

Health Promotion Interventions in Occupational Settings: Fact-Finding Survey Among Italian Occupational Physicians

SUPPLEMENTARY MATERIALS

Table S1. Age related differences in questionnaire responses.

Age related differences	Number of responses	< 39 years, N = 75	40-49 years, N = 62	50-59 years, N = 87	=> 60 years, N = 156	p-value
Gender	380					<0.001
Female		43 (57%)	27 (44%)	38 (44%)	25 (16%)	
Male		32 (43%)	35 (56%)	49 (56%)	131 (84%)	
OP activity	380					<0.001
No		34 (45%)	3 (4.8%)	3 (3.4%)	4 (2.6%)	
Yes		41 (55%)	59 (95%)	84 (97%)	152 (97%)	
Following the enactment of Legislative Decree 81/2008 and subsequent amendments, occupational HP programs have increased	335					N.C.
Do not agree at all		3 (7.3%)	6 (10%)	6 (7.1%)	10 (6.6%)	
Disagree		6 (15%)	12 (20%)	23 (27%)	48 (32%)	
Quite agree		25 (61%)	31 (53%)	38 (45%)	69 (46%)	
Very much agree		4 (9.8%)	8 (14%)	13 (15%)	14 (9.3%)	
Totally agree		3 (7.3%)	2 (3.4%)	4 (4.8%)	10 (6.6%)	
Occupational HP programs should be understood as an integral part of a system for protecting workers' health and psycho-physical integrity	336					N.C.
Do not agree at all		0 (0%)	0 (0%)	2 (2.4%)	0 (0%)	
Disagree		1 (2.4%)	2 (3.4%)	2 (2.4%)	3 (2.0%)	
Quite agree		4 (9.8%)	9 (15%)	12 (14%)	41 (27%)	
Very much agree		16 (39%)	27 (46%)	36 (43%)	58 (38%)	
Totally agree		20 (49%)	21 (36%)	32 (38%)	50 (33%)	
Occupational HP programs should be supported by collaboration with other health professionals (general practitioners, specialists in other disciplines)	336					N.C.
Do not agree at all		0 (0%)	1 (1.7%)	1 (1.2%)	1 (0.7%)	
Disagree		0 (0%)	3 (5.1%)	2 (2.4%)	2 (1.3%)	
Quite agree		11 (27%)	8 (14%)	20 (24%)	53 (35%)	
Very much agree		14 (34%)	25 (42%)	38 (45%)	59 (39%)	
Totally agree		16 (39%)	22 (37%)	23 (27%)	37 (24%)	

Based on your work experience, generally, the interest of employers in implementing health promotion programs is:	335					N.C.
Insufficient		2 (4.9%)	2 (3.4%)	10 (12%)	13 (8.6%)	
Poor		12 (29%)	18 (31%)	25 (30%)	58 (38%)	
Sufficient		17 (41%)	19 (32%)	26 (31%)	46 (30%)	
Good		9 (22%)	16 (27%)	19 (23%)	32 (21%)	
High		1 (2.4%)	4 (6.8%)	4 (4.8%)	2 (1.3%)	
In the last 5 years, during your work as OP, have you had the opportunity to organize health promotion interventions?	335					0.020
No		20 (49%)	19 (32%)	28 (33%)	76 (50%)	
Yes		21 (51%)	40 (68%)	56 (67%)	75 (50%)	
In the last 5 years, while carrying out the activity of OP, have you had the opportunity to collaborate in health promotion interventions?	334					0.562
No		17 (41%)	26 (44%)	34 (40%)	74 (49%)	
Yes		24 (59%)	33 (56%)	50 (60%)	76 (51%)	
How do you evaluate the workers' participation in such voluntary interventions?	274					N.C.
Insufficient		0 (0%)	1 (2.0%)	2 (2.6%)	3 (2.6%)	
Poor		1 (3.1%)	6 (12%)	16 (21%)	17 (15%)	
Sufficient		14 (44%)	15 (30%)	23 (30%)	50 (43%)	
Good		13 (41%)	22 (44%)	28 (37%)	42 (36%)	
High		4 (12%)	6 (12%)	7 (9.2%)	4 (3.4%)	
How do you evaluate the effectiveness of the HP interventions adopted?	267					N.C.
Not very effective		4 (12%)	3 (6.2%)	16 (22%)	23 (20%)	
Quite effective		20 (62%)	35 (73%)	40 (56%)	80 (70%)	
Very effective		7 (22%)	9 (19%)	12 (17%)	11 (9.6%)	
Completely effective		1 (3.1%)	1 (2.1%)	4 (5.6%)	1 (0.9%)	
Have effectiveness indicators been adopted (e.g. Key Performance Indicators – KPI)?	271					0.025
No		19 (59%)	29 (59%)	52 (71%)	81 (69%)	
I don't know		9 (28%)	4 (8.2%)	9 (12%)	20 (17%)	
Yes		4 (12%)	16 (33%)	12 (16%)	16 (14%)	

