QUALITATIVE RESEARCH

Nursing Education and Training: The Status in the Punjab Public Sector Health Services

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Abstract: Punjab produces nurses holding diploma in general nursing, while globally this qualification is increasingly been replaced with baccalaureate and master in nursing. As a consequence, whereas the quality of healthcare is on the lower ebb, nurses holding diploma qualification can hardly compete in the international job market and only a few of them can join post graduate education.

Objectives: (i) To define a conceptual framework for nurses' education and training; (ii) To review the nurses' education and training in Punjab, Pakistan; and (iii) to propose measures for improving the situation with the purpose to improve quality in health care delivery.

Methods: this is a cross sectional study that used mix methods. All 42 public sector schools of nursing in Punjab were included. A structured questionnaire was used to collect primary data about the status of the nursing education and training. In addition to infrastructure, issues related to pre-education, education and training, and post-education nurse practice were studied. In-depth interviews were held with stakeholders and observation was used to collect qualitative data. Since a priori framework was used in designing the study, it also guided the analysis and presentation of findings.

Results: image of nursing has improved and while entry qualification remains matric with science, increasingly candidates with FSc. are applying. Governance is an issue across all schools, which lack student affairs department. Education services are more akin to skills without much theory building. 42% teaching positions were vacant, while there are no post for non-nursing subjects teachers. They are hired and paid by the students. Over 60% of school budget goes for stipend and was considered by many teachers a factor responsible for deteriorating nursing education. There is no research culture, and while skill labs and libraries are there, those are used infrequently and ineffectively. Maintenance of building with few exceptions is poor and while there is transport, but to use students pay for fuel.

Conclusion: radical measures are required for improving nursing education and training system. Pakistan Nursing Council has already set 2018 for schools to take last batch of diploma in nursing. Instead it has recommended upgrading schools to colleges and introducing baccalaureate of science in nursing. The availability of faculty will remain a challenge and while postgraduate nursing institutes to produce masters in nursing should be established, foreign faculty will be required to immediately fill up the gap.

Key words: *nursing education and training, punjab, schools of nursing, college of nursing, quality in health care delivery.*

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Introduction

Human resource is a cornerstone of health systems, and developing capable, motivated and supported health workers is essential to achieve better health outcomes (WHO, 2006). There is a range of cadres, including medics, paramedics,

nurses and midwifes. They are not just the individual health workers but are integral part of well-functioning health teams. This paper focuses on nurse practitioners. As members of the team, they promote health, prevent illness and participate in curative and rehabilitative services for the individuals, families and communities specially in areas of great health need, where they may be the only front line providers of healthcare.

In addition to health services, nursing practice is linked to health indicators and the mortality and morbidity dynamics.[2] (WHO, 2014). In this regard, while the density, i.e. number of health workers per unit of population is important (WHO, 2006), their qualification and the quality of services they render is linked to the health outcomes (Linda H. Aiken, PhD, et al, 2003). With this background, this paper provides an insight into the status of nursing education and training in Punjab. In the following, after introducing a framework, used to design a study conducted during 2015, an overview of the developments and the salient findings of study are presented. The issues that emerged are discussed in the penultimate section. Finally, a set of recommendations is made. It is emphasized; in the context the health system in Punjab which is facing enormous problems, it was a high time to upgrade nursing education and training. In this regard, a roadmap is defined.

Conceptual framework

A framework defined for upgrading nursing education and training (IOM 2011, WHR 2003, WHR 2006, The Lancet Commission report 2010, Willis Commission report 2012) contemplates, "nursing education and training, guided by philosophy of nursing discipline, its core values, functions and roles, comprises pre-training, education and training, and post-training practice. The caring and competent nurse practitioner, thus produced is likely to contribute to better access and availability of quality healthcare, which will pay in terms of the improved population health outcomes".

The proposed framework is seen in figure -1.

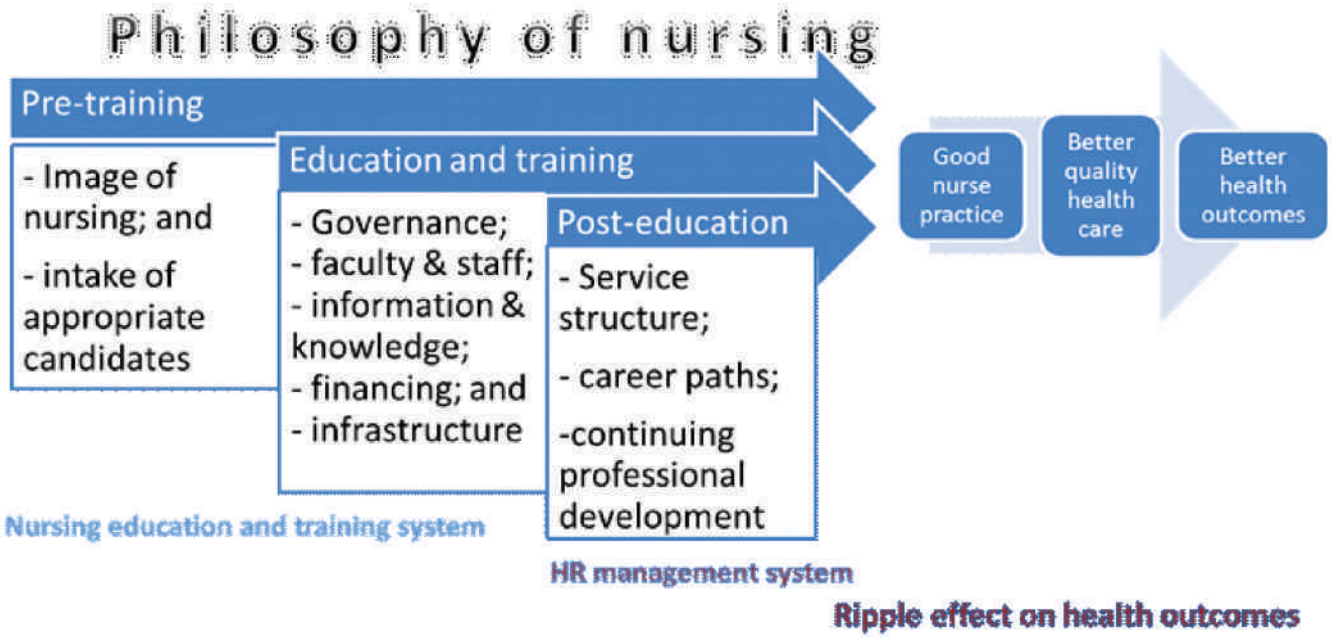


Figure1: *Conceptual Framework Fornursing Education and Training*

Methodology

A census survey of all schools of nursing in Punjab public sector was conducted during 2015 to collect primary data using a comprehensive questionnaire. In addition, secondary data was collected through documents review, individual and group interviews. The quantitative data, after cleaning, was entered in a specially designed excel application. It was analysed using framework approach around pre-training, education and training and post education nurse practice and comparison was made with minimum standards for colleges of nursing and postgraduate nursing institutes. In the following, findings of study are presented, but firstly an overview of the nursing education in Pakistan is provided.

