



Original Article

Prevalence and Forms of Workplace Bullying Among Health-care Professionals in Cyprus: Greek Version of “Leymann Inventory of Psychological Terror” Instrument

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ABSTRACT

Background: Workplace bullying is a pervasive phenomenon with negative consequences for the health of victims and the productivity of organizations. The aim of this study was to measure the prevalence and forms of workplace bullying among employees working at the public health-care sector of Cyprus using the Greek version of Leymann Inventory of Psychological Terror (LIPT) instrument.

Methods: A translation process was followed from the French to the Greek version of LIPT questionnaire. Test–retest reliability expressed by Pearson's correlation coefficient was 0.98 indicating excellent reproducibility. Internal consistency reliability assessed by Cronbach α coefficient was 0.87 suggesting high reliability. LIPT instrument was distributed among 403 employees working at the primary health-care setting and at the largest public hospital of Cyprus with response rate of 73.4%.

Results: Women comprised the majority of participants (71.4%). Mean age was 43.3 years. Prevalence of workplace bullying according to Leymann's definition was 5.9%. Most common forms of bullying were “Being continuously interrupted” (17.2%) and “continuously being given new work assignments” (13.5%). Women were significantly more often exposed to at least one mobbing behavior than men within the previous year (49% vs. 35.7%, $p = 0.038$), whereas nurses were significantly exposed to at least one mobbing behavior as compared to physicians (53.3% vs. 31.4%, $p = 0.004$).

Conclusion: This was the first study that examined the prevalence of workplace bullying in the public health-care sector by elaborating the Greek version of LIPT instrument. Results showed that workplace bullying is a common and complex phenomenon among health-care organizations.

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1. Introduction

Workplace bullying was introduced in the early 80s by Heinz Leymann, a Swedish psychiatrist who used the term “mobbing” to denote a specific form of workplace aggression towards employees. According to Leymann [1], workplace bullying or mobbing “involves hostile and unethical communication which is directed in a systematic way by one or a few individuals mainly towards one individual who due to mobbing is pushed into a helpless and defenseless position,

being held there by means of continuing mobbing activities.” Various definitions and terminologies have been used to describe this workplace phenomenon: “psychological terror,” “psychological violence,” and “psychological harassment” [1,2]. However, there is no consensus regarding the definition of the concept although these definitions share certain elements: (1) there is a manifestation of interpersonal hostility in the workplace expressed by aggressive behaviors; (2) these hostile behaviors occur on a frequent basis (i.e., at least once weekly) and over a long period of

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time (i.e., at least 6 months) [3–5]; and (3) there is an imbalance of power between the persecutor and the victim [6].

Research has shown that workplace bullying is a widespread phenomenon in many European countries. According to the latest results of the Sixth European Conditions Survey [7] carried out in 2015, 16% of 35,765 workers reported exposure to adverse social behavior (including violence, physical, or sexual harassment). Large scale Scandinavian studies have shown that approximately 3–4% of the working population is affected on a regular basis [3]. Studies from the UK [4] and Finland [5] have revealed prevalence rates of around 10%, whereas in Austria reported results ranged from 7.8% to 26% [8]. The lack of a standardized definition and methodology applied to measure workplace bullying contribute most probably to the difference in prevalence rates between countries, populations, and organizations [9]. The most frequently used instruments for the measurement of workplace bullying are (1) the Leymann Inventory of Psychological Terror (LIPT) [10], (2) the Negative Acts Questionnaire [11], and (3) Work Harassment Scale [12].

In Cyprus, there are no studies so far addressing psychological harassment at work. The aim of this study was to translate the French version of LIPT instrument to Greek and to measure the prevalence and forms of workplace bullying among health-care professionals working at the public health-care sector of Cyprus. The French version of LIPT questionnaire combines two complementary approaches: The first includes the measurement of the frequency and duration of exposure to one or more of the 45 forms of bullying according to Leymann's definition [1]. The second approach includes self-reporting of bullying within the past 12 months based on a definition proposed by the developer of the French version of LIPT [13].

2. Materials and methods

2.1. Instrument

For the purpose of the study, the French version of "Leymann's Inventory of Psychological Terror" (LIPT) instrument was applied. LIPT questionnaire was developed in Sweden by H. Leymann and has been validated in several European countries [14–17].

LIPT consists of 45 items, each one measuring the exposure to workplace bullying within the previous 12 months with two response options (no or yes). It includes two additional questions on the frequency (i.e., daily, weekly, or monthly basis) as well as the duration of bullying (i.e., months and years). The 45 bullying behaviors are grouped in five sections [1] according to the impact of each behavior to the victim: (1) social relationships at work (no possibility to communicate, verbal aggression, criticism, and indifference), (2) exclusion (isolation, rejection, and avoidance), (3) job tasks (no tasks, too many tasks, uninteresting tasks, humiliating tasks, tasks superior, or inferior to skills), (4) personal attacks (attacks on opinion or origins, rumors, gossiping, and ridicule), and (5) physical violence (physical threats including sexual harassment). According to Leymann's definition, those who report exposure to at least one of the 45 bullying behaviors within the previous 12 months, weekly or more, and for six months or longer are defined as victims of bullying [1].

