

DEBRIEFING & FEEDBACK AFTER HEADSSSSSS PSYCHOSOCIAL ASSESSMENT WITH ADOLESCENT AGED SIMULATED PATIENTS & UNDERGRADUATE MEDICAL STUDENTS: 5 YEARS' EXPERIENCES AT NDUM

SOE- SOE- AYE* & MOHD AZHAR MOHD NOOR**

*Professor/Head of Paediatrics & Adolescent Medicine, Faculty of Medicine and Defence Health, National Defence University of Malaysia, Kuala Lumpur WP, MALAYSIA

**Deputy Dean, Academic/Professor of Obstetrics & Gynaecology, Faculty of Medicine and Defence Health, National Defence University of Malaysia, Kuala Lumpur WP, MALAYSIA

ABSTRACT

A simulation based learning activity consisting of engaging adolescent aged simulated patients and undergraduate medical students using HEADSSSSSS psychosocial framework had been done since its inception in 2013 till presently, 2018 at National Defence University Malaysia (NDUM). The aim of this paper is to highlight (1) the Debriefing & feedback done (2) the important role of debriefing in the field of simulation-based learning, and highlights from some literature reviews.(3) to make recommendations for future 5 years. The Debriefing (including the feedback) had been done by means of (1) a written feedback using three sets of Questionnaire given to the students, the simulated patients and the Facilitators (Faculty) involved in the first year, together with Prof SSA. (2) face to face verbal debriefing and feedback after the activity in a separate room. The Facilitator (Prof SSA) led the debriefing by stating the set objectives of the activity then guided the feedback from each of the pair {the simulated patient and the student ,who had acted as the doctor} on what had been done and what had been not done by the other one and vice versa and the ranking on a scale of 10, made by each on the other. At the end of each feedback and debriefings, the gathered information had been summarized by the Facilitator Prof SSA who had then highlighted, the lessons learned and what should be done at next learning activity session. In conclusion, a sharing of experiences on debriefing which is the “heart and soul” of the simulation experience, over a 5-year period had been made; It is recommended for significant & relevant modifications to be done, starting from getting a new cohort of suitable adolescent aged simulated patients since the presently used group had “grown up “ over the 5 years period and the whole program should be modified accordingly for the next future 5 years .

Keywords: Simulation based learning, adolescents, HEADSSSSSSS, Debriefing & Feedback, undergraduate medical students.

INTRODUCTION

There is compelling evidence that simulation leads to increased knowledge and improved skills for several core graduate outcomes in undergraduate curricula. (Simulation priorities report reference group.HETI 2014.)

Confidence, knowledge and skills are shown to improve with simulated patient based simulations for communication, patient counselling, error disclosure skills, professionalism and other clinical skills. “Simulated Learning Technologies in Undergraduate Curricula: An Evidence Check Review for HETI” HETI, 2014.

At the NDUM, in the Adolescent Medicine Module in Paediatrics and Adolescent Medicine clinical posting for undergraduate Year 3 students, a simulation based learning activity, consisting of engaging adolescent aged simulated patients and undergraduate medical students using HEADSSSSSS psychosocial assessment frameworks followed by Debriefing and feedback with the simulated patients and students, had been done, once in every posting, since inception in September 2013 till presently, (July 2018).

AIM OF THIS PAPER

The aim of this paper is to highlight (1) the Debriefing & feedback done (2) the important role of debriefing in the field of simulation-based learning, and other related facts, from some literature reviews.(3) Recommendations for future next 5 years period.

BACKGROUND ON SIMULATION BASED LEARNING AT NDUM

OBJECTIVES of the Adolescent Medicien Module consist of:

At the end of the posting, the students should be able i) to understand meaning of Adolescents and need for inclusion of teaching of Adolescent Medicine in Year 3 curriculum ii) to communicate effectively with adolescents using HEADSSSSSS acronym psychosocial assessment iii) to be familiar with some problems that adolescents usually encounter .