Nursing Education in Pakistan

Nursing education is regulated by Pakistan Nursing Council (PNC): an autonomous body constituted under the PNC Act (1952, 1973) empowered to register and license Nurses, Midwives, Lady Health Visitors and Nurse Auxiliaries to practice in Pakistan. In 1947, when country won its independence there was only one school of nursing in Lahore. Later, after formulation of PNC, standard curriculum for nurses' education was designed in 1952 and updated in 1973 for diploma in general nursing (Soares, 2000; Dias et.al 2010).The private sector, and Agha Khan University(AKU) leading, introduced in 1989 a Post RN BSN programme - a 2 year degree for registered nurses, and in 2000, a 4-year BSN programme was introduced. In 2005, Masters of Science in nursing programme was launched. PNC, in collaboration with Higher Education Commission (HEC), adapted the curricula, and since 2006 a number of schools of nursing in public sector have been offering undergraduate nursing degree programmes. In addition, MSc-N degree is being offered in Punjab by University of Health Sciences(UHS) and Shalimar schools of nursing.

But, in addition to the private sector, for nursing education 42 public sector schools in Punjab offer diploma programmes. The graduate programmes include: (i)Baccalaureate of Science in Nursing, which is 4-years degree programme, (ii) Post-RN-BSN is a 2-years programme offered to registered nurses, and (iii) Fast track BSN, a one year degree programme for registered nurses. In addition, AKU and Jinnah Post Graduate Medical Centre (JPMC), Karachi offer18 months' Fast track MSc-Nursing programme for senior nurse tutors and staff nurses. This programme was initiated to bridge the gap in the availability of nursing faculty. UHS-Punjab offers [5]MSc-N, but till rate was not recognized by PNC. Post-Basic or post-RN specialty diploma, a 1-2 years programme, meant to prepare registered nurses for specialized nursing services, is offered in nursing institutions, both public and private.

Status of Nursing Education and Training

Pre-training

1. Image of Nursing Discussion with stakeholders and anecdotal evidence suggests that by-and-large the image in society is not such to attract good candidates for nursing. Often, only a particular section of society would join this profession. Therefore matric with science as entry qualification and stipend during training was introduced. That led to the children mainly from low income families would join nursing. Culture has been another barrier. Muslim women would not like to be attended by male nurses. Therefore, in Punjab, with only few exceptions, the nurses are females. But, the trend is changing particularly with the setting up of colleges of nursing offering BSN.

2. Entry criteria: Hitherto, as pointed out above, matric with science is the basic qualification for entrants to schools of nursing for diploma in general nursing. The applicant should have more than 50% of the total marks and selection is made based on merit without territorial consideration and interview is held only to verify the original certificates. There is no written test given to the entrants. The same procedure, albeit with FSc. (premedical) as basic qualification, is adopted for selecting BSN candidates for College of Nursing(CONs). However, to assure wider representation of candidates, consideration should be given to the socio-

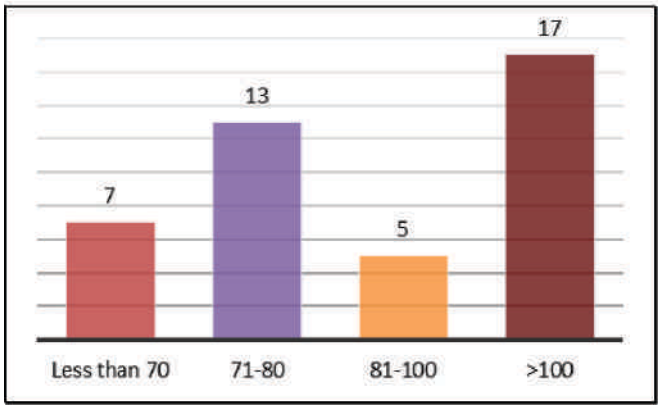
demographic status, geographical distribution and gender balance while determining merit.

Education and Training

Total intake on diploma in general nursing, which is a three years programme for 2014-15, was 1,458. In 2015 total on campus student were 4708, varying from <70 in 7 to >100 in 17 schools (Figure 2).

Governance: Out of 42 schools, 20 had an organizational chart, which was displayed in 19 schools. When asked, who the academic head was, in 8 someone other than principal was recognized. In the same vein, in 12 cases principal was not the administrative head of the institution (Figure-3).

