

Exploratory Factor Model of Self-Care against in the Covid-19 ERA

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Abstract –Studies of adherence to treatment have explained the trajectories of relationships between determinants from theoretical models related to reasoned action and planned behavior, although the emphasis on cognition assumes that adherence is a subjective project rather than a group one. . the present work proposed to investigate the effect of norms and values on beliefs, attitudes and intentions as antecedent variables of adherence to treatment. An exploratory, cross-sectional, psychometric and correlational study was carried out with a sample of 258 students, selected for their participation in professional practices and social service in the area of health and risk prevention. The results show that the interrelation between cultural factors –norms, values, beliefs– with cognitive factors –attitudes, knowledge, perceptions, intentions– determine adherence to treatment, but their influence supposes the inclusion of other explanatory factors of the socioeconomic threshold and Sociodemographic determinant of adherence to treatment in age groups and economic contexts.

Keywords – Public health, Sexually Transmitted Diseases, adherence to treatment, model, subjective norm.

INTRODUCTION

Sexually Transmitted Diseases (STDs) are different between men and women as condom use intensifies and the risk of contagion is reduced. Once the STD has been acquired, condom use is determined by information and expertise (Flores et al., 2018).

The World Health Organization (WHO) in its report for the year 2020 has registered approximately 539,530 deaths in the 2016-2018 period (86.9 per 100,000 inhabitants). In said report, HIV with 5,189 cases has a prevalence of 4.9 cases per 100,000 inhabitants, as well as in cases of mortality in the reproductive stage (203,504 deaths) and the post-productive stage registers (292,375 deaths).

From a biomedical perspective, information, knowledge, and skills anticipate risk behaviors. Díez and Díaz (2011) point out that a timely diagnosis prevents co-infection and reinfection, as well as reducing the prevalence in vulnerable age groups, but asymptomatology of STDs poses a risk to personal health that is transferred collective health and public health. STDs seem to correspond to cultural, cognitive and behavioral factors linked to risks, but identity is a determining factor for risky lifestyles and, therefore, with a higher prevalence of STDs in age groups between 18 and 25 years (Tobairo et al. , 2009).

However, the information, knowledge and skills in risk prevention are observed in damage control scenarios. In university contexts, the psychological social paradigm warns of the emergence of explanatory variables of self-care that would explain the absence of a relationship between socioeconomic factors with self-care of sexuality (Moreno, 2020). Adherence to treatment emerges as a variable composed of sociocultural, socioeconomic, and sociocognitive factors. In this sense, group values, beliefs,

norms, income, and stigma predict observable self-care in condom use.

Despite the fact that the biopsychosocial approach integrates situational, cultural, economic, informational and cognitive factors, gender studies open up the discussion about the differences between men and women in the face of STDs.

Del Rio and Uribe (1993) demonstrated that the invention of the female condom contributed to a better quality of life in terms of reproductive and sexual health of women with respect to the use of the male condom, but the differences between gender identities have led to that now the asymmetries are about access to the sexual device since its high cost discriminates against marginalized and excluded sectors that do not have the resources to acquire the female condom and be able to increase their reproductive and sexual health.

In other words, self-care is a variable that can be predicted from sociocultural, socioeconomic, sociocognitive, and gender factors. The models warn that risk behaviors alluding to STDs are explained from norms and values (Anguiano et al., 2017), income (Ríos, Lienis and Guerrero, 2009), perceptions, beliefs and attitudes (Rodríguez et al., 2009) and from gender identity (Carreón et al., 2017).

Therefore, the objective of the present work is to explore the factorial dimensions of self-care in the face of the risks of infection, contagion or death by STDs in students of a public university in central Mexico. Based on the cultural, economic, cognitive and gender dimensions put forward, their relationships are explored in order to anticipate risk scenarios.

Do the dimensions of values, norms, beliefs, perceptions, attitudes, knowledge, intentions and behaviors anticipate risk scenarios alluding to STDs in university students?

Given that sexuality self-care is determined by cultural factors in interaction with economic, cognitive and gender factors, it will be possible to anticipate an STD risk scenario (García, 2017). In fact, the prevalence of sociocultural factors such as norms, beliefs, and values will explain a greater percentage of the risk of STDs (García, Carreón, & Hernández, 2017). Even, the capacity and appreciation of the self-care agency increases with social interaction more in young people than in adults (Muñoz, 2017).

