

Differences between the experimental and control groups regarding the NKLM learning objectives

(Part 1)

NKLM learning objectives	Group	N	M _{pre} (SD _{pre})	M _{post} (SD _{post})	Difference
Ability to hold professional consultations and apply questioning techniques in manners appropriate to a given situation.	CG	13	1.9 (0.9)	1.8 (0.6)	F _{Time} (1)=0.48; p=0.49; η ² =0.01 F _{T*Gr} (1)=0.19; p=0.66; η ² =0.01
	EG	29	2.2 (0.7)	2.2 (0.5)	F _{Group} (1)=4.07; p=0.05; η ² =0.09
Ability to give and receive feedback.	CG	13	1.9 (0.7)	1.9 (0.6)	F _{Time} (1)=0.21; p=0.65; η ² =0.01 F _{T*Gr} (1)=0.21; p=0.65; η ² =0.01
	EG	29	2.0 (0.5)	1.9 (0.4)	F _{Group} (1)=0.70; p=0.41; η ² =0.02
Ability to adequately begin interaction with the patient during consultations.	CG	13	1.8 (0.6)	1.7 (0.6)	F _{Time} (1)=0.50; p=0.49; η ² =0.01 F _{T*Gr} (1)=0.01; p=0.92; η ² =0.00
	EG	29	2.1 (0.8)	2.0 (0.3)	F _{Group} (1)=3.66; p=0.06; η ² =0.08
Ability to record a structured patient history.	CG	13	2.2 (0.9)	2.0 (0.6)	F _{Time} (1)=14.26; p<0.0017; η ² =0.26 F _{T*Gr} (1)=6.25; p=0.02; η ² =0.14
	EG	29	2.9 (0.5)	2.1 (0.6)	F _{Group} (1)=4.67; p=0.04; η ² =0.11
Ability to write adequate doctor's letters.	CG	13	2.5 (1.0)	2.4 (0.8)	F _{Time} (1)=5.47; p=0.02; η ² =0.12 F _{T*Gr} (1)=3.71; p=0.06; η ² =0.09
	EG	29	3.7 (0.1)	2.9 (1.1)	F _{Group} (1)=9.94; p=0.003; η ² =0.20
Ability to create a plan for diagnostic and therapy together with the patient.	CG	13	2.9 (0.7)	2.5 (0.8)	F _{Time} (1)=7.11; p=0.01; η ² =0.15 F _{T*Gr} (1)=0.23; p=0.64; η ² =0.01
	EG	29	3.5 (1.0)	2.9 (0.8)	F _{Group} (1)=6.12; p=0.02; η ² =0.13
Ability to properly fill out a medical prescription.	CG	13	3.5 (0.9)	2.8 (1.4)	F _{Time} (1)=17.61; p<0.0017; η ² =0.31 F _{T*Gr} (1)=1.29; p=0.26; η ² =0.03
	EG	29	4.2 (1.4)	3.0 (1.2)	F _{Group} (1)=2.20; p=0.15; η ² =0.05
Ability to involve the relevant people in the treatment and determine their position.	CG	13	2.31 (1.0)	2.3 (0.6)	F _{Time} (1)=0.01; p=0.91; η ² =0.00 F _{T*Gr} (1)=0.01; p=0.91; η ² =0.00
	EG	29	2.52 (0.9)	2.5 (0.5)	F _{Group} (1)=0.93; p=0.34; η ² =0.02
Ability to recognize mistakes and address them up in an appropriate manner.	CG	13	2.31 (0.9)	2.1 (0.8)	F _{Time} (1)=1.76; p=0.19; η ² =0.04 F _{T*Gr} (1)=0.01; p=0.94; η ² =0.00
	EG	29	2.62 (0.7)	2.4 (0.9)	F _{Group} (1)=2.37; p=0.13; η ² =0.06
Ability to collaborate professionally, respectfully and efficiently with other medical disciplines.	CG	13	2.00 (0.8)	2.0 (0.7)	F _{Time} (1)=0.85; p=0.36; η ² =0.02 F _{T*Gr} (1)=0.85; p=0.36; η ² =0.02
	EG	29	2.59 (1.0)	2.2 (0.9)	F _{Group} (1)=3.15; p=0.08; η ² =0.07
Ability to communicate with other health professionals using appropriate terminology.	CG	13	2.08 (0.8)	1.7 (0.6)	F _{Time} (1)=5.68; p=0.02; η ² =0.12 F _{T*Gr} (1)=0.02; p=0.90; η ² =0.00
	EG	29	2.31 (0.9)	2.0 (0.4)	F _{Group} (1)=2.30; p=0.14; η ² =0.05
Ability to present case histories succinctly, clearly and in problem-oriented manner.	CG	13	2.46 (1.0)	1.8 (0.6)	F _{Time} (1)=13.17; p<0.0017; η ² =0.25 F _{T*Gr} (1)=1.48; p=0.23; η ² =0.04
	EG	29	0.66 (0.8)	2.3 (0.9)	F _{Group} (1)=2.56; p=0.12; η ² =0.06