Figure2: Number of Students on RN Program



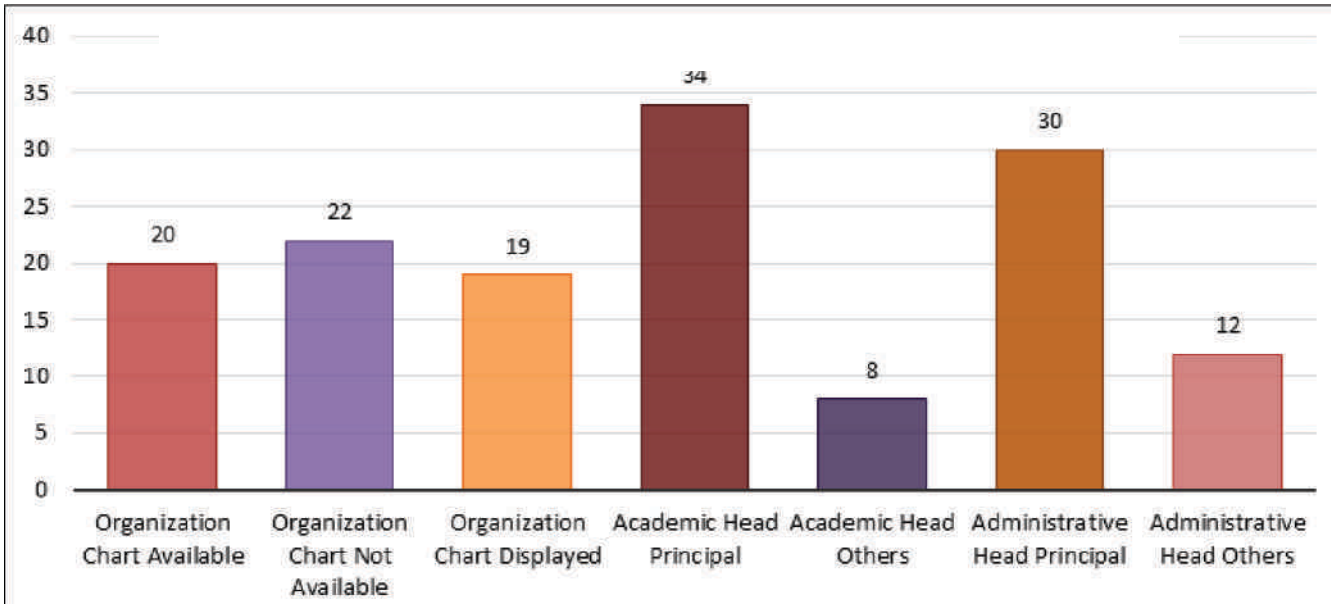


Figure 3: *Governance in schools of nursing*

Committee structure is another parameter to gauge the level of governance. The respondents were asked about four committees. Academic committee was claimed to be present in 26 schools, but only 16 had the schedule of last meeting and 6 had agenda. Curriculum committee existed in only 5 schools, but potentially active only in 3. On the other hand, social/recreation and disciplinary committee were present in 33 and 39 schools respectively. But, their functionality level varied (Figure-4). As to who heads the committee for selection of candidates, in 33 schools it was the principal, but in 9 school they were Nursing Instructor/Medical Superintendent/Executive District Officer(Health)/Additional Medical Superintendent etc.

Stewardship in assuring that students receive what they need and in academic institutions students' affairs department undertakes this responsibility. But in none of the 42 nursing schools surveyed, such department existed. However, certain alternate mechanism like students' advisement on personal, financial and academic matters

