

Bullying among Nursing Intern Students: Factors and Consequences

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Abstract: Background: Bullying is worldwide endlessly experienced by nurses from education to workplace, nursing intern students are highly exposed to training intimidation. Design: An exploratory design was tracked. Aim and Objectives: To recognize factors and consequences about the clinical training bullying as experienced by faculty of nursing intern students. Methods: A purposive selection method was utilized to enroll 242 intern students who registered, trained in 2019-2020 academic year and were bullied. Results: The findings indicated that (84.6%) of faculty of nursing intern students were bullied. The highest experienced mean form of bullying was “training related bullying” ($\bar{X}=0.91$). The highest percentage of students (30%) considered unit head nurse was the bully, less than (20%) of students reported bullying if experienced or witnessed it. There were statistically significant relations between experiencing of bullying students’ age, social status, educational level before enrollment to faculty, university of graduation and current health status. Conclusion: the widely held of interns experienced many forms of under-reported bullying with negative effect and consequences on their well-being. Bullying should be addressed firstly in study years before graduation, then at healthcare working settings.

Keywords: Bullying, Consequences, Factors, Nursing Intern students.

INTRODUCTION

Workplace bullying violates the safety of working environment and is considered a prominent psychological and physical problem in health care services (Obeidat et al, 2018). Moreover, many studies have described a greater occurrence of bullying among nurses compared with other health care workers (Evans, 2017).

Nursing bullying is an inescapable foundational issue that won't vanish for the time being. However, it has little considerations in nursing. Intimidation and other offensive behaviors need to be lectured in nursing study and profession (Edmonson & Zelonka, 2019). According to (Wilson, 2016), bullying was defined as a concept that includes common behaviors toward victims.

In emergency, nurses may speak rudely and inhospitably to their peers. Yet, an alteration exists between someone who lashes out during a crunch moment and an intimidator. A nurse who is not an aggressor, but behaves unsuitably, identifies that he or she behaved poorly and is willing to apologize. Bullies explain their activities and do not consider they have made any mistakes (Aleccia, 2008).

Nurse-to-nurse bullying is a problem. Whenever, nurses should end tolerating bad behaviors of their coworkers as the norm, therefore, bullying would stopover (Felblinger, 2008).

Nurses who sufferers from bullying can be involved in a variety of feelings such as humiliation, incompetence, lack of confidence, and loss of self-worth. Those victims may leave their job, adding to the current nursing shortage and impacting others who continue working in a toxic work environment (Longo & Sherman, 2007).

Domineering has been linked to several negative consequences including anxiety, psychological distress, depression, absenteeism or sickness absence, reduced wellbeing, sleep problems, concentration difficulties, ineffective communication, decreased participation in

decision-making processes, intention to leave the profession, turnover and job dissatisfaction (Nielsen et al, 2015).

Kaşli and Ilban (2013) suggested a successful internship period will smooth the transition and may yield a fruitful outcome in term of enhancing graduates’ competency. Despite its significance, clinical internship can also be a source of frustration to undergraduates and can lead to choosing to work away from the clinical set-up (Nabolsi et al, 2012).

Jamshidi et al. (2016) mentioned that challenges faced by nursing students during internship affects their overall health and disturbs their learning process. Nursing intern students encounter complex issues, obstacles, and complications demanding a high level of skills that affect their practice (Moscaritolo, 2009).

Internship nurses experience discrimination from regular staff; such differentiation can affect the professional identity of nurses, violates their dignity and increases their sense of professional inferiority (Sana et al, 2013).

SIGNIFICANCE OF THE STUDY

Nursing intern students enrolling this occupation are mainly vulnerable to maltreatment due to inferiority of students under the training; every day they receive a numerous emergency cases with their lack of experience, position or authority. Studies about internships are insufficient identifying this delinquent during clinical training.

Literature endorses that occurrences linked to mobbing behavior towards nursing intern students are under-reported due to feelings of shame and guilt, lack of support from faculties, and lack of structured reporting systems (Johnson, 2009).

ETHICAL CONSIDERATIONS

Verbal agreement to collect the data was taken from the head of nursing administration department before the students’ gathering in their scientific day. Involvement in the study was

based on the interns' agreement where the ethical considerations include explaining the purpose and method of the study, assuring the confidentiality of data while participation was with no risk to their internship year.

METHODS

A. Methodological Design:

An Exploratory design was adopted to attain the current study purpose.