For the second objective to be fulfilled an innovative simulation based learning activity programmed by the first Professor/Head PSSA, had to be included since there are no Adolescent Health clinics or in-patients at the Affiliated teaching hospital ie Hospital Angkatan Tentera Tuanku Mizam. Thus, the simulation based learning activity has been included in the Adolescent Medicine Module, at the Paediatrics & Adolescent Medicine clinical postings for Year 3 medical students since its inception in 2013. It consists of HEADSSSSSS psychosocial assessment being done between simulated patients who are of the adolescent aged group and the medical students as the doctor. In the first academic session with a total of 44 students divided into 4 groups of 11 posted to Paediatrics posting in rotation, there were only 6 simulated patients (aged 15 to 18 years old) recruited to portray roles of adolescents with various psychosocial issues for two times per posting for four postings. Informed consent was obtained from the recruited simulated patients and their parents. From the second academic session, 10 adolescent aged simulated patients had been recruited for every simulation based learning sessions since the number of total students had been 62 per year and 15-16 students per posting. Before each session, a Workshop of 60 minutes' duration was included. The simulated patients had been briefed by the simulated patients program Course Director /Facilitator Prof Dr SSA on the different scenarios, how to internalize the scenarios, Guidelines on how to perform, purpose of the activity which was to serve as a learning experience for the Year 3 students to be able to conduct the HEADSSSSSS psychosocial assessment and for the students to become familiar with some of the issues that adolescents usually experience. Finally, it was made clear that the purpose of the activity was to ensure that the students would gain experiences on communicating with the simulated adolescent aged patients through using the HEADSSSSSS acronym psychosocial assessment and would become familiar with the issues that most adolescents usually encounter and not necessarily for the students to give treatment or advice at this point in time.

A) DEBRIEFINGS & FEEDBACKS AT NDUM

After each simulation based learning activity, the debriefings and feedbacks had been done as follows:

- 1) Written feedback whereby three sets of Questionnaires * had been given to the simulated patients, year 3 students and facilitators involved in first year with PSSA.
- 2) Face to Face verbal debriefing and feedback sessions whereby the respective pair of simulated patient and year 3 student would present their experiences with the other at time of HEADSSSSSS psychosocial assessment. Each of them were asked to rank the other on a 10-point scale.
- 3) The debriefing and feedback sessions had been led by Program Director Prof SSA whereby, she had reiterated the objectives of the simulation based learning activity. At the end of the debriefing she had summarised all that been done well (positive achievements) and what had not been done so (negative or errors) and had led discussion on what should be done in order to improve at next session.
- 4) Still photographs as well as video clips of the debriefing and feedback sessions had been taken by the students in turns with personal (Prof SSA's) iPad and iPhone camera for documentation purposes only and for review with simulated patients/students at debriefing/feedback sessions. Confidentiality , Ethical principles & Professionalism had been adhered throughout the Program implementation.

*Three sets of Questionnaire used after each session are as follows:

(a) **Questionnaire 1**- the students were given a 6 item questionnaire to provide feedback on the simulated patient performance and the benefits from their experience

(b) **Questionnaire 2**- the simulated patients were given a 15 item questionnaire to provide feedback on the student's communication skills.

A 4 point Likert's scale (1= complete disagreement; 2 = somewhat disagree; 3= somewhat agree; 4 = complete agreement) was used to measure the students' and simulated patients' responses.

(c). **Questionnaire 3** – the facilitators (faculty involved, only in first academic sessions) with Prof SSA) was given a 10 item Questionnaire to provide feedback on the students' and simulated patients' performances.

The Questionnaires were pretested to ensure face validity.

B) HIGHLIGHTS from some literature reviews on debriefing and feedback after simulation based learning.

1. **DEBRIEFING** is a meeting that takes place in order to get information about a particular piece of work that has been finished, for example about what was done successfully and what was not (Cambridge Business English Dictionary © Cambridge University Press).

Historically, debriefing originated in the military, in which the term was used to describe the account individuals gave on returning from a mission. (Pearson M, Smith D, 1986)

Another form of debriefing, critical incident debriefing, was pioneered by Mitchell and is used to mitigate stress among emergency first responders. He formulated a set of procedures termed the Critical Incident Stress Debriefing (CISD). CISD is a facilitator-led approach to enable participants to review the facts, thoughts, impressions, and reactions after a critical incident. Its main aim is to reduce stress and accelerate normal recovery after a traumatic event by stimulating group cohesion and empathy (Mitchell JT, Everly GS , 1993.)

