

Implementation of Academic Monitoring and Support in an Undergraduate Nursing Education Programme: an Ethnographic Study

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Abstract: Attrition of student nurses is increasingly gaining attention in the context of chronic shortage of nurses globally. Nursing education institutions are implementing a range of student support interventions to address student dropout. Literature however shows that most of the existing interventions are not comprehensive and they focus on addressing the pathology by fixing students problems. Using an ethnographic approach and grounded theory data analysis framework, this study explored implementation of academic monitoring and support (AMS) in an undergraduate nursing programme. The findings revealed that a comprehensive AMS programme that is holistic is characterised by institutional commitment at strategic level, a vision, mission and strategic plan that reflects commitment to opening access for success to all student irrespective of their background, a student support policy framework providing context to AMS, dedicated resources, a mix of student support initiatives at different stages; pre-entry, integration into the institution, during curriculum offering, and preparing completing students for the world of work. Effective AMS emerged as student centred in nature, centrally coordinated, implemented collaboratively, with students academic performance tracked and monitored throughout the programme, and interventions on each student captured on an online SharePoint system accessible to all members of the team for continuity.

Keywords: Student attrition, academic monitoring and support, undergraduate nursing, ethnography [5 keywords]

I. Introduction

Central to improving the performance of the health care system is the nursing and midwifery workforce and population health outcomes [1,2,3] as they are the largest group of health professionals in the health care system [3]. This is however compromised by the reported chronic shortage of nurses and midwives globally [2,3,4]. Student attrition is also reported as contributing to this shortage of nurses. In South Africa there was a failure rate ranging from 39.3% to 58.7% in selected nursing education institutions and that spaces of students who have dropped out are not filled leading to graduating less nurses than projected [5]. Student attrition places a financial burden to taxpayers as nursing is highly subsidized by the government and students in public nursing colleges are on a government bursary system [6]. As a result addressing student attrition is taking a forefront [6,7]. Mal-distribution of health professionals, with remote and rural areas mostly affected is another area of concern. This is associated with the student body that is not reflecting the human resources need of the country [2,8]. To address the skewed distribution of nurses nursing education institutions are now targeting students from remote and rural areas and this is accompanied by having admission policies that target students from these area and structured support interventions in place to ensure that the students, irrespective of their background succeed in their studies [2,8]. Student support programmes such as peer mentorship [9,10] peer tutoring or supplemental instruction [10,11], clinical mentorship [11,12], career guidance and counselling [13,14] embedded academic writing and English for academic purposes programme [15,16] are reported in nursing education institutions and they have positive outcomes in terms of improving retention and throughputs. It is clear that nursing education institutions are investing resources, finances and time in student support interventions and the results yielded may still be improved to achieve the desired outcomes in relation to available nurses and midwives in the health sector, including remote and rural areas.

II. Background to the study

The primary responsibility of nursing education institutions is to ensure that the students who met the programme entry requirements and were admitted to the programme are retained, supported to graduation as stated by Demetriou and Schmitz-Sciborski [17]. Student attrition stifles the agenda of upscaling educational programmes for production of more nurses and midwives for improved health service delivery as well as patient and population health outcome [3,2]. WHO [2] is advocating for the production of quality, quantity and responsive graduates for universal health coverage. The Ministry of Health in South Africa recommitted the health sector to the re-engineering of primary health care (PHC) where nurse play a key role of providing

leadership in community-based outreach teams and schools health serves and are part of district clinical specialist team [3]. This compounds the pressure to ensure that good quantities of nurses complete their studies in line with the demands of the health care system. With the mal-distribution of nurses and midwives that seriously affect populations in rural area the government of the day in South Africa introduced policies that support targeted recruitment and admission of students from previously disadvantaged backgrounds as part of opening access to higher education. Some of the university-based nursing departments have spaces dedicated for students drawn from previously disadvantaged schools [14,6]; the schools that are criticised for producing students who are inadequately prepared for higher education, thus contributing to high dropout rates [14,6]. To address the challenges of the students from such backgrounds a diverse range of student support programmes are implemented in undergraduate nursing programmes [6]. Wells [18] categories student support intervention aimed at addressing student attrition into primary and secondary prevention interventions.

Shushok and Hulme cited in Demetriou and Schmitz-Sciborski [17] are of the view that the existing student support interventions intend to fix the pathology by repairing problems of the students instead of holistic programmes that include prevention, promotion, treatment and rehabilitation [10]. Loftin et al. [10] highlighted lack of indepth and detailed reporting on the existing comprehensive student support programmes. Most of the research studies focus on one student support initiative as reflected earlier in the introduction. The undergraduate programme in the institution of interest in this study was reported by Essack et al [19] as having a comprehensive AMS programme which uses a holistic approach. McKenna [20] asserts that the varied ways of in which student support programmes have been understood and implemented have led to those involved in student support approaching it differently and from opposing philosophical stances and that affects the effectiveness of student support programmes. Borden, Vithal and Dhunpath [21] contend that while there is consensus on the need to support the students as part of opening access for success, there is no agreed upon form of effective student support that will generate the desired results, taking into considerations investments made in this programmes. This study therefore aimed at analysing the implementation of this AMS programme with the aim to explore (a) contextual conditions that facilitated implementation of AMS in an undergraduate nursing programme and (b) the process and practice of AMS implementation in an undergraduate programme of interest in this study.

