'). The RCA scale was chosen because it has been widely used in literature and is the most dominant tool used in role conflict and role ambiguity studies [17,18].

Role Overload Scale

The Role Overload Scale (ROS) developed by Reilly[23] was used. The ROS is a 13- item questionnaire ("there are too many demands on my time") with a 5-point Likert-type response format (from 1= 'strongly disagree' and 5= 'strongly agree'). The tool had a Cronbach's alpha of 0.88. Other researchers had found the Cronbach's alpha ranging from 0.89 to 0.94 [20–22]. The Minnesota Satisfaction Questionnaire of the shorter version, the MSQ20 was used to collect data on job satisfaction. The tool had been widely used in both developed and developing countries [23]. It is a 20-item questionnaire with a 5-point Likert type response format (from 1= very dissatisfied to 5 very satisfied). The instrument is also reported to have high Cronbach's alpha ranging between 0.70 to 0.80 [24].

The Task Inventory Scale

The task inventory scale developed by Burgel et al[25] was adapted in this study to collect information on HSAs job tasks. The instrument has been used in previous studies by Mbambo[26] and Uys[27] in studies related to job analysis of selected health workers in a district health system in KwaZulu-Natal for the South African PHC package of services. The instrument was modified and tasks not relevant to this study were removed and replaced with HSAs tasks contained in their job description to develop a final instrument. For each task, two options were required: to tick in the most appropriate box whether the task applied to the setting and the frequency the task was carried out (less than once per week, 1-5 times per week, 6-10 times per week and more than ten times per week). In addition, the questionnaire had a demographic section where all information pertaining to demographic variables were collected.

Pretesting

The data collection tools were first pre-tested before distribution to respondents. The pre-test was done among HSAs in Nkhotakota a different district from the sampled districts. The pre-test was conducted with the intention to identify items in the questionnaire which were not clearly drafted and might not be clear in the reader's view. The identified items were corrected and once the corrections were made, the questionnaire was ready for distribution to the respondents. The pre-test findings were not incorporated into the main study.

Reliability and Validity of the Instruments

Internal consistency was used to assess the reliability of the scales and subscales. This was carried out to find out if there was consistency in the way the respondents responded to the items on the questionnaire. Cronbach's alpha (α) was used for this purpose. The RCA, the ROS and the MSQ scales had all a Cronbach's alpha ≥.70. Originally, the authors had high Cronbach's alpha ranging from .80 to .90 but this was deemed acceptable since the instruments were adapted and translated into the vernacular language (Chichewa) which is commonly spoken in most districts in Malawi. An alpha value of ≥ 0.70 is desirable, although values that are slightly below 0.70 are usually considered acceptable [28].

Statistical Analysis

Statistical analysis was performed with Statistical Package for Social Sciences (SPSS) software version 23. The statistics used in the analysis included mean, correlation coefficient and Principal Component Analysis (PCA). The Mean was used to determine overall scores for curative and preventive roles, the correlations were used to determine the relationships between variables while, the PCA was used to identify factors for role stressors and job satisfaction.

Public Involvement

HSAs were involved in the design and conduct of this research. During the feasibility stage, translation of the data collection tools to a vernacular language, was informed by discussions with HSAs through a focus group session. During data collection, some HSAs were involved as study team members. Once the study has been published, participants will be sent details of the results in a study newsletter suitable for a non-specialist audience.

Results

Relationships between Variables

As shown in Table 1, there was a significant negative relationship between role ambiguity and job satisfaction (r= -.238, p= .01 at the 1% level of significance). This means that there was an association between role ambiguity and job satisfaction. There was a weak, negative and non-significant association between role conflict and job satisfaction (r= -.004, p=.472) (Table 1). This means that there was no association between role conflict and job satisfaction in HSAs. In addition, there was a weak, negative and significant association between role overload and job satisfaction (r= -.159, p=.01 at the 1% level of significance) (Table 1). This means that there was a negative association between role overload and job satisfaction in HSAs.

Table 1: Relationships between the dependent variables

		RA	RC	RO	JS
RA	*R*	1			
	p				
RC	*r*	-.247**	1		
	p	.01			
RO	*r*	-.097*	-.307**	1	
	p	.022	.01		
JS	*r*	-.238**	-.004	-.159**	1
	p	.01	.472	.01	

** Correlation is significant at the 0.01 level (1 tailed); * Correlation is significant at the 0.05 level (1 tailed),

Key: RA= role ambiguity, RC= Role Conflict, RO= Role Overload and JS= Job Satisfaction

The relationship between the HSAs tasks and the role stressors

The purpose of this analysis was to identify if there were any relationships between the HSAs preventive and curative tasks and the role stressors. This analysis involved grouping of HSAs tasks into curative and preventive tasks as illustrated in Table 2. The overall curative and preventive tasks were derived by summing up all row means to get their averages. The correlation analysis revealed that the HSAs overall curative task was positively correlated with role conflict (r= 0.118, *p*=0.008) and role overload (*r*= .105, *p*= 0.015) while it was negatively correlated with role ambiguity (r=.108, p=0.013). The HSAs overall preventive task was only positively correlated with role overload (*r*= .129, *p*= 0.004) (Fig 1). Both the overall preventive and curative tasks were positively correlated with role overload but not with role ambiguity. This finding suggests preventive tasks were related to role overload in HSAs while the curative tasks were related to all the role stressors.