How Debriefing came about?

The attempt to bridge the natural gap between *experiencing* an event and making *sense* of it led to the evolution of the concept of the “post experience analysis”¹³ or debriefing. As such, debriefing represents facilitated or guided reflection in the cycle of experiential learning. (Fanning RM and Gaba DM.)

Objectives of Debriefing

Objectives may be well defined, and specified beforehand, or may be emergent and evolve within the simulation. For well-defined objectives, such as a technical skill or a particular team behavior, the debriefing session affords the opportunity to examine how closely participants’ performance has approached a known target, and what needs to be done to bridge any observed gaps between performance and target. It also affords an opportunity to share these objectives with participants. With emergent objectives, participants may be asked to reflect on the observed evolution of the scenario and to see how the behaviors, attitudes, and choices uncovered in the simulation relate to real life situations.

Role of the Facilitator in the Debriefing Process There is a tension between making participants active and responsible for their own learning versus ensuring they address important issues and extract maximum learning during debriefings.

It was with this in mind that Rudolph and colleagues developed the concept of debriefing with “good judgment,” which focuses on creating a context for the adult learner to learn important lessons, and incorporate them into cognitions while amalgamating new information with their prior frames/life experience. (Rudolph JW, Simon R, Dufresne R, et al: 2006)

It is widely accepted that debriefing is the “heart and soul” of the simulation experience. (Rall M, Manser T, Howard S, 2000)

2. FEEDBACK

In the setting of clinical medical education, feedback refers to information describing students' or house officers' performance in a given activity (Ende J , 1983).

Distant from evaluation, feedback presents information, not judgment.(Hyman RT. 1980.) Feedback is formative. As an integral part of the learning process, it allows the student to remain on course in reaching a goal. Evaluation, on the other hand; is summarative. It comes after the fact and presents a judgment, usually the teacher's, about how well or poorly a student met a given goal, often in relation to the performance of peers. Evaluation is expressed as normative statements, peppered with adverbs and adjectives; Feedback is neutral, composed of verbs and nouns.

The concept of feedback-information that a system uses to make adjustments in reaching a goal was first appreciated by rocket engineers in the 1940s and has since been applied in many fields. The father of cybernetics, Norbert Weiner, (Weiner N. 1950). was one of the first to extend the concept to the humanities:

Feedback is the control of a system by reinserting into the system the results of its performance. If these results are merely used as numerical data for criticism of the system and its radiation, we have the simple feedback of the control engineer. If, however, the information which proceeds backwards from the performance is able to change the general method and pattern of the performance, we have a process which may very well be called learning Feedback occurs when a student or house officer is offered insight into what he or she actually did, as well as the consequences of his or her actions. This insight is valuable insofar as it highlights the dissonance between the intended result and the actual result,

thereby providing impetus for change. (Nadler DA. 1977.) It is what happens when an attending physician observes a student or house officer performing a history and physical examination, presenting a patient on rounds, making decisions about a patient's therapy, or interacting with other members of the medical team and then transmits the information back to the trainee in a manner that is useful for the trainee's future performance in that same activity. The trainee's reaction to the feedback would also be a valid indicator of the program's success. Like giving feedback, receiving it properly is not always a simple passive act. It requires maturity, honesty, and selfless commitment to the goal of improving clinical skills-traits that are certainly worth cultivating in our future physicians. (Ende J , MD,1983) A recent systematic review of high fidelity simulation literature identified feedback (including debriefing) as the most important feature of simulation-based medical education.(. Issenberg SB et al , 2005)

2.i. The value of SPaCE in delivering patient feedback.

The Simulated Patient Candidate Evaluation (SPaCE) tool was developed to deliver Simulated Patient (SP) feedback following a simulation activity. SpaCE is a closed feedback tool that allows SPs to rate a student's performance, using a five-point Likert scale, in three domains: attitude; interaction skills; and management. This research study examined the value of the SPaCE tool and how it contributes to the overall feedback that a student receives. (Clapham L et al 2016)

2.ii. Achieving 360° student feedback using SPaCE.(Simulated Patient Candidate Evaluation)..