III. Methodology

A classical ethnographic approach was adopted this study and data was analysed using Strauss and Corbin's grounded theory data analysis framework as recommended in Pettigrew [22]. Pettigrew argues that these two approaches share similar characteristics as they both use a naturalistic approach to inquiry of observing, analysing and exploring in-depth the phenomenon of interest as it occurs in its natural setting. When combined ethnography provides those thick descriptions that are required in grounded theory to allow for emergence. Ethnography brings in the richness of the culture of the key informants, which is not the focus in grounded theory studies. Ethnography provided the researcher with the opportunity to be immersed in the culture where AMS was implemented. Data was collected through individual and focused group interviews from 40 key informants. It was also collected through document analysis, naturalistic conversations with the informants and observations as stated in Whitehead [23]. The researcher spent 18 months in the field (nursing education institution and clinical settings) observing and studying how students are supported and monitored to ensure that they progress and succeed in their studies. The extended period in the field allowed the researcher to be immersed in the cultural settings [23]. Purposive and later theoretical sampling were used to ensure that the selected informants have rich data required to understand the phenomenon of interest in this study. Key informants included Bachelor of Nursing students (24), peer wellness mentors (4), academic mentors/ student tutors(4), nurse educators (4), AMS coordinator, student counsellor and two Academic Development Officers. Ethical clearance was obtained from the University Research Ethics Board and the Study protocol reference number is: HSS/0562/014D. Gatekeeper permission was obtained from the Registrar to have access to the students and permission was obtained from the Nursing Department to collect data from the students. Ethical principles were observed through out the study. Issues of trustworthiness were also addressed in this study as stated in Lincoln and Guba [24]. Data sources were triangulated and transcribed data was validated with the informants to ensure confirmability. Credibility was ensured by verifying collected data and emerging findings with the informants and also matching it against verbatim transcripts. Having a co-coder also assisted in confirming the emerging codes and categories, and a critical reader who draw the researcher's attention to data that required verification. Having a clearly articulated plan, research methods and data collection and analysis process in a form of a research proposal with the help of experts in qualitative research enhanced dependability of the study. Transferability was ensured through providing thick description of the study context, settings, procedures and findings. This paper is part of a bigger study and the results only focuses on two elements of Strauss and Corbin's grounded theory data analysis framework; contextual conditions and action and interaction strategies.

IV. Results

Guided by Strauss and Corbin's framework, the findings in this paper outline the categories that emerged from the process of analysing AMS implementation in the undergraduate programme. Five categories emerged and they included (a) external environment imperatives (b) establishing institutional context, (c) planning, (d) AMS strategy implementation, (e) monitoring and evaluation. Two additional categories (f) AMS foundational principles and (f) AMS outcomes are included to complete the data that emerged under AMS implementation. These two are however summarised as they are presented somewhere else as a standalone article. These categories are summarised visually in a Figure 1: AMS Conceptual Framework. The subcategories that made up these categories are presented under each category.

External environment imperatives: Data sources revealed AMS as a response to the external environment (national imperatives) because the institution as a system has open boundaries. In this particular study the external environment emerged as having a transformation agenda aimed at influencing change in a country that is characterised by inequalities and injustices. The Department of Education was reported to have a transformation agenda aimed at widening participation in higher education; participation that will go together with student success. The National Department of health aimed at transforming the health care system by attracting and training nurses, especially from rural, remote and under-resourced communities in line with the HRH needs. The Ministry of Health was also reported as also having a Universal Health Care agenda, with all populations having access to health care and this was possible with targeted recruitment and selection of students from such communities. The SANC in line with the country's agenda, as a regulatory body prescribed that all nursing education programmes should be relevant and responsive to the needs of the country, as per the quotes below:

...University's Strategic Plan stemmed from the... DHET agenda of widening access with success to address the challenges of the past. [KI 3]

... NDOH wants us to attract and train nurses according to the HRH needs and its Universal Health Care agenda. So we target students from rural and remote areas to address nurse shortage in those health care settings [KI 7]