The French version of LIPT instrument also includes the following definition of workplace bullying developed by Niedhammer et al: "Bullying may be defined by a situation in which someone is exposed to a hostile behavior on the part of one or more persons in the work environment that aim continually and repeatedly to offend, oppress, maltreat or to exclude or isolate over a long period of time" [13]. Employees are asked whether they perceive themselves as being bullied within the previous year. For those considering themselves bullied, contributing factors are further

investigated. In addition, employees are asked whether they witnessed bullying at work directed toward another employee during the past 12 months. In this study the terms "bullying" and "mobbing" will be used interchangeably.

Translation and cultural adaptation of the French version of LIPT instrument was performed according to the Minimal Translation Criteria developed by the Scientific Advisory Committee of the Medical Outcomes Trust [18,19]. Permission was obtained from the developer of the French version of LIPT instrument [14]. Two of the authors who were bilingual having Greek as their native language and with advanced knowledge in French conducted forward translation of the questionnaire from French to Greek independently. In the presence of a third reviewer, a reconciliation meeting was conducted, and a consensus version was agreed after reviewing and discussing both translations. A native French speaking teacher blinded to the original version proceeded to backward translation of the tool from Greek to French.

Changes were incorporated in the revised version of the questionnaire, and a cognitive debriefing process was used for the cultural adaptation of the questionnaire. During the process, a pretest study was performed among 12 randomly selected registered nurses. Participants were asked in a semistructured interview to indicate possible words or phrases that were inadequately understood and to provide alternatives as well as to comment on the comprehension of instructions and the clarity of questionnaire in general. No comments or suggestions were made regarding the comprehension of each of the 45 items and the instructions of the questionnaire. A pilot study was then performed with the participation of another 20 registered nurses. Participants were asked to complete the questionnaire at time zero and 2 weeks later. Test-retest reliability was expressed by Pearson correlation coefficient (r) and internal consistency was expressed by Cronbach α . The time needed to complete the questionnaire was approximately 8–10 minutes.

2.2. Study population

The present study was the result of two master theses that were based on the study conducted among health-care professionals working at the public health-care sector in Cyprus. The first thesis [20] was about a study conducted in a primary health-care setting with the participation of 15 primary health-care centers (PHCCs) in Nicosia area (8 urban and 7 rural). Selection of PHCCs was based on the number of employees (minimum number: 3) working at each PHCC. A total of 167 employees (including general practitioners, nurses, administrative staff, and cleaners) were working at the selected PHCCs at the time of the study [21].

The second thesis [22] was about on the conducted in the largest public hospital of Cyprus, Nicosia General Hospital (NGH). The NGH operates for a decade with a total of 482 beds and 2,097 employees. Of those, 286 are physicians of different specialties and 893 are registered nurses [23]. For practical reasons, the study was performed in the following departments: Surgical, Internal Medicine, Nephrology, Dermatology, Cardiology, Hematology, Orthopedic, and Respiratory.

For the first thesis [20], the postgraduate student visited each PHCC where a prescheduled meeting took place with physicians, nurses, administrative staff, and cleaners. The personnel were informed about the scope of the study and the procedure regarding the completion and collection of the self-administered anonymous questionnaires. Together with the distributed questionnaires, a letter was also included stating the aim and the voluntary basis of the participation to the study, as well as the instructions regarding the completion of the questionnaire. The Chief Medical Officer was given the responsibility to gather the questionnaires from each

employee. A 1-week period was given for the completion of the questionnaires that were collected from the postgraduate student. A total of 167 questionnaires were administered at the participating PHCCs, and 136 were returned (response rate 81.4%).

For the second thesis [22], the postgraduate student visited the NGH and had a prescheduled meeting with the Medical Director and Senior Nurse of each participating clinic. Information about the purpose of the study and the procedure regarding the completion and collection of the anonymous questionnaires was provided. The Senior Nurse at each department was appointed as the person responsible for the distribution and collection of the questionnaires from physicians and nurses. Together with the questionnaire, a letter was also included stating the aim and the voluntary basis of the participation to the study, as well as the instructions regarding the completion of the questionnaire. A 1-week period was given for the completion of the questionnaires that were collected by the postgraduate student from the Senior Nurse of each clinic. A total of 236 questionnaires were administered at the NGH, and 160 were returned (response rate 67.8%).

The two studies were performed during December 2013 to January 2014 and August to October 2015 respectively.

2.3. Statistical analysis

Continuous variables were expressed as means [standard deviation (SD)], and categorical variables were expressed as frequencies and percentages. Differences in gender or age were tested using χ^2 test or Fisher's exact test if sample size was small. Statistical analysis was performed using the statistical software IBM SPSS, Chicago, SPSS Inc. statistics (version 21.0). A p value <0.05 was considered statistically significant.

2.4. Ethics approval

Approvals for the two studies were obtained from both the Directors of Medical Services and Nursing Services, from the Scientific Committee of the Ministry of Health, from the Commissioner for Personal Data Protection and from the National Bioethics Committee of Cyprus (EC 2013.01.105 and EC 2014.01.137).