The SPaCE tool is a structured, standardised feedback tool that SPs can complete easily and quickly. The SpaCE tool encourages SPs to provide feedback from specific interactions they have had with students during the FYWSE (Final Year Ward Simulation Exercise). In the SP's opinion, good interaction and good interpersonal skills are the determinants of good performance.([Garry A, Stirling K](#) .2012)

3. SIMULATED PATIENTS

“Simulated Patients” (Barrows 1968) are actors who act like a patient and/or use simulators which are devices and tools, to replace the actual patient, to help mimic a clinical encounter so as to provide a safe learning environment, for the learner to do deliberate practice of health-care skills so that it then becomes safe for the patient and for the learner to practice the skills on real patients .(Cleland JA, Abe K, Rethans JJ. 2009.)

3.i.WHAT IS HEALTHCARE SIMULATION?

“Simulation is the imitation or representation of a real life situation, or process from the simple to the very complex. Simulation is an important educational modality in HETI's inclusive educational approach. (HETI,2014).Healthcare simulations can be said to have four main purposes - education, assessment, research and health system integration in facilitating patient safety.” (Society for Simulation in healthcare. available at: www.ssih.org/about-simulation)

3.ii.WHY USE SIMULATION IN STUDENT EDUCATION?

“Simulation can lead to increased efficiency (learning faster) when compared with other methods.” (Nestel., D., Harlim., J., Smith., C., Krogh., K. & Bearman. M. 2014.)

There are four main reasons to use simulation in student education: ethical imperatives; educational benefits; the potential to help address training system capacity issues; and ongoing changes to the health sector.

Ethical Imperatives The first imperative is to minimise risks to patients by ensuring students are prepared for clinical placements and for transition to professional practice. The second imperative is to provide students with opportunity to learn via simulation where strong evidence exists for the benefits of simulation training in comparison with or in addition to other training modalities.

Educational benefits: Simulation leads to clinical skills acquisition and retention when ongoing practice is offered and these skills are able to be transferred to clinical settings. Simulation also provided other educational benefits including: i) providing an opportunity to practise skills repeatedly without needing to rely on finding a patient with a particular condition, allowing a greater focus on the student's learning requirements.ii) simulation scenarios can be quickly created and adapted to suit learning objectives and some approaches can provide objective measures of performance iii).a significant benefit of preparing students for critical incidents or crisis situations that occur rarely but require a high level of preparedness

Addressing capacity issues: i). Providing high quality clinical experiences for students is of utmost importance.ii) Short patient length of stays, high patient acuity, disparities in learning experiences, programs competing for clinical sites and the amount of time instructors need to spend supervising skills all increase the associated challenges.

There is evidence that simulation can replace some clinical placement activities without impacting graduate outcomes. Simulation has been found to be at least as effective in terms of the learning students acquire in clinical placements for at least some professions and areas of learning.

Changes in the Health sector : A number of recent changes in the healthcare environment provide compelling reasons for the use of simulation in student training.

i. Ruth M. Fanning; David M. Gaba (2007) have discussed the important role of debriefing in simulation based learning.

ii. Rudolph JW, Simon R, Raemer DB, Eppich WJ, 2008. have discussed on debriefing as formative assessment: closing performance gaps in medical education .

iii. Dieckmann P, Patterson M, Lahlou S, Mesman J, Nyström P, Krage R ,2017 have discussed on variation and adaptation: learning from success in patient safety-oriented simulation training.

iv. Guillaume Der Sahakian, Guillaume Alinier, Georges Savoldelli, 2015, have discussed on Setting conditions for productive debriefing.

v. INACSL Standards Committee have provided the INACSL Standards of Best Practice: SimulationSM Debriefing; 2016.