B. Sample:

A Purposive sampling technique was followed; 286 of the faculty of nursing intern students, Cairo University who registered and trained in 2019-2020 academic year have been screened to assess if they faced any kind of bullying, 242 of 286 matched the criteria of being bullied with percentage of (84.6%) and included in the study.

C. Setting:

The study was carried out at the Faculty of Nursing - Cairo University, Egypt.

D. Data Collection Tool and Tool's Psychometrics:

Data were collected by using Intern Students' Clinical Training Area's Bullying Self-administered Inventory which developed by the researchers, based on the previous tools of (Hutchinson et al, 2008; Valvatne et al, 2020 & Bahgat et al, 2019) and the current Egyptian nursing internship year polices and rules. The inventory consists of personal data and current health status of the students, (49) items related to the behavioral characteristics of bullying, the bully herself/himself, reporting of bullying, reasons of not reporting and its different consequences.

Construct Validity of tool was tested using the factor analysis and provided 4 factors that emerged in clinical training bullying with the total of (49 items) as follows: training related bullying (α : .86), personal dealing related bullying (α : .82), physically intimidating bullying (α : .75), and organizational system related bullying (α : .82). Reliability of the tools was checked by testing its internal consistency using a Cronbach's Alpha test which yielded a coefficient of (α : 0.87).

E. Procedures:

The data were collected by the students during the scientific day in the last day of their clinical training areas in 30-9-2019 at the faculty of nursing's class rooms. The inventory was filled by students within 30 minutes.

RESULTS

The collected data were revised, coded and fed into statistical software (SPSS), Version 20.0, for analysis. Data were analyzed using the Frequency distribution, Percentage, Mean, Standard Deviation, and ANOVA, t-test. The significance level was at < 0.05 (P-value). The study results were illustrated as follows:

It is apparent in Table 1 that more than half of students were male (56.2%), while less than half of students been 24 years old (45.5 %); three-quarters of sample were single (78.5 %). The majority of sample' educational level before enrollment in nursing faculty was high secondary school (85.5%). More than half of sample graduated from Cairo University. More than three-quarters of sample didn't suffer from any disease (78.5 %).

As illustrated in Figure 1 that the highest perceived mean

clinical training bullying was regarding the "training related bullying" (\bar{X} =0.91), followed by organizational system related bullying (\bar{X} =0.55), personal dealing bullying (\bar{X} =0.51), and physical intimidating bullying (\bar{X} =0.44).

Table 2 emphasizes the statistical significant differences between experiencing of clinical training area's bullying and students whom age was 22 years (p =.0001, \bar{X} =0.61, SD =0.32), were married (p =.0001, \bar{X} =0.80, SD =0.29), held High secondary school enrollment to faculty of nursing (p =.002, \bar{X} =0.61, SD =0.31), were graduated from Cairo University (p =.0001, \bar{X} =1.11, SD =0.78), and suffered from physiological diseases/ changes (p =.050, \bar{X} =0.74, SD =0.29).

Figure 2 points out that the highest percentage of students (30%) considered unit head nurse is the bully, followed by unit staff nurses and the resident physician came on the third ranking. As can be seen from Figure 3 shows that less than (20%) of students reported bullying if they experienced or witnessed because they thought that bullying would negatively affect their training and it could not be approved. Figure 4 illustrates that more than (80%) of students reported bullying to faculty members who was responsible for clinical training areas.

Figure 5 indicates that the highest percentage of students mentioned that succumbed to the reality and given advice were the common responses after reporting of bullying. Figure 6 Indicates that most of the students felt fatigue and exhaustion followed by anxiety as health consequences of exposure to bullying.

Table 1: Distribution of Faculty of Nursing Intern Students' Personal Data (n=242)

Personal data	Frequency	Percent
Gender		
Male	136	56.2
Female	106	43.8
Age		
22 years	21	8.7
23 years	54	22.3
24 years	110	45.5
25 years	52	21.5
above 25 years	5	2.1
Social status		
single	190	78.5
in-relationship	38	15.7
married	13	5.4
divorced	1	.4
Educational level before enrollment in nursing faculty		
High secondary school	207	85.5
Technical associate nursing diploma	25	10.3
Bachelor degree of sciences	10	4.1
University of graduation		
Cairo University	150	62.0
Asuit University	48	19.8
South Valley University	1	.4
Elmansoura University	1	.4
Elmenia University	42	17.4
Current health status		
I don't suffer from any diseases	192	79.3
I suffer from physical diseases	22	9.1
I suffer from physiological diseases/ changes	25	10.3
I suffer from psychological diseases	3	1.2

