DOCUMENT RESUME

ED 470 622 RC 023 805

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TITLE	A Rural-Based Teacher Education Internship: Stressors and Coping Mechanisms.
PUB DATE	2001-12-00
NOTE	23p.; In: Providing Quality Education and Training for Rural Australians. SPERA National Conference Proceedings (17th, Wagga Wagga, New South Wales, Australia, July 8-11, 2001); see RC 023 797.
PUB TYPE	Reports - Research (143) -- Speeches/Meeting Papers (150)
EDRS PRICE	EDRS Price MF01/PC01 Plus Postage.
DESCRIPTORS	College School Cooperation; *Coping; Elementary Education; Foreign Countries; Higher Education; Preservice Teacher Education; Rural Schools; *Stress Management; *Stress Variables; Student Surveys; *Student Teacher Attitudes; Student Teachers; *Student Teaching
IDENTIFIERS	Australia (New South Wales)

ABSTRACT

A study examined sources of stress and coping mechanisms associated with student teaching. Questionnaires were completed by 43 students taking a rural-based internship program in New South Wales (Australia), and four of them participated in case studies involving interviews and diary accounts. Factor analysis of the data yielded four categories of stress: university evaluation, school evaluation, managing workload and roles, and catering for individual differences. Content analysis of open-ended responses yielded four main stress-related themes: teaching roles and responsibilities, management of time and workload, costs and living away from home, and student behavior. Five strategies for coping with stress were identified, with the main strategy being "communicating with others," especially mentor, class teacher, principal, parents, and friends. The second most-used strategy was self-help, such as reflection and maintaining a positive attitude. Other frequent coping strategies were relaxation and recreation, teaching and managing techniques, and organization. Recommendations include developing shared understandings of expectations between mentors, teachers, and lecturers of the internship program; implementing pre-internship stress management sessions; and strengthening collaboration between school and university personnel. An appendix presents the questionnaire. (Contains 33 references.) (TD)

A rural-based teacher education internship: Stressors and coping mechanisms

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Abstract

This paper reports on a study that focused on the lived experiences and concerns of final year Bachelor of Education (Primary) students undertaking a nine-week internship in a rural location. The study had two aims: one, to identify the main sources of stress faced by student teachers as they progressed through the internship; and two, to explore how the student teachers coped with this stress. Both qualitative and quantitative research methods were adopted to meet the aims of the study. Qualitative research methods, based on the principles of grounded theory, guided the data collection and analysis. These methods included interviews and diary accounts. An analysis of these data obtained from four student teachers generated five categories of stress, and these categories were also indicative of the coping strategies adopted to deal with stress related to the internship. Quantitative research methods were employed to complement the qualitative approach. The quantitative methods were applied to questionnaire data from the cohort of student teachers (N=54). A response rate of 79.6% was obtained from the questionnaire, and the responses were analysed using factor analysis, a set of one-way ANOVAs, and a content analysis. Four stress factors from the questionnaire were generated, and the effects of age, school size, class year/s taught, and self-rating of academic performance on the stress factors were determined. Four main categories of stress were also derived as a result of the content analysis of the survey data, and five coping strategies employed by the cohort of student teachers were identified. Taken together, the findings provided an insight into the experiences of the student teachers involved in the rural-based internship. The implications of the study are wide ranging, and a number of recommendations arising from the study are outlined.

Introduction

Research has consistently shown that those in the professions, particularly helping professions, have significantly high levels of stress (Gold & Roth, 1993). Teacher stress, more specifically, has become a major concern, with writers such as Gold and Roth (1993) and O'Connor and Clarke (1990), arguing that teaching is one of the most potentially stressful occupations. This is hardly surprising, given its nature. Kyriacou (1987) notes that teacher stress is "the experience by a teacher of unpleasant emotions, such as tension, frustration, anxiety, anger and depression, resulting from aspects of work as a teacher" (as reported in Woods, 1990, p. 174). O'Connor and Clarke (1990) believe that such frustrations or demands may arise in one or more of

four relatively distinct areas of the teacher's occupational role. The areas are: 1. the overall time and workload pressures; 2. the daily interaction with students, including student behaviour problems and coping with the individual demands of students' personal problems; 3. the interaction with fellow professionals within the school and other members of staff; and, 4. the interactions extending outside the school, including relations with the education system and perceptions of negative community attitudes towards teachers individually or the teaching profession generally.

The consequences of a stressor or stressors will depend on the type of coping mechanisms the teacher has developed. Essentially, stress is occurring in those areas where teachers feel that there is little or nothing they can do to remove or modify the stressor and that they must learn to live with the particular stressor (O'Connor & Clarke, 1990). In many instances, teachers have not been trained either to handle their stressors or to develop a variety of successful coping mechanisms.