There are many methods of debriefing that can be used :

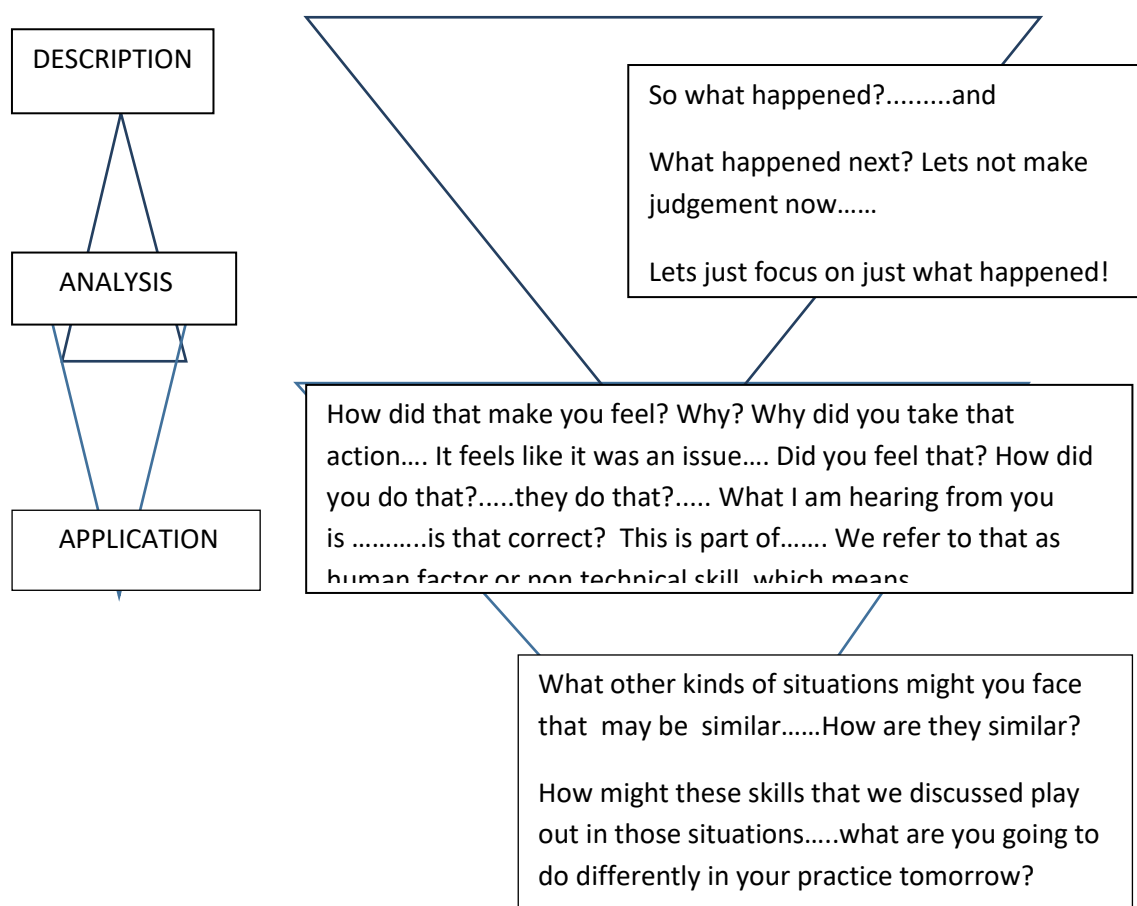
DIAMOND DEBRIEFING

The diamond debriefing method is based on the technique of description, analysis and application, along with aspects of the advocacy-inquiry approach and of debriefing with

good judgement. It is specifically designed to allow an exploration of the non-technical aspects of a simulated scenario. Context : The debrief diamond, a structured visual reminder of the debrief process, was developed.

The diamond shape visually represents the idealised process of a debrief: opening out a facilitated discussion about the scenario, before bringing the learning back into sharp focus with specific learning points.

Implication : The Diamond encourages a standardised approach to high-quality debriefing on non-technical skills. Feedback from learners and from debriefing faculty members has indicated that the Diamond is useful and valuable as a debriefing tool, benefitting both participants and faculty members. It can be used by junior and senior faculty members debriefing in pairs, allowing the junior faculty member to conduct the description phase, while the more experienced faculty member leads the later and more challenging phases. The Diamond gives an easy but pedagogically sound structure to follow and specific prompts to use in the moment.