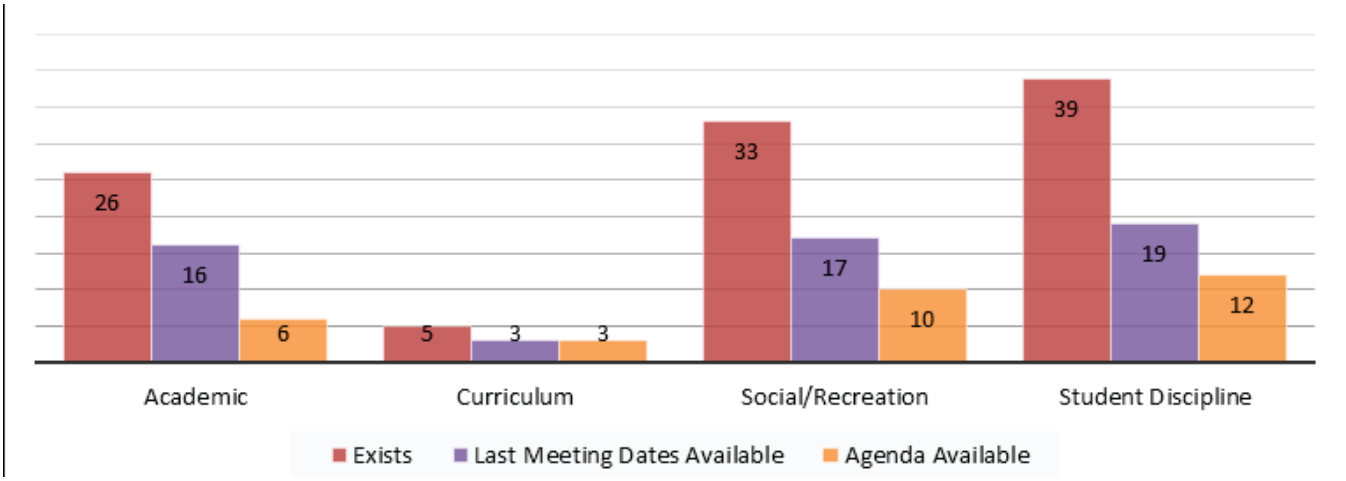


Figure 4: *Committee structure in schools of nursing*

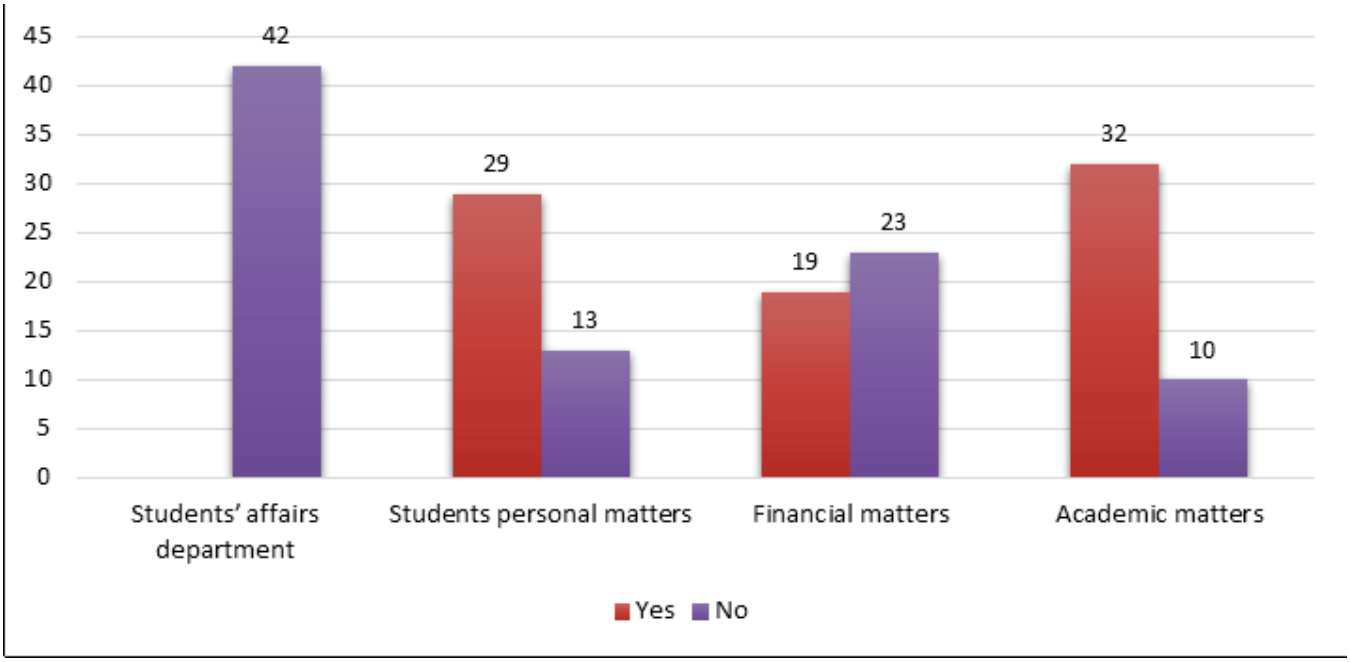


Figure 5: *Students' affairs department in schools of nursing*

was afforded in 29, 19 and 32 schools respectively (figure-5). As to who heads the committee for selection of candidates, in 33 schools it was principal, but in 9 schools they were Nursing Instructor/ Medical Superintendent/Executive District Officer (Health),Additional Medical Superintendent, etc.

Education services Student do not receive handbook as a guide to school and its clinical setting. In the absence of handbook students receive information through circulars displayed on notice board and during morning and evening assemblies. PNC which is regulatory body responsible to maintain standard of nursing education and training in recent past had inspected only 13 schools, as respondents in 29 schools had no idea when the last inspection took place.

Teaching and Training

Clinical Teaching involves setting objectives for each clinical area and assigning patients for nursing

care under supervision of clinical teacher. Supervision in clinical area could be through a teacher assigned from school or a staff nurse or a part time teacher /staff appointed as clinical preceptor. In actual fact, they included, Clinical Instructor, Nursing Instructor, Head Nurses, Charge Nurses and at times, Nursing Superintendent or even the Principal. Clinical teaching is often bed side demonstration for specific learning objective without however following a predefined plan. In certain cases, teaching is also substantiated with lectures on specific topics, group wok, role play and practicing procedures like TPR, recording input/ output, mouth wash, back care, bed sore care, bed bath etc.

Clinical learning objectives should be defined in line with course grid /syllabus, but no set pattern was being followed. While in some schools respondents had no idea, other did not think it was important. Where the objectives are set, those were according to the topic under study/discussion and to relate theory with practice and achieving competency in skills' performance, like gain and improve/ update knowledge, enhance skills, achieve correct results, accomplish task with good nurse plan, conduct procedure with best results, face critical situations and manage those.

Student grouping is done based on learning objectives and as per availability of patients in the given clinical area, albeit following no protocols or standard operating procedures. The group comprising five to eight students, placed in the leadership of an intelligent student, conduct group work like solving multiple choice questions, filling in the blanks, determining true/ false, to check and correct assignment after completion, delivering lecture, weekly test, student class presentation, monthly test, evaluating theory and practical in real situation (ward), where bed side teaching is done.

Clinical skills are usually assessed using a checklist while students are at clinical setting or by Objectively Structured Clinical Examination (OSCE) while in the skills lab and could also be through viva (i.e. asking questions orally). The methods vary from observing student while conducting nursing procedures, clinical skills demonstration, written tests and random rounds by the teachers in clinical field to observe nurse practices. But, there is no set pattern followed in assessing clinical skills of nurse students.

Clinical Sites hospitals attached to schools of nursing serve as clinical sites for nursing education and training. Their size i.e. number of beds and specialties vary, and a review of that vis-à-vis PNC rules for nursing education and training indicates that apart from Jinnah Hospital, none of the hospitals, whether or not attached with medical colleges, are eligible for nursing education.

Community nursing is an integral part of nurse education and all schools of nursing are expected to have a designated area, like a katchi abadi or slums for taking their students for community visits. The survey found a variety of sites, ranging from a basic health unit or rural health center to a water purification plant or slaughter house used for this purpose. Students were also engaged in conducting polio, measles, EPI campaign and recently the dengue survey. Community based teaching and training should comprise household visits, working alongside lady health visitors or other healthcare providers. The practice however varied and is rather akin to class room teaching rather than community based teaching and learning. The approaches, identified by respondents, included white board, overhead projector, lecture and discussion. Only a couple of responses were relevant, like “they plan for health education to communities, give demonstration about preparing and administering ORS and students are oriented on how to interact with village chief, groups, families and community”. Other activities normally conducted in community may include: household based survey; group health education; community meetings; school based screening; working at health center (BHU/RHC or NGO based PHC

Teaching Staff and Faculty Development

Teaching Staff are the ultimate resource of any educational institution. In 25% schools the principal was not in post, while key teaching positions were vacant in 42% of schools. Availability of sanctioned positions is another dimension of analysis. Vice principal is key in supporting academic and school management activities. But, this post is not sanctioned in 40 schools. Likewise, almost all 42 schools lacked community nurse instructor, thus students are not exposed to public health issues in their teaching and training (Figure-6).

English and Other Non-Nursing Teachers are crucial for the quality of learning, particularly since entrants are matriculate. But, none of the schools has positions. The administration hires these teachers as part timer and students pool money to pay them. Clinical instructor is an important faculty position, but does not exist in 60% of schools. Qualification held by incumbent faculty varies. Mainly, they are RNs/RMs with a significant number having post RN diploma in teaching and ward administration. Out of the total available faculty in 42 SONs, 5 possess BSN, other 7 have Post-RN BSN, and 5 hold MSN.

Academic activities other than teaching and training nurses are rare. While majority did not respond to this question, faculty in three schools indicated their participation in research activities: two as principal investigator and another co-investigator.

Multiple reasons for not engaging in research activities ranged from 'not required' to 'no interest', 'don't know methods' and 'no budget' in addition to many 'others'. Also, many suggestions came through to enhance their involvement in research. They required training in research methods, funds/ grants to support research activities, provision of IT like laptops, and availability of supervisors to guide research (figure-7).