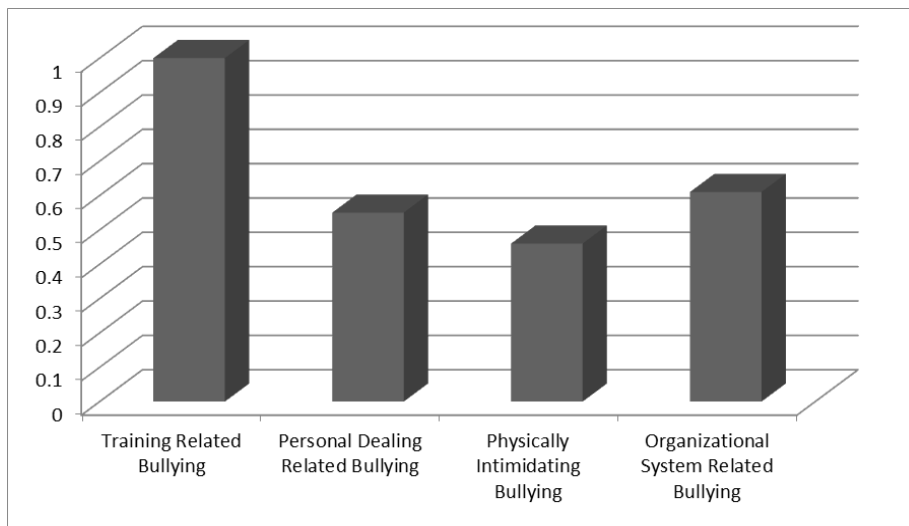


Figure 1: Total Mean Scores of Behavioral Description of Clinical Training Bullying dimensions (n=242).

Table 2: Relation between Experiencing of Clinical Training Area's Bullying and Faculty of Nursing Intern Students' Personal Data (n=242)

Personal data	Mean	SD	ANOVA test value	p-value
Gender				
Male	0.56	0.31	0.908	.365
Female	0.60	0.30		
Age				
22 years	0.61	0.32	7.170	.0001*
23 years	0.45	0.22		
24 years	0.57	0.30		
25 years	0.54	0.33		
above 25 years	0.41	0.31		
Marital status				
single	0.54	0.29	9.261	.0001*
in-relationship	0.57	0.32		
married	0.80	0.29		
divorced	0.21	0.00		
Educational level before enrollment to faculty of nursing				
High secondary school	0.61	0.31	6.675	.002*
Technical associate nursing diploma	0.42	0.27		
Bachelor degree of sciences	0.37	0.29		
University of graduation				
Cairo University	1.11	0.78	5.731	.0001*
Asuit University	0.64	0.29		
South Valley University	0.54	0.00		
Elmansoura University	1.00	0.00		
Elmenia University	0.73	0.32		
Current health status				
I don't suffer from any diseases	0.56	0.31	2.646	.050*
I suffer from physical diseases	0.54	0.27		
I suffer from physiological diseases/ changes	0.74	0.29		
I suffer from psychological diseases	0.61	0.35		