HP, health promotion; N.C, not calculable; OP, occupational physician.

Table S2. Gender related differences in in questionnaire responses.

Gender related differences	N	Female, N = 133	Male, N = 247	p-value
Age	380			<0.001
< 39 years		43 (32%)	32 (13%)	
40-49 years		27 (20%)	35 (14%)	
50-59 years		38 (29%)	49 (20%)	
=> 60 years		25 (19%)	131 (53%)	
OP activity	380			0.006
No		24 (18%)	20 (8.1%)	
Yes		109 (82%)	227 (92%)	
In how many companies are you currently appointed as OP?	332			0.003
< 10 enterprises		62 (57%)	83 (37%)	
10-25 enterprises		14 (13%)	39 (17%)	
26-50 enterprises		7 (6.5%)	36 (16%)	
> 50 enterprises		25 (23%)	66 (29%)	
Following the enactment of Legislative Decree 81/2008 and subsequent amendments, occupational HP programs have increased	335			0.218
Do not agree at all		7 (6.4%)	18 (8.0%)	
Disagree		21 (19%)	68 (30%)	
Quite agree		59 (54%)	104 (46%)	
Very much agree		16 (15%)	23 (10%)	
Totally agree		6 (5.5%)	13 (5.8%)	
Occupational HP programs should be understood as an integral part of a system for protecting workers' health and psycho-physical integrity	336			0.887
Do not agree at all		0 (0%)	2 (0.9%)	
Disagree		2 (1.8%)	6 (2.6%)	
Quite agree		19 (17%)	47 (21%)	
Very much agree		46 (42%)	91 (40%)	
Totally agree		42 (39%)	81 (36%)	
Occupational HP programs should be supported by collaboration with other health professionals (general practitioners, specialists in other disciplines)	336			0.200
Do not agree at all		0 (0%)	3 (1.3%)	
Disagree		1 (0.9%)	6 (2.6%)	
Quite agree		23 (21%)	69 (30%)	

Very much agree	50 (46%)	86 (38%)	
Totally agree	35 (32%)	63 (28%)	0.026
Based on your work experience, generally, the interest of employers in implementing health promotion programs is:	335		
Insufficient	6 (5.6%)	21 (9.3%)	
Poor	27 (25%)	86 (38%)	
Sufficient	44 (41%)	64 (28%)	
Good	25 (23%)	51 (22%)	
High	6 (5.6%)	5 (2.2%)	0.159
In the last 5 years, during your work as OP, have you had the opportunity to organize health promotion interventions?	335		
No	53 (49%)	90 (40%)	
Yes	56 (51%)	136 (60%)	
In the last 5 years, while carrying out the activity of OP, have you had the opportunity to collaborate in health promotion interventions?	334		0.054
No	58 (53%)	93 (41%)	
Yes	51 (47%)	132 (59%)	
How do you evaluate the workers' participation in such voluntary interventions?	274		0.671
Insufficient	3 (3.5%)	3 (1.6%)	
Poor	10 (12%)	30 (16%)	
Sufficient	31 (36%)	71 (38%)	
Good	33 (39%)	72 (38%)	
High	8 (9.4%)	13 (6.9%)	
How do you evaluate the effectiveness of the HP interventions adopted?	267		0.634
Not very effective	12 (15%)	34 (18%)	
Quite effective	57 (71%)	118 (63%)	
Very effective	9 (11%)	30 (16%)	
Completely effective	2 (2.5%)	5 (2.7%)	
Have effectiveness indicators been adopted (e.g. Key Performance Indicators – KPI)?	271		0.439
No	52 (64%)	129 (68%)	
I don't know	16 (20%)	26 (14%)	
Yes	13 (16%)	35 (18%)	

