Development of Tools to Assess Vaccine Literacy: a Scoping Review and Future Perspectives

**Supplementary material**

Variables’ psychological glossary considered for building the framework

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| Term | APA definition (https://www.apa.org/) | Common definitions reported in literature |
| **Ability** | existing competence or skill to perform a specific physical or mental act. Although ability may be either innate or developed through experience, it is distinct from capacity to acquire competence | innate potential to perform mental and physical actions or tasks |
| **Attitude** | relatively enduring and general evaluation of an object, person, group, issue, or concept on a dimension ranging from negative to positive. Attitudes provide summary evaluations of target objects and are often assumed to be derived from specific beliefs, emotions, and past behaviors  | internal construct within an individual’s mind which reflects thoughts, beliefs, emotions and evaluation |
| **Behavior** | any action or function that can be objectively observed in response to controlled stimuli. | external manifestation that can be observed by others and reflects an individual's actions in the external world  |
| **Belief** | acceptance of the truth, reality, or validity of something (e.g., a person’s veracity), particularly in the absence of substantiation. | descriptive thought that persons hold about something |
| **Capacity** | maximum ability of an individual to receive or retain information and knowledge or to function in mental or physical tasks. | an individual's mental or physical ability |
| **Competencies** |  - | knowledge, skills, abilities, and behaviors that contribute to individual and organizational performance  |
| **Emotion** | complex reaction pattern, involving experiential, behavioral, and physiological elements, by which an individual attempts to deal with a personally significant matter or event. Emotion typically involves [feeling](https://dictionary.apa.org/feeling) but differs from feeling in having an overt or implicit engagement with the world | strong feeling deriving from one's circumstances, mood, or relationships with others |
| **Feeling** | self-contained phenomenal experience, subjective, evaluative, and independent of the sensations, thoughts, or images evoking it Feelings differ from [emotions](https://dictionary.apa.org/emotion) in being purely mental, whereas emotions are designed to engage with the world | subjective, evaluative, and independent of the sensations, thought |
| **Knowledge** | the state of being familiar with something or aware of its existence, usually resulting from experience or study | information learned through experience, study or investigation  |
| **Motivation** | a person’s willingness to exert physical or mental effort in pursuit of a goal or outcome | internal and external: process that initiates, guides, and maintains goal-oriented behaviors |
| **Perception** | the process or result of becoming aware of objects, relationships, and events by means of the senses, which including such activities as recognizing, observing, and discriminating |  |
| **Self-efficacy** | an individual’s subjective perception of their capability to perform in a given setting or to attain desired results, proposed by Albert Bandura as a primary determinant of emotional and motivational states and behavioral change. | individual's belief in their own ability to successfully complete tasks, achieve goals, and handle challenges   |
| **Skill** | an ability or proficiency acquired through training and practice. | the result of repeatedly applying knowledge or ability |

GLM MEDIATION MODEL applied on the data set of the 2020 survey (N=885);

Gallucci, M. (2020). jAMM: jamovi Advanced Mediation Models.- <https://jamovi-amm.github>

 *LEGENDA OF ITEMS INTRODUCED IN THE MEDIATION MODEL AND PCA OF 2020 SURVEY DATA (N=885)[17]*

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| --- |
| **FUVL ITEMS - When reading or listening to information about future Covid-19 vaccines or current vaccines:**  |
| ITEM1=       Did you find words you didn’t know? |
| ITEM2=       Did you find that the texts were difficult to understand? |
| ITEM3=       Did you need much time to understand them? |
| ITEM4=       Did you or would you need someone to help you understand them? |
| FUVLNOM= Functional VL nominal scale |
|  |
| **ICVL ITEMS - When looking for information about future Covid-19 vaccines or current vaccines:** |
| ITEM5=       Have you consulted more than one source of information? |
| ITEM 6=       Did you find the information you were looking for? |
| ITEM 7=       Have you had the opportunity to use the information? |
| ITEM 8=       Did you discuss what you understood about vaccinations with your doctor or other people? |
| ITEM 9=       Did you consider whether the information collected was about your condition? |
| ITEM 10=   Have you considered the credibility of the sources? |
| ITEM 11=   Did you check whether the information was correct? |
| ITEM 12=   Did you find any useful information to make a decision on whether or not to get vaccinated? |
| ICVLNOM= Interactive-critical VL nominal scale |
|  |
| **BELIEFS ABOUT VACCINATION – about general vaccination** |
| 1)     BEL1EF1 / **CONF IDENCE** - ‘I am not favorable to vaccines because they are unsafe’ |
| 2)     BELIEF2 / **COMP LACENCY** - ‘There is no need to vaccinate because natural immunity exists’ |
|  |
| **Attitudes (QUEstions) – ABOUT Covid-19 vaccines** |
| 1)      QUE1 Will be possible to produce safe and efficacious vaccines? |
| 2)      QUE2 / **INT ENTION** - Will you get vaccinated, if possible? |
| 3)      QUE3 Will Health Authorities succeed in vaccinating the entire population? |
| 4)      QUE4 / **CONV ENIENCE** - Would you pay a fee to be vaccinated? |
| 5) QUE5CHI -Should children be vaccinated too? |
|  |
| **Demographics and outcome** |
| AGE CLASS = Four classes: 1=18-30 - 2=31-50 - 3=51-65 - 4=>65 years of age |
| EDUCATION = Four level:: 1= primary – 2= secondary – 3= tertiary – 4= master |
| FLULAST = last seasonal flu vaccine received (uptake) yes / no |

**VL mediating effects between antecedents and ‘3Cs’ - Indirect and Total Effects** **C.I. 95%** *computed with method: Standard (Delta method)*

