

Aula 11:

'A política de GRH é algo que se mede?'

Validação de Escalas em GRH

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O uso de escalas em GRH

- Uma parte importante da investigação em GRH envolve o desenvolvimento e validação de escalas.
- Nesta aula, vamos focar-nos na validação (estatística) de escalas.





PROPRIEDADES	QUESTÃO	FORMA DE VALIDAÇÃO ESTATÍSTICA
VALIDADE	A escala mede o/s construto/s que se pretende/m medir?	<u>Análise Factorial Exploratória</u> (A ser usada na fase de desenvolvimento de escalas)
		Análise Factorial Confirmatória (A ser usada na fase de validação de escalas)
CONFIABILIDADE (=FIDELIDADE)	Independentemente do número de vezes que é aplicada, os resultados da aplicação da escala são consistentes entre si?	<u>Teste de Alpha de Cronbach</u>
	(O grau de confiabilidade é uma função da consistência interna da escala e da sua	

estabilidade)



- Objectivo:
 - Sujeitar uma escala que mede as condições de trabalho dos trabalhadores a uma Análise Fatorial Exploratória de modo a identificar quais os componentes/dimensões que estão na base da escala.



Como medir a s condições de trabalho?

O modelo "Job-Demand-Control-Support" é um modelo teórico que explica como as características de trabalho influencia o bem-estar.

Identifica assim 4 dimensões relevantes que devem ser medidas para caracterizar as condições de trabalho.

How the Job-Demand-Control-Support Model works

When job demands are high and employees feel pressured, gaining control of the job and developing strong relationships with others helps to cope with stress. The JBCS model supports this using the following principles:

Gaining control over the job

Making autonomous decisions is vital to gaining control over the job. Attaining this and being able to make decisions without asking for direction might require negotiation with superiors but pays off.

Support from the supervisor

Good and helpful social interactions, for example with superiors, can buffer the impact of stress by influencing job attitude, satisfaction and commitment.



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- Selecionar 'Analisar'/ 'Redução de dimensão' / 'Fator'
- Selecionar as variável 'Q61a' a 'Q61o'
 B
- Colocar na caixa 'Variáveis'

ta Análise de Fatores	×
Análise de Fatores Análise de Fatores Q 660a - For the team in which you work mostly, do the Q 660b - For the team in which you work mostly, do the Q 60b - For the team in which you work mostly, do the Q 60b - For the team in which you work mostly, do the Q 60b - For the team in which you work mostly, do the Q 60b - For the team in which you work mostly, do the Q 60b - Your manager helps and supports you? [Q61b] Q 61b - You are consulted before objectives are set for Q 61c - You have a say in the choice of your work colle Q 61b - You are able to apply your own ideas in your work. Q 61b - You have the feeling of work well done Q 61b - You are able to apply your own ideas in your work? [Q611] Q 61b - You are treated fairly atyour work? [Q611] Q 61b - You raperience stress in your work? [Q611] Q 61b - You raperience stress in your work? [Q611] Q 61b - You raperience stress in your work? [Q611] Q 61b - You raperience stress in your work? [Q611] Q 61b - You raperience stress in your work? [Q611] Q 61b - You raperience stress in your work? [Q611] Q 61b - You raperience stress in your work? [Q611] Q 61b - Your job requires that you hide your feelings? [Q 63a - Your immediate boss Respects you as a p </td <td>× escritivos Extração Roţação E<u>s</u>cores Opções</td>	× escritivos Extração Roţação E <u>s</u> cores Opções
Q63d - Your immediate boss Is helpful in getting th Q63e - Your immediate boss Provides useful feed Q63f - Your immediate boss Encourages and sup OK Colar Reconfigurar Ajuda	

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- Selecionar 'Analisar'/ 'Redução de dimensão' / 'Fator'
- Selecionar as variáveis 'Q61a' a 'Q61o' (B)
- Colocar na caixa 'Variáveis'

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- Selecionar 'Analisar'/ 'Redução de dimensão' / 'Fator'
- Selecionar as variáveis 'Q61a' a 'Q61o'
 B
- Colocar na caixa 'Variáveis'
- Clicar no botão 'Descritivos'

ta Análise de Fatores	li l
 Q60a - For the team in which you work mostly, do the Q60b - For the team in which you work mostly, do the Q60c - For the team in which you work mostly, do the Q62 - Is your immediate boss a man or a woman? [Q6 Q63a - Your immediate boss Respects you as a p Q63b - Your immediate boss Gives you praise and Q63c - Your immediate boss Is successful in getti Q63d - Your immediate boss Is helpful in getting th Q63d - Your immediate boss Is helpful in getting th Q63d - Your immediate boss Provides useful feed Q63f - Your immediate boss Encourages and sup Q65a - Training paid for or provided by your employer [Q65b - Training paid for or provided by your employer [Q65c - On-the-job training (co-workers, supervisors) [Q65d - Other training [Past 12 months, hav. Q65d - Other training IPast 12 months, have you under Q67a - The training has helped me improve the way 1 Q67b - I feel that my job is more secure because of my Q67c - I feel my prospects for future employment are b Q68 - Since you started your main paid job, how many Q69 - Did you ask for training to be provided for you by Q70a - Employees are appreciated when they have do Q70b - The management trusts the employees to do t Q70c - Conflicts are resolved in a fair way [Agree with the foll 	 Variáveis: Q61a - Your colleagues help and support you? [Q61a] Q61b - Your manager helps and supports you? [Q61b] Q61c - You are consulted before objectives are set for yo Q61d - You are involved in improving the work organisati Q61e - You have a say in the choice of your work colleagu Q61f - You can take a break when you wish ? [Q61f] Q61g - You have enough time to get the job done? [Q61g] Q61h - Your job gives you the feeling of work well done? [Q61i - You are able to apply your own ideas in your work? Q61i - You can influence decisions that are important for Q61o - Your job requires that you hide your feelings? [Q6 Variável de seleção: Valor
OK Colar	Reconfigurar Cancelar Ajuda

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- Selecionar 'Analisar' / 'Redução de dimensão' / 'Fator'
- Selecionar as variável 'Q61a' a 'Q61o'
 B
- Colocar na caixa 'Variáveis'
- Clicar no botão 'Descritivos'
- Selecionar as opções 'Descritivas univariadas' e 'Solução inicial'
- Selecionar as opções 'Coeficientes' e 'Teste de esfericidade de Bartlet e KMO'