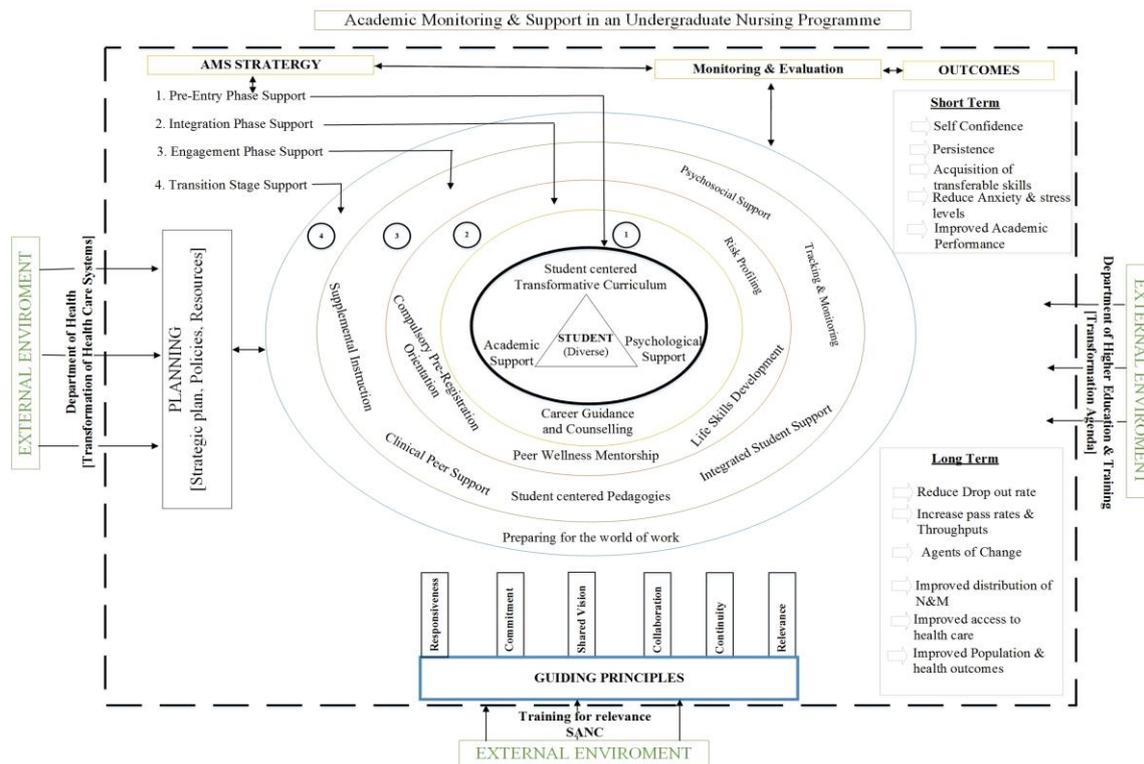
... SANC ... stipulates that programmes should be relevant and responsive to the country needs [KI 12]

Establishing institutional context: The data sources reflected an effective AMS had to be informed by the context of the institution. An audit of the student failure rate and dropout was conducted and all key stakeholders had a voice in this audit. The audit according to the key informants confirmed the concern over high failure rate and dropout of students especially from previously disadvantaged backgrounds who were not adequately prepared to cope with the demands of the higher education system. This in their view implied that although access to higher education was improving it was not accompanied by success. A number of reasons for high failure rates and dropout cited by the informants included the problem of adjustment to the higher education environment, financial, psychosocial, inadequate support systems to struggling students and inadequate preparation of faculty and administration to deal with students from previously disadvantaged backgrounds and diverse racial groups. The audit recommendations the introduction of a structured and funded academic development and student support programme.

The 2005 audit report showed that positive change was marred by high failure rates ...the report cited a range of reasons for the abnormally high failure rates; ... inability to cope with the demands of higher education environment, personal issues, finance, racism, health and struggling with discipline related knowledge and skills due to limited support from lecturers. A three pronged approach to student support was recommended ... [KI 17]

...while many more historically disadvantaged students were gaining formal access to institutions, they were not gaining epistemological access, this was reflected in the inability of so many of them to successfully graduate. Hence, the need for Academic development and student success project, now known as AMS [KI 27]

... the Audit of Student Failure ... made a case for an overhaul of teaching practices and student support and adoption of a multi-pronged and structured student support programme. [KI 50].



Planning: The category planning comprised of a number of subcategories, which reflected what the planning process entailed. The planning process entailed (a) collaboratively developing AMS strategy, (b) provision of legal instruments to support AMS implementation, (c) resources mobilisation.

Collaboratively developing an AMS strategy: Data sources reflected that the institution had to develop an AMS strategy working collaboratively with all key stakeholders. This process had a driver and a team to champion AMS strategy development. The driver of the AMS strategy according to the informants was part of the institution leadership, which was a sign of commitment to the project.

... the interim Director of Access was appointed to champion and give effect to the Institutions access policy. Working with a special task team this interim director had to develop an integrated cohesive access and retention policy which placed emphasis on selection and retention strategies. [KI 17]

Having a driver positioned at an institutional or strategic level assisted in the successful development of the AMS strategy because Professor... had leadership support and had some legitimacy when requesting input from key stakeholders. [KI 13]

The informants reported that the draft strategy that was developed was circulated to the wider stakeholders for input and comments before it was submitted through the internal university structures for approval and adoption. The process that was inclusive of all was viewed by the key informants as crucial as the issue of opening access for success was a sensitive issue to other members of the university community. Obtaining buy in and ownership of the emerging AMS strategy as early as possible was critical for AMS to be implemented successfully and effectively. The key stakeholders included students especially the student representative council members to ensure that the voices of the students are included in the final product:

I remember in our school discussing the draft document where we had to give our input that was going to be taken back to Professor... who was leading the access project. This involvement was very strategic as students support and attracting students from previously disadvantages backgrounds is a sore issue to some [KI 7]

The students in my campus through the SRC had their say on the draft strategy because this was about students, so that had to be involved before it is approved by the university structures. [KI 9]