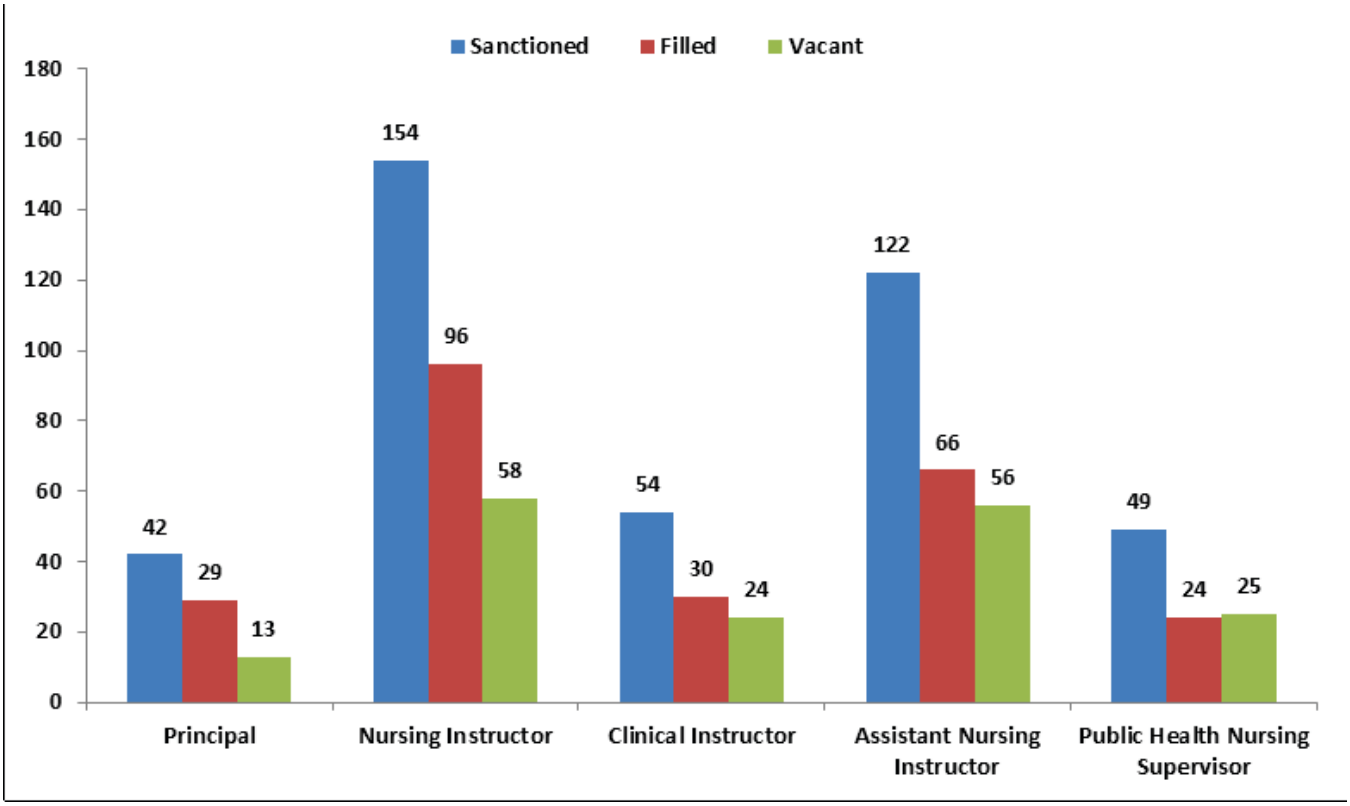


Figure 6: *Faculty Positions in Schools of Nursing*

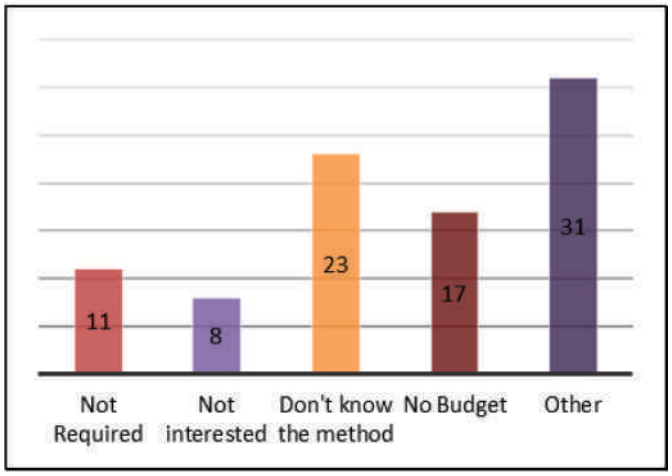


Figure 7: *Why not Involved in Research Activities?*

Financing of Schools of Nursing

The government of Punjab finances nursing education and training and spent PKR 1,069,668, 825 during 2014-15. Major heads of expenditure include: salaries of technical staff; salaries of management staff; building maintenance and repair; student stipend; teaching activities; extracurricular activities; and misc. Who holds purse, i.e. receives and has authority to utilize budget is another issue related to financing nursing education and training. The study revealed that in many cases, principal is not authority over utilizing budget. In autonomous medical institutions, it is with principal of medical colleges or chief executives of teaching hospitals who controls budget.