*significant at p-value<0.05

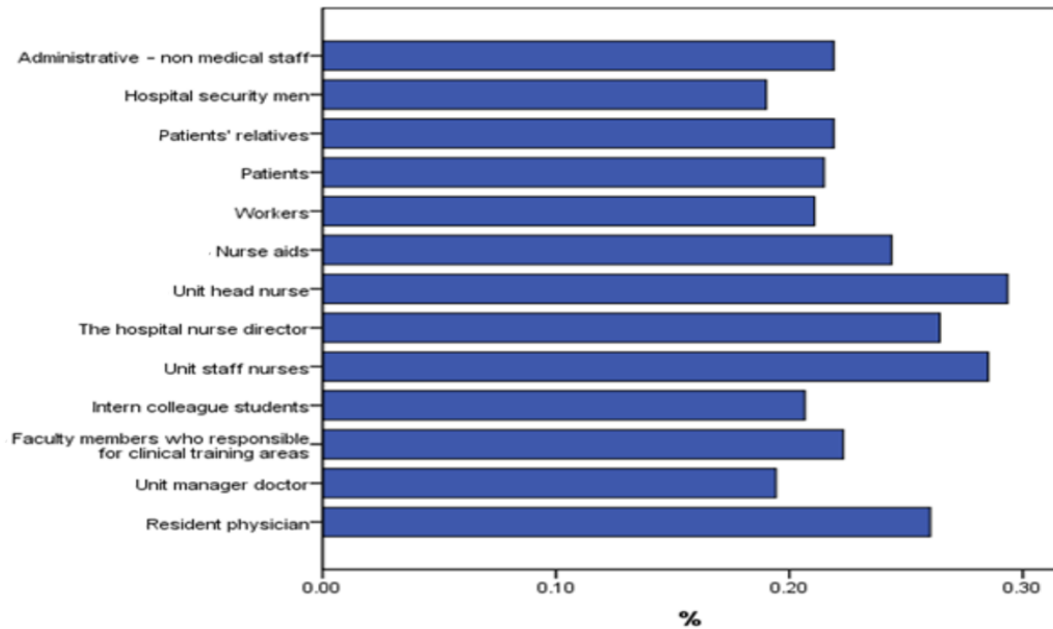


Figure 2: Distribution of Faculty of Nursing Intern Students' Perception about "Who was the Bully" (n=242)

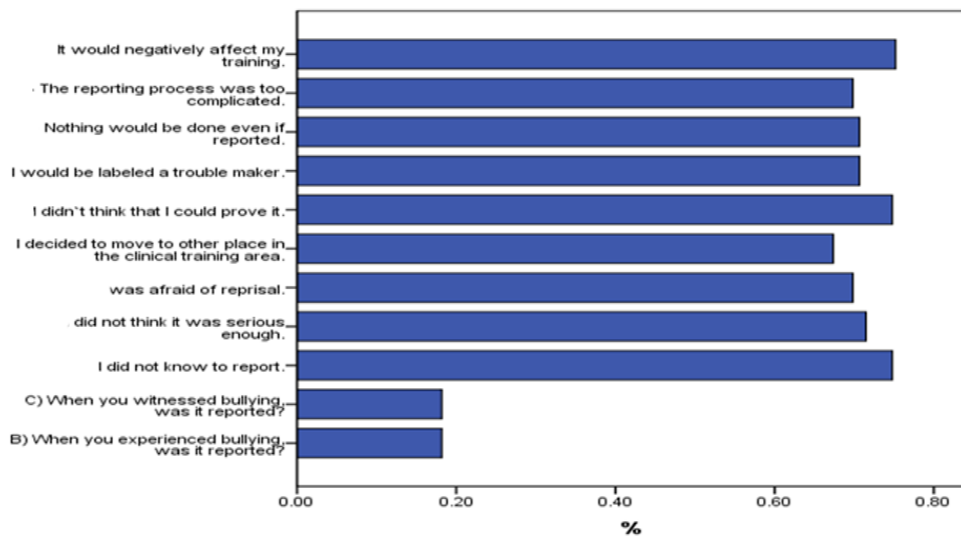


Figure 3: Distribution of Faculty of Nursing Intern Students' Perception about "Reporting of Bullying and Reasons of Not Reporting" (n=242)

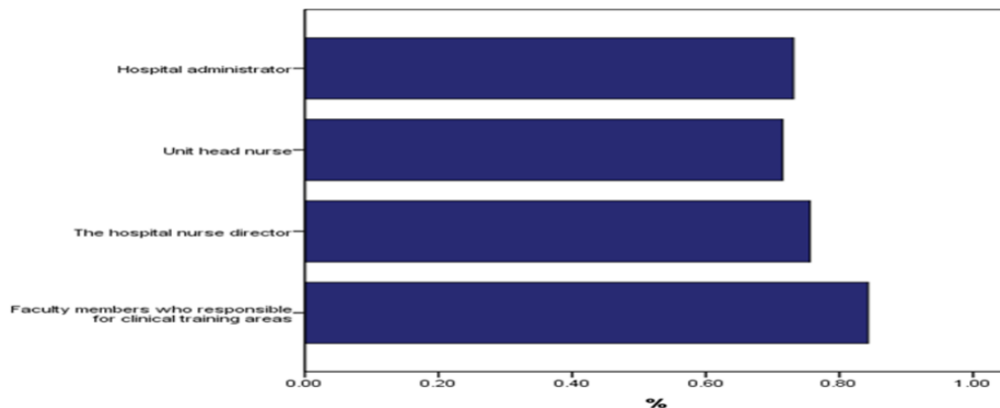


Figure 4: Distribution of Faculty of Nursing Intern Students' Perception about "To Whom They Reported Bullying Incidences" (n=242)