Given that many researchers now recognise stress as a problem within the teaching profession, it is surprising that limited research exists on student teacher stress. The relevant literature that does exist in this area (based on ERIC and AEI searches) suggests that many student teachers experience stress, particularly during the 'practicum' (Costin, Fogarty, & Yarrow, 1993, 1992; MacDonald, 1993; Morris & Morris, 1980; Murray-Harvey, Silins, & Saebel, 1999; Regan, 1989).

A review of both overseas and Australian research literature on student teacher stress highlights a number of stressors for student teachers during the practicum. These common stressors include: fear of not fulfilling self expectations (Costin et al. 1992; Murray-Harvey et al. 1999; Sinclair & Nicoll, 1981); workload (Costin et al. 1992; D'Rozario & Wong, 1996; Morris & Morris, 1980); being evaluated (D'Rozario & Wong, 1996; MacDonald, 1993; Sinclair & Nicoll, 1981); lack of time for preparation (Costin et al., 1992; D'Rozario & Wong, 1996); and, relationships with others (Sinclair & Nicoll, 1981; Sumsion & Thomas, 1995).

The above-mentioned literature also indicates that teacher education programs in this country and overseas vary in their structure and duration, and contain, in varying proportions, 'practical experiences'. The practicums discussed in the studies ranged in

length from one day a week, for eight weeks, as in the study conducted by a team of academics from Queensland University of Technology (Costin et al., 1993), to a six-week teaching block as investigated in a South Australian context (Murray-Harvey et al., 1999). Research on extended block practical experiences is notably lacking.

Few studies have monitored how student teacher stress may change over time. Morris and Morris (1980, p. 58) found that "generally, the level of stress declines near the end of the student teaching experience", whilst Sinclair and Nicoll (1981) recorded that initial 'anxiety' is high and, in the course of the teaching practice, some reduction in anxiety is achieved.

A Survey of Practicum Stresses (SPS) has been used by a number of researchers in investigating student teacher stress during the practicum. D'Rozario and Wong (1996) first developed and used the SPS to examine areas of stress experienced by first year teacher education students in Singapore. The SPS was then used in an adapted form by Murray-Harvey et al. (1999) in South Australia comparing Singaporean and Australian student concerns relating to practice teaching. The focus in their paper was a cohort of students completing its first practicum. Significant differences between the stressors experienced by Singaporean and Australian students point to the need to understand student stress within the cultural context. In another study conducted by Murray-Harvey, Slee, Lawson, Silins, Banfield, and Russell (1999), data were gathered from Australian teacher education students enrolled at Flinders University. In this study, responses were gained from undergraduate and graduate-entry students during two teaching experience placements — their first practicum and during their second practicum. Examination of the data found that there was a significant reduction in stress from the first to the second practicum for both student cohorts.

It is surprising to find that despite the increasingly serious phenomenon of student teacher stress, and the importance of practicums in teacher education programs, very little research has been undertaken to study the coping strategies employed by student teachers to manage stress related to the teaching practicum. Sumsion and Thomas (1995) carried out a study with early childhood student teachers from Macquarie University, New South Wales. This study explored the feasibility of having teacher educators assist student teachers in developing skills to manage stress specifically

associated with the practicum. Morris and Morris (1980) made eight suggestions as to how university supervisors and supervising teachers could help the student teacher to cope with stress during student teaching. These included: 1. establish and maintain open communications among the student teacher, supervising teacher, and university supervisor; 2. encourage students to schedule some time each day for themselves; 3. provide opportunities for student teachers to share their experiences; 4. encourage student teachers to get sufficient amounts of exercise, rest and sleep; 5. encourage or even require that students prepare unit and lesson plans well in advance; 6. encourage student teachers to engage in regular, in-depth self evaluation; 7. provide inservice programs and opportunities for supervising teachers and university supervisors to develop competencies in assessing classroom environments for source of stress, recognising stress symptoms, and assisting student teachers in developing coping skills; and, 8. provide a comprehensive orientation program to student teaching.

More recently, MacDonald (1993) identified communication, conformity, initiative, goal setting, and relaxation techniques as strategies for coping with stress. In conducting this Canadian study, MacDonald examined the students' perspectives using a number of sources, namely, focus group interviews, observation visits, and journal writings. Little research in this area has been concerned with seeking information directly from those affected. It could be argued that the less able students may not be as equipped to buffer stress as their more able counterparts; however, no study has been reported in the literature to test such a claim.