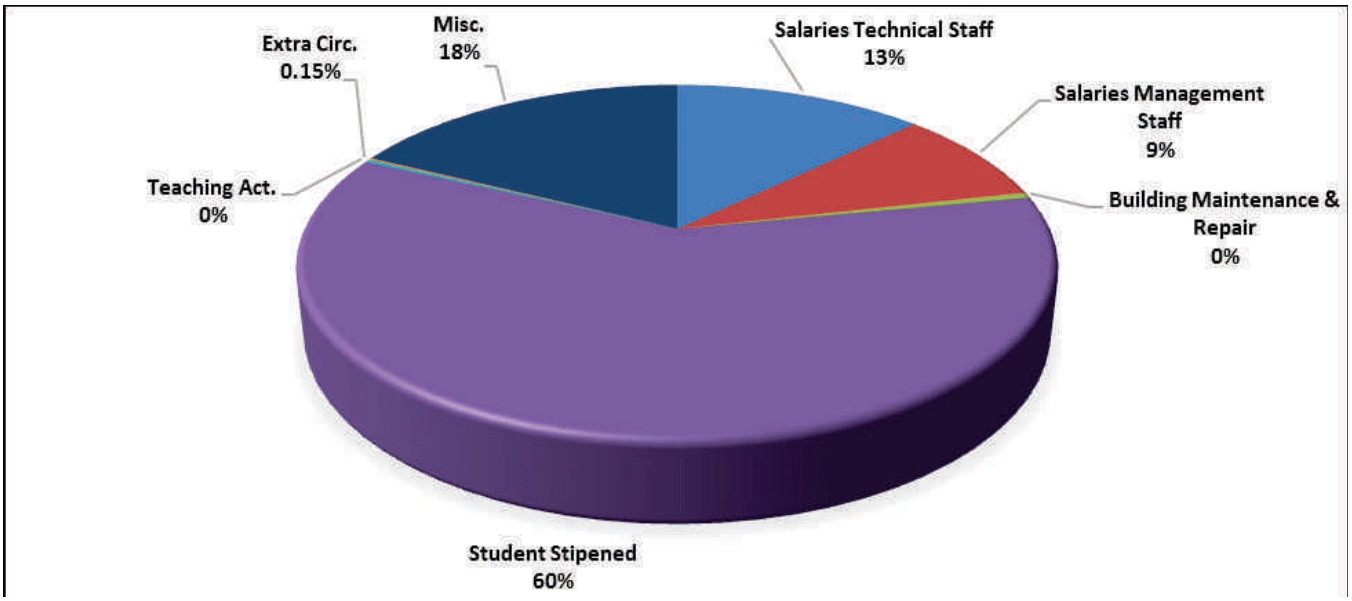


Figure 8: *Expenditure 2014-15*

Stipend, as in figure-8, is major expenditure item. Whereas it attracted candidates, as anecdotes go, it has also contributed to the deterioration of nursing education and training. The administrations of hospitals, to which schools of nursing are attached, consider student nurse as workforce. There is overwhelming evidence that soon after probation or attending three/four months' Preliminary Training School (PTS), when they learn temperature pulse recording and bedding/ clothing, students work as staff nurses and often their names appear in staff roster. They administer medication and are even assigned to take care of the newborns in nursery. While in this manner, quality of nursing education and training deteriorates, student nurses not entitled otherwise provide nursing care to patients.

Information and Knowledge

As in figure 9, all schools maintained students' attendance, academic and clinical record. However,

there was some laxity in maintaining of health record and transcripts. Seven schools did not keep the former, while eleven did not save transcripts. In rare instances, computer was used, as manual was the main mode of record keeping; and was in good shape.

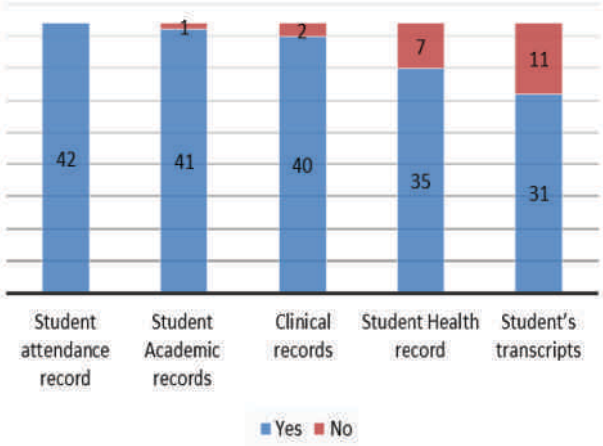


Figure 9: *Student Record*

Learning resources comprise library and facilities to access databases. As in figure 10, five schools have internet facility, while none subscribe to the nursing journals or has access to databases. Although library existed in 31 schools, text books were available in 28, while 20 had also reference books. But, in most cases those were old and outdated editions. As a result, student buy books as not many were available for issuing on loan, as told by a respondent, "student purchase text books from book seller; and only few old books are locked in a cupboard of an unused room". Another similar response was, "Librarian is appointed and has cupboard full of new and old books, but students are not aware of the presence of these books".

There is no system for borrowing book, as though there were 20-years old books, but on inspection those looked new. Another respondent noted, "Nothing is there, except some books in the demonstration lab but they had students name written on them".

Skills Lab

Skill lab is an important teaching and training aid for nursing education. It was available in 40, while these were operational in 37 schools. However, only 4 schools had a dedicated staff to assist students in using lab (figure 11). Whenever a teacher

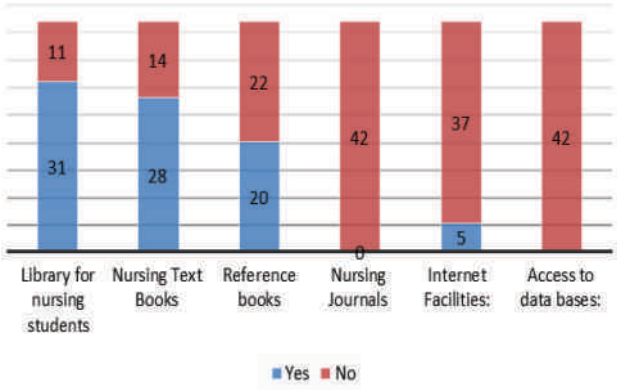


Figure 10: *Information & Knowledge*

needed to use, informal arrangements are made, as was noted by a respondent, "each teacher takes their class to skills lab and demonstrate. There is no planned schedule for skills lab and teacher tells when to go to skills lab".

Models and instruments were available in almost all skill labs. However, in many cases they were lying packed and even had gathered dust indicating perhaps those were never or rarely used, as a representative respondent noted, "There is neither a teacher nor schedule of skill lab. All

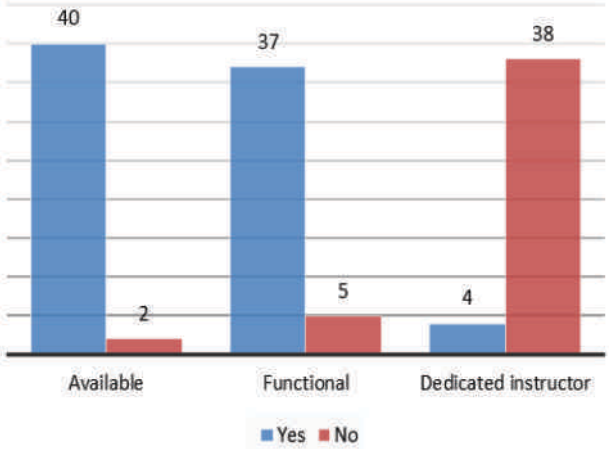


Figure 11: *Skill Lab Instructor*

dummies and models are kept in a cupboard in a separate room in the custody of librarian. The librarian said that the dummies and models are not moved from there. The models and dummies looked new and untouched".