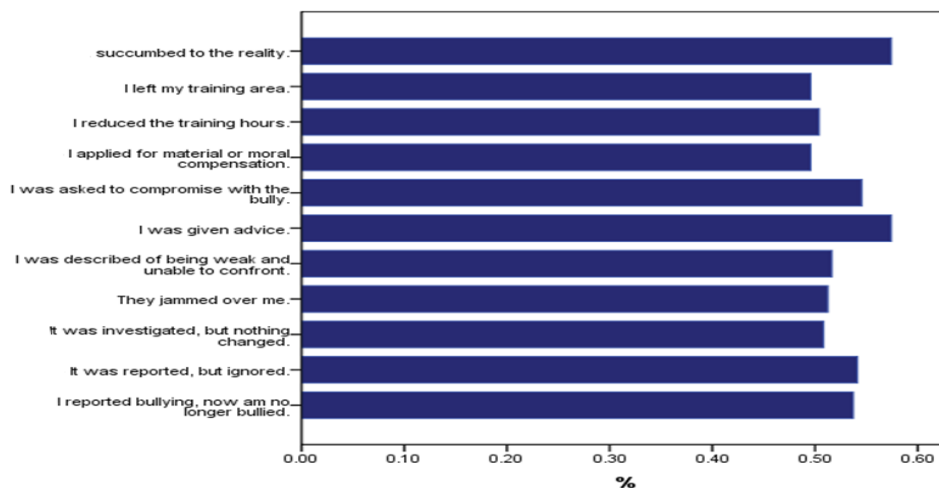


Figure 5: Distribution of Faculty of Nursing Intern Students’ Perception about “The Responses after Reporting the Bullying” (n=242)

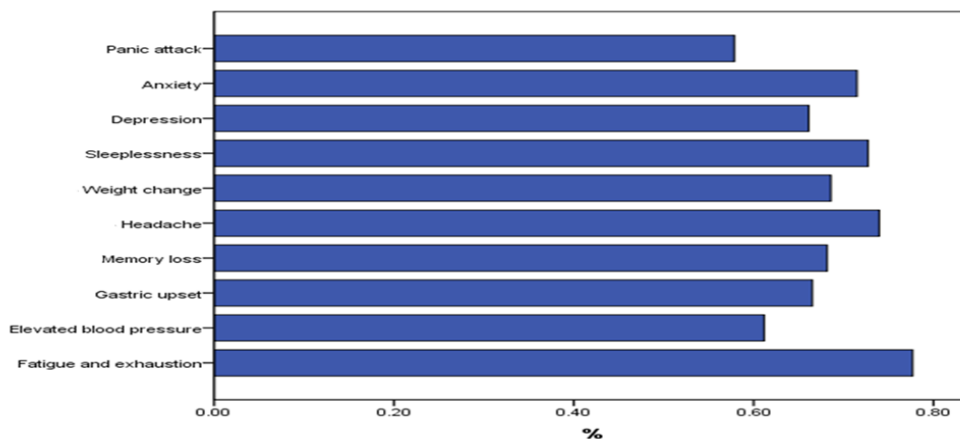


Figure 6: Distribution of Faculty of Nursing Intern Students’ Perception about “The Health Consequences of Exposure to Bullying” (n=242)

DISCUSSION

Statistically wise, commonly, the student surveyed experienced some form of bullying in their clinical placement. Although the results are more extreme than those reported by (Quine, 2001) who reported 1-2 students was intimidated and that (8.4%) were terrorized, currently there is an increasing trend towards student and junior nurses for being bullied. However, as noted earlier, Garrett (1998) argued that the power imbalance between a trainer and trainee can lead to provocation and mistreatment.

The recent results listed constant with (Clarke et al, 2012) who established that the majority of nursing students (88.72%) testified undergoing negative behaviors in the clinical setting. Other international studies reported up to (90%) of nursing students described facing hounding manners during training (Cooper et al, 2011).

Nevertheless, a Turkish and U.K. studies detailed more than half of the respondents were exposed to bullying throughout their education (60% and 53% respectively) (Palaz, 2013). This also was reinforced by (Baltimore, 2006) who clinched that nursing students do encounter bullying in baccalaureate schools which leave them feeling powerless and unfulfilled, and create a hostile atmosphere.