Provision of legal instruments to support AMS implementation: To legitimize and enforce access for success through AMS the institution built within its strategic plan, vision and mission and strategic objectives statements that reflected its commitment. In addition the institution developed an academic monitoring and exclusions policy, which is used as the basis for student support and academic exclusion. This policy details the process to be followed before academic exclusion of any student. Additional support instruments included teaching and learning policy that is student centred, language policy formalising the use of two languages English and isiZulu (local indigenous language) during teaching and learning, the university transformation charter to facilitate the institutions transformation agenda of opening access for success and improving throughputs as well as

graduation rates. In 2013 the university introduced an admission policy that uses a quota system, reserving 15% of the spaces for students from previously disadvantaged backgrounds as part of facilitating the change in the university demographics. The data sources also revealed a PACT to be signed by both the students and academics to help institutionalise and commit the university and students to academic development and student support was introduced in 2006. The PACT outlined the rights and responsibilities of all the parties to ensure a good teaching and learning student experience and consequently improved academic throughput and success. The PACT also aimed at ensuring that the capacity of the faculty is developed as well to be able to provide effective support to all the students during the teaching and learning process and the students to commit to fully utilise the available student support services.

... Allied strategies to institutionalised student support include: The university strategic plan ... the PACT; Academic Monitoring and Exclusions Policy; Policy on Teaching and Learning; Policy on Assessment; Language Policy; Language Plan of the university...; The ... Transformation Charter;... The Academic Exclusions policy is clear that a student cannot be excluded before exhausting all the available avenues of support, but within the prescripts of the policy.... [KI 4]

..."PACT" which outlined the rights and responsibilities of all key players to ensure a good teaching and learning student experience and consequently improved academic throughput and success.... This was a way of institutionalizing academic support. The PACT was to ensure that the rights of students to quality teaching and learning are formally and actively promoted within the institution...to include a reciprocal co-responsibility of all members of the university community to commit themselves to ensuring a quality teaching and learning working ethos within the framework of the university rules and regulations. [KI 49]

Resources mobilisation: According to the data sources the Deputy Vice Chancellor Teaching and Learning working with her Teaching and Learning team is responsible for mobilising resources for AMS. Every year they submit proposals to the Department of Higher Education and Training (DHET) to be awarded a Teaching Development Grant. The institution proposal incorporates requests from all the schools and colleges within the university. Initially the funding was sourced from external donors, where Access initiatives were funded through the SUKAR project. The data sources reveal that the funding is well controlled and its usage is monitored according to the submitted operational plans and budgets. AMS coordinators report produce financial statements with the help of the finance department and account for how funds were utilised. This approach assists in ensuring that utilisation of funding is closely monitored and that it is used for intended purpose;

The practice now is that DVC Teaching and Learning at an Institutional Level sources funding to implement the AMS strategy. DHET funds student support programmes but DVCs develop institutional proposals and budgets to compete for this funding with other institutions. The same applies internally, the AMS coordinators at operational level develop funding proposals and cost their activities line by line, submit to the office of the DVC to compete for this limited funding [KI 17]

The activities of the whole AMS team are funded through the Teaching Development Grant which is managed at a college level ... we have to go according to our activity plans and budgets because the AMS coordinator has to account for these funds to the office of the DVC... [KI 2]

AMS strategy implementation: It emerged from the data sources that the process of implementing the Institutional AMS strategy is broad and it required to be operationalize at operational levels, taking into consideration the diversity of programme offered. Undergraduate nursing programme is one example where there is a clinical component, which had to be integrated into the straightforward AMS strategy. A number of subcategories emerged under the category implementation of AMS at operational level. These included (a) central coordination of AMS at operational level.

Central coordination of AMS at operational level: Central coordination of student support emerged as essential for effective implementation, monitoring and evaluation. AMS was designed as a multipronged programme with multiple student support initiatives integrating student support services (psychosocial support), academic development and support (skills development and peer-learning) and integration of student support in student centred curriculum. In this study AMS was based in a central office dedicated to coordinate and manage all AMS related activities. According to the data sources, the coordinator had a responsibility of developing proposals for funding to ensure that there are funds to implement AMS, monitor the implementation of the AMS initiatives in relation to activity plans and provide additional technical support in the implementation of different aspects of the AMS programme, as stated in the quotes below;

.. we had to adapt the strategy and include the element of clinical support because clinical learning experience is one of our students big challenge. First year students really struggle with clinical... So we had to include it as one area of support in our AMS programme... [KI 3]

...AMS coordinator was appointed to that position to establish and work with student and support services to oversee the implementation of the AMS strategy and ensure that both academic staff and psychosocial units work collaboratively in providing support to students. "The coordinator also provided technical support to all the teams that were implementing aspects of AMS as she was an expects in health sciences education [KI 9]

We called our student retention and success programme a twinning project as it is collaboration between academic staff and student support services responsible for psychosocial support. We have a common goal of providing holistic support to our students. [KI 6]