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Type** | **DETERMINANT > VL > CONFIDENCE** | **Estimate** | **SE** | **Lower** | **Upper** | **β** | **z** | **p** | **%** |
| Indirect | EDUCATION ⇒ FUVL ⇒ CONFIDENCE | 0,00589 | 0,00275 | 4,97E-04 | 0,01128 | 0,01083 | 2.141 | 0,032 | **0,11** |
|  | EDUCATION ⇒ ICVL ⇒ CONFIDENCE | 0,01744 | 0,00474 | 0,00815 | 0,02674 | 0,03207 | 3.678 | < ,001 | **0,32** |
|  | AGECLASS ⇒ FUVL ⇒ CONFIDENCE | -7,27e−4 | 0,00199 | -0,00463 | 0,00318 | -0,00121 | -0,365 | 0,715 |  |
|  | AGECLASS ⇒ ICVL ⇒ CONFIDENCE | 0,00747 | 0,00401 | -3,95e−4 | 0,01533 | 0,01241 | 1.861 | 0,063 |  |
|  | HCWORKER ⇒ FUVL ⇒ CONFIDENCE | 0,02122 | 0,009 | 0,00359 | 0,03886 | 0,01372 | 2.358 | 0,018 |  |
|  | HCWORKER ⇒ ICVL ⇒ CONFIDENCE | 0,02738 | 0,01116 | 0,0055 | 0,04927 | 0,0177 | 2.453 | 0,014 |  |
| Component | EDUCATION ⇒ FUVL | 0,07644 | 0,0241 | 0,0292 | 0,12368 | 0,11032 | 3.171 | 0,002 |  |
|  | FUVL ⇒ CONFIDENCE | 0,07706 | 0,02656 | 0,02501 | 0,12912 | 0,09818 | 2.902 | 0,004 |  |
|  | EDUCATION ⇒ ICVL | 0,08932 | 0,01817 | 0,05371 | 0,12492 | 0,16982 | 4.917 | < ,001 |  |
|  | ICVL ⇒ CONFIDENCE | 0,1953 | 0,03524 | 0,12623 | 0,26437 | 0,18887 | 5.542 | < ,001 |  |
|  | AGECLASS ⇒ FUVL | -0,00944 | 0,02566 | -0,05974 | 0,04086 | -0,01231 | -0,368 | 0,713 |  |
|  | AGECLASS ⇒ ICVL | 0,03823 | 0,01934 | 3,13E-04 | 0,07614 | 0,0657 | 1.976 | 0,048 |  |
|  | HCWORKER ⇒ FUVL | 0,27539 | 0,06802 | 0,14208 | 0,4087 | 0,13971 | 4.049 | < ,001 |  |
|  | HCWORKER ⇒ ICVL | 0,14021 | 0,05127 | 0,03973 | 0,24068 | 0,0937 | 2.735 | 0,006 |  |
| Direct | EDUCATION ⇒ CONFIDENCE | 0,03095 | 0,01897 | -0,00623 | 0,06813 | 0,05692 | 1.632 | 0,103 |  |
|  | AGECLASS ⇒ CONFIDENCE | -0,04656 | 0,01991 | -0,08558 | -0,00754 | -0,0774 | -2.339 | 0,019 |  |
|  | HCWORKER ⇒ CONFIDENCE | 0,03275 | 0,05326 | -0,07164 | 0,13714 | 0,02117 | 0,615 | 0,539 |  |
| Total | EDUCATION ⇒ CONFIDENCE | 0,05429 | 0,01914 | 0,01677 | 0,09181 | 0,09982 | 2.836 | 0,005 |  |
|  | AGECLASS ⇒ CONFIDENCE | -0,03982 | 0,02038 | -0,07977 | 1,26E-04 | -0,0662 | -1.954 | 0,051 |  |
|  | HCWORKER ⇒ CONFIDENCE | 0,08135 | 0,05402 | -0,02452 | 0,18723 | 0,05258 | 1.506 | 0,132 |  |
|  **DETERMINANT > VL > COMPLACENCY** |  |
| Indirect | EDUCATION ⇒ FUVL ⇒ COMPLACENCY | 0,00195 | 0,00211 | -0,0022 | 0,00609 | 0,00366 | 0,921 | 0,357 |  |
|  | EDUCATION ⇒ ICVL ⇒ COMPLACENCY | 0,01208 | 0,00398 | 0,00427 | 0,01989 | 0,02272 | 3.033 | 0,002 | **0,25** |
|  | AGECLASS ⇒ FUVL ⇒ COMPLACENCY | -2,40e−4 | 6,99E-04 | -0,00161 | 0,00113 | -4,08e−4 | -0,343 | 0,731 |  |
|  | AGECLASS ⇒ ICVL ⇒ COMPLACENCY | 0,00517 | 0,00294 | -5,93e−4 | 0,01094 | 0,00879 | 1.758 | 0,079 |  |
|  | HCWORKER ⇒ FUVL ⇒ COMPLACENCY | 0,00701 | 0,00749 | -0,00767 | 0,02169 | 0,00463 | 0,936 | 0,349 |  |
|  | HCWORKER ⇒ ICVL ⇒ COMPLACENCY | 0,01897 | 0,0085 | 0,0023 | 0,03564 | 0,01254 | 2.230 | 0,026 |  |
| Component | EDUCATION ⇒ FUVL | 0,07644 | 0,0241 | 0,0292 | 0,12368 | 0,11032 | 3.171 | 0,002 |  |
|  | FUVL ⇒ COMPLACENCY | 0,02546 | 0,02646 | -0,02641 | 0,07732 | 0,03317 | 0,962 | 0,336 |  |
|  | EDUCATION ⇒ ICVL | 0,08932 | 0,01817 | 0,05371 | 0,12492 | 0,16982 | 4.917 | < ,001 |  |
|  | ICVL ⇒ COMPLACENCY | 0,13528 | 0,03511 | 0,06647 | 0,20409 | 0,13378 | 3.853 | < ,001 |  |
|  | AGECLASS ⇒ FUVL | -0,00944 | 0,02566 | -0,05974 | 0,04086 | -0,01231 | -0,368 | 0,713 |  |
|  | AGECLASS ⇒ ICVL | 0,03823 | 0,01934 | 3,13E-04 | 0,07614 | 0,0657 | 1.976 | 0,048 |  |
|  | HCWORKER ⇒ FUVL | 0,27539 | 0,06802 | 0,14208 | 0,4087 | 0,13971 | 4.049 | < ,001 |  |
|  | HCWORKER ⇒ ICVL | 0,14021 | 0,05127 | 0,03973 | 0,24068 | 0,0937 | 2.735 | 0,006 |  |
| Direct | EDUCATION ⇒ COMPLACENCY | 0,03454 | 0,0189 | -0,0025 | 0,07159 | 0,06495 | 1.828 | 0,068 |  |
|  | AGECLASS ⇒ COMPLACENCY | 0,00567 | 0,01984 | -0,03321 | 0,04455 | 0,00964 | 0,286 | 0,775 |  |
|  | HCWORKER ⇒ COMPLACENCY | 0,02687 | 0,05306 | -0,07713 | 0,13088 | 0,01776 | 0,506 | 0,613 |  |
| Total | EDUCATION ⇒ COMPLACENCY | 0,04857 | 0,01878 | 0,01177 | 0,08538 | 0,09133 | 2.587 | 0,01 |  |
|  | AGECLASS ⇒ COMPLACENCY | 0,0106 | 0,02 | -0,02859 | 0,04979 | 0,01802 | 0,53 | 0,596 |  |
|  | HCWORKER ⇒ COMPLACENCY | 0,05285 | 0,05299 | -0,05101 | 0,15671 | 0,03493 | 0,997 | 0,319 |  |
|  **DETERMINANT > VL > CONVENIENCE** |  |
| Indirect | EDUCATION ⇒ FUVL ⇒ CONVENIENCE | -6,82e−4 | 0,0014 | -0,00342 | 0,00206 | -0,00188 | -0,488 | 0,626 |  |
|  | EDUCATION ⇒ ICVL ⇒ CONVENIENCE | 0,01103 | 0,0031 | 0,00495 | 0,01711 | 0,03037 | 3.557 | < ,001 | **0,57** |
|  | AGECLASS ⇒ FUVL ⇒ CONVENIENCE | 8,42E-05 | 2,85E-04 | -4,75e−4 | 6,44E-04 | 2,09E-04 | 0,295 | 0,768 |  |
|  | AGECLASS ⇒ ICVL ⇒ CONVENIENCE | 0,00472 | 0,00256 | -2,94e−4 | 0,00974 | 0,01175 | 1.845 | 0,065 |  |
|  | HCWORKER ⇒ FUVL ⇒ CONVENIENCE | -0,00246 | 0,00501 | -0,01228 | 0,00737 | -0,00238 | -0,49 | 0,624 |  |
|  | HCWORKER ⇒ ICVL ⇒ CONVENIENCE | 0,01732 | 0,00717 | 0,00327 | 0,03137 | 0,01676 | 2.416 | 0,016 |  |
| Component | EDUCATION ⇒ FUVL | 0,07644 | 0,0241 | 0,0292 | 0,12368 | 0,11032 | 3.171 | 0,002 |  |
|  | FUVL ⇒ CONVENIENCE | -0,00892 | 0,01806 | -0,04432 | 0,02649 | -0,01701 | -0,494 | 0,621 |  |
|  | EDUCATION ⇒ ICVL | 0,08932 | 0,01817 | 0,05371 | 0,12492 | 0,16982 | 4.917 | < ,001 |  |
|  | ICVL ⇒ CONVENIENCE | 0,12351 | 0,02397 | 0,07654 | 0,17049 | 0,17885 | 5.154 | < ,001 |  |
|  | AGECLASS ⇒ FUVL | -0,00944 | 0,02566 | -0,05974 | 0,04086 | -0,01231 | -0,368 | 0,713 |  |
|  | AGECLASS ⇒ ICVL | 0,03823 | 0,01934 | 3,13E-04 | 0,07614 | 0,0657 | 1.976 | 0,048 |  |
|  | HCWORKER ⇒ FUVL | 0,27539 | 0,06802 | 0,14208 | 0,4087 | 0,13971 | 4.049 | < ,001 |  |
|  | HCWORKER ⇒ ICVL | 0,14021 | 0,05127 | 0,03973 | 0,24068 | 0,0937 | 2.735 | 0,006 |  |
| Direct | EDUCATION ⇒ CONVENIENCE | 0,00884 | 0,0129 | -0,01645 | 0,03413 | 0,02434 | 0,685 | 0,493 |  |
|  | AGECLASS ⇒ CONVENIENCE | -0,00225 | 0,01354 | -0,02879 | 0,02429 | -0,00561 | -0,166 | 0,868 |  |
|  | HCWORKER ⇒ CONVENIENCE | -0,03548 | 0,03622 | -0,10648 | 0,03551 | -0,03434 | -0,98 | 0,327 |  |
| Total | EDUCATION ⇒ CONVENIENCE | 0,01919 | 0,01289 | -0,00606 | 0,04445 | 0,05284 | 1.489 | 0,136 |  |
|  | AGECLASS ⇒ CONVENIENCE | 0,00255 | 0,01372 | -0,02434 | 0,02944 | 0,00636 | 0,186 | 0,852 |  |
|   | HCWORKER ⇒ CONVENIENCE | -0,02062 | 0,03636 | -0,09189 | 0,05064 | -0,01996 | -0,567 | 0,571 |  |