Findings displayed the mainstream of nursing intern student acknowledged clinical training related bullying, where they undertake a significant amount of excessive monitoring over

their training and were given tasks with unreasonable deadlines. Additionally, almost all interns are young; the highest mean age score of students who were bullied was 22 years (Mean=0.61, SD=0.32). Thus, they lack the appropriate approach to deal with ill-treatment.

These findings generally came congruent with of the findings of (Berry et al, 2012; Bahgat et al, 2019) which showed that the highest mean scores of bullying types that experienced by nurses were work related bullying where experienced excessive monitoring of their work on a daily and weekly bases and less than fifth of them were exposed to unmanageable workload on a daily or weekly base. While, the least mean score was for the physically intimidated bullying. Also, these findings were aligned with (Tambur & Vadi, 2012) who exposed that the chief number of respondents perceived negative acts on a daily and weekly bases belonged to issues concerning with work related bullying.

Discoveries pointed out that the uppermost proportion of subjects considered unit head nurse was the bully, followed by unit staff nurses, the resident physician came on the third ranking. Stevens (2002) argued that the series was prolonged by senior nurses who supposed that because they had to undergo a hard and often tyrannical training in which oppression was part of the system; their juniors should also have to put up with it. Thus, this was correlated to a Hong Kong’s study which revealed the crosswise violence was (45%) and staff members, colleagues, and supervisors were the main perpetrators (Zhao et al, 2016).

Findings specified that lower percentage of the students reported bullying if they experienced or witnessed it, because they were thinking that it would negatively affect their training and it could not be approved. Ullah et al (2018) quantified a low value (14.5%) of abuse between nursing staff where the public reason was “complaining is of no use” (28.8%) and “being afraid of the consequences” (22%).

In the same line, Somani et al (2015) mentioned that (63.8%) of victimized nurses hold the conviction that reporting such an incident was aimless. Where, (36.2%) of the nurses were scared of the undesirable penalties of commenting this incident and (6.7%) felt ashamed and guilty for suffering such incidents.

The findings presented that students reported bullying to faculty members who was responsible for clinical training areas. Earlier, O'Moore et al, (1998) found a different number of respondents (over 70%) got advice and care by talking to someone else about this event.

However, the results showed that most nursing intern students experienced symptoms of bullying (i.e. getting fatigue, exhaustion and anxiety as health consequences of bullying) for lengthy period. These symptoms led to a straight cost to the organization and the faculty in term of high prevalence of illness and absence, low morale, and turnover.

Regarding the statistical significant differences found between experiencing of clinical training area's bullying and students' age, social status, educational background before enrollment to faculty of nursing, graduation university, and current health status. Recent studies disapproved such results; Serafin and Czarkowska-Pączek (2019) mentioned that nurse's oldness disclosed a feeble negative relationship with work-related bullying ($r = -0.128$, $p=0.010$), person-related bullying ($r = -0.128$, $p=0.010$) and also marital status showed an insignificant negative associations with bullying ($r = -0.136$, $p=0.006$).

Further, Yildirim (2009) clarified the insignificant alterations that distinguished between physiological diseases and educational grade before enrollment to the college in regard to the violent manners ($P > 0.05$). Correlation revealed that bullying was absolutely connected to work overload ($P < 0.01$) and the working years in medical facilities ($P < 0.05$).

CONCLUSION

It is clearly indicated that bullying was arisen to the majority of undergraduates whilst on clinical placement. The more advanced the student is in their training, the less likely they are to suffer and disclose maltreatment suggesting that as they become more skilled and confident. As a consequence, students testified a various psychological effects associated with being bullied.

While intimidation was often trivialized and condoned, the long-term adverse impact was on the victims, the colleagues, the families and the organization deemed that it should no longer be unnoticed.

RECOMMENDATIONS

Protected approaches of complaint to make the monitoring and resolution of bullying difficult to be addressed; it should

comprise regular meetings between the faculty staff, students and clinical staff, and build up an efficient central database for uncovering unaccepted attitudes because non-reporting.

Human relation, human rights, the art of etiquette, communication skills and other refresher soft skills courses including strategies of dealing with subordinates, effective supervisory skills, mentorship, positive criticism, and handling difficult workers should be arranged for nurses in all positions at the healthcare settings.