Psychosocial support services: It emerged from the informants that AMS was two pronged; psycho-social support and academic support. Data sources revealed that although there were grey areas in terms of student support interventions, psychosocial support was the mandate of student support services. According to the student support services their purpose is three fold; enhancing the wellness of the student, holistic growth and development of students (personal support), providing constructive support to students as they get integrated into higher education up to final year and providing services that impact on teaching and learning spaces such as classrooms and clinical settings, as well as in their living and learning contexts- the residential spaces. The main aim is to enhance total growth to the students, as per the extracts below:

Our purpose as student support services is to play a critical role in enhancing the wellness, holistic growth and development of students, provide students with constructive help to support them as they navigate their way through their journey from 1st year through to graduation, impact on the student in both the 'Teaching and Learning' and the 'Living and Learning' context [Document analysis, KI 42] As student support services we have a suite of student support services from the period of integration into our institution up when they exit the programme. These services are aimed at enhancing total growth of our students. We focus on their personal development, walking their first year journey with them as it has a lot of challenges and then ensure that our support does not only take place in formal learning spaces but also in residential areas, as peer mentors are there all the time to support them [KI 13]

The data sources reflected a range of services offered by student support services including professional and confidential counselling to students with personal issues, career and academic support as some students struggle with their career choices or struggle to cope with their studies and specific student support services which may be in a form of individual or group interventions. It emerged from the data sources that career counselling is also available to prospective students who intend to join the nursing profession, to assist with choosing the career in an informed manner. According to data sources, specific interventions include academic orientation, peer wellness mentoring, life skills development, structured student retention and throughput programme, crisis and or trauma management. *We offer a free professional and confidential counselling, career and academic support services to all registered students and prospective students. Some specific services offered include personal and career assessment and counselling, career development services, academic skills development programme, structured students retention and throughput programme, crisis/trauma management, lifeskills development, peer wellness mentoring, academic orientation and living and learning communities. [Document analysis, KI 38]*

Living and learning communities project is more formalized in medical school residences. In nursing it is informal with tutors and supplemental instructor having sessions in residents depending on the needs of the group allocated to them. The peer wellness mentors also play the similar role informally in residences because sometimes they are in clinical settings during the day [KI 17]

The psychosocial support that was provided to the students was classified into four domains; (a) integration to the higher education and nursing department, (b) early screening for risk diagnosis, (c) targeted individualised and group interventions, (d) tracking and monitoring and (e) preparation for the world of work. What emerged from the data was that some of these student support activities were shared with academics or academic development officers to ensure holistic support. The student support services led and managed administratively but work with relevant student support structures. The collaboration is unpacked later under the discussion of each domain.

Integration to the higher education and nursing department: Integration of students into higher education was preceded by career counselling to ensure that the students are informed about the career they are choosing. The process of integration into the nursing programme and higher education was characterised by compulsory pre-registration orientation, which took place before the start of the academic semester, life skills development to strengthen the capacity of the students to cope with academic demands, and peer wellness mentoring where first year students are allocated to peer-mentors who are senior students who are performing well. Student support services refer to this

...We offer pre-admission counselling to guide students with career choices... The students also attended a compulsory pre-registration orientation ... from 24 January to 2 February..., which focused on the "1st year experience" and the critical skills required for academic success. Students were afforded the opportunity of meeting one another, their Mentors and their ADO's. ... The orientation also included orientation to the physical environment and available learning resource centres. [Document analysis, KI 17]

As part of the extended orientation programme for all 1st year students, academic skills workshops were conducted during March allowing students to be exposed to the critical academic development skills to assist in their transition and academic success at university.... The training workshops focused on 'Time

Management and Goal Setting,' 'Study Skills and Critical Thinking,' 'Note-taking and Effective Reading,' 'Exam Preparation', 'Stress Management' and 'Working in Teams. [Document analysis, KI 17]

Early screening for risk diagnosis: Upon admission into university all first year students as part of a compulsory activity need to complete the on-line risk profile which is planned and conducted by the Student Support Service department. The aim of this risk profile exercise is to derive which students are at academic risk through academic and personal needs. This includes academic, personal, finance and social problems. Data is analysed by a research assistant who then provides the Student Support Service department the results. The results from the risk profile are sent to the ADO and Student Support Services for further support and referral to appropriate services the student needs.

The Retention and Throughput Programme...is an appropriate, relevant and meaningful Student Support Service that is able to identify the changing needs and ultimate risk factors impacting on students entering higher education... It is a comprehensive strategy that includes profiling of students to identify the areas for development as well as strategies and programmes to respond to students presenting needs. [Document analysis, KI 17]

...compulsory for the students to attend...for the first years we do a risk profile and exercise because they are new at the university. This risk profile is more like an online test where they do a self-assessment on academic, financial, psycho social, teaching and learning problems and clinical support. For their responses we are able to pick which one is have financial problems and so on and they are individualised in interventions... [KI 17]

...early profiling of students by Student Support Services and ADOs and to appoint a Research Assistant who will capture data, analyse results and compile a report. [Document analysis, KI 20]