E	statísticas	5
	Descritivas <u>u</u> nivariadas	
	Solução <u>i</u> nicial	
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• Clicar 'Continuar'

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• Clicar no botão 'Extração'

 Q60a - For the team in which you work mostly, do the Q60b - For the team in which you work mostly, do the Q60c - For the team in which you work mostly, do the Q62 - Is your immediate boss a man or a woman? [Q6 Q63a - Your immediate boss Respects you as a p Q63b - Your immediate boss Gives you praise and Q63d - Your immediate boss Is successful in getti Q63d - Your immediate boss Is helpful in getting th Q63d - Your immediate boss Is helpful in getting th Q63d - Your immediate boss Provides useful feed Q63f - Your immediate boss Provides useful feed Q63f - Your immediate boss Encourages and sup Q64 - Which of the following statements would best de Q65b - Training paid for or provided by your employer [Q65c - On-the-job training (co-workers, supervisors) [Q65d - Other training [Past 12 months, have you under Q66d - Over the past 12 months, how many days in total Q67b - I feel that my job is more secure because of my Q67b - I feel that my job is more secure because of my Q67b - I feel my prospects for future employment are b Q67b - Did you ask for training to be provided for you by Q70a - Employees are appreciated when they have do Q70b - The management trusts the employees to do t Q70c - Conflicts are resolved in a fair way [Agree with t Q70d - The work is distributed fairly [Agree with the foll 	*	Variáveis: Q61a - Your colleagues help and support you? [Q61a] Q61b - Your manager helps and supports you? [Q61b] Q61c - You are consulted before objectives are set for yo Q61d - You are involved in improving the work organisati Q61e - You have a say in the choice of your work colleagu Q61f - You can take a break when you wish ? [Q61f] Q61f - You can take a break when you wish ? [Q61g] Q61h - Your job gives you the feeling of work well done? [L61g] Q61i - You are able to apply your own ideas in your work? Q61i - You know what is expected of you at work? [Q61k] Q61n - You experience stress in your work? [Q61m] Q61n - You can influence decisions that are important for Q61o - Your job requires that you hide your feelings? [Q6]	Descritivos Extração Roţação Escores Opções
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- Clicar no botão 'Extração'
- Selecionar a opção 'Gráfico de Escarpa'
- Clicar 'Continuar



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• Clicar no botão 'Rotação'

 Análise de Fatores Q60a - For the team in which you work mostly, do the Q60b - For the team in which you work mostly, do the Q60c - For the team in which you work mostly, do the Q60c - For the team in which you work mostly, do the Q62 - Is your immediate boss a man or a woman? [Q6 Q63a - Your immediate boss Respects you as a p Q63b - Your immediate boss Gives you praise and Q63c - Your immediate boss Is successful in getti Q63d - Your immediate boss Is helpful in getting th Q63f - Your immediate boss Provides useful feed Q63f - Your immediate boss Encourages and sup Q64 - Which of the following statements would best de Q65b - Training paid for or provided by your employer [Q65c - On-the-job training (co-workers, supervisors) [Q65d - Other training [Past 12 months, have you under Q66 - Over the past 12 months, how many days in total Q67a - The training has helped me improve the way I Q67b - I feel that my job is more secure because of my Q68 - Since you started your main paid job, how many Q69 - Did you ask for training to be provided for you by Q69 - Did you ask for training to be provided for you by 	Variáveis: Q61a - Your colleagues help and support you? [Q61a] Q61b - Your manager helps and supports you? [Q61b] Q61c - You are consulted before objectives are set for yo Q61d - You are involved in improving the work organisati Q61e - You have a say in the choice of your work colleagu Q61g - You have a say in the choice of your work colleagu Q61g - You have enough time to get the job done? [Q61g] Q61h - Your job gives you the feeling of work well done? [Q61j - You have the feeling of doing useful work? [Q61j] Q61k - You know what is expected of you at work? [Q61k] Q61h - You are treated fairly at your workplace? [Q61n] Q61n - You can influence decisions that are important for Q61n - Your job requires that you hide your feelings? [Q6	X Descritivo: Extracão Roţação Escores Opções
Q70b - The management trusts the employees to do t Q70c - Conflicts are resolved in a fair way [Agree with t Q70d - The work is distributed fairly [Agree with the foll	Valor Reconfigurar Cancelar Ajuda	

- Clicar no botão 'Rotação'
- Selecionar a opção 'Oblimin direto'
- Clicar 'Continuar

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• Clicar no botão 'Opções'

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- Clicar no botão 'Opções'
- Selecionar as opção 'Ordenado por tamanho'

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Valores omissos	
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O Excluir casos por método pairwis	se
Substituir pela média	
Formato de exibição de coeficiente - Vordenado por tamanho	
Suprimir coeficientes pequenos	
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- Clicar no botão 'Opções'
- Selecionar as opção 'Ordenado por tamanho'
- Selecionar as opção 'Suprimir coeficientes pequenos'
 - O 'Valor absoluto' determina o valor do coeficiente a partir do qual uma variável deve ser suprimida
 - Deve estar entre os 0.30 e 0.40
 - Neste caso, escolhemos 0.30



• O resultado é publicado no 'Visualizador de Resultados'

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	Análise de Fatores		
	Estatísticas Descritivas		

Estatísticas Descritivas

	Média	Erro Desvio	Análise N	
Q61a - Your colleagues help and support you?	2,00	1,049	1861	
Q61b - Your manager helps and supports you?	2,29	1,196	1861	
Q61c - You are consulted before objectives are set for your work?	2,80	1,454	1861	
Q61d - You are involved in improving the work organisation or work processes of your department or organisation	? 2,65	1,368	1861	
Q61e - You have a say in the choice of your work colleagues?	3,85	1,369	1861	
Q61f - You can take a break when you wish ?	2,93	1,560	1861	
Q61g - You have enough time to get the job done?	2,15	1,002	1861	
Q61h - Your job gives you the feeling of work well done?	1,82	,874	1861	
Q61i - You are able to apply your own ideas in your work?	2,42	1,226	1861	
Q61j - You have the feeling of doing useful work?	1,72	,853	1861	
Q61k - You know what is expected of you at work?	1,41	,696	1861	
Q611 - You are treated fairly at your workplace?	1,78	,897	1861	
	2.00	1 1 4 5	1961	



 Esta primeira tabela dá-nos informação sobre o nº de observações, a média e o desvio-padrão de cada uma das variáveis que foi incluída na Análise Fatorial Exploratória.

