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### Knowledge of MERS-Corona Virus among Female Students at Qatar University

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#### Abstract

Middle East Respiratory Syndrome (MERS) is a severe, acute respiratory illness caused by Corona Virus (CDC, 2015). Globally, there are 1599 cases diagnosed with MERS Corona virus and at least 574 related death cases were reported in the year 2012 (WHO, 2015). In Qatar, a total of 17 cases were reported between November 2013–May 2015 (WHO, 2015). The routes of transmission of MERS-COV includes direct contact with an infected person, touching contaminated objects or surfaces then touching your mouth, nose or eyes and direct contact with infected camels. A study in Qatar showed that MERS-COV was detected in 3 camels out of 14 from nose swabs taken from these camels. It also showed that the virus fragments were similar to what was found in two human cases from the same farm (Haagmans et al., 2014). Another study was conducted at Al-Shahaniya-Qatar in 2014 confirmed the presence of MERS-CoV in the milk of five camels. This explains that camels are a source of transmission of MERS-COV in the State of Qatar (Reusken et al., 2014). The purpose of this study is to examine knowledge of MERS-CoV transmission, symptoms and prevention techniques among female students at Qatar University, and further evaluate the effect of an awareness event organized by the Public Health Program. Participants (N= 33) were female students at Qatar University aged from 18–26 years old. Public health students designed a survey to test the knowledge of MERS-CoV transmission, symptoms and prevention techniques among female students at Qatar University. A pre-test survey was distributed in an awareness event of MERS-CoV that was held on the 19th of November 2015 at the college of Arts and Sciences. The survey included questions about demographics such as age, college, and nationality. It also included five questions to examine the level of knowledge about transmission routes for the virus, symptoms associated with the infection, the prevention techniques and the preferred strategy to be educated about the disease among students. Later, participants attended activities organized by public health students to be educated about

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MERS-CoV. They were exposed to epidemiological facts through distributed flyers and screen slides. The transmission routes were explained to the students using a creative and meaningful poster. Moreover, students were informed about the symptoms by another poster and a demonstration of MERS-CoV model. The prevention techniques regarding MERS-CoV were also explained through a poster and attractive, colorful brochures. The same recipients answered same questions as a post-test to measure changes in knowledge about MERS-CoV. For the analysis, SPSS software was used to analyze the pre- and post-test data. The McNemar's Test was used to compare the pre- and post-test results. P-value less than 0.05 was considered to be significant. The results showed the percentage of recipients aged (18–20) years and (21–23) years was the same (45.5%) for both age groups. The majority of the recipients were from the college of Science (57.6%); however, neither was from the college of Medicine nor the college of Law. Moreover, due to the high diversity in Qatar University, students from different nationalities participated in our survey such as, Qatari, Gulf countries, Egyptian, Palestinian, Iranian, Jordanian, Sudanese, Pakistani and Others. Most of the students were Qatari (21.2%), whereas Iranian and Pakistani had the lowest number of recipients (3.0%), (see Table 1). The results showed that prior to the educational event, the majority of the recipients thought that they didn't have enough knowledge about MERS-Corona Virus (54.5%). However, after the event, the majority agreed that they have enough knowledge about MERS-CoV, McNemar's Test ( $P=0.000$ ). In addition, the findings regarding transmission routes showed that the majority of recipients didn't know any of the transmission routes (33.3%), on the other hand, after the event 78% of the recipients were aware of all the transmission routes, McNemar's Test ( $P=0.000$ ). The next result showed that, most recipients knew about the symptoms associated with MERS-Corona Virus in pretest (51.5%), additively, the majority showed that they knew about these symptoms, but their knowledge improved compared to pre-test (90.9%), McNemar's Test ( $P=0.001$ ). When it comes to prevention, most recipients chose washing hands as preventive methods (33.3%) in pretest. However, the results after the event showed that recipients were aware of all of the preventive methods, but without statistical significance, McNemar's Test ( $P=0.424$ ). Finally, the pretest regarding the best educational methods showed that all the strategic methods were effective to educate about MERS-Corona Virus (75.8%). The percentage increased in the post-test (84.4%) but without statistical significance, McNemar's Test ( $P=0.375$ ) (see Table 2). Future research should focus more on comprehensive educational interventions that are needed to facilitate adoption of precautions associated with MERS-COV, and more follow up studies to see if these educational interventions promote changes in knowledge and behavior of students.

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