3.iii. The 12 features and best practices for effective simulation based Medical Education according to Thomas V Chacko consist of following:

1. Feedback
2. Repetitive/practices.
3. Curriculum integration
4. Outcome measurement

5. Simulation fidelity and simulator validity 6. Skill acquisition and maintenance
 7. Individualized mastery learning 8 Transfer to practice.9 Team training
 10. High stakes testing. 11 Instructor training 12. Educational & Professional context.
 (Chacko,TV 2017.)

DISCUSSION

The authors SoeSoeAye , Noor Mohd Azhar M & Rahman MRA (2014) had reported that in the first academic session, all 44 (100%) year 3 students had given their written feedback (in given forms). The majority (n=42,95.4%) of year 3 students had reported that the role played by the simulated patients had considerably increased their sensitivity to the needs of adolescent patients. All medical students reported that the simulated patients helped them in (a) communicating with adolescent (p=0.006) and (b) understanding the different psychosocial issues that adolescents may encounter during their transitional period into adulthood (p=0.048). 44 students gave overall rating, the adolescent simulated patients' general performance 7.7 out of 10-point scale.

The simulated patients reported that a significant proportion (n=38;86.3%) of the students demonstrated good communication skill and they are able to communicate effectively with them (simulated patient). All (n= 44; 100%) can clearly convey exactly what sort of information he/she is looking for during the HEADSSSSS session. All (n=44;100%) students had shown good attitude in "ensuring everything said will be kept confidential". Feedback from Prof SSA/faculty involved in first academic session showed the overall performance of the adolescent simulated patients were high 8.1 on a 10-point scale, showing a significant authenticity of role play (p<0.016) when analysed using the unpaired t test.

Regarding Debriefings done over the years, Prof Dr SSA had noticed that the ranking given by each pair (the simulated patient and the student (as doctor) on the other and vice versa had improved considerably. In the initial years, the ranking had been in range of 6-8 on a 10 point scale and now in this last year, almost all the rankings on each other between a pair had risen to 10 out of 10 On one or two occasions, the SP had remarked that the students (doctors) had achieved 11 on a 10 point scale, giving due credit to the performances as doctors by the students. This was at the 18 and 19th session and the last 20th session is due on 5th July during the 5 academic years since inception. The reasons why the students' performance as doctors had improved over the years is because of the foundation laid down before they met the simulated patients consisting of lecture series and video clip viewing and discussion with/ by Prof Dr SSA, role play by two students known as the Peer Pair sessions whereby one student acted as simulated patient and other as doctor. The disadvantage in this is that the students are not well versed in all of the scenarios and so the simulated patient role was not ideally portrayed But the feedback at end of sessions had reminded them of the pitfalls and had encouraged them to take note and portray as doctors more convincingly in session with simulated patients later on in the posting.

CONCLUSIONS

(1).A sharing of experiences regarding the Adolescent Medicine module, specifically the debriefing and feedback, over a 5-year period had been made as well as some highlights from some literature reviews

(2) Debriefings (& Feedback) being the ‘heart and soul’ of simulation learning activity had been highlighted. .

(3)Presently, the learning outcomes laid down in the Adolescent Medicine module in Year 3 at Paediatrics and Adolescent Medicine postings has been fulfilled.

It is recommended that significant necessary modifications starting from getting a new cohort of suitable adolescent aged simulated patients should be done since the presently used cohort had “grown up” over the past 5 years period and are no more adolescents, and the whole program should be modified accordingly for the next future 5 years in areas that are no more relevant to the unique conditions laid down in the program by its founder PSSA.

ACKNOWLEDGEMENT

Grateful thanks are due to the Founder Dean Dato Zin in initial years and present Dean, Dato Muhammad Abu Baker, The 10 Simulated patients recruited in every posting’s Simulated Patients sessions, Prof Noor MAM and Prof Suleiman A for her support and help in recruitment of the adolescent aged patients, and the secretariat for doing the consent forms, attendance forms and getting financial grant to be banked into designated account for timely payment to the SP at rate of 80 rm per session of 2 hours and 40 rm for participating at workshop prior to SP sessions.