Estatísticas Descritivas

	Média	Erro Desvio	Análise N
Q61a - Your colleagues help and support you?	2,00	1,049	1861
Q61b - Your manager helps and supports you?	2,29	1,196	1861
Q61c - You are consulted before objectives are set for your work?	2,80	1,454	1861
Q61d - You are involved in improving the work organisation or work processes of your department or organisation?	2,65	1,368	1861
Q61e - You have a say in the choice of your work colleagues?	3,85	1,369	1861
Q61f- You can take a break when you wish ?	2,93	1,560	1861
Q61g - You have enough time to get the job done?	2,15	1,002	1861
Q61h - Your job gives you the feeling of work well done?	1,82	,874	1861
Q61i - You are able to apply your own ideas in your work?	2,42	1,226	1861
Q61j - You have the feeling of doing useful work?	1,72	,853	1861
Q61k - You know what is expected of you at work?	1,41	,696	1861
Q61I - You are treated fairly at your workplace?	1,78	,897	1861
Q61m - You experience stress in your work?	2,90	1,145	1861
Q61n - You can influence decisions that are important for your work?	2,93	1,317	1861
Q61o - Your job requires that you hide your feelings?	3,44	1,437	1861



Análise Fatorial Exploratória

- A Matriz de Correlações apresenta as correlações entre as variáveis que foram incluída da Análise Fatorial Exploratória.
- Espera-se correlações relevantes entre os itens

				Matriz de cor	relações											
		Q61a - Your colleagues help and support you?	Q61b - Your manager helps and supports you?	Q61c - You are consulted before objectives are set for your work?	Q61d - You are involved in improving the work organisation or work processes of your department or organisation?	Q61e - You have a say in the choice of your work colleagues?	Q61f - You can take a break when you wish ?	Q61g - You have enough time to get the job done?	Q61h - Your job gives you the feeling of work well done?	Q61i - You are able to apply your own ideas in your work?	Q61j - You have the feeling of doing useful work?	Q61k - You know what is expected of you at work?	Q61I - You are treated fairly at your workplace?	Q61m - You experience stress in your work?	Q61n - You can influence decisions that are important for your work?	Q61o - Your job requires that you hide your feelings?
ão	Q61a - Your colleagues help and support you?	1,000	,530	,224	,270	,175	,081	,178	,223	,222	,220	,158	,305	-,046	,208	-,024
	Q61b - Your manager helps and supports you?	,530	1,000	,321	,337	,148	,114	,250	,283	,319	,259	,213	,438	-,118	,245	-,077
	Q61c - You are consulted before objectives are set for your work?	,224	,321	1,000	,512	,346	,260	,132	,211	,451	,166	,139	,225	,020	,500	,000,
	Q61d - You are involved in improving the work organisation or work processes of your department or organisation?	,270	,337	,512	1,000	,365	,257	,090	,272	,541	,239	,165	,270	,047	,559	,007
	Q61e - You have a say in the choice of your work colleagues?	,175	,148	,346	,365	1,000	,238	-,007	,084	,303	,082	,008	,115	,137	,423	,097
	Q61f - You can take a break when you wish ?	,081	,114	,260	,257	,238	1,000	,115	,104	,297	,018	,026	,142	-,022	,305	-,034
	Q61g - You have enough time to get the job done?	,178	,250	,132	,090	-,007	,115	1,000	,256	,141	,183	,201	,284	-,315	,079	-,107
	Q61h - Your job gives you the feeling of work well done?	,223	,283	,211	,272	,084	,104	,256	1,000	,338	,522	,320	,361	-,148	,246	-,095
	Q61i - You are able to apply your own ideas in your work?	,222	,319	,451	,541	,303	,297	,141	,338	1,000	,284	,149	,298	,024	,588	-,037
	Q61j - You have the feeling of doing useful work?	,220	,259	,166	,239	,082	,018	,183	,522	.284	1,000	,286	,300	-,039	,199	-,046
	Q61k - You know what is expected of you at work?	,158	,213	,139	,165	,008	,026	,201	,320	,149	,286	1,000	,353	-,086	,108	-,026
	Q611 - You are treated fairly at your workplace?	,305	,438	,225	,270	,115	,142	,284	,361	,298	,300	,353	1,000	-,234	,243	-,158
	Q61m - You experience stress in your work?	-,046	-,118	,020	,047	,137	-,022	-,315	-,148	,024	-,039	-,086	-,234	1,000	,072	,321
	Q61n - You can influence decisions that are important for your work?	,208	,245	,500	,559	,423	,305	,079	,246	,588	,199	,108	,243	,072	1,000	,031
	Q61o - Your job requires that you hide your feelings?	-,024	-,077	,000	,007	,097	-,034	-,107	-,095	-,037	-,046	-,026	-,158	,321	,031	1,000



Análise Fatorial Exploratória

- A Medida de Adequação da Amostra de Kaiser-Meyer-Olkin (KMO), mede a mede a adequabilidade da amostra para a realização da Análise Fatorial: mede a variabilidade partilhada
- Se o valor da KMO for ≥ 0.60, então devemos prosseguir com a Análise Fatorial Exploratória.



A interpretação típica dos valores KMO é: **0.00 a 0.49:** Inadequado. **0.50 a 0.59:** Marginal. **0.60 a 0.69:** Mediano. **0.70 a 0.79:** Bom. **0.80 a 0.89:** Muito bom. **0.90 a 1.00:** Excelente.

Teste de KMO e Bartlett

Medida Kaiser-Meyer-Olkin amostragem.	de adequação de	,845	
Teste de esfericidade de	Aprox. Qui-quadrado	6968,076	A
Bartlett	gl	105	
	Sig.	,000	



(B)

Análise Fatorial Exploratória

- Teste de esfericidade de Bartlett testa se a matriz de correlações é uma matriz identidade, o que implicaria que as variáveis não estão correlacionadas. Queremos rejeitar esta hipótese nula!
- p <0,05 Neste caso, o Teste é significativo, o que significa que podemos proceder com a Análise Fatorial.
- Os resultados do teste de Bartlett (com p <. 05) e das medidas de adequabilidade KMO (KMO > 0.80) permitem concluir que a aplicação da AFE é adequada

Teste de KMO e Bartlett

amostragem.	ue auequação ue	,845	_
Teste de esfericidade de	Aprox. Qui-quadrado	6968,076	
Bartlett	gl	105	
	Sig.	,000	
			B

045



Análise Fatorial Exploratória

- O Gráfico de Escarpa apresenta os autovalores (eigenvalues) em função do numero de componentes/fatores retidos
- Queremos a solução ótima: menor numero possível de fatores que retêm o máximo de variabilidade
- A escolha do número de fatores to ser tomada em função de vários critérios. Os mais conhecidos:
 - Método de Kaiser: 'Autovalores iniciais' superiores a 1'
 - Método de Kaiser adaptado: 'Autovalores iniciais' superiores a 0,7
 - Método do "cotovelo"





(B)

Análise Fatorial Exploratória

- A tabela da 'Variância total explicada' indica a percentagem total da variância que é explicada pelos fatores obtidos.
- Neste caso, os 4 fatores identificados explicam aproximadamente 56% da variância.