It therefore appears evident that there is a need for research that focuses on student teacher stress, and particularly how student teachers cope with stress during the practicum. The few studies that have been conducted in this area have generally used quantitative methods to examine the problem, exposing the need for a study that focuses more on the 'lived experiences' of student teachers during their internship. Those studies which have incorporated interview data (see e.g., MacDonald, 1993; Sumsion & Thomas, 1995) have generally failed to provide an indepth picture of the reality of student teachers' stressors and experiences. Further, as no study has used an extended practicum in a rural location as its focus, it is timely to conduct such a study. Consequently, this study has two aims: to identify the main sources of stress faced by student teachers as they progress through the internship; and, to explore how the

student teachers cope with the stress associated with the term-long internship. The results of this study have implications for tertiary educators and other professionals concerned with the preparation and professional development of teachers.

Method

a. Participants

Fifty-four student teachers formed the participant sample being drawn from fourth year B.Ed. (Primary) students who undertook the Charles Sturt University (Riverina) rural-based 2000 Internship program. This sample was approached to complete a questionnaire (see Appendix A for sections of this instrument).

From this sample, a sub-sample of four students was asked to participate in an indepth case study. The selection of the participants for the case study was to some extent constrained by what Glaser and Strauss (1967, p. 66) refer to as "structural conditions". They maintain that the ideal is to be able to choose different groups, individuals or situations as the data dictate. The interns were selected on the basis of a number of criteria, namely, school setting, year level or levels of class and intern age.

All participants were assured that their names, the name of the school in which they were placed, and the names of all other individuals (i.e., students, mentor, liaison lecturer, etc.) would not be used. Each questionnaire was identified by an ID number, which related to an intern. The names of schools were not requested by the researcher.

b. Procedure

Contrasting methods were used to gather and analyse the data in this study. By making use of contrasting methods, viz., qualitative and quantitative methods, the researchers attempted to raise the chances of providing data that were more accurate.

Qualitative approach

According to Kemmis (1983, p. 75) case study research is "a process of truth-seeking ... it is an empirical exercise ...". Case study research techniques (viz., interviews and diary accounts) were adopted for this study because they allowed the researchers to explore the lived experiences of a group of student teachers who existed within the 'bounded system' of the internship.

- Interviews

Interviews with the student teachers were conducted over a nine-week period and were semi-structured and informal in nature. The study relied on three interviews: at the beginning, in the middle, and towards the end of the internship. The length of each interview varied among participants, although most were approximately one hour in length. All interviews were conducted in a neutral area; however, specific times and places were selected by each participant. These interviews were audio-taped with the permission of each participant sought at the commencement of each interview.

Using an open-ended style, the researchers asked student teachers to talk about their early experiences and perspectives on the internship. No specific interview schedules were used. In this way, the interviews were flexible and creative and provided the basis for further developing friendships with the interns (Roberts, 1991). The data collected from these interviews allowed the researchers to list issues that warranted additional treatment and expansion in subsequent interviews. The second set of informal interviews consisted of loosely-structured questions, developed partly as a result of responses to the formal questionnaire (see quantitative section for further details). These second interviews occurred at the completion of week five of the nine-week internship with all participants.

- Diary accounts

Participants were asked to use a diary to record 'critical incidents' (Oxtoby, 1979, as cited in Bell, 1999) which occurred during each day. They were also encouraged to use the diary to produce a record of the internship experiences and concerns about which they felt the researchers should know. Along with the critical incidents approach, the diaries were used as a preliminary base-point to the other interviews.

Two of the four interns regularly wrote in their diaries, and maintained lengthy entries, describing their feelings and reflecting on their experiences. Another intern kept brief notes, making seven entries only during the first two weeks of the study. The fourth intern did not make any entries, and this decision was respected.

Personal identifiers were removed from the diaries and replaced with code names. The diary accounts were then transcribed onto computer disk, remaining secure in accordance with ethical principles (Burgess, 1989).

Quantitative approach

Writers such as de Vaus (1991), Hemmings (1994), and Lancy (1993) have noted that quantitative methods can make a significant contribution to qualitative studies. Further support comes from Merriam (1988) when she proposes that:

> *Quantitative data from surveys or other instruments can be used to support findings from qualitative data* (p. 68).