3. Results

3.1. Reliability of LIPT instrument

Test–retest reliability expressed by Pearson correlation coefficient (r) yielded a value of 0.98 indicating excellent reproducibility [24,25]. The overall reliability of LIPT instrument expressed by Cronbach α was 0.87 suggesting high internal consistency for the translated in Greek instrument [26].

3.2. Characteristics of the study sample

The majority of participants were women (71.4%), and physicians represented 34.6% of the study population. Mean age for the total sample was 43.3 years (SD = 10.1 years). Health-care professionals working at the NGH were significantly younger than those working at PHCCs (mean age for those working at the NGH was 39.2 ± 10.1 years vs. 48.5 ± 7.5 years for those working at PHCCs respectively, $p < 0.001$). A statistically significant difference was also found among participants in regard to the mean length of employment. Health-care professionals working at the NGH worked for significantly fewer years than those working at the PHCCs (mean job tenure was 12.3 ± 9.5 years for those working at the NGH vs. 18.1 ± 7.7 years for those working at PHCCs, $p < 0.001$).

Demographic characteristics of the study population are shown in Table 1.

3.3. Prevalence of workplace bullying among participants

Among the total sample of the study, 135 employees (45.6%) were exposed to at least one bullying behavior at work within the previous 12 months, whereas 9.9% were exposed to at least one bullying behavior at least once weekly within the previous 12 months. When Leymann's definition [1] was applied, 5.9% of the study participants reported exposure to at least one bullying behavior at least once weekly and for at least 6 months. The prevalence of workplace bullying among health-care professionals working at the NGH was 3.3% whereas among those working at the PHC setting was 8.8%, a finding that was not statistically significant ($p = 0.077$). When the definition of Niedhammer et al [13] was applied, 31.4% and 26.3% of employees working at the NGH and PHCCs, respectively, reported exposure in hostile behaviors at their workplace within the previous 12 months.

The mean of reported bullying duration among health-care professionals working at the NGH was 4.7 ± 6.1 years, whereas for those employed at the PHC setting the mean bullying duration was 2.4 ± 4.2 years ($p = 0.086$). Mean number of perpetrators against the victims was 1.6 ± 1.2 for those working at the NGH and 2.3 ± 1.1

Table 1
Characteristics of the study population ($N = 296$).

| Characteristic | PHCCs ($N = 136$) | NGH ($N = 160$) | Total ($N = 296$) |
|-------------------------------------|---------------------|-------------------|---------------------|
| | n (%) | n (%) | n (%) |
| Gender | | | |
| Male | 23 (16.9) | 61 (38.6) | 84 (28.6) |
| Female | 113 (83.1) | 97 (61.4) | 210 (71.4) |
| Age (years) | | | |
| ≤ 30 | 1 (0.8) | 32 (20.9) | 33 (12.0) |
| 31–45 | 43 (35.0) | 79 (51.6) | 122 (44.2) |
| 46–59 | 70 (56.9) | 38 (24.8) | 108 (39.1) |
| ≥ 60 | 9 (7.3) | 4 (2.6) | 13 (4.7) |
| Family status | | | |
| Married | 107 (79.3) | 103 (65.6) | 210 (71.9) |
| Unmarried | 13 (9.6) | 45 (28.7) | 58 (19.8) |
| Divorced | 11 (8.1) | 7 (4.5) | 18 (6.2) |
| Widowed | 4 (3.0) | 2 (1.3) | 6 (2.1) |
| Profession | | | |
| Physician | 44 (32.4) | 42 (26.8) | 86 (34.6) |
| Registered nurse | 50 (36.8) | 115 (73.2) | 165 (65.7) |
| Administrative staff | 25 (18.4) | 0 (0) | 25 (8.4) |
| Cleaner | 17 (12.5) | 0 (0) | 15 (5.7) |
| Professional position | | | |
| Senior medical officer | 6 (6.6) | 5 (3.1) | 11 (4.4) |
| Medical officer | 40 (44.0) | 40 (25.2) | 80 (32.0) |
| Chief nurse | 2 (2.2) | 13 (8.2) | 15 (6.0) |
| Senior nurse | 13 (14.3) | 17 (10.7) | 30 (12.0) |
| Nurse | 30 (33.0) | 84 (52.8) | 114 (45.6) |
| Education | | | |
| College/university graduate | 55 (43.0) | 93 (59.3) | 148 (60.7) |
| Master | 28 (21.1) | 63 (40.1) | 91 (37.2) |
| Ph.D. | 4 (3.1) | 1 (0.6) | 5 (2.1) |
| Exposure to mobbing behavior | | | |
| Daily/almost daily | 10 (7.4) | 10 (6.3) | 20 (6.8) |
| At least once per week | 6 (4.4) | 4 (2.5) | 10 (3.4) |
| At least once per month | 7 (5.1) | 17 (10.6) | 24 (8.1) |
| Rarely | 24 (17.6) | 42 (26.3) | 66 (22.3) |

NGH, Nicosia General Hospital; PHCCs, primary health-care centers.

for those working at PHCCs, a finding of statistical significance ($p = 0.023$).