		Autovalores inici	ais	Somas de ei	dração de carrega quadrado	amentos ao	Somas de rotação de carregamento s ao quadrado ^a
Componente	Total	% de variância	% cumulativa	Total	% de variância	% cumulativa	Total
1	4,159	27,727	27,727	4,159	27,727	27,727	3,329
2	2,015	13,436	41,163	2,015	13,436	41,163	1,743
3	1,247	8,316	49,479	1,247	8,316	49,479	2,587
4	1,077	7,181	56,660	1,077	7,181	56,660	2,442
5	,888,	5,918	62,578				
6	,781	5,206	67,783	(B)			
7	,745	4,965	72,749				
8	,689	4,594	77,343				
9	,606	4,040	81,383				
10	,566	3,774	85,157				
11	,527	3,512	88,669				
12	,459	3,060	91,729				
13	,438	2,922	94,651				
14	,430	2,864	97,515				
15	,373	2,485	100,000				

Variância total explicada

Método de Extração: análise de Componente Principal.

a. Quando os componentes são correlacionados, as somas de carregamentos ao quadrado não podem ser adicionadas para se obter uma variância total.



Análise Fatorial Exploratória

- A 'Matriz de correlações de componente' permite-nos avaliar sobre a 'qualidade' dos fatores identificados.
- Neste caso, <u>não queremos</u> correlações moderadas ou fortes, i.e.

< - 0.4 ou > 0.4

• Neste caso, não encontramos correlações preocupantes...

Matriz de correlações de componente

Componente	1	2	3	4
1	1,000	-,027	,191	,265
2	-,027	1,000	-,161	-,101
3	,191	-,161	1,000	,359
4	,265	-,101	,359	1,000

Método de Extração: análise de Componente Principal. Método de Rotação: oblimin com Normalização de Kaiser.



Análise Fatorial Exploratória

Matriz padrão: os coeficientes indicam a força e a direção da relação entre cada variável e cada fator

Matriz estrutura: os coeficientes indicam a correlação entre cada variável original e cada fator

- Diferentes formas de interpretar os fatores (matriz padrão é + fácil de interpretar)

Rotações

A rotação ajusta os coeficientes para serem mais fáceis de interpretar

- ORTOGONAL: assume que os fatores não estão correlacionados
- OBLÍQUA: assume que os fatores estão correlacionados

М	atriz de pa	adrão ^a		
		Compo	onente	
Q61n Q61n - You can influence decisions that are important for your work?	,794	2	3	4
Q61i Q61i - You are able to apply your own ideas in your work?	,701			
Q61d Q61d - You are involved in improving the work organisation or work processes of your department or organisation?	,689			
Q61c Q61c - You are consulted before objectives are set for your work?	,669			
Q61f Q61f - You can take a break when you wish ?	,627			
Q61e Q61e - You have a say in the choice of your work colleagues?	,619			
Q61m Q61m - You experience stress in your work?		,792		
Q61o Q61o - Your job requires that you hide your feelings?		,706		
Q61g Q61g - You have enough time to get the job done?		-,488		
Q61j Q61j - You have the feeling of doing useful work?			,812	
Q61h Q61h - Your job gives you the feeling of work well done?			,772	
Q61k Q61k - You know what is expected of you at work?			,647	
Q61a Q61a - Your colleagues help and support you?				,884
Q61b Q61b - Your manager helps and supports you?				,801
Q611 Q611 - You are treated fairly at your workplace?			,326	,364

a. Rotação convergida em 9 iterações.



	Componente					
	1	2	3	4		
Q61n Q61n - You can influence decisions that are important for your work?	,794					
Q61i Q61i - You are able to apply your own ideas in your work?	,701					
Q61d Q61d - You are involved in improving the work organisation or work processes of your department or organisation?	,689					
Q61c Q61c - You are consulted before objectives are set for your work?	,669					
Q61f Q61f - You can take a break when you wish ?	,627					
Q61e Q61e - You have a say in the choice of your work colleagues?	,619					
Q61m Q61m - You experience stress in your work?		,792				
Q61o Q61o - Your job requires that you hide your feelings?		,706				
Q61g Q61g - You have enough time to get the job done?		-,488				
Q61j Q61j - You have the feeling of doing useful work?			,812			
Q61h Q61h - Your job gives you the feeling of work well done?			,772			
Q61k Q61k - You know what is expected of you at work?			,647			
Q61a Q61a - Your colleagues help and support you?				,884		
Q61b Q61b - Your manager helps and supports you?				,801		
Q611 Q611 - You are treated fairly at your workplace?			,326	,364		



Matriz de padrão^a

	Componente			
	1	2	3	4
Q61n Q61n - You can influence decisions that are important for your work?	,794			
Q61i Q61i - You are able to apply your own ideas in your work?	,701			
Q61d Q61d - You are involved in improving the work organisation or work processes of your department or organisation?	,689			
Q61c Q61c - You are consulted before objectives are set for your work?	,669			
Q61f Q61f - You can take a break when you wish ?	,627			
Q61e Q61e - You have a say in the choice of your work colleagues?	,619			
Q61m Q61m - You experience stress in your work?		,792		
Q61o Q61o - Your job requires that you hide your feelings?		,706		
Q61g Q61g - You have enough time to get the job done?		-,488		
Q61j Q61j - You have the feeling of doing useful work?			,812	
Q61h Q61h - Your job gives you the feeling of work well done?			,772	
Q61k Q61k - You know what is expected of you at work?			,647	
Q61a Q61a - Your colleagues help and support you?				,884
Q61b Q61b - Your manager helps and supports you?				,801
Q61I Q61I - You are treated fairly at your workplace?			,326	,364

Job Decision Latitude

Método de Extração: análise de Componente Principal. Método de Rotação: oblimin com Normalização de Kaiser.