In the current study, a questionnaire was used to collect data from the participant sample, and the once only survey was also utilised to guide further qualitative data gathering. The first part of the questionnaire asked respondents to indicate biographical characteristics such as age, gender, school size and year level/s of class. The second section of the survey asked interns to respond, voluntarily, to a number of open-ended questions concerning stressors experienced in the internship. The third section of the questionnaire consisted of the 29-item SPS as developed by D'Rozario and Wong (1996), and later adapted by Murray-Harvey et al. (1999). Slight modifications were made to the wording of the items to suit the research context, and two items, (viz., *Writing detailed lesson plans* and *Managing practicum related assignments*) were deleted due to their irrelevance to the internship. Thus, the modified SPS comprised of 27 items representing experiences related to the extended practicum that interns may have faced during the first few weeks of teaching.

Interns were asked to rate how often each of the 27 'itemised' experiences may have stressed them in the early part of the internship. Responses were indicated on a four point Likert scale. The scale: 1 - Never Stressed Me, 2 - Stressed Me Some of the Time, 3 - Stressed Me Most of the Time, and 4 - Stressed Me all the Time.

Following the SPS, respondents were asked to respond to a number of open-ended questions concerning strategies they may have used to cope with stress during the internship. The last section, section five, asked interns to indicate, on average, their academic performance thus far at university.

The questionnaire was sent to the 54 interns in approximately week three of the nine-week internship, along with a covering letter explaining the nature of the research,

and a stamped self-addressed envelope. Student teachers were advised that completing the questionnaire was voluntary, and as such 43 of the 54 questionnaires sent were returned to the researchers, representing a response rate of 79.6 per cent. This is deemed appropriate, as according to Wiersma (1986), 70 per cent is the minimum response rate when surveying a professional population.

The responses on the SPS were subjected to a factor analysis which was used to generate four 'stress' scores. These scores were then used as the dependent variables in a series of one-way ANOVAs with various independent variables (viz., age, gender, school size, and class year/s taught) to determine where there were significant differences in the stress scores. In this way it was possible to identify relationships between the set of independent variables (background variables) and the participants' stress scores.

Results

a. Qualitative data analysis

The qualitative approach used in this study was directed by the work of Glaser and Strauss (1967) and their notion of grounded theory. It must be noted that these strategies guided the analysis and were not applied in the same way as they would in a true grounded theory study. Three strategies of grounded theory (viz., theoretical sampling, constant comparative analysis, and theoretical saturation) were drawn upon to allow the researchers to collect data which reflected the experiences of the student teachers during their internship, and to permit the researchers to analyse the stressors experienced and the coping strategies employed by interns.

The early stages of analysis revealed 14 categories. This 'shopping list' of categories describes the data at a very simple level of conceptualisation (Woods, 1986). These emergent categories provided the researchers with direction for further data collection and, at the same time, data to generate categories (Lord, 1996; McAndrew, 1998).

In unison with the process of theoretical sampling, constant comparative analysis was also conducted. The next step in the analytical processes was to achieve a greater

level of delimination and refinement while, at the same time, seeking to establish linkages and relationships between and among categories (Hunt, 2000).

The secondary and final categories that were refined and re-categorised are shown in Table 1.

Table 1: Final categories and their properties

FINAL CATEGORIES	PROPERTIES
External Factors	Family commitments, personal background, accommodation, finances, public perceptions of teachers
University	Liaison lecturer, university commitments, course structure, academic performance
Relationships with Staff and Students	Mentor, class teacher, staff perceptions, students' perceptions, status/identification, coping – school support, school context
Managing Teacher Roles and Responsibilities	Routines, marking/assessing students' work, playground/bus duties, programming, assembly, behaviour management, managing students' with special needs, managing time, managing workload
Coping Strategies – Outside School	Health issues, communicating with others outside school, relaxation/recreational activities, reflection

The researchers felt that data had been verified and sufficient data had been gathered to fully explore the issues relevant to the research, and felt that they had worked towards theoretical saturation.

b. Quantitative data analysis

Some of the data obtained from the questionnaire (see SECTIONS 2 and 4) were content analysed manually. The remaining data (see SECTIONS 1, 3, and 5) were coded and computer analysed. The items comprising the SPS (see SECTION 3) were labelled using a maximum of seven characters as required for SPSS variable labelling. The items and their respective labels are presented in Table 2.