Table 2: Correlations between HSA tasks and the dependent variables

Preventive Tasks	Curative Tasks
Immunizations	HIV testing service
Health Education	Drug Management
WASH	Integrated community case management (iCCM)
Water Chlorination	Malaria testing (MRDT)
Antenatal and Post-Natal visits	Family Planning
Salt iodine testing	Home based care (HBC)
Growth monitoring promotion	Nutrition
Village Health Committee meetings	Dispensing of tuberculosis drugs, sputum collection and examination

Principal Component Analysis

The purpose of this analysis was to identify factors for the role stressors and job satisfaction.

Role ambiguity

Three factors contributing to role ambiguity were extracted. The first factor explained 45.26% of the total variance while all the three components explained 73.63% of the total variance (Table 3). The extraction was done with a loading factor value of 0.7 where Component 1 loaded on three items which reflected on the 'Supervisor' with an eigenvalue of 3.62, Component 2 loaded on three items which reflected on 'role clarity' with an eigenvalue of 1.27 and Component 3 loaded on one item which reflected on 'work guidelines' with an eigenvalue of 1.00 (Table 3).

Role conflict

Two factors contributing to role conflict were extracted after conducting the PCA analysis. The first factor explained 33.19% of the total variance while all the two factors combined explained 54.64% of the total variance (Table 3). The extraction was carried out with a factor loading value of 0.7 and loaded three items on Component 1 with an eigenvalue of 2.32 which reflected on 'incompatibility' and two items on Component 2 with an eigenvalue of 1.50 which reflected on 'time & person values' (Table 3).

Role overload

Three factors contributing to role overload were extracted after conducting the PCA. The first factor explained 45.26% of the total variance while all the three factors when combined explained 63.04% of the total variance. In this analysis, Component 1 loaded 2 items, Component 2 loaded 2 items and Component 3 loaded 1 item. Component 1 items reflected on issues of 'time pressure' with an eigenvalue

of 3.37 while, Component 2 reflected on the issue of ‘task overload’ with an eigenvalue of 1.20 and Component 3 reflected on issues of ‘work prioritization’ with an eigenvalue of 1.11 (Table 3).

Job satisfaction

Six factors contributing to job satisfaction were extracted after conducting the PCA. The first factor explained 23.31% of the total variance while all the six factors explained 58.84% of the total variance (Table 3). The six factors were advancement, work conditions, supervision, ability utilization, social service and activity (Table 3).

Table 3: Summarized results for Principal Component Analysis

Variable	EV	% of Var	Cum. Tot.
Role Ambiguity			
Supervisor	3.62	45.26	30.3
Role clarity	1.27	15.84	60.05
Guidelines	1	12.53	73.63
Role Conflict			
Incompatibility	2.32	33.19	32.78
Time & personal values	1.5	54.64	54.64
Role Overload			
Time pressure	3.37	45.26	26.03
Task overload	1.2	21.36	47.39
Prioritization	1.11	15.65	63.04
Job Satisfaction			
Advancement	4.66	23.31	12.39
Work conditions	1.88	9.41	24.59
Supervision	1.64	8.20	34.97
Ability utilization	1.42	7.10	43.43
Social service	1.09	5.43	51.43
Activity	1.08	5.39	58.84

Key: EV= eigenvalue, % of Var= Percentage of variance, Cum. Tot. = Cumulative total

Discussion

HSAs tasks

The key finding of this study is that the HSAs tasks are related to the role stressors. Other literature evidences are in support of this assertion as they have reported similar finding that HSAs in Malawi are experiencing the role stressors in their work due to high workload [7, 9, 29–31]. Additionally, other literature evidence suggests the introduction of clinical roles among HSAs in Malawi has not only expanded their role but also divided their time and attention. It is further argued in the literature, that they spend most of their time at the health facility unlike at the community [31]. Furthermore, HSAs are engaged in certain roles, of which some are incompatible with their traditional roles [7]. Subsequently, the changes made to the HSAs roles require new skills, sufficient time and quality supervision for them to be effectively delivered at the community level. Previously, the HSAs were only performing a few preventive health tasks such as WASH, immunizations and growth monitoring [9]. With the increasing health demands at the community level and the critical shortage of health workers, has necessitated the addition of new roles the HSAs [32]. Evidence from the literature suggests role stressors among employees are likely to contribute to lower job satisfaction and poor job performance if mitigation measures are not put in place [9]. Therefore, it is imperative for Malawi Ministry of Health to consider this when adding new roles to HSAs.