Note: N: number of participants, M_{pre}: mean value for pre-measure, SD_{pre}: standard deviation for pre-measure, M_{post}: mean value for post-measure, SD_{post}: standard deviation for post-measure, CG: control group (final year students in the ambulatory care rotation without ambulatory care simulation), EG: experimental group (final year students in the ambulatory care rotation with ambulatory care simulation), F_{Time}: effect of time (comparison pre-post measures), F_{T*Gr}: interaction of time and group (intervention effect), F_{Group}: effect of group (general difference between CG and EG), Bonferroni alpha adjustment: p<0.0017. 1=completely agree, 2=mostly agree, 3=somewhat agree, 4=somewhat disagree, 5=mostly disagree, 6=completely disagree.

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Differences between the experimental and control groups regarding the NKLM learning objectives (Part 2)

NKLM learning objectives	Group	N	M _{pre} (SD _{pre})	M _{post} (SD _{post})	Difference
Ability to integrate health promotion and prevention as basic aspects of individual care.	CG	13	2.8 (0.9)	2.2 (0.8)	F _{Time} (1)=3.98; p=0.05; η ² =0.09 F _{T*Gr} (1)=6.24; p=0.02; η ² =0.14
	EG	29	2.7 (0.9)	2.7 (0.9)	F _{Group} (1)=0.80; p=0.38; η ² =0.02
Ability to suggest suitable measures to improve the patient's overall health.	CG	13	2.5 (1.0)	2.2 (0.8)	F _{Time} (1)=1.75; p=0.19; η ² =0.04 F _{T*Gr} (1)=1.22; p=0.28; η ² =0.03
	EG	29	2.5 (0.8)	2.5 (0.8)	F _{Group} (1)=0.27; p=0.60; η ² =0.01
Ability to identify resources for and resistance to such measures.	CG	13	2.6 (0.7)	2.23 (0.8)	F _{Time} (1)=5.44; p=0.03; η ² =0.12 F _{T*Gr} (1)=0.01; p=0.93; η ² =0.00
	EG	29	2.8 (1.2)	2.4 (0.7)	F _{Group} (1)=0.42; p=0.52; η ² =0.01
Ability to name critical organizations and their services with which health promotion can be encouraged.	CG	12	2.8 (1.1)	2.2 (0.8)	F _{Time} (1)=5.66; p=0.02; η ² =0.13 F _{T*Gr} (1)=2.76; p=0.11; η ² =0.07
	EG	29	3.0 (0.9)	2.9 (0.8)	F _{Group} (1)=3.72; p=0.06; η ² =0.09
Ability to identify and coordinate all persons and healthcare structures involved in providing health care in a concrete patient case.	CG	13	2.6 (0.9)	2.6 (1.0)	F _{Time} (1)=2.68; p=0.11; η ² =0.06 F _{T*Gr} (1)=2.68; p=0.11; η ² =0.06
	EG	29	3.4 (0.)	2.9 (0.9)	F _{Group} (1)=4.45; p=0.04; η ² =0.10
Ability to point out economic problems in the context of healthcare and propose solutions.	CG	13	3.4 (1.1)	2.6 (1.0)	F _{Time} (1)=9.23; p=0.004; η ² =0.19 F _{T*Gr} (1)=3.06; p=0.09; η ² =0.07
	EG	29	3.5 (1.1)	3.2 (1.1)	F _{Group} (1)=1.15; p=0.29; η ² =0.03
Ability to make initial decisions for an acutely helpless patient while separating the medical and social problems.	CG	13	2.6 (1.0)	2.6 (1.1)	F _{Time} (1)=1.33; p=0.26; η ² =0.03 F _{T*Gr} (1)=1.33; p=0.26; η ² =0.03
	EG	29	3.0 (1.0)	2.7 (0.8)	F _{Group} (1)=0.75; p=0.39; η ² =0.02
Ability to make and justify statements concerning specific instances of incapacity to work, occupational disability and permanently reduced earning capacity.	CG	13	3.9 (0.1)	2.9 (1.0)	F _{Time} (1)=15.31; p<0.0017; η ² =0.28 F _{T*Gr} (1)=1.84; p=0.18; η ² =0.04
	EG	29	4.3 (1.0)	3.9 (1.1)	F _{Group} (1)=5.27; p=0.03; η ² =0.12
Ability to identify measures for quality assurance and act accordingly.	CG	13	3.2 (1.1)	3.2 (0.8)	F _{Time} (1)=0.42; p=0.52; η ² =0.01 F _{T*Gr} (1)=0.42; p=0.52; η ² =0.01
	EG	29	4.0 (1.1)	3.7 (1.0)	F _{Group} (1)=4.77; p=0.04; η ² =0.11
Ability to clearly and truthfully present the chances of success regarding prophylactic, diagnostic and therapeutic measures.	CG	13	2.7 (1.0)	2.9 (0.9)	F _{Time} (1)=0.23; p=0.63; η ² =0.01 F _{T*Gr} (1)=2.04; p=0.16; η ² =0.05
	EG	29	3.3 (1.0)	3.0 (0.9)	F _{Group} (1)=2.04; p=0.16; η ² =0.05
Knowledge of the duty to follow the rules of confidentiality.	CG	13	1.2 (0.6)	1.5 (0.7)	F _{Time} (1)=0.01; p=0.94; η ² =0.00 F _{T*Gr} (1)=1.68; p=0.20; η ² =0.04
	EG	29	1.6 (1.0)	1.4 (0.5)	F _{Group} (1)=0.85; p=0.36; η ² =0.02
Familiarity with legal release from the duty to remain silent.	CG	13	2.3 (1.4)	2.0 (1.2)	F _{Time} (1)=3.67; p=0.06; η ² =0.08 F _{T*Gr} (1)=0.13; p=0.72; η ² =0.00
	EG	29	2.7 (1.1)	2.2 (1.0)	F _{Group} (1)=0.74; p=0.39; η ² =0.02