Table 2: SPS items and codes

Item No.	SPS ITEMS	Code
1	Managing the class and enforcing discipline	DISCIP
2	Delivering the lesson	DELIV
3	Managing groupwork	GROUP
4	Managing the individual seatwork	ISEAT
5	Establishing rapport with students	RAPP
6	Giving appropriate feedback to students	FEED
7	Marking students' written work	MARK
8	Teaching mixed ability classes	MIXED
9	Helping students with learning difficulties	LDIFF
10	Helping students with emotional/behavioural problems	EMOTBE
11	Communicating concepts to students	COMCON
12	Having high expectations of my teaching performance	EXPECT
13	Overall teaching workload	WLOAD
14	Managing time	TIME
15	Striking balance between practicum and personal commitments	BALAN
16	Selecting appropriate content for my lessons	CONTEN
17	Preparing resources for my lessons	RESOUR
18	Others expecting me to perform tasks beyond my competency	PERFOR
19	Being observed by my liaison lecturer	OBSLL
20	Being evaluated by my liaison lecturer	EVALL
21	Communicating with and relating to my liaison lecturer	COMLL
22	Being observed by my mentor	OBSMEN
23	Being evaluated by my mentor	EVAMEN
24	Communicating with/relating to my mentor	COMMEN
25	Fear of failing the practicum	FAIL
26	Communicating with/relating to teachers in the school	COMTEA
27	Communicating with/relating to Principal/School Executive	COMPRI

The data derived from SECTION 1 and SECTION 5 of the questionnaire were also coded, and the conversion of the data from words to numbers can be found in Table 3.

Table 3: Coding of questionnaire items in SECTION 1 and SECTION 5

VALUE LABELS	VALUES/CODES
SECTION 1	
Age range (AGE)	21-25 = 1 26+ = 2
Gender (GENDER)	Male = 1 Female = 2
School Size (total school enrolment) (SIZE)	10-150 = 1 150+ = 2
Class year/s taught (YEAR)	Predominantly Stage 1 = 1 Predominantly Stage 2 and 3 = 2
SECTION 5	
Self-rating of academic performance (GRADE)	Low Grade = 1 High Grade = 2

Factor analysis

Hair, Anderson, Tatham, & Black (1998) argue that a sample size of 300 is needed when 27 variables are included in a factor analysis. In order to overcome the limitation of a relatively small sample size, a selective examination was made of the intercorrelation matrices and this led to a factor analysis being undertaken with 11 variables (viz., DELIV, FEED, MIXED, EMOTBE, WLOAD, OBSLL, COMLL, EVALL, OBSMEN, EVAMEN, and COMMEN).

The factor analysis was made possible in this study by subjecting the cluster of variables to a principal components analysis using the SPSS program titled Factor Analysis (SPSS, 2000). The factors were extracted using a scree test and an eigenvalue specification of 1.0 plus, and were rotated using the varimax criterion (Hair et al., 1998; Kim & Mueller, 1978). Four factors, termed i) University Evaluation, ii) School Evaluation, iii) Managing Workload and Roles, and iv) Catering for Individual Differences, emerged from this analysis. These four factors explained approximately 75% of the total variance in the factor analysis. The factor loadings of the constituent variables on the four factors are reported below.

Table 4: Factor loadings for the SPS items in the 4 factors

Code	COMPONENT				Factor Label
	1	2	3	4	
OBSLL	.898				University Evaluation
COMLL	.894				
EVALL	.888				
OBSMEN		.834			School Evaluation
EVAMEN		.826			
COMMEN		.728			
WLOAD			.900		Managing Workload and Roles
DELIV			.734		
EMOTBE				.856	Catering for Individual Differences
MIXED				.760	

NB: FEED was not included because it did not load meaningfully or substantially on any of the factors.

ANOVA

A set of one-way ANOVAs was undertaken to test the effects of the four independent variables, viz., AGE, SIZE, YEAR, and GRADE, on the four dependent variables that were the standardised factor scores measuring the four stress variables. Except for one case, there were no significant group results across any of the four factors. The significant effect related to GRADE (low grade/high grade). That is, students with higher grades (HD and DI) were more stressed with regard to school-based evaluation

during the internship than those interns with lower grades (F = 4.494, p = .04). The results, taken as whole, indicate that AGE, SIZE, YEAR, and GRADE do not significantly affect the stress levels of interns.

Content analysis

Content analysis investigates the thematic content of documents which serves as a basis of inference (Cohen & Manion, 1994). Such an analysis may be used in the context of a qualitative or a quantitative approach (Sarantakos, 1998). In this study, a content analysis was related to the latter approach and drew on responses to the open-ended questions posed in the questionnaire. These responses were content analysed and the results of this analysis are reported for the following set of questions:

1. What do you consider to be the main cause of stress during the internship so far?

The analysis of the intern's comments to these questions indicated four main categories of cause: i) Roles and Responsibilities; ii) Managing Time and Workload; iii) Costs/Living Away from Home; and iv) Students' Behaviour. A fifth category was also developed in relation to a 'mixed-bag' of causes, and was hence labelled 'Miscellaneous'. A total of 58 comments was categorised, and the categorisation of comments is shown in Table 5.