Table S3. Differences in HP perception according to the number of the workers employed in the enterprises where the OPs performed their professional activity.

Degree of agreement with the following statements concerning HP:	N	Enterprises with >49 employees, N = 183	Enterprises with ≤ 49 employees, N = 146	p-value
Following the enactment of Legislative Decree 81/2008 and subsequent amendments. occupational HP programs have increased	328			0.087
Do not agree at all		13 (7.1%)	12 (8.2%)	
Disagree		38 (21%)	50 (34%)	
Quite agree		97 (53%)	63 (43%)	
Very much agree		22 (12%)	14 (9.6%)	
Totally agree		12 (6.6%)	7 (4.8%)	
Occupational HP programs should be understood as an integral part of a system for protecting workers' health and psycho-physical integrity	329			0.731
Do not agree at all		1 (0.5%)	1 (0.7%)	
Disagree		4 (2.2%)	4 (2.7%)	
Quite agree		33 (18%)	32 (22%)	
Very much agree		72 (39%)	61 (42%)	
Totally agree		73 (40%)	48 (33%)	
Occupational HP programs should be supported by collaboration with other health professionals (general practitioners, specialists in other disciplines)	329			0.436
Do not agree at all		2 (1.1%)	1 (0.7%)	
Disagree		3 (1.6%)	4 (2.7%)	
Quite agree		43 (23%)	46 (32%)	
Very much agree		80 (44%)	53 (36%)	
Totally agree		55 (30%)	42 (29%)	
Based on your work experience, generally, the interest of employers in implementing HP programs is:	328			0.090
Insufficient		11 (6.0%)	15 (10%)	
Poor		56 (31%)	56 (39%)	
Sufficient		61 (33%)	47 (32%)	
Good		49 (27%)	23 (16%)	
High		6 (3.3%)	4 (2.8%)	

HP, health promotion.

Table S4. Differences in HP perception according to the number of workers followed by OPs.

Degree of agreement with the following statements concerning HP:	N	≤ 500 workers, N = 78	> 500 workers, N = 249	p-value
Following the enactment of Legislative Decree 81/2008 and subsequent amendments. occupational HP programs have increased	326			0.609
Do not agree at all		3 (3.8%)	22 (8.9%)	
Disagree		21 (27%)	65 (26%)	
Quite agree		39 (50%)	120 (48%)	
Very much agree		11 (14%)	26 (10%)	
Totally agree		4 (5.1%)	15 (6.0%)	
Occupational HP programs should be understood as an integral part of a system for protecting workers' health and psycho-physical integrity	327			0.740
Do not agree at all		0 (0%)	2 (0.8%)	
Disagree		2 (2.6%)	6 (2.4%)	
Quite agree		19 (24%)	45 (18%)	
Very much agree		31 (40%)	102 (41%)	
Totally agree		26 (33%)	94 (38%)	
Occupational HP programs should be supported by collaboration with other health professionals (general practitioners, specialists in other disciplines)	327			0.155
Do not agree at all		0 (0%)	3 (1.2%)	
Disagree		0 (0%)	7 (2.8%)	
Quite agree		28 (36%)	61 (24%)	
Very much agree		26 (33%)	105 (42%)	
Totally agree		24 (31%)	73 (29%)	
Based on your work experience, generally, the interest of employers in implementing health promotion programs is:	326			0.252
Insufficient		4 (5.2%)	23 (9.2%)	
Poor		21 (27%)	87 (35%)	
Sufficient		28 (36%)	78 (31%)	
Good		23 (30%)	52 (21%)	
High		1 (1.3%)	9 (3.6%)	

HP, health promotion.