REFERENCES

- [1]. Aleccia, J. (2008). Hospital bullies take a toll on patient safety. Retrieved from <https://www.nbcnews.com/health/health-news/hospita-l-bullies-take-toll-patient-safety-flna1c9461648>
- [2]. Bahgat, M. M., Ahmed, E. A. & Abdullah, H. M. (2019). Workplace Bullying and Occupational Stress among Nurses in Alazhar University Hospital at New Damietta. Unpublished master thesis, Faculty of Nursing, Port Said University, Egypt: 41-45.
- [3]. Baltimore, J., J. (2006). Nurse collegiality: Fact or fiction. *Nursing Management*, 37(5): 28-36. <https://doi:10.1097/00006247-200605000-00008>.
- [4]. Berry, P. A., Gillespie, G. L., Gates, D. & Schafer, J. (2012). Novice Nurse Productivity Following Workplace Bullying. *Journal of Nursing Scholarship*, 44(1): 80-87. <https://doi:10.1111/j.1547-5069.2011.01436.x>
- [5]. Clarke, C., Kane, D., Rajacich, D. & Lafreniere, K. (2012). Bullying in Undergraduate Clinical Nursing Education. *Journal of Nursing Education*, 51(5): 269-276. <https://doi:10.3928/01484834-20120409-01>
- [6]. Cooper, J., Walker, J., Askew, R., Robinson, J., Reid, A. & McNair, M. (2011). Students' perceptions of bullying behaviors by nursing faculty. *Issues in Educational Research*, 21(1): 1-21. Retrieved from: <https://eric.ed.gov/?id=EJ920833>
- [7]. Edmonson, C. & Zelonka, C. (2019). Our Own Worst Enemies the Nurse Bullying Epidemic. *Nursing Administration Quarterly*, 43(3):274-279. <https://doi:10.1097/NAQ.0000000000000353>.
- [8]. Evans, D. (2017). Categorizing the Magnitude and Frequency of Exposure to Uncivil Behaviors: A New Approach for More Meaningful Interventions. *J. Nurs. Scholarsh*, 49(2): 214-222. <https://doi.org/10.1111/jnu.12275>.
- [9]. Felblinger, D. (2008). Incivility, bullying and shame responses of nurses in the workplace. *Journal of Obstetric, Gynecologic and Neonatal Nursing*, 37(2):234-42. <https://doi:10.1111/j.1552-6909.2008.00227>.
- [10]. Garrett, T. (1998). Trainer-Trainee Bullying. *Journal of Community and Applied Social Psychology*, 7(3): 227-232. [https://doi.org/10.1002/\(SICI\)1099-1298\(199706\)7:3<227::AID-CASP421>3.0.CO;2-M](https://doi.org/10.1002/(SICI)1099-1298(199706)7:3<227::AID-CASP421>3.0.CO;2-M)
- [11]. Hutchinson, M., Jackson, D., Wilkes, L. & Vickers, M., H. (2008). A new model of bullying in the nursing workplace: organizational characteristics as critical antecedents. *ANS Adv Nurs Sci*, 32: 60-71. <https://doi:10.1097/01.ANS.0000319572.37373.0c>.
- [12]. Jamshidi, N., Molazem, Z., Sharif, F., Torabizadeh, C. C. & Kalyani, M. (2016). The Challenges of Nursing Students in the Clinical Learning Environment: A