METHOD

Design. An exploratory, cross-sectional, psychometric and correlational study was carried out. Since the relationships between cultural, economic, cognitive and gender factors have not been observed, the exploratory study was pertinent. Since a part of the STD risk process is observed, a cross-sectional study was considered. By measuring the dimensions of STD risk, a psychometric and correlational study was established.

Sample. A non-probabilistic selection of 258 students from a public university was made. The selection criteria belonged to the internship and social service system in for-profit and non-profit organizations and institutions in the municipality of Chimalhuacán, State of Mexico.

Instrument. The Carreón Sexuality Self-Care Scale (2017) was used, which includes 24 statements (see annex) regarding norms (alpha = 0.724), values (alpha = 0.789), beliefs (alpha = 0.761), perceptions (alpha = 0.829), knowledge (alpha = 0.895), skills (alpha = 0.886), attitudes (alpha = 0.856), intentions (alpha = 0.725) and behaviors (alpha = 0.826) with six response options ranging from "not likely" even very probable". The reliability reported in the literature indicates alpha values ranging between .760 and .792, although the conformation of the scale assumes factor values between .680 and .862. Regarding validity, the factorial weights indicate values that oscillate between .456 and .682.

Procedure. Participants were interviewed and surveyed at the university facilities. They were informed that the results of the investigation would not positively or negatively affect their school situation. They were asked to answer the questions and statements honestly. They were invited to consult the results in the final report of the research group. The data were processed in the Statistical Package for Social Sciences (SPSS) and the Analysis of Structural Moments Software (AMOS) in its versions 10 and 6.0.

Analysis. The parameters of kurtosis, Cronbach's alpha, KMO coefficients, Bartlett's test, factorial weights, Pearson correlations, "phi" covariances, "beta" and "gamma" weights, as well as fit and residual indices were used to compare the model of specified relationships with the observed data.

Normal. The kurtosis value close to unity was assumed as evidence of normal distribution of the responses of

respondents with respect to the statements that measure the study variables in an instrument with response options and interval measurement levels.

Validity. KMO coefficients greater than 0.600 and Bartlett's test with a significance level less than 0.050 were assumed as evidence of product moment correlations that facilitated the exploratory factor analysis of principal axes with promax rotation. Subsequently, factorial weights greater than 0.300 were considered as evidence of variance maximization in terms of the factors derived from the exploratory analysis. The percentages of explained variance greater than 0.20 were assumed as evidence of acceptance of the null hypothesis.

Reliability. Cronbach's alpha value greater than 0.60 was assumed to be sufficient to demonstrate the internal consistency of the indicators with respect to the general scale and the particular subscales. The product-moment correlation greater than 0.90 was considered as evidence of collinearity and multicollinearity, which means that the items are similar in terms of their contents.

Correlation. Pearson's r values close to unity and zero were discarded from further analysis as they signify collinear or spurious relationships. Instead, those values greater than 0.30 and less than 0.90 were assumed as evidence of dependency relationships.

Covariance. The "phi" values between 0.30 and 0.90 were identified as evidence of dependency relationships in the case of categorical variables or in combination with continuous variables.

Structure. The "beta" values between exogenous and endogenous variables between 0.30 and 0.90 were assumed as evidence of dependency relationships. In the same way, the "gamma" values between endogenous variables close to zero or unity were discarded from further analysis.

Adjustment. The Goodness of Fit Index (GFI) close to unity was assumed as evidence of fit and acceptance of the null hypothesis. On the contrary, values lower than 0.975 were considered as evidence of rejection of the null hypothesis and acceptance of the alternative hypothesis.

Residual. Values close to zero were assumed as evidence of fit between the specified relationships and the data obtained, therefore, the null hypothesis of fit between both models was accepted. In contrast, values greater than 0.007 were considered as evidence of rejection of the null hypothesis.