3.4. Bullying behaviors and frequency of exposure to workplace bullying

The five most common mobbing behaviors reported among the study population were the following: “being continuously interrupted” (17.2%); “continuously being given new work assignments” (13.5%); “being gossiped” (11.8%); “being exposed to slanders and lies” (10.5%); and “being criticized regarding work assignments” (9.5%). Statistically significant difference was found among health-care professionals working at the NGH and PHCCs for two of the 45 mobbing behaviors, namely: “not being talked to” and “not being given any work assignments at all”. Both of the above behaviors were more frequent among health-care professionals working at the NGH in comparison to those working at the PHC setting (9.4% vs. 2.2%, $p = 0.010$ and 3.1% vs. 0%, $p = 0.038$, respectively). Two mobbing behaviors that were more commonly reported by nurses than physicians namely: “physical presence being ignored among others” and “continuously being given new work assignments” reached statistical significance (8.5% vs. 1.2%, $p = 0.020$ and 17.6% vs. 3.5%, $p = 0.001$, respectively). In regard to gender and exposure to a mobbing behavior, men reported “being exposed to irritating gestures or looks” more often than women, a finding that was statistically significant (10.7% vs. 4.3%, $p = 0.038$). On the other hand, women reported “not being talked to” more often than men, another finding of statistical significance (8.1% vs. 1.2%, $p = 0.026$). Prevalence of exposure to each of the 45 bullying behaviors among study participants within the previous 12 months is shown in Table 2.

There were no statistically significant differences between educational background, marital status, or formal position and exposure to any of the 45 hostile behaviors. As shown in Table 3, women were exposed to at least one mobbing behavior more often than men within the previous 12 months, a finding which was statistically significant (49% vs. 35.7%, $p = 0.038$). When Leymann’s definition was applied, although women were more frequently exposed to at least one mobbing behavior at least once weekly and for at least six months (7.4%) as compared with men (2.4%), this finding did not reach statistical significance ($p = 0.112$). Employees who were 30 years and younger were exposed to at least one mobbing behavior within the previous 12 months more frequently than those who were 31–45 years and 46 years and older (62.5% vs. 47.2% and 38%, respectively) which was statistically significant ($p = 0.037$). Nurses were more frequently exposed to at least one mobbing behavior as compared to physicians, another statistical significant finding (53.3% vs. 31.4%, $p = 0.004$). In addition, chief and senior nurses were significantly less commonly exposed to bullying behaviors in comparison with junior nurses (33.3% and 46.7% vs. 56.1%, $p = 0.017$).

Among the total study population, 55.2% reported current exposure to mobbing behaviors at their present work (52.9% for those working at the NGH vs. 58.7% for those working at PHCCs, $p = 0.779$). Superiors were most commonly recognized as mobbers between participants (57.5%). Health-care professionals working at the NGH and employees working at the PHC setting reported that they experienced hostile behaviors mostly by their superiors (58.3% vs. 55.9%, respectively). In regard to the gender of perpetrators, women were more frequently pointed out as mobbers as compared with men, a finding with no statistical significance (69.1% vs. 19.8%, $p = 0.147$). Health-care professionals working at the NGH reported discussing their exposure to workplace bullying with a colleague at a percentage of 67.7% whereas 30.6% discussed about the issue with

members of their family. Respective percentages for health-care professionals working at PHCCs were 63.4% and 43.9%.

When applying the definition of mobbing as proposed by Niedhammer et al [13], 29.3% of the study participants answered positively regarding exposure to hostile behaviors within the last 12 months (31.4% of those working at the NGH and 26.3% of those working at PHCCs, respectively). The most common causes responsible for the exposure to hostile behaviors for health-care professionals working at the NGH were “problems in the management and professional position” (33.3%) followed by “a generally bad working environment” (31.3%) and “an inadequate work organization” (29.2%) as well as “jealousy” (29.2%). As for those working at PHCCs, “inadequate work organization” was responsible for 43.3% of the causes leading to hostile behaviors, followed by “problems in the management and professional position” (40%) and “a generally bad working environment” (33.3%) as well as “competitive behaviors between employees” (33.3%).

3.5. Observers of workplace bullying

Respondents reported that they became observers of bullying behaviors against another employee during the previous year at a percentage of 43.4%. Health-care professionals working at the NGH observed one or more of their colleagues being bullied more often than those working at PHCCs (52.2% vs. 31.4%), a finding that was statistically significant ($p = 0.001$). Younger employees witnessed hostile behaviors significantly more than employees of older age. As shown in Table 4, those of 30 years and less were observers of bullying at work at a percentage of 75% in comparison to those aged 31–45 years and 46 years and older (45.5% and 35.1%, respectively, $p < 0.001$). Nurses reported witnessing bullying significantly more frequently in comparison to physicians (50.3% vs. 38.1%, $p = 0.035$). Employees working for 6–10 years witnessed mobbing behaviors more frequently than those working for 5 years and less and those who had more than 10 years at work, another finding of statistical significance. Relevant percentages were 58%, 51.9%, and 36.7%, respectively, ($p = 0.011$).