Factors for the dependent variables

Role overload

In terms of role overload, the most important factor was time pressure. This finding is in agreement to the finding by Davis et al.[33] who found CHWs working under pressure to provide services related to their new roles. Additionally, it is reported that the addition of new clinical roles to the CHWs has affected their traditional roles to the extent that some of their traditional roles have been forgotten [1, 6] Evidence from literature suggests that when employees are overloaded with tasks they tend to prioritize tasks they feel are important [1, 7, 33]. For example, tasks such as immunization of children are considered important and this is why in this study, vaccination and growth monitoring promotion were frequently conducted about 6–10 times per week by over 70% of the respondents.

Further, role overload in this study was positively correlated to tasks such as growth monitoring, HIV testing service and Village Health Committee meetings indicating both clinical and preventive tasks were responsible for role overload among HSAs. However, considering the significant health gains the Ministry of Health in Malawi has made in achieving 4 out of 8 millennium development goals (MDGs) of which three are health related: reducing child mortality, combating HIV and AIDS, malaria and other diseases [34], this task shifting is not only necessary but relevant for the Malawi Ministry of Health. Much of this achievement is attributed to HSAs work at the community level and weighing at these achievements, their

positive health outcomes and the growing demands for health care, it is important to continue with the task shifting but with some regulation. Although the guidelines for HSAs task shifting are available, it would be important if the Ministry of Health went further to introduce an independent body for HSAs task regulation such as the Medical Council of Malawi or the Nurses Council of Malawi.

Role ambiguity

The most important factor for role ambiguity in this study was the supervisor. Additionally, the HSAs curative tasks were negatively related to role ambiguity. These results suggest that the HSAs supervision and the introduction of clinical roles have a contribution towards HSA role ambiguity.

HSAs Supervision

The HSAs in Malawi are well known for being poorly supervised [30, 31]. Evidence from the literature suggests supervision should be done regularly and that the supervisors should be experts in the field who should be able to provide new knowledge and actively engage the supervisees during supervision [35]. Currently, the AEHOs are considered as the principal supervisors for the HSAs and are supported by Senior HSAs (SHSAs), clinical officers and community nurses. In light of the expansion of their role, supervision really needs to be given a priority as the country has a critical shortage of clinicians and nurses to provide the requisite supervision. Some of the barriers that have been reported as barriers for effective supervision of CHWs include travel expenses and logistics for face to face interaction meetings with the CHWs, lack of appropriate supervisory tools, inadequate understanding of CHW roles, and the poor general perception managers have towards CHWs supervision, lack of supervisory training and resources to provide a conducive climate for CHWs and their oversight due to some existing bureaucracies [36].

Job satisfaction in HSAs

In terms of job satisfaction, the main important factor for job satisfaction was compensation and advancement. This finding is consistent with the findings of other researchers where compensation and advancement has been identified as the most important predictors for job satisfaction [37–40]. Similarly, the HSAs in Malawi are lacking good compensation and a clear career structure for their advancement which is demotivating and dissatisfying considering that the majority of them work in very rural and remote areas where communication is a challenge. The current practice for HSAs advancement is that they have to get back to school and improve their grades and later enroll in a college to train either as a nurse or medical assistant [41]. In light of this, there is need to understand more about their needs [39] and that it is important they are fully supported inorder to ensure their optimization and productivity to achieve improved health outcomes [42–45]. Mpembeni[39] suggests job satisfaction should be looked at as key to the retention of CHWs. It is quite surprising to note that in Government there are other cadres

with short duration of training as HSAs but are considered for promotion within their career structure without going back to school. It is therefore important that Government should look at these critical issues to ensure HSAs remain motivated and satisfied in their work. This study therefore urges policy makers at the Ministry of Health to review the community health strategy to ensure HSAs have a clear career structure for advancement.

Strengths and Limitations

The strength of this research study is that it has been able to measure the role stressors and job satisfaction in HSAs. In addition, it has been able to draw relationships between the role stressors and job satisfaction. One of the major limitations of this study is that it is a cross-sectional study and its results cannot institute causality among the relationships established.