RESULTS

The internal consistency of each of the scales reached a value greater than 0.60 and less than 0.90 because the items seem to measure the variables, but with variations in different contexts and samples. Extraction method: main axes, promax rotation. sphericity ($X^2 = 234.35$ (23gl) $p = 0.000$) and adequacy (KMO = 0.671). M = Mean, SD = Standard Deviation, Values (23% of the total variance explained), Norms (19% of the total variance explained), Beliefs (17% of the total variance explained), Perceptions (15% of the total variance explained), Attitudes (11% of the

total variance explained), Knowledge (9% of the total variance explained), Intentions (5% of the total variance explained), Behaviors (3% of the total variance explained). In the case of construct validity, the indicators reached

correlations with the factor greater than 0.300 although less than 0.900, evidencing the inclusion of other indicators in the factors, as well as the difference between the same factors (Figure 1).

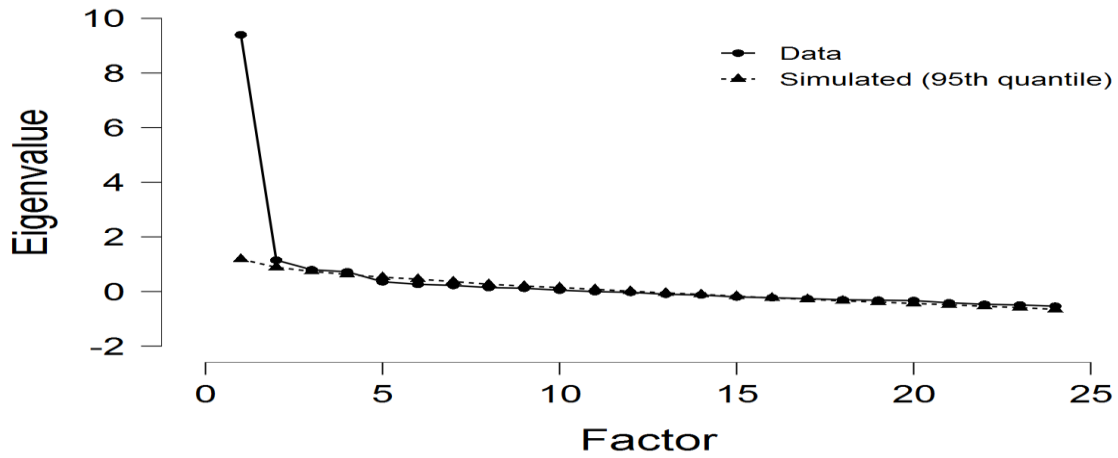


Figure 1. Eigenvalue

Source: Elaborated with data study

Once the factors were formed, their reflective trajectories were estimated in a structural model. A structural model [$\chi^2 = 14.10$ (9gl) $p = 0.000$; GFI = 0.970; IFC = 0.975; NFI = 0.990; RMSEA = 0.003; RMR = 0.000; $R^2 = 0.238$] allowed us to establish dependency relationships between selfish values regarding self-care ($\gamma = 0.42$). In relation to other

exogenous variables such as subjective norm ($\Phi = 0.06$), risk perceptions ($\Phi = 0.041$), condom use beliefs ($\Phi = 0.23$) and attitudes towards condom use ($\Phi = - 0.40$), the explanatory factor had a direct and significant effect (see Figure 2).