Table S5. Analyses of the differences with respect to have been organizing HP interventions.

	Number of responses	No, N = 143	Yes, N = 192	p-value
Gender	335			0.127
Female		53 (37%)	56 (29%)	
Male		90 (63%)	136 (71%)	
Age	335			0.020
< 39 years		20 (14%)	21 (11%)	
40–49 years		19 (13%)	40 (21%)	
50–59 years		28 (20%)	56 (29%)	
=> 60 years		76 (53%)	75 (39%)	
OP activity	335			
Yes		143 (100%)	192 (100%)	
In how many companies are you currently appointed as OP?	331			0.043
≤ 25 enterprises		75 (53%)	122 (64%)	
>25 enterprises		66 (47%)	68 (36%)	
Number of employees in the enterprises where the OPs performed their professional activity	328			<0.001
≤ 49 employees		57 (40%)	125 (67%)	
>49 employees		84 (60%)	62 (33%)	
Number of followed workers per OP	327			<0.001
≤500		47 (33%)	31 (17%)	
> 500		94 (67%)	155 (83%)	
Following the enactment of Legislative Decree 81/2008 and subsequent amendments, occupational HP programs have increased	334			0.164
Do not agree at all		14 (9.8%)	11 (5.8%)	
Disagree		45 (31%)	43 (23%)	
Quite agree		61 (43%)	102 (53%)	
Very much agree		15 (10%)	24 (13%)	
Totally agree		8 (5.6%)	11 (5.8%)	

Occupational HP programs should be understood as an integral part of a system for protecting workers' health and psycho-physical integrity	335		0.052
Do not agree at all		0 (0%)	2 (1.0%)
Disagree		4 (2.8%)	4 (2.1%)
Quite agree		38 (27%)	28 (15%)
Very much agree		53 (37%)	84 (44%)
Totally agree		48 (34%)	74 (39%)
Occupational HP programs should be supported by collaboration with other health professionals (general practitioners, specialists in other disciplines)	335		0.054
Do not agree at all		0 (0%)	3 (1.6%)
Disagree		3 (2.1%)	4 (2.1%)
Quite agree		47 (33%)	45 (23%)
Very much agree		47 (33%)	88 (46%)
Totally agree		46 (32%)	52 (27%)
Based on your work experience, generally, the interest of employers in implementing HP programs is:	334		<0.001
Insufficient		17 (12%)	10 (5.2%)
Poor		53 (37%)	59 (31%)
Sufficient		51 (36%)	57 (30%)
Good		20 (14%)	56 (29%)
High		1 (0.7%)	10 (5.2%)
In the last 5 years, during your work as OP, have you had the opportunity to collaborate to HP interventions?	333		<0.001
No		114 (80%)	37 (19%)
Yes		28 (20%)	154 (81%)
How do you evaluate the workers' participation in such voluntary interventions?	273		<0.001
Insufficient		6 (7.4%)	0 (0%)
Poor		19 (23%)	21 (11%)
Sufficient		35 (43%)	66 (34%)
Good		19 (23%)	86 (45%)
High		2 (2.5%)	19 (9.9%)

Table S5 (Continued)

	Number of responses		p-value
	No, N = 143	Yes, N = 192	
How do you evaluate the effectiveness of the HP interventions adopted?			<0.001
Not effective at all	23 (30%)	23 (12%)	
Not very effective	51 (66%)	123 (65%)	
Quite effective	3 (3.9%)	36 (19%)	
Very effective	0 (0%)	7 (3.7%)	
Have effectiveness indicators been adopted (e.g. Key Performance Indicators – KPI)?			0.001
No	53 (67%)	127 (66%)	
I don't know	20 (25%)	22 (12%)	
Yes	6 (7.6%)	42 (22%)	

HP, health promotion; OP, occupational physician.