Table 5: Comments made by interns about the main cause of stress during the internship

CATEGORY	NO. OF RESPONSES	EXAMPLES OF COMMENTS MADE
Teaching Roles and Responsibilities	15	"Size of my class and being Kinder". "Trying to fit into school structure". "Remembering all the little things". "Managing 3 class levels at the same time".
Managing Time and Workload	13	"I've found the hours of work quite stressful". "Not getting through enough work". "The workload". "Finding the time to fit everything in".
Costs/Living Away from Home	5	"Hard to find cheap accommodation". "Travelling expenses". "Having to go home and work".
Students' Behaviour	16	"Maintaining a level of discipline and ensuring it is adhered to". "Working out strategies that work". "Two individual children who continually disrupt the class".
Miscellaneous	9	"Passing - getting a good report". "Teaching Yr 9/10 computer studies". "Fitting in with staff". "Lack of sleep".

2. What other stressors have you experienced?

Forty-four comments were categorised in response to this question. An analysis of the comments identified six categories of response as shown in Table 6.

Table 6: Categorisation of interns' responses

CATEGORY	NO. OF COMMENTS	SPECIFIC POINT
Teaching Roles and Responsibilities	10	Assessment Programming Teaching mixed grades Remembering routines
Students' Behaviour	7	Swearing Attitudes of students Noise levels
Time Management — School and Other	7	Fitting in all KLAs/assessment Juggling normal life Lack of time to do everything
Performance	6	Expectations of others Wondering whether doing right thing
External Factors	9	Fatigue Assignments Costs Transport
Miscellaneous	5	Isolation Computer technology

An analysis of the responses to these two questions revealed that whilst the 'main' source of stress may not be the same for all interns, overall, similar stressors may be experienced to varying degrees.

3. What strategies have you used to cope with stress experienced in the internship?

Five categories of response to this question were identified, and a total of 85 comments was coded and categorised (see Table 7).

Table 7: Categorisation of comments relating to coping with stress

CATEGORY	NO. OF COMMENTS
Communicating with Others	28
Self – help	21
Relaxation/Recreation	17
Teaching and Managing	11
Organisation	8

The above table shows that the main coping strategy for interns was categorised as 'Communicating with Others', noting that 'others' consisted of a range of people. This is evident in the following quote: "... *communication is a big coping strategy — talking to other staff especially mentor, class teacher, Principal, sometimes other staff and in particular my mum and dad and my boyfriend (evening cleaning staff to a*

small degree)". Through discussion, interns felt they were able to release and share their concerns with others. Through sharing, interns may have found that they were not alone in their experiences.

By addressing the stressor, the problem may seem less severe, although if the stressor is unknown, this may be difficult. Self-help strategies such as reflection may help identify the stressor and become a form of coping as indicated in the following comment: *"I have tried to evaluate what is causing the stress"*. Generally, comments categorised as 'Self-help' reflect the notion that a positive approach is important in dealing with stress, and is apparent in the following brief quotes made by different interns: *"Adopt a positive attitude"* and *"Believe in yourself"*.

The third most adopted coping strategy as categorised by the researcher, was 'Relaxation/Recreation'. A number of activities were expressed as helpful in coping with stress and responses included watching TV, playing playstation, socialising, meditating, eating, sleeping, spending time with family, reading, sightseeing and having a bath. These activities were seen as time-out activities where interns were able to 'switch off' from school.

Approximately 13 per cent of the intern responses to the question on coping indicated that teaching and managing techniques helped them to cope with the stress experienced during the internship. Such techniques were coded and categorised as 'Teaching and Managing'. One intern felt that you should "*not leave anything unresolved for another time*", whilst another way of dealing with stress, as indicated by another intern, was to "*approach each issue in small ways and continually*".

The fifth category that was developed as a result of the content of the responses to the above question, was titled 'Organisation'. Not as many comments were recorded as part of this category compared with the other four, however, some people identified over-planning, utilising time effectively, setting goals, planning back-up activities and generally being prepared, as ways of coping with stress. Although a number of coping strategies have been identified above, it is not overly clear how they worked or how effective they were.