- Qualitative Study. *The Scientific World Journal*, 2016, 1-7. <https://doi.org/10.1155/2016/1846178>
- [13]. Johnson, S., L. (2009). International perspectives on workplace bullying among nurses: a review. *International Nursing Review*, 56: 34–40. <https://doi.org/10.1111/j.1466-7657.2008.00679.x>.
- [14]. Kaşlı, M. & İlban, M. O. (2013). The Influence of Problems Faced During Internships on Interns' Views of Their Profession and Their Intention to Work in the Tourism Industry. *Eurasian Journal of Educational Research (EJER)*, 52: 79-96. <https://www.researchgate.net/publication/280977175>
- [15]. Longo, J. & Sherman, R.O. (2007). Leveling horizontal violence. *Nursing Management*, 38(3): 34-47, 50-51. <https://doi.org/10.1097/01.numa.0000262925.77680.e0>
- [16]. Moscaritolo, L., M. (2009). Interventional strategies to decrease nursing student anxiety in the clinical learning environment. *Journal of Nursing Education*, 48(1): 17-23. <https://doi.org/10.3928/01484834-20090101-08>
- [17]. Nabolsi, M., Zumot, A., Wardam, L. & Abu-Moghli, F. (2012). The experience of Jordanian nursing students in their clinical practice. *Procedia – Social and Behavioral Sciences*, 46(0): 5849–5857. <https://doi.org/http://dx.doi.org/10.1016/j.sbspro.2012.06.527>
- [18]. Nielsen, M., B., Tangen, T., Idsoe, T., Matthiesen, S., B. & Magerøy, N. (2015). Post- Traumatic Stress Disorders as a Consequences of Bullying at Work and at School: A literature review and meta- analysis. *Agress Violent Beh*, 21: 17- 24. <https://doi.org/10.1016/j.avb.2015.01.001>
- [19]. O'Moore, M., Seigne, E., McGuire, L. & Smith, M. (1998). Bullying at work: Victims of bullying at work in Ireland. *Journal of Occupational Health and Safety*, 14(6): 569-574. <https://doi.org/10.1080/03033910.1998.10558195>.
- [20]. Obeidat, R. F., Qan'ir, Y. & Turaani, H. (2018). The Relationship between Perceived Competence and Perceived Workplace Bullying among Registered Nurses: A Cross Sectional Survey. *International Journal of Nursing Studies*, 88(3): 71- 78. <https://doi.org/10.1016/j.ijnurstu.2018.08.012>.
- [21]. Palaz, S. (2013). Turkish nursing students' perceptions and experiences of bullying behavior in nursing education. *Journal of Nursing Education and Practice*, 3(1): 23-30. <https://doi.org/10.5430/jnep.v3n1p23>
- [22]. Quine, L. (2001). Workplace bullying in nurses. *Journal of Health Psychology*, 6 (1): 73-84. <https://doi.org/10.1177/135910530100600106>
- [23]. Sana, A., Shereen, R. D. & Mahasen, I.A. (2013). Relationship between Nurse Interns' Satisfaction Regarding Internship Program and Clinical Competence. *Med. J. Cairo Univ*, 81(2): 151-161. <https://www.medicaljournalofcairouniversity.com>
- [24]. Serafin, L., I. & Czarkowska-Pączek B. (2019). Prevalence of bullying in the nursing workplace and determinant factors: a nationwide cross-sectional Polish study survey. *BMJ Open*, 9: 1-8. <https://doi.org/10.1136/bmjopen-2019-033819>.
- [25]. Somani, R., Karmaliani, R., Mc Farlane, J., Asad, N. & Hirani, S. (2015). Prevalence of Bullying/Mobbing behavior among Nurses of Private and Public Hospitals in Karachi, Pakistan. *International Journal of Nursing Education*, 8(2):123-134. . <https://doi.org/10.5958/0974-9357.2015.00111.7>
- [26]. Stevens, S. (2002). Nursing workforce retention: Challenging a bullying culture. *Health Affairs*, 21(5): 189-193. <https://doi.org/10.1377/hlthaff.21.5.189>
- [27]. Tambur, M. & Vadi, M. (2012). Workplace Bullying and Organizational Culture in a Post Transitional Country. *International Journal of Manpower*, 33(7): 754- 768. <https://doi.org/10.1108/01437721211268302>
- [28]. Ullah, R., Siddiqui, F., Zafar, M., S. & Iqbal, K. (2018). Bullying experiences of dental interns working at four dental institutions of a developing country: A cross-sectional study. *Work*, 61:91–100. <https://doi.org/10.3233/WOR-182784>
- [29]. Valvatne , S., E., Hoel, H., Zapf, D. & Cooper, C. L. (2020). Bullying and Harassment in the Workplace: Theory, Research and Practice. 3rd Edition, Boca Raton. <https://doi.org/10.1201/9780429462528>
- [30]. Wilson, J. L. (2016). An Exploration of Bullying Behaviors in Nursing: A Review of the Literature. *British Journal of Nursing*, 25(4): 303- 306. <https://doi.org/10.12968/bjon.2016.25.6.303>
- [31]. Yildirim, D. (2009). Bullying among nurses and its effects. *International Nursing Review*, 56: 504–511. <https://doi.org/10.1111/j.1466-7657.2009.00745.x>
- [32]. Zhao, S., Qu, L., Liu, H., Gao, L., Jiao, M., Liu, J., Liang, L., Zhao, Y. & Wu, Q.(2016). Coping with workplace violence against general practitioners and nurses in Heilongjiang province, China: Social supports and prevention strategies. *PLOS One*, 11(6), e0157897. <https://doi.org/10.1371/journal.pone.0157897>.
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