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| ‘3Cs’ mediating effects between VL and outcome - Indirect and Total Effects - C.I. 95% *computed with method: Standard (Delta method)* |
| Type | VL > CONFIDENCE > FLU VACCINE UPTAKE | **Estimate** | **SE** | **Lower** | **Upper** | **β** | **z** | **p** | **%** |
| Indirect | FUVL ⇒ CONFIDENCE ⇒ FLULAST | 0,0114 | 0,00448 | 0,00262 | 0,02018 | 0,0163 | 2.545 | 0,011 | **0,14** |
|  | ICVL ⇒ CONFIDENCE ⇒ FLULAST | 0,02889 | 0,00754 | 0,01411 | 0,04367 | 0,03137 | 3.832 | < ,001 | **0,37** |
|  | EDUCATION ⇒ CONFIDENCE ⇒ FLULAST | 0,00458 | 0,00294 | -0,00118 | 0,01033 | 0,00945 | 1.560 | 0,119 |  |
|  | AGECLASS ⇒ CONFIDENCE ⇒ FLULAST | -0,00689 | 0,00322 | -0,0132 | -5,79e−4 | -0,01285 | -2.140 | 0,032 |  |
|  | HCWORKER ⇒ CONFIDENCE ⇒ FLULAST | 0,00484 | 0,00793 | -0,0107 | 0,02039 | 0,00351 | 0,611 | 0,541 |  |
| Component | FUVL ⇒ CONFIDENCE | 0,07706 | 0,02656 | 0,02501 | 0,12912 | 0,09818 | 2.902 | 0,004 |  |
|  | CONFIDENCE ⇒ FLULAST | 0,14792 | 0,02789 | 0,09325 | 0,20259 | 0,16607 | 5.303 | < ,001 |  |
|  | ICVL ⇒ CONFIDENCE | 0,1953 | 0,03524 | 0,12623 | 0,26437 | 0,18887 | 5.542 | < ,001 |  |
|  | EDUCATION ⇒ CONFIDENCE | 0,03095 | 0,01897 | -0,00623 | 0,06813 | 0,05692 | 1.632 | 0,103 |  |
|  | AGECLASS ⇒ CONFIDENCE | -0,04656 | 0,01991 | -0,08558 | -0,00754 | -0,0774 | -2.339 | 0,019 |  |
|  | HCWORKER ⇒ CONFIDENCE | 0,03275 | 0,05326 | -0,07164 | 0,13714 | 0,02117 | 0,615 | 0,539 |  |
| Direct | FUVL ⇒ FLULAST | 0,06729 | 0,02197 | 0,02423 | 0,11035 | 0,09624 | 3.063 | 0,002 |  |
|  | ICVL ⇒ FLULAST | 0,04827 | 0,02952 | -0,00958 | 0,10612 | 0,05241 | 1.635 | 0,102 |  |
|  | EDUCATION ⇒ FLULAST | 0,01409 | 0,01564 | -0,01656 | 0,04475 | 0,02909 | 0,901 | 0,368 |  |
|  | AGECLASS ⇒ FLULAST | 0,18136 | 0,01644 | 0,14913 | 0,21358 | 0,33846 | 11.031 | < ,001 |  |
|  | HCWORKER ⇒ FLULAST | 0,20187 | 0,04385 | 0,11592 | 0,28782 | 0,14648 | 4.603 | < ,001 |  |
| Total | FUVL ⇒ FLULAST | 0,07869 | 0,02223 | 0,03512 | 0,12225 | 0,11254 | 3.540 | < ,001 |  |
|  | ICVL ⇒ FLULAST | 0,07716 | 0,02949 | 0,01936 | 0,13496 | 0,08378 | 2.616 | 0,009 |  |
|  | EDUCATION ⇒ FLULAST | 0,01867 | 0,01588 | -0,01244 | 0,04979 | 0,03854 | 1.176 | 0,24 |  |
|  | AGECLASS ⇒ FLULAST | 0,17447 | 0,01666 | 0,14181 | 0,20713 | 0,32561 | 10.471 | < ,001 |  |
|  | HCWORKER ⇒ FLULAST | 0,20672 | 0,04457 | 0,11936 | 0,29408 | 0,15 | 4.638 | < ,001 |  |
|  **VL > COMPLACENCY > FLU VACCINE UPTAKE** |  |  |  |
| Indirect | FUVL ⇒ COMPLACENCY ⇒ FLULAST | 0,00376 | 0,00397 | -0,00402 | 0,01154 | 0,00537 | 0,946 | 0,344 |  |
|  | ICVL ⇒ COMPLACENCY ⇒ FLULAST | 0,01997 | 0,00642 | 0,00739 | 0,03255 | 0,02168 | 3.111 | 0,002 | **0,26** |
|  | EDUCATION ⇒ COMPLACENCY ⇒ FLULAST | 0,0051 | 0,00295 | -6,89e−4 | 0,01088 | 0,01052 | 1.727 | 0,084 |  |
|  | AGECLASS ⇒ COMPLACENCY ⇒ FLULAST | 8,37E-04 | 0,00293 | -0,00491 | 0,00658 | 0,00156 | 0,285 | 0,775 |  |
|  | HCWORKER ⇒ COMPLACENCY ⇒ FLULAST | 0,00397 | 0,00787 | -0,01145 | 0,01939 | 0,00288 | 0,504 | 0,614 |  |
| Component | FUVL ⇒ COMPLACENCY | 0,02546 | 0,02646 | -0,02641 | 0,07732 | 0,03317 | 0,962 | 0,336 |  |
|  | COMPLACENCY ⇒ FLULAST | 0,14759 | 0,028 | 0,09271 | 0,20247 | 0,16204 | 5.271 | < ,001 |  |
|  | ICVL ⇒ COMPLACENCY | 0,13528 | 0,03511 | 0,06647 | 0,20409 | 0,13378 | 3.853 | < ,001 |  |