Matriz de padrão^a

	Componente			
	1	2	3	4
Q61n Q61n - You can influence decisions that are important for your work?	,794			
Q61i Q61i - You are able to apply your own ideas in your work?	,701			
Q61d Q61d - You are involved in improving the work organisation or work processes of your department or organisation?	,689			
Q61c Q61c - You are consulted before objectives are set for your work?	,669			
Q61f Q61f - You can take a break when you wish ?	,627			
Q61e Q61e - You have a say in the choice of your work colleagues?	,619			
Q61m Q61m - You experience stress in your work?		,792		
Q61o Q61o - Your job requires that you hide your feelings?		,706		
Q61g Q61g - You have enough time to get the job done?		-,488		
Q61j Q61j - You have the feeling of doing useful work?			,812	
Q61h Q61h - Your job gives you the feeling of work well done?			,772	
Q61k Q61k - You know what is expected of you at work?			,647	
Q61a Q61a - Your colleagues help and support you?				,884
Q61b Q61b - Your manager helps and supports you?				,801
Q61I Q61I - You are treated fairly at your workplace?			,326	,364

Job Decision Latitude

Psychological Job Demands

Método de Extração: análise de Componente Principal. Método de Rotação: oblimin com Normalização de Kaiser.



Matriz de padrão^a

	Componente			
	1	2	3	4
Q61n Q61n - You can influence decisions that are important for your work?	,794			
Q61i Q61i - You are able to apply your own ideas in your work?	,701			
Q61d Q61d - You are involved in improving the work organisation or work processes of your department or organisation?	,689			
Q61c Q61c - You are consulted before objectives are set for your work?	,669			
Q61f Q61f - You can take a break when you wish ?	,627			
Q61e Q61e - You have a say in the choice of your work colleagues?	,619			
Q61m Q61m - You experience stress in your work?		,792		
Q61o Q61o - Your job requires that you hide your feelings?		,706		
Q61g Q61g - You have enough time to get the job done?		-,488		
Q61j Q61j - You have the feeling of doing useful work?			,812	
Q61h Q61h - Your job gives you the feeling of work well done?			,772	
Q61k Q61k - You know what is expected of you at work?			,647	
Q61a Q61a - Your colleagues help and support you?				,884
Q61b Q61b - Your manager helps and supports you?				,801
Q611 Q611 - You are treated fairly at your workplace?			,326	,364

Job Decision Latitude

Psychological Job Demands

Psychological Rewards

Método de Extração: análise de Componente Principal. Método de Rotação: oblimin com Normalização de Kaiser.



Matriz de padrão^a

	Componente			
	1	2	3	4
Q61n Q61n - You can influence decisions that are important for your work?	,794			
Q61i Q61i - You are able to apply your own ideas in your work?	,701			
Q61d Q61d - You are involved in improving the work organisation or work processes of your department or organisation?	,689			
Q61c Q61c - You are consulted before objectives are set for your work?	,669			
Q61f Q61f - You can take a break when you wish ?	,627			
Q61e Q61e - You have a say in the choice of your work colleagues?	,619			
Q61m Q61m - You experience stress in your work?		,792		
Q61o Q61o - Your job requires that you hide your feelings?		,706		
Q61g Q61g - You have enough time to get the job done?		-,488		
Q61j Q61j - You have the feeling of doing useful work?			,812	
Q61h Q61h - Your job gives you the feeling of work well done?			,772	
Q61k Q61k - You know what is expected of you at work?			,647	
Q61a Q61a - Your colleagues help and support you?				,884
Q61b Q61b - Your manager helps and supports you?				,801
Q61I Q61I - You are treated fairly at your workplace?			,326	,364

Job Decision Latitude

Psychological Job Demands

Psychological Rewards

Social Support

Método de Extração: análise de Componente Principal. Método de Rotação: oblimin com Normalização de Kaiser.



Como medir a s condições de trabalho?

O modelo "Job-Demand-Control-Support" é um modelo teórico que explica como as características de trabalho influencia o bem-estar.

Identifica assim 4 dimensões relevantes que devem ser medidas para caracterizar as condições de trabalho.

How the Job-Demand-Control-Support Model works

When job demands are high and employees feel pressured, gaining control of the job and developing strong relationships with others helps to cope with stress. The JBCS model supports this using the following principles:

Gaining control over the job

Making autonomous decisions is vital to gaining control over the job. Attaining this and being able to make decisions without asking for direction might require negotiation with superiors but pays off.

Support from the supervisor

Good and helpful social interactions, for example with superiors, can buffer the impact of stress by influencing job attitude, satisfaction and commitment.



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- Objectivo:
 - Usando o Alpha de Crombach, vamos avaliar a confiabilidade de cada dimensão da escala que mede as condições de trabalho dos trabalhadores.



Alpha de Cronbach

 Selecionar 'Analisar' / 'Escala' / 'Análise de Confiabilidade'

ta 🔤 🕼	RH_BD_A	ula13.sav [Con	njuntodeDad	os1] - Edito	r de d	lados do IBI	V SPSS Stat	istics						
Arquivo	<u>E</u> ditar	<u>V</u> isualizar	<u>D</u> ados	Transform	nar	Analisar	<u>G</u> ráficos	<u>U</u> tilitários	E <u>x</u> tensõ	es Janela	Ajuda			\mathbf{i}
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2		1	Female		49	Model	o Linear <u>G</u> e	eral	*				-	
3		2	Male		54	Model	os lineares	generalizado	s 🕨					
4		3	Male		52	Model	os mistos		•	Male			-	
5		3	Male		28	<u>C</u> orrel	acionar		*	Female				
6		4	Female	•	49	Regre	ssão		*	Male	Female			
7		3	Female	•	32	Loa lir	near		•	Female				
8		3	Male	•	57	Redes	s neurais		*	Male				
9		3	Female	•	27	Class	ificar		•	Female				
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(A**)**



(B)

C

Alpha de Cronbach

- Selecionar 'Analisar' / 'Escala' / 'Análise de Confiabilidade'
- Selecionar as variáveis 'Q61a' a 'Q61o'
- Colocar na caixa os 6 do F1 'Itens'

Q61n Q61n - You can influence decisions that are important for your work?

Q61i Q61i - You are able to apply your own ideas in your work?

Q61d Q61d - You are involved in improving the work organisation or work processes of your department or organisation?

Q61c Q61c - You are consulted before objectives are set for your work?

Q61f Q61f - You can take a break when you wish ?