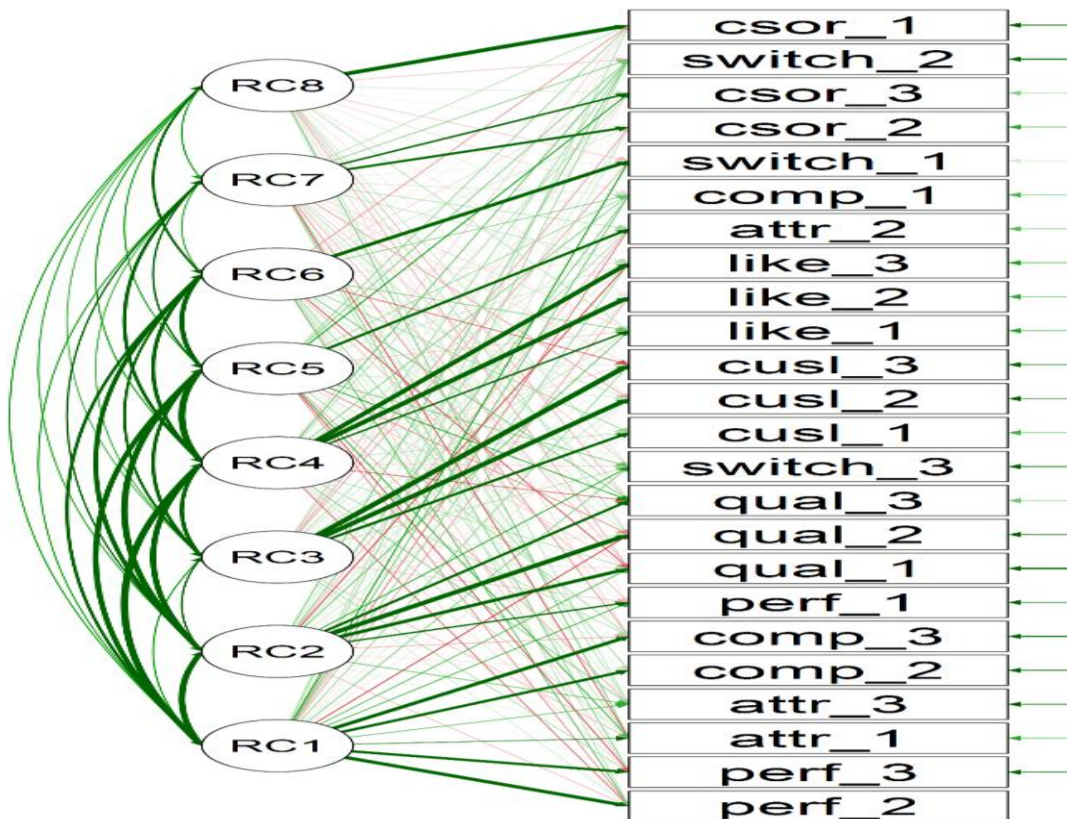


Figure 2. Exploratory factorial model of adherence to treatment

Source: Prepared with the results of the study. Instrument sphericity test (KMO between .513 to .893; Sample Adequacy Test [$X^2 = 3014.020$ (112 degrees of freedom) $p < .0001$])

That is to say: the selfish values "In my sexual life the use of condoms is indisputable" associated with the subjective norm "My sexual health is accompanied by a condom" , as well as the risk perceptions "Using a double condom is a risk to me health" , the beliefs "The use of a condom prevents sexually transmitted diseases" and the attitudes "The use of a condom is protection for my sexual life" determine the use of a condom during intercourse as a measure to prevent a reinfection of STDs. The scope and limits of this model in relation to the reviewed literature and state of knowledge are discussed below.

DISCUSSION

The present work contributes to the state of the art an exploratory model of the dimensions of self-care of sexuality in the face of the risks of STDs. The values explained 23% of the variance of the proposal. That is, the sample surveyed reflects a sociocultural structure of self-care. This finding is similar to those reported in the literature. Values as principles that guide behavior are predictors of self-care (Carreón, 2016). More specifically, egocentric values anticipate risk behaviors (Montes, 2013).

The present study also found that group norms are an explanatory factor for 19% of the variance of the proposed model. The influence of the family on self-care of sexuality is a cultural factor that explains condom use (Cajachagua Castro et al., 2020). In this sense, the literature suggests that decisions regarding sexual behaviors are influenced by family approval (Jimenez, 2022). In fact, the choice of sexual partner is determined by the family norm (Ludueña and Zerpa, 2022).

The interrelation between cultural and cognitive factors increases the percentage of explained variance of the model, although the intentional and behavioral variables are associated. In other words, the sample surveyed can be influenced by values and norms to learn about STDs, but they do not necessarily decide and act in accordance with the data or surrounding recommendations in the media or sociodigital networks.

Rather, the influence of the media and sociodigital networks on family norms and values can influence decisions and self-care regarding sexuality, but media information may be incompatible with the sociocultural environment (Aliatis Bravo, 2019). In that case, sexual STD risk behaviors may emerge as a result of discrepancy in cultural and family norms (Polanski, 2019). It is recommended to carry out comparative studies of the cultural dimensions in order to establish their influence on the family and this on those who are sexually active.

CONCLUSION

The objective of the present work was to explore the dimensions of the risks before STDs in a sample of university students. The results indicate the prevalence of values as axes of preventive or risk behaviors. In relation to the state of the art, the central finding of this study is directly related to the models in which values are associated with self-care. Therefore, the extension of the study is

recommended in order to explore the indicators of values as principles that guide decisions and behavior.

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