|  | EDUCATION ⇒ COMPLACENCY | 0,03454 | 0,0189 | -0,0025 | 0,07159 | 0,06495 | 1.828 | 0,068 |  |
|  | AGECLASS ⇒ COMPLACENCY | 0,00567 | 0,01984 | -0,03321 | 0,04455 | 0,00964 | 0,286 | 0,775 |  |
|  | HCWORKER ⇒ COMPLACENCY | 0,02687 | 0,05306 | -0,07713 | 0,13088 | 0,01776 | 0,506 | 0,613 |  |
| Direct | FUVL ⇒ FLULAST | 0,07493 | 0,02188 | 0,03204 | 0,11781 | 0,10717 | 3.425 | < ,001 |  |
|  | ICVL ⇒ FLULAST | 0,05719 | 0,02926 | -1,55e−4 | 0,11454 | 0,0621 | 1.955 | 0,051 |  |
|  | EDUCATION ⇒ FLULAST | 0,01357 | 0,01565 | -0,0171 | 0,04424 | 0,02802 | 0,867 | 0,386 |  |
|  | AGECLASS ⇒ FLULAST | 0,17363 | 0,01639 | 0,1415 | 0,20576 | 0,32404 | 10.592 | < ,001 |  |
|  | HCWORKER ⇒ FLULAST | 0,20275 | 0,04386 | 0,11679 | 0,28871 | 0,14712 | 4.623 | < ,001 |  |
| Total | FUVL ⇒ FLULAST | 0,07869 | 0,02223 | 0,03512 | 0,12225 | 0,11254 | 3.540 | < ,001 |  |
|  | ICVL ⇒ FLULAST | 0,07716 | 0,02949 | 0,01936 | 0,13496 | 0,08378 | 2.616 | 0,009 |  |
|  | EDUCATION ⇒ FLULAST | 0,01867 | 0,01588 | -0,01244 | 0,04979 | 0,03854 | 1.176 | 0,24 |  |
|  | AGECLASS ⇒ FLULAST | 0,17447 | 0,01666 | 0,14181 | 0,20713 | 0,32561 | 10.471 | < ,001 |  |
|  | HCWORKER ⇒ FLULAST | 0,20672 | 0,04457 | 0,11936 | 0,29408 | 0,15 | 4.638 | < ,001 |  |
|  **VL > CONVENIENCE > FLU VACCINE UPTAKE** |  |  |  |
| Indirect | FUVL ⇒ CONVENIENCE ⇒ FLULAST | -0,00182 | 0,0037 | -0,00906 | 0,00543 | -0,0026 | -0,491 | 0,623 |  |
|  | ICVL ⇒ CONVENIENCE ⇒ FLULAST | 0,02516 | 0,00704 | 0,01136 | 0,03896 | 0,02732 | 3.573 | < ,001 | **0,33** |
|  | EDUCATION ⇒ CONVENIENCE ⇒ FLULAST | 0,0018 | 0,00265 | -0,0034 | 0,007 | 0,00372 | 0,679 | 0,497 |  |
|  | AGECLASS ⇒ CONVENIENCE ⇒ FLULAST | -4,59e−4 | 0,00276 | -0,00587 | 0,00495 | -8,56e−4 | -0,166 | 0,868 |  |
|  | HCWORKER ⇒ CONVENIENCE ⇒ FLULAST | -0,00723 | 0,00752 | -0,02197 | 0,00751 | -0,00525 | -0,961 | 0,337 |  |
| Component | FUVL ⇒ CONVENIENCE | -0,00892 | 0,01806 | -0,04432 | 0,02649 | -0,01701 | -0,494 | 0,621 |  |
|  | CONVENIENCE ⇒ FLULAST | 0,20371 | 0,04109 | 0,12317 | 0,28425 | 0,15275 | 4.957 | < ,001 |  |
|  | ICVL ⇒ CONVENIENCE | 0,12351 | 0,02397 | 0,07654 | 0,17049 | 0,17885 | 5.154 | < ,001 |  |
|  | EDUCATION ⇒ CONVENIENCE | 0,00884 | 0,0129 | -0,01645 | 0,03413 | 0,02434 | 0,685 | 0,493 |  |
|  | AGECLASS ⇒ CONVENIENCE | -0,00225 | 0,01354 | -0,02879 | 0,02429 | -0,00561 | -0,166 | 0,868 |  |
|  | HCWORKER ⇒ CONVENIENCE | -0,03548 | 0,03622 | -0,10648 | 0,03551 | -0,03434 | -0,98 | 0,327 |  |
| Direct | FUVL ⇒ FLULAST | 0,0805 | 0,02191 | 0,03756 | 0,12345 | 0,11514 | 3.674 | < ,001 |  |
|  | ICVL ⇒ FLULAST | 0,052 | 0,02951 | -0,00583 | 0,10983 | 0,05646 | 1.762 | 0,078 |  |
|  | EDUCATION ⇒ FLULAST | 0,01687 | 0,01565 | -0,01381 | 0,04755 | 0,03483 | 1.078 | 0,281 |  |
|  | AGECLASS ⇒ FLULAST | 0,17493 | 0,01642 | 0,14274 | 0,20712 | 0,32646 | 10.652 | < ,001 |  |
|  | HCWORKER ⇒ FLULAST | 0,21395 | 0,04395 | 0,1278 | 0,3001 | 0,15524 | 4.867 | < ,001 |  |
| Total | FUVL ⇒ FLULAST | 0,07869 | 0,02223 | 0,03512 | 0,12225 | 0,11254 | 3.540 | < ,001 |  |
|  | ICVL ⇒ FLULAST | 0,07716 | 0,02949 | 0,01936 | 0,13496 | 0,08378 | 2.616 | 0,009 |  |
|  | EDUCATION ⇒ FLULAST | 0,01867 | 0,01588 | -0,01244 | 0,04979 | 0,03854 | 1.176 | 0,24 |  |
|  | AGECLASS ⇒ FLULAST | 0,17447 | 0,01666 | 0,14181 | 0,20713 | 0,32561 | 10.471 | < ,001 |  |
|   | HCWORKER ⇒ FLULAST | 0,20672 | 0,04457 | 0,11936 | 0,29408 | 0,15 | 4.638 | < ,001 |  |