Q61e Q61e - You have a say in the choice of your work colleagues?



(B)

(C)

(D**)**

Alpha de Cronbach

- Selecionar 'Analisar' / 'Escala' / 'Análise de Confiabilidade'
- Selecionar as variáveis 'Q61a' a 'Q61o'
- Colocar na caixa 'Items'
- Clicar no botão 'Estatísticas'

ta Análise de confiabilidade	×
 Q52 - For your work, are these interrupt Q53a - Meeting precise quality standar Q53b - Assessing yourself the quality o Q53c - Solving unforeseen problems o Q53d - Monotonous tasks [Generally, d Q53e - Complex tasks [Generally, does Q53f - Learning new things [Generally, d Q54a - Your order of tasks [Generally, d Q54a - Your methods of work [Generally, d Q54b - Your methods of work [Generall Q55 - Does your job involve rotating tas Q55 - Does your job involve rotating tas Q57a - Who decides the division of tho Q57a - Who decides the division of tho Q57b - Who decides the division of tho Q59 - Is that always in the same team Q60a - For the team in which you work Q61a - Your colleagues help and supp Q61b - Your manager helps and suppo 	Itens: Estatisticas Q61a - Your colleagues help and suppo Q61b - Your manager helps and suppo Estatisticas Q61c - You are consulted before object Q61d - You are involved in improving th Q61f - You have a say in the choice of Q61f - You can take a break when you Q61g - You have enough time to get th Q61g - You have enough time to get th Image: Construction of the construction of
Modelo: Alfa Rótulo de escala:	
OK Cola	r <u>R</u> econfigurar Cancelar Ajuda



(B)

(C**)**

(D)

(E)

(F)

(G)

Alpha de Cronbach

- Selecionar 'Analisar'/ 'Escala' / 'Análise de Confiabilidade'
- Selecionar as variáveis 'Q61a' a 'Q61o'
- Colocar na caixa 'Items'
- Clicar no botão 'Estatísticas'
- Selecionar a opção 'Escalar se item foi excluído'
- Selecionar a opção 'Correlações'
- Clicar 'Continuar' / 'OK'

Enálise de confiabilidade: estatísticas	(F) ×					
Descritivas para Item Escala Escala Escala	Interitem ✓ Correlações Covariâncias					
Resumos <u>M</u> édias <u>V</u> ariâncias C <u>o</u> variâncias Co <u>r</u> relações	Tabela de ANOVA Nenhum Teste <u>F</u> Qui-quadrado de Friedman Qui-quadrado de Coc <u>h</u> ran					
Concordância de interavaliador: Fleiss' Kappa Exibir acordo sobre categorias individuais Ignorar maiúsculas e minúsculas de sequência M Os rótulos de categorias de sequência de Nível de significância assintótico (%): 95	a de caracteres caracteres são exibidos em letras maiúsculas					
Omisso © Excluir valores omissos para o usuário e do sistema © Valores omissos para o usuário são tratados como válidos						
 Quadrado T de Hotelling Coeficiente de correlação intraclasse Modelo: Misto de Dois Fatores 	Tipo: Consistência					
Intervalo de <u>c</u> onfiança: 95 % Valor de teste: 0 G <u>Continuar</u> Cancelar Ajuda						



Alpha de Cronbach

- O resultado do Alfa de Cronbach é apresentado na tabela das 'Estatísticas de confiabilidade'.
- A regra de interpretação do Alfa de Cronbach (George and Mallery, 2019) é:
 - ≥ 0.9 -> Excelente ≥ 0.8 e < 0.9 -> Bom ≥ 0.7 e < 0.8 -> Aceitável ≥ 0.6 e < 0.7 -> Mediocres ≥ 0.5 e < 0.6 -> Pobre
- Neste caso, o Alfa de Cronbach para esta escala é <u>bom</u>



Q61n Q61n - You influence decisio

are important for work? Q61i Q61i - You a

to apply your own your work? Q61d Q61d - You

involved in impro work organisatio processes of you department or

organisation? Q61c Q61c - You consulted before objectives are se work? Q61e Q61e - You say in the choice work colleagues?

Q61fQ61f-You o a break when you

					Esta	tíst	ticas de ite	m-total		
				Mé esca ite ex	dia de ala se o em for cluído	Va es	riância de scala se o item for excluído	Correlação de item total corrigida	Correlação múltipla ao quadrado	Alfa de Cronbach se o item for excluído
S		Q61n (influen are im work?	Q61n - You car ice decisions t portant for you	n hat r	14,26		25,696	,697	,516	,752
6		Q61i G to appl your w	(61i - You are a ly your own ide ork?	able as in	14,75		27,386	,632	,449	,769
		Q61d	Q61d - You are) the	14,50		25,940	,646	,456	,762
		Ν	latriz de corre	elações entre	itens					
				Q61d Q61d - You are involved in improving the						
	Q61n Q61n - You can influence decisions that		61n Q61n - Organisation Q61c Q6 organisation You ar You can Q61l Q61i - or work consult influence You are able processes of befor ecisions that to apply your your objectives		Q61c Q61c You are consulted before objectives ar	- re	Q61e Q61e - You have a say in the choice of your	Q61fQ61f- You can take	,380	,773
	are im for you	oortant r work?	own ideas in your work?	department or organisation?	set for your work?	r	work colleagues?	a break when you wish ?	,285	,792
can is that		1,000	,605	,576	,52	27	,476	,323	4.47	026
oui									,147	,826
re able ideas in		,605	1,000	,554	,47	70	,352	,322		
are ing the or work		,576	,554	1,000	,52	28	,428	,268		
are for your		,527	,470	,528	1,00	00	,401	,271		
have a of your		,476	,352	,428	,40	D1	1,000	,265		
an take wish ?		,323	,322	,268	,27	71	,265	1,000		



Alpha de Cronbach

- A tabela 'Estatísticas de item-total' permite-nos identificar se existem itens/ item/variáveis que possam estar a contribuir para reduzir a consistência interna – por vezes há itens problemáticos (por exemplo com interpretação difícil e que por isso não medem o que o fator deve medir)
- Por exemplo o item Q61f se eliminado aumenta um pouco o alfa. Nos casos em que a eliminação de um item aumenta o alfa para níveis razoáveis pode-se considerar a sua eliminação
- Neste caso o alfa já é bom, não se aconselha a eliminação de informação