4. Discussion

This was the first study carried out in Cyprus addressing psychological violence otherwise known as “mobbing syndrome” or “workplace bullying” among health-care professionals working at the public health-care sector. This study developed the Greek version of LIPT questionnaire from the French version of the instrument [14]. It also measured the prevalence of mobbing syndrome among health-care professionals by measuring exposure to 45 hostile behaviors at work within the previous 12 months as well as the frequency and duration of mobbing. The Greek version of LIPT showed very good psychometric properties with high reproducibility (Pearson correlation coefficient = 0.98) and high internal consistency reliability according to Cronbach α coefficient (0.87). This is consistent with previous studies that also showed high internal consistency reliability (0.93–0.97 in Cronbach α coefficient) for LIPT instrument [15,27].

Although workplace bullying is a particularly sensitive topic, overall response rate in the present study was high (73.4%) as compared with the results of other studies that ranged from 38.5% to 68% [13,28–30].

4.1. Prevalence and duration of workplace bullying

According to Leymann’s definition [1], those who reported exposure to at least one of 45 bullying behaviors within the previous 12 months, weekly or more, and for 6 months or longer were

Table 2

Prevalence of exposure to each of the 45 mobbing behaviors among the study population during the last 12 months (N = 296).

| Mobbing behavior | PHCCs (N = 136) | NGH (N = 160) | Total (N = 296) |
|---|-----------------|---------------|-----------------|
| | n (%) | n (%) | n (%) |
| 1. Being silenced by superior | 7 (5.1) | 8 (5) | 15 (5.1) |
| 2. Being continuously interrupted | 19 (14) | 32 (20) | 51 (17.2) |
| 3. Being silenced by others | 12 (8.8) | 8 (5) | 20 (6.8) |
| 4. Being scolded and yelled | 7 (5.1) | 6 (3.8) | 13 (4.4) |
| 5. Being criticized regarding work assignments | 14 (10.3) | 14 (8.8) | 28 (9.5) |
| 6. Private life being criticized by others | 1 (0.7) | 1 (0.6) | 2 (0.7) |
| 7. Being terrorized by means of phone calls | 1 (0.7) | 1 (0.6) | 2 (0.7) |
| 8. Receiving verbal threats | 12 (8.8) | 8 (5) | 20 (6.8) |
| 9. Receiving written threats | 0 (0) | 1 (0.6) | 1 (0.3) |
| 10. Being exposed to irritating gestures/looks | 6 (4.4) | 12 (7.5) | 18 (6.1) |
| 11. Physical presence ignored, addressing only others | 7 (5.1) | 11 (6.9) | 18 (6.1) |
| 12. Not being talked to | 3 (2.2) | 15 (9.4) | 18 (6.1) |
| 13. Not being allowed to physically contact others | 4 (2.9) | 2 (1.3) | 6 (2.0) |
| 14. Being isolated from others at work | 7 (5.1) | 2 (1.3) | 9 (3.0) |
| 15. Conversation with colleagues is forbidden | 3 (2.2) | 1 (0.6) | 4 (1.4) |
| 16. Physical presence being ignored among others | 8 (5.9) | 10 (6.3) | 18 (6.1) |
| 17. Being addressed only in written ways | 3 (2.2) | 1 (0.6) | 4 (1.4) |
| 18. Not being given any work assignments at all | 0 (0.0) | 5 (3.1) | 5 (1.7) |
| 19. Being given meaningless work assignments | 8 (5.9) | 16 (10) | 24 (8.1) |
| 20. Being given work assignments far below capacity | 5 (3.7) | 10 (6.3) | 15 (5.1) |
| 21. Continuously being given new work assignments | 19 (14.0) | 21 (13.1) | 40 (13.5) |
| 22. Being given humiliating work assignments | 1 (0.7) | 3 (1.9) | 4 (1.4) |
| 23. Being given difficult work assignments far above capacity | 1 (0.7) | 2 (1.3) | 3 (1.0) |
| 24. Being gossiped | 16 (11.8) | 19 (11.9) | 35 (11.8) |
| 25. Being exposed to slanders and lies | 13 (9.6) | 18 (11.3) | 31 (10.5) |
| 26. Being ridiculed | 2 (1.5) | 2 (1.3) | 4 (1.4) |
| 27. Being said to have a mental illness | 1 (0.7) | 2 (1.3) | 3 (1.0) |
| 28. Being forced to go through psychiatric exams | 0 (0.0) | 0 (0) | 0 (0.0) |
| 29. Being mocked due to a handicap that you have | 2 (1.5) | 4 (2.5) | 6 (2.0) |
| 30. Voice, gestures, and way of moving are imitated to tease | 1 (0.7) | 2 (1.3) | 3 (1.0) |
| 31. Suffering verbal attacks regarding political and religious beliefs | 4 (2.9) | 1 (0.6) | 5 (1.7) |
| 32. Being teased due to ethnic background | 0 (0.0) | 2 (1.3) | 2 (0.7) |
| 33. Being forced to do work assignments which are against your conscious | 2 (1.5) | 5 (3.1) | 7 (2.4) |
| 34. Being judged for your work in an injustice and humiliating way | 7 (5.1) | 8 (5.0) | 15 (5.1) |
| 35. Your decisions are questioned by others | 8 (5.9) | 11 (6.9) | 19 (6.4) |
| 36. Being reviled using obscene or degrading terms | 1 (0.7) | 4 (2.5) | 5 (1.7) |
| 37. Being sexually threaten | 0 (0.0) | 3 (1.9) | 3 (1.0) |
| 38. Being given dangerous work assignments for your health | 6 (4.4) | 9 (5.6) | 15 (5.1) |
| 39. Despite your bad health you are forced to do work assignments that hurt your health | 4 (2.9) | 4 (2.5) | 8 (2.7) |
| 40. Being physically threaten | 0 (0.0) | 0 (0.0) | 0 (0) |
| 41. Being physically threatened in the form of mild violence as a warning | 3 (2.2) | 0 (0.0) | 3 (1.0) |
| 42. Being physically attacked | 0 (0.0) | 0 (0.0) | 0 (0.0) |
| 43. Being forced to spend big sums of money | 1 (0.7) | 1 (0.6) | 2 (0.7) |
| 44. Workplace or home is damaged by others | 1 (0.7) | 0 (0.0) | 1 (0.3) |
| 45. Being sexually attacked | 0 (0.0) | 1 (0.6) | 1 (0.3) |