Note: N: number of participants, M_{pre}: mean value for pre-measure, SD_{pre}: standard deviation for pre-measure, M_{post}: mean value for post-measure, SD_{post}: standard deviation for post-measure, CG: control group (final year students in the ambulatory care rotation without ambulatory care simulation), EG: experimental group (final year students in the ambulatory care rotation with ambulatory care simulation), F_{Time}: effect of time (comparison pre-post measures), F_{T*Gr}: interaction of time and group (intervention effect), F_{Group}: effect of group (general difference between CG and EG), Bonferroni alpha adjustment: p<0.0017. 1=completely agree, 2=mostly agree, 3=somewhat agree, 4=somewhat disagree, 5=mostly disagree, 6=completely disagree.

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Differences between the experimental and control groups regarding the NKLM learning objectives

(Part 3)

NKLM learning objectives	Group	N	M _{pre} (SD _{pre})	M _{post} (SD _{post})	Difference
Ability to document medical activities in a comprehensible manner.	CG	13	2.3 (1.0)	1.8 (0.7)	F _{Time} (1)=13.27; p<0.0017; η ² =0.25 F _{T*Gr} (1)=0.26; p=0.61; η ² =0.01 F _{Group} (1)=5.01; p=0.03; η ² =0.11
	EG	28	2.9 (0.9)	2.1 (0.6)	
Ability to fill out a narcotic prescription form in compliance with the applicable regulations.	CG	12	3.8 (1.3)	4.0 (1.5)	F _{Time} (1)=6.47; p=0.02; η ² =0.14 F _{T*Gr} (1)=13.23; p<0.0017; η ² =0.25 F _{Group} (1)=0.15; p=0.70; η ² =0.00
	EG	29	4.7 (1.2)	3.3 (1.3)	
Ability to recognize life-threatening, avoidable conditions and apply strategies to avert them.	CG	12	2.5 (0.8)	2.2 (0.9)	F _{Time} (1)=2.58; p=0.12; η ² =0.06 F _{T*Gr} (1)=0.14; p=0.71; η ² =0.00 F _{Group} (1)=5.46; p=0.03; η ² =0.12
	EG	29	2.9 (0.8)	2.7(0.7)	
Knowledge of the recommendations made by the Standing Committee on Vaccination (STIKO).	CG	13	2.8 (1.2)	2.8 (1.1)	F _{Time} (1)=0.17; p=0.69; η ² =0.00 F _{T*Gr} (1)=0.17; p=0.69; η ² =0.00 F _{Group} (1)=0.07; p=0.79; η ² =0.00
	EG	29	2.9 (1.1)	2.8 (0.9)	
Knowledge of the indications for various emergency vehicles and ability to dispatch them appropriately given the indication.	CG	13	2.4 (1.5)	2.4 (1.5)	F _{Time} (1)=0.14; p=0.71; η ² =0.00 F _{T*Gr} (1)=0.14; p=0.71; η ² =0.00 F _{Group} (1)=0.17; p=0.69; η ² =0.00
	EG	29	2.5 (0.8)	2.6 (1.1)	

Note: N: number of participants, M_{pre}: mean value for pre-measure, SD_{pre}: standard deviation for pre-measure, M_{post}: mean value for post-measure, SD_{post}: standard deviation for post-measure, CG: control group (final year students in the ambulatory care rotation without ambulatory care simulation), EG: experimental group (final year students in the ambulatory care rotation with ambulatory care simulation), F_{Time}: effect of time (comparison pre-post measures), F_{T*Gr}: interaction of time and group (intervention effect), F_{Group}: effect of group (general difference between CG and EG), Bonferroni alpha adjustment: p<0.0017. 1= completely agree, 2=mostly agree, 3=somewhat agree, 4=somewhat disagree, 5=mostly disagree, 6=completely disagree.

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