|  |
| --- |
| **Single VL ITEMS mediating effects between ‘education’ and ‘3Cs’** **Indirect and Total Effects**  |
|  *Confidence intervals computed with method: Standard (Delta method)* |
|  | **95% C.I.** |  |
| **Type** | **Effect** | **Estimate** | **SE** | **Lower** | **Upper** | **β** | **z** |  **P %** |
| Indirect | EDUCAT ⇒ ITEM1 ⇒ CONFIDENCE | 0,00591 | 0,00441 | -0,0027 | 0,01456 | 0,01088 | 1.339 | 0,181 | **0,10** |
|   | EDUCAT ⇒ ITEM2 ⇒ CONFIDENCE | 0,00542 | 0,0039 | -0,0022 | 0,01306 | 0,00998 | 1.391 | 0,164 | **0,09** |
|   | EDUCAT ⇒ ITEM3 ⇒ CONFIDENCE | 0,00319 | 0,00287 | -0,0024 | 0,00882 | 0,00587 | 1.110 | 0,267 | **0,06** |
|   | EDUCAT ⇒ ITEM4 ⇒ CONFIDENCE | -0,0011 | 0,00206 | -0,0052 | 0,00291 | -0,0021 | -0,546 | 0,585 | **-0,02** |
| Component | EDUCAT ⇒ ITEM1 | 0,15063 | 0,02692 | 0,09786 | 0,2034 | 0,18483 | 5.595 | < ,001 |  |
|   | ITEM1 ⇒ CONFIDENCE | 0,03922 | 0,02844 | -0,0165 | 0,09496 | 0,05886 | 1.379 | 0,168 |  |
|   | EDUCAT ⇒ ITEM2 | 0,10542 | 0,02577 | 0,0549 | 0,15593 | 0,1362 | 4.090 | < ,001 |  |
|   | ITEM2 ⇒ CONFIDENCE | 0,05142 | 0,03477 | -0,0167 | 0,11956 | 0,07329 | 1.479 | 0,139 |  |
|   | EDUCAT ⇒ ITEM3 | 0,08004 | 0,02788 | 0,02539 | 0,1347 | 0,09605 | 2.871 | 0,004 |  |
|   | ITEM3 ⇒ CONFIDENCE | 0,03983 | 0,03308 | -0,025 | 0,10467 | 0,06114 | 1.204 | 0,229 |  |
|   | EDUCAT ⇒ ITEM4 | 0,0725 | 0,0303 | 0,01312 | 0,13188 | 0,08018 | 2.393 | 0,017 |  |
|   | ITEM4 ⇒ CONFIDENCE | -0,0155 | 0,02768 | -0,0698 | 0,03873 | -0,0259 | -0,561 | 0,575 |  |
| Direct | EDUCAT ⇒ CONFIDENCE | 0,04413 | 0,01828 | 0,0083 | 0,07996 | 0,08128 | 2.414 | 0,016 |  |
| Total | EDUCAT ⇒ CONFIDENCE | 0,05752 | 0,01816 | 0,02193 | 0,09311 | 0,10594 | 3.168 | 0,002 |  |
| **Type** | **Effect** | **Estimate** | **SE** | **Lower** | **Upper** | **β** | **z** |  **P %** |
| Indirect | EDUCAT ⇒ ITEM5 ⇒ CONFIDENCE | 1,38E-04 | 0,00129 | -0,0024 | 0,00266 | 2,54E-04 | 0,107 | 0,914 | **0,00** |
|   | EDUCAT ⇒ ITEM6 ⇒ CONFIDENCE | 0,00248 | 0,002 | -0,0014 | 0,0064 | 0,00457 | 1.239 | 0,215 | **0,04** |
|   | EDUCAT ⇒ ITEM7 ⇒ CONFIDENCE | 0,00396 | 0,00293 | -0,0018 | 0,0097 | 0,0073 | 1.354 | 0,176 | **0,07** |
|   | EDUCAT ⇒ ITEM8 ⇒ CONFIDENCE | -4,76e−4 | 0,00351 | -0,0074 | 0,00641 | -8,77e−4 | -0,136 | 0,892 | **na** |
|   | EDUCAT ⇒ ITEM9 ⇒ CONFIDENCE | -0,0073 | 0,00313 | -0,0134 | -0,0011 | -0,0134 | -2.323 | 0,02 | **-0,13** |
|   | EDUCAT ⇒ ITEM10 ⇒ CONFIDENCE | 0,01163 | 0,00404 | 0,00372 | 0,01955 | 0,02143 | 2.882 | 0,004 | **0,20** |
|   | EDUCAT ⇒ ITEM11 ⇒ CONFIDENCE | 0,00262 | 0,0032 | -0,0036 | 0,00889 | 0,00483 | 0,821 | 0,412 | **0,05** |
|   | EDUCAT ⇒ ITEM12 ⇒ CONFIDENCE | 0,01136 | 0,00405 | 0,00342 | 0,01929 | 0,02091 | 2.805 | 0,005 | **0,20** |
| Component | EDUCAT ⇒ ITEM5 | 0,0531 | 0,02822 | -0,0022 | 0,10842 | 0,06312 | 1.882 | 0,06 |  |
|   | ITEM5 ⇒ CONFIDENCE | 0,0026 | 0,02417 | -0,0448 | 0,04996 | 0,00403 | 0,108 | 0,914 |  |
|   | EDUCAT ⇒ ITEM6 | 0,05943 | 0,02473 | 0,01096 | 0,10789 | 0,08051 | 2.403 | 0,016 |  |
|   | ITEM6 ⇒ CONFIDENCE | 0,04175 | 0,02886 | -0,0148 | 0,09832 | 0,05675 | 1.447 | 0,148 |  |
|   | EDUCAT ⇒ ITEM7 | 0,08824 | 0,02462 | 0,03999 | 0,1365 | 0,11963 | 3.584 | < ,001 |  |
|   | ITEM7 ⇒ CONFIDENCE | 0,0449 | 0,0307 | -0,0153 | 0,10507 | 0,061 | 1.463 | 0,144 |  |
|   | EDUCAT ⇒ ITEM8 | 0,18483 | 0,03462 | 0,11698 | 0,25269 | 0,17665 | 5.339 | < ,001 |  |
|   | ITEM8 ⇒ CONFIDENCE | -0,0026 | 0,01899 | -0,0398 | 0,03465 | -0,005 | -0,136 | 0,892 |  |
|   | EDUCAT ⇒ ITEM9 | 0,13794 | 0,03494 | 0,06946 | 0,20641 | 0,13156 | 3.948 | < ,001 |  |
|   | ITEM9 ⇒ CONFIDENCE | -0,0528 | 0,01836 | -0,0888 | -0,0168 | -0,1019 | -2.873 | 0,004 |  |
|   | EDUCAT ⇒ ITEM10 | 0,09574 | 0,0191 | 0,05831 | 0,13318 | 0,16615 | 5.013 | < ,001 |  |
|   | ITEM10 ⇒ CONFIDENCE | 0,12151 | 0,0345 | 0,0539 | 0,18912 | 0,12896 | 3.522 | < ,001 |  |
|   | EDUCAT ⇒ ITEM11 | 0,11658 | 0,02717 | 0,06333 | 0,16982 | 0,14277 | 4.291 | < ,001 |  |
|   | ITEM11 ⇒ CONFIDENCE | 0,02251 | 0,02693 | -0,0303 | 0,07529 | 0,03386 | 0,836 | 0,403 |  |
|   | EDUCAT ⇒ ITEM12 | 0,13187 | 0,03124 | 0,07064 | 0,19309 | 0,14049 | 4.221 | < ,001 |  |
|   | ITEM12 ⇒ CONFIDENCE | 0,08611 | 0,02294 | 0,04115 | 0,13107 | 0,14886 | 3.754 | < ,001 |  |
| Direct | EDUCAT ⇒ CONFIDENCE | 0,03308 | 0,01793 | -0,0021 | 0,06822 | 0,06092 | 1.845 | 0,065 |  |