NGH, Nicosia General Hospital; PHCCs, primary health-care centers.

defined as victims of bullying. In the present study, 5.9% of respondents reported that they had been subjected to workplace bullying according to Leymann's definition [1]. In Sweden, the use of LIPT instrument recorded a prevalence of mobbing syndrome of 3.5% [1], whereas among French men and women its prevalence reached 11% and 12.8%, respectively [14]. According to Carnero et al [17], the prevalence of workplace bullying among workers in Spain was 4.5%, whereas among Japanese civil servants, the prevalence of mobbing was 4.1% [27]. According to the results of a Finnish study, the prevalence of psychological violence varied between 5% and 20% depending on the organization, reaching 5% among hospital employees [31]. In other Scandinavian studies, the prevalence of

mobbing behaviors among hospital staff and nurses ranged between 3% and 5% [3,32,33]. In a British survey comprising of 5,288 employees from 70 different organizations, it was found that 10.6% had experienced bullying during the last 6 months [34]. In the Netherlands, results varied between 1% and 12.4% depending on the type of profession studied [35].

In the present study, mean reported bullying duration was 3.4 years (SD = 5.2). In addition, this study showed that 55.2% of participants who were mobbed at work within the previous 12 months, reported regular exposure to hostile behaviors at their present job confirming that persistence and recurrence are main features of bullying [31]. Results of other studies showed that mean

Table 3

Exposure to at least one mobbing behavior within the previous 12 months among the study population ($N = 296$).

| Characteristic | No | Yes | χ^2 test | p |
|------------------------------|------------|------------|---------------|--------|
| | n (%) | n (%) | | |
| Gender | | | 4.306 | 0.038* |
| Male | 54 (64.3) | 30 (35.7) | | |
| Female | 107 (51.0) | 103 (49.0) | | |
| Age (years) | | | 6.576 | 0.037* |
| ≤30 | 12 (37.5) | 20 (62.5) | | |
| 31–45 | 65 (52.8) | 36 (47.2) | | |
| ≥46 | 75 (62.0) | 58 (38.0) | | |
| Family status | | | 4.128 | 0.127 |
| Married | 122 (58.1) | 88 (41.9) | | |
| Single | 25 (43.1) | 33 (56.9) | | |
| Divorced/widowed | 13 (54.2) | 11 (45.8) | | |
| Profession | | | 13.187 | 0.004* |
| Physician | 59 (68.6) | 27 (31.4) | | |
| Registered nurse | 77 (46.7) | 88 (53.3) | | |
| Administrative staff | 12 (48.0) | 13 (52.0) | | |
| Cleaner | 12 (70.6) | 5 (29.4) | | |
| Formal position | | | 12.049† | 0.017* |
| Senior medical officer | 8 (72.7) | 3 (27.3) | | |
| Medical officer | 53 (66.3) | 27 (33.8) | | |
| Chief nurse | 10 (66.7) | 5 (33.3) | | |
| Senior nurse | 16 (53.3) | 14 (46.7) | | |
| Nurse | 50 (43.9) | 64 (56.1) | | |
| Education | | | 6.893 | 0.142 |
| Elementary/primary/secondary | 25 (61.0) | 16 (39.0) | | |
| College/university | 73 (49.3) | 75 (50.7) | | |
| Master/Ph.D. | 59 (61.5) | 37 (38.5) | | |
| Tenure (years) | | | 5.995 | 0.049* |
| ≤5 | 21 (39.6) | 32 (60.4) | | |
| 6–10 | 32 (57.1) | 24 (42.9) | | |
| ≥11 | 104 (58.4) | 74 (41.6) | | |

* $p < 0.05$.