Discussion

Based on the literature relating to studies of student teacher stress and coping strategies, a number of factors were identified as causes of the stress experienced during practicum situations. Along with D'Rozario and Wong (1996) and Murray-Harvey et al. (1999), who have used the SPS to investigate student teacher stress during the practicum, the current researchers derived a 4-factor model from the data. Table 8 highlights how the results of the factor analysis in this study compare to D'Rozario and Wong's (1996) 7-factor model and the 4-factor model presented by Murray-Harvey et al. (1999). It needs emphasising that each factor is derived from the SPS items that encompass it, and whilst the factor labels may be different in some cases, the similarities in the studies' findings remain evident. Table 8 also presents the five categories that were developed as a result of the processes of grounded theory which provided the guidance for the analysis of qualitative data collected.

Table 8: Summary of findings

Quantitative Data			**Qualitative Data**
Factor Analytic Model This study	Murray-Harvey et al.	D'Rozario and Wong	*Grounded Theory Approach* This study
1. University Evaluation 2. School Evaluation 3. Managing Workload and Roles 4. Catering for Individual Differences	1. Teaching 2. Preparation 3. University Evaluation 4. School Evaluation	1. Overall Performance 2. Workload 3. New Colleagues 4. Cooperating Teacher 5. Supervisor 6. Teaching and Managing 7. Helping	1. External Factors 2. University 3. Relationships with Staff and Students 4. Managing Teacher Roles and Responsibilities 5. Coping Strategies — Outside School

The factor analytic model of this study portrays four different variable sets which encapsulate the major sources of stress experienced by interns when placed in a rural school setting. These categories are consistent with much of the literature, although limited, that exists on student teacher stress.

The interviews were useful in providing information about changes in stressors over time. It appears that uncertainty and hence, stress, diminishes over time. During the nine-week internship, the researchers were able to seek the different sources of stress experienced by interns at four different times — approximately after week 1, week 3, week 5 and week 9 of the internship. Overall, the experiences of the intern were considerably less stressful towards the end of the internship. This finding is in accord

with the work of Morris and Morris (1980, p. 58) who found that "generally, the level of stress declines near the end of the student teaching experience".

A content analysis revealed the following five categories of coping strategy: Communicating with Others, Self-help, Relaxation/Recreation, Teaching and Managing and lastly, Organisation. Communication was also found by MacDonald (1993) to be a strategy that students employ to deal with stress, as was relaxation.

A set of one-way ANOVAs was undertaken to test the effects of four separate independent variables, namely, AGE, SIZE, YEAR, and GRADE, on the four dependent variables that were the standardised factor scores measuring the four stress variables. There were no significant results for the four factors in relation to AGE. The literature that exists on the relationship between age and stress (Gold & Roth, 1993; Schwab & Iwanicki, 1982 as cited in O'Connor & Clarke, 1990) indicates that there are many inconsistencies, with some studies noting no difference whilst others showing a significant relationship. Also, for YEAR there were no significant results in this study. This is not in accord with a study conducted by D'Rozario and Wong (1996) who found that there was a relationship between the amount of stress experienced and the year level of classes taught. They found that teaching at the lower primary level was stressful, especially for the men, and also that teaching at both the lower and upper primary levels seemed to have been stressful for both male and female student teachers. It needs to be stressed that the 1996 study was undertaken in Singapore and the student teachers were less experienced in terms of practicum compared with the cohort in this study.

In relation to SIZE, the results were nearing significance for two factors viz., University Evaluation and Catering for Individual Differences. However, there was a significant effect on School Evaluation related to GRADE. Whilst no other study has been conducted to determine the relationship between the stress experienced by student teachers and academic achievement, the relationship between personal factors and stress has been examined by O'Connor and Clarke (1990). They found that teachers who have a need for achievement are more stress prone. This appears to be consistent with the fact that in this study, those interns with higher self-rated academic performance were more stressed than those with lower self-ratings.

From a practical perspective, the findings of this study suggest that all primary school staff members need to be aware of the stressors that interns may encounter during the term-long internship; they should be sensitive to the individual needs of interns; and, be able to offer assistance and support to interns, and monitor the perception of interns, especially monitoring the extent to which interns' expectations are being fulfilled. Hence, this study could better inform school personnel how they can maximise the overall experience of the internship, and play a role in reducing some of the sources of stress that lie beyond the immediate control of the intern.

Without explicit knowledge and understanding of the stressors experienced during the internship, and the coping strategies used by interns to cope with that stress, educators cannot attempt to meet their charges' needs. To date, university staff have done what they perceive would benefit student teachers during the practicum, yet this research study suggests that the perception of the intern should be of prime focus. Seeking feedback from interns should be viewed as a critical component of course design, evaluation and improvement. Through an increased understanding of student teacher concerns and realities, teacher educators will be better informed of ways in which to improve their teacher education programs (Murray-Harvey et al., 1999). The frank accounts of the interns' experiences provide a valuable basis for refining practicum requirements and organisation, and add to the current knowledge base about internship programs. This information may be useful in identifying those student teachers most in need of interventions aimed at ameliorating specific areas of concern, and may also have implications for placement decisions.