| Total | EDUCAT ⇒ CONFIDENCE | 0,05752 | 0,01816 | 0,02193 | 0,09311 | 0,10594 | 3.168 | 0,002 |  |
| **Type** | **Effect** | **Estimate** | **SE** | **Lower** | **Upper** | **β** | **z** |  **P %** |
| Indirect | EDUCAT ⇒ ITEM1 ⇒ COMPLACENCY | 0,00232 | 0,00423 | -0,006 | 0,01061 | 0,00438 | 0,549 | 0,583 | **0,04** |
|   | EDUCAT ⇒ ITEM2 ⇒ COMPLACENCY | 0,00836 | 0,00414 | 2,43E-04 | 0,01647 | 0,01577 | 2.019 | 0,044 | **0,16** |
|   | EDUCAT ⇒ ITEM3 ⇒ COMPLACENCY | -4,48e−4 | 0,00261 | -0,0056 | 0,00466 | -8,46e−4 | -0,172 | 0,863 | **na** |
|   | EDUCAT ⇒ ITEM4 ⇒ COMPLACENCY | -0,0024 | 0,00221 | -0,0067 | 0,00195 | -0,0045 | -1.077 | 0,281 | **-0,04** |
| Component | EDUCAT ⇒ ITEM1 | 0,15063 | 0,02692 | 0,09786 | 0,2034 | 0,18483 | 5.595 | < ,001 |   |
|   | ITEM1 ⇒ COMPLACENCY | 0,01541 | 0,02794 | -0,0394 | 0,07018 | 0,0237 | 0,552 | 0,581 |   |
|   | EDUCAT ⇒ ITEM2 | 0,10542 | 0,02577 | 0,0549 | 0,15593 | 0,1362 | 4.090 | < ,001 |   |
|   | ITEM2 ⇒ COMPLACENCY | 0,07928 | 0,03416 | 0,01234 | 0,14622 | 0,11579 | 2.321 | 0,02 |   |
|   | EDUCAT ⇒ ITEM3 | 0,08004 | 0,02788 | 0,02539 | 0,1347 | 0,09605 | 2.871 | 0,004 |   |
|   | ITEM3 ⇒ COMPLACENCY | -0,0056 | 0,0325 | -0,0693 | 0,0581 | -0,0088 | -0,172 | 0,863 |   |
|   | EDUCAT ⇒ ITEM4 | 0,0725 | 0,0303 | 0,01312 | 0,13188 | 0,08018 | 2.393 | 0,017 |   |
|   | ITEM4 ⇒ COMPLACENCY | -0,0328 | 0,02719 | -0,0861 | 0,02048 | -0,056 | -1.207 | 0,228 |   |
| Direct | EDUCAT ⇒ COMPLACENCY | 0,04528 | 0,01796 | 0,01008 | 0,08048 | 0,08544 | 2.521 | 0,012 |   |
| Total | EDUCAT ⇒ COMPLACENCY | 0,05313 | 0,01773 | 0,01837 | 0,08789 | 0,10026 | 2.996 | 0,003 |   |
| **Type** | **Effect** | **Estimate** | **SE** | **Lower** | **Upper** | **β** | **z** |  **P %** |
| Indirect | EDUCAT ⇒ ITEM5 ⇒ COMPLACENCY | 6,52E-04 | 0,00132 | -0,0019 | 0,00324 | 0,00123 | 0,493 | 0,622 | **0,01** |
|   | EDUCAT ⇒ ITEM6 ⇒ COMPLACENCY | 0,00137 | 0,0018 | -0,0022 | 0,0049 | 0,00259 | 0,764 | 0,445 | **0,03** |
|   | EDUCAT ⇒ ITEM7 ⇒ COMPLACENCY | 0,00404 | 0,00292 | -0,0017 | 0,00976 | 0,00762 | 1.384 | 0,166 | **0,08** |
|   | EDUCAT ⇒ ITEM8 ⇒ COMPLACENCY | -0,0016 | 0,0035 | -0,0084 | 0,00529 | -0,003 | -0,45 | 0,652 | **-0,03** |
|   | EDUCAT ⇒ ITEM9 ⇒ COMPLACENCY | -0,0044 | 0,00276 | -0,0098 | 9,87E-04 | -0,0083 | -1.602 | 0,109 | **-0,08** |
|   | EDUCAT ⇒ ITEM10 ⇒ COMPLACENCY | 0,01258 | 0,00413 | 0,00448 | 0,02068 | 0,02374 | 3.044 | 0,002 | **0,24** |
|   | EDUCAT ⇒ ITEM11 ⇒ COMPLACENCY | -0,0043 | 0,00328 | -0,0108 | 0,0021 | -0,0082 | -1.319 | 0,187 | **-0,08** |
|   | EDUCAT ⇒ ITEM12 ⇒ COMPLACENCY | 0,00872 | 0,00365 | 0,00157 | 0,01587 | 0,01646 | 2.390 | 0,017 | **0,16** |
| Component | EDUCAT ⇒ ITEM5 | 0,0531 | 0,02822 | -0,0022 | 0,10842 | 0,06312 | 1.881 | 0,06 |   |
|   | ITEM5 ⇒ COMPLACENCY | 0,01228 | 0,02402 | -0,0348 | 0,05937 | 0,0195 | 0,511 | 0,609 |   |
|   | EDUCAT ⇒ ITEM6 | 0,05943 | 0,02473 | 0,01096 | 0,10789 | 0,08051 | 2.403 | 0,016 |   |
|   | ITEM6 ⇒ COMPLACENCY | 0,02313 | 0,02869 | -0,0331 | 0,07937 | 0,03222 | 0,806 | 0,42 |   |
|   | EDUCAT ⇒ ITEM7 | 0,08824 | 0,02462 | 0,03999 | 0,1365 | 0,11963 | 3.584 | < ,001 |   |
|   | ITEM7 ⇒ COMPLACENCY | 0,04577 | 0,03052 | -0,014 | 0,10559 | 0,06371 | 1.500 | 0,134 |   |
|   | EDUCAT ⇒ ITEM8 | 0,18483 | 0,03462 | 0,11698 | 0,25269 | 0,17665 | 5.339 | < ,001 |   |
|   | ITEM8 ⇒ COMPLACENCY | -0,0085 | 0,01888 | -0,0455 | 0,02847 | -0,0169 | -0,452 | 0,651 |   |
|   | EDUCAT ⇒ ITEM9 | 0,13794 | 0,03494 | 0,06946 | 0,20641 | 0,13156 | 3.948 | < ,001 |   |
|   | ITEM9 ⇒ COMPLACENCY | -0,032 | 0,01826 | -0,0678 | 0,00379 | -0,0633 | -1.752 | 0,08 |   |
|   | EDUCAT ⇒ ITEM10 | 0,09574 | 0,0191 | 0,05831 | 0,13318 | 0,16615 | 5.013 | < ,001 |   |
|   | ITEM10 ⇒ COMPLACENCY | 0,13142 | 0,03429 | 0,0642 | 0,19864 | 0,1429 | 3.832 | < ,001 |   |
|   | EDUCAT ⇒ ITEM11 | 0,11658 | 0,02717 | 0,06333 | 0,16982 | 0,14277 | 4.291 | < ,001 |   |
|   | ITEM11 ⇒ COMPLACENCY | -0,0371 | 0,02677 | -0,0896 | 0,01536 | -0,0572 | -1.386 | 0,166 |   |
|   | EDUCAT ⇒ ITEM12 | 0,13187 | 0,03124 | 0,07064 | 0,19309 | 0,14049 | 4.221 | < ,001 |   |
|   | ITEM12 ⇒ COMPLACENCY | 0,06613 | 0,0228 | 0,02144 | 0,11083 | 0,11714 | 2.900 | 0,004 |   |
| Direct | EDUCAT ⇒ COMPLACENCY | 0,03608 | 0,01783 | 0,00114 | 0,07101 | 0,06808 | 2.024 | 0,043 |   |
| Total | EDUCAT ⇒ COMPLACENCY | 0,05313 | 0,01773 | 0,01837 | 0,08789 | 0,10026 | 2.996 | 0,003 |   |