† Fisher's exact test.

Table 4

Observers of workplace bullying within the previous 12 months among the study population ($N = 296$).

| Characteristic | No | Yes | χ^2 test | p |
|------------------------------|------------|-----------|---------------|--------|
| | n (%) | n (%) | | |
| Gender | | | 1.247 | 0.264 |
| Male | 41 (51.3) | 39 (48.8) | | |
| Female | 116 (58.6) | 82 (41.4) | | |
| Age (years) | | | 16.021 | 0.000* |
| ≤30 | 8 (25.0) | 24 (75.0) | | |
| 31–45 | 66 (54.5) | 55 (45.5) | | |
| ≥46 | 72 (64.9) | 39 (35.1) | | |
| Family status | | | 13.355 | 0.001* |
| Married | 120 (60.3) | 79 (39.7) | | |
| Single | 20 (35.7) | 36 (64.3) | | |
| Divorced/widowed | 16 (72.7) | 6 (27.3) | | |
| Profession | | | 8.610 | 0.035* |
| Physician | 52 (50.0) | 32 (38.1) | | |
| Registered nurse | 80 (49.7) | 81 (50.3) | | |
| Administrative staff | 13 (72.2) | 5 (27.8) | | |
| Cleaner | 11 (78.6) | 3 (21.4) | | |
| Formal position | | | 6.106† | 0.191 |
| Senior medical officer | 6 (54.5) | 5 (45.5) | | |
| Medical officer | 46 (59.0) | 32 (41.0) | | |
| First nurse | 6 (40.0) | 9 (60.0) | | |
| Senior nurse | 21 (70.0) | 6 (30.0) | | |
| Nurse | 54 (49.1) | 56 (50.9) | | |
| Education | | | 10.770 | 0.030* |
| Elementary/primary/secondary | 25 (75.8) | 8 (24.2) | | |
| College/university | 72 (50.3) | 71 (49.7) | | |
| Master/Ph.D. | 55 (58.5) | 39 (41.5) | | |
| Tenure (years) | | | 8.968 | 0.011* |
| ≤5 | 25 (48.1) | 27 (51.9) | | |
| 6–10 | 21 (42.0) | 29 (58.0) | | |
| ≥11 | 107 (63.3) | 62 (36.7) | | |

* $p < 0.05$.

† Fisher's exact test.

duration of psychological violence varied from 15 months to 2.7 years, [1,3,28]. According to Niedhammer et al [13], 76.4% of those being bullied at work reported that they were currently exposed to mobbing behaviors. Another study from Canada which included nurses working in hospitals [36] showed that 49% of participants were currently exposed to hostile behaviors at their workplace.

4.2. Prevalence of bullying behaviors

The most common mobbing behaviors identified in this study, were “being continuously interrupted” (17.2%), “continuously being given new work assignments” (13.5%), “being gossiped” (11.8%), and “being exposed to slanders and lies” (10.5%). It is important to note that the above mobbing behaviors include both work-related as well as nonwork-related items suggesting that workplace bullying is a complicated phenomenon [31]. According to Niedhammer et al [14], in a large sample of 7,694 French employees from different organizations, the most common mobbing behaviors were “being gossiped” (17%) followed by “being criticized regarding work assignments” (12.1%) and “physical presence being ignored among others” (11.3%). In the study performed by Côté and St-Pierre among nurses in Canada [36], the most common mobbing behaviors were “being gossiped” (34.1%), “receiving verbal threats” (26.8%), and “being exposed to irritating gestures/looks” (24.4%). According to the results of Salin [28], respondents reported that they were given tasks clearly below their level of competence

(13.7%), that they were given tasks with impossible targets and deadlines (5.3%), and that they were being ignored or excluded (2.1%). In addition, in a British study, participants reported that they were being given tasks with impossible targets or deadlines, that their opinions and views were ignored, and that they were being given work below their level of competence [4].

4.3. Workplace bullying in relation to gender and formal position

Findings from several studies indicate that just as many men as women are subjected to bullying [34,37–39]. Also the type of position a person holds within an organization seems to make a difference between the two genders with regard to bullying. A survey of Finnish employees showed that even though the percentage of men and women who were bullied was approximately the same, women superiors were being bullied significantly more than their male counterparts [28]. In the present study, men and women were equally bullied when Leymann's definition was applied ($p = 0.147$). However, women were significantly more frequently exposed to at least one mobbing behavior within the previous year as compared to their male counterparts (49% vs. 35.7%, $p = 0.038$). According to Salin [28], 11.6% of female respondents were significantly more exposed to bullying at least occasionally in comparison with 5% of male.