Conclusion

Considering that some HSAs tasks are correlated to role stressors, it is important that their address should be given a priority. If mitigation measures are not initiated, the role stressors would very likely contribute to low performance at work and lower job satisfaction among HSAs. Additionally stress conditions such as depression, dissatisfaction, anxiety and tension would arise [46]. Therefore, there is an urgent need by the authorities and partners to join hands to address these role stressors for the HSAs to continue enjoying high job satisfaction and good performance at work. This study, therefore, would like to recommend that Government should introduce measures that would control role ambiguity, role conflict and role overload levels in HSAs. This study, therefore, proposes to Government to introduce an independent regulatory body that would regulate HSAs tasks in Malawi. Additionally, supervision of HSAs should be intensified to overcome the role stressors. Since the HSAs role is broader than the roles of other health cadres it would be imperative to adopt an integrated approach towards the supervision of HSAs. This study, therefore, would like to propose interprofessional supervision (IPS) as an approach for the effective supervision of the HSAs in order to enhance HSAs supervision in Malawi. IPS involves supervision by supervisors from different professional disciplines [47]. This would help to address the challenges faced in the supervision of the HSAs, as their role is more interprofessional requiring supervisors from different health professional backgrounds. We propose this to start right at college by letting students from different professional background working and learning together in a class to ensure effective teams for supervision are formed for greater performance and improved health outcomes.

Abbreviations

DHOs: District Health Officer; HSAs: Health Surveillance Assistants; RCA: Role Conflict and Ambiguity; ROS: Role Overload Scale; MSQ: Minnesota Satisfaction Questionnaire

Declarations

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Availability of data and materials:

The datasets used in this study would be available upon making a request to the corresponding author.

Ethics approval and consent to participate:

The study was sent to the College of Medicine Research Committee [COMREC] for approval. Written permission was obtained from COMREC and also the DHOs of Mangochi, Lilongwe and Mzimba South for the studies to be carried out in the districts. Additionally, participants were asked to sign a consent form before responding to the questionnaire. Therefore, written consent was obtained from the participants.

Consent for publication:

This manuscript does not contain any individual data. However, for the RCA Scales and MSQ20 and permission to use the instruments was obtained.

Competing interests:

The authors declare that they do not have competing interests.

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Figures

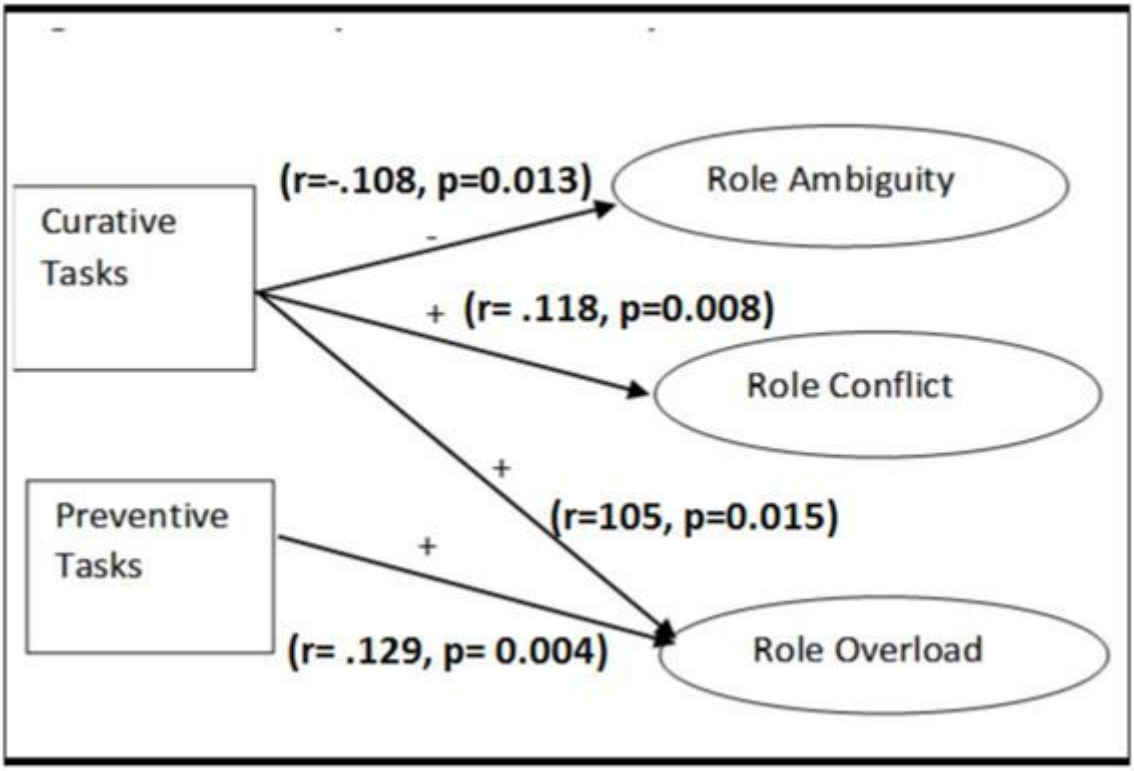

Figure 1

Relationships between tasks and role stressors