



Adverse Effects of COVID-19 Vaccination among Students of a Medical institute in Central India:

An Observational study

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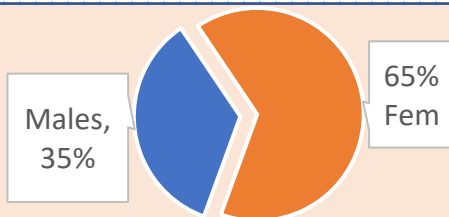
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Introduction: Healthcare workers were among the first to receive Covid vaccine in India. India embarked on Covid vaccination drive from 16th January 2021 & since then along with fear of Covid, the concurring infodemic added fear and hesitancy towards the Covid vaccine among the public – educated & uneducated alike.

Objective: 1. To document actual adverse effects experienced by the vaccine beneficiaries at our institute.
2. To explore distribution of side-effects on basis of gender

Methods: This was a Cross sectional study conducted among medical students of Jawaharlal Nehru Medical college, DMIMS [DU]. Data collection was done from February -July 2021. A Self-administered questionnaire was drafted after referring to relevant literature like WHO guidelines and MoHFW factsheet on Covid vaccines and AEFI. All the Medical students who received their vaccination from the Covid Vaccination Centre run in our institute were contacted electronically & 317 completed responses were recorded during the duration of the study.

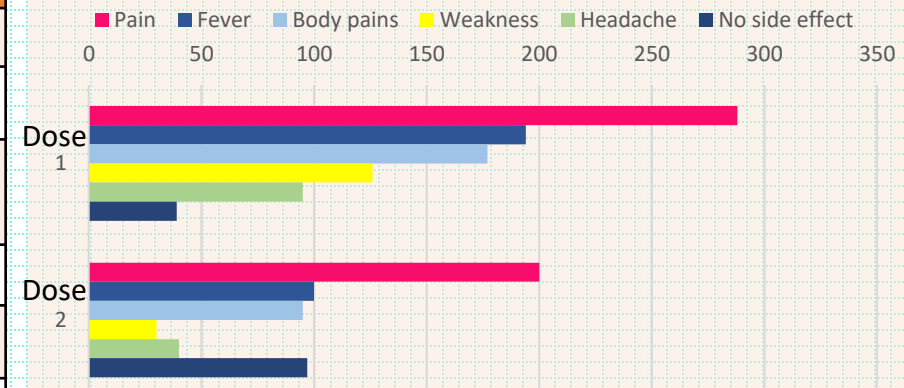
Gender-wise distribution of participants



Frequency of side effects; Gender wise

Adverse events	No. of Students reporting the effect		In Total(n=317)	Odds(95%CI)
	Male(n=111)	Female(n=206)		
Injection site pain/ Tenderness	89(80%)	199(96.6%)	288(90.5%)	1.115
Injection site irritation/itching	7(6.3%)	6(2.9%)	13(4%)	0.969
Injection site bruising	1(0.9%)	8(3.8%)	9(2.8%)	0.150 (0.006-1.070)
Painful single limb swelling	1(0.9%)	3(1.4%)	4(1.3%)	0.396 (0.014-4.056)
Feverishness	55(50%)	139(67.4%)	194(61.2%)	0.4633 (0.228-0.945)
Fever with Chills	40(36%)	93(45.14%)	133(41.9%)	0.501 (0.503-0.240)
Fatigue/ Tiredness	55(49.3%)	80(38.8%)	135(42.6%)	0.803 (0.389-1.66)
Malaise / Weakness	39(35.1%)	87(42.2%)	126(39.4%)	0.525 (0.533-2.085)
Myalgia / Body pains	56(50.4%)	121(58.6%)	177(55.7%)	0.539 (0.269-1.092)
Nausea	5(4.6%)	17(8.2%)	23(7.1%)	0.343 (0.097-1.114)
Vomiting	9(0.8%)	11(5.3%)	20(6.3%)	0.955 (0.313-2.872)
Dizziness	5(4.4%)	32(15.5%)	37(11.6%)	0.182 (0.3601-0.160)
Headache	27(24.3%)	68(33%)	95(30%)	0.463 (0.214-1.001)
Palpitation/Anxiety	1(0.9%)	8(3.9%)	9(2.8%)	0.291 (0.029-2.851)
Chest pain	1(0.9%)	0	1(0.3%)	-
No Side effects	18(16.2%)	21(10.1%)	39(12.3%)	-

Tracking Side effects along doses



Results: Nearly all of the participants (91%) reported considerable pain at injection site after receiving the vaccination jab. 61% of the participants feverishness & ~42% had fever with chills. Headache was observed in 30% of the participants & ~3% reported mild anxiety following vaccination. There was no significant variation seen in adverse-effects due to gender.

Conclusion: Pain at injection site, Fever & Body pains were most commonly observed adverse-effects in both males and females. While 88% of participants had some side effects following the first dose, only 64% of participants reported side effects even after second dose.