Targeted individualised and group interventions: Following the risk profile analysis, students are consulted with and planned targeted individualised and group interventions with AMS and SSS personnel. The interventions are aimed at focusing on improving and working on students areas of needs. For personal problems to a risk students, they are referred to the Student Support Service department for further support. Academic needs for at academic at risk students are referred to the ADO and/academic mentors. The academic and personal skill capacity with focused interventions aim at strengthening a student's capacity. By either individual or group sessions, students are provided supported on subject matter as an extension to out of class support. Academic support for instance includes peer mentor or academic mentor support to student nurses understanding of traditionally difficult subjects and assignment writing. Their guidance and insight to these subjects allow increased understanding as indicated in the excerpts below:

...individualised in interventions but if we having maybe a group of students that are having academic problems then we try and run workshops so that the group benefits [KI 17]

...students presenting with risks in areas of Individual/Personal, Career issues and Skills Development issues are referred to Student Support Services on their respective Campuses. All students presenting with risks in Academic Development Issues are referred to the ADO's, SI Leaders". [Document analysis, KI 21]

....they (peer mentors and supplemental instructors) would assist us in questions we had regarding a certain subject....study group on certain days and they would help us...give us past papers...we had assignments they would help us because we did not know how to reference... [FGD 1]

Tracking and monitoring: Tracking and monitoring of students was observed as one of the shared responsibility by academics and student support services. An online Sharepoint system was used as a data base keeping a record of support provided to each students and a record of those who were referred to support interventions but did not follow that through. In addition, students were also monitored and tracked by their assessment marks by the ADO who was appointed solely for full time coordination of student support initiatives in the undergraduate programme. The ADO had a responsibility of holding regular meetings with student support services and other AMS personnel as part of monitoring support provided to the students. A student management system that used a robot system was reported to track and monitor the students academic standing and take appropriate action in cases of those students who were regarded as at risk or underperforming academically.

student support services devised an online Sharepoint system which we all (AMS team) use to keep a record of all the student who access student support interventions of who do not comply when they have been referred [KI 3]

...we (ADOs) monitor and support these students as soon as they are in this category with the aim of getting them out of the "At Risk" status and back to the "Good" or "Satisfactory" academic status or the commonly known as the "Green" status [KI 17]

...ADOs get the reports (from lecturer) of those students...we want them to track them on the anatomy test...if you didn't perform...we...see which interventions should take place [KI 17]

Academic support: Key informants reflected on three types of academic support provided to the students; peer teaching and learning, clinical peer mentoring and integrated academic support in student centred curricula. These interventions focused on the academic aspect where students struggled with discipline specific content

leading to poor academic performance. Undergraduate students had academic tutors also known as supplemental instructors appointed to provide extra tutorials in courses such as anatomy, physiology and chemistry where there was a high failure rate and are gatekeeper subjects. Clinical peer mentorship, although it was not formalized like supplemental instruction, it was observed in the clinical settings that senior students volunteered to support those students who were new in the clinical settings. According to the key informants, this was crucial as the clinical environment is very stressful physically, psychologically and emotionally. They took it upon themselves to assist the new students in the absence of the preceptors.

We employed student tutors who worked with the students and we worked with anatomy department to get extra learning material and support in a form of short tests and quizzes... Through this support by the academic tutors we had a 100% pass rate in Anatomy and we have managed to sustain a pass rate that is higher than 75%... [KI 11]

These supplemental instruction sessions are attended by all students irrespective of their color coding status. This is encouraged because we want to ensure that students excel in their studies [KI10].

... As senior students we volunteer to support our students in the clinical settings because we know how difficult it is when you are a first year student in a very busy ward that is very short staffed. You seem like a burden to others, worse if you also want to be taught the basics... [KI 19]

Data sources revealed that students who participated in providing student support had to undergo some training to ensure that they are equipped for the role. The student support services unit led the process of training of the AMS team (peer-wellness mentors, academic tutors including ADOs). Although ADOs were qualified professionals they had to undergo training and updates on crisis management in emergency situations, including suicide.

A 3-day Peer wellness mentorship training was facilitated in April ... with Mentors from the School of Nursing. The training was well received and Mentors were enthusiastic about their role... the Mentors are receiving regular support in terms of supervision and debriefing from the Student Counsellor... [KI 4].

This year workshop was held with Academic Development Officers, on the following areas: Signs and symptoms of distress/crises, the role of Student Counseling, the role of ADO's in the Student Success Programme and Referral processes [KI 7].

Dr ... facilitated the training of all newly appointed academic tutors (SI Leaders)...[KI 9]

In addition the researcher gathered that the undergraduate programme implemented a student centred curriculum, which facilitated individualised and group support to the students. The curriculum used innovative teaching strategies that catered for the different learning styles of the students with collaborative learning in a form of group discussions, group work, group projects dominating the learning process. In addition, the students had an opportunity to submit draft assignments for comments by the lecturers before the actual submission date as part of support. This seemed important especially to those students with limited academic writing skills and English language proficiency, limited critical thinking skills, ability to present an argument in a logical and evidence-based manner. This practice provided this group with an opportunity to also develop these academic skills which are critical to survive in higher education.