Table S6. Analyses of the differences with respect to have been collaborating in HP interventions.

	N	No, N = 143	Si, N = 192	p-value
Gender	334			0.041
Female		58 (38%)	51 (28%)	
Male		93 (62%)	132 (72%)	
Age	334			0.562
< 39 years		17 (11%)	24 (13%)	
40-49 years		26 (17%)	33 (18%)	
50-59 years		34 (23%)	50 (27%)	
=> 60 years		74 (49%)	76 (42%)	
OP activity	334			
Yes		151 (100%)	183 (100%)	
In how many companies are you currently appointed as OP?	330			0.078
≤ 25 enterprises		81 (55%)	117 (64%)	
>25 enterprises		67 (45%)	65 (36%)	
Number of employees in the enterprises where the OPs performed their professional activity	327			<0.001
≤ 49 employees		65 (44%)	118 (66%)	
>49 employees		83 (56%)	61 (34%)	
Number of followed workers per OP	326			<0.001
≤500		53 (36%)	25 (14%)	
> 500		94 (64%)	154 (86%)	
Following the enactment of Legislative Decree 81/2008 and subsequent amendments, occupational HP programs have increased	333			0.453
Do not agree at all		13 (8.6%)	12 (6.6%)	
Disagree		42 (28%)	46 (25%)	
Quite agree		76 (50%)	86 (47%)	
Very much agree		14 (9.3%)	25 (14%)	
Totally agree		6 (4.0%)	13 (7.1%)	
Occupational HP programs should be understood as an integral part of a system for protecting workers' health and psycho-physical integrity	334			0.114
Do not agree at all		1 (0.7%)	1 (0.5%)	
Disagree		4 (2.6%)	4 (2.2%)	
Quite agree		38 (25%)	27 (15%)	
Very much agree		60 (40%)	76 (42%)	
Totally agree		48 (32%)	75 (41%)	

Table S6 (Continued)

	N	No, N = 143	Si, N = 192	p-value
Occupational HP programs should be supported by collaboration with other health professionals (general practitioners, specialists in other disciplines)	334			0.190
Do not agree at all		0 (0%)	3 (1.6%)	
Disagree		3 (2.0%)	4 (2.2%)	
Quite agree		47 (31%)	43 (23%)	
Very much agree		54 (36%)	82 (45%)	
Totally agree		47 (31%)	51 (28%)	
Based on your work experience, generally, the interest of employers in implementing HP programs is:	333			0.058
Insufficient		18 (12%)	9 (4.9%)	
Poor		49 (33%)	63 (34%)	
Sufficient		52 (35%)	55 (30%)	
Good		28 (19%)	48 (26%)	
High		3 (2.0%)	8 (4.4%)	
In the last 5 years, during your work as OP, have you had the opportunity to organize HP interventions?	333			<0.001
No		114 (75%)	28 (15%)	
Yes		37 (25%)	154 (85%)	
How do you evaluate the workers' participation in such voluntary interventions?	273			<0.001
Insufficient		5 (5.6%)	1 (0.5%)	
Poor		21 (23%)	19 (10%)	
Sufficient		36 (40%)	65 (36%)	
Good		24 (27%)	81 (44%)	
High		4 (4.4%)	17 (9.3%)	
How do you evaluate the effectiveness of the HP interventions adopted?	266			0.002
Not very effective		25 (28%)	21 (12%)	
Quite effective		55 (62%)	119 (67%)	
Very effective		7 (8.0%)	32 (18%)	
Completely effective		1 (1.1%)	6 (3.4%)	
Have effectiveness indicators been adopted (e.g. Key Performance Indicators – KPI)?	270			0.011
No		67 (75%)	113 (62%)	
I don't know		15 (17%)	27 (15%)	
Yes		7 (7.9%)	41 (23%)	

HP, health promotion; OP, occupational physician.