Interns' concerns should come to the attention of all parties interested in improving the internship and education per se. If the education systems are to pursue excellence, attention must be given to the needs of interns. District and state system administrators can deal with issues directly affecting the quality of instruction such as class size, behaviour management, excessive administration tasks, and non-teaching duties. They could also work toward consensus statements that would be in the best interests of all stakeholders in the internship. The information in this study could inform future directions for practitioners, policy makers and researchers.

As a result of this study the following recommendations have been suggested:

- Inservice mentors, teachers, and liaison lecturers to develop shared understandings of the internship program and expectations of all involved.
- Develop and implement pre-internship stress management sessions that could help interns generate/use appropriate resources and coping skills and hence allow interns to gain the maximum advantage from the internship.
- As the internship program evolves, collaborate and strengthen the links between school personnel and those in the university setting to ensure that the goals of all are complementary, and that all parties have a vested interest in the education of primary school teachers.

This study has fulfilled the aims that were set out at the beginning and which guided the conduct of the research. The experiences of interns as they progressed through the Charles Sturt University (Riverina) rural-based 2000 Internship program resulted in some interesting insights about the stressors in a teaching practicum and the coping strategies adopted by interns. Hence, this study has made a contribution by adding depth to the available data on the experiences of student teachers. Although this study has filled a gap in the literature pertaining to stress and the coping strategies adopted by interns during the internship, the field is still ripe for further investigation.

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APPENDIX A: Questionnaire

SECTION 1

Age range: (please tick where appropriate)

21-25 [ ]
26-30 [ ]
31-35 [ ]
36-40 [ ]
40+ [ ]

Gender: (please tick)

Male [ ]
Female [ ]

School size: (total student enrolment) _____

Class year/s taught: _____

SECTION 2

What do you consider to be the main cause of stress during the internship so far?

_____
_____
_____

Why?

_____
_____
_____

What other stressors have you experienced?

_____
_____
_____

SECTION 3

Please indicate how often you may have found the following situations stressful in your internship (so far). For each item, please circle the most appropriate number.

1 Never Stressed Me
2 Stressed Me Some of the Time
3 Stressed Me Most of the Time
4 Stressed Me All the Time

1.	Managing the class and enforcing discipline	1	2	3	4
2.	Delivering the lesson	1	2	3	4
3.	Managing groupwork	1	2	3	4
4.	Managing the individual seatwork	1	2	3	4
5.	Establishing rapport with students	1	2	3	4
6.	Giving appropriate feedback to students	1	2	3	4
7.	Marking students' written work	1	2	3	4
8.	Teaching mixed ability classes	1	2	3	4
9.	Helping students with learning difficulties	1	2	3	4
10.	Helping students with emotional/behavioural problems	1	2	3	4
11.	Communicating concepts to students	1	2	3	4
12.	Having high expectations of my teaching performance	1	2	3	4
13.	Overall teaching workload	1	2	3	4
14.	Managing time	1	2	3	4
15.	Striking balance between practicum and personal commitments	1	2	3	4
16.	Selecting appropriate content for my lessons	1	2	3	4
17.	Preparing resources for my lessons	1	2	3	4

18.	Others expecting me to perform tasks beyond my competency	1	2	3	4
19.	Being observed by my liaison lecturer	1	2	3	4
20.	Being evaluated by my liaison lecturer	1	2	3	4
21.	Communicating with and relating to my liaison lecturer	1	2	3	4
22.	Being observed by my mentor	1	2	3	4
23.	Being evaluated by my mentor	1	2	3	4
24.	Communicating with/relating to my mentor	1	2	3	4
25.	Fear of failing the practicum	1	2	3	4
26.	Communicating with/relating to teachers in the school	1	2	3	4
27.	Communicating with/relating to Principal/School Executive	1	2	3	4

SECTION 4

What strategies have you used to cope with stress experienced during the internship?

Do you think the coping strategies you have used have been effective? Please explain.

SECTION 5

What grade would be most prevalent on your current academic transcript? (please tick)

HD [ ]
DI [ ]
CR [ ]
PS [ ]

What grade would be the second most prevalent? (please tick)

HD [ ]
DI [ ]
CR [ ]
PS [ ]

Thank you for your time and consideration in completing this questionnaire.

NOTE: Please place the questionnaire in the enclosed self addressed, stamped envelope

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