In 2006 all undergraduate programmes had to adopt student centred curricula to ensure that the student takes the centre stage and learning is prioritised instead of teaching. As teacher were taken through a series of workshop on facilitating learning in student centred curriculum. So we less lecturing and use small group session, groups discussion and projects. These strategies force even the quiet students to participate in class... [KI 10]

... At first year ... they are worried about handing in assignment. I tell them to submit before the due date to get my feedback and they have to book an appointment with me where I give verbal feedback and se engage in a discussion to ensure that learning is taking place. They are however a bit shy to engage with you [KI 3].

Preparation for the world of work: Data sources revealed that Student Support Services has a programme that prepares completing students for the world of work. The students learn about preparing your CV, presenting yourself in an interview, available career opportunities and planning your career path. The informants also indicated that in the final year, the Nursing Departments organises a career and invite nurses who are in different fields to share their career experiences with the students and how to plan their academic career as early as first year post graduation. The students during these sessions were also reported to be taken through individual or group counselling interventions aimed at exposing a student to the realities of the world after graduation. This included stress at work and how to cope as a young professional.

The head of school took this project of preparing the final year students for the world of work personally and she invites high profile nurses and nurses from different field to address our students [Document analysis, KI 21]

students support services has a generic project that prepares our students in terms of preparing your cv, selling yourself during the interview, available career options and opportunities to study further. The students find this very useful because at this stage they have this fear of the unknown.... [KI 1]

Monitoring and Evaluating Implementation of AMS: Data sources indicated periodic monitoring and evaluation of AMS implementation. There are specially designed tools used by AMS personnel to report on their activities as part of monitoring. It was also observed that student support services manager and ADOs compile monthly statistics on the utilisation of student support services and they report to Nursing Department staff meetings and they highlighting positive areas and areas that require assistance from the nursing departments. These included students who repeatedly failed to keep their appointment or attend intervention recommended to them.

They (I mean AMS team) give us the report...every month to report on the challenges of the students. The ADO and student support services keep statistics and compile reports to ensure that services are utilised and they report is services are under-utilised and where we need to intervene as leaders in the undergraduate programme. [KI 10]

ADOs compile monthly and end of the Semester reports. Monthly reports give figures of students who accessed ADO services, the nature of issues or problems, interventions, referrals and follow up on referred cases... [KI 2]

The AMS coordinators had a responsibility to compile reports on AMS twice a year and submit to the university central office that provides strategic leadership in academic monitoring and support. The AMS coordinator reports on AMS implementation, achievements and areas that require strengthening. The report even includes students academic performance in relation to the academic standing in the SMS or Robot system. It was observed that the report by the AMS coordinator had to show the contribution of AMS in ensuring that the students' academic performance is improving. Statistics on pass rates has to accompany submitted report as evidence that AMS is effectively implemented. For example, in 2013 the undergraduate programme reported a 100% pass rate in anatomy for the first time after struggling for years. This was associated with aggressive supplemental instruction that was implemented this year, working closely with the Anatomy department.

ADOs and student support manager compile detailed reports on the utilisation of student support services and the improvement they have noted. These reports are submitted to the AMS coordinator who collates them and produce one report that is submitted to the central office. She also completes a template used to monitor implementation of AMS to accompany this submission. [KI 7]

ADOs compile monthly and end of the Semester reports. Monthly reports give figures of students who accessed ADO services, the nature of issues or problems, interventions, referrals and follow up on referred cases. The reports commonly reflect that ADO services are accessed by both; the at-risk and well performing students. ... The end of the Semester Report focuses more on tracking of those students who were identified to be at risk. The reports have to be supported with evidence, statistics that shows improvement in the academic performance of the students. They want to see value for money. Like the 2013 success story of a 100% pass rate in anatomy after some years. ... [KI 11]

AMS foundational principles: The category AMS foundational principles emerged as being regarded as facilitating effective and successful implementation of AMS. These principles included responsiveness, commitment, shared vision, collaboration, continuity and relevance. They included responsiveness to the needs of those external and internal to the institution (DHET, NDOH and SANC), strategic collaborative partnership between academics and student support service. These two had clearly defined roles and responsibilities which were all aimed at ensuring that students are supported holistically and in a comprehensive manner. having a shared vision that will ensure that all initiatives are aimed at a common goal, collaboration that is strategic in nature, with key partners; academics, student support services and students themselves effective interventions, continuity – with student support initiatives available pre-entry to completion and relevance of student support interventions to all the needs of the students; academic, clinical, psychosocial, health, financial and other personal needs.

AMS outcomes: The category AMS outcomes emerged as consisting of being grouped into short term and long term outcomes. The *short term outcomes* included students developing self confidence, acquiring transferable life skills required to cope with higher education demands, reduced anxiety and stress levels in class and in the clinical settings and improved academic performance. The *long term outcomes* included reduction in drop-out rates, increase in pass rates and throughputs, transforming student body in nursing education programmes in line with country demographics and health care system demands, improvement in the equitable distribution of nursing and midwifery workforce in all health care settings irrespective of geographic location, this may lead to improved access to health care and improved population and health care outcomes.