Infrastructure and Technology

All schools have hostel with a total room capacity of 1014. In most cases, 3 students would occupy a room, but in certain cases 6 to 9 students are put in one room. Common room was available in 33, while 40 had dining room. Only 20 hostels have visitors' room, but there were no protocols about their usage, which is alarming in the wake of security situation. Recreational facilities were available in 25, and where available included cafeteria, playground, table tennis, badminton etc. The hostel facility is exclusively for females, and at no schools there was a hostel for males.

The status of living condition, i.e. maintenance and cleanliness is seen in figure 12, indicating the situation was not good. It was noted, "CMW hostel is a new building so seems clean, but with 8 beds is one room it was congested and washrooms were not clean. Nursing hostel has six toilets– all in bad hygienic condition. Showers are out of order". In another hostel, "rooms are well ventilated, each has 03 charpais (not regular beds) and 3 wooden cupboard attached to wall. Toilets were very stained and dirty. Hostel needs lot of maintenance and white wash". Another hostel had "doors broken, too many people in one room, even two persons sleeping in a single bed. Electric wiring was messed up hence often no electricity. Water tank was overflowing and no-guard present for security. In short, all in all it was very pathetic conditions.

Transport

Principal of the school had transport in two cases (Mayo and Faisalabad), while teaching staff had this facility in just one school (Faisalabad). Students have transport facility except in 3 schools (Sialkot, Okara and Kasur). However, generally POL is not available and students have to pool money for this purpose.

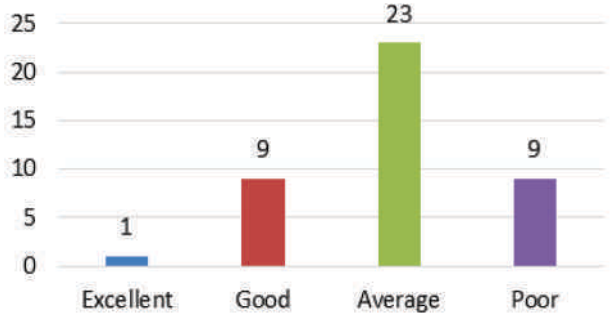


Figure 12: *Living conditions - student hostel*

Discussion

Nurses have a key role in the provision of safe, high quality effective and efficient health services (Who, 2014). But, are the nurses prepared to play the desired role in Punjab while their education and training remains well below any standard? Table-1 indicates that 42 out of 46 nursing institutions offer diploma in general nursing that continues to be the required qualification for entering into nurse practice, while globally it is being phased out and baccalaureate programme is being introduced. It is essentially based on apprenticeship model (Awal Khan et al, 2015), where essentially students took some classes during first three months' PTS module and are then put to practice nursing care in hospital wards[1,2]. The entry requirement for diploma in general nursing is matric with science. After qualification they are registered with Pakistan Nursing Council as Registered Nurses(RN) to enter

Table 1: *Nurses' Education and Training Institutions*

Sr. #	Category	#
1.	Nursing Institute at UHS (offer MSN)	1
2.	Postgraduate college of nursing (offer post RN specialised nursing diploma)	1
3.	Colleges of nursing (offer Baccalaureate in nursing)	2
4.	Schools of nursing (offer diploma in general nursing)	42
	Total	**46**

into nursing practice. Majority of nurse workforce even in senior positions, except few who attended a 2-years post RN Baccalaureate of Science in nursing, are Registered Nurses.

Nursing, as defined by International Council for nurses, "encompasses autonomous and collaborative care of individuals of all ages, families, groups and communities, sick or well and in all settings. Nursing includes the promotion of health, prevention of illness, and the care of ill, disabled and dying people. Advocacy, promotion of a safe environment, research, participation in shaping health policy and in patient and health systems management, and education are also key nursing roles" (ICN, 2014). However, in Pakistan, traditionally the emphasis has been on 'cure' rather than 'care'. One of the consequences is that the issues about nurse workforce have largely been ignored. No effort has been made to improve the image of nursing and generally nursing jobs are not considered prestigious as a respondent was quoted saying, "This profession is not the first choice for many" and "is not considered a well-reputed profession and something that is generally meant for women" (Nesam Chaudhary, 2014). Furthermore, "despite their integral role in patient care, they are seldom given the attention or recognition they deserve" (ibid). While on professional team in medical setting, nurses' role is often reduced to taking notes and implementing orders that the clinicians pass during ward rounds[1]. They however seldom enjoy professional autonomy.

The nursing curriculum and the techniques to deliver were last updated in 1998 (PNC, 1998); and since then much has changed in nursing education and training. Only two nursing institutions in Punjab (see table 1) offer Baccalaureate of Science in nursing. But, shortage of faculty is a hindrance in upgrading nursing schools to colleges; even the two existing colleges are not recognized by the Pakistan Nursing Council. The Nursing Institute at University of Health Sciences Lahore, the only institute offering MSc in Nursing, which could produce faculty for the nursing colleges, is not recognized by the Pakistan Nursing Council. This is due to the Institute lacking a PhD faculty; and there is none in country that offers PhD programme in nursing. This state of affairs demands the nursing education in the Punjab is transformed.

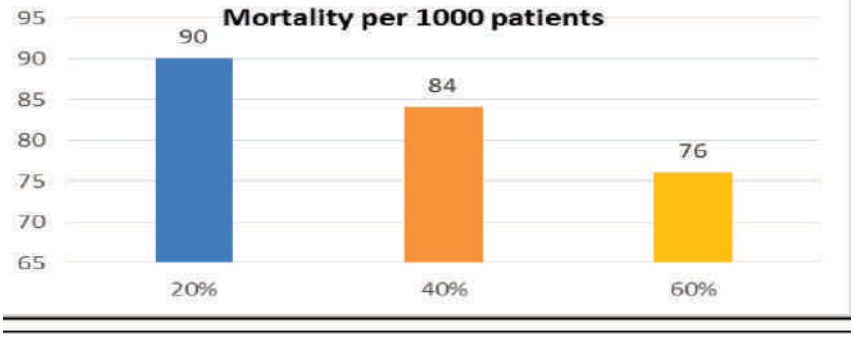
Educational activities, like holding active membership in professional organizations, participation in conferences (institutional, national and international), undertaking research and publication in peer reviewed journals contribute to continuous professional development. It is important for maintaining good standing in the profession and keeping abreast with changes and advances in nurse practice (Nursing Time, 2015; Frenk Julio, 2010). But, this study found no such mechanism existing in the Punjab. Likewise, leadership development program akin to the needs of institution and progression of nursing profession is a critical requirement. Therefore, short and long term programmes on the analogy of administrative staff college needs to be devised for supporting development of leadership competencies amongst nurses working at all levels.