Regarding the formal position of perpetrators in the present study, superiors were pointed out as mobbers by 57.5% of the

overall study population. It might be assumed that professionals who have less power could be in a more vulnerable position for exposure to bullying behaviors. Most studies have shown that colleagues act more commonly as bullies. According to Einarsen et al [40], 50% from a large sample of Norwegian employees rated coworkers as the bullies, whereas 40% reported their immediate supervisor as the persecutor. Similar findings were reported by Carnero et al [17] in a Spanish study in which 40% and 25% of the victims identified colleagues and their superior, respectively, as their mobbers. Among nurses in Canada [36], colleagues were identified as bullies at a percentage of 59.5% followed by superiors (51%). In our study, colleagues were reported as bullies at a high percentage among employees that reached 52.8%. The restructuring of the public health-care sector in Cyprus as a result of the economic recession during the last 4 years has led to downsizing practices and to early retirement of a considerable number of employees. As a result, high pressure and competition among the remaining health-care professionals could be possible causes of hostile behaviors among colleagues.

Another interesting finding of this study was that 9.4% of participants reported that they were bullied by their subordinates, indicating that a managerial position does not guarantee protection from bullying. This was also shown by Vartia [41] and Salin [28] who found that 4% and 9% of the victims, respectively, were bullied by subordinates. According to Carnero et al [17] and Côté and St-Pierre [36], employees were bullied by subordinates at a percentage of 7.3% in Spain and 13.5% in Canada, respectively. The above findings suggest that the lack of a firm leadership contributes to the manifestation of mobbing behaviors from all the levels of the hierarchy ladder of the organization [40].

In the present study, women were more frequently pointed out as mobbers as compared with men (69.1% vs. 19.8%), a finding however of no statistical significance. Similar results were reported by Côté and St-Pierre [36] among nurses in Canada who recognized women as bullies at a percentage of 69.7% whereas respective percentage for men was 3%. Another noteworthy finding of this study was that nurses of lower hierarchical position experienced considerably more bullying than nurses of higher positions in the hierarchy (56.1% vs. 46.7% and 33.3%, respectively), which was statistically significant ($p = 0.017$). Similar findings were reported by Salin [28], who found that employees of lower hierarchical position in the public sector were exposed to more bullying behaviors than those in higher formal positions. The literature has shown that senior nurses usually bully junior nurses [42] in the context of the managerial and bureaucratic focus within health-care organizations [43]. As nursing activities are constantly under surveillance, closely monitored, and scrutinized, nurses experience multiple stressors at their everyday work that predispose to their exposure to aggression and violence [44].

4.4. Observers of workplace bullying

In the present study, 43.4% of all respondents reported that they had witnessed bullying within the previous 12 months. Those who witnessed workplace bullying against another employee were significantly younger, single, and worked for 6–10 years at the organization. Nurses witnessed bullying against another employee more commonly in comparison to physicians, a finding of statistical significance (50.3% vs. 38.1%, $p = 0.035$). According to the study of Einarsen et al [40], among 2,023 employees, a percentage of 13% reported witnessing bullying during the last 6 months. Several other studies have shown that bullying was witnessed at rates ranging between 30% and 70% [28,32,45,46].

4.5. Limitations

An important limitation of the study was related with the limited sample size that did not allow for factor-based validity including Exploratory Factor Analysis because of the lack of variance in some questions. This weakness can be transcended by further surveys involving large numbers of employees from the public health-care sector as well as from other organizations. However, the use of standardized procedures for the translation and cultural adaptation of the LIPT instrument and the high response rate of participants are noteworthy strengths of the study.

Furthermore, the study was performed in Nicosia area where the largest public hospital is located and where primary health-care services are very well organized with the largest number of PHCCs. However, results cannot be generalized as employees from other hospitals and PHCCs at other districts of the island could yield different results. A more extensive survey with the participation of the entire public health-care sector would be of particular value to gain further insight at this important workplace phenomenon among health-care professionals. Another limitation of the study was that it was conducted in selected departments of the NGH because of the extensive workload reported and the resulting unwillingness to participate in the study; therefore, results should be interpreted with caution as mobbing among health-care professionals working at the hospital setting may not reflect the actual situation. It can be argued however that the number of employees from the participating clinics is a representative sample of health-care professionals working in the hospital setting.

A further limitation of the study is the overrepresentation of women in comparison to men. This could be an argument for the hospital setting where certain clinics (mostly surgical specialties) are male dominated and therefore different results could be yielded if more men were included in the study. Regarding the PHC setting, women comprised 83.1% of the study population. It should be stated however that in Cyprus PHC services are female dominated, and therefore results are representing the actual situation of exposure to bullying behaviors among participants.

5. Conclusion

The psychometric properties of the Greek translated LIPT questionnaire showed that it is a reliable tool for the measurement of the prevalence and forms of workplace bullying among health-care professionals. Prevalence of workplace bullying is an existing reality in the public health-care sector of Cyprus. Women, nurses, younger age, and lower position in the ladder of hierarchy have been identified as important predisposing factors for the manifestation of workplace bullying. The study also revealed that psychological violence at work is an ongoing process. Further research is needed to examine the relationship between workplace bullying and different aspects of the work environment quality (including role conflict and role ambiguity, person–organization fit, and leadership) as well as personality traits of both the bully and the victim.

Conflicts of interest

The authors declare that they have no conflicts of interest.

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