V. Discussion

The AMS programme in this study was informed by the student support needs of the students. The needs were established through an audit. The audit results confirmed the need for a structured and well coordinated AMS programme to address the diverse needs of the students accessing higher education. This report provided context on which AMS programme was developed. The findings further revealed that successful

implementation of AMS requires institutional commitment a context informed AMS programme and a collaborative approach. The institutions AMS strategic plan provided legitimacy and context in the internal and external environment within which AMS was provided. At this strategic level, The AMS strategic plan helped to identify and support the student nurses through various stages in identifying timeously underperforming under performing students and providing targeted support which was either individualised or in groups to assist students perform well academically in order to complete their studies. The collaborative process of developing the AMS strategy ensured transparency in the whole process and assisted in obtaining buying from the broader stakeholder to facilitate its implementation. The institution also demonstrated its commitments to the course of ensuring improved success rates and throughput by ensuring that funds are available to translate the vision, mission and policy into reality. The institution reported ring fenced funding for AMS from the Department of Higher Education Teaching Development Grant. Quinn [25] is of the view that this funding is used for a more effective transition of students to academia to achieve better learning and educational support and development. The action and interaction strategies at the crux of it all within which AMS was provided in this study were three pronged; with psychosocial support, peer academic support and implementation of student centred curricula. The psychosocial support was reported from as early as career guidance and counselling before enrolling in the undergraduate programme to ensure that the students make informed decision, especially because the reality of the nursing profession are different from what is portrayed in the media. The integration into higher education was reported to include taking students through the academic skills that will strengthen their capacity to engage in higher education, especially those students who are regarded as underprepared for higher education. This intervention is regarded as essential in the context where higher education institutions is aiming at changing demographics in higher education [10, 20] by opening access to students from diverse backgrounds including those from previously disadvantaged backgrounds who are regarded as underprepared [10,19]. Under preparedness for higher education was also identified as one factor contributing to high failure rates [8]. According to this author the underprepared students struggle with discipline specific content as well as academic skills and this has a devastating effect on their academic performance. Widening participation and increasing diversity of student body demanded a structured student support programme to ensure that all students succeed. The findings revealed some positive outcomes as a result of the interventions that led to increase in pass rates across the board.

Peer wellness mentorship was also used as part of facilitating integration of first year students into higher education and into the undergraduate nursing programme. The peer wellness mentors had a responsibility of supporting the first year students as they take their first year journey. The focus was not necessarily support related to academic performance but psychosocial support to ensure smooth integration into university, personal development and adjustments to the unfamiliar environment. Authors such as Latino and Unite [26], Shook et al. [27] and Ganser and Kennedy [28] argues that peer wellness mentoring has significant positive effects on the students because they enhance their experience in higher education, provide ongoing orientation including providing support in residences. Academic support initiatives included academic tutoring by peers, clinical peer- mentorship and integration of student support in student-centred curricula. Research shows that peer support through academic tutoring or supplemental instruction has positive outcomes. The sessions re reported to develop the students personally and academically while they are learning discipline specific content and this enhances their chances to succeed [26,27,28]. Clinical mentorship, although it was not part of the formal AMS programme it was reported to be helpful to the new students in the clinical settings, especially because clinical settings are characterised by chronic shortage of staff to teach the students and nurses are overloaded with work. Clinical mentorship is associated with a safe clinical learning environment that lead to increase in self-confidence, acquisition of clinical skills, improved performance in the care provision and decrease in anxiety and stress levels that predispose students to making mistakes [27,28].

Integration of AMS into a curriculum through student centred approaches was used to address the needs of diverse students demographics. This approach of integrating AMS was advocated by Essack et al. [17] who is of the view that student-centred curricula focus beyond the acquisition of discipline specific knowledge and competencies. It also assist student develop academic and cognitive skills, as well as the capacity of learning to learn and becoming self-directed learner. The findings in this study revealed that academics provided additional support to students in terms of academic writing and use of English for academic purposes. This was facilitated by providing students with the opportunity to submit draft assignments and feedback discussed with the student to ensure that learning is taking place. Gimenez [15] asserts that academic writing and English embedded into learning discipline specific is more effective, which was the practice in this study. In this study teaching strategies used promoted collaborative learning with students working in groups, engaging in group discussions and group projects. Such strategies enhance learning through engagement and interaction in a comfortable and safe environment space of peers with minimal interference by the facilitator [18]. The similar author [Essack et al.] [17] recommends capacity building on the academics in facilitating of learning as they are likely to revert back to their comfortable styles if they view learning process as slow and delaying progress.

VI. Conclusion

Implementation of academic monitoring a support emerged as one strategy to address high failure rates, low throughputs and student dropouts. In the context where there is a chronic shortage of nurses and midwives student attrition required special attention with nursing education institutions implementing a range of student support interventions. In this study, support started before embarking on the undergraduate nursing programme to ensure that student nurses attracted to nursing are committed to the nursing profession, to avoid dropout as a result of challenging reality of the profession. Nursing students in the undergraduate programme had access both academic and psychosocial support interventions as determined by their support needs. The academic monitoring and support policy provide guiding framework on how to support students depending on their academic performance status in the student management system that used a robot system. Although clinical mentorship was not part of the formal academic monitoring programme the senior students volunteered to mentor the first year students in the clinical setting. This may be considered in the review of the AMS strategies as it contributes positively towards addressing student attrition.

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