While a well-trained and motivated health workforce is importance in strengthening health systems[2] (WHO, 2006), well-functioning health care delivery systems require educated and properly trained nurse workforce. This is since they are the key to ensuring access and continuity of care, whether in community or health facility[3] (WHO, 2014). It is therefore advocated that strategy be defined for effective nurse workforce, encompassing: scaling up and transforming education; workforce planning and optimizing skill

1. Personal observations as house officer.
2. It was observed by a surveyor in a nursing school, "most of the clinical procedures and nursing skills are taught in PTS program, and following that students are assigned to work in wards".
3. Likewise, in another observation in a nursing school, it was noted, "during PTS, students cover 50-60 % course of the first year RN. After that, they are assigned to work in wards as nurses".

mix; ensuring a positive work environment; and promoting evidence-based practice and innovation. These tenets of strategy will be realised subject to: regulation to safeguard the public; building multi-disciplinary research capacity; partnerships, interdisciplinary and inter-sectoral collaboration; and management & leader-ship (ibid). A critical look at the strategy and enabling mechanisms however reinforce the framework conceptualized earlier in this paper for upgrading nursing education and training in the local context.

There is growing evidence that patients' mortality while in hospitals varies substantially according to the proportion of staff nurses holding Baccalaureate in nursing (BSN) or higher degrees upon entry into nurse practice. For example, a study conducted in 168 hospitals in USA concluded that 10% increase in the proportion of nurses holding BSN was associated with 5% decrease in the likelihood of patients dying within 30 days of admission. That is, as in figure-13, the BSN concentration in hospitals rising from 20% to 60% will decrease mortality from 90 to 76 per 1,000 patients admitted for surgical interventions.



Source: Linda H. Aiken, PhD, et al Educational Levels of Hospital Nurses and Surgical Patient Mortality, JAMA. 2003;290(12):1617-1623.

Figure 13: *Effect of Nurse Education on Health Outcomes for Patients in Hospital*

Conclusion and Recommendations

There are enormous gaps in nursing education and training in the Punjab province of Pakistan. As a consequence a nurse workforce is developed which, inferred from anecdotal evidences, contributes to poor nurse practices and quality in healthcare, leading to poor health outcomes, at least for patients in hospitals (Figure-14). In Punjab, nurses holding diploma in general nursing are produced, while internationally this qualification is increasingly being discontinued for entry into nurse practice. Therefore, they cannot compete in the international job market. Also, Pakistani nurses holding diploma in general nursing don't qualify for further education in nursing field at the universities of international repute. Therefore, it is imperative to revamp the current system of nursing education and training. In addition to upgrading the existing schools of nursing to colleges for producing nurses holding Bacca-laureate of Science in Nursing, Postgraduate Nursing Institutions should be developed to produce faculty holding Master of Science and PhD in Nursing for Colleges of Nursing. Also, a system for conti-nuing professional development and academic and management leadership development should be designed. But, alongside the aforementioned, interventions should be made for improving the image of nursing, entry requirements, and to improve work environment .

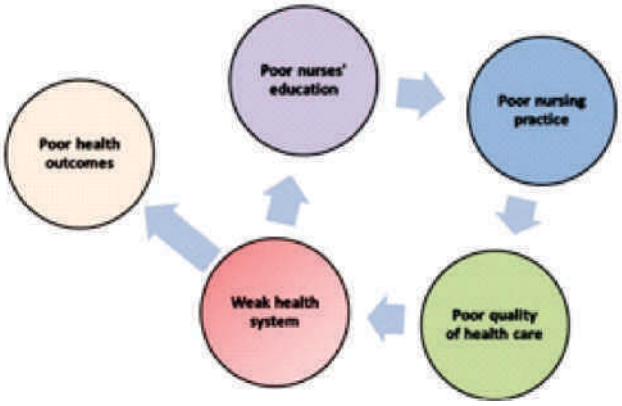


Figure 14: *Consequence of Nurse Education: as it is now!*

References

1. WHO, Working together for health, World Health Report 2006, Geneva.
2. WHO, Strengthening Nursing and Midwifery: European strategic directions towards Health 2020 goals, (2014), WHO, Copenhagen.
3. Frenk, Julio, Health professionals for a new century: transforming education to strengthen health systems in an interdependent world, The Lancet, Published Online, November 29, 2010, DOI:10.1016/S0140-
4. Institute of Medicine, The future of Nursing: leading change, advancing health, 2011
5. Willis Commission report, Quality with Compassion: the future of nursing education, 2012 at: www.rcn.org.uk/williscommission
6. Soares, J. M., Impediments to Learning in Nurse Training in Pakistan, Unpublished Master's thesis, University of Wales, Cardiff, U.K. in Urban health programme, community health sciences Aga Khan University, Karachi: Available from: http://www.aku.edu/chs/chsuhpfield. [Accessed 28 September 2009]
7. Dias, J.M. etal, Conceptualization and operationalization of a baccalaureate nursing curriculum in Pakistan: Challenges, hurdles and lessons learnt, Procedia Social and Behavioral Sciences 2010, Vol2:2335–2337
8. Awal khan et al, Future Directions of Nursing Education in Pakistan, Escalating Research, July 2015; 4(2), accessed on 14 August, 2014 at http://aeirc-edu.com/wp-content/uploads/AERV4I207. pdf
9. International Council for Nurses, 3 June 2014:10: 15
10. Nesam Chauhan, Nursing in Pakistan: Handle with Care, The Tribune, Thursday 11 August, 2016, at: http://tribune.com.pk/story/ 801156/nursing-in-pakistan-handle-with-care/ accessed on 14 August, 2016.
11. WHO, Shaping the future, World Health Report 2003, Geneva

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