Estatísticas de item-total

	Média de escala se o item for excluído	Variância de escala se o item for excluído	Correlação de item total corrigida	Correlação múltipla ao quadrado	Alfa de Cronbach se o item for excluído
Q61n Q61n - You can influence decisions that are important for your work?	14,26	25,696	,697	,516	,752
Q61i Q61i - You are able to apply your own ideas in your work?	14,75	27,386	,632	,449	,769
Q61d Q61d - You are involved in improving the work organisation or work processes of your department or organisation?	14,50	25,940	,646	,456	,762
Q61c Q61c - You are consulted before objectives are set for your work?	14,36	25,977	,598	,380	,773
Q61e Q61e - You have a say in the choice of your work colleagues?	13,37	27,120	,516	,285	,792
Q61f Q61f - You can take a break when you wish ?	14,26	28,443	,375	,147	,826





Análise de confiabilidade

Alpha de Cronbach

- Replica-se o mesmo procedimento para os outros componentes
 - 💑 Q60b For the team in which you work . Q60c - For the team in which you work Q61a - Your colleagues help and supp. Q61b - Your manager helps and suppo. Colocar na caixa: 📲 Q61c - You are consulted before object. Q61d - You are involved in improving th. **Psychological Job Demands** Q61e - You have a say in the choice of. Q61f - You can take a break when you. Q61m Q61m - You experience stress in your work? 🚺 Q61g - You have enough time to get th.. Q61o Q61o - Your job requires that you hide your feelings? 👖 Q61h - Your job gives you the feeling of. 📕 Q61i - You are able to apply your own i.. Classificações: Q61g Q61g - You have enough time to get the job done? 🚺 Q61j - You have the feeling of doing us.. **Psychological Rewards** Q61k - You know what is expected of yo. 🚺 Q61I - You are treated fairly at your wor. Q61j Q61j - You have the feeling of doing useful work? Q61m - You experience stress in your. Q61n - You can influence decisions tha. Q61h Q61h - Your job gives you the feeling of work well done? Q61o - Your job requires that you hide y 4 Q61k Q61k - You know what is expected of you at work? 062 - Is your immediate boss a man Q63a - Your immediate boss... - Resp.. Social Support Q63b - Your immediate boss... - Gives 📲 Q63c - Your immediate boss... - Is suc... Q61a Q61a - Your colleagues help and support you? Q61b Q61b - Your manager helps and supports you? Modelo: Alfa T Q611 Q611 - You are treated fairly at your workplace? Rótulo de escala: OK Reconfigurar Cancelar Ajuda

Х

Estatísticas.



Estatísticas de item-total

Alpha de Cronbach

Q61m Q61m - You experience stress in your work? Q61o Q61o - Your job requires that you hide your feelings? Q61g Q61g - You have enough time to get the job done?

Psychological Job Demands

sim)

Estatísticas de confiabilidade

	Alfa de Cronbach com base em itens	
Alfa de	padronizados	
Cronbach	а	N de itens
,016	-,098	3

a. O valor é negativo devido a uma covariância média negativa entre itens. Isto viola as suposições do modelo de confiabilidade. É possível verificar as codificações de item.

Estatísticas de confiabilidade



Valor mesmo muito baixo, o que se passa?

Temos um item invertido!

(não afeta a AFE mas o alfa

Temos de recodificar o item

e voltar a pedir o Alfa!

	Média de escala se o item for excluído	Variância de escala se o item for excluído	Correlação de item total corrigida	Correlação múltipla ao quadrado	Alfa de Cronbach se o item for excluído
Q61g Q61g - You have enough time to get the job done?	6,33	4,503	-,218	,086	,430
Q61m Q61m - You experience stress in your work?	5,45	2,910	,070	,152	-,161ª
Q61o Q61o - Your job requires that you hide your feelings?	5,04	1,691	,193	,079	-,812ª

a. O valor é negativo devido a uma covariância média negativa entre itens. Isto viola as suposições do modelo de confiabilidade. É possível verificar as codificações de item.

Valor antigo	Novo valor
⊖ Valor:	O Valor:
	Omisso no sistema
⊖ Omisso no sist <u>e</u> ma	O Co <u>p</u> iar valor(es) antigo(s)
 Omisso para o sistema ou usuário Amplitude: 	Antigo> Novo: 1> 5
a <u>t</u> é	Incluir 3> 3 Alterar 4> 2
O Intervalo, MAIS BAIXO até o valor:	Remover 5> 1 ELSE> SYSMIS
O Intervalo, valor até o MAIS ALTO:	
	As variáveis de saída são sequências de caracteres Largura: 8
Todos os outros valores	Converter sequências de caracteres numéricas em números ('5'->5)



Reportar os resultados de uma análise factorial exploratória

Foi realizada uma análise fatorial exploratória com uma rotação oblíqua (oblimn) no conjunto de dados de 15 itens de uma escala que mede as condições de trabalho, aplicada numa amostra de 2481 participantes. A fatorialidade dos dados foi estudada com a medida KMO, que se mostrou no geral (KMO 0.88) e para cada variável (KMO > 0.80) com valores muito acima dos níveis aceitáveis e com o teste de esfericidade de Bartlett $(\gamma^2 (36) = 1081.968, p < 0.001)$, que indicou que o nível de intercorrelação entre as várias é suficiente para uma análise fatorial. O número de critérios a reter foi estudado com base do estudo da solução com o máximo de fatores, tento em conta o critério de Kaiser (valores próprios > 1) e da análise do gráfica da evolução dos valores próprios (método) em função do número de fatores retidos. Os critérios sugeriram a retenção de 4 fatores. Apresenta-se a matriz dos pesos fatoriais ordenada após rotação, em que é possível verificar a saturação não ambígua de 6 itens na componente 1 (Job Decision Latitude), 3 itens na componente 2 (Psychological Job Demands), 3 itens na componente 3 (Psychological Rewards), e 3 itens na componente 4 (Social Support). A solução de quatro componentes permite explicar 57% da variabilidade total, e na maioria dos indicadores mais de metade da variância é variância partilhada com a escala (Comunalidades > 0.5 em todos os indicadores exceto no item Q611). O fator Job Decision Latitude mostrou bons níveis de consistência interna (alfa > 0,80), os fatores Psychological Rewards e Social Support registam níveis de consistência interna medíocres (< 0.70) e o fator Psychological Job Demands, um valores muito baixos, sugerindo problemas de consistência interna.



Ainda temos tempo?