| **Type** | **Effect** | **Estimate** | **SE** | **Lower** | **Upper** | **β** | **z** |  **P %** |
| Indirect | EDUCAT ⇒ ITEM1 ⇒ CONVENIENCE | 0,00355 | 0,00299 | -0,0023 | 0,0094 | 0,00973 | 1.190 | 0,234 | **0,19** |
|   | EDUCAT ⇒ ITEM2 ⇒ CONVENIENCE | 0,00102 | 0,00251 | -0,0039 | 0,00594 | 0,00281 | 0,409 | 0,683 | **0,05** |
|   | EDUCAT ⇒ ITEM3 ⇒ CONVENIENCE | 0,00149 | 0,00188 | -0,0022 | 0,00516 | 0,00407 | 0,792 | 0,428 | **0,08** |
|   | EDUCAT ⇒ ITEM4 ⇒ CONVENIENCE | -0,0031 | 0,00188 | -0,0068 | 5,93E-04 | -0,0085 | -1.644 | 0,1 | **-0,16** |
| Component | EDUCAT ⇒ ITEM1 | 0,15063 | 0,02692 | 0,09786 | 0,2034 | 0,18483 | 5.595 | < ,001 |   |
|   | ITEM1 ⇒ CONVENIENCE | 0,02359 | 0,01937 | -0,0144 | 0,06155 | 0,05263 | 1.218 | 0,223 |   |
|   | EDUCAT ⇒ ITEM2 | 0,10542 | 0,02577 | 0,0549 | 0,15593 | 0,1362 | 4.090 | < ,001 |   |
|   | ITEM2 ⇒ CONVENIENCE | 0,00972 | 0,02367 | -0,0367 | 0,05612 | 0,0206 | 0,411 | 0,681 |   |
|   | EDUCAT ⇒ ITEM3 | 0,08004 | 0,02788 | 0,02539 | 0,1347 | 0,09605 | 2.871 | 0,004 |   |
|   | ITEM3 ⇒ CONVENIENCE | 0,01856 | 0,02252 | -0,0256 | 0,0627 | 0,04234 | 0,824 | 0,41 |   |
|   | EDUCAT ⇒ ITEM4 | 0,0725 | 0,0303 | 0,01312 | 0,13188 | 0,08018 | 2.393 | 0,017 |   |
|   | ITEM4 ⇒ CONVENIENCE | -0,0427 | 0,01885 | -0,0796 | -0,0057 | -0,1056 | -2.263 | 0,024 |   |
| Direct | EDUCAT ⇒ CONVENIENCE | 0,01609 | 0,01245 | -0,0083 | 0,04048 | 0,04404 | 1.292 | 0,196 |   |
| Total | EDUCAT ⇒ CONVENIENCE | 0,01906 | 0,01227 | -0,005 | 0,04311 | 0,05217 | 1.553 | 0,12 |   |
| **Type** | **Effect** | **Estimate** | **SE** | **Lower** | **Upper** | **β** | **z** |  **P %** |
| Indirect | EDUCAT ⇒ ITEM5 ⇒ CONVENIENCE | -0,0014 | 0,00116 | -0,0037 | 8,50E-04 | -0,0039 | -12.256 | 0,22 | **-0,07** |
|   | EDUCAT ⇒ ITEM6 ⇒ CONVENIENCE | -0,0019 | 0,00141 | -0,0046 | 8,88E-04 | -0,0051 | -13.292 | 0,184 | **-0,10** |
|   | EDUCAT ⇒ ITEM7 ⇒ CONVENIENCE | 0,00427 | 0,0022 | -4,77e−5 | 0,00859 | 0,01169 | 19.383 | 0,053 | **0,22** |
|   | EDUCAT ⇒ ITEM8 ⇒ CONVENIENCE | -2,79e−4 | 0,0024 | -0,005 | 0,00443 | -7,64e−4 | -0,1162 | 0,908 | **na** |
|   | EDUCAT ⇒ ITEM9 ⇒ CONVENIENCE | 0,00193 | 0,0018 | -0,0016 | 0,00546 | 0,00528 | 10.722 | 0,284 | **0,10** |
|   | EDUCAT ⇒ ITEM10 ⇒ CONVENIENCE | 0,00606 | 0,00256 | 0,00104 | 0,01108 | 0,01658 | 23.646 | 0,018 | **0,32** |
|   | EDUCAT ⇒ ITEM11 ⇒ CONVENIENCE | -3,37e−5 | 0,00215 | -0,0042 | 0,00417 | -9,22e−5 | -0,0157 | 0,987 | **na** |
|   | EDUCAT ⇒ ITEM12 ⇒ CONVENIENCE | 0,00887 | 0,00295 | 0,00309 | 0,01465 | 0,02429 | 30.084 | 0,003 | **0,47** |
| Component | EDUCAT ⇒ ITEM5 | 0,0531 | 0,02822 | -0,0022 | 0,10842 | 0,06312 | 18.815 | 0,06 |   |
|   | ITEM5 ⇒ CONVENIENCE | -0,0267 | 0,01653 | -0,0591 | 0,0057 | -0,0615 | -16.153 | 0,106 |   |
|   | EDUCAT ⇒ ITEM6 | 0,05943 | 0,02473 | 0,01096 | 0,10789 | 0,08051 | 24.030 | 0,016 |   |
|   | ITEM6 ⇒ CONVENIENCE | -0,0315 | 0,01974 | -0,0702 | 0,00719 | -0,0636 | -15.956 | 0,111 |   |
|   | EDUCAT ⇒ ITEM7 | 0,08824 | 0,02462 | 0,03999 | 0,1365 | 0,11963 | 35.845 | < ,001 |   |
|   | ITEM7 ⇒ CONVENIENCE | 0,04838 | 0,021 | 0,00723 | 0,08954 | 0,0977 | 23.043 | 0,021 |   |
|   | EDUCAT ⇒ ITEM8 | 0,18483 | 0,03462 | 0,11698 | 0,25269 | 0,17665 | 53.390 | < ,001 |   |
|   | ITEM8 ⇒ CONVENIENCE | -0,0015 | 0,01299 | -0,027 | 0,02395 | -0,0043 | -0,1162 | 0,907 |   |
|   | EDUCAT ⇒ ITEM9 | 0,13794 | 0,03494 | 0,06946 | 0,20641 | 0,13156 | 39.480 | < ,001 |   |
|   | ITEM9 ⇒ CONVENIENCE | 0,01399 | 0,01256 | -0,0106 | 0,03861 | 0,04016 | 11.141 | 0,265 |   |
|   | EDUCAT ⇒ ITEM10 | 0,09574 | 0,0191 | 0,05831 | 0,13318 | 0,16615 | 50.126 | < ,001 |   |
|   | ITEM10 ⇒ CONVENIENCE | 0,06327 | 0,0236 | 0,01703 | 0,10952 | 0,09981 | 26.817 | 0,007 |   |
|   | EDUCAT ⇒ ITEM11 | 0,11658 | 0,02717 | 0,06333 | 0,16982 | 0,14277 | 42.912 | < ,001 |   |
|   | ITEM11 ⇒ CONVENIENCE | -2,89e−4 | 0,01842 | -0,0364 | 0,03581 | -6,46e−4 | -0,0157 | 0,987 |   |
|   | EDUCAT ⇒ ITEM12 | 0,13187 | 0,03124 | 0,07064 | 0,19309 | 0,14049 | 42.212 | < ,001 |   |
|   | ITEM12 ⇒ CONVENIENCE | 0,06729 | 0,01569 | 0,03654 | 0,09804 | 0,1729 | 42.886 | < ,001 |   |
| Direct | EDUCAT ⇒ CONVENIENCE | 0,00153 | 0,01226 | -0,0225 | 0,02557 | 0,00419 | 0,1247 | 0,901 |   |
| Total | EDUCAT ⇒ CONVENIENCE | 0,01906 | 0,01227 | -0,005 | 0,04311 | 0,05217 | 15.533 | 0,12 |   |