REFERENCES

1. Barrows HS. (1968) Simulated patients in medical teaching. *Can Med Assoc J* 98:674-6
- 2 Cambridge Business English Dictionary © Cambridge University Press).
3. Cleland JA, Abe K, Rethans JJ. (2009). The use of simulated patients in medical education: AMEE Guide No. 42. *Med Teach* 31:477-86.
4. Dieckmann P, Patterson M, Lahlou S, Mesman J, Nyström P, Krage R. (2017) Variation and Adaptation: learning from success in patient safety-oriented simulation training. *Adv Simul* (Lond).
5. Ende J, MD *JAMA* (1983).250:777-781. From the Evans Memorial Departments of Clinical Research and Medicine, Section of General Internal Medicine, Boston University Medical Center
6. Fanning RM and Gaba DM. (2007). The role of debriefing in simulation based learning. *Simulation in Healthcare* Vol2.No2.
7. Garry A, Stirling K. Achieving 360° student feedback using SPaCE. *Clin Teach*. 2012 Aug;9(4):222-7. doi: 10.1111/j.1743-498X.2012.00550.x © Blackwell Publishing Ltd 2012.
- 8 Guillaume Der Sahakian, Guillaume Alinier, Georges Savoldelli. (2015). Setting conditions for productive debriefing. *Support Center Support Center Research Article* Volume: 46 issue: 2, page(s): 197-208.
9. Hyman RT. (1980). Improving discussion leadership. New York: Teachers College Press,
10. INACSL Standards Committee (2016). INACSL Standards of Best Practice: SimulationSM Debriefing; DOI: <https://doi.org/10.1016/j.ecns.2016.09.008>
- 11 Issenberg SB, McGaghie WC, Petrusa ER, et al (2005). Features and uses of high-fidelity medical simulations that lead to effective learning: a BEME systematic review. *Med Teach* 27:10–28.
12. Milkins L, Moore C and Spiteri J networks. (2014). Simulation and Supervision (HETI) Simulation based education Professional Entry student education and training @ HETI. Health Education Institute.

13. Mitchell JT, Everly GS (1993). Critical incident stress debriefing: An operations manual for the prevention of traumatic stress among emergency services and disaster workers. Ellicott City, MD: Chevron Publishing.
14. Nestel, D., Harlim, J., Smith, C., Krogh, K. & Bearman, M (2014). An Evidence Check Review for HETI. HealthPEER, Faculty of Medicine, Nursing & Health Sciences. p.17
15. Pearson M, Smith D (1986). Debriefing in experience-based learning. Simulation/Games for Learning 16:155–172.
16. Rall M, Manser T, Howard S (2000). Key elements of debriefing for simulator training. Eur J Anaesthesiol 17:516–517.
17. Rudolph JW, Simon R, Dufresne R, et al (2006). There’s no such thing as “Nonjudgmental” debriefing: A theory and method for debriefing with good judgment. Simul Healthcare 1:49–55.
18. Simulation Priorities Report Reference Group. HETI 2014.
19. Society for Simulation in HealthCare available at: www.ssih.org/About-Simulation
20. SoeSoeAye, Noor Mohd Azhar M & Rahman MRA (2014). Lessons learned from Adolescent aged simulated patients in Undergraduate Adolescent Medicine Curriculum: NDUM experience. European Journal of Research and Reflection in Educational Sciences Vol 2 No2 .
21. Soe Soe Aye, Noor M Azhar Mohd & Suleiman A (2015). Educational benefits of engaging simulated patients for interviewing by medical students in undergraduate Adolescent Medicine posting, at NDUM, Malaysia .DOI: 10.15694/mep.2015.004.0013
22. Thomas V Chako. Arch Med Health Sci (2017) 5:9-15
23. The Review; (2014). Stakeholders across NSW and HETI’s Simulation Priorities Report Reference Group.
24. Ziv A, Wolpe PR, Small SD, Glick S. (2003). Simulation based Medical Education: An ethical imperative Academic Medicine 78(8)783-788 PMID 12915366 ISSN Print 1040-2446 Publication dated 2003/08/01