Realizar uma análise fatorial exploratória a escala de avaliação das condições físicas no local de trabalho

tad *ADGR	H_BD_Aula11.sav	ConjuntodeDado	os1] - Editor d	e dados do IBI	A SPSS Statistics						- 0	× נ
Arquivo	Editar <u>V</u> isual	zar <u>D</u> ados	Transforma	r <u>A</u> nalisar	Gráficos Utilitários Extensões Janela Ajuda							
	Nome	Tipo				Valores	Omisso	Colunas	Aliphar	Medida	Panel	
88	021a	Numérico	1	0	021a - Before this restructuring or reorganisation took place, were you 2 - Informed of the forthcoming changes	{1 Yes}	8 9	8	Tireito	A Nominal	> Entrada	
89	021b	Numérico	1	0	21 a Selection to restructuring or regranization task place were your 2 - Asked to rise your onlinion	[1, Yes]	8.9	8	E Direito	Nominal	> Entrada	-
90	022	Numérico	1	0	222 - At your place of work are workers with the same inbitile as you ?	{1 Mostly	8.9	8	Direito	Nominal	> Entrada	-
91	Q23	Numérico	10	0	223 - How many becole work under your supervision, for whom pay increases, bonuses or promotion depend directly on you?	{0, None}	8888, 9999	8	Direito	Escala	> Entrada	-
92	Q24	Numérico	8	0	Q24 - How many hours do you usually work per week in your main paid job?	{888. DK/no	888, 999	8	Direito	Escala	> Entrada	-
93	Q25	Numérico	8	0	Q25 - How many hours per week would you prefer to work at present? [Make a free choice regarding your working hours]	{777. The s	888, 999	8	Direito	Escala	> Entrada	-
94	Q26	Numérico	8	0	Q26 - How many days per week do vou usually work in your main paid iob?	{8. DK /no o	8.9	8	Direito	Escala	> Entrada	-
95	Q27	Numérico	1	0	Q27 - Besides your main paid job, do you have any other paid job(s)? (IF YES) Is it / are they?	{1. No other	8.9	8	Direito	Nominal	> Entrada	-
96	Q28	Numérico	8	0	Q28 - How many hours a week on average do you work in job(s) other than your main paid job?	{888, DK (s	888, 999	8	Direito	🖋 Escala	S Entrada	-
97	Q29a	Numérico	1	0	Q29a - Vibrations from hand tools, machinery etc. [Are you exposed at work to?]	{1, All of the	8,9	8	Direito	Ordinal	S Entrada	-
98	Q29b	Numérico	1	0	Q29b - Noise so loud that you would have to raise your voice to talk to people [Are you exposed at work to?]	{1, All of the	8,9	8	Direito	Ordinal	S Entrada	-
99	Q29c	Numérico	1	0	Q29c - High temperatures which make you perspire even when not working [Are you exposed at work to?]	{1, All of the	8,9	8	Direito	Ordinal	S Entrada	-
100	Q29d	Numérico	1	0	Q29d - Low temperatures whether indoors or outdoors [Are you exposed at work to?]	{1, All of the	8, 9	8	🔳 Direito	J Ordinal	S Entrada	-
101	Q29e	Numérico	1	0	Q29e - Breathing in smoke, fumes (such as welding or exhaust fumes), powder or dust etc. [Are you exposed at work to?]	{1, All of the	8, 9	8	🔳 Direito	J Ordinal	S Entrada	-
102	Q29f	Numérico	1	0	Q29f - Breathing in vapours such as solvents and thinners [Are you exposed at work to?]	{1, All of the	8, 9	8	🗏 Direito	Ordinal	S Entrada	1
103	Q29g	Numérico	1	0	Q29g - Handling or being in skin contact with chemical products or substances [Are you exposed at work to?]	{1, All of the	8, 9	8	🗏 Direito	Ordinal	S Entrada	1
104	Q29h	Numérico	1	0	Q29h - Tobacco smoke from other people [Are you exposed at work to?]	{1, All of the	8, 9	8	🗏 Direito	Ordinal	S Entrada	1
105	Q29i	Numérico	1	0	Q29i - Handling or being in direct contact with materials which can be infectious [Are you exposed at work to?]	{1, All of the	8, 9	8	🔳 Direito	Ordinal	S Entrada	
106	Q30a	Numérico	1	0	Q30a - Tiring or painful positions [Does your main paid job involve?]	{1, All of the	8, 9	8	🔳 Direito	🚮 Ordinal	🔪 Entrada	-
107	Q30b	Numérico	1	0	Q30b - Lifting or moving people [Does your main paid job involve?]	{1, All of the	8, 9	8	🗃 Direito	J Ordinal	🔪 Entrada	
108	Q30c	Numérico	1	0	Q30c - Carrying or moving heavy loads [Does your main paid job involve?]	{1, All of the	8, 9	8	🗃 Direito	J Ordinal	🔪 Entrada	
109	Q30d	Numérico	1	0	Q30d - Sitting [Does your main paid job involve?]	{1, All of the	8, 9	8	🗃 Direito	🚮 Ordinal	🔪 Entrada	
110	Q30e	Numérico	1	0	Q30e - Repetitive hand or arm movements [Does your main paid job involve?]	{1, All of the	8, 9	8	🗃 Direito	J Ordinal	💊 Entrada	
111	Q30f	Numérico	1	0	Q30f - Dealing directly with people who are not employees at your workplace [Does your main paid job involve?]	{1, All of the	8, 9	8	🔳 Direito	🚮 Ordinal	🔪 Entrada	
112	Q30g	Numérico	1	0	Q30g - Handling angry clients, customers, patients, pupils etc. [Does your main paid job involve?]	{1, All of the	8, 9	8	🗏 Direito	J Ordinal	🔪 Entrada	
113	Q30h	Numérico	1	0	Q30h - Being in situations that are emotionally disturbing for you [Does your main paid job involve?]	{1, All of the	8, 9	8	🗏 Direito	J Ordinal	🔪 Entrada	
114	Q30i	Numérico	1	0	Q30i - Working with computers, laptops, smartphones etc [Does your main paid job involve?]	{1, All of the	8, 9	8	🖷 Direito	J Ordinal	🔪 Entrada	
115	Q31	Numérico	1	0	Q31 - Does your job ever require that you wear personal protective equipment?	{1, Yes}	8, 9	8	Direito	\delta Nominal	🔪 Entrada	1
116	032	Numérico	1	0	O32 - Do vou alwaye use it when it is required?	11 Vecl	8.9	8	Direito	A Nominal	> Entrada	1