PCA: reduction of items on the 2020 data series (N= 885)[20], and reliability tests

1. **entering19 items overall**

Kaiser-Meye- Olkin Measure of Sampling Adequacy. 0,834 - Bartlett's Test of Sphericity ChiSquare 5677,360 P=0,00



|  |  |
| --- | --- |
| Component  | **Total Variance Explained**Initial Eigenvalues |
| Total | % of Variance | Cumulative % |
| 1 | 4,351 | 22,899 | 22,899 |
| 2 | 2,901 | 15,269 | 38,168 |
| 3 | 2,318 | 12,200 | 50,369 |
| 4 | 1,153 | 6,069 | 56,438 |
| 5 | 1,021 | 5,376 | 61,814 |
| 6 | 0,859 | 4,520 | 66,334 |
| 7 | 0,773 | 4,070 | 70,404 |
| 8 | 0,690 | 3,632 | 74,036 |
| 9 | 0,618 | 3,254 | 77,291 |
| 10 | 0,606 | 3,188 | 80,478 |
| 11 | 0,556 | 2,924 | 83,402 |
| 12 | 0,528 | 2,776 | 86,179 |
| 13 | 0,501 | 2,635 | 88,814 |
| 14 | 0,451 | 2,372 | 91,186 |
| 15 | 0,427 | 2,250 | 93,435 |
| 16 | 0,365 | 1,922 | 95,357 |
| 17 | 0,322 | 1,696 | 97,053 |
| 18 | 0,283 | 1,488 | 98,541 |
| 19  | 0,277 | 1,459 | 100,000 |

|  |  |
| --- | --- |
|  Fit measures | RMSEA 90% CI |
| CFI | SRMR | RMSEA | Lower | Upper |
| 0.919 | 0.0525 | 0.0589 | 0.0540 | 0.0639 |

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
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| --- |
|  Item Reliability Statistics |
|  | If item dropped |
|  | Cronbach's α | McDonald's ω |
| ITEM1 | 0.756 | 0.791 |
| ITEM2 | 0.748 | 0.787 |
| ITEM3 | 0.752 | 0.789 |
| ITEM4 | 0.756 | 0.791 |
| ITEM5 | 0.756 | 0.790 |
| ITEM7 | 0.747 | 0.783 |
| ITEM8 | 0.761 | 0.793 |
| ITEM9 | 0.770 | 0.796 |
| ITEM10 | 0.757 | 0.788 |
| ITEM11 | 0.743 | 0.782 |
| ITEM12 | 0.741 | 0.779 |
| QUE1 | 0.766 | 0.787 |
| INTENTION | 0.763 | 0.777 |
| QUE3 | 0.766 | 0.796 |
| CONVENIENCE | 0.762 | 0.782 |
| QUE5CHI | 0.764 | 0.783 |
| CONFIDENCE | 0.755 | 0.775 |
| COMPLACENCY | 0.760 | 0.780 |

 **Cronbach's α 0.785 McDonald's ω 0.806** |

Component plot in rotated space

1. **entering six items overall**

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.0,744 - Bartlett's Test of Sphericity Chi-Square 1393,236, P=0,00

|  |  |
| --- | --- |
| Component | **Total Variance Explained**Initial Eigenvalues |
| Total | % of Variance | Cumulative % |
| 1 | 2.719 | 45.31 | 45.3 |
| 2 | 1.087 | 18.11 | 63.4 |
| 3 | 0.837 | 13.95 | 77.4 |
| 4 | 0.651 | 10.85 | 88.2 |
| 5 | 0.385 | 6.42 | 94.6 |
| 6 | 0.321 | 5.35 | 100.0 |



|  |  |
| --- | --- |
| Fit Measures | RMSEA 90% CI |
| CFI | SRMR | RMSEA | Lower | Upper |
| 0.984 | 0.0221 | 0.0653 | 0.0425 | 0.0902 |

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|  **Cronbach's α 0.602 McDonald's ω 0.749** |
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|  Item Reliability Statistics |
|  | If item dropped |
|  | Cronbach's α | McDonald's ω |
| ITEM2 | 0.647 | 0.787 |
| ITEM12 | 0.623 | 0.763 |
| INTENTION | 0.550 | 0.671 |
| CONVENIENCE | 0.553 | 0.710 |
| CONFIDENCE | 0.474 | 0.663 |
| COMPLACENCY | 0.504 | 0.677 |

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|  |  |  |
| --- | --- | --- |
| Fit measures[50] |  | acceptable fit |
| Comparative Fit Index | CFI |  >.95 |
| Standardized Root Mean Square Residual | SRMR | < .08 |
| Root Mean Square Error of Approximation | RMSEA | < .08 or < .05 